# Federal Home Loan Bank of Des Moines Monthly Price Report

The Federal Home Loan Bank of Des Moines (Bank) is providing estimated valuations for specific Convertible, Amortizing and Non-Amortizing advances set forth below for members' information and convenience only. The estimated valuations are generated by models used for the Bank's own asset/liability management purposes. The models use specific assumptions, for example, market volatility and discount curve adjusted for the Bank's spread, to estimate the value of the advance**. The valuations represent theoretical market prices only and should not be construed as a liquidation price for the specific advance.**

It is expressly understood that in providing these valuations to members, the Bank is not performing any advisory service. The valuations are provided without representation or warranty and the member is solely responsible for any decision it makes or actions it takes based on the valuations provided. It is recommended that members maintain independent capabilities to value their asset/liability positions, including Convertible, Amortizing and Non-Amortizing advances. You should consult with your own tax, legal, accounting, credit and financial advisors with respect to the transaction structure and information detailed herein.

The table depicts valuation estimates resulting from immediate parallel interest-rate movements of plus/minus 400 basis points in 100 basis point increments. To identify your advance, locate the appropriate maturity date and verify the advance rate. The advances in report are grouped by advance type and then within each type sorted in ascending order by maturity date. Once the appropriate structure is located, read across to view the sensitivity analysis for that advance.

If you have any questions, contact the Money Desk at 800.544.3452, ext. 2122.

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 191216A00010 | 12/16/2019 | 1.84 | 8/17/2020 | 12/16/2019 | 100.07453 | 100.0745283 | 100.0745283 | 100.0745283 | 100.0710187 | 100.0238902 | 99.97682311 | 99.9298173 | 99.88287264 |
| 191223A00049 | 12/23/2019 | 1.85 | 10/23/2020 | 12/23/2019 | 100.37437 | 100.3743667 | 100.3743667 | 100.3743667 | 100.3510802 | 100.1184192 | 99.88684471 | 99.65634914 | 99.42692491 |
| 200121A00001 | 1/21/2020 | 1.88 | 1/15/2021 | 1/21/2020 | 100.76251 | 100.7625114 | 100.7625114 | 100.7625114 | 100.7115445 | 100.2467854 | 99.78631675 | 99.33007907 | 98.87801416 |
| 200219A00005 | 2/19/2020 | 1.81 | 1/20/2021 | 2/19/2020 | 100.75162 | 100.7516169 | 100.7516169 | 100.7516169 | 100.6988419 | 100.2203833 | 99.74646945 | 99.27703574 | 98.81201876 |
| 200220A00022 | 2/20/2020 | 1.75 | 2/16/2021 | 2/20/2020 | 100.83459 | 100.8345918 | 100.8345918 | 100.8345918 | 100.7708038 | 100.2180412 | 99.67133257 | 99.13057874 | 98.59568276 |
| 200316A00058 | 3/16/2020 | 0.81 | 11/16/2020 | 3/16/2020 | 100.16927 | 100.169272 | 100.169272 | 100.169272 | 100.138246 | 99.83982616 | 99.54319214 | 99.24832784 | 98.9552174 |
| 200318A00033 | 3/18/2020 | 0.58 | 2/18/2021 | 3/18/2020 | 100.18684 | 100.1868363 | 100.1868363 | 100.1868363 | 100.122396 | 99.5662419 | 99.01624454 | 98.4723021 | 97.93431499 |
| 200326A00008 | 3/26/2020 | 0.56 | 11/25/2020 | 3/26/2020 | 100.10205 | 100.1020487 | 100.1020487 | 100.1020487 | 100.0681868 | 99.74515 | 99.42419681 | 99.10530716 | 98.7884612 |
| 200327A00082 | 3/27/2020 | 0.36 | 10/8/2020 | 3/27/2020 | 100.02005 | 100.0200472 | 100.0200472 | 100.0200472 | 100.0018813 | 99.81114825 | 99.62115137 | 99.43188636 | 99.24334896 |
| 200402A00051 | 4/2/2020 | 0.56 | 12/15/2020 | 4/2/2020 | 100.11958 | 100.1195831 | 100.1195831 | 100.1195831 | 100.079336 | 99.70133229 | 99.32618676 | 98.95386695 | 98.58434093 |
| 200413A00025 | 4/13/2020 | 0.63 | 1/13/2021 | 4/13/2020 | 100.17742 | 100.1774226 | 100.1774226 | 100.1774226 | 100.1273449 | 99.66967848 | 99.21619093 | 98.76682512 | 98.32152494 |
| 190815A00016 | 8/15/2019 | 2.06 | 8/14/2020 | 8/15/2019 | 100.06993 | 100.0699298 | 100.0699298 | 100.0699298 | 100.0670389 | 100.0282171 | 99.98944277 | 99.95071566 | 99.91203572 |
| 191223A00045 | 12/23/2019 | 1.84 | 9/23/2020 | 12/23/2019 | 100.23763 | 100.2376316 | 100.2376316 | 100.2376316 | 100.2242612 | 100.0746392 | 99.92547222 | 99.7767583 | 99.62849534 |
| 200218A00022 | 2/18/2020 | 1.82 | 12/18/2020 | 2/18/2020 | 100.61194 | 100.6119426 | 100.6119426 | 100.6119426 | 100.5706182 | 100.1832105 | 99.79879222 | 99.41732882 | 99.0387862 |
| 200302A00055 | 3/2/2020 | 1.24 | 2/2/2021 | 3/2/2020 | 100.51374 | 100.5137384 | 100.5137384 | 100.5137384 | 100.4561797 | 99.9427634 | 99.4345744 | 98.93153324 | 98.43356207 |
| 200311A00011 | 3/11/2020 | 0.71 | 12/11/2020 | 3/11/2020 | 100.17144 | 100.1714396 | 100.1714396 | 100.1714396 | 100.1324603 | 99.76531824 | 99.40087083 | 99.03908841 | 98.67994173 |
| 200318A00046 | 3/18/2020 | 0.63 | 2/18/2021 | 3/18/2020 | 100.21487 | 100.2148695 | 100.2148695 | 100.2148695 | 100.1504196 | 99.59417509 | 99.04408808 | 98.50005669 | 97.96198134 |
| 200319A00010 | 3/19/2020 | 0.65 | 3/19/2021 | 3/19/2020 | 100.34067 | 100.3406682 | 100.3406682 | 100.3406682 | 100.2622376 | 99.62540242 | 98.99662904 | 98.37576495 | 97.76266157 |
| 200323A00004 | 3/23/2020 | 0.67 | 12/23/2020 | 3/23/2020 | 100.17092 | 100.1709203 | 100.1709203 | 100.1709203 | 100.1281015 | 99.72802011 | 99.33113293 | 98.93740177 | 98.54678904 |
| 200403A00004 | 4/3/2020 | 0.47 | 10/5/2020 | 4/3/2020 | 100.03931 | 100.0393052 | 100.0393052 | 100.0393052 | 100.0221502 | 99.83966098 | 99.65784246 | 99.47669097 | 99.29620281 |
| 200403A00027 | 4/3/2020 | 0.62 | 3/3/2021 | 4/3/2020 | 100.21626 | 100.2162623 | 100.2162623 | 100.2162623 | 100.1459675 | 99.55430926 | 98.96960768 | 98.39174073 | 97.82058921 |
| 200709A00013 | 7/13/2020 | 0.45 | 3/19/2021 | 7/13/2020 | 100.12362 | 100.1236198 | 100.1236198 | 100.1236198 | 100.0454192 | 99.41049207 | 98.78359001 | 98.16456158 | 97.55325912 |
| 200309A00024 | 3/11/2020 | 0.57 | 1/7/2021 | 3/11/2020 | 100.14432 | 100.1443158 | 100.1443158 | 100.1443158 | 100.0964152 | 99.65527333 | 99.21801144 | 98.78457845 | 98.3549242 |
| 200320A00017 | 3/20/2020 | 0.62 | 12/18/2020 | 3/20/2020 | 100.14555 | 100.1455496 | 100.1455496 | 100.1455496 | 100.1043366 | 99.71803785 | 99.33472228 | 98.9543553 | 98.5769029 |
| 200325A00012 | 3/25/2020 | 0.71 | 2/25/2021 | 3/25/2020 | 100.26256 | 100.262563 | 100.262563 | 100.262563 | 100.1950497 | 99.61960305 | 99.05073482 | 98.48833282 | 97.9322874 |
| 200325A00057 | 3/25/2020 | 0.71 | 2/25/2021 | 3/25/2020 | 100.26256 | 100.262563 | 100.262563 | 100.262563 | 100.1950497 | 99.61960305 | 99.05073482 | 98.48833282 | 97.9322874 |
| 200326A00041 | 3/26/2020 | 0.36 | 10/2/2020 | 3/26/2020 | 100.01824 | 100.018244 | 100.018244 | 100.018244 | 100.0021048 | 99.82791546 | 99.65433263 | 99.48135313 | 99.30897382 |
| 200327A00015 | 3/27/2020 | 0.73 | 3/26/2021 | 3/27/2020 | 100.3124 | 100.3124032 | 100.3124032 | 100.3124032 | 100.2306522 | 99.57597104 | 98.92980149 | 98.29197847 | 97.66234114 |
| 200330A00025 | 3/30/2020 | 0.5 | 2/26/2021 | 3/30/2020 | 100.14136 | 100.1413642 | 100.1413642 | 100.1413642 | 100.0734578 | 99.49568399 | 98.92454605 | 98.35993034 | 97.80172577 |
| 200330A00035 | 3/30/2020 | 0.39 | 10/30/2020 | 3/30/2020 | 100.03671 | 100.0367106 | 100.0367106 | 100.0367106 | 100.011111 | 99.7597147 | 99.50957689 | 99.26068816 | 99.01303922 |
| 200331A00003 | 3/31/2020 | 0.51 | 11/2/2020 | 3/31/2020 | 100.06922 | 100.0692177 | 100.0692177 | 100.0692177 | 100.042642 | 99.7829322 | 99.52456701 | 99.26753607 | 99.01182908 |
| 200406A00010 | 4/6/2020 | 0.74 | 4/1/2021 | 4/6/2020 | 100.32711 | 100.3271087 | 100.3271087 | 100.3271087 | 100.2423569 | 99.57128141 | 98.90913976 | 98.2557547 | 97.61095364 |
| 200414A00018 | 4/16/2020 | 0.61 | 12/21/2020 | 4/16/2020 | 100.14473 | 100.1447261 | 100.1447261 | 100.1447261 | 100.1025535 | 99.70802388 | 99.31660336 | 98.92825522 | 98.54294335 |

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 200422A00025 | 4/22/2020 | 0.47 | 4/22/2021 | 4/22/2020 | 100.25835 | 100.2583532 | 100.2583532 | 100.2583532 | 100.1626881 | 99.43344951 | 98.71477307 | 98.00643068 | 97.30820076 |
| 200527A00020 | 5/27/2020 | 0.49 | 5/27/2021 | 5/27/2020 | 100.18593 | 100.1859291 | 100.1859291 | 100.1859291 | 100.0728181 | 99.2504118 | 98.44143168 | 97.64555144 | 96.86245524 |
| 200622A00009 | 6/22/2020 | 0.33 | 6/22/2021 | 6/22/2020 | 100.19119 | 100.1911911 | 100.1911911 | 100.1911911 | 100.0643806 | 99.16978265 | 98.29106368 | 97.42780422 | 96.57959947 |
| 191219A00046 | 12/19/2019 | 1.77 | 12/18/2020 | 12/19/2019 | 100.64226 | 100.6422618 | 100.6422618 | 100.6422618 | 100.6008678 | 100.2128151 | 99.82776371 | 99.44567896 | 99.06652645 |
| 200129A00006 | 1/29/2020 | 1.84 | 1/25/2021 | 1/29/2020 | 100.78819 | 100.7881896 | 100.7881896 | 100.7881896 | 100.7335931 | 100.2413053 | 99.75382123 | 99.27107088 | 98.7929855 |
| 200220A00023 | 2/20/2020 | 1.81 | 11/20/2020 | 2/20/2020 | 100.48645 | 100.4864457 | 100.4864457 | 100.4864457 | 100.4540914 | 100.1440335 | 99.83589557 | 99.52965975 | 99.22530841 |
| 200312A00035 | 3/12/2020 | 0.72 | 12/11/2020 | 3/12/2020 | 100.17513 | 100.1751319 | 100.1751319 | 100.1751319 | 100.1361518 | 99.76900135 | 99.40454556 | 99.0427548 | 98.68359984 |
| 200319A00033 | 3/19/2020 | 0.63 | 2/19/2021 | 3/19/2020 | 100.21587 | 100.2158737 | 100.2158737 | 100.2158737 | 100.1509869 | 99.59200794 | 99.03924626 | 98.49259854 | 97.95196377 |
| 200326A00044 | 3/26/2020 | 0.38 | 10/9/2020 | 3/26/2020 | 100.02424 | 100.0242352 | 100.0242352 | 100.0242352 | 100.0057311 | 99.81223564 | 99.61949853 | 99.42751526 | 99.23628135 |
| 200327A00011 | 3/27/2020 | 0.46 | 12/24/2020 | 3/27/2020 | 100.08699 | 100.0869927 | 100.0869927 | 100.0869927 | 100.0438748 | 99.64125532 | 99.24187142 | 98.84568417 | 98.4526553 |
| 200403A00033 | 4/3/2020 | 0.73 | 3/29/2021 | 4/3/2020 | 100.31638 | 100.3163822 | 100.3163822 | 100.3163822 | 100.2331404 | 99.57027344 | 98.91612627 | 98.27052784 | 97.63331163 |
| 200406A00043 | 4/6/2020 | 0.5 | 11/6/2020 | 4/6/2020 | 100.06938 | 100.0693816 | 100.0693816 | 100.0693816 | 100.0415396 | 99.77082207 | 99.50157201 | 99.23377747 | 98.96742664 |
| 200413A00001 | 4/13/2020 | 0.56 | 4/13/2021 | 4/13/2020 | 100.31359 | 100.3135864 | 100.3135864 | 100.3135864 | 100.2225177 | 99.51757502 | 98.82250416 | 98.13709882 | 97.46115841 |
| 200417A00003 | 4/17/2020 | 0.65 | 4/16/2021 | 4/17/2020 | 100.28238 | 100.2823812 | 100.2823812 | 100.2823812 | 100.1899616 | 99.47826408 | 98.77663008 | 98.0848473 | 97.4027094 |
| 200417A00022 | 4/17/2020 | 0.52 | 12/30/2020 | 4/17/2020 | 100.11594 | 100.1159393 | 100.1159393 | 100.1159393 | 100.0708953 | 99.65174806 | 99.23609533 | 98.82389364 | 98.41510026 |
| 200424A00019 | 4/24/2020 | 0.53 | 3/24/2021 | 4/24/2020 | 100.17876 | 100.1787638 | 100.1787638 | 100.1787638 | 100.0980601 | 99.44931879 | 98.80894657 | 98.17678238 | 97.55266923 |
| 200511A00013 | 5/11/2020 | 0.44 | 2/1/2021 | 5/11/2020 | 100.10023 | 100.1002332 | 100.1002332 | 100.1002332 | 100.0432404 | 99.53379377 | 99.02950797 | 98.53030505 | 98.0361086 |
| 191210A00004 | 12/10/2019 | 1.83 | 8/10/2020 | 12/10/2019 | 100.04329 | 100.0432934 | 100.0432934 | 100.0432934 | 100.041229 | 100.013505 | 99.98581164 | 99.95814897 | 99.93051691 |
| 191216A00011 | 12/16/2019 | 1.84 | 10/16/2020 | 12/16/2019 | 100.34098 | 100.3409823 | 100.3409823 | 100.3409823 | 100.3200678 | 100.1067739 | 99.89439955 | 99.68293872 | 99.47238547 |
| 200117A00005 | 1/17/2020 | 1.84 | 10/19/2020 | 1/17/2020 | 100.35429 | 100.3542903 | 100.3542903 | 100.3542903 | 100.3323593 | 100.110766 | 99.89016298 | 99.67054342 | 99.45190075 |
| 200214A00008 | 2/18/2020 | 1.81 | 1/12/2021 | 2/18/2020 | 100.71682 | 100.7168171 | 100.7168171 | 100.7168171 | 100.6669499 | 100.2105564 | 99.75830137 | 99.3101286 | 98.86598288 |
| 200214A00011 | 2/18/2020 | 1.81 | 1/21/2021 | 2/18/2020 | 100.75597 | 100.7559668 | 100.7559668 | 100.7559668 | 100.7028285 | 100.2216123 | 99.74499237 | 99.27290293 | 98.80527955 |
| 200214A00023 | 2/19/2020 | 1.81 | 12/15/2020 | 2/19/2020 | 100.595 | 100.5950034 | 100.5950034 | 100.5950034 | 100.5546449 | 100.1755299 | 99.79927926 | 99.4258605 | 99.05524163 |
| 200306A00026 | 3/6/2020 | 0.72 | 2/5/2021 | 3/6/2020 | 100.24903 | 100.2490311 | 100.2490311 | 100.2490311 | 100.1902452 | 99.66941806 | 99.15398526 | 98.64386331 | 98.13897048 |
| 200309A00025 | 3/9/2020 | 0.57 | 2/9/2021 | 3/9/2020 | 100.16843 | 100.1684273 | 100.1684273 | 100.1684273 | 100.1079286 | 99.57648076 | 99.05065628 | 98.53036624 | 98.01552359 |
| 200309A00053 | 3/9/2020 | 0.68 | 12/9/2020 | 3/9/2020 | 100.15793 | 100.157932 | 100.157932 | 100.157932 | 100.1195959 | 99.75797661 | 99.39897066 | 99.04254969 | 98.68868579 |
| 200313A00012 | 3/16/2020 | 0.77 | 1/5/2021 | 3/16/2020 | 100.23022 | 100.2302174 | 100.2302174 | 100.2302174 | 100.1830165 | 99.74712944 | 99.31502546 | 98.8866555 | 98.46197131 |
| 200316A00039 | 3/16/2020 | 0.83 | 2/16/2021 | 3/16/2020 | 100.32388 | 100.3238846 | 100.3238846 | 100.3238846 | 100.2602705 | 99.70914045 | 99.16405152 | 98.62490472 | 98.09160323 |
| 200318A00003 | 3/18/2020 | 0.71 | 2/18/2021 | 3/18/2020 | 100.25972 | 100.2597226 | 100.2597226 | 100.2597226 | 100.1952572 | 99.63886818 | 99.08863773 | 98.54446404 | 98.0062475 |
| 200318A00021 | 3/18/2020 | 0.71 | 2/18/2021 | 3/18/2020 | 100.25972 | 100.2597226 | 100.2597226 | 100.2597226 | 100.1952572 | 99.63886818 | 99.08863773 | 98.54446404 | 98.0062475 |
| 200318A00042 | 3/18/2020 | 0.6 | 12/18/2020 | 3/18/2020 | 100.13778 | 100.1377764 | 100.1377764 | 100.1377764 | 100.0965652 | 99.71028497 | 99.32698778 | 98.94663907 | 98.56920484 |
| 200319A00032 | 3/19/2020 | 0.6 | 12/18/2020 | 3/19/2020 | 100.13778 | 100.1377764 | 100.1377764 | 100.1377764 | 100.0965652 | 99.71028497 | 99.32698778 | 98.94663907 | 98.56920484 |
| 200324A00015 | 3/24/2020 | 0.58 | 9/25/2020 | 3/24/2020 | 100.05047 | 100.050467 | 100.050467 | 100.050467 | 100.0365114 | 99.88159653 | 99.72716688 | 99.57322016 | 99.41975412 |

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 200324A00048 | 3/24/2020 | 0.64 | 11/2/2020 | 3/24/2020 | 100.10315 | 100.1031477 | 100.1031477 | 100.1031477 | 100.0765665 | 99.81679789 | 99.55837418 | 99.30128495 | 99.04551992 |
| 200325A00022 | 3/25/2020 | 0.62 | 10/26/2020 | 3/25/2020 | 100.09063 | 100.0906283 | 100.0906283 | 100.0906283 | 100.0663711 | 99.82590264 | 99.58659273 | 99.34843296 | 99.11141507 |
| 200325A00056 | 3/25/2020 | 0.63 | 11/25/2020 | 3/25/2020 | 100.12479 | 100.1247871 | 100.1247871 | 100.1247871 | 100.0909207 | 99.76783707 | 99.4468373 | 99.1279013 | 98.81100921 |
| 200330A00063 | 3/30/2020 | 0.64 | 3/30/2021 | 3/30/2020 | 100.25727 | 100.2572671 | 100.2572671 | 100.2572671 | 100.1735536 | 99.50818515 | 98.85160397 | 98.20363713 | 97.56411621 |
| 200401A00018 | 4/1/2020 | 0.7 | 3/30/2021 | 4/1/2020 | 100.29756 | 100.2975614 | 100.2975614 | 100.2975614 | 100.2138311 | 99.54831139 | 98.89158043 | 98.24346521 | 97.60379727 |
| 200403A00020 | 4/3/2020 | 0.63 | 3/5/2021 | 4/3/2020 | 100.22433 | 100.2243271 | 100.2243271 | 100.2243271 | 100.1530363 | 99.55589768 | 98.96584789 | 98.38276131 | 97.80651528 |
| 200406A00003 | 4/6/2020 | 0.47 | 10/7/2020 | 4/6/2020 | 100.04052 | 100.040517 | 100.040517 | 100.040517 | 100.0226863 | 99.8346812 | 99.64739036 | 99.46080968 | 99.27493511 |
| 200406A00023 | 4/6/2020 | 0.53 | 12/4/2020 | 4/6/2020 | 100.09938 | 100.099384 | 100.099384 | 100.099384 | 100.0626607 | 99.71490172 | 99.36955493 | 99.02659535 | 98.68599829 |
| 191112A00020 | 11/12/2019 | 1.85 | 10/13/2020 | 11/12/2019 | 100.32771 | 100.3277112 | 100.3277112 | 100.3277112 | 100.3078152 | 100.1028433 | 99.89872123 | 99.69544371 | 99.49300546 |
| 191210A00005 | 12/10/2019 | 1.85 | 11/10/2020 | 12/10/2019 | 100.45448 | 100.4544802 | 100.4544802 | 100.4544802 | 100.4253033 | 100.1428637 | 99.86201992 | 99.58275832 | 99.30506552 |
| 191220A00012 | 12/20/2019 | 1.85 | 11/20/2020 | 12/20/2019 | 100.49888 | 100.498884 | 100.498884 | 100.498884 | 100.4665273 | 100.1564445 | 99.84828186 | 99.5420214 | 99.23764555 |
| 200108A00011 | 1/8/2020 | 1.88 | 1/4/2021 | 1/8/2020 | 100.71253 | 100.7125258 | 100.7125258 | 100.7125258 | 100.6655587 | 100.2311596 | 99.80050251 | 99.37353937 | 98.95022273 |
| 200304A00003 | 3/4/2020 | 0.98 | 12/4/2020 | 3/4/2020 | 100.2568 | 100.2567997 | 100.2567997 | 100.2567997 | 100.2200425 | 99.87194135 | 99.52625422 | 99.18295605 | 98.84202213 |
| 200309A00051 | 3/9/2020 | 0.72 | 9/10/2020 | 3/9/2020 | 100.05197 | 100.0519739 | 100.0519739 | 100.0519739 | 100.0425551 | 99.92907766 | 99.81586984 | 99.70293067 | 99.59025919 |
| 200311A00018 | 3/11/2020 | 0.71 | 12/11/2020 | 3/11/2020 | 100.17144 | 100.1714396 | 100.1714396 | 100.1714396 | 100.1324603 | 99.76531824 | 99.40087083 | 99.03908841 | 98.67994173 |
| 200316A00047 | 3/16/2020 | 1.04 | 3/16/2021 | 3/16/2020 | 100.49529 | 100.4952929 | 100.4952929 | 100.4952929 | 100.4184348 | 99.79034826 | 99.17009497 | 98.55752898 | 97.95250796 |
| 200320A00022 | 3/20/2020 | 0.57 | 9/21/2020 | 3/20/2020 | 100.04547 | 100.0454701 | 100.0454701 | 100.0454701 | 100.0327244 | 99.88885953 | 99.74541907 | 99.60240114 | 99.45980385 |
| 200320A00030 | 3/20/2020 | 0.64 | 1/20/2021 | 3/20/2020 | 100.18976 | 100.1897589 | 100.1897589 | 100.1897589 | 100.1371485 | 99.66027806 | 99.18794147 | 98.72007419 | 98.25661295 |
| 200325A00027 | 3/25/2020 | 0.71 | 3/25/2021 | 3/25/2020 | 100.38904 | 100.389038 | 100.389038 | 100.389038 | 100.3076017 | 99.65420128 | 99.00927701 | 98.37266484 | 97.74420489 |
| 200327A00052 | 3/27/2020 | 0.73 | 3/26/2021 | 3/27/2020 | 100.3124 | 100.3124032 | 100.3124032 | 100.3124032 | 100.2306522 | 99.57597104 | 98.92980149 | 98.29197847 | 97.66234114 |
| 200403A00019 | 4/3/2020 | 0.47 | 10/5/2020 | 4/3/2020 | 100.03931 | 100.0393052 | 100.0393052 | 100.0393052 | 100.0221502 | 99.83966098 | 99.65784246 | 99.47669097 | 99.29620281 |
| 200408A00016 | 4/8/2020 | 0.71 | 4/5/2021 | 4/8/2020 | 100.31178 | 100.3117839 | 100.3117839 | 100.3117839 | 100.2249882 | 99.54308738 | 98.87041846 | 98.20679503 | 97.55203569 |
| 200720A00010 | 7/20/2020 | 0.28 | 7/20/2021 | 7/20/2020 | 100.15857 | 100.1585679 | 100.1585679 | 100.1585679 | 100.0163546 | 99.04619076 | 98.09469733 | 97.16133998 | 96.24560455 |
| 200729A00013 | 7/30/2020 | 0.43 | 6/15/2021 | 7/30/2020 | 100.14451 | 100.1445051 | 100.1445051 | 100.1445051 | 100.0216292 | 99.14803313 | 98.28959447 | 97.44592166 | 96.61663649 |
| 191219A00050 | 12/19/2019 | 1.84 | 11/19/2020 | 12/19/2019 | 100.49136 | 100.4913617 | 100.4913617 | 100.4913617 | 100.4593236 | 100.1520107 | 99.84658474 | 99.54302831 | 99.24132424 |
| 200122A00009 | 1/22/2020 | 1.86 | 12/22/2020 | 1/22/2020 | 100.64545 | 100.6454476 | 100.6454476 | 100.6454476 | 100.6028325 | 100.2043428 | 99.80901145 | 99.41680111 | 99.02767484 |
| 200309A00017 | 3/9/2020 | 0.55 | 3/9/2021 | 3/9/2020 | 100.26449 | 100.2644928 | 100.2644928 | 100.2644928 | 100.1910682 | 99.58182195 | 98.97995858 | 98.38534446 | 97.79784916 |
| 200313A00021 | 3/13/2020 | 0.74 | 3/12/2021 | 3/13/2020 | 100.38628 | 100.3862764 | 100.3862764 | 100.3862764 | 100.3113121 | 99.69344117 | 99.08315832 | 98.48032428 | 97.8848032 |
| 200318A00001 | 3/18/2020 | 0.68 | 11/18/2020 | 3/18/2020 | 100.13268 | 100.132677 | 100.132677 | 100.132677 | 100.1010247 | 99.79717468 | 99.49517546 | 99.19501006 | 98.89666176 |
| 200319A00017 | 3/19/2020 | 0.6 | 12/15/2020 | 3/19/2020 | 100.1348 | 100.1347966 | 100.1347966 | 100.1347966 | 100.0945459 | 99.71650661 | 99.34132572 | 98.96897074 | 98.59940975 |
| 200319A00021 | 3/19/2020 | 0.6 | 12/18/2020 | 3/19/2020 | 100.13778 | 100.1377764 | 100.1377764 | 100.1377764 | 100.0965652 | 99.71028497 | 99.32698778 | 98.94663907 | 98.56920484 |
| 200320A00028 | 3/20/2020 | 0.62 | 12/18/2020 | 3/20/2020 | 100.14555 | 100.1455496 | 100.1455496 | 100.1455496 | 100.1043366 | 99.71803785 | 99.33472228 | 98.9543553 | 98.5769029 |
| 200320A00032 | 3/20/2020 | 0.67 | 2/19/2021 | 3/20/2020 | 100.23841 | 100.2384112 | 100.2384112 | 100.2384112 | 100.1735166 | 99.61446469 | 99.06163065 | 98.51491114 | 97.97420514 |

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 200320A00040 | 3/20/2020 | 0.57 | 9/25/2020 | 3/20/2020 | 100.04891 | 100.048912 | 100.048912 | 100.048912 | 100.0349565 | 99.88004356 | 99.72561584 | 99.57167104 | 99.41820691 |
| 200323A00006 | 3/23/2020 | 0.85 | 3/23/2021 | 3/23/2020 | 100.38668 | 100.3866836 | 100.3866836 | 100.3866836 | 100.3063917 | 99.65961086 | 99.02113737 | 98.39081195 | 97.76847939 |
| 200323A00012 | 3/23/2020 | 0.69 | 2/23/2021 | 3/23/2020 | 100.24868 | 100.2486802 | 100.2486802 | 100.2486802 | 100.1820446 | 99.61210451 | 99.04862139 | 98.49148603 | 97.94059168 |
| 200323A00019 | 3/23/2020 | 0.69 | 3/23/2021 | 3/23/2020 | 100.37269 | 100.3726927 | 100.3726927 | 100.3726927 | 100.2922585 | 99.64438078 | 99.00484054 | 98.37347758 | 97.75013579 |
| 200323A00040 | 3/23/2020 | 0.67 | 12/23/2020 | 3/23/2020 | 100.17092 | 100.1709203 | 100.1709203 | 100.1709203 | 100.1281015 | 99.72802011 | 99.33113293 | 98.93740177 | 98.54678904 |
| 200331A00025 | 3/31/2020 | 0.56 | 12/31/2020 | 3/31/2020 | 100.1337 | 100.1337 | 100.1337 | 100.1337 | 100.0883317 | 99.66639716 | 99.24800103 | 98.83309906 | 98.42164774 |
| 200406A00047 | 4/6/2020 | 0.63 | 3/5/2021 | 4/6/2020 | 100.22433 | 100.2243271 | 100.2243271 | 100.2243271 | 100.1530363 | 99.55589768 | 98.96584789 | 98.3827613 | 97.80651528 |
| 200408A00023 | 4/8/2020 | 0.71 | 4/8/2021 | 4/8/2020 | 100.31553 | 100.3155255 | 100.3155255 | 100.3155255 | 100.2271905 | 99.53711462 | 98.85649619 | 98.18514187 | 97.52286352 |
| 200413A00020 | 4/13/2020 | 0.65 | 3/12/2021 | 4/13/2020 | 100.2441 | 100.2441027 | 100.2441027 | 100.2441027 | 100.169329 | 99.55304046 | 98.94430761 | 98.34299208 | 97.74895888 |
| 200422A00029 | 4/22/2020 | 0.47 | 4/22/2021 | 4/22/2020 | 100.25835 | 100.2583532 | 100.2583532 | 100.2583532 | 100.1626881 | 99.43344951 | 98.71477307 | 98.00643068 | 97.30820076 |
| 200520A00003 | 5/20/2020 | 0.33 | 5/20/2021 | 5/20/2020 | 100.17186 | 100.1718635 | 100.1718635 | 100.1718635 | 100.0620475 | 99.257042 | 98.46490938 | 97.68534294 | 96.91804562 |
| 200630A00001 | 6/30/2020 | 0.47 | 6/25/2021 | 6/30/2020 | 100.18544 | 100.185443 | 100.185443 | 100.185443 | 100.0573593 | 99.1565474 | 98.27183684 | 97.40279942 | 96.54902198 |
| 200406A00058 | 4/6/2020 | 0.53 | 12/4/2020 | 4/6/2020 | 100.09938 | 100.099384 | 100.099384 | 100.099384 | 100.0626607 | 99.71490172 | 99.36955493 | 99.02659535 | 98.68599829 |
| 200203A00020 | 2/3/2020 | 1.83 | 9/3/2020 | 2/3/2020 | 100.14804 | 100.1480378 | 100.1480378 | 100.1480378 | 100.1407294 | 100.0465062 | 99.952464 | 99.85860227 | 99.76492047 |
| 200218A00016 | 2/18/2020 | 1.83 | 9/18/2020 | 2/18/2020 | 100.21434 | 100.2143375 | 100.2143375 | 100.2143375 | 100.2024823 | 100.0667038 | 99.93130621 | 99.79628789 | 99.66164723 |
| 200316A00014 | 3/16/2020 | 1.04 | 3/16/2021 | 3/16/2020 | 100.49529 | 100.4952929 | 100.4952929 | 100.4952929 | 100.4184348 | 99.79034826 | 99.17009497 | 98.55752898 | 97.95250796 |
| 200318A00045 | 3/18/2020 | 0.62 | 1/15/2021 | 3/18/2020 | 100.17491 | 100.1749117 | 100.1749117 | 100.1749117 | 100.1241121 | 99.66097486 | 99.20211712 | 98.7474796 | 98.2970042 |
| 200325A00002 | 3/25/2020 | 0.87 | 3/25/2021 | 3/25/2020 | 100.40316 | 100.4031558 | 100.4031558 | 100.4031558 | 100.321864 | 99.66957197 | 99.02572551 | 98.39016149 | 97.76272095 |
| 200406A00045 | 4/6/2020 | 0.53 | 12/4/2020 | 4/6/2020 | 100.09938 | 100.099384 | 100.099384 | 100.099384 | 100.0626607 | 99.71490172 | 99.36955493 | 99.02659535 | 98.68599829 |
| 200408A00018 | 4/8/2020 | 0.5 | 10/9/2020 | 4/8/2020 | 100.04756 | 100.04756 | 100.04756 | 100.04756 | 100.0290529 | 99.83552412 | 99.64275377 | 99.45073736 | 99.25947042 |
| 200413A00014 | 4/13/2020 | 0.56 | 4/13/2021 | 4/13/2020 | 100.31359 | 100.3135864 | 100.3135864 | 100.3135864 | 100.2225177 | 99.51757502 | 98.82250416 | 98.13709882 | 97.46115841 |
| 200414A00005 | 4/14/2020 | 0.63 | 10/15/2020 | 4/14/2020 | 100.07913 | 100.079129 | 100.079129 | 100.079129 | 100.0585911 | 99.84847663 | 99.63925676 | 99.43092572 | 99.22347782 |
| 200428A00008 | 4/28/2020 | 0.45 | 4/28/2021 | 4/28/2020 | 100.24913 | 100.2491296 | 100.2491296 | 100.2491296 | 100.1503886 | 99.40485174 | 98.67034478 | 97.94662459 | 97.23345517 |
| 200605A00001 | 6/5/2020 | 0.52 | 6/4/2021 | 6/5/2020 | 100.21654 | 100.2165355 | 100.2165355 | 100.2165355 | 100.0993217 | 99.25512288 | 98.42506591 | 97.60879808 | 96.80597836 |
| 200720A00022 | 7/22/2020 | 1.94 | 7/22/2021 | 7/22/2020 | 101.6427 | 101.6426958 | 101.6426958 | 101.6426958 | 101.4987048 | 100.5174822 | 99.55516448 | 98.61120933 | 97.68509497 |
| 200729A00012 | 7/30/2020 | 0.42 | 4/30/2021 | 7/30/2020 | 100.12329 | 100.1232864 | 100.1232864 | 100.1232864 | 100.0237726 | 99.27470372 | 98.53677593 | 97.80974248 | 97.09336389 |
| 150601A00320 | 6/1/2015 | 2.63 | 6/28/2023 | 6/1/2015 | 103.38509 | 103.3850936 | 103.3850936 | 103.3850936 | 103.1048958 | 101.6415776 | 100.214214 | 98.82162586 | 97.46268204 |
| 150601A00342 | 6/1/2015 | 3.97 | 8/26/2033 | 6/1/2015 | 123.60117 | 123.6011705 | 123.6011705 | 123.2463744 | 117.9054433 | 111.2151542 | 105.07813 | 99.44051124 | 94.25424374 |
| 150601A00433 | 6/1/2015 | 1.91 | 3/17/2021 | 6/1/2015 | 100.5212 | 100.5211959 | 100.5211959 | 100.5211959 | 100.4860863 | 100.1661677 | 99.84909418 | 99.53482365 | 99.22331486 |
| 150601A00434 | 6/1/2015 | 1.91 | 3/17/2021 | 6/1/2015 | 100.5212 | 100.5211954 | 100.5211954 | 100.5211954 | 100.4860858 | 100.1661675 | 99.84909433 | 99.53482412 | 99.22331564 |
| 150601A00435 | 6/1/2015 | 1.91 | 3/17/2021 | 6/1/2015 | 100.52119 | 100.521195 | 100.521195 | 100.521195 | 100.4860854 | 100.1661674 | 99.84909446 | 99.5348245 | 99.22331626 |
| 150601A00439 | 6/1/2015 | 2.57 | 3/18/2024 | 6/1/2015 | 104.11047 | 104.1104683 | 104.1104683 | 104.1104683 | 103.7117504 | 101.888335 | 100.1175604 | 98.39747353 | 96.72620858 |
| 180329A00011 | 3/29/2018 | 2.77 | 3/29/2023 | 3/29/2018 | 103.48121 | 103.4812112 | 103.4812112 | 103.4812112 | 103.223615 | 101.8251054 | 100.4590831 | 99.12452369 | 97.82044331 |

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 180402A00025 | 4/2/2018 | 3.27 | 4/2/2031 | 4/2/2018 | 117.03265 | 117.0326512 | 117.0326512 | 117.0256799 | 112.9820599 | 107.2111933 | 101.8571336 | 96.88466763 | 92.26187574 |
| 180508A00038 | 5/8/2018 | 3.57 | 5/9/2033 | 5/8/2018 | 122.68371 | 122.6837088 | 122.6837088 | 122.3237579 | 116.5750973 | 109.5645944 | 103.1452326 | 97.25908918 | 91.85448487 |
| 180607A00028 | 6/7/2018 | 2.76 | 6/7/2021 | 6/7/2018 | 101.15932 | 101.1593242 | 101.1593242 | 101.1593242 | 101.1036592 | 100.6394159 | 100.1805456 | 99.72694423 | 99.27851094 |
| 180612A00012 | 6/12/2018 | 2.94 | 6/12/2023 | 6/12/2018 | 104.0614 | 104.0613957 | 104.0613957 | 104.0613957 | 103.7677018 | 102.2376261 | 100.7452798 | 99.28942432 | 97.86887189 |
| 180712A00048 | 7/12/2018 | 3.05 | 7/12/2023 | 7/12/2018 | 107.92087 | 107.9208671 | 107.9208671 | 107.9208671 | 107.2359845 | 104.3571799 | 101.5729969 | 98.8797957 | 96.27409795 |
| 180302A00012 | 3/2/2018 | 3.3 | 3/4/2031 | 3/2/2018 | 116.93939 | 116.9393929 | 116.9393929 | 116.9371677 | 113.0192494 | 107.329154 | 102.0445338 | 97.13156669 | 92.55955597 |
| 180302A00014 | 3/2/2018 | 2.69 | 3/2/2023 | 3/2/2018 | 103.26512 | 103.2651185 | 103.2651185 | 103.2651185 | 103.0190263 | 101.664681 | 100.3411568 | 99.04749569 | 97.78277756 |
| 180316A00003 | 3/16/2018 | 2.43 | 3/16/2021 | 3/16/2018 | 100.871 | 100.8709962 | 100.8709962 | 100.8709962 | 100.8292567 | 100.4526067 | 100.0794321 | 99.70968002 | 99.34329832 |
| 180321A00015 | 3/21/2018 | 3.02 | 3/21/2025 | 3/21/2018 | 107.30731 | 107.3073099 | 107.3073099 | 107.3073099 | 106.5397837 | 103.8527918 | 101.2673358 | 98.7787174 | 96.38249002 |
| 180322A00030 | 3/22/2018 | 2.79 | 3/24/2025 | 3/22/2018 | 106.55909 | 106.5590853 | 106.5590853 | 106.5590853 | 105.9026398 | 103.4434608 | 101.0715383 | 98.78303184 | 96.57429847 |
| 180323A00008 | 3/23/2018 | 3.35 | 3/24/2031 | 3/23/2018 | 117.37648 | 117.37648 | 117.37648 | 117.3720813 | 113.3777225 | 107.6279358 | 102.2906743 | 97.33130497 | 92.71841459 |
| 171222A00017 | 12/22/2017 | 3.04 | 12/23/2030 | 12/22/2017 | 115.15238 | 115.1523773 | 115.1523773 | 115.1523773 | 111.4170925 | 105.8898081 | 100.7509524 | 95.96855263 | 91.51355323 |
| 180112A00013 | 1/12/2018 | 3.05 | 1/14/2031 | 1/12/2018 | 115.33517 | 115.3351716 | 115.3351716 | 115.3348381 | 111.532115 | 105.9581181 | 100.7785483 | 95.96072576 | 91.47497115 |
| 180119A00025 | 1/19/2018 | 3.08 | 1/21/2031 | 1/19/2018 | 115.51087 | 115.5108693 | 115.5108693 | 115.5103686 | 111.7016865 | 106.1190977 | 100.9315621 | 96.10634556 | 91.61371996 |
| 180126A00015 | 1/26/2018 | 3.08 | 1/27/2031 | 1/26/2018 | 115.51129 | 115.5112917 | 115.5112917 | 115.5106484 | 111.7017988 | 106.1190983 | 100.9314757 | 96.106193 | 91.61351862 |
| 180202A00020 | 2/2/2018 | 3.41 | 2/3/2031 | 2/2/2018 | 117.59128 | 117.5912797 | 117.5912797 | 117.5897101 | 113.6507788 | 107.9295881 | 102.6160106 | 97.67605435 | 93.07886773 |
| 180209A00010 | 2/9/2018 | 3.25 | 2/10/2031 | 2/9/2018 | 116.64166 | 116.6416593 | 116.6416593 | 116.639916 | 112.7323887 | 107.0570756 | 101.7861329 | 96.88583644 | 92.32557786 |
| 171103A00011 | 11/3/2017 | 2.83 | 11/4/2030 | 11/3/2017 | 113.82541 | 113.8254079 | 113.8254079 | 113.8254079 | 110.1949058 | 104.7692492 | 99.72216787 | 95.02271172 | 90.64273656 |
| 171117A00017 | 11/17/2017 | 2.9 | 11/18/2030 | 11/17/2017 | 114.22568 | 114.2256802 | 114.2256802 | 114.2256802 | 110.5817242 | 105.1367566 | 100.0717475 | 95.35562984 | 90.96015331 |
| 171127A00023 | 11/27/2017 | 2.85 | 11/27/2030 | 11/27/2017 | 113.94085 | 113.9408531 | 113.9408531 | 113.9408531 | 110.3054997 | 104.8739208 | 99.82139281 | 95.11692013 | 90.7323179 |
| 171130A00037 | 11/10/2017 | 2.85 | 11/12/2030 | 11/10/2017 | 113.93989 | 113.9398945 | 113.9398945 | 113.9398945 | 110.3053269 | 104.8740635 | 99.82178728 | 95.11751223 | 90.73306168 |
| 171208A00017 | 12/8/2017 | 2.9 | 12/9/2030 | 12/8/2017 | 114.34309 | 114.3430915 | 114.3430915 | 114.3430915 | 110.634658 | 105.1463681 | 100.0437337 | 95.29501432 | 90.87136516 |
| 171215A00022 | 12/15/2017 | 2.91 | 12/16/2030 | 12/15/2017 | 114.40115 | 114.4011503 | 114.4011503 | 114.4011503 | 110.6904747 | 105.1992707 | 100.0939447 | 95.34273592 | 90.91678116 |
| 170921A00056 | 9/21/2017 | 2.82 | 9/21/2027 | 9/21/2017 | 115.81112 | 115.8111163 | 115.8111163 | 115.8111163 | 111.8276907 | 105.5694317 | 99.7353393 | 94.29379783 | 89.21572767 |
| 170925A00048 | 9/25/2017 | 2.75 | 9/25/2030 | 9/25/2017 | 113.1501 | 113.1501002 | 113.1501002 | 113.1501002 | 109.6596904 | 104.3411122 | 99.38846163 | 94.77221753 | 90.4655014 |
| 170929A00028 | 9/29/2017 | 2.8 | 9/30/2030 | 9/29/2017 | 113.43008 | 113.4300831 | 113.4300831 | 113.4300831 | 109.9308536 | 104.5990946 | 99.63418367 | 95.00652373 | 90.68916766 |
| 171006A00020 | 10/6/2017 | 2.88 | 10/7/2030 | 10/6/2017 | 113.99378 | 113.9937809 | 113.9937809 | 113.9937809 | 110.4183694 | 105.0225708 | 100.000616 | 95.32214581 | 90.9595359 |
| 171013A00004 | 10/13/2017 | 2.77 | 10/15/2030 | 10/13/2017 | 113.37278 | 113.3727789 | 113.3727789 | 113.3727789 | 109.8163186 | 104.4496577 | 99.45484543 | 94.80168228 | 90.46268924 |
| 171020A00012 | 10/20/2017 | 2.85 | 10/21/2030 | 10/20/2017 | 113.8249 | 113.8249044 | 113.8249044 | 113.8249044 | 110.2540524 | 104.865968 | 99.85122929 | 95.17951356 | 90.82322988 |
| 170825A00015 | 8/25/2017 | 2.68 | 8/26/2030 | 8/25/2017 | 112.65224 | 112.6522407 | 112.6522407 | 112.6522407 | 109.2359749 | 103.9784245 | 99.08001435 | 94.51196774 | 90.2480673 |
| 170830A00040 | 8/30/2017 | 1.84 | 8/30/2022 | 8/30/2017 | 101.6927 | 101.6927019 | 101.6927019 | 101.6927019 | 101.5121783 | 100.4303941 | 99.37022205 | 98.33103975 | 97.31224842 |
| 170831A00026 | 8/31/2017 | 1.65 | 8/31/2020 | 8/31/2017 | 100.11955 | 100.1195483 | 100.1195483 | 100.1195483 | 100.1131501 | 100.0272519 | 99.94149875 | 99.85589041 | 99.77042649 |
| 170901A00005 | 9/1/2017 | 2.58 | 9/3/2030 | 9/1/2017 | 112.20125 | 112.201252 | 112.201252 | 112.201252 | 108.7410716 | 103.4673839 | 98.55648333 | 93.97910818 | 89.70861565 |

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 170908A00007 | 9/8/2017 | 2.52 | 9/9/2030 | 9/8/2017 | 111.86832 | 111.8683214 | 111.8683214 | 111.8683214 | 108.4180265 | 103.159802 | 98.26331829 | 93.69939619 | 89.4414682 |
| 170915A00019 | 9/15/2017 | 2.67 | 9/16/2030 | 9/15/2017 | 112.70304 | 112.7030437 | 112.7030437 | 112.7030437 | 109.2267759 | 103.9292914 | 98.99626207 | 94.39828811 | 90.10860114 |
| 170705A00021 | 7/5/2017 | 2.59 | 7/6/2027 | 7/5/2017 | 112.83744 | 112.8374353 | 112.8374353 | 112.8374353 | 109.9419252 | 104.7626787 | 99.90369613 | 95.34255816 | 91.05855756 |
| 170714A00014 | 7/14/2017 | 2.78 | 7/15/2030 | 7/14/2017 | 113.08303 | 113.0830253 | 113.0830253 | 113.0830253 | 109.716765 | 104.4809318 | 99.60001215 | 95.04577274 | 90.79247418 |
| 170720A00017 | 7/20/2017 | 2.74 | 7/19/2030 | 7/20/2017 | 112.87378 | 112.8737771 | 112.8737771 | 112.8737771 | 109.5097118 | 104.279888 | 99.40470643 | 94.855948 | 90.60788687 |
| 170804A00009 | 8/4/2017 | 2.71 | 8/5/2030 | 8/4/2017 | 112.81687 | 112.8168706 | 112.8168706 | 112.8168706 | 109.3967144 | 104.1319218 | 99.2267097 | 94.65227201 | 90.382364 |
| 170811A00006 | 8/11/2017 | 2.67 | 8/12/2030 | 8/11/2017 | 112.59613 | 112.5961273 | 112.5961273 | 112.5961273 | 109.1822408 | 103.9275519 | 99.0317725 | 94.46614816 | 90.2044815 |
| 170817A00008 | 8/17/2017 | 2.71 | 8/16/2030 | 8/17/2017 | 112.81754 | 112.8175354 | 112.8175354 | 112.8175354 | 109.3967771 | 104.1317178 | 99.22628482 | 94.65166522 | 90.38160849 |
| 170602A00010 | 6/2/2017 | 2.7 | 6/3/2030 | 6/2/2017 | 112.54545 | 112.5454525 | 112.5454525 | 112.5454525 | 109.249759 | 104.0733393 | 99.24533972 | 94.73823281 | 90.5269068 |
| 170609A00011 | 6/9/2017 | 2.74 | 6/10/2030 | 6/9/2017 | 112.76339 | 112.7633897 | 112.7633897 | 112.7633897 | 109.4609711 | 104.2743931 | 99.43693673 | 94.92101689 | 90.7014696 |
| 170616A00012 | 6/16/2017 | 2.69 | 6/17/2030 | 6/16/2017 | 112.49193 | 112.4919328 | 112.4919328 | 112.4919328 | 109.1970698 | 104.0228 | 99.19684385 | 94.69167793 | 90.48219465 |
| 170623A00020 | 6/23/2017 | 2.67 | 6/24/2030 | 6/23/2017 | 112.38381 | 112.3838127 | 112.3838127 | 112.3838127 | 109.0917346 | 103.9222617 | 99.10080033 | 94.59984868 | 90.39431921 |
| 170630A00023 | 6/30/2017 | 2.77 | 7/1/2030 | 6/30/2017 | 112.92799 | 112.927989 | 112.927989 | 112.927989 | 109.6197968 | 104.4253026 | 99.58051887 | 95.05780787 | 90.83195826 |
| 170630A00051 | 6/30/2017 | 1.75 | 6/30/2021 | 6/30/2017 | 100.75204 | 100.7520368 | 100.7520368 | 100.7520368 | 100.6896485 | 100.1854067 | 99.68754984 | 99.19594294 | 98.71045511 |
| 170428A00034 | 4/28/2017 | 2.92 | 4/29/2030 | 4/28/2017 | 113.50966 | 113.5096576 | 113.5096576 | 113.5096576 | 110.2998078 | 105.1554423 | 100.3523146 | 95.86383179 | 91.66570496 |
| 170505A00007 | 5/5/2017 | 2.92 | 5/6/2030 | 5/5/2017 | 113.62651 | 113.6265105 | 113.6265105 | 113.6265105 | 110.3571332 | 105.1694704 | 100.3284187 | 95.80678268 | 91.57973818 |
| 170512A00030 | 5/12/2017 | 2.94 | 5/12/2027 | 5/12/2017 | 114.98914 | 114.9891379 | 114.9891379 | 114.9891379 | 111.6932294 | 105.9996139 | 100.6675975 | 95.67163916 | 90.98815254 |
| 170518A00028 | 5/18/2017 | 2.45 | 5/20/2024 | 5/18/2017 | 107.71485 | 107.7148502 | 107.7148502 | 107.7148502 | 106.6543256 | 103.1001608 | 99.68906983 | 96.41448036 | 93.27015935 |
| 170519A00021 | 5/19/2017 | 2.79 | 5/20/2030 | 5/19/2017 | 112.9121 | 112.9121011 | 112.9121011 | 112.9121011 | 109.6667685 | 104.5154808 | 99.70827373 | 95.2181532 | 91.02047877 |
| 170526A00022 | 5/26/2017 | 2.77 | 5/28/2030 | 5/26/2017 | 112.81656 | 112.816556 | 112.816556 | 112.816556 | 109.5692431 | 104.4179973 | 99.61099342 | 95.12121588 | 90.92400514 |
| 170324A00011 | 3/24/2017 | 3 | 3/25/2030 | 3/24/2017 | 113.81735 | 113.817349 | 113.817349 | 113.817349 | 110.6561171 | 105.5365912 | 100.7541057 | 96.28258208 | 92.09818575 |
| 170331A00016 | 3/31/2017 | 3.02 | 4/1/2030 | 3/31/2017 | 113.92455 | 113.924548 | 113.924548 | 113.924548 | 110.7600701 | 105.6356492 | 100.8486082 | 96.37284039 | 92.18448606 |
| 170406A00031 | 4/6/2017 | 3.01 | 4/6/2027 | 4/6/2017 | 116.0601 | 116.0601008 | 116.0601008 | 116.0601008 | 112.584438 | 106.6277164 | 101.0525971 | 95.8321101 | 90.94134518 |
| 170407A00012 | 4/7/2017 | 2.88 | 4/8/2030 | 4/7/2017 | 113.29346 | 113.2934626 | 113.2934626 | 113.2934626 | 110.0907144 | 104.9565233 | 100.1628392 | 95.68313223 | 91.49317055 |
| 170417A00018 | 4/17/2017 | 2.82 | 4/17/2030 | 4/17/2017 | 112.97236 | 112.9723585 | 112.9723585 | 112.9723585 | 109.7781726 | 104.6582837 | 99.87797919 | 95.4107984 | 91.23257282 |
| 170417A00059 | 4/17/2017 | 2.14 | 4/18/2022 | 4/17/2017 | 103.06657 | 103.0665726 | 103.0665726 | 103.0665726 | 102.7717639 | 101.1304197 | 99.52391197 | 97.95118861 | 96.41124022 |
| 160628A00006 | 6/28/2016 | 1.44 | 6/28/2023 | 6/28/2016 | 101.74665 | 101.7466485 | 101.7466485 | 101.7466485 | 101.4589218 | 99.96150303 | 98.50105841 | 97.07637237 | 95.68627907 |
| 160707A00017 | 7/7/2016 | 1.22 | 7/7/2021 | 7/7/2016 | 101.01731 | 101.017309 | 101.017309 | 101.017309 | 100.8856566 | 99.96875883 | 99.06869085 | 98.18499075 | 97.31721342 |
| 161222A00035 | 12/22/2016 | 2.29 | 12/22/2023 | 12/22/2016 | 103.52531 | 103.5253062 | 103.5253062 | 103.5253062 | 103.1581481 | 101.4088781 | 99.70781951 | 98.05324901 | 96.44351822 |
| 161222A00036 | 12/22/2016 | 2.69 | 12/22/2026 | 12/22/2016 | 107.80678 | 107.8067785 | 107.8067785 | 107.8067785 | 106.6158262 | 103.3556653 | 100.2442504 | 97.27336584 | 94.43531324 |
| 161222A00037 | 12/22/2016 | 3.08 | 12/22/2031 | 12/22/2016 | 115.99069 | 115.9906922 | 115.9906922 | 115.9367559 | 111.7918984 | 106.0517482 | 100.7377685 | 95.81267627 | 91.24280886 |
| 170317A00022 | 3/17/2017 | 3.11 | 3/18/2030 | 3/17/2017 | 114.40473 | 114.4047266 | 114.4047266 | 114.4047266 | 111.2276187 | 106.0819007 | 101.2749252 | 96.78048423 | 92.57462461 |
| 160603A00015 | 6/3/2016 | 1.95 | 6/5/2023 | 6/3/2016 | 104.55465 | 104.5546516 | 104.5546516 | 104.5546516 | 103.9270837 | 101.2152482 | 98.5898534 | 96.04767911 | 93.58564282 |

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 160608A00026 | 6/8/2016 | 2.36 | 6/8/2026 | 6/8/2016 | 110.74167 | 110.7416739 | 110.7416739 | 110.7416739 | 108.2475691 | 103.0862807 | 98.22168289 | 93.63491634 | 89.30842033 |
| 160608A00031 | 6/8/2016 | 2.36 | 6/8/2026 | 6/8/2016 | 110.74167 | 110.7416739 | 110.7416739 | 110.7416739 | 108.2475691 | 103.0862807 | 98.22168289 | 93.63491634 | 89.30842033 |
| 160608A00032 | 6/8/2016 | 2.36 | 6/8/2026 | 6/8/2016 | 110.74167 | 110.7416739 | 110.7416739 | 110.7416739 | 108.2475691 | 103.0862807 | 98.22168289 | 93.63491634 | 89.30842033 |
| 160609A00075 | 6/9/2016 | 1.94 | 6/9/2026 | 6/9/2016 | 105.03388 | 105.0338837 | 105.0338837 | 105.0338837 | 104.0180964 | 100.9963041 | 98.10473369 | 95.33658202 | 92.68545273 |
| 160620A00018 | 6/20/2016 | 1.25 | 6/21/2021 | 6/20/2016 | 100.49724 | 100.497242 | 100.497242 | 100.497242 | 100.4352553 | 99.93328762 | 99.43763477 | 98.94816462 | 98.4647489 |
| 150601A00542 | 6/1/2015 | 1.97 | 8/4/2021 | 6/1/2015 | 100.85579 | 100.8557932 | 100.8557932 | 100.8557932 | 100.7902232 | 100.278181 | 99.77325667 | 99.27528505 | 98.78410646 |
| 150601A00549 | 6/1/2015 | 1.94 | 8/13/2021 | 6/1/2015 | 100.86172 | 100.8617176 | 100.8617176 | 100.8617176 | 100.7938849 | 100.26896 | 99.75150148 | 99.24133218 | 98.738281 |
| 150601A00559 | 6/1/2015 | 3.06 | 8/31/2029 | 6/1/2015 | 112.38394 | 112.3839423 | 112.3839423 | 112.3839423 | 109.8286495 | 105.258442 | 100.9679164 | 96.93674007 | 93.14623549 |
| 150601A00589 | 6/1/2015 | 2.52 | 7/14/2025 | 6/1/2015 | 105.45343 | 105.4534301 | 105.4534301 | 105.4534301 | 104.7598321 | 102.2761734 | 99.88414286 | 97.57955961 | 95.35846477 |
| 150601A00684 | 6/1/2015 | 2.25 | 2/7/2025 | 6/1/2015 | 104.38487 | 104.3848673 | 104.3848673 | 104.3848673 | 103.8003865 | 101.5401779 | 99.35753388 | 97.24913169 | 95.21181564 |
| 160531A00012 | 5/31/2016 | 1.43 | 6/1/2021 | 5/31/2016 | 100.54203 | 100.5420261 | 100.5420261 | 100.5420261 | 100.4864774 | 100.0235146 | 99.5659204 | 99.11359086 | 98.66642499 |
| 150601A00440 | 6/1/2015 | 3.27 | 3/16/2029 | 6/1/2015 | 112.66537 | 112.6653697 | 112.6653697 | 112.6653697 | 110.3712381 | 106.0001215 | 101.8846993 | 98.00715359 | 94.35106026 |
| 150601A00443 | 6/1/2015 | 1.91 | 4/9/2021 | 6/1/2015 | 100.57709 | 100.5770925 | 100.5770925 | 100.5770925 | 100.5370164 | 100.1828925 | 99.83223264 | 99.48498047 | 99.14108082 |
| 150601A00450 | 6/1/2015 | 3.28 | 4/27/2029 | 6/1/2015 | 112.87265 | 112.8726528 | 112.8726528 | 112.8726528 | 110.5121273 | 106.0837237 | 101.9172253 | 97.99419001 | 94.29763273 |
| 150601A00460 | 6/1/2015 | 3.05 | 5/16/2029 | 6/1/2015 | 111.94092 | 111.9409166 | 111.9409166 | 111.9409166 | 109.5630844 | 105.1390668 | 100.9782718 | 97.06206727 | 93.37329981 |
| 150601A00506 | 6/1/2015 | 3.14 | 7/6/2029 | 6/1/2015 | 112.5348 | 112.5348001 | 112.5348001 | 112.5348001 | 110.0663174 | 105.5596501 | 101.3247444 | 97.34211501 | 93.59384201 |
| 150601A00528 | 6/1/2015 | 3.08 | 7/27/2029 | 6/1/2015 | 112.34212 | 112.3421214 | 112.3421214 | 112.3421214 | 109.8444658 | 105.3191062 | 101.0681307 | 97.07176577 | 93.31183404 |
| 150601A00571 | 6/1/2015 | 2.5 | 9/23/2022 | 6/1/2015 | 102.0045 | 102.0045041 | 102.0045041 | 102.0045041 | 101.84205 | 100.9244252 | 100.0275817 | 99.15084012 | 98.29354961 |
| 180919A00090 | 3/19/2020 | 3.24 | 3/19/2024 | 3/19/2020 | 110.79214 | 110.7921373 | 110.7921373 | 110.7921373 | 109.7206243 | 106.0301172 | 102.4850457 | 99.07885609 | 95.80532982 |
| 200207A00007 | 2/7/2020 | 1.74 | 2/7/2023 | 2/7/2020 | 103.68068 | 103.6806831 | 103.6806831 | 103.6806831 | 103.1417322 | 100.6422715 | 98.21616761 | 95.86083975 | 93.57381462 |
| 200207A00013 | 2/12/2020 | 1.73 | 2/10/2023 | 2/12/2020 | 103.66685 | 103.6668458 | 103.6668458 | 103.6668458 | 103.1251677 | 100.6172334 | 98.18307776 | 95.82009796 | 93.52579974 |
| 200211A00014 | 2/11/2020 | 1.75 | 8/11/2023 | 2/11/2020 | 104.44653 | 104.4465289 | 104.4465289 | 104.4465289 | 103.7063863 | 100.7063279 | 97.80866782 | 95.00934294 | 92.30447574 |
| 200211A00017 | 2/11/2020 | 1.77 | 8/12/2024 | 2/11/2020 | 105.9952 | 105.9952041 | 105.9952041 | 105.9952041 | 104.7075094 | 100.728327 | 96.92217063 | 93.28061008 | 89.79567154 |
| 200214A00018 | 2/18/2020 | 1.77 | 1/12/2022 | 2/18/2020 | 102.19528 | 102.1952848 | 102.1952848 | 102.1952848 | 101.943735 | 100.5031709 | 99.09004655 | 97.70364687 | 96.3432811 |
| 200729A00016 | 7/30/2020 | 0.5 | 4/1/2022 | 7/30/2020 | 100.34399 | 100.3439938 | 100.3439938 | 100.3439938 | 100.0489657 | 98.40898828 | 96.80341278 | 95.23122153 | 93.69143711 |
| 200629A00023 | 6/29/2020 | 0.95 | 6/29/2026 | 6/29/2020 | 103.82808 | 103.8280799 | 103.8280799 | 103.8280799 | 100.8914806 | 95.27069953 | 89.99332439 | 85.03673408 | 80.37990458 |
| 200730A00011 | 7/30/2020 | 1.15 | 7/28/2028 | 7/30/2020 | 106.76167 | 106.7616746 | 106.7616746 | 106.7616746 | 100.8772116 | 93.45650061 | 86.6281828 | 80.34209618 | 74.55255856 |
| 200729A00015 | 7/30/2020 | 0.47 | 9/21/2021 | 7/30/2020 | 100.22427 | 100.2242655 | 100.2242655 | 100.2242655 | 100.0408452 | 98.90341494 | 97.79161621 | 96.70459137 | 95.64152066 |
| 200708A00011 | 7/10/2020 | 2.87 | 7/10/2031 | 7/10/2020 | 127.983 | 127.982998 | 127.982998 | 127.3956529 | 116.1553856 | 105.574729 | 96.08281716 | 87.5609021 | 79.90378021 |
| 200701A00007 | 7/1/2020 | 0.47 | 7/1/2021 | 7/1/2020 | 100.18879 | 100.1887911 | 100.1887911 | 100.1887911 | 100.0575522 | 99.1405236 | 98.24017234 | 97.3560474 | 96.48771385 |
| 200730A00013 | 7/30/2020 | 0.74 | 1/30/2025 | 7/30/2020 | 102.01595 | 102.0159518 | 102.0159518 | 102.0159518 | 100.4375217 | 96.11329155 | 91.99718019 | 88.0781341 | 84.34574347 |
| 200611A00019 | 6/11/2020 | 0.88 | 12/11/2025 | 6/11/2020 | 103.09965 | 103.0996464 | 103.0996464 | 103.0996464 | 100.7955068 | 95.67244356 | 90.83639556 | 86.26991771 | 81.95670791 |
| 200611A00020 | 6/11/2020 | 0.81 | 6/11/2025 | 6/11/2020 | 102.46897 | 102.4689721 | 102.4689721 | 102.4689721 | 100.6174549 | 95.95327085 | 91.52891349 | 87.33090445 | 83.34658767 |

Classification | Public

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 200611A00021 | 6/11/2020 | 0.72 | 6/11/2024 | 6/11/2020 | 101.65278 | 101.6527826 | 101.6527826 | 101.6527826 | 100.4876572 | 96.75035662 | 93.1702995 | 89.74010127 | 86.45276119 |
| 200611A00023 | 6/11/2020 | 0.64 | 6/12/2023 | 6/11/2020 | 100.99497 | 100.9949709 | 100.9949709 | 100.9949709 | 100.336678 | 97.54279791 | 94.84002734 | 92.22492778 | 89.69420916 |
| 200629A00020 | 6/29/2020 | 1.4 | 6/28/2030 | 6/29/2020 | 110.8323 | 110.8322984 | 110.8322984 | 110.8322984 | 101.6651943 | 92.64133928 | 84.48731934 | 77.11493849 | 70.44534259 |
| 200629A00021 | 6/29/2020 | 1.21 | 6/29/2028 | 6/29/2020 | 107.17065 | 107.1706547 | 107.1706547 | 107.1706547 | 101.3972335 | 94.02195834 | 87.22961147 | 80.97130894 | 75.20249005 |
| 200527A00014 | 5/27/2020 | 1.06 | 5/27/2026 | 5/27/2020 | 104.41407 | 104.4140736 | 104.4140736 | 104.4140736 | 101.5832158 | 96.02404601 | 90.7993372 | 85.88736399 | 81.26791532 |
| 200527A00015 | 5/27/2020 | 0.99 | 11/26/2025 | 5/27/2020 | 103.66504 | 103.66504 | 103.66504 | 103.66504 | 101.398342 | 96.29624205 | 91.47773511 | 86.92569432 | 82.62410965 |
| 200527A00016 | 5/27/2020 | 0.92 | 5/27/2025 | 5/27/2020 | 102.98236 | 102.982357 | 102.982357 | 102.982357 | 101.1598251 | 96.52046768 | 92.11760929 | 87.93805047 | 83.96939312 |
| 200528A00021 | 5/28/2020 | 0.63 | 5/26/2023 | 5/28/2020 | 100.95046 | 100.9504646 | 100.9504646 | 100.9504646 | 100.3111999 | 97.56218051 | 94.90148591 | 92.32581079 | 89.83199247 |
| 200529A00022 | 6/1/2020 | 0.98 | 6/1/2026 | 6/1/2020 | 103.95518 | 103.9551761 | 103.9551761 | 103.9551761 | 101.1120241 | 95.55422978 | 90.33175748 | 85.42278855 | 80.80702583 |
| 200605A00005 | 6/5/2020 | 0.99 | 6/5/2025 | 6/5/2020 | 103.33904 | 103.3390366 | 103.3390366 | 103.3390366 | 101.4948106 | 96.82479174 | 92.39382763 | 88.18853412 | 84.19634066 |
| 200521A00013 | 5/21/2020 | 2.09 | 5/21/2035 | 5/21/2020 | 126.19081 | 126.1908145 | 126.1908145 | 120.1520035 | 105.6221463 | 92.78673512 | 81.69173651 | 72.09002371 | 63.77076209 |
| 200521A00015 | 5/21/2020 | 2.14 | 5/21/2036 | 5/21/2020 | 128.70365 | 128.7036524 | 128.7036524 | 121.3369767 | 105.8775641 | 92.36340572 | 80.78467686 | 70.85110675 | 62.31739974 |
| 200521A00016 | 5/21/2020 | 2.18 | 5/21/2037 | 5/21/2020 | 131.13589 | 131.1358851 | 131.1358851 | 122.5052462 | 106.1286147 | 91.95799204 | 79.92254442 | 69.6852552 | 60.96401617 |
| 200521A00017 | 5/21/2020 | 2.22 | 5/21/2038 | 5/21/2020 | 133.63951 | 133.6395104 | 133.6395104 | 123.7294824 | 106.4420984 | 91.63085227 | 79.1592706 | 68.63996629 | 59.75171777 |
| 200527A00012 | 5/27/2020 | 1.2 | 5/27/2027 | 5/27/2020 | 106.12224 | 106.1222381 | 106.1222381 | 106.1222381 | 101.9343869 | 95.47816557 | 89.46875763 | 83.87309571 | 78.66071357 |
| 200527A00013 | 5/27/2020 | 1.13 | 11/25/2026 | 5/27/2020 | 105.23309 | 105.2330944 | 105.2330944 | 105.2330944 | 101.7499221 | 95.74253333 | 90.12367987 | 84.8663677 | 79.94560552 |
| 200508A00017 | 5/12/2020 | 1.18 | 5/8/2024 | 5/12/2020 | 103.36233 | 103.3623306 | 103.3623306 | 103.3623306 | 102.2437038 | 98.55967012 | 95.02692395 | 91.63842447 | 88.38750109 |
| 200511A00006 | 5/11/2020 | 1.65 | 5/13/2030 | 5/11/2020 | 113.14043 | 113.1404297 | 113.1404297 | 113.1404297 | 104.1397624 | 95.10019529 | 86.91868037 | 79.50931808 | 72.79521065 |
| 200515A00019 | 5/15/2020 | 0.59 | 5/15/2023 | 5/15/2020 | 100.82755 | 100.82755 | 100.82755 | 100.82755 | 100.2003329 | 97.48106802 | 94.84838689 | 92.29903095 | 89.82988572 |
| 200515A00020 | 5/15/2020 | 0.82 | 5/15/2025 | 5/15/2020 | 102.47982 | 102.4798176 | 102.4798176 | 102.4798176 | 100.6859653 | 96.08753027 | 91.72226286 | 87.57717364 | 83.64006479 |
| 200515A00021 | 5/15/2020 | 1.12 | 5/17/2027 | 5/15/2020 | 105.55227 | 105.5522666 | 105.5522666 | 105.5522666 | 101.4102748 | 94.99497529 | 89.02243267 | 83.45994378 | 78.2773776 |
| 200518A00019 | 5/19/2020 | 0.9 | 5/19/2025 | 5/19/2020 | 102.87213 | 102.8721298 | 102.8721298 | 102.8721298 | 101.0672714 | 96.44989439 | 92.06698505 | 87.9054757 | 83.95309395 |
| 200429A00066 | 4/29/2020 | 0.8 | 4/28/2023 | 4/29/2020 | 101.39502 | 101.3950227 | 101.3950227 | 101.3950227 | 100.7843315 | 98.10067856 | 95.50119857 | 92.98270361 | 90.5421511 |
| 200430A00030 | 4/30/2020 | 0.96 | 4/30/2025 | 4/30/2020 | 103.12778 | 103.1277844 | 103.1277844 | 103.1277844 | 101.3616005 | 96.78429794 | 92.43710722 | 88.30724889 | 84.38272592 |
| 200504A00005 | 5/4/2020 | 0.6 | 5/4/2022 | 5/4/2020 | 100.54017 | 100.5401732 | 100.5401732 | 100.5401732 | 100.2247654 | 98.49467935 | 96.80238021 | 95.14671668 | 93.52658427 |
| 200504A00006 | 5/4/2020 | 0.94 | 5/5/2025 | 5/4/2020 | 103.04092 | 103.0409243 | 103.0409243 | 103.0409243 | 101.2646777 | 96.67726713 | 92.32109521 | 88.18330792 | 84.25183704 |
| 200504A00007 | 5/4/2020 | 1.47 | 5/4/2028 | 5/4/2020 | 109.0554 | 109.0554005 | 109.0554005 | 109.0554005 | 103.4760093 | 96.15205732 | 89.39497923 | 83.15804346 | 77.39859864 |
| 200508A00016 | 5/12/2020 | 1.2 | 5/8/2024 | 5/12/2020 | 103.43839 | 103.4383899 | 103.4383899 | 103.4383899 | 102.3194405 | 98.63397682 | 95.09984338 | 91.70999774 | 88.45776773 |
| 200429A00054 | 4/29/2020 | 1.04 | 4/29/2025 | 4/29/2020 | 103.50825 | 103.5082463 | 103.5082463 | 103.5082463 | 101.7417222 | 97.15802964 | 92.8045248 | 88.66843415 | 84.73776563 |
| 200429A00057 | 4/29/2020 | 1.4 | 4/29/2027 | 4/29/2020 | 107.40769 | 107.4076879 | 107.4076879 | 107.4076879 | 103.3110221 | 96.87550138 | 90.88000058 | 85.2922069 | 80.08234426 |
| 200429A00061 | 4/29/2020 | 1.66 | 10/29/2029 | 4/29/2020 | 112.52342 | 112.5234199 | 112.5234199 | 112.5234199 | 104.498445 | 95.88338922 | 88.04567116 | 80.91111161 | 74.41296641 |
| 200429A00062 | 4/29/2020 | 0.65 | 10/29/2021 | 4/29/2020 | 100.47205 | 100.4720459 | 100.4720459 | 100.4720459 | 100.2628239 | 99.02219789 | 97.81198395 | 96.63107628 | 95.4784221 |
| 200429A00064 | 4/29/2020 | 0.69 | 4/29/2022 | 4/29/2020 | 100.69474 | 100.6947369 | 100.6947369 | 100.6947369 | 100.3822603 | 98.66386491 | 96.98276059 | 95.33779905 | 93.72787972 |

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 200429A00065 | 4/29/2020 | 0.74 | 10/28/2022 | 4/29/2020 | 101.00726 | 101.0072588 | 101.0072588 | 101.0072588 | 100.5607222 | 98.36220069 | 96.22199585 | 94.13812991 | 92.10870982 |
| 200427A00018 | 4/27/2020 | 1.51 | 4/27/2028 | 4/27/2020 | 109.3436 | 109.3436045 | 109.3436045 | 109.3436045 | 103.787588 | 96.46832644 | 89.71406524 | 83.47832459 | 77.71867691 |
| 200428A00002 | 4/28/2020 | 1.47 | 4/26/2030 | 4/28/2020 | 113.27104 | 113.2710354 | 113.2710354 | 113.2710354 | 104.2275303 | 95.12630379 | 86.88941526 | 79.43035916 | 72.67169666 |
| 200428A00003 | 4/29/2020 | 1.01 | 4/29/2025 | 4/29/2020 | 103.36491 | 103.3649053 | 103.3649053 | 103.3649053 | 101.5992888 | 97.01894788 | 92.66867446 | 88.5357003 | 84.60803841 |
| 200429A00004 | 5/1/2020 | 0.74 | 5/1/2023 | 5/1/2020 | 101.23256 | 101.2325581 | 101.2325581 | 101.2325581 | 100.619206 | 97.92997711 | 95.32532526 | 92.80204301 | 90.3570692 |
| 200429A00021 | 5/4/2020 | 0.97 | 4/29/2025 | 5/4/2020 | 103.17378 | 103.1737841 | 103.1737841 | 103.1737841 | 101.4093775 | 96.83350553 | 92.48754066 | 88.35872182 | 84.43506878 |
| 200429A00049 | 4/29/2020 | 1.25 | 4/29/2026 | 4/29/2020 | 105.45339 | 105.4533858 | 105.4533858 | 105.4533858 | 102.7056179 | 97.18250753 | 91.98725886 | 87.09873173 | 82.49726127 |
| 200423A00020 | 4/28/2020 | 0.68 | 4/15/2022 | 4/28/2020 | 100.66239 | 100.6623924 | 100.6623924 | 100.6623924 | 100.3584462 | 98.67800517 | 97.03341917 | 95.42360549 | 93.84752533 |
| 200423A00022 | 4/28/2020 | 0.76 | 2/15/2023 | 4/28/2020 | 101.19296 | 101.1929613 | 101.1929613 | 101.1929613 | 100.6524642 | 98.16211036 | 95.74552753 | 93.40009748 | 91.1233121 |
| 200423A00026 | 4/28/2020 | 0.85 | 12/15/2023 | 4/28/2020 | 101.88677 | 101.8867748 | 101.8867748 | 101.8867748 | 100.9877198 | 97.70243264 | 94.54006801 | 91.49541067 | 88.5634938 |
| 200423A00027 | 4/28/2020 | 0.88 | 4/15/2024 | 4/28/2020 | 102.18459 | 102.1845944 | 102.1845944 | 102.1845944 | 101.1065057 | 97.50334325 | 94.04624431 | 90.72847319 | 87.54364685 |
| 200424A00014 | 4/28/2020 | 1.01 | 4/23/2025 | 4/28/2020 | 103.35341 | 103.3534094 | 103.3534094 | 103.3534094 | 101.6002923 | 97.03530172 | 92.69891139 | 88.57847375 | 84.6621124 |
| 200427A00017 | 4/27/2020 | 1.02 | 4/25/2025 | 4/27/2020 | 103.40491 | 103.404912 | 103.404912 | 103.404912 | 101.6473275 | 97.07610653 | 92.73401425 | 88.6083612 | 84.68723249 |
| 200421A00029 | 4/24/2020 | 0.72 | 12/15/2022 | 4/24/2020 | 101.018 | 101.0179951 | 101.0179951 | 101.0179951 | 100.5320481 | 98.20715406 | 95.9470638 | 93.74962227 | 91.61275855 |
| 200421A00031 | 4/21/2020 | 0.84 | 4/19/2024 | 4/21/2020 | 102.04093 | 102.0409347 | 102.0409347 | 102.0409347 | 100.9573143 | 97.34648015 | 93.88242234 | 90.5583535 | 87.3678428 |
| 200421A00032 | 4/21/2020 | 1.31 | 4/21/2027 | 4/21/2020 | 106.77665 | 106.7766478 | 106.7766478 | 106.7766478 | 102.718785 | 96.32232021 | 90.36233237 | 84.80684646 | 79.62639077 |
| 200422A00015 | 4/27/2020 | 0.73 | 12/22/2022 | 4/27/2020 | 101.05048 | 101.0504762 | 101.0504762 | 101.0504762 | 100.5585829 | 98.2153086 | 95.93782014 | 93.72391393 | 91.5714731 |
| 200423A00006 | 4/23/2020 | 0.82 | 4/23/2025 | 4/23/2020 | 103.3553 | 103.3553 | 103.3553 | 103.3553 | 101.5888627 | 96.99596851 | 92.6338451 | 88.48968914 | 84.5514801 |
| 200423A00017 | 4/23/2020 | 1.82 | 4/23/2035 | 4/23/2020 | 125.19793 | 125.1979275 | 125.1979275 | 119.1209952 | 104.4673093 | 91.57568293 | 80.43885667 | 70.8074163 | 62.46858111 |
| 200417A00019 | 4/17/2020 | 0.77 | 4/17/2025 | 4/17/2020 | 103.10536 | 103.1053635 | 103.1053635 | 103.1053635 | 101.3530601 | 96.78124401 | 92.4385186 | 88.31221108 | 84.39042083 |
| 200421A00020 | 4/24/2020 | 0.83 | 3/15/2024 | 4/24/2020 | 101.95205 | 101.9520507 | 101.9520507 | 101.9520507 | 100.9217749 | 97.4017567 | 94.02178032 | 90.77551456 | 87.65695207 |
| 200421A00021 | 4/21/2020 | 0.56 | 4/21/2023 | 4/21/2020 | 101.21657 | 101.2165704 | 101.2165704 | 101.2165704 | 100.6106174 | 97.93700718 | 95.34701038 | 92.83747253 | 90.40538227 |
| 200421A00022 | 4/21/2020 | 0.74 | 4/21/2023 | 4/21/2020 | 101.22041 | 101.2204103 | 101.2204103 | 101.2204103 | 100.6172229 | 97.95447496 | 95.37477904 | 92.87500924 | 90.45218118 |
| 200421A00024 | 4/24/2020 | 0.8 | 10/16/2023 | 4/24/2020 | 101.63326 | 101.6332559 | 101.6332559 | 101.6332559 | 100.8164367 | 97.68928086 | 94.67414511 | 91.76635611 | 88.96146712 |
| 200421A00028 | 4/21/2020 | 0.56 | 4/21/2023 | 4/21/2020 | 101.21657 | 101.2165704 | 101.2165704 | 101.2165704 | 100.6106174 | 97.93700718 | 95.34701038 | 92.83747253 | 90.40538227 |
| 200417A00008 | 4/17/2020 | 0.96 | 4/17/2025 | 4/17/2020 | 103.10466 | 103.104655 | 103.104655 | 103.104655 | 101.3655239 | 96.82140472 | 92.50422629 | 88.40146964 | 84.50137663 |
| 200417A00011 | 4/22/2020 | 0.68 | 7/15/2022 | 4/22/2020 | 100.75912 | 100.7591237 | 100.7591237 | 100.7591237 | 100.3946425 | 98.47316213 | 96.59778704 | 94.76713127 | 92.97985997 |
| 200417A00012 | 4/22/2020 | 0.71 | 12/15/2022 | 4/22/2020 | 100.994 | 100.9940004 | 100.9940004 | 100.9940004 | 100.5081044 | 98.18350105 | 95.9236952 | 93.72653199 | 91.5899407 |
| 200417A00013 | 4/17/2020 | 0.74 | 4/17/2023 | 4/17/2020 | 101.21556 | 101.2155623 | 101.2155623 | 101.2155623 | 100.6164175 | 97.96430147 | 95.394631 | 92.90431445 | 90.49039947 |
| 200417A00014 | 4/17/2020 | 0.96 | 4/17/2025 | 4/17/2020 | 103.10466 | 103.104655 | 103.104655 | 103.104655 | 101.3655239 | 96.82140472 | 92.50422629 | 88.40146964 | 84.50137663 |
| 200417A00018 | 4/21/2020 | 0.67 | 7/25/2022 | 4/21/2020 | 100.74983 | 100.749833 | 100.749833 | 100.749833 | 100.3779629 | 98.43074575 | 96.53087626 | 94.67691146 | 92.86746244 |
| 200415A00036 | 4/15/2020 | 0.91 | 10/15/2024 | 4/15/2020 | 102.60601 | 102.6060112 | 102.6060112 | 102.6060112 | 101.2233156 | 97.15089793 | 93.26265631 | 89.54927402 | 86.00196026 |
| 200415A00037 | 4/15/2020 | 0.97 | 4/15/2025 | 4/15/2020 | 103.14849 | 103.1484942 | 103.1484942 | 103.1484942 | 101.4132306 | 96.87312093 | 92.55950516 | 88.4599024 | 84.56258937 |

Classification | Public

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 200415A00038 | 4/15/2020 | 1.37 | 4/15/2027 | 4/15/2020 | 107.16423 | 107.1642283 | 107.1642283 | 107.1642283 | 103.1245048 | 96.7294252 | 90.76951233 | 85.21296601 | 80.03046949 |
| 200417A00002 | 4/17/2020 | 0.96 | 4/17/2025 | 4/17/2020 | 103.10466 | 103.104655 | 103.104655 | 103.104655 | 101.3655239 | 96.82140472 | 92.50422629 | 88.40146964 | 84.50137663 |
| 200417A00004 | 4/17/2020 | 0.86 | 4/17/2024 | 4/17/2020 | 102.11287 | 102.1128744 | 102.1128744 | 102.1128744 | 101.0320185 | 97.42501586 | 93.96443301 | 90.64350849 | 87.45583537 |
| 200417A00006 | 4/17/2020 | 0.74 | 4/17/2023 | 4/17/2020 | 101.21556 | 101.2155623 | 101.2155623 | 101.2155623 | 100.6164175 | 97.96430147 | 95.394631 | 92.90431445 | 90.49039947 |
| 200415A00023 | 4/15/2020 | 1.71 | 4/15/2030 | 4/15/2020 | 113.62093 | 113.6209318 | 113.6209318 | 113.6209318 | 104.7476414 | 95.74182803 | 87.58415788 | 80.19030199 | 73.48471786 |
| 200415A00024 | 4/15/2020 | 2.2 | 4/16/2035 | 4/15/2020 | 127.62934 | 127.6293421 | 127.6293421 | 121.7096859 | 107.1731638 | 94.29635435 | 83.15179302 | 73.49512973 | 65.11769557 |
| 200415A00026 | 4/15/2020 | 0.77 | 4/14/2023 | 4/15/2020 | 101.29383 | 101.2938334 | 101.2938334 | 101.2938334 | 100.6975129 | 98.05225063 | 95.48900685 | 93.00471459 | 90.59644461 |
| 200415A00027 | 4/15/2020 | 0.86 | 4/15/2024 | 4/15/2020 | 102.1098 | 102.1097985 | 102.1097985 | 102.1097985 | 101.0320183 | 97.43023979 | 93.97448398 | 90.65801671 | 87.47445641 |
| 200415A00031 | 4/15/2020 | 0.97 | 4/15/2025 | 4/15/2020 | 103.14849 | 103.1484942 | 103.1484942 | 103.1484942 | 101.4132306 | 96.87312093 | 92.55950516 | 88.4599024 | 84.56258937 |
| 200415A00033 | 4/15/2020 | 0.82 | 10/13/2023 | 4/15/2020 | 101.69368 | 101.6936757 | 101.6936757 | 101.6936757 | 100.880628 | 97.76008707 | 94.75108575 | 91.84898146 | 89.04935612 |
| 200414A00014 | 4/14/2020 | 0.76 | 4/12/2024 | 4/14/2020 | 102.40183 | 102.4018307 | 102.4018307 | 102.4018307 | 101.3211382 | 97.70399771 | 94.23358896 | 90.90314294 | 87.70624508 |
| 200414A00015 | 4/14/2020 | 0.64 | 4/14/2023 | 4/14/2020 | 101.42701 | 101.4270137 | 101.4270137 | 101.4270137 | 100.8276249 | 98.16973686 | 95.59446417 | 93.0987104 | 90.67951853 |
| 200414A00019 | 4/16/2020 | 0.69 | 4/20/2021 | 4/16/2020 | 100.3159 | 100.3158965 | 100.3158965 | 100.3158965 | 100.2214121 | 99.49870784 | 98.78637547 | 98.08419302 | 97.39194481 |
| 200415A00003 | 4/15/2020 | 0.77 | 4/14/2023 | 4/15/2020 | 101.29383 | 101.2938334 | 101.2938334 | 101.2938334 | 100.6975129 | 98.05225063 | 95.48900685 | 93.00471459 | 90.59644461 |
| 200415A00020 | 4/15/2020 | 0.86 | 4/15/2024 | 4/15/2020 | 102.1098 | 102.1097985 | 102.1097985 | 102.1097985 | 101.0320183 | 97.43023979 | 93.97448398 | 90.65801671 | 87.47445641 |
| 200415A00021 | 4/15/2020 | 1.37 | 4/15/2027 | 4/15/2020 | 107.16423 | 107.1642283 | 107.1642283 | 107.1642283 | 103.1245048 | 96.7294252 | 90.76951233 | 85.21296601 | 80.03046949 |
| 200413A00004 | 4/13/2020 | 0.89 | 4/11/2025 | 4/13/2020 | 103.66462 | 103.6646229 | 103.6646229 | 103.6646229 | 101.9213891 | 97.35182449 | 93.01034791 | 88.88438662 | 84.96213105 |
| 200413A00011 | 4/13/2020 | 0.94 | 4/12/2024 | 4/13/2020 | 102.40371 | 102.4037091 | 102.4037091 | 102.4037091 | 101.3293161 | 97.72986341 | 94.27600103 | 90.96102955 | 87.77859945 |
| 200413A00012 | 4/13/2020 | 0.64 | 4/13/2023 | 4/13/2020 | 101.42557 | 101.4255747 | 101.4255747 | 101.4255747 | 100.8272046 | 98.17199878 | 95.59925591 | 93.10588822 | 90.68894671 |
| 200413A00026 | 4/13/2020 | 0.82 | 4/13/2023 | 4/13/2020 | 101.42891 | 101.4289128 | 101.4289128 | 101.4289128 | 100.8332578 | 98.18879042 | 95.62623437 | 93.14252974 | 90.7347539 |
| 200413A00027 | 4/13/2020 | 0.94 | 4/12/2024 | 4/13/2020 | 102.40371 | 102.4037091 | 102.4037091 | 102.4037091 | 101.3293161 | 97.72986341 | 94.27600103 | 90.96102955 | 87.77859945 |
| 200414A00013 | 4/14/2020 | 0.55 | 4/14/2022 | 4/14/2020 | 100.74444 | 100.7444364 | 100.7444364 | 100.7444364 | 100.4399334 | 98.75607045 | 97.10817651 | 95.4951648 | 93.9159927 |
| 200408A00004 | 4/8/2020 | 0.76 | 4/8/2022 | 4/8/2020 | 100.79157 | 100.7915697 | 100.7915697 | 100.7915697 | 100.4916899 | 98.8289581 | 97.20139695 | 95.60795523 | 94.04762383 |
| 200408A00011 | 4/8/2020 | 0.82 | 9/26/2022 | 4/8/2020 | 101.14197 | 101.1419695 | 101.1419695 | 101.1419695 | 100.7205577 | 98.60357194 | 96.54103899 | 94.53117643 | 92.57227487 |
| 200408A00013 | 4/13/2020 | 0.87 | 4/14/2023 | 4/13/2020 | 101.56686 | 101.5668569 | 101.5668569 | 101.5668569 | 100.969843 | 98.32084091 | 95.75394501 | 93.26608554 | 90.85433056 |
| 200409A00011 | 4/9/2020 | 0.7 | 4/7/2023 | 4/9/2020 | 101.58 | 101.5800023 | 101.5800023 | 101.5800023 | 100.9873345 | 98.34600066 | 95.78627081 | 93.30510665 | 90.89960556 |
| 200409A00019 | 4/9/2020 | 0.58 | 4/8/2022 | 4/9/2020 | 100.78857 | 100.7885673 | 100.7885673 | 100.7885673 | 100.4876597 | 98.81964372 | 97.18699566 | 95.5886563 | 94.02360889 |
| 200413A00003 | 4/13/2020 | 0.64 | 4/13/2023 | 4/13/2020 | 101.42557 | 101.4255747 | 101.4255747 | 101.4255747 | 100.8272046 | 98.17199878 | 95.59925591 | 93.10588822 | 90.68894671 |
| 200406A00053 | 4/6/2020 | 1.13 | 4/7/2025 | 4/6/2020 | 103.93629 | 103.9362862 | 103.9362862 | 103.9362862 | 102.2120401 | 97.67241295 | 93.35810918 | 89.25676951 | 85.35678121 |
| 200406A00059 | 4/6/2020 | 0.92 | 4/6/2023 | 4/6/2020 | 101.68971 | 101.6897061 | 101.6897061 | 101.6897061 | 101.1004571 | 98.47096784 | 95.92242222 | 93.45181672 | 91.05628144 |
| 200406A00060 | 4/6/2020 | 1.03 | 4/5/2024 | 4/6/2020 | 102.72552 | 102.7255153 | 102.7255153 | 102.7255153 | 101.6605457 | 98.07330571 | 94.63045066 | 91.32536929 | 88.15179367 |
| 200407A00004 | 4/7/2020 | 0.99 | 4/7/2025 | 4/7/2020 | 104.13004 | 104.1300366 | 104.1300366 | 104.1300366 | 102.3923008 | 97.82214489 | 93.4794843 | 89.35180934 | 85.42736782 |
| 200407A00016 | 4/7/2020 | 0.8 | 4/7/2022 | 4/7/2020 | 100.85845 | 100.8584513 | 100.8584513 | 100.8584513 | 100.5590867 | 98.89846271 | 97.27291985 | 95.68141114 | 94.12293145 |

Classification | Public

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 200407A00019 | 4/7/2020 | 1.06 | 4/8/2024 | 4/7/2020 | 102.84315 | 102.8431467 | 102.8431467 | 102.8431467 | 101.7730905 | 98.17590271 | 94.72375436 | 91.40999121 | 88.22830549 |
| 200403A00015 | 4/3/2020 | 0.73 | 4/4/2022 | 4/3/2020 | 100.73562 | 100.7356208 | 100.7356208 | 100.7356208 | 100.4382439 | 98.78677968 | 97.1700774 | 95.58710417 | 94.03686817 |
| 200403A00017 | 4/3/2020 | 0.81 | 4/3/2023 | 4/3/2020 | 101.38759 | 101.3875904 | 101.3875904 | 101.3875904 | 100.8021259 | 98.18468237 | 95.64763858 | 93.18801919 | 90.80298073 |
| 200403A00018 | 4/3/2020 | 0.91 | 4/3/2024 | 4/3/2020 | 102.27669 | 102.2766856 | 102.2766856 | 102.2766856 | 101.2166105 | 97.64279352 | 94.21272705 | 90.91983577 | 87.75788538 |
| 200403A00025 | 4/3/2020 | 0.91 | 4/3/2024 | 4/3/2020 | 102.27669 | 102.2766856 | 102.2766856 | 102.2766856 | 101.2166105 | 97.64279352 | 94.21272705 | 90.91983577 | 87.75788538 |
| 200406A00018 | 4/6/2020 | 0.65 | 4/18/2022 | 4/6/2020 | 100.9229 | 100.9229027 | 100.9229027 | 100.9229027 | 100.6157123 | 98.91943338 | 97.25956087 | 95.63498862 | 94.04465564 |
| 200406A00049 | 4/6/2020 | 0.92 | 4/6/2023 | 4/6/2020 | 101.68971 | 101.6897061 | 101.6897061 | 101.6897061 | 101.1004571 | 98.47096784 | 95.92242222 | 93.45181672 | 91.05628144 |
| 200402A00038 | 4/2/2020 | 0.84 | 4/2/2025 | 4/2/2020 | 103.40922 | 103.4092198 | 103.4092198 | 103.4092198 | 101.68644 | 97.14572456 | 92.83069223 | 88.7289592 | 84.82888959 |
| 200402A00041 | 4/2/2020 | 1.03 | 4/2/2025 | 4/2/2020 | 103.4544 | 103.4543989 | 103.4543989 | 103.4543989 | 101.7435108 | 97.22763023 | 92.93547438 | 88.85479962 | 84.97409991 |
| 200402A00044 | 4/2/2020 | 1.65 | 4/2/2030 | 4/2/2020 | 112.99203 | 112.9920319 | 112.9920319 | 112.9920319 | 104.2014729 | 95.25031945 | 87.14013207 | 79.78752832 | 73.11778745 |
| 200402A00048 | 4/2/2020 | 0.71 | 4/2/2024 | 4/2/2020 | 102.19831 | 102.1983091 | 102.1983091 | 102.1983091 | 101.1339083 | 97.54661704 | 94.10396005 | 90.79930898 | 87.6263799 |
| 200403A00010 | 4/6/2020 | 0.8 | 4/6/2023 | 4/6/2020 | 101.36472 | 101.3647226 | 101.3647226 | 101.3647226 | 100.7762895 | 98.15121698 | 95.60698509 | 93.14059356 | 90.74917563 |
| 200403A00012 | 4/3/2020 | 0.55 | 4/15/2022 | 4/3/2020 | 100.74563 | 100.7456277 | 100.7456277 | 100.7456277 | 100.4405137 | 98.75393484 | 97.10342697 | 95.48789874 | 93.90630313 |
| 200402A00023 | 4/2/2020 | 1.11 | 4/2/2025 | 4/2/2020 | 103.83082 | 103.8308183 | 103.8308183 | 103.8308183 | 102.1176135 | 97.59306006 | 93.29253862 | 89.20379208 | 85.3153016 |
| 200402A00026 | 4/2/2020 | 1.28 | 4/2/2026 | 4/2/2020 | 105.55519 | 105.5551899 | 105.5551899 | 105.5551899 | 102.8938227 | 97.43338588 | 92.29330751 | 87.45317051 | 82.89396493 |
| 200402A00028 | 4/2/2020 | 0.71 | 4/4/2022 | 4/2/2020 | 100.70171 | 100.7017104 | 100.7017104 | 100.7017104 | 100.4043795 | 98.75321141 | 97.13679982 | 95.55411205 | 94.00415646 |
| 200402A00030 | 4/2/2020 | 0.8 | 4/3/2023 | 4/2/2020 | 101.36059 | 101.360591 | 101.360591 | 101.360591 | 100.7751941 | 98.15811639 | 95.62142992 | 93.16215961 | 90.77746224 |
| 200402A00035 | 4/2/2020 | 0.62 | 4/3/2023 | 4/2/2020 | 101.35705 | 101.3570517 | 101.3570517 | 101.3570517 | 100.7690065 | 98.14136565 | 95.59465491 | 93.12587213 | 90.73214854 |
| 200402A00036 | 4/2/2020 | 0.71 | 4/2/2024 | 4/2/2020 | 102.19831 | 102.1983091 | 102.1983091 | 102.1983091 | 101.1339083 | 97.54661704 | 94.10396005 | 90.79930898 | 87.6263799 |
| 200402A00010 | 4/2/2020 | 0.89 | 4/2/2024 | 4/2/2020 | 102.20093 | 102.2009287 | 102.2009287 | 102.2009287 | 101.1426942 | 97.57285502 | 94.14652956 | 90.85715746 | 87.69851832 |
| 200402A00013 | 4/2/2020 | 0.89 | 4/2/2024 | 4/2/2020 | 102.20093 | 102.2009287 | 102.2009287 | 102.2009287 | 101.1426942 | 97.57285502 | 94.14652956 | 90.85715746 | 87.69851832 |
| 200402A00014 | 4/2/2020 | 0.84 | 4/2/2025 | 4/2/2020 | 103.40922 | 103.4092198 | 103.4092198 | 103.4092198 | 101.68644 | 97.14572456 | 92.83069223 | 88.7289592 | 84.82888959 |
| 200402A00017 | 4/2/2020 | 0.76 | 4/1/2022 | 4/2/2020 | 100.78267 | 100.782674 | 100.782674 | 100.782674 | 100.4870534 | 98.84326442 | 97.23394633 | 95.65807959 | 94.11468493 |
| 200402A00018 | 4/2/2020 | 0.85 | 4/3/2023 | 4/2/2020 | 101.49559 | 101.4955876 | 101.4955876 | 101.4955876 | 100.9098532 | 98.29094631 | 95.75247322 | 93.29145752 | 90.9050547 |
| 200402A00022 | 4/2/2020 | 0.96 | 4/2/2024 | 4/2/2020 | 102.46021 | 102.4602148 | 102.4602148 | 102.4602148 | 101.4009282 | 97.82633586 | 94.39539643 | 91.10154431 | 87.93855414 |
| 200401A00013 | 4/1/2020 | 1.01 | 4/1/2025 | 4/1/2020 | 103.35835 | 103.35835 | 103.35835 | 103.35835 | 101.6501279 | 97.1389825 | 92.85124308 | 88.77468917 | 84.89783597 |
| 200401A00023 | 4/1/2020 | 0.82 | 4/1/2025 | 4/1/2020 | 103.31278 | 103.3127797 | 103.3127797 | 103.3127797 | 101.592691 | 97.05675081 | 92.74617146 | 88.64859258 | 84.75239979 |
| 200402A00001 | 4/2/2020 | 0.72 | 4/2/2021 | 4/2/2020 | 100.31484 | 100.3148413 | 100.3148413 | 100.3148413 | 100.229582 | 99.55583176 | 98.89108935 | 98.23517527 | 97.58791472 |
| 200402A00002 | 4/2/2020 | 0.71 | 4/4/2022 | 4/2/2020 | 100.70171 | 100.7017104 | 100.7017104 | 100.7017104 | 100.4043795 | 98.75321141 | 97.13679982 | 95.55411205 | 94.00415646 |
| 200402A00003 | 4/2/2020 | 0.8 | 4/3/2023 | 4/2/2020 | 101.36059 | 101.360591 | 101.360591 | 101.360591 | 100.7751941 | 98.15811639 | 95.62142992 | 93.16215961 | 90.77746224 |
| 200402A00009 | 4/2/2020 | 1.03 | 4/2/2025 | 4/2/2020 | 103.4544 | 103.4543989 | 103.4543989 | 103.4543989 | 101.7435108 | 97.22763023 | 92.93547438 | 88.85479962 | 84.97409991 |
| 200331A00017 | 3/31/2020 | 0.9 | 3/31/2025 | 3/31/2020 | 103.68843 | 103.6884346 | 103.6884346 | 103.6884346 | 101.968126 | 97.42606006 | 93.10941989 | 89.00585136 | 85.10374547 |
| 200331A00018 | 3/31/2020 | 0.82 | 3/31/2023 | 3/31/2020 | 101.41029 | 101.4102929 | 101.4102929 | 101.4102929 | 100.8277984 | 98.2179898 | 95.6881412 | 93.23530202 | 90.85665198 |

Classification | Public

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 200331A00022 | 4/1/2020 | 1.07 | 4/1/2025 | 4/1/2020 | 103.6405 | 103.6405003 | 103.6405003 | 103.6405003 | 101.9305436 | 97.41290094 | 93.11889443 | 89.03629343 | 85.15360357 |
| 200331A00024 | 3/31/2020 | 0.64 | 3/31/2023 | 3/31/2020 | 101.40687 | 101.4068671 | 101.4068671 | 101.4068671 | 100.8217433 | 98.20141885 | 95.66158966 | 93.19927829 | 90.81163915 |
| 200401A00001 | 4/1/2020 | 1.01 | 4/1/2025 | 4/1/2020 | 103.35835 | 103.35835 | 103.35835 | 103.35835 | 101.6501279 | 97.1389825 | 92.85124308 | 88.77468917 | 84.89783597 |
| 200401A00012 | 4/2/2020 | 1 | 4/2/2025 | 4/2/2020 | 103.31324 | 103.3132416 | 103.3132416 | 103.3132416 | 101.6032222 | 97.09059405 | 92.80157529 | 88.72392745 | 84.84614928 |
| 200331A00007 | 3/31/2020 | 0.72 | 3/29/2024 | 3/31/2020 | 102.22882 | 102.2288189 | 102.2288189 | 102.2288189 | 101.1703981 | 97.59282086 | 94.15912417 | 90.86273146 | 87.69740675 |
| 200331A00008 | 3/31/2020 | 0.64 | 3/31/2023 | 3/31/2020 | 101.40687 | 101.4068671 | 101.4068671 | 101.4068671 | 100.8217433 | 98.20141885 | 95.66158966 | 93.19927829 | 90.81163915 |
| 200331A00011 | 3/31/2020 | 1.09 | 3/31/2025 | 3/31/2020 | 103.73239 | 103.7323874 | 103.7323874 | 103.7323874 | 102.0239432 | 97.50671188 | 93.21295119 | 89.13044685 | 85.24771935 |
| 200331A00014 | 3/31/2020 | 0.72 | 3/29/2024 | 3/31/2020 | 102.22882 | 102.2288189 | 102.2288189 | 102.2288189 | 101.1703981 | 97.59282086 | 94.15912417 | 90.86273146 | 87.69740675 |
| 200331A00015 | 3/31/2020 | 0.64 | 3/31/2023 | 3/31/2020 | 101.40687 | 101.4068671 | 101.4068671 | 101.4068671 | 100.8217433 | 98.20141885 | 95.66158966 | 93.19927829 | 90.81163915 |
| 200331A00016 | 3/31/2020 | 1.11 | 3/31/2026 | 3/31/2020 | 105.67853 | 105.6785269 | 105.6785269 | 105.6785269 | 102.9988101 | 97.50231365 | 92.32912972 | 87.45861274 | 82.87154232 |
| 200330A00038 | 3/30/2020 | 1.79 | 3/29/2030 | 3/30/2020 | 114.32901 | 114.329013 | 114.329013 | 114.329013 | 105.5212611 | 96.5179239 | 88.35791363 | 80.95778153 | 74.24273344 |
| 200330A00043 | 3/30/2020 | 0.86 | 3/30/2023 | 3/30/2020 | 101.51639 | 101.5163895 | 101.5163895 | 101.5163895 | 100.9345874 | 98.32591136 | 95.79708876 | 93.3451756 | 90.96735777 |
| 200330A00044 | 3/30/2020 | 1.09 | 3/28/2025 | 3/30/2020 | 103.72581 | 103.7258149 | 103.7258149 | 103.7258149 | 102.0234865 | 97.51374761 | 93.22678819 | 89.1504492 | 85.27330189 |
| 200330A00046 | 3/30/2020 | 0.86 | 3/30/2023 | 3/30/2020 | 101.51639 | 101.5163895 | 101.5163895 | 101.5163895 | 100.9345874 | 98.32591136 | 95.79708876 | 93.3451756 | 90.96735777 |
| 200330A00064 | 3/30/2020 | 0.83 | 3/30/2023 | 3/30/2020 | 101.43572 | 101.4357222 | 101.4357222 | 101.4357222 | 100.8541205 | 98.24653321 | 95.71877406 | 93.26789988 | 90.89109733 |
| 200330A00066 | 3/30/2020 | 1.08 | 3/31/2025 | 3/30/2020 | 103.68539 | 103.6853897 | 103.6853897 | 103.6853897 | 101.9772342 | 97.46108446 | 93.1683671 | 89.08686949 | 85.20511369 |
| 200330A00017 | 3/30/2020 | 0.86 | 3/30/2023 | 3/30/2020 | 101.51639 | 101.5163895 | 101.5163895 | 101.5163895 | 100.9345874 | 98.32591136 | 95.79708876 | 93.3451756 | 90.96735777 |
| 200330A00020 | 3/30/2020 | 0.68 | 3/30/2021 | 3/30/2020 | 100.28413 | 100.28413 | 100.28413 | 100.28413 | 100.2004053 | 99.53493598 | 98.87825494 | 98.23018918 | 97.59057025 |
| 200330A00021 | 3/30/2020 | 0.8 | 3/30/2022 | 3/30/2020 | 100.84737 | 100.8473732 | 100.8473732 | 100.8473732 | 100.5528624 | 98.91381935 | 97.30906656 | 95.73759274 | 94.19842647 |
| 200330A00028 | 3/30/2020 | 1.09 | 3/28/2025 | 3/30/2020 | 103.72581 | 103.7258149 | 103.7258149 | 103.7258149 | 102.0234865 | 97.51374761 | 93.22678819 | 89.1504492 | 85.27330189 |
| 200330A00036 | 3/30/2020 | 0.86 | 3/30/2023 | 3/30/2020 | 101.51639 | 101.5163895 | 101.5163895 | 101.5163895 | 100.9345874 | 98.32591136 | 95.79708876 | 93.3451756 | 90.96735777 |
| 200330A00037 | 3/30/2020 | 1.09 | 3/28/2025 | 3/30/2020 | 103.72581 | 103.7258149 | 103.7258149 | 103.7258149 | 102.0234865 | 97.51374761 | 93.22678819 | 89.1504492 | 85.27330189 |
| 200327A00088 | 3/27/2020 | 1.22 | 3/27/2025 | 3/27/2020 | 104.33317 | 104.3331697 | 104.3331697 | 104.3331697 | 102.6291519 | 98.10791413 | 93.80972029 | 89.72240804 | 85.83454498 |
| 200330A00006 | 3/30/2020 | 0.9 | 3/28/2025 | 3/30/2020 | 103.68194 | 103.6819402 | 103.6819402 | 103.6819402 | 101.9678072 | 97.4333036 | 93.12352668 | 89.02617835 | 85.12970107 |
| 200330A00007 | 3/30/2020 | 0.93 | 4/1/2024 | 3/30/2020 | 102.34736 | 102.3473621 | 102.3473621 | 102.3473621 | 101.2900671 | 97.72013374 | 94.2935967 | 91.00390604 | 87.844851 |
| 200330A00008 | 3/30/2020 | 1.09 | 3/28/2025 | 3/30/2020 | 103.72581 | 103.7258149 | 103.7258149 | 103.7258149 | 102.0234865 | 97.51374761 | 93.22678819 | 89.1504492 | 85.27330189 |
| 200330A00011 | 3/30/2020 | 0.93 | 4/1/2024 | 3/30/2020 | 102.34736 | 102.3473621 | 102.3473621 | 102.3473621 | 101.2900671 | 97.72013374 | 94.2935967 | 91.00390604 | 87.844851 |
| 200330A00013 | 3/30/2020 | 0.68 | 3/30/2021 | 3/30/2020 | 100.28413 | 100.28413 | 100.28413 | 100.28413 | 100.2004053 | 99.53493598 | 98.87825494 | 98.23018918 | 97.59057025 |
| 200327A00066 | 6/25/2020 | 0.93 | 6/26/2023 | 6/25/2020 | 101.85815 | 101.8581491 | 101.8581491 | 101.8581491 | 101.1815925 | 98.33835158 | 95.588879 | 92.92959336 | 90.35706988 |
| 200327A00068 | 6/25/2020 | 0.93 | 6/26/2023 | 6/25/2020 | 101.85815 | 101.8581491 | 101.8581491 | 101.8581491 | 101.1815925 | 98.33835158 | 95.588879 | 92.92959336 | 90.35706988 |
| 200327A00073 | 3/27/2020 | 0.99 | 3/27/2025 | 3/27/2020 | 104.10357 | 104.1035672 | 104.1035672 | 104.1035672 | 102.3888913 | 97.84714752 | 93.53024346 | 89.42588451 | 85.5225158 |
| 200327A00076 | 3/27/2020 | 1.18 | 3/27/2026 | 3/27/2020 | 106.06771 | 106.0677065 | 106.0677065 | 106.0677065 | 103.3972689 | 97.89954216 | 92.72448921 | 87.85154385 | 83.26155702 |
| 200327A00077 | 3/27/2020 | 0.83 | 3/27/2024 | 3/27/2020 | 102.63248 | 102.6324809 | 102.6324809 | 102.6324809 | 101.5754414 | 97.99553102 | 94.5593437 | 91.26031988 | 88.0922392 |

Classification | Public

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 200327A00079 | 3/27/2020 | 0.99 | 3/27/2025 | 3/27/2020 | 104.10357 | 104.1035672 | 104.1035672 | 104.1035672 | 102.3888913 | 97.84714752 | 93.53024346 | 89.42588451 | 85.5225158 |
| 200327A00055 | 3/27/2020 | 1.01 | 3/27/2024 | 3/27/2020 | 102.63361 | 102.6336099 | 102.6336099 | 102.6336099 | 101.5826736 | 98.02014067 | 94.60021969 | 91.31641819 | 88.16257859 |
| 200327A00056 | 3/27/2020 | 1.18 | 3/27/2025 | 3/27/2020 | 104.14562 | 104.1456173 | 104.1456173 | 104.1456173 | 102.4427466 | 97.92581587 | 93.63177693 | 89.54847409 | 85.66448126 |
| 200327A00058 | 3/27/2020 | 0.9 | 3/27/2023 | 3/27/2020 | 101.61891 | 101.6189055 | 101.6189055 | 101.6189055 | 101.0397182 | 98.43736045 | 95.91447001 | 93.46812477 | 91.09553115 |
| 200327A00059 | 3/27/2020 | 1.01 | 3/27/2024 | 3/27/2020 | 102.63361 | 102.6336099 | 102.6336099 | 102.6336099 | 101.5826736 | 98.02014067 | 94.60021969 | 91.31641819 | 88.16257859 |
| 200327A00060 | 3/27/2020 | 1.18 | 3/27/2025 | 3/27/2020 | 104.14562 | 104.1456173 | 104.1456173 | 104.1456173 | 102.4427466 | 97.92581587 | 93.63177693 | 89.54847409 | 85.66448126 |
| 200327A00061 | 3/31/2020 | 1.18 | 3/31/2025 | 3/31/2020 | 104.15537 | 104.1553664 | 104.1553664 | 104.1553664 | 102.4443246 | 97.91735863 | 93.61420796 | 89.52264312 | 85.63117024 |
| 200327A00046 | 3/27/2020 | 1.23 | 3/27/2025 | 3/27/2020 | 104.38006 | 104.3800578 | 104.3800578 | 104.3800578 | 102.6757532 | 98.15343869 | 93.85420613 | 89.76589153 | 85.87706091 |
| 200327A00047 | 3/27/2020 | 0.99 | 3/27/2025 | 3/27/2020 | 104.10357 | 104.1035672 | 104.1035672 | 104.1035672 | 102.3888913 | 97.84714752 | 93.53024346 | 89.42588451 | 85.5225158 |
| 200327A00048 | 3/27/2020 | 1.18 | 3/24/2025 | 3/27/2020 | 104.13831 | 104.1383069 | 104.1383069 | 104.1383069 | 102.4415644 | 97.93216519 | 93.64496657 | 89.56786801 | 85.68949409 |
| 200327A00051 | 3/27/2020 | 0.99 | 3/27/2025 | 3/27/2020 | 104.10357 | 104.1035672 | 104.1035672 | 104.1035672 | 102.3888913 | 97.84714752 | 93.53024346 | 89.42588451 | 85.5225158 |
| 200327A00053 | 3/27/2020 | 0.84 | 3/25/2022 | 3/27/2020 | 100.90705 | 100.9070452 | 100.9070452 | 100.9070452 | 100.6154061 | 98.98890821 | 97.39625515 | 95.83645556 | 94.30855684 |
| 200327A00054 | 3/27/2020 | 0.9 | 3/27/2023 | 3/27/2020 | 101.61891 | 101.6189055 | 101.6189055 | 101.6189055 | 101.0397182 | 98.43736045 | 95.91447001 | 93.46812477 | 91.09553115 |
| 200327A00039 | 3/27/2020 | 0.84 | 3/28/2022 | 3/27/2020 | 100.9116 | 100.9116027 | 100.9116027 | 100.9116027 | 100.6181863 | 98.98381085 | 97.38355342 | 95.81641053 | 94.28141813 |
| 200327A00040 | 3/27/2020 | 0.72 | 3/27/2023 | 3/27/2020 | 101.61605 | 101.6160464 | 101.6160464 | 101.6160464 | 101.0342518 | 98.42142962 | 95.88860586 | 93.43283186 | 91.05128898 |
| 200327A00041 | 3/27/2020 | 0.9 | 3/27/2023 | 3/27/2020 | 101.61891 | 101.6189055 | 101.6189055 | 101.6189055 | 101.0397182 | 98.43736045 | 95.91447001 | 93.46812477 | 91.09553115 |
| 200327A00042 | 3/27/2020 | 0.83 | 3/27/2024 | 3/27/2020 | 102.63248 | 102.6324809 | 102.6324809 | 102.6324809 | 101.5754414 | 97.99553102 | 94.5593437 | 91.26031988 | 88.0922392 |
| 200327A00043 | 3/27/2020 | 1.48 | 3/27/2028 | 3/27/2020 | 110.52523 | 110.5252311 | 110.5252311 | 110.5252311 | 105.0111691 | 97.65680413 | 90.86596179 | 84.59262728 | 78.79476642 |
| 200327A00045 | 3/27/2020 | 2.24 | 3/27/2034 | 3/27/2020 | 129.14716 | 129.147156 | 129.147156 | 124.6201253 | 110.6470429 | 98.11470714 | 87.16605937 | 77.5910295 | 69.20844617 |
| 200327A00027 | 3/27/2020 | 0.9 | 3/27/2023 | 3/27/2020 | 101.61891 | 101.6189055 | 101.6189055 | 101.6189055 | 101.0397182 | 98.43736045 | 95.91447001 | 93.46812477 | 91.09553115 |
| 200327A00030 | 3/27/2020 | 1.01 | 3/27/2024 | 3/27/2020 | 102.63361 | 102.6336099 | 102.6336099 | 102.6336099 | 101.5826736 | 98.02014067 | 94.60021969 | 91.31641819 | 88.16257859 |
| 200327A00031 | 3/27/2020 | 1.18 | 3/27/2025 | 3/27/2020 | 104.14562 | 104.1456173 | 104.1456173 | 104.1456173 | 102.4427466 | 97.92581587 | 93.63177693 | 89.54847409 | 85.66448126 |
| 200327A00032 | 3/27/2020 | 0.66 | 3/28/2022 | 3/27/2020 | 100.90882 | 100.9088192 | 100.9088192 | 100.9088192 | 100.6144055 | 98.97487828 | 97.36965932 | 95.79773745 | 94.2581414 |
| 200327A00035 | 3/27/2020 | 0.83 | 3/27/2024 | 3/27/2020 | 102.63248 | 102.6324809 | 102.6324809 | 102.6324809 | 101.5754414 | 97.99553102 | 94.5593437 | 91.26031988 | 88.0922392 |
| 200327A00037 | 3/27/2020 | 1.18 | 3/27/2026 | 3/27/2020 | 106.06771 | 106.0677065 | 106.0677065 | 106.0677065 | 103.3972689 | 97.89954216 | 92.72448921 | 87.85154385 | 83.26155702 |
| 200326A00016 | 3/26/2020 | 1.54 | 3/25/2025 | 3/26/2020 | 105.82674 | 105.8267427 | 105.8267427 | 105.8267427 | 104.1176677 | 99.56708214 | 95.24029256 | 91.12512023 | 87.21011614 |
| 200326A00025 | 3/26/2020 | 0.99 | 3/28/2022 | 3/26/2020 | 101.16303 | 101.1630291 | 101.1630291 | 101.1630291 | 100.8692758 | 99.23272887 | 97.63033906 | 96.06110189 | 94.52405224 |
| 200327A00013 | 3/27/2020 | 0.72 | 3/27/2023 | 3/27/2020 | 101.61605 | 101.6160464 | 101.6160464 | 101.6160464 | 101.0342518 | 98.42142962 | 95.88860586 | 93.43283186 | 91.05128898 |
| 200327A00019 | 3/30/2020 | 0.85 | 3/15/2022 | 3/30/2020 | 100.92451 | 100.9245103 | 100.9245103 | 100.9245103 | 100.6387002 | 99.0379154 | 97.47008861 | 95.93426785 | 94.42953776 |
| 200327A00022 | 3/27/2020 | 0.9 | 3/27/2023 | 3/27/2020 | 101.61891 | 101.6189055 | 101.6189055 | 101.6189055 | 101.0397182 | 98.43736045 | 95.91447001 | 93.46812477 | 91.09553115 |
| 200327A00025 | 3/30/2020 | 0.86 | 3/30/2022 | 3/30/2020 | 100.94828 | 100.9482754 | 100.9482754 | 100.9482754 | 100.6536289 | 99.01371189 | 97.40810088 | 95.83578419 | 94.29578997 |
| 200325A00046 | 3/25/2020 | 1.76 | 3/25/2025 | 3/25/2020 | 106.85708 | 106.8570754 | 106.8570754 | 106.8570754 | 105.1417122 | 100.5674916 | 96.21790117 | 92.08072563 | 88.14448133 |
| 200325A00047 | 3/25/2020 | 1.68 | 9/25/2024 | 3/25/2020 | 105.7963 | 105.7963048 | 105.7963048 | 105.7963048 | 104.4330885 | 100.3447592 | 96.43847733 | 92.70515787 | 89.13622143 |

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 200325A00048 | 3/25/2020 | 1.34 | 12/27/2022 | 3/25/2020 | 102.5404 | 102.5404026 | 102.5404026 | 102.5404026 | 102.0410847 | 99.6666861 | 97.35917018 | 95.11628642 | 92.93587338 |
| 200326A00009 | 3/27/2020 | 1.54 | 3/27/2025 | 3/27/2020 | 105.83359 | 105.8335885 | 105.8335885 | 105.8335885 | 104.1203945 | 99.56470022 | 95.23326718 | 91.1138797 | 87.19505474 |
| 200326A00011 | 3/30/2020 | 1.54 | 3/31/2025 | 3/30/2020 | 105.84728 | 105.8472823 | 105.8472823 | 105.8472823 | 104.1258501 | 99.55994565 | 95.21923503 | 91.09142818 | 87.16497381 |
| 200326A00012 | 3/26/2020 | 0.99 | 3/25/2022 | 3/26/2020 | 101.15723 | 101.1572279 | 101.1572279 | 101.1572279 | 100.8652556 | 99.23660651 | 97.641841 | 96.07996664 | 94.55002978 |
| 200325A00016 | 3/30/2020 | 1.67 | 3/31/2025 | 3/30/2020 | 106.45825 | 106.458252 | 106.458252 | 106.458252 | 104.7330676 | 100.1531021 | 95.79882814 | 91.6579339 | 87.71884732 |
| 200325A00032 | 3/25/2020 | 1.29 | 9/26/2022 | 3/25/2020 | 102.166 | 102.1659976 | 102.1659976 | 102.1659976 | 101.7426699 | 99.61436345 | 97.54074065 | 95.52001232 | 93.55046259 |
| 200325A00038 | 3/25/2020 | 1.48 | 9/25/2023 | 3/25/2020 | 103.76754 | 103.7675366 | 103.7675366 | 103.7675366 | 102.9715503 | 99.86413485 | 96.86609771 | 93.97295354 | 91.18043022 |
| 200325A00042 | 3/25/2020 | 1.58 | 3/25/2024 | 3/25/2020 | 104.72846 | 104.728458 | 104.728458 | 104.728458 | 103.6720955 | 100.0764032 | 96.62406565 | 93.30857367 | 90.12375308 |
| 200325A00043 | 3/25/2020 | 1.62 | 6/25/2024 | 3/25/2020 | 105.2102 | 105.2102007 | 105.2102007 | 105.2102007 | 104.0065926 | 100.1643585 | 96.48447621 | 92.9592682 | 89.58145963 |
| 200325A00044 | 3/25/2020 | 1.7 | 12/23/2024 | 3/25/2020 | 106.17814 | 106.1781437 | 106.1781437 | 106.1781437 | 104.6498841 | 100.328845 | 96.21000169 | 92.2828848 | 88.53761919 |
| 200324A00029 | 3/24/2020 | 1.86 | 3/24/2025 | 3/24/2020 | 107.32111 | 107.321109 | 107.321109 | 107.321109 | 105.6049621 | 101.0225921 | 96.66499701 | 92.51996354 | 88.57600936 |
| 200324A00031 | 3/24/2020 | 1.64 | 3/22/2024 | 3/24/2020 | 104.93826 | 104.9382608 | 104.9382608 | 104.9382608 | 103.8855772 | 100.2936923 | 96.84471479 | 93.53216877 | 90.34991073 |
| 200324A00051 | 3/24/2020 | 1.73 | 11/1/2024 | 3/24/2020 | 106.10808 | 106.1080793 | 106.1080793 | 106.1080793 | 104.6773055 | 100.4902492 | 96.49335493 | 92.67694013 | 89.03187336 |
| 200324A00066 | 3/26/2020 | 1.81 | 3/26/2025 | 3/26/2020 | 107.0954 | 107.0954044 | 107.0954044 | 107.0954044 | 105.37654 | 100.7943603 | 96.43723458 | 92.29292075 | 88.34991014 |
| 200325A00009 | 3/27/2020 | 1.67 | 3/27/2025 | 3/27/2020 | 106.44313 | 106.4431336 | 106.4431336 | 106.4431336 | 104.7262118 | 100.1565196 | 95.8115831 | 91.67916506 | 87.74776182 |
| 200325A00013 | 3/25/2020 | 1.03 | 8/16/2021 | 3/25/2020 | 100.79669 | 100.7966903 | 100.7966903 | 100.7966903 | 100.6376646 | 99.593506 | 98.57087707 | 97.56911757 | 96.58759404 |
| 200320A00049 | 3/25/2020 | 1.47 | 3/25/2025 | 3/25/2020 | 105.49891 | 105.4989096 | 105.4989096 | 105.4989096 | 103.7918353 | 99.24877004 | 94.92923528 | 90.82106397 | 86.91281812 |
| 200320A00052 | 3/25/2020 | 1.47 | 3/25/2025 | 3/25/2020 | 105.49891 | 105.4989096 | 105.4989096 | 105.4989096 | 103.7918353 | 99.24877004 | 94.92923528 | 90.82106397 | 86.91281812 |
| 200323A00011 | 3/23/2020 | 1.37 | 3/23/2023 | 3/23/2020 | 102.86691 | 102.8669073 | 102.8669073 | 102.8669073 | 102.2884755 | 99.67966019 | 97.15014271 | 94.69701921 | 92.31751297 |
| 200323A00018 | 3/23/2020 | 1.37 | 3/23/2023 | 3/23/2020 | 102.86691 | 102.8669073 | 102.8669073 | 102.8669073 | 102.2884755 | 99.67966019 | 97.15014271 | 94.69701921 | 92.31751297 |
| 200324A00012 | 3/25/2020 | 1.78 | 3/25/2025 | 3/25/2020 | 106.95074 | 106.950742 | 106.950742 | 106.950742 | 105.2348072 | 100.6584379 | 96.30677467 | 92.16759885 | 88.22942362 |
| 200324A00013 | 3/25/2020 | 1.78 | 3/25/2025 | 3/25/2020 | 106.95074 | 106.950742 | 106.950742 | 106.950742 | 105.2348072 | 100.6584379 | 96.30677467 | 92.16759885 | 88.22942362 |
| 200319A00037 | 3/19/2020 | 0.99 | 6/18/2021 | 3/19/2020 | 100.64607 | 100.6460699 | 100.6460699 | 100.6460699 | 100.521341 | 99.63720541 | 98.76853803 | 97.91493582 | 97.07600962 |
| 200319A00038 | 3/19/2020 | 1.18 | 9/17/2021 | 3/19/2020 | 101.0353 | 101.0353047 | 101.0353047 | 101.0353047 | 100.8540711 | 99.72241112 | 98.61598286 | 97.53395022 | 96.47551372 |
| 200319A00039 | 3/19/2020 | 1.12 | 3/18/2022 | 3/19/2020 | 101.358 | 101.3580017 | 101.3580017 | 101.3580017 | 101.0699041 | 99.45786543 | 97.87910927 | 96.33267039 | 94.81762078 |
| 200320A00013 | 3/20/2020 | 1.25 | 3/20/2024 | 3/20/2020 | 104.16454 | 104.1645384 | 104.1645384 | 104.1645384 | 103.1119195 | 99.52184428 | 96.0749993 | 92.76488216 | 89.58532489 |
| 200320A00025 | 3/20/2020 | 0.78 | 3/19/2021 | 3/20/2020 | 100.33517 | 100.3351726 | 100.3351726 | 100.3351726 | 100.2568877 | 99.62119609 | 98.99353644 | 98.37375718 | 97.76171055 |
| 200320A00026 | 3/20/2020 | 2.11 | 3/20/2029 | 3/20/2020 | 115.59626 | 115.596256 | 115.596256 | 115.596256 | 108.5264089 | 100.2496976 | 92.67209132 | 85.73079947 | 79.36897647 |
| 200318A00047 | 3/18/2020 | 1.29 | 3/18/2025 | 3/18/2020 | 105.48703 | 105.4870289 | 105.4870289 | 105.4870289 | 103.7823753 | 99.23123153 | 94.90396934 | 90.78841146 | 86.87310952 |
| 200318A00049 | 3/18/2020 | 0.84 | 3/18/2021 | 3/18/2020 | 100.37201 | 100.3720055 | 100.3720055 | 100.3720055 | 100.2942025 | 99.66110383 | 99.03597025 | 98.41865206 | 97.80900333 |
| 200318A00054 | 3/18/2020 | 1.56 | 3/18/2025 | 3/18/2020 | 105.89607 | 105.8960657 | 105.8960657 | 105.8960657 | 104.2008442 | 99.66601485 | 95.35343145 | 91.25104109 | 87.34751028 |
| 200319A00005 | 3/19/2020 | 0.81 | 3/19/2021 | 3/19/2020 | 100.3544 | 100.3544047 | 100.3544047 | 100.3544047 | 100.2761121 | 99.640351 | 99.01262248 | 98.39277496 | 97.78066067 |
| 200319A00009 | 3/19/2020 | 0.94 | 3/18/2022 | 3/19/2020 | 101.35605 | 101.3560493 | 101.3560493 | 101.3560493 | 101.0669795 | 99.44989436 | 97.86627625 | 96.31515259 | 94.79558843 |

Classification | Public

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 200319A00025 | 3/19/2020 | 1.39 | 3/21/2024 | 3/19/2020 | 104.01677 | 104.0167729 | 104.0167729 | 104.0167729 | 102.9692818 | 99.39669163 | 95.96633594 | 92.67176923 | 89.50687692 |
| 200318A00013 | 3/18/2020 | 1.5 | 3/18/2025 | 3/18/2020 | 105.61622 | 105.6162163 | 105.6162163 | 105.6162163 | 103.9226902 | 99.39425543 | 95.08784167 | 90.99140583 | 87.09362375 |
| 200318A00026 | 3/20/2020 | 1.08 | 3/16/2022 | 3/20/2020 | 101.2877 | 101.2876954 | 101.2876954 | 101.2876954 | 101.0008734 | 99.39467182 | 97.82156273 | 96.28058905 | 94.77083058 |
| 200318A00037 | 3/18/2020 | 1.35 | 3/18/2024 | 3/18/2020 | 103.86119 | 103.8611947 | 103.8611947 | 103.8611947 | 102.8188328 | 99.25666412 | 95.83609259 | 92.55071281 | 89.39444756 |
| 200318A00038 | 3/18/2020 | 1.48 | 3/18/2025 | 3/18/2020 | 105.52293 | 105.5229332 | 105.5229332 | 105.5229332 | 103.8299722 | 99.30366896 | 94.99931174 | 90.90486075 | 87.00899491 |
| 200318A00039 | 3/18/2020 | 1.08 | 3/18/2022 | 3/18/2020 | 101.29206 | 101.2920602 | 101.2920602 | 101.2920602 | 101.0040492 | 99.39257148 | 97.81436624 | 96.26846847 | 94.75395047 |
| 200318A00044 | 3/18/2020 | 1.17 | 3/18/2024 | 3/18/2020 | 103.86426 | 103.8642585 | 103.8642585 | 103.8642585 | 102.8158722 | 99.23637001 | 95.79956504 | 92.49898584 | 89.32849334 |
| 200317A00025 | 3/17/2020 | 1.66 | 3/15/2030 | 3/17/2020 | 114.95905 | 114.9590541 | 114.9590541 | 114.9590541 | 106.0824752 | 96.990759 | 88.751148 | 81.27934859 | 74.49980377 |
| 200317A00027 | 3/17/2020 | 1.29 | 3/17/2025 | 3/17/2020 | 104.63401 | 104.6340054 | 104.6340054 | 104.6340054 | 102.9484616 | 98.44493356 | 94.16240909 | 90.08889778 | 86.21312489 |
| 200317A00033 | 3/19/2020 | 1.1 | 2/15/2022 | 3/19/2020 | 101.27226 | 101.2722647 | 101.2722647 | 101.2722647 | 101.0025375 | 99.47591813 | 97.9798233 | 96.51340904 | 95.07586216 |
| 200317A00039 | 3/19/2020 | 1.11 | 4/15/2022 | 3/19/2020 | 101.40454 | 101.4045363 | 101.4045363 | 101.4045363 | 101.0995581 | 99.41252672 | 97.76147052 | 96.14530347 | 94.56298353 |
| 200317A00045 | 3/19/2020 | 1.43 | 3/19/2025 | 3/19/2020 | 105.29285 | 105.2928469 | 105.2928469 | 105.2928469 | 103.5992439 | 99.07572682 | 94.7741995 | 90.6826119 | 86.78963385 |
| 200317A00064 | 3/19/2020 | 1.12 | 5/16/2022 | 3/19/2020 | 101.51045 | 101.5104497 | 101.5104497 | 101.5104497 | 101.1859066 | 99.41528184 | 97.68389154 | 95.99058101 | 94.33423937 |
| 200316A00068 | 3/16/2020 | 1.05 | 3/16/2022 | 3/16/2020 | 101.23841 | 101.2384051 | 101.2384051 | 101.2384051 | 100.9516475 | 99.34586399 | 97.77316542 | 96.23259498 | 94.72323265 |
| 200316A00070 | 3/16/2020 | 1.05 | 3/16/2022 | 3/16/2020 | 101.23841 | 101.2384051 | 101.2384051 | 101.2384051 | 100.9516475 | 99.34586399 | 97.77316542 | 96.23259498 | 94.72323265 |
| 200316A00071 | 3/16/2020 | 1.18 | 3/16/2023 | 3/16/2020 | 102.34252 | 102.3425193 | 102.3425193 | 102.3425193 | 101.7720931 | 99.18836144 | 96.68279476 | 94.25254715 | 91.89489637 |
| 200316A00072 | 3/16/2020 | 1.18 | 3/16/2023 | 3/16/2020 | 102.34252 | 102.3425193 | 102.3425193 | 102.3425193 | 101.7720931 | 99.18836144 | 96.68279476 | 94.25254715 | 91.89489637 |
| 200317A00011 | 3/17/2020 | 1.04 | 3/17/2022 | 3/17/2020 | 101.22405 | 101.2240469 | 101.2240469 | 101.2240469 | 100.9367166 | 99.32843605 | 97.75332787 | 96.21043133 | 94.69882272 |
| 200317A00023 | 3/17/2020 | 1.1 | 3/17/2025 | 3/17/2020 | 104.59436 | 104.5943639 | 104.5943639 | 104.5943639 | 102.8971899 | 98.36899305 | 94.06372563 | 89.96926041 | 86.07419592 |
| 200316A00046 | 3/16/2020 | 1.18 | 3/18/2024 | 3/16/2020 | 103.23851 | 103.2385054 | 103.2385054 | 103.2385054 | 102.1986245 | 98.64775052 | 95.23814583 | 91.96341727 | 88.81749927 |
| 200316A00048 | 3/16/2020 | 1.11 | 3/16/2023 | 3/16/2020 | 102.157 | 102.1569961 | 102.1569961 | 102.1569961 | 101.5870219 | 99.00576044 | 96.50260717 | 94.07471796 | 91.71937229 |
| 200316A00049 | 3/16/2020 | 1.25 | 3/14/2025 | 3/16/2020 | 104.43966 | 104.4396632 | 104.4396632 | 104.4396632 | 102.7613881 | 98.26968193 | 93.99814059 | 89.93483496 | 86.06854679 |
| 200316A00050 | 3/16/2020 | 1.54 | 3/16/2027 | 3/16/2020 | 108.20782 | 108.2078193 | 108.2078193 | 108.2078193 | 104.2703936 | 97.9107641 | 91.9785707 | 86.44293135 | 81.27534816 |
| 200316A00055 | 3/16/2020 | 1.06 | 3/14/2025 | 3/16/2020 | 104.3993 | 104.3992972 | 104.3992972 | 104.3992972 | 102.7094603 | 98.19318541 | 93.89899192 | 89.81481466 | 85.92930938 |
| 200316A00067 | 3/18/2020 | 1.1 | 9/15/2022 | 3/18/2020 | 101.72774 | 101.7277447 | 101.7277447 | 101.7277447 | 101.313863 | 99.21992985 | 97.17927722 | 95.19018264 | 93.25099318 |
| 200316A00019 | 3/16/2020 | 1.11 | 3/16/2023 | 3/16/2020 | 102.157 | 102.1569961 | 102.1569961 | 102.1569961 | 101.5870219 | 99.00576044 | 96.50260717 | 94.07471796 | 91.71937229 |
| 200316A00037 | 3/16/2020 | 1.06 | 3/14/2025 | 3/16/2020 | 104.3993 | 104.3992972 | 104.3992972 | 104.3992972 | 102.7094603 | 98.19318541 | 93.89899192 | 89.81481466 | 85.92930938 |
| 200316A00040 | 3/16/2020 | 1.04 | 3/16/2022 | 3/16/2020 | 101.22197 | 101.221975 | 101.221975 | 101.221975 | 100.9352389 | 99.32959472 | 97.75703299 | 96.21659695 | 94.70736668 |
| 200316A00041 | 3/16/2020 | 1.16 | 3/16/2023 | 3/16/2020 | 102.28951 | 102.2895126 | 102.2895126 | 102.2895126 | 101.7192156 | 99.13618972 | 96.63131259 | 94.20173881 | 91.84474664 |
| 200316A00042 | 3/16/2020 | 1.23 | 3/15/2024 | 3/16/2020 | 103.4139 | 103.413905 | 103.413905 | 103.413905 | 102.3778264 | 98.83134935 | 95.42568081 | 92.15446105 | 89.01165551 |
| 200316A00043 | 3/16/2020 | 1.3 | 3/14/2025 | 3/16/2020 | 104.67232 | 104.6723232 | 104.6723232 | 104.6723232 | 102.9926446 | 98.49563406 | 94.2189746 | 90.15072895 | 86.27967118 |
| 200312A00019 | 3/17/2020 | 1.06 | 5/16/2022 | 3/17/2020 | 101.40175 | 101.4017456 | 101.4017456 | 101.4017456 | 101.0773632 | 99.30774859 | 97.57734974 | 95.88501241 | 94.22962622 |
| 200312A00036 | 3/12/2020 | 1.04 | 3/11/2022 | 3/12/2020 | 101.22779 | 101.2277877 | 101.2277877 | 101.2277877 | 100.9439489 | 99.35107662 | 97.79085171 | 96.2623367 | 94.76462989 |

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 200312A00037 | 3/12/2020 | 1.3 | 3/12/2025 | 3/12/2020 | 104.66679 | 104.6667924 | 104.6667924 | 104.6667924 | 102.9912123 | 98.49925753 | 94.22719449 | 90.16312233 | 86.29584861 |
| 200313A00019 | 3/13/2020 | 1.55 | 3/13/2026 | 3/13/2020 | 107.02649 | 107.026489 | 107.026489 | 107.026489 | 104.415362 | 98.96192664 | 93.82514382 | 88.98501604 | 84.42291131 |
| 200316A00009 | 3/16/2020 | 1.25 | 3/14/2025 | 3/16/2020 | 104.43966 | 104.4396632 | 104.4396632 | 104.4396632 | 102.7613881 | 98.26968193 | 93.99814059 | 89.93483496 | 86.06854679 |
| 200316A00015 | 3/16/2020 | 0.99 | 3/14/2022 | 3/16/2020 | 101.1522 | 101.1522034 | 101.1522034 | 101.1522034 | 100.8666878 | 99.26659369 | 97.69940281 | 96.16416617 | 94.65997121 |
| 200311A00044 | 3/11/2020 | 1.73 | 3/11/2030 | 3/11/2020 | 113.68042 | 113.6804192 | 113.6804192 | 113.6804192 | 104.980055 | 96.0413661 | 87.9370325 | 80.58480469 | 73.91092966 |
| 200311A00055 | 3/11/2020 | 1.66 | 12/17/2027 | 3/11/2020 | 110.02267 | 110.0226724 | 110.0226724 | 110.0226724 | 104.9842176 | 97.93568809 | 91.4078117 | 85.35954146 | 79.75325794 |
| 200312A00006 | 3/12/2020 | 1.23 | 3/12/2025 | 3/12/2020 | 104.34145 | 104.3414518 | 104.3414518 | 104.3414518 | 102.6678302 | 98.18328438 | 93.91837043 | 89.86119882 | 86.00058783 |
| 200312A00009 | 3/12/2020 | 1.46 | 3/12/2027 | 3/12/2020 | 107.66319 | 107.6631903 | 107.6631903 | 107.6631903 | 103.7478254 | 97.4146888 | 91.5069511 | 85.99390695 | 80.84721871 |
| 200312A00014 | 3/12/2020 | 1.04 | 3/12/2025 | 3/12/2020 | 104.30074 | 104.3007368 | 104.3007368 | 104.3007368 | 102.6155973 | 98.1065441 | 93.81903335 | 89.74104003 | 85.8612569 |
| 200312A00015 | 3/12/2020 | 1.23 | 3/10/2025 | 3/12/2020 | 104.3363 | 104.3363045 | 104.3363045 | 104.3363045 | 102.6667752 | 98.18726887 | 93.9269364 | 89.87392454 | 86.01708495 |
| 200311A00012 | 3/11/2020 | 0.87 | 3/11/2022 | 3/11/2020 | 100.9508 | 100.9508021 | 100.9508021 | 100.9508021 | 100.6673215 | 99.07677997 | 97.5188441 | 95.9925776 | 94.4970799 |
| 200311A00023 | 3/11/2020 | 1.41 | 3/10/2028 | 3/11/2020 | 109.92356 | 109.9235576 | 109.9235576 | 109.9235576 | 104.4892505 | 97.19469188 | 90.45663711 | 84.22985361 | 78.47300272 |
| 200311A00024 | 3/11/2020 | 1.54 | 3/11/2030 | 3/11/2020 | 113.77889 | 113.7788922 | 113.7788922 | 113.7788922 | 104.9552916 | 95.9247656 | 87.741249 | 80.3209568 | 73.58878444 |
| 200311A00031 | 3/11/2020 | 1.41 | 12/24/2027 | 3/11/2020 | 108.19372 | 108.1937225 | 108.1937225 | 108.1937225 | 103.1562053 | 96.15699551 | 89.67743953 | 83.6764166 | 78.11625058 |
| 200311A00032 | 3/11/2020 | 1.11 | 3/11/2025 | 3/11/2020 | 104.62471 | 104.6247075 | 104.6247075 | 104.6247075 | 102.9396633 | 98.42569804 | 94.13330555 | 90.05046779 | 86.16588359 |
| 200311A00043 | 3/11/2020 | 1.3 | 3/11/2025 | 3/11/2020 | 104.66403 | 104.6640269 | 104.6640269 | 104.6640269 | 102.9904963 | 98.50106971 | 94.23130538 | 90.16932062 | 86.3039397 |
| 200310A00038 | 3/10/2020 | 1.41 | 3/11/2030 | 3/10/2020 | 110.60684 | 110.6068394 | 110.6068394 | 110.6068394 | 101.9909062 | 93.18985212 | 85.21413541 | 77.98220106 | 71.42093111 |
| 200310A00040 | 3/10/2020 | 1.36 | 3/10/2028 | 3/10/2020 | 108.04261 | 108.0426075 | 108.0426075 | 108.0426075 | 102.7018063 | 95.5360713 | 88.91621571 | 82.79794848 | 77.14078408 |
| 200310A00041 | 3/10/2020 | 1.39 | 3/12/2029 | 3/10/2020 | 109.34918 | 109.34918 | 109.34918 | 109.34918 | 102.4514606 | 94.44565478 | 87.12086364 | 80.41575985 | 74.27482707 |
| 200310A00051 | 3/10/2020 | 1.41 | 3/8/2030 | 3/10/2020 | 110.59786 | 110.5978634 | 110.5978634 | 110.5978634 | 101.996937 | 93.20210739 | 85.23142894 | 78.00352156 | 71.44541812 |
| 200310A00054 | 3/10/2020 | 1.1 | 3/10/2025 | 3/10/2020 | 103.73281 | 103.7328128 | 103.7328128 | 103.7328128 | 102.0669085 | 97.60112984 | 93.35404404 | 89.31381872 | 85.46932544 |
| 200310A00062 | 3/10/2020 | 1.05 | 3/8/2024 | 3/10/2020 | 102.74146 | 102.7414622 | 102.7414622 | 102.7414622 | 101.7185349 | 98.20185905 | 94.82435574 | 91.57976383 | 88.46214067 |
| 200310A00021 | 3/10/2020 | 1.1 | 3/10/2025 | 3/10/2020 | 103.73281 | 103.7328128 | 103.7328128 | 103.7328128 | 102.0669085 | 97.60112984 | 93.35404404 | 89.31381872 | 85.46932544 |
| 200310A00023 | 3/10/2020 | 1.02 | 3/10/2026 | 3/10/2020 | 105.1107 | 105.1107043 | 105.1107043 | 105.1107043 | 102.5028021 | 97.07209154 | 91.95836049 | 87.14152853 | 82.6028895 |
| 200310A00024 | 3/10/2020 | 0.91 | 3/10/2025 | 3/10/2020 | 103.6896 | 103.6895951 | 103.6895951 | 103.6895951 | 102.0122409 | 97.52210103 | 93.25255454 | 89.19163442 | 85.32808736 |
| 200310A00028 | 3/10/2020 | 1.1 | 3/10/2025 | 3/10/2020 | 103.73281 | 103.7328128 | 103.7328128 | 103.7328128 | 102.0669085 | 97.60112984 | 93.35404404 | 89.31381872 | 85.46932544 |
| 200310A00033 | 3/10/2020 | 0.91 | 3/10/2025 | 3/10/2020 | 103.6896 | 103.6895951 | 103.6895951 | 103.6895951 | 102.0122409 | 97.52210103 | 93.25255454 | 89.19163442 | 85.32808736 |
| 200310A00034 | 3/10/2020 | 1.41 | 3/11/2030 | 3/10/2020 | 110.60684 | 110.6068394 | 110.6068394 | 110.6068394 | 101.9909062 | 93.18985212 | 85.21413541 | 77.98220106 | 71.42093111 |
| 200310A00003 | 3/10/2020 | 1.1 | 3/10/2025 | 3/10/2020 | 103.73281 | 103.7328128 | 103.7328128 | 103.7328128 | 102.0669085 | 97.60112984 | 93.35404404 | 89.31381872 | 85.46932544 |
| 200310A00005 | 3/10/2020 | 1.41 | 3/8/2030 | 3/10/2020 | 110.59786 | 110.5978634 | 110.5978634 | 110.5978634 | 101.996937 | 93.20210739 | 85.23142894 | 78.00352156 | 71.44541812 |
| 200310A00014 | 3/10/2020 | 0.91 | 3/10/2025 | 3/10/2020 | 103.6896 | 103.6895951 | 103.6895951 | 103.6895951 | 102.0122409 | 97.52210103 | 93.25255454 | 89.19163442 | 85.32808736 |
| 200310A00015 | 3/10/2020 | 1.37 | 3/11/2030 | 3/10/2020 | 110.22264 | 110.2226419 | 110.2226419 | 110.2226419 | 101.6172626 | 92.83341287 | 84.87377328 | 77.65687561 | 71.10968129 |
| 200310A00016 | 3/10/2020 | 1.02 | 3/10/2026 | 3/10/2020 | 105.1107 | 105.1107043 | 105.1107043 | 105.1107043 | 102.5028021 | 97.07209154 | 91.95836049 | 87.14152853 | 82.6028895 |

Classification | Public

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 200310A00020 | 3/10/2020 | 1.1 | 3/10/2025 | 3/10/2020 | 103.73281 | 103.7328128 | 103.7328128 | 103.7328128 | 102.0669085 | 97.60112984 | 93.35404404 | 89.31381872 | 85.46932544 |
| 200309A00040 | 3/9/2020 | 0.91 | 3/8/2024 | 3/9/2020 | 102.23251 | 102.2325056 | 102.2325056 | 102.2325056 | 101.211581 | 97.7040702 | 94.33546748 | 91.09952144 | 87.9902988 |
| 200309A00043 | 3/9/2020 | 0.92 | 6/7/2024 | 3/9/2020 | 102.42524 | 102.4252392 | 102.4252392 | 102.4252392 | 101.2631488 | 97.52127097 | 93.93623781 | 90.50070671 | 87.20771562 |
| 200309A00044 | 3/9/2020 | 0.94 | 9/9/2024 | 3/9/2020 | 102.66968 | 102.6696829 | 102.6696829 | 102.6696829 | 101.3499187 | 97.36702223 | 93.56069718 | 89.92219184 | 86.44323721 |
| 200309A00045 | 3/9/2020 | 0.97 | 3/7/2025 | 3/9/2020 | 103.12374 | 103.1237366 | 103.1237366 | 103.1237366 | 101.46756 | 97.02297454 | 92.79591938 | 88.7746372 | 84.94806914 |
| 200309A00048 | 3/9/2020 | 1.11 | 3/9/2027 | 3/9/2020 | 105.33287 | 105.3328675 | 105.3328675 | 105.3328675 | 101.4575587 | 95.2055508 | 89.37451614 | 83.93404657 | 78.85607867 |
| 200309A00054 | 3/9/2020 | 0.98 | 3/9/2028 | 3/9/2020 | 106.61712 | 106.6171222 | 106.6171222 | 106.6171222 | 101.2423916 | 94.07061886 | 87.44854212 | 81.33138281 | 75.6782219 |
| 200306A00077 | 3/6/2020 | 1.06 | 3/6/2025 | 3/6/2020 | 103.53869 | 103.538691 | 103.538691 | 103.538691 | 101.882056 | 97.43049967 | 93.1965776 | 89.16853608 | 85.33531912 |
| 200309A00007 | 3/9/2020 | 1.11 | 3/9/2027 | 3/9/2020 | 105.33287 | 105.3328675 | 105.3328675 | 105.3328675 | 101.4575587 | 95.2055508 | 89.37451614 | 83.93404657 | 78.85607867 |
| 200309A00009 | 3/9/2020 | 0.92 | 3/9/2027 | 3/9/2020 | 105.34812 | 105.3481163 | 105.3481163 | 105.3481163 | 101.4325155 | 95.13214601 | 89.25767075 | 83.77823289 | 78.66536145 |
| 200309A00029 | 3/9/2020 | 1.02 | 3/7/2025 | 3/9/2020 | 103.35544 | 103.3554379 | 103.3554379 | 103.3554379 | 101.6978741 | 97.2480271 | 93.01589452 | 88.98971103 | 85.15841017 |
| 200309A00030 | 3/9/2020 | 1.11 | 3/9/2027 | 3/9/2020 | 105.33287 | 105.3328675 | 105.3328675 | 105.3328675 | 101.4575587 | 95.2055508 | 89.37451614 | 83.93404657 | 78.85607867 |
| 200309A00038 | 3/9/2020 | 1.26 | 3/11/2030 | 3/9/2020 | 109.1661 | 109.1660988 | 109.1660988 | 109.1660988 | 100.5897426 | 91.85320494 | 83.93777741 | 76.76223061 | 70.25374429 |
| 200306A00040 | 3/6/2020 | 1.01 | 3/6/2025 | 3/6/2020 | 103.30713 | 103.3071266 | 103.3071266 | 103.3071266 | 101.6518765 | 97.20557562 | 92.97672516 | 88.95357941 | 85.12508998 |
| 200306A00049 | 3/6/2020 | 1.01 | 3/6/2025 | 3/6/2020 | 103.30713 | 103.3071266 | 103.3071266 | 103.3071266 | 101.6518765 | 97.20557562 | 92.97672516 | 88.95357941 | 85.12508998 |
| 200306A00054 | 3/6/2020 | 1.01 | 3/6/2025 | 3/6/2020 | 103.30713 | 103.3071266 | 103.3071266 | 103.3071266 | 101.6518765 | 97.20557562 | 92.97672516 | 88.95357941 | 85.12508998 |
| 200306A00055 | 3/6/2020 | 0.82 | 3/6/2025 | 3/6/2020 | 103.26225 | 103.262255 | 103.262255 | 103.262255 | 101.5956531 | 97.12515044 | 92.87398515 | 88.83027798 | 84.98285674 |
| 200306A00064 | 3/6/2020 | 1.2 | 3/8/2027 | 3/6/2020 | 105.92721 | 105.9272101 | 105.9272101 | 105.9272101 | 102.0484408 | 95.77972844 | 89.9325866 | 84.4765881 | 79.38365058 |
| 200306A00066 | 3/6/2020 | 1.2 | 3/8/2027 | 3/6/2020 | 105.92721 | 105.9272101 | 105.9272101 | 105.9272101 | 102.0484408 | 95.77972844 | 89.9325866 | 84.4765881 | 79.38365058 |
| 200306A00013 | 3/6/2020 | 1.01 | 3/6/2025 | 3/6/2020 | 103.30713 | 103.3071266 | 103.3071266 | 103.3071266 | 101.6518765 | 97.20557562 | 92.97672516 | 88.95357941 | 85.12508998 |
| 200306A00022 | 3/6/2020 | 1.2 | 3/8/2027 | 3/6/2020 | 105.92721 | 105.9272101 | 105.9272101 | 105.9272101 | 102.0484408 | 95.77972844 | 89.9325866 | 84.4765881 | 79.38365058 |
| 200306A00028 | 3/6/2020 | 1.01 | 3/6/2025 | 3/6/2020 | 103.30713 | 103.3071266 | 103.3071266 | 103.3071266 | 101.6518765 | 97.20557562 | 92.97672516 | 88.95357941 | 85.12508998 |
| 200306A00031 | 3/6/2020 | 1.01 | 3/6/2025 | 3/6/2020 | 103.30713 | 103.3071266 | 103.3071266 | 103.3071266 | 101.6518765 | 97.20557562 | 92.97672516 | 88.95357941 | 85.12508998 |
| 200306A00036 | 3/6/2020 | 1.01 | 3/6/2025 | 3/6/2020 | 103.30713 | 103.3071266 | 103.3071266 | 103.3071266 | 101.6518765 | 97.20557562 | 92.97672516 | 88.95357941 | 85.12508998 |
| 200306A00038 | 3/6/2020 | 1.2 | 3/8/2027 | 3/6/2020 | 105.92721 | 105.9272101 | 105.9272101 | 105.9272101 | 102.0484408 | 95.77972844 | 89.9325866 | 84.4765881 | 79.38365058 |
| 200305A00039 | 3/5/2020 | 1.58 | 3/5/2030 | 3/5/2020 | 112.21898 | 112.2189772 | 112.2189772 | 112.2189772 | 103.5884431 | 94.72695599 | 86.69320298 | 79.40561186 | 72.79103075 |
| 200305A00045 | 3/5/2020 | 0.99 | 3/6/2023 | 3/5/2020 | 101.81968 | 101.819678 | 101.819678 | 101.819678 | 101.260104 | 98.70907404 | 96.23467612 | 93.83414379 | 91.50482953 |
| 200306A00003 | 3/6/2020 | 0.7 | 3/6/2023 | 3/6/2020 | 101.52836 | 101.5283639 | 101.5283639 | 101.5283639 | 100.9670044 | 98.40965467 | 95.92935702 | 93.52332271 | 91.18888323 |
| 200306A00006 | 3/6/2020 | 0.88 | 3/6/2023 | 3/6/2020 | 101.53117 | 101.5311728 | 101.5311728 | 101.5311728 | 100.9722914 | 98.42506427 | 95.95438232 | 93.55748184 | 91.23171789 |
| 200306A00007 | 3/6/2020 | 1.01 | 3/6/2025 | 3/6/2020 | 103.30713 | 103.3071266 | 103.3071266 | 103.3071266 | 101.6518765 | 97.20557562 | 92.97672516 | 88.95357941 | 85.12508998 |
| 200306A00010 | 3/6/2020 | 0.88 | 3/6/2023 | 3/6/2020 | 101.53117 | 101.5311728 | 101.5311728 | 101.5311728 | 100.9722914 | 98.42506427 | 95.95438232 | 93.55748184 | 91.23171789 |
| 200305A00017 | 3/5/2020 | 1.19 | 3/5/2025 | 3/5/2020 | 104.13829 | 104.1382943 | 104.1382943 | 104.1382943 | 102.4801032 | 98.0173989 | 93.77257858 | 89.73388585 | 85.89026165 |
| 200305A00019 | 3/5/2020 | 0.81 | 3/6/2023 | 3/5/2020 | 101.81756 | 101.8175645 | 101.8175645 | 101.8175645 | 101.2555087 | 98.69433749 | 96.21030576 | 93.8006221 | 91.46261539 |

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 200305A00030 | 3/5/2020 | 1.58 | 3/5/2030 | 3/5/2020 | 112.21898 | 112.2189772 | 112.2189772 | 112.2189772 | 103.5884431 | 94.72695599 | 86.69320298 | 79.40561186 | 72.79103075 |
| 200305A00032 | 3/5/2020 | 1.58 | 3/5/2030 | 3/5/2020 | 112.21898 | 112.2189772 | 112.2189772 | 112.2189772 | 103.5884431 | 94.72695599 | 86.69320298 | 79.40561186 | 72.79103075 |
| 200305A00037 | 3/5/2020 | 1.43 | 3/6/2028 | 3/5/2020 | 108.56432 | 108.5643158 | 108.5643158 | 108.5643158 | 103.230843 | 96.05485407 | 89.42442047 | 83.29534799 | 77.62723402 |
| 200305A00038 | 3/5/2020 | 1.51 | 3/5/2029 | 3/5/2020 | 110.36093 | 110.3609318 | 110.3609318 | 110.3609318 | 103.4719925 | 95.43959429 | 88.08811236 | 81.35638977 | 75.18905087 |
| 200304A00035 | 3/4/2020 | 1.17 | 3/4/2025 | 3/4/2020 | 104.04331 | 104.043314 | 104.043314 | 104.043314 | 102.3877199 | 97.92962908 | 93.68912099 | 89.65446041 | 85.81460786 |
| 200305A00001 | 3/5/2020 | 1.14 | 3/5/2025 | 3/5/2020 | 103.90687 | 103.9068669 | 103.9068669 | 103.9068669 | 102.2500584 | 97.79260336 | 93.55284882 | 89.51904634 | 85.6801444 |
| 200305A00006 | 3/5/2020 | 0.99 | 3/6/2023 | 3/5/2020 | 101.81968 | 101.819678 | 101.819678 | 101.819678 | 101.260104 | 98.70907404 | 96.23467612 | 93.83414379 | 91.50482953 |
| 200305A00014 | 3/10/2020 | 1 | 2/15/2023 | 3/10/2020 | 101.80986 | 101.8098591 | 101.8098591 | 101.8098591 | 101.267921 | 98.76958924 | 96.34520824 | 93.99215422 | 91.70791377 |
| 200305A00015 | 3/5/2020 | 0.99 | 3/6/2023 | 3/5/2020 | 101.81968 | 101.819678 | 101.819678 | 101.819678 | 101.260104 | 98.70907404 | 96.23467612 | 93.83414379 | 91.50482953 |
| 200305A00016 | 3/5/2020 | 0.99 | 3/6/2023 | 3/5/2020 | 101.81968 | 101.819678 | 101.819678 | 101.819678 | 101.260104 | 98.70907404 | 96.23467612 | 93.83414379 | 91.50482953 |
| 200304A00022 | 3/4/2020 | 0.86 | 3/6/2023 | 3/4/2020 | 101.94902 | 101.9490193 | 101.9490193 | 101.9490193 | 101.3866471 | 98.82373877 | 96.33800973 | 93.92666728 | 91.5870391 |
| 200304A00025 | 3/4/2020 | 1.04 | 3/6/2023 | 3/4/2020 | 101.95082 | 101.9508168 | 101.9508168 | 101.9508168 | 101.3909279 | 98.83816939 | 96.36208239 | 93.95989922 | 91.62897118 |
| 200304A00029 | 3/4/2020 | 1.17 | 3/4/2025 | 3/4/2020 | 104.04331 | 104.043314 | 104.043314 | 104.043314 | 102.3877199 | 97.92962908 | 93.68912099 | 89.65446041 | 85.81460786 |
| 200304A00030 | 3/4/2020 | 1.6 | 12/22/2028 | 3/4/2020 | 110.88093 | 110.8809313 | 110.8809313 | 110.8809313 | 104.2985069 | 96.40390016 | 89.16361034 | 82.520128 | 76.421264 |
| 200304A00032 | 3/4/2020 | 1.6 | 12/15/2028 | 3/4/2020 | 110.85631 | 110.8563062 | 110.8563062 | 110.8563062 | 104.3044603 | 96.42551614 | 89.19825117 | 82.56550441 | 76.47539218 |
| 200304A00033 | 3/4/2020 | 1.17 | 3/4/2025 | 3/4/2020 | 104.04331 | 104.043314 | 104.043314 | 104.043314 | 102.3877199 | 97.92962908 | 93.68912099 | 89.65446041 | 85.81460786 |
| 200304A00012 | 3/4/2020 | 0.98 | 3/4/2025 | 3/4/2020 | 104.00161 | 104.0016101 | 104.0016101 | 104.0016101 | 102.3346686 | 97.85229842 | 93.58939856 | 89.53410041 | 85.67524084 |
| 200304A00013 | 3/4/2020 | 1.01 | 3/4/2022 | 3/4/2020 | 101.1648 | 101.1647962 | 101.1647962 | 101.1647962 | 100.8851807 | 99.31118153 | 97.76920138 | 96.25833038 | 94.77769289 |
| 200304A00015 | 3/4/2020 | 0.83 | 3/4/2022 | 3/4/2020 | 101.14673 | 101.1467332 | 101.1467332 | 101.1467332 | 100.8662563 | 99.28778513 | 97.74149688 | 96.22647518 | 94.74183831 |
| 200304A00018 | 3/4/2020 | 0.98 | 3/4/2025 | 3/4/2020 | 104.00161 | 104.0016101 | 104.0016101 | 104.0016101 | 102.3346686 | 97.85229842 | 93.58939856 | 89.53410041 | 85.67524084 |
| 200304A00019 | 3/4/2020 | 1.04 | 3/6/2023 | 3/4/2020 | 101.95082 | 101.9508168 | 101.9508168 | 101.9508168 | 101.3909279 | 98.83816939 | 96.36208239 | 93.95989922 | 91.62897118 |
| 200304A00020 | 3/4/2020 | 0.98 | 3/4/2025 | 3/4/2020 | 104.00161 | 104.0016101 | 104.0016101 | 104.0016101 | 102.3346686 | 97.85229842 | 93.58939856 | 89.53410041 | 85.67524084 |
| 200302A00025 | 3/2/2020 | 1.02 | 3/2/2022 | 3/2/2020 | 101.44805 | 101.4480535 | 101.4480535 | 101.4480535 | 101.1683822 | 99.59267175 | 98.04901215 | 96.53649364 | 95.05424066 |
| 200302A00056 | 3/2/2020 | 1.2 | 3/2/2023 | 3/2/2020 | 102.36043 | 102.3604348 | 102.3604348 | 102.3604348 | 101.8034028 | 99.25557654 | 96.78399838 | 94.38592632 | 92.05873571 |
| 200303A00009 | 3/3/2020 | 1.3 | 3/3/2025 | 3/3/2020 | 104.6419 | 104.6419039 | 104.6419039 | 104.6419039 | 102.9847711 | 98.51557796 | 94.26421533 | 90.21894537 | 86.36872558 |
| 200304A00002 | 3/4/2020 | 0.98 | 3/4/2025 | 3/4/2020 | 104.00161 | 104.0016101 | 104.0016101 | 104.0016101 | 102.3346686 | 97.85229842 | 93.58939856 | 89.53410041 | 85.67524084 |
| 200304A00005 | 3/4/2020 | 0.98 | 3/4/2025 | 3/4/2020 | 104.00161 | 104.0016101 | 104.0016101 | 104.0016101 | 102.3346686 | 97.85229842 | 93.58939856 | 89.53410041 | 85.67524084 |
| 200304A00011 | 3/4/2020 | 0.83 | 3/4/2022 | 3/4/2020 | 101.14673 | 101.1467332 | 101.1467332 | 101.1467332 | 100.8662563 | 99.28778513 | 97.74149688 | 96.22647518 | 94.74183831 |
| 200302A00006 | 3/2/2020 | 1.2 | 3/2/2023 | 3/2/2020 | 102.36043 | 102.3604348 | 102.3604348 | 102.3604348 | 101.8034028 | 99.25557654 | 96.78399838 | 94.38592632 | 92.05873571 |
| 200302A00013 | 3/2/2020 | 1.25 | 3/4/2024 | 3/2/2020 | 103.458 | 103.4579978 | 103.4579978 | 103.4579978 | 102.4382566 | 98.91879539 | 95.53814658 | 92.29008378 | 89.16869637 |
| 200302A00014 | 3/2/2020 | 1.2 | 3/2/2022 | 3/2/2020 | 101.46561 | 101.4656095 | 101.4656095 | 101.4656095 | 101.1867962 | 99.61554571 | 98.07618304 | 96.56780484 | 95.0895416 |
| 200302A00016 | 3/2/2020 | 1.36 | 3/3/2025 | 3/2/2020 | 104.91929 | 104.9192881 | 104.9192881 | 104.9192881 | 103.2605018 | 98.78502419 | 94.52759659 | 90.47647162 | 86.62059774 |
| 200302A00017 | 3/2/2020 | 1.3 | 3/4/2024 | 3/2/2020 | 103.63922 | 103.6392185 | 103.6392185 | 103.6392185 | 102.6187679 | 99.09605293 | 95.71224406 | 92.46111143 | 89.33674111 |

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 200302A00018 | 3/2/2020 | 1.25 | 3/2/2023 | 3/2/2020 | 102.49102 | 102.4910225 | 102.4910225 | 102.4910225 | 101.9336788 | 99.38413832 | 96.910885 | 94.51117561 | 92.18238434 |
| 200228A00070 | 5/18/2020 | 1.35 | 5/18/2023 | 5/18/2020 | 102.97618 | 102.9761826 | 102.9761826 | 102.9761826 | 102.3400457 | 99.58274693 | 96.9132228 | 94.328179 | 91.82446586 |
| 200228A00071 | 2/28/2020 | 1.74 | 12/14/2029 | 2/28/2020 | 113.44104 | 113.4410391 | 113.4410391 | 113.4410391 | 105.1724327 | 96.42319316 | 88.4722423 | 81.24262588 | 74.66516313 |
| 200228A00091 | 2/28/2020 | 1.72 | 12/7/2029 | 2/28/2020 | 113.22682 | 113.2268185 | 113.2268185 | 113.2268185 | 104.997559 | 96.2716682 | 88.34070283 | 81.1281611 | 74.56525565 |
| 200302A00002 | 3/2/2020 | 1.12 | 3/3/2025 | 3/2/2020 | 104.64917 | 104.649175 | 104.649175 | 104.649175 | 102.9804085 | 98.48580421 | 94.2109571 | 90.14399428 | 86.27374804 |
| 200302A00003 | 3/2/2020 | 1.2 | 3/2/2023 | 3/2/2020 | 102.36043 | 102.3604348 | 102.3604348 | 102.3604348 | 101.8034028 | 99.25557654 | 96.78399838 | 94.38592632 | 92.05873571 |
| 200302A00005 | 3/2/2020 | 1.31 | 3/3/2025 | 3/2/2020 | 104.68813 | 104.6881346 | 104.6881346 | 104.6881346 | 103.0307262 | 98.56048566 | 94.3081122 | 90.26186641 | 86.41070427 |
| 200225A00028 | 2/25/2020 | 1.89 | 12/21/2029 | 2/25/2020 | 114.87661 | 114.8766104 | 114.8766104 | 114.8766104 | 106.5366601 | 97.71046496 | 89.68937072 | 82.39570884 | 75.75966558 |
| 200225A00029 | 2/25/2020 | 1.89 | 12/28/2029 | 2/25/2020 | 114.90664 | 114.906636 | 114.906636 | 114.906636 | 106.5319948 | 97.69042644 | 89.65682836 | 82.35311424 | 75.70910907 |
| 200226A00004 | 2/26/2020 | 1.58 | 2/26/2025 | 2/26/2020 | 105.91887 | 105.9188656 | 105.9188656 | 105.9188656 | 104.2642216 | 99.77903942 | 95.51152622 | 91.4499924 | 87.58343855 |
| 200227A00055 | 2/27/2020 | 1.41 | 2/27/2023 | 2/27/2020 | 102.89973 | 102.8997285 | 102.8997285 | 102.8997285 | 102.3442473 | 99.79738134 | 97.32650679 | 94.92889904 | 92.60194967 |
| 200228A00045 | 2/28/2020 | 1.45 | 2/28/2025 | 2/28/2020 | 105.32584 | 105.3258357 | 105.3258357 | 105.3258357 | 103.6707406 | 99.19348252 | 94.93391599 | 90.88033356 | 87.02171999 |
| 200228A00047 | 5/18/2020 | 1.35 | 5/18/2023 | 5/18/2020 | 102.97618 | 102.9761826 | 102.9761826 | 102.9761826 | 102.3400457 | 99.58274693 | 96.9132228 | 94.328179 | 91.82446586 |
| 200221A00011 | 2/21/2020 | 1.69 | 8/21/2024 | 2/21/2020 | 105.70445 | 105.7044486 | 105.7044486 | 105.7044486 | 104.4027193 | 100.4065971 | 96.58510752 | 92.92970065 | 89.43229227 |
| 200221A00023 | 2/21/2020 | 2.05 | 12/7/2029 | 2/21/2020 | 116.31279 | 116.3127879 | 116.3127879 | 116.3127879 | 108.0034361 | 99.14261978 | 91.08536231 | 83.75451173 | 77.080685 |
| 200221A00024 | 2/21/2020 | 2.05 | 12/28/2029 | 2/21/2020 | 116.41193 | 116.4119281 | 116.4119281 | 116.4119281 | 107.9977153 | 99.08997517 | 90.9944621 | 83.6327676 | 76.93442159 |
| 200224A00006 | 2/24/2020 | 1.58 | 11/15/2024 | 2/24/2020 | 105.51364 | 105.513641 | 105.513641 | 105.513641 | 104.0601515 | 99.84946554 | 95.8317412 | 91.99713253 | 88.33634971 |
| 200225A00008 | 2/25/2020 | 1.52 | 6/3/2024 | 2/25/2020 | 104.74305 | 104.7430466 | 104.7430466 | 104.7430466 | 103.5772635 | 99.80131963 | 96.18271567 | 92.7141165 | 89.38856578 |
| 200225A00023 | 2/25/2020 | 1.62 | 2/25/2025 | 2/25/2020 | 106.09968 | 106.0996828 | 106.0996828 | 106.0996828 | 104.4459582 | 99.95944475 | 95.69049741 | 91.62743951 | 87.75928335 |
| 200218A00025 | 2/21/2020 | 1.71 | 2/24/2023 | 2/21/2020 | 103.66929 | 103.6692918 | 103.6692918 | 103.6692918 | 103.1147382 | 100.5664353 | 98.09391853 | 95.69447926 | 93.36552381 |
| 200218A00026 | 2/21/2020 | 1.73 | 3/25/2024 | 2/21/2020 | 105.28077 | 105.2807744 | 105.2807744 | 105.2807744 | 104.2221925 | 100.616432 | 97.15431974 | 93.82933547 | 90.63529458 |
| 200218A00030 | 2/21/2020 | 1.71 | 2/24/2023 | 2/21/2020 | 103.66929 | 103.6692918 | 103.6692918 | 103.6692918 | 103.1147382 | 100.5664353 | 98.09391853 | 95.69447926 | 93.36552381 |
| 200220A00013 | 2/20/2020 | 2.09 | 12/14/2029 | 2/20/2020 | 116.72065 | 116.7206465 | 116.7206465 | 116.7206465 | 108.3665548 | 99.47366264 | 91.38826743 | 84.03272023 | 77.33720394 |
| 200220A00014 | 2/20/2020 | 2.09 | 12/21/2029 | 2/20/2020 | 116.75445 | 116.7544486 | 116.7544486 | 116.7544486 | 108.3653417 | 99.45674546 | 91.35854152 | 83.99266148 | 77.28892538 |
| 200220A00034 | 2/25/2020 | 1.71 | 3/27/2023 | 2/25/2020 | 103.79023 | 103.7902261 | 103.7902261 | 103.7902261 | 103.205666 | 100.5740859 | 98.02264985 | 95.5484145 | 93.14856579 |
| 200605A00014 | 6/5/2020 | 1.02 | 6/5/2025 | 6/5/2020 | 103.24479 | 103.2447877 | 103.2447877 | 103.2447877 | 101.566586 | 97.21207036 | 93.0753525 | 89.14437653 | 85.40781475 |
| 200605A00016 | 6/5/2020 | 1.02 | 6/5/2025 | 6/5/2020 | 103.24479 | 103.2447877 | 103.2447877 | 103.2447877 | 101.566586 | 97.21207036 | 93.0753525 | 89.14437653 | 85.40781475 |
| 200605A00017 | 6/5/2020 | 1.02 | 6/5/2025 | 6/5/2020 | 103.24479 | 103.2447877 | 103.2447877 | 103.2447877 | 101.566586 | 97.21207036 | 93.0753525 | 89.14437653 | 85.40781475 |
| 200709A00025 | 7/9/2020 | 1.37 | 7/9/2030 | 7/9/2020 | 105.50768 | 105.5076754 | 105.5076754 | 105.5076754 | 102.3623128 | 97.47276143 | 92.91479833 | 88.6620395 | 84.69043185 |
| 200709A00024 | 7/9/2020 | 0.83 | 7/9/2025 | 7/9/2020 | 101.35321 | 101.3532063 | 101.3532063 | 101.3532063 | 100.6479374 | 98.15926248 | 95.76375061 | 93.45710818 | 91.23527127 |
| 200709A00021 | 7/9/2020 | 0.83 | 7/9/2025 | 7/9/2020 | 101.35321 | 101.3532063 | 101.3532063 | 101.3532063 | 100.6479374 | 98.15926248 | 95.76375061 | 93.45710818 | 91.23527127 |
| 160610A00017 | 6/10/2016 | 2.21 | 6/11/2029 | 6/10/2016 | 108.88977 | 108.8897675 | 108.8897675 | 108.8897675 | 106.3369879 | 101.7762521 | 97.49532215 | 93.47394344 | 89.69349792 |
| 160701A00032 | 7/1/2016 | 1.99 | 7/2/2029 | 7/1/2016 | 107.91191 | 107.9119145 | 107.9119145 | 107.9119145 | 105.3322041 | 100.7748988 | 96.49944933 | 92.48529861 | 88.71356211 |

Classification | Public

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 160708A00021 | 7/8/2016 | 2 | 7/6/2029 | 7/8/2016 | 107.9602 | 107.9601984 | 107.9601984 | 107.9601984 | 105.3791452 | 100.8197163 | 96.54228463 | 92.52628164 | 88.75281244 |
| 160715A00015 | 7/15/2016 | 2.13 | 7/16/2029 | 7/15/2016 | 108.5874 | 108.5874023 | 108.5874023 | 108.5874023 | 105.9909581 | 101.4049086 | 97.10252623 | 93.06311789 | 89.2676747 |
| 200309A00021 | 3/9/2020 | 1.05 | 3/9/2026 | 3/9/2020 | 104.19471 | 104.1947122 | 104.1947122 | 104.1947122 | 101.6207908 | 96.25436808 | 91.20033587 | 86.43895644 | 81.95183917 |
| 200316A00013 | 3/16/2020 | 1 | 4/15/2022 | 3/16/2020 | 101.21469 | 101.2146856 | 101.2146856 | 101.2146856 | 100.9099714 | 99.22462586 | 97.57522482 | 95.96068306 | 94.37995934 |
| 200318A00043 | 3/18/2020 | 1.06 | 3/20/2023 | 3/18/2020 | 102.51142 | 102.5114187 | 102.5114187 | 102.5114187 | 101.9341642 | 99.32743873 | 96.80000933 | 94.34897217 | 91.97155051 |
| 200325A00030 | 3/25/2020 | 1.5 | 3/25/2025 | 3/25/2020 | 106.49741 | 106.4974094 | 106.4974094 | 106.4974094 | 104.7721662 | 100.1802955 | 95.81475148 | 91.66319095 | 87.71401196 |
| 200326A00029 | 3/26/2020 | 1.82 | 3/26/2027 | 3/26/2020 | 110.11119 | 110.1111924 | 110.1111924 | 110.1111924 | 106.1116858 | 99.66822655 | 93.6581524 | 88.05008904 | 82.81509083 |
| 200330A00027 | 3/30/2020 | 0.62 | 3/30/2022 | 3/30/2020 | 100.84446 | 100.8444599 | 100.8444599 | 100.8444599 | 100.5489465 | 98.9047295 | 97.29499411 | 95.71872136 | 94.17493254 |
| 200403A00014 | 4/3/2020 | 0.63 | 4/17/2023 | 4/3/2020 | 101.40388 | 101.4038771 | 101.4038771 | 101.4038771 | 100.801502 | 98.13594657 | 95.55345532 | 93.05090636 | 90.62531877 |
| 200406A00006 | 4/6/2020 | 1.13 | 4/7/2025 | 4/6/2020 | 103.93629 | 103.9362862 | 103.9362862 | 103.9362862 | 102.2120401 | 97.67241295 | 93.35810918 | 89.25676951 | 85.35678121 |
| 200408A00019 | 4/10/2020 | 1.7 | 4/11/2022 | 4/10/2020 | 102.40735 | 102.4073538 | 102.4073538 | 102.4073538 | 102.1034255 | 100.4183497 | 98.76900544 | 97.15432067 | 95.57326634 |
| 200408A00021 | 4/8/2020 | 0.99 | 4/4/2025 | 4/8/2020 | 104.12283 | 104.1228298 | 104.1228298 | 104.1228298 | 102.3914403 | 97.82911895 | 93.49355438 | 89.37229713 | 85.45365023 |
| 200429A00035 | 5/1/2020 | 1.41 | 4/30/2024 | 5/1/2020 | 104.21242 | 104.2124173 | 104.2124173 | 104.2124173 | 103.1028431 | 99.42302926 | 95.89338568 | 92.50692777 | 89.2570406 |
| 200429A00044 | 5/1/2020 | 1.86 | 4/30/2025 | 5/1/2020 | 107.43048 | 107.4304775 | 107.4304775 | 107.4304775 | 105.6370259 | 100.9590646 | 96.51482908 | 92.29137927 | 88.27656577 |
| 200429A00053 | 5/1/2020 | 2.18 | 4/30/2025 | 5/1/2020 | 108.96032 | 108.9603239 | 108.9603239 | 108.9603239 | 107.1571772 | 102.4434261 | 97.96468574 | 93.70795896 | 89.66104217 |
| 200501A00003 | 5/1/2020 | 0.66 | 4/14/2023 | 5/1/2020 | 100.99351 | 100.9935076 | 100.9935076 | 100.9935076 | 100.3979498 | 97.75680132 | 95.19757486 | 92.71720655 | 90.31277006 |
| 200504A00013 | 5/4/2020 | 1.26 | 5/4/2027 | 5/4/2020 | 106.47295 | 106.4729498 | 106.4729498 | 106.4729498 | 102.3690221 | 95.95263666 | 89.97638073 | 84.40786825 | 79.21725799 |
| 200511A00019 | 5/11/2020 | 1.18 | 2/1/2027 | 5/11/2020 | 105.71319 | 105.71319 | 105.71319 | 105.71319 | 101.9699457 | 95.79375651 | 90.02765021 | 84.6423916 | 79.61096979 |
| 200511A00020 | 5/11/2020 | 1.4 | 2/1/2028 | 5/11/2020 | 108.2359 | 108.2359049 | 108.2359049 | 108.2359049 | 103.0433559 | 95.95778969 | 89.40532528 | 83.34321137 | 77.73232688 |
| 200604A00012 | 6/4/2020 | 1.59 | 6/4/2030 | 6/4/2020 | 112.6303 | 112.6302997 | 112.6302997 | 112.6302997 | 103.5329157 | 94.4738771 | 86.28023082 | 78.86489326 | 72.14994069 |
| 200611A00010 | 6/11/2020 | 1.08 | 6/11/2027 | 6/11/2020 | 105.33224 | 105.3322412 | 105.3322412 | 105.3322412 | 101.0971813 | 94.63294935 | 88.61914184 | 83.02223483 | 77.81135371 |
| 200615A00019 | 6/17/2020 | 1.34 | 6/16/2025 | 6/17/2020 | 105.07778 | 105.0777774 | 105.0777774 | 105.0777774 | 103.1980504 | 98.45883632 | 93.96302407 | 89.69692367 | 85.64768177 |
| 200709A00006 | 7/10/2020 | 2.58 | 7/10/2030 | 7/10/2020 | 122.58634 | 122.58634 | 122.58634 | 122.58634 | 113.0113447 | 103.422631 | 94.74522084 | 86.8872525 | 79.76657135 |
| 200720A00012 | 7/20/2020 | 0.77 | 7/15/2025 | 7/20/2020 | 102.31633 | 102.3163325 | 102.3163325 | 102.3163325 | 100.3913303 | 95.64778008 | 91.15260325 | 86.89158599 | 82.85139807 |
| 200722A00012 | 7/22/2020 | 0.41 | 7/21/2023 | 7/22/2020 | 100.87666 | 100.8766558 | 100.8766558 | 100.8766558 | 100.1695993 | 97.26471808 | 94.45817813 | 91.7461246 | 89.12487597 |
| 191018A00015 | 10/18/2019 | 1.89 | 10/18/2021 | 10/18/2019 | 101.98706 | 101.9870587 | 101.9870587 | 101.9870587 | 101.7837466 | 100.5626711 | 99.37076371 | 98.20698893 | 97.07035986 |
| 191024A00016 | 10/25/2019 | 1.91 | 2/16/2021 | 10/25/2019 | 100.92341 | 100.9234105 | 100.9234105 | 100.9234105 | 100.8595922 | 100.3065457 | 99.75955536 | 99.21852205 | 98.68334876 |
| 191025A00002 | 10/25/2019 | 1.75 | 10/26/2020 | 10/25/2019 | 100.3944 | 100.3944008 | 100.3944008 | 100.3944008 | 100.3700625 | 100.1287597 | 99.88862285 | 99.64964342 | 99.41181306 |
| 191106A00022 | 11/6/2019 | 2.34 | 1/2/2030 | 11/6/2019 | 119.16779 | 119.1677901 | 119.1677901 | 119.1677901 | 110.6564571 | 101.6173337 | 93.40025759 | 85.92593037 | 79.12308265 |
| 191108A00014 | 11/8/2019 | 2.25 | 11/8/2029 | 11/8/2019 | 119.94167 | 119.9416661 | 119.9416661 | 119.9416661 | 111.5700222 | 102.5284263 | 94.30006885 | 86.80733033 | 79.98037967 |
| 191113A00020 | 11/13/2019 | 1.88 | 11/13/2020 | 11/13/2019 | 100.47655 | 100.4765472 | 100.4765472 | 100.4765472 | 100.4464146 | 100.1556641 | 99.86660507 | 99.57922281 | 99.29350266 |
| 191115A00014 | 11/18/2019 | 2.45 | 11/18/2024 | 11/18/2019 | 109.29497 | 109.2949688 | 109.2949688 | 109.2949688 | 107.8158556 | 103.5168616 | 99.41419053 | 95.49784656 | 91.75839652 |
| 191115A00015 | 11/18/2019 | 2.61 | 11/18/2024 | 11/18/2019 | 109.98847 | 109.9884651 | 109.9884651 | 109.9884651 | 108.5056665 | 104.1918966 | 100.0749393 | 96.14477844 | 92.39196156 |

Classification | Public

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 191121A00009 | 11/21/2019 | 2.55 | 11/21/2036 | 11/21/2019 | 139.84094 | 139.8409372 | 139.8409372 | 131.4764258 | 114.631973 | 99.91730583 | 87.35213217 | 76.60640023 | 67.40247622 |
| 191206A00009 | 12/6/2019 | 2.87 | 12/4/2037 | 12/6/2019 | 143.92898 | 143.9289796 | 143.9289796 | 134.4009013 | 116.7368401 | 101.3955948 | 88.38928507 | 77.3428516 | 67.94359262 |
| 191216A00042 | 12/16/2019 | 1.95 | 12/16/2022 | 12/16/2019 | 103.97392 | 103.9739229 | 103.9739229 | 103.9739229 | 103.4808384 | 101.1175276 | 98.81993281 | 96.5858688 | 94.41323582 |
| 191223A00006 | 12/23/2019 | 1.92 | 12/23/2020 | 12/23/2019 | 100.67409 | 100.6740894 | 100.6740894 | 100.6740894 | 100.6311467 | 100.229837 | 99.83172865 | 99.43678351 | 99.04496387 |
| 191223A00019 | 12/23/2019 | 1.92 | 12/30/2020 | 12/23/2019 | 100.70668 | 100.7066825 | 100.7066825 | 100.7066825 | 100.6614875 | 100.2408498 | 99.82371582 | 99.41004188 | 98.99978517 |
| 191230A00013 | 12/30/2019 | 1.84 | 12/2/2024 | 12/30/2019 | 107.55939 | 107.559392 | 107.559392 | 107.559392 | 106.0529681 | 101.7301737 | 97.60751265 | 93.67472601 | 89.92213146 |
| 191230A00031 | 12/30/2019 | 1.85 | 12/30/2024 | 12/30/2019 | 107.73743 | 107.7374287 | 107.7374287 | 107.7374287 | 106.1762314 | 101.7784938 | 97.5875843 | 93.59273284 | 89.78378474 |
| 200106A00019 | 1/6/2020 | 1.89 | 7/16/2024 | 1/6/2020 | 106.36466 | 106.3646559 | 106.3646559 | 106.3646559 | 105.1209139 | 101.2026972 | 97.45208131 | 93.86103391 | 90.42194992 |
| 200110A00013 | 1/10/2020 | 1.76 | 1/10/2024 | 1/10/2020 | 105.72409 | 105.7240869 | 105.7240869 | 105.7240869 | 104.7693015 | 101.3365421 | 98.03441552 | 94.85726898 | 91.79972504 |
| 200122A00034 | 1/22/2020 | 1.87 | 1/22/2024 | 1/22/2020 | 105.52441 | 105.5244061 | 105.5244061 | 105.5244061 | 104.5583127 | 101.1143189 | 97.80223129 | 94.61630257 | 91.55106729 |
| 200123A00005 | 1/23/2020 | 1.81 | 1/24/2022 | 1/23/2020 | 102.29019 | 102.2901894 | 102.2901894 | 102.2901894 | 102.0319566 | 100.5593477 | 99.1153887 | 97.69931715 | 96.31039724 |
| 200127A00013 | 1/27/2020 | 1.56 | 1/27/2023 | 1/27/2020 | 103.63844 | 103.63844 | 103.63844 | 103.63844 | 103.1072738 | 100.6293572 | 98.22365982 | 95.8876627 | 93.6189505 |
| 200129A00018 | 2/3/2020 | 1.74 | 12/15/2022 | 2/3/2020 | 103.46546 | 103.465457 | 103.465457 | 103.465457 | 102.9743035 | 100.6197609 | 98.33066153 | 96.10483093 | 93.94017977 |
| 200130A00016 | 1/30/2020 | 1.58 | 1/30/2025 | 1/30/2020 | 106.6563 | 106.6563031 | 106.6563031 | 106.6563031 | 105.0401557 | 100.5881742 | 96.34969906 | 92.31339765 | 88.46859776 |
| 200130A00028 | 1/30/2020 | 1.54 | 2/7/2023 | 1/30/2020 | 103.63109 | 103.6310882 | 103.6310882 | 103.6310882 | 103.0899138 | 100.5813432 | 98.14659358 | 95.78306152 | 93.48825233 |
| 200131A00007 | 1/31/2020 | 1.68 | 1/31/2023 | 1/31/2020 | 103.50157 | 103.5015719 | 103.5015719 | 103.5015719 | 102.9694701 | 100.4924874 | 98.0878221 | 95.75294689 | 93.48543867 |
| 200203A00011 | 2/3/2020 | 1.7 | 2/15/2023 | 2/3/2020 | 103.60914 | 103.6091442 | 103.6091442 | 103.6091442 | 103.0630034 | 100.5414027 | 98.09427697 | 95.7189864 | 93.41300197 |
| 200203A00051 | 2/3/2020 | 1.58 | 11/3/2021 | 2/3/2020 | 101.86611 | 101.8661053 | 101.8661053 | 101.8661053 | 101.6520054 | 100.3866036 | 99.1514098 | 97.94534775 | 96.76739208 |
| 200207A00004 | 2/7/2020 | 1.53 | 2/7/2023 | 2/7/2020 | 103.60554 | 103.6055449 | 103.6055449 | 103.6055449 | 103.0644296 | 100.5561874 | 98.12175884 | 95.75854067 | 93.46403844 |
| 200207A00009 | 2/7/2020 | 1.58 | 2/7/2025 | 2/7/2020 | 106.68841 | 106.6884093 | 106.6884093 | 106.6884093 | 105.0559821 | 100.5812016 | 96.32191369 | 92.26663285 | 88.4045458 |
| 200207A00015 | 2/7/2020 | 1.73 | 2/7/2022 | 2/7/2020 | 102.22555 | 102.2255452 | 102.2255452 | 102.2255452 | 101.9593834 | 100.4484229 | 98.96742125 | 97.51556155 | 96.09205619 |
| 200212A00003 | 2/12/2020 | 1.63 | 2/12/2025 | 2/12/2020 | 106.93795 | 106.9379544 | 106.9379544 | 106.9379544 | 105.293978 | 100.7996152 | 96.52217107 | 92.45005638 | 88.57236227 |
| 200214A00004 | 2/14/2020 | 1.81 | 2/16/2021 | 2/14/2020 | 100.8679 | 100.8678988 | 100.8678988 | 100.8678988 | 100.8040995 | 100.2512304 | 99.70441611 | 99.16355748 | 98.62855751 |
| 200214A00005 | 2/14/2020 | 1.59 | 2/14/2025 | 2/14/2020 | 106.76243 | 106.7624267 | 106.7624267 | 106.7624267 | 105.1154447 | 100.61944 | 96.34071067 | 92.26763526 | 88.3892753 |
| 200214A00019 | 2/14/2020 | 1.81 | 2/16/2021 | 2/14/2020 | 100.8679 | 100.8678988 | 100.8678988 | 100.8678988 | 100.8040995 | 100.2512304 | 99.70441611 | 99.16355748 | 98.62855751 |
| 200220A00029 | 2/20/2020 | 1.72 | 2/21/2023 | 2/20/2020 | 103.68368 | 103.68368 | 103.68368 | 103.68368 | 103.1318495 | 100.5919981 | 98.12750457 | 95.73568282 | 93.41396057 |
| 200221A00003 | 2/25/2020 | 1.69 | 2/25/2025 | 2/25/2020 | 106.42215 | 106.4221469 | 106.4221469 | 106.4221469 | 104.7665122 | 100.2727173 | 95.99674197 | 91.92689871 | 88.05218936 |
| 200221A00016 | 2/21/2020 | 1.69 | 2/21/2025 | 2/21/2020 | 106.40715 | 106.4071494 | 106.4071494 | 106.4071494 | 104.7595791 | 100.2771578 | 96.01156415 | 91.9511871 | 88.08509907 |
| 200224A00015 | 2/24/2020 | 1.57 | 1/10/2024 | 2/24/2020 | 104.4295 | 104.4295008 | 104.4295008 | 104.4295008 | 103.48468 | 100.0902133 | 96.82478025 | 93.68280682 | 90.65899004 |
| 200225A00004 | 2/25/2020 | 1.54 | 2/26/2024 | 2/25/2020 | 104.48521 | 104.4852054 | 104.4852054 | 104.4852054 | 103.4718716 | 99.95229597 | 96.57076127 | 93.32110693 | 90.1974831 |
| 200225A00015 | 2/25/2020 | 1.54 | 2/26/2024 | 2/25/2020 | 104.48521 | 104.4852054 | 104.4852054 | 104.4852054 | 103.4718716 | 99.95229597 | 96.57076127 | 93.32110693 | 90.1974831 |
| 200225A00017 | 2/25/2020 | 1.94 | 2/25/2030 | 2/25/2020 | 115.63581 | 115.6358142 | 115.6358142 | 115.6358142 | 106.9515964 | 97.95400979 | 89.7908924 | 82.38038374 | 75.64904363 |
| 200226A00008 | 2/26/2020 | 1.38 | 2/26/2025 | 2/26/2020 | 105.83884 | 105.8388398 | 105.8388398 | 105.8388398 | 104.1731551 | 99.66457924 | 95.37552177 | 91.294162 | 87.40937899 |

Classification | Public

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 200227A00031 | 2/27/2020 | 1.43 | 2/27/2024 | 2/27/2020 | 104.09171 | 104.0917124 | 104.0917124 | 104.0917124 | 103.0784395 | 99.56317772 | 96.18594453 | 92.94057451 | 89.82121346 |
| 200228A00005 | 2/28/2020 | 1.35 | 2/28/2024 | 2/28/2020 | 103.80594 | 103.8059351 | 103.8059351 | 103.8059351 | 102.7923078 | 99.27944322 | 95.90464979 | 92.66175525 | 89.54489912 |
| 200228A00029 | 2/28/2020 | 1.31 | 2/28/2022 | 2/28/2020 | 101.63641 | 101.6364084 | 101.6364084 | 101.6364084 | 101.3585649 | 99.79115507 | 98.25548288 | 96.75065203 | 95.27579965 |
| 200228A00040 | 2/28/2020 | 1.14 | 2/28/2023 | 2/28/2020 | 102.66816 | 102.66816 | 102.66816 | 102.66816 | 102.1098599 | 99.55306802 | 97.07284585 | 94.66643867 | 92.33120963 |
| 200228A00042 | 2/28/2020 | 1.17 | 2/28/2024 | 2/28/2020 | 103.80891 | 103.8089146 | 103.8089146 | 103.8089146 | 102.7894958 | 99.25968699 | 95.86901438 | 92.61124234 | 89.48045109 |
| 200228A00043 | 2/28/2020 | 1.21 | 2/28/2025 | 2/28/2020 | 105.05794 | 105.0579375 | 105.0579375 | 105.0579375 | 103.3928946 | 98.89649121 | 94.61948287 | 90.55003715 | 86.67702307 |
| 200228A00065 | 2/28/2020 | 1.4 | 2/28/2025 | 2/28/2020 | 105.09509 | 105.0950931 | 105.0950931 | 105.0950931 | 103.4413689 | 98.96932951 | 94.71479966 | 90.6660798 | 86.81216215 |
| 200304A00034 | 3/4/2020 | 1.12 | 3/4/2024 | 3/4/2020 | 102.98682 | 102.9868238 | 102.9868238 | 102.9868238 | 101.9689272 | 98.45792578 | 95.08549312 | 91.84541189 | 88.73178005 |
| 200306A00098 | 3/10/2020 | 1.59 | 3/8/2030 | 3/10/2020 | 112.3253 | 112.3252964 | 112.3252964 | 112.3252964 | 103.6770027 | 94.80487704 | 86.76196337 | 79.46649204 | 72.84513974 |
| 200306A00099 | 3/10/2020 | 1.92 | 3/10/2031 | 3/10/2020 | 117.08692 | 117.0869168 | 117.0869168 | 116.8959799 | 106.3515057 | 96.54325512 | 87.73141381 | 79.80930871 | 72.68219351 |
| 200306A00101 | 3/10/2020 | 1.93 | 3/8/2030 | 3/10/2020 | 115.58823 | 115.5882254 | 115.5882254 | 115.5882254 | 106.85046 | 97.83233084 | 89.65297286 | 82.22988071 | 75.48905835 |
| 200309A00004 | 3/9/2020 | 0.71 | 3/8/2024 | 3/9/2020 | 102.15729 | 102.1572858 | 102.1572858 | 102.1572858 | 101.1307885 | 97.60764181 | 94.22443955 | 90.97486745 | 87.8529334 |
| 200309A00041 | 3/9/2020 | 0.73 | 3/9/2022 | 3/9/2020 | 100.72021 | 100.7202124 | 100.7202124 | 100.7202124 | 100.4382108 | 98.85483739 | 97.30385773 | 95.78434434 | 94.29540495 |
| 200311A00021 | 3/11/2020 | 1.09 | 3/11/2024 | 3/11/2020 | 103.5514 | 103.5514001 | 103.5514001 | 103.5514001 | 102.5148585 | 98.95888748 | 95.54414554 | 92.2642544 | 89.11316166 |
| 200312A00017 | 3/16/2020 | 1.09 | 2/15/2023 | 3/16/2020 | 102.0412 | 102.0411958 | 102.0411958 | 102.0411958 | 101.4987173 | 98.99739382 | 96.5700885 | 94.2141755 | 91.9271394 |
| 200317A00026 | 3/17/2020 | 1.22 | 3/15/2024 | 3/17/2020 | 103.37736 | 103.3773586 | 103.3773586 | 103.3773586 | 102.3414251 | 98.79560953 | 95.39058329 | 92.11998739 | 88.97778793 |
| 200407A00002 | 4/8/2020 | 1.82 | 4/8/2024 | 4/8/2020 | 105.67078 | 105.6707781 | 105.6707781 | 105.6707781 | 104.5891606 | 100.9399128 | 97.43723387 | 94.07441208 | 90.84508477 |
| 200415A00019 | 4/15/2020 | 0.68 | 4/15/2022 | 4/15/2020 | 100.66239 | 100.6623924 | 100.6623924 | 100.6623924 | 100.3584462 | 98.67800517 | 97.03341917 | 95.42360549 | 93.84752533 |
| 200415A00035 | 4/17/2020 | 2.16 | 4/16/2025 | 4/17/2020 | 108.79381 | 108.7938143 | 108.7938143 | 108.7938143 | 107.0212177 | 102.347523 | 97.90523795 | 93.68165541 | 89.66483789 |
| 200417A00009 | 4/17/2020 | 1.35 | 4/16/2027 | 4/17/2020 | 107.03242 | 107.0324236 | 107.0324236 | 107.0324236 | 102.9905243 | 96.59738354 | 90.63952367 | 85.08512141 | 79.9048398 |
| 200429A00043 | 5/1/2020 | 1.56 | 4/30/2025 | 5/1/2020 | 105.99625 | 105.9962465 | 105.9962465 | 105.9962465 | 104.2118841 | 99.5674757 | 95.15558846 | 90.96333581 | 86.97861916 |
| 200430A00008 | 4/30/2020 | 0.94 | 4/30/2025 | 4/30/2020 | 103.03217 | 103.032169 | 103.032169 | 103.032169 | 101.2665911 | 96.69152534 | 92.34649118 | 88.21871265 | 84.29619615 |
| 200515A00001 | 5/15/2020 | 0.59 | 5/15/2023 | 5/15/2020 | 100.82755 | 100.82755 | 100.82755 | 100.82755 | 100.2003329 | 97.48106802 | 94.84838689 | 92.29903095 | 89.82988572 |
| 200604A00005 | 6/4/2020 | 0.89 | 6/4/2025 | 6/4/2020 | 102.84952 | 102.8495222 | 102.8495222 | 102.8495222 | 101.01069 | 96.35484139 | 91.93736629 | 87.74492112 | 83.76497316 |
| 200604A00014 | 6/4/2020 | 2.42 | 6/4/2040 | 6/4/2020 | 141.28151 | 141.2815078 | 141.2815078 | 128.3902224 | 109.0994902 | 92.86601611 | 79.42142294 | 68.26190854 | 58.97753634 |
| 200626A00014 | 6/26/2020 | 0.62 | 6/26/2025 | 6/26/2020 | 102.48729 | 102.4872903 | 102.4872903 | 102.4872903 | 100.5883449 | 95.85698346 | 91.3716722 | 87.11843465 | 83.08415622 |
| 200701A00004 | 7/1/2020 | 0.54 | 7/1/2022 | 7/1/2020 | 100.47266 | 100.4726566 | 100.4726566 | 100.4726566 | 100.1190063 | 98.23655628 | 96.39843665 | 94.60334094 | 92.8500098 |
| 200710A00006 | 7/10/2020 | 0.4 | 7/10/2023 | 7/10/2020 | 100.83794 | 100.8379361 | 100.8379361 | 100.8379361 | 100.1443191 | 97.26799457 | 94.48810752 | 91.80091567 | 89.20284314 |
| 200720A00041 | 7/22/2020 | 2.34 | 7/21/2027 | 7/22/2020 | 114.23078 | 114.2307822 | 114.2307822 | 114.2307822 | 109.7195014 | 102.8676507 | 96.49411108 | 90.56298777 | 85.04125464 |
| 200727A00016 | 7/27/2020 | 0.43 | 7/27/2023 | 7/27/2020 | 100.94203 | 100.9420318 | 100.9420318 | 100.9420318 | 100.2275146 | 97.30639246 | 94.48467329 | 91.75843955 | 89.12395085 |
| 140701A00002 | 7/1/2014 | 2.84 | 7/1/2022 | 7/1/2014 | 104.93148 | 104.9314841 | 104.9314841 | 104.9314841 | 104.5706635 | 102.6440746 | 100.762663 | 98.92509828 | 97.1300981 |
| 140702A00034 | 7/2/2014 | 2.7 | 7/1/2022 | 7/2/2014 | 105.01323 | 105.0132254 | 105.0132254 | 105.0132254 | 104.6509547 | 102.717053 | 100.8286087 | 98.98428003 | 97.18277377 |
| 140908A00060 | 9/8/2014 | 2.34 | 11/30/2020 | 9/8/2014 | 100.70926 | 100.7092586 | 100.7092586 | 100.7092586 | 100.6736888 | 100.3356308 | 99.99983378 | 99.66627528 | 99.33493304 |

Classification | Public

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 140929A00098 | 9/29/2014 | 2.62 | 9/29/2021 | 9/29/2014 | 102.76224 | 102.7622379 | 102.7622379 | 102.7622379 | 102.5709697 | 101.3962915 | 100.2484563 | 99.12655174 | 98.02970675 |
| 141009A00028 | 10/9/2014 | 3.02 | 10/9/2024 | 10/9/2014 | 111.51185 | 111.5118507 | 111.5118507 | 111.5118507 | 110.0946012 | 105.8518144 | 101.7979423 | 97.92351893 | 94.21960844 |
| 150116A00039 | 1/16/2015 | 1.85 | 1/19/2021 | 1/16/2015 | 100.76636 | 100.7663647 | 100.7663647 | 100.7663647 | 100.7139477 | 100.238193 | 99.76693214 | 99.30010157 | 98.83763891 |
| 150203A00005 | 2/3/2015 | 2.11 | 2/3/2022 | 2/3/2015 | 102.79117 | 102.7911706 | 102.7911706 | 102.7911706 | 102.5267022 | 101.0229502 | 99.54888876 | 98.10371426 | 96.68665133 |
| 150213A00025 | 2/13/2015 | 2.37 | 2/14/2022 | 2/13/2015 | 103.25155 | 103.251546 | 103.251546 | 103.251546 | 102.9799831 | 101.4402724 | 99.93128048 | 98.45215954 | 97.00209254 |
| 150319A00013 | 3/19/2015 | 3.25 | 3/19/2030 | 3/19/2015 | 128.34354 | 128.3435402 | 128.3435402 | 128.3435402 | 119.198718 | 109.5863112 | 100.8545856 | 92.91749261 | 85.69783045 |
| 150331A00004 | 3/31/2015 | 2.08 | 3/31/2022 | 3/31/2015 | 103.30905 | 103.3090453 | 103.3090453 | 103.3090453 | 103.0096097 | 101.3413414 | 99.70803543 | 98.10865801 | 96.54221606 |
| 150407A00010 | 4/7/2015 | 2.21 | 4/10/2023 | 4/7/2015 | 105.70108 | 105.7010841 | 105.7010841 | 105.7010841 | 105.0949339 | 102.3892314 | 99.76690798 | 97.22485783 | 94.76011417 |
| 150506A00014 | 5/6/2015 | 2.21 | 5/6/2022 | 5/6/2015 | 103.73697 | 103.7369701 | 103.7369701 | 103.7369701 | 103.4145323 | 101.6442401 | 99.91270528 | 98.2187527 | 96.5612545 |
| 150512A00029 | 5/12/2015 | 3.03 | 5/12/2025 | 5/12/2015 | 113.11362 | 113.113621 | 113.113621 | 113.113621 | 111.257865 | 106.4162596 | 101.8161408 | 97.44416256 | 93.28778912 |
| 150518A00016 | 5/18/2015 | 1.84 | 11/18/2020 | 5/18/2015 | 100.52603 | 100.5260332 | 100.5260332 | 100.5260332 | 100.4942595 | 100.1891989 | 99.88600064 | 99.58464744 | 99.28512246 |
| 150519A00012 | 5/19/2015 | 2.44 | 5/19/2022 | 5/19/2015 | 103.91984 | 103.9198384 | 103.9198384 | 103.9198384 | 103.5897971 | 101.7888483 | 100.0278738 | 98.30570735 | 96.62122607 |
| 150601A00490 | 6/1/2015 | 3.19 | 7/2/2024 | 6/1/2015 | 111.26258 | 111.2625753 | 111.2625753 | 111.2625753 | 110.020104 | 106.041736 | 102.2308732 | 98.57958851 | 95.08037169 |
| 150601A00512 | 6/1/2015 | 3.79 | 7/16/2029 | 6/1/2015 | 130.73906 | 130.7390597 | 130.7390597 | 130.7390597 | 122.7720422 | 113.6059216 | 105.2240716 | 97.55459718 | 90.53256072 |
| 150601A00514 | 6/1/2015 | 3.07 | 11/15/2024 | 6/1/2015 | 112.62832 | 112.6283156 | 112.6283156 | 112.6283156 | 111.1269109 | 106.7405514 | 102.5539113 | 98.55682016 | 94.73968192 |
| 150601A00609 | 6/1/2015 | 2.52 | 9/30/2021 | 6/1/2015 | 102.60691 | 102.6069113 | 102.6069113 | 102.6069113 | 102.415056 | 101.238637 | 100.0891672 | 98.96572855 | 97.86744468 |
| 150601A00734 | 6/1/2015 | 2.92 | 5/1/2025 | 6/1/2015 | 112.30266 | 112.3026569 | 112.3026569 | 112.3026569 | 110.4761692 | 105.6817234 | 101.1253397 | 96.79388019 | 92.67500801 |
| 150727A00013 | 7/27/2015 | 3.04 | 7/28/2025 | 7/27/2015 | 113.7381 | 113.7380975 | 113.7380975 | 113.7380975 | 111.7048813 | 106.6501002 | 101.8574967 | 97.31208421 | 92.99981013 |
| 150819A00011 | 8/19/2015 | 2.53 | 8/19/2022 | 8/19/2015 | 104.63349 | 104.6334938 | 104.6334938 | 104.6334938 | 104.2356242 | 102.1826067 | 100.1804609 | 98.22759262 | 96.32246954 |
| 150821A00017 | 8/21/2015 | 2.22 | 8/23/2022 | 8/21/2015 | 104.38996 | 104.3899611 | 104.3899611 | 104.3899611 | 103.9878437 | 101.9196199 | 99.90294889 | 97.93620433 | 96.01782356 |
| 150824A00072 | 8/24/2015 | 2.14 | 8/24/2022 | 8/24/2015 | 104.22845 | 104.2284507 | 104.2284507 | 104.2284507 | 103.8258292 | 101.7566695 | 99.73913545 | 97.77159655 | 95.85248628 |
| 150828A00010 | 8/28/2015 | 1.96 | 8/28/2020 | 8/28/2015 | 100.13208 | 100.1320846 | 100.1320846 | 100.1320846 | 100.1263039 | 100.0486923 | 99.9712054 | 99.89384291 | 99.81660453 |
| 150921A00031 | 9/21/2015 | 1.92 | 9/21/2020 | 9/21/2015 | 100.24041 | 100.2404102 | 100.2404102 | 100.2404102 | 100.2276447 | 100.0835451 | 99.93987053 | 99.79661907 | 99.65378885 |
| 150923A00049 | 9/23/2015 | 1.97 | 9/23/2021 | 9/23/2015 | 102.15335 | 102.1533473 | 102.1533473 | 102.1533473 | 101.9664122 | 100.8089463 | 99.67764694 | 98.57163473 | 97.49006926 |
| 150924A00030 | 9/24/2015 | 1.67 | 9/24/2020 | 9/24/2015 | 100.23707 | 100.2370714 | 100.2370714 | 100.2370714 | 100.2233787 | 100.0707769 | 99.91864859 | 99.76699158 | 99.61580366 |
| 151008A00019 | 10/8/2015 | 1.58 | 10/15/2020 | 10/8/2015 | 100.30862 | 100.3086159 | 100.3086159 | 100.3086159 | 100.2880155 | 100.0772435 | 99.86737217 | 99.65839568 | 99.45030823 |
| 151015A00006 | 10/15/2015 | 1.68 | 10/15/2020 | 10/15/2015 | 100.30071 | 100.3007098 | 100.3007098 | 100.3007098 | 100.2801412 | 100.0696905 | 99.8601355 | 99.65147049 | 99.44368974 |
| 151022A00011 | 10/22/2015 | 1.57 | 10/22/2020 | 10/22/2015 | 100.33476 | 100.3347623 | 100.3347623 | 100.3347623 | 100.3117876 | 100.0816321 | 99.85254381 | 99.62451522 | 99.39753894 |
| 151123A00014 | 11/23/2015 | 2.13 | 11/23/2020 | 11/23/2015 | 100.6016 | 100.6016048 | 100.6016048 | 100.6016048 | 100.5682765 | 100.2497214 | 99.9331875 | 99.61865551 | 99.30610647 |
| 151221A00014 | 12/21/2015 | 2.94 | 12/22/2025 | 12/21/2015 | 114.29466 | 114.2946607 | 114.2946607 | 114.2946607 | 111.8693943 | 106.4249652 | 101.2822729 | 96.42302931 | 91.8301457 |
| 151223A00072 | 12/23/2015 | 2.81 | 12/23/2025 | 12/23/2015 | 114.6877 | 114.687702 | 114.687702 | 114.687702 | 112.235969 | 106.7431878 | 101.5558914 | 96.65550749 | 92.02468509 |
| 151229A00079 | 12/29/2015 | 3 | 12/30/2025 | 12/29/2015 | 114.67922 | 114.6792234 | 114.6792234 | 114.6792234 | 112.227578 | 106.7530438 | 101.5828802 | 96.69857727 | 92.08284274 |
| 160119A00026 | 1/19/2016 | 3.14 | 1/19/2029 | 1/19/2016 | 124.04087 | 124.0408701 | 124.0408701 | 124.0408701 | 117.060181 | 108.580328 | 100.7961333 | 93.64653093 | 87.0761192 |

Classification | Public

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 160129A00016 | 1/29/2016 | 1.76 | 1/29/2021 | 1/29/2016 | 100.76551 | 100.7655075 | 100.7655075 | 100.7655075 | 100.7094696 | 100.2062721 | 99.70808711 | 99.21484017 | 98.72645815 |
| 160129A00068 | 1/29/2016 | 1.97 | 1/30/2023 | 1/29/2016 | 104.68863 | 104.688627 | 104.688627 | 104.688627 | 104.1524009 | 101.653274 | 99.22712019 | 96.87138724 | 94.58362832 |
| 160211A00035 | 2/11/2016 | 2.25 | 2/11/2025 | 2/11/2016 | 108.92789 | 108.9278898 | 108.9278898 | 108.9278898 | 107.2855577 | 102.7742805 | 98.47934312 | 94.38923946 | 90.49313607 |
| 160216A00002 | 2/16/2016 | 1.88 | 2/16/2022 | 2/16/2016 | 102.49572 | 102.495722 | 102.495722 | 102.495722 | 102.2238998 | 100.6844496 | 99.17578724 | 97.69706025 | 96.24744707 |
| 160218A00029 | 2/18/2016 | 1.81 | 4/15/2021 | 2/18/2016 | 101.11178 | 101.1117789 | 101.1117789 | 101.1117789 | 101.019495 | 100.3072124 | 99.60494972 | 98.91249666 | 98.2296486 |
| 160331A00024 | 3/31/2016 | 1.91 | 3/31/2022 | 3/31/2016 | 102.71854 | 102.7185418 | 102.7185418 | 102.7185418 | 102.4209191 | 100.7630327 | 99.13982186 | 97.55026311 | 95.99337328 |
| 160422A00026 | 4/22/2016 | 2.62 | 4/22/2026 | 4/22/2016 | 113.32162 | 113.3216151 | 113.3216151 | 113.3216151 | 110.5252057 | 104.7994057 | 99.40869617 | 94.33165754 | 89.54835517 |
| 160523A00047 | 5/23/2016 | 1.77 | 5/18/2021 | 5/23/2016 | 101.22168 | 101.2216815 | 101.2216815 | 101.2216815 | 101.1125374 | 100.3098134 | 99.51979684 | 98.74218777 | 97.9766955 |
| 160524A00027 | 5/24/2016 | 3.06 | 5/27/2031 | 5/24/2016 | 129.73107 | 129.7310709 | 129.7310709 | 129.2891131 | 118.1060164 | 107.5249486 | 98.01898745 | 89.4721902 | 81.7816993 |
| 160615A00045 | 6/15/2016 | 1.59 | 6/15/2021 | 6/15/2016 | 101.17106 | 101.1710646 | 101.1710646 | 101.1710646 | 101.0475858 | 100.1690499 | 99.30573148 | 98.45723768 | 97.62318914 |
| 160620A00015 | 6/20/2016 | 1.71 | 6/20/2023 | 6/20/2016 | 104.65089 | 104.6508883 | 104.6508883 | 104.6508883 | 103.9701087 | 101.0898612 | 98.3040183 | 95.6089897 | 93.0013416 |
| 160630A00042 | 6/30/2016 | 1.52 | 6/30/2021 | 6/30/2016 | 101.16107 | 101.1610689 | 101.1610689 | 101.1610689 | 101.0297896 | 100.1105923 | 99.20803415 | 98.32166699 | 97.45105852 |
| 160701A00027 | 7/1/2016 | 1.93 | 7/1/2024 | 7/1/2016 | 106.45685 | 106.4568511 | 106.4568511 | 106.4568511 | 105.23781 | 101.3557426 | 97.63807673 | 94.07701367 | 90.66516506 |
| 160705A00104 | 7/5/2016 | 2.1 | 7/6/2026 | 7/5/2016 | 110.69551 | 110.6955122 | 110.6955122 | 110.6955122 | 107.6679551 | 101.8329363 | 96.35192297 | 91.20164094 | 86.36045959 |
| 160706A00014 | 7/6/2016 | 1.41 | 7/6/2021 | 7/6/2016 | 101.07824 | 101.0782422 | 101.0782422 | 101.0782422 | 100.9436297 | 100.0085862 | 99.09077985 | 98.18973747 | 97.30500319 |
| 160706A00029 | 7/6/2016 | 2.49 | 7/8/2030 | 7/6/2016 | 121.68076 | 121.6807582 | 121.6807582 | 121.6807582 | 112.1430767 | 102.6001283 | 93.96482212 | 86.14565132 | 79.06077768 |
| 160830A00010 | 8/30/2016 | 1.65 | 8/30/2021 | 8/30/2016 | 101.50529 | 101.5052853 | 101.5052853 | 101.5052853 | 101.3364993 | 100.2505162 | 99.18768623 | 98.14727544 | 97.12858077 |
| 160830A00031 | 8/30/2016 | 1.65 | 8/31/2021 | 8/30/2016 | 101.5091 | 101.5091044 | 101.5091044 | 101.5091044 | 101.3396554 | 100.2509503 | 99.18551151 | 98.14259989 | 97.12150738 |
| 160830A00037 | 8/30/2016 | 2.16 | 8/29/2025 | 8/30/2016 | 109.4795 | 109.4795035 | 109.4795035 | 109.4795035 | 107.4003567 | 102.3703844 | 97.60652939 | 93.09332581 | 88.81628736 |
| 160909A00024 | 9/9/2016 | 1.7 | 9/9/2021 | 9/9/2016 | 101.5994 | 101.5993956 | 101.5993956 | 101.5993956 | 101.4234296 | 100.3099082 | 99.22072062 | 98.15507616 | 97.112218 |
| 160921A00021 | 9/21/2016 | 1.45 | 9/21/2021 | 9/21/2016 | 101.5412 | 101.5411957 | 101.5411957 | 101.5411957 | 101.3562071 | 100.2079273 | 99.08551328 | 97.98809928 | 96.91485766 |
| 160923A00002 | 9/23/2016 | 1.5 | 9/23/2020 | 9/23/2016 | 100.18665 | 100.1866475 | 100.1866475 | 100.1866475 | 100.1732824 | 100.0237227 | 99.87461796 | 99.72596606 | 99.57776497 |
| 160926A00004 | 9/26/2016 | 1.66 | 9/26/2023 | 9/26/2016 | 104.92305 | 104.9230481 | 104.9230481 | 104.9230481 | 104.1179684 | 100.9756955 | 97.94424322 | 95.01905579 | 92.19579462 |
| 160926A00016 | 9/26/2016 | 1.47 | 9/28/2020 | 9/26/2016 | 100.19895 | 100.1989458 | 100.1989458 | 100.1989458 | 100.184067 | 100.020683 | 99.85783192 | 99.6955111 | 99.53371802 |
| 160930A00005 | 9/30/2016 | 2.03 | 9/30/2024 | 9/30/2016 | 107.28556 | 107.2855596 | 107.2855596 | 107.2855596 | 105.9060806 | 101.7739747 | 97.82599221 | 94.05292846 | 90.44609214 |
| 161003A00004 | 10/3/2016 | 1.91 | 10/3/2023 | 10/3/2016 | 105.17121 | 105.1712056 | 105.1712056 | 105.1712056 | 104.3602146 | 101.2094954 | 98.17009301 | 95.2374194 | 92.4071059 |
| 161004A00034 | 10/4/2016 | 1.67 | 10/4/2021 | 10/4/2016 | 101.66201 | 101.662006 | 101.662006 | 101.662006 | 101.4682945 | 100.2870186 | 99.13309981 | 98.00559691 | 96.90361122 |
| 161004A00040 | 10/4/2016 | 1.45 | 10/4/2021 | 10/4/2016 | 101.58919 | 101.5891903 | 101.5891903 | 101.5891903 | 101.3950315 | 100.2113319 | 99.05509722 | 97.92538077 | 96.82127906 |
| 170111A00009 | 1/11/2017 | 3.16 | 1/11/2028 | 1/11/2017 | 121.31699 | 121.3169927 | 121.3169927 | 121.3169927 | 115.9991129 | 108.4932673 | 101.5377576 | 95.08918421 | 89.10778443 |
| 170111A00020 | 1/11/2017 | 2.27 | 1/11/2022 | 1/11/2017 | 102.92429 | 102.9242863 | 102.9242863 | 102.9242863 | 102.6724628 | 101.2289652 | 99.81290421 | 98.42356613 | 97.06026125 |
| 170123A00039 | 1/23/2017 | 2.79 | 1/23/2026 | 1/23/2017 | 114.80728 | 114.8072823 | 114.8072823 | 114.8072823 | 112.2605431 | 106.6865562 | 101.4270757 | 96.46269967 | 91.77532102 |
| 170130A00008 | 1/30/2017 | 2.58 | 1/30/2023 | 1/30/2017 | 105.77142 | 105.771416 | 105.771416 | 105.771416 | 105.2350197 | 102.7317605 | 100.3013107 | 97.9411312 | 95.64878759 |
| 170203A00013 | 2/3/2017 | 3.67 | 2/1/2036 | 2/3/2017 | 151.6659 | 151.6658961 | 151.6658961 | 144.418989 | 127.7975397 | 112.9165576 | 100.0677621 | 88.95627936 | 79.33174139 |

Classification | Public

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 170215A00038 | 2/15/2017 | 2.71 | 8/22/2022 | 2/15/2017 | 105.02683 | 105.0268343 | 105.0268343 | 105.0268343 | 104.6259092 | 102.5607906 | 100.5469447 | 98.58275993 | 96.66668728 |
| 170216A00043 | 2/16/2017 | 3.17 | 2/16/2027 | 2/16/2017 | 118.82979 | 118.829786 | 118.829786 | 118.829786 | 114.8720078 | 108.243224 | 102.0488838 | 96.25814225 | 90.84250063 |
| 170224A00011 | 2/24/2017 | 1.83 | 2/24/2021 | 2/24/2017 | 100.98825 | 100.9882481 | 100.9882481 | 100.9882481 | 100.9207947 | 100.344692 | 99.77515123 | 99.21206067 | 98.65531122 |
| 170303A00020 | 3/3/2017 | 2 | 3/3/2021 | 3/3/2017 | 101.12289 | 101.1228943 | 101.1228943 | 101.1228943 | 101.0521412 | 100.4563796 | 99.86762651 | 99.28575874 | 98.71065604 |
| 170307A00033 | 3/7/2017 | 2.2 | 3/7/2022 | 3/7/2017 | 103.37287 | 103.3728665 | 103.3728665 | 103.3728665 | 103.0877463 | 101.4827306 | 99.91049747 | 98.37010953 | 96.86066506 |
| 170314A00006 | 3/14/2017 | 2.67 | 3/14/2024 | 3/14/2017 | 109.34869 | 109.3486882 | 109.3486882 | 109.3486882 | 108.2845492 | 104.6157848 | 101.0918592 | 97.70624341 | 94.45274193 |
| 170322A00024 | 3/22/2017 | 3.72 | 9/22/2036 | 3/22/2017 | 154.54627 | 154.5462672 | 154.5462672 | 146.4053184 | 129.0342201 | 113.5873234 | 100.3188774 | 88.90225112 | 79.06174048 |
| 170323A00013 | 3/23/2017 | 2.1 | 3/23/2022 | 3/23/2017 | 103.29879 | 103.2987941 | 103.2987941 | 103.2987941 | 103.004169 | 101.3572334 | 99.74451956 | 98.16502658 | 96.6177924 |
| 170327A00075 | 3/27/2019 | 2.47 | 3/28/2022 | 3/27/2019 | 103.64377 | 103.6437696 | 103.6437696 | 103.6437696 | 103.346693 | 101.68872 | 100.0652907 | 98.47538989 | 96.91804212 |
| 170328A00015 | 3/28/2017 | 2.75 | 11/29/2024 | 3/28/2017 | 110.66883 | 110.6688335 | 110.6688335 | 110.6688335 | 109.1618228 | 104.8044748 | 100.6470084 | 96.67923986 | 92.89155513 |
| 170412A00045 | 4/12/2017 | 2.01 | 4/12/2022 | 4/12/2017 | 103.25381 | 103.253807 | 103.253807 | 103.253807 | 102.9470461 | 101.2463617 | 99.58184874 | 97.95241835 | 96.35702572 |
| 170417A00057 | 4/17/2017 | 2.32 | 4/17/2023 | 4/17/2017 | 105.54239 | 105.5423912 | 105.5423912 | 105.5423912 | 104.9322111 | 102.2206557 | 99.59294217 | 97.04593458 | 94.57663787 |
| 170417A00068 | 4/17/2019 | 2.59 | 4/17/2024 | 4/17/2019 | 108.59222 | 108.5922215 | 108.5922215 | 108.5922215 | 107.484578 | 103.7575194 | 100.1804255 | 96.7464009 | 93.44891097 |
| 170419A00023 | 4/19/2017 | 2.11 | 4/19/2023 | 4/19/2017 | 105.47806 | 105.4780636 | 105.4780636 | 105.4780636 | 104.8632096 | 102.1361129 | 99.49371099 | 96.93282228 | 94.45040916 |
| 170419A00025 | 4/19/2017 | 2.72 | 4/19/2027 | 4/19/2017 | 117.6537 | 117.6537045 | 117.6537045 | 117.6537045 | 113.4221628 | 106.62729 | 100.2904116 | 94.37816388 | 88.85978772 |
| 170427A00044 | 4/27/2017 | 3.02 | 4/27/2027 | 4/27/2017 | 118.35995 | 118.3599544 | 118.3599544 | 118.3599544 | 114.1308164 | 107.3440929 | 101.0138899 | 95.10697406 | 89.59270592 |
| 170502A00028 | 5/2/2017 | 2.84 | 5/3/2027 | 5/2/2017 | 118.57298 | 118.5729838 | 118.5729838 | 118.5729838 | 114.273242 | 107.4137974 | 101.0185012 | 95.05340423 | 89.48721768 |
| 170508A00010 | 5/8/2017 | 2.43 | 5/8/2024 | 5/8/2017 | 108.82088 | 108.8208845 | 108.8208845 | 108.8208845 | 107.6723735 | 103.8670951 | 100.2173848 | 96.71601011 | 93.35611929 |
| 170515A00010 | 5/15/2017 | 2.58 | 5/15/2024 | 5/15/2017 | 108.73049 | 108.7304896 | 108.7304896 | 108.7304896 | 107.5778605 | 103.7748234 | 100.1275132 | 96.6287071 | 93.27155904 |
| 170515A00054 | 5/15/2017 | 3.2 | 5/17/2032 | 5/15/2017 | 136.61319 | 136.6131939 | 136.6131939 | 134.8578838 | 122.2669535 | 110.5151337 | 100.0501471 | 90.72257114 | 82.40110702 |
| 170515A00056 | 5/15/2017 | 3.2 | 5/17/2032 | 5/15/2017 | 136.61319 | 136.6131939 | 136.6131939 | 134.8578838 | 122.2669535 | 110.5151337 | 100.0501471 | 90.72257114 | 82.40110702 |
| 170517A00027 | 5/17/2017 | 1.99 | 5/17/2022 | 5/17/2017 | 103.40098 | 103.4009756 | 103.4009756 | 103.4009756 | 103.0719002 | 101.2755309 | 99.51904492 | 97.80126969 | 96.121077 |
| 170530A00060 | 5/30/2017 | 2.12 | 3/25/2022 | 5/30/2017 | 103.04194 | 103.0419371 | 103.0419371 | 103.0419371 | 102.747455 | 101.1026003 | 99.49192109 | 97.91441676 | 96.36912594 |
| 170531A00004 | 5/31/2017 | 1.79 | 6/1/2021 | 5/31/2017 | 101.41523 | 101.4152297 | 101.4152297 | 101.4152297 | 101.2986577 | 100.4553279 | 99.62598295 | 98.81027734 | 98.00787694 |
| 170608A00003 | 6/8/2017 | 1.97 | 6/8/2021 | 6/8/2017 | 101.47438 | 101.47438 | 101.47438 | 101.47438 | 101.3543732 | 100.4934264 | 99.64706087 | 98.81490847 | 97.99661343 |
| 170612A00003 | 6/12/2017 | 1.97 | 6/13/2022 | 6/12/2017 | 103.5032 | 103.5031995 | 103.5031995 | 103.5031995 | 103.1558922 | 101.2859735 | 99.45903641 | 97.67384166 | 95.92919365 |
| 170615A00004 | 6/15/2017 | 2.01 | 6/11/2021 | 6/15/2017 | 101.52347 | 101.5234658 | 101.5234658 | 101.5234658 | 101.4018661 | 100.5325205 | 99.6780383 | 98.83804079 | 98.01216188 |
| 170615A00015 | 6/15/2017 | 2.25 | 6/14/2024 | 6/15/2017 | 108.3521 | 108.352103 | 108.352103 | 108.352103 | 107.1452123 | 103.2516633 | 99.52122741 | 95.94624239 | 92.51944533 |
| 170615A00033 | 6/15/2017 | 2.01 | 6/15/2021 | 6/15/2017 | 101.54275 | 101.54275 | 101.54275 | 101.54275 | 101.4190528 | 100.5387284 | 99.67364315 | 98.82340383 | 97.98763062 |
| 170621A00014 | 6/21/2017 | 1.82 | 6/21/2021 | 6/21/2017 | 101.53496 | 101.53496 | 101.53496 | 101.53496 | 101.4078607 | 100.5093868 | 99.62677865 | 98.75961885 | 97.90750447 |
| 170622A00037 | 6/22/2017 | 3.27 | 6/22/2033 | 6/22/2017 | 138.00583 | 138.0058341 | 138.0058341 | 134.6891183 | 121.1736873 | 108.7318979 | 97.75565764 | 88.0620235 | 79.49185128 |
| 170622A00040 | 6/22/2017 | 3.41 | 6/23/2036 | 6/22/2017 | 148.84676 | 148.8467582 | 148.8467582 | 141.111928 | 124.3184829 | 109.3990635 | 96.5697748 | 85.52018347 | 75.98774223 |
| 170628A00056 | 6/28/2017 | 1.97 | 6/28/2022 | 6/28/2017 | 103.5801 | 103.5800959 | 103.5800959 | 103.5800959 | 103.2222734 | 101.3106778 | 99.4438968 | 97.62061266 | 95.83955499 |

Classification | Public

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 170630A00010 | 6/30/2017 | 2.63 | 6/30/2026 | 6/30/2017 | 115.0145 | 115.0145022 | 115.0145022 | 115.0145022 | 111.9382733 | 105.952049 | 100.3272271 | 95.04011197 | 90.06867807 |
| 170630A00027 | 6/30/2017 | 2.35 | 6/28/2024 | 6/30/2017 | 108.83025 | 108.8302538 | 108.8302538 | 108.8302538 | 107.5980094 | 103.6577806 | 99.8840448 | 96.26891135 | 92.80490475 |
| 170717A00033 | 7/17/2017 | 2.19 | 7/18/2022 | 7/17/2017 | 103.76055 | 103.7605467 | 103.7605467 | 103.7605467 | 103.3888645 | 101.4292313 | 99.51666533 | 97.64974694 | 95.82710899 |
| 170721A00007 | 7/21/2017 | 1.8 | 7/21/2021 | 7/21/2017 | 101.65696 | 101.656959 | 101.656959 | 101.656959 | 101.5131765 | 100.5323574 | 99.57041869 | 98.62681934 | 97.70103866 |
| 170803A00018 | 8/3/2017 | 1.85 | 8/3/2020 | 8/3/2017 | 100.01315 | 100.0131546 | 100.0131546 | 100.0131546 | 100.0125352 | 100.0042165 | 99.99590539 | 99.98760187 | 99.97930593 |
| 170818A00035 | 8/18/2017 | 1.77 | 8/18/2021 | 8/18/2017 | 101.75585 | 101.7558496 | 101.7558496 | 101.7558496 | 101.5943963 | 100.5369343 | 99.50139269 | 98.48709543 | 97.4933939 |
| 170829A00025 | 8/29/2017 | 1.9 | 8/30/2021 | 8/29/2017 | 101.77914 | 101.7791439 | 101.7791439 | 101.7791439 | 101.6101475 | 100.5225666 | 99.45816237 | 98.41620051 | 97.39597734 |
| 170830A00029 | 8/30/2017 | 1.87 | 3/30/2021 | 8/30/2017 | 101.0833 | 101.0833004 | 101.0833004 | 101.0833004 | 100.999241 | 100.3307731 | 99.67112139 | 99.02011263 | 98.37757791 |
| 170831A00010 | 8/31/2017 | 2.05 | 8/30/2022 | 8/31/2017 | 103.69145 | 103.691452 | 103.691452 | 103.691452 | 103.2866085 | 101.2145881 | 99.1944102 | 97.22443066 | 95.30307004 |
| 170831A00022 | 8/31/2017 | 2.27 | 2/29/2024 | 8/31/2017 | 107.13315 | 107.1331465 | 107.1331465 | 107.1331465 | 106.1050985 | 102.5299692 | 99.09481188 | 95.79337876 | 92.61973758 |
| 170906A00006 | 9/6/2017 | 1.81 | 9/6/2022 | 9/6/2017 | 103.59912 | 103.5991159 | 103.5991159 | 103.5991159 | 103.1873235 | 101.0899873 | 99.04560196 | 97.05247057 | 95.10896405 |
| 170906A00033 | 9/6/2017 | 1.75 | 9/8/2020 | 9/6/2017 | 100.16103 | 100.1610286 | 100.1610286 | 100.1610286 | 100.1522056 | 100.0441414 | 99.93632081 | 99.82874316 | 99.72140757 |
| 170908A00016 | 9/10/2018 | 1.94 | 9/10/2021 | 9/10/2018 | 101.87354 | 101.8735405 | 101.8735405 | 101.8735405 | 101.6966396 | 100.5787786 | 99.48539491 | 98.41569137 | 97.36890508 |
| 170912A00031 | 9/12/2017 | 1.89 | 9/12/2022 | 9/12/2017 | 103.79876 | 103.7987561 | 103.7987561 | 103.7987561 | 103.3818292 | 101.2659563 | 99.20379014 | 97.19359789 | 95.2337166 |
| 170913A00003 | 9/13/2017 | 2.08 | 9/13/2022 | 9/13/2017 | 103.82338 | 103.8233779 | 103.8233779 | 103.8233779 | 103.4072274 | 101.2958562 | 99.23799115 | 97.23190779 | 95.2759512 |
| 170919A00073 | 9/19/2017 | 2.28 | 9/19/2024 | 9/19/2017 | 109.04944 | 109.0494384 | 109.0494384 | 109.0494384 | 107.671894 | 103.5107711 | 99.53406147 | 95.73258936 | 92.09768819 |
| 170922A00006 | 9/22/2017 | 2.09 | 9/22/2021 | 9/22/2017 | 102.10256 | 102.1025571 | 102.1025571 | 102.1025571 | 101.916866 | 100.7652036 | 99.63947329 | 98.53880677 | 97.46237412 |
| 170929A00057 | 9/29/2017 | 2.16 | 9/29/2023 | 9/29/2017 | 106.53687 | 106.5368706 | 106.5368706 | 106.5368706 | 105.7226759 | 102.5466278 | 99.48258944 | 96.52595072 | 93.67232158 |
| 171005A00003 | 10/5/2017 | 2.02 | 10/5/2022 | 10/5/2017 | 104.19864 | 104.1986365 | 104.1986365 | 104.1986365 | 103.7625987 | 101.5799886 | 99.45395864 | 97.3826366 | 95.3642279 |
| 171006A00034 | 10/6/2017 | 2.27 | 10/6/2022 | 10/6/2017 | 104.35573 | 104.3557252 | 104.3557252 | 104.3557252 | 103.9202994 | 101.7411391 | 99.6183718 | 97.55013349 | 95.53463764 |
| 171016A00045 | 10/16/2017 | 2.2 | 10/17/2022 | 10/16/2017 | 104.25923 | 104.2592348 | 104.2592348 | 104.2592348 | 103.8151367 | 101.6081557 | 99.45889963 | 97.36543697 | 95.32591779 |
| 171017A00024 | 10/17/2017 | 2.04 | 4/19/2021 | 10/17/2017 | 101.29618 | 101.2961806 | 101.2961806 | 101.2961806 | 101.2017552 | 100.4778118 | 99.76420321 | 99.06070933 | 98.36711612 |
| 171018A00011 | 10/18/2017 | 2.68 | 10/18/2027 | 10/18/2017 | 118.6667 | 118.6666991 | 118.6666991 | 118.6666991 | 113.6830752 | 106.4140431 | 99.66675989 | 93.40092445 | 87.57955594 |
| 171024A00069 | 10/24/2017 | 1.99 | 10/26/2020 | 10/24/2017 | 100.42158 | 100.4215776 | 100.4215776 | 100.4215776 | 100.3972696 | 100.1562561 | 99.91640317 | 99.67770243 | 99.44014558 |
| 171026A00006 | 10/26/2017 | 2.32 | 10/26/2022 | 10/26/2017 | 104.57804 | 104.5780411 | 104.5780411 | 104.5780411 | 104.1260756 | 101.8918251 | 99.71649497 | 97.59809502 | 95.53471982 |
| 171026A00007 | 10/26/2017 | 2.47 | 10/26/2023 | 10/26/2017 | 107.10321 | 107.1032111 | 107.1032111 | 107.1032111 | 106.2550418 | 103.0136745 | 99.88839006 | 96.87432636 | 93.96685877 |
| 171030A00021 | 10/30/2017 | 2.29 | 11/30/2022 | 10/30/2017 | 104.70245 | 104.702453 | 104.702453 | 104.702453 | 104.22145 | 101.891235 | 99.62469538 | 97.41974956 | 95.27439592 |
| 171031A00012 | 10/31/2017 | 2.28 | 10/31/2022 | 10/31/2017 | 104.51503 | 104.5150281 | 104.5150281 | 104.5150281 | 104.0591611 | 101.8125062 | 99.62538465 | 97.4957746 | 95.42174115 |
| 171204A00020 | 12/4/2017 | 2.48 | 12/5/2022 | 12/4/2017 | 105.18068 | 105.1806842 | 105.1806842 | 105.1806842 | 104.6944177 | 102.3453616 | 100.0607973 | 97.83860583 | 95.67674982 |
| 171206A00048 | 12/6/2017 | 3.04 | 12/6/2032 | 12/6/2017 | 136.33597 | 136.3359658 | 136.3359658 | 133.766806 | 120.6425196 | 108.5207186 | 97.78342051 | 88.26330252 | 79.81411875 |
| 171208A00008 | 12/8/2017 | 2.25 | 12/8/2022 | 12/8/2017 | 105.08444 | 105.0844435 | 105.0844435 | 105.0844435 | 104.5937953 | 102.2291843 | 99.92986982 | 97.69369428 | 95.51858389 |
| 171213A00019 | 12/13/2017 | 2.17 | 12/13/2021 | 12/13/2017 | 102.84691 | 102.8469067 | 102.8469067 | 102.8469067 | 102.6099312 | 101.2401587 | 99.89518437 | 98.57439285 | 97.27718871 |
| 171215A00004 | 12/15/2017 | 2.29 | 12/15/2020 | 12/15/2017 | 100.77756 | 100.7775647 | 100.7775647 | 100.7775647 | 100.7371635 | 100.3576218 | 99.98094677 | 99.60710602 | 99.23606749 |

Classification | Public

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 171218A00020 | 12/18/2017 | 2.99 | 12/20/2027 | 12/18/2017 | 119.8868 | 119.886798 | 119.886798 | 119.886798 | 114.6819864 | 107.2780573 | 100.4139843 | 94.047468 | 88.13972936 |
| 171219A00051 | 12/19/2017 | 2.34 | 1/21/2021 | 12/19/2017 | 101.01195 | 101.0119541 | 101.0119541 | 101.0119541 | 100.9587404 | 100.4767973 | 99.99945551 | 99.52664919 | 99.05831385 |
| 171219A00063 | 12/19/2017 | 2.8 | 12/20/2027 | 12/19/2017 | 120.00638 | 120.0063825 | 120.0063825 | 120.0063825 | 114.741867 | 107.2745441 | 100.3539122 | 93.9370032 | 87.98443534 |
| 171228A00089 | 12/28/2017 | 2.13 | 12/28/2020 | 12/28/2017 | 100.83813 | 100.8381293 | 100.8381293 | 100.8381293 | 100.7934741 | 100.3773839 | 99.96472528 | 99.555456 | 99.14953438 |
| 171229A00007 | 12/29/2017 | 2.12 | 12/30/2020 | 12/29/2017 | 100.84509 | 100.8450898 | 100.8450898 | 100.8450898 | 100.7997901 | 100.3781711 | 99.96007102 | 99.54544612 | 99.13425319 |
| 180103A00011 | 1/3/2018 | 2.35 | 1/3/2023 | 1/3/2018 | 105.48383 | 105.4838326 | 105.4838326 | 105.4838326 | 104.9699006 | 102.5317766 | 100.1627753 | 97.86055054 | 95.62285011 |
| 180104A00018 | 1/4/2018 | 2.97 | 1/4/2027 | 1/4/2018 | 117.2039 | 117.2039006 | 117.2039006 | 117.2039006 | 113.4333919 | 106.9629602 | 100.9104549 | 95.24665882 | 89.94454126 |
| 180109A00006 | 1/9/2018 | 2.18 | 1/8/2021 | 1/9/2018 | 100.92198 | 100.9219765 | 100.9219765 | 100.9219765 | 100.8734278 | 100.4268023 | 99.98413403 | 99.54537057 | 99.11046024 |
| 180109A00028 | 1/9/2018 | 2.6 | 1/9/2025 | 1/9/2018 | 111.15739 | 111.1573899 | 111.1573899 | 111.1573899 | 109.5571562 | 105.0587135 | 100.7720786 | 96.68618161 | 92.7905881 |
| 180110A00005 | 1/10/2018 | 2.22 | 1/11/2021 | 1/10/2018 | 100.95738 | 100.9573797 | 100.9573797 | 100.9573797 | 100.9077311 | 100.4527435 | 100.0018637 | 99.55503609 | 99.11220607 |
| 180111A00007 | 1/11/2018 | 2.66 | 1/14/2025 | 1/11/2018 | 111.46229 | 111.4622927 | 111.4622927 | 111.4622927 | 109.8503388 | 105.3322882 | 101.0275002 | 96.92479765 | 93.0136474 |
| 180116A00010 | 1/16/2018 | 2.58 | 1/17/2023 | 1/16/2018 | 105.68935 | 105.6893523 | 105.6893523 | 105.6893523 | 105.1646855 | 102.6965236 | 100.2991873 | 97.97024128 | 95.7073487 |
| 180116A00012 | 1/16/2018 | 2.4 | 1/15/2021 | 1/16/2018 | 101.06471 | 101.0647121 | 101.0647121 | 101.0647121 | 101.0135796 | 100.5472756 | 100.0852833 | 99.6275429 | 99.17399571 |
| 180116A00014 | 1/16/2018 | 3.01 | 1/19/2027 | 1/16/2018 | 117.57283 | 117.5728321 | 117.5728321 | 117.5728321 | 113.7396286 | 107.2217863 | 101.1272393 | 95.4262237 | 90.09121665 |
| 180116A00046 | 1/16/2018 | 2.58 | 1/11/2023 | 1/16/2018 | 105.65148 | 105.6514775 | 105.6514775 | 105.6514775 | 105.1322257 | 102.6802728 | 100.2982375 | 97.98373143 | 95.73446226 |
| 180116A00048 | 1/16/2018 | 2.37 | 1/19/2021 | 1/16/2018 | 101.01464 | 101.0146367 | 101.0146367 | 101.0146367 | 100.9621474 | 100.4856941 | 100.0137395 | 99.54621991 | 99.0830729 |
| 180123A00024 | 1/23/2018 | 2.44 | 2/16/2021 | 1/23/2018 | 101.21762 | 101.2176222 | 101.2176222 | 101.2176222 | 101.1537038 | 100.5997168 | 100.0517934 | 99.50983426 | 98.9737424 |
| 180130A00070 | 1/30/2018 | 3.14 | 1/29/2027 | 1/30/2018 | 118.49484 | 118.4948411 | 118.4948411 | 118.4948411 | 114.6118314 | 108.0411378 | 101.8983282 | 96.15321514 | 90.77789269 |
| 180202A00012 | 2/2/2018 | 2.57 | 2/2/2022 | 2/2/2018 | 103.74889 | 103.7488944 | 103.7488944 | 103.7488944 | 103.4830644 | 101.9703655 | 100.4875548 | 99.03382297 | 97.6083894 |
| 180205A00049 | 2/5/2018 | 2.55 | 2/5/2021 | 2/5/2018 | 101.20906 | 101.2090604 | 101.2090604 | 101.2090604 | 101.1499678 | 100.6262236 | 100.1078955 | 99.5948997 | 99.08715433 |
| 180215A00018 | 2/15/2018 | 2.57 | 9/15/2020 | 2/15/2018 | 100.29579 | 100.295789 | 100.295789 | 100.295789 | 100.284834 | 100.1572546 | 100.0300136 | 99.90310976 | 99.77654162 |
| 180222A00027 | 2/22/2018 | 3.24 | 2/22/2028 | 2/22/2018 | 123.83901 | 123.8390084 | 123.8390084 | 123.8390084 | 118.2434736 | 110.4831577 | 103.3003431 | 96.64879748 | 90.48622346 |
| 180308A00015 | 3/8/2018 | 2.82 | 12/15/2021 | 3/8/2018 | 103.5264 | 103.5264035 | 103.5264035 | 103.5264035 | 103.2883721 | 101.9121033 | 100.5607768 | 99.23377283 | 97.93049142 |
| 180313A00026 | 3/13/2018 | 3.34 | 3/13/2028 | 3/13/2018 | 123.17101 | 123.1710058 | 123.1710058 | 123.1710058 | 117.5649316 | 109.8425966 | 102.6965913 | 96.08062693 | 89.9523685 |
| 180323A00013 | 3/23/2018 | 3.18 | 3/23/2028 | 3/23/2018 | 123.6336 | 123.6335997 | 123.6335997 | 123.6335997 | 117.9135258 | 110.0878849 | 102.8502538 | 96.15312695 | 89.95307993 |
| 180327A00013 | 3/27/2018 | 2.77 | 3/26/2021 | 3/27/2018 | 101.65978 | 101.6597819 | 101.6597819 | 101.6597819 | 101.5774764 | 100.9178053 | 100.2666918 | 99.62397009 | 98.9894787 |
| 180328A00008 | 3/28/2018 | 2.85 | 3/25/2022 | 3/28/2018 | 104.25949 | 104.2594926 | 104.2594926 | 104.2594926 | 103.9633892 | 102.3080654 | 100.6871056 | 99.09950401 | 97.54429425 |
| 180328A00035 | 3/28/2018 | 2.73 | 3/29/2021 | 3/28/2018 | 101.65398 | 101.6539796 | 101.6539796 | 101.6539796 | 101.5701802 | 100.9023105 | 100.2432071 | 99.5926984 | 98.95061714 |
| 180406A00009 | 4/6/2018 | 2.58 | 4/6/2021 | 4/6/2018 | 101.70157 | 101.7015671 | 101.7015671 | 101.7015671 | 101.6134901 | 100.9222696 | 100.2404418 | 99.56781607 | 98.90420698 |
| 180425A00019 | 4/25/2018 | 3.02 | 10/25/2021 | 4/25/2018 | 103.43146 | 103.4314556 | 103.4314556 | 103.4314556 | 103.2221587 | 101.9727016 | 100.7534715 | 99.56338092 | 98.40139389 |
| 180426A00018 | 4/26/2018 | 2.94 | 4/26/2023 | 4/26/2018 | 107.81598 | 107.8159762 | 107.8159762 | 107.8159762 | 107.1878621 | 104.4092952 | 101.7172789 | 99.10854573 | 96.57997701 |
| 180427A00011 | 4/27/2018 | 3.03 | 4/27/2022 | 4/27/2018 | 104.80882 | 104.8088157 | 104.8088157 | 104.8088157 | 104.4916951 | 102.7414977 | 101.0290682 | 99.3532486 | 97.71292873 |
| 180430A00014 | 4/30/2018 | 3.01 | 3/15/2022 | 4/30/2018 | 104.46774 | 104.4677414 | 104.4677414 | 104.4677414 | 104.1773087 | 102.5465186 | 100.9492241 | 99.38445842 | 97.85129176 |

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 180430A00016 | 4/30/2018 | 3.07 | 12/15/2022 | 4/30/2018 | 106.65676 | 106.6567554 | 106.6567554 | 106.6567554 | 106.1588129 | 103.7656111 | 101.438686 | 99.17583831 | 96.9749545 |
| 180430A00069 | 4/30/2018 | 2.75 | 3/30/2021 | 4/30/2018 | 101.768 | 101.7679966 | 101.7679966 | 101.7679966 | 101.6834937 | 101.0112572 | 100.3478934 | 99.69322772 | 99.04708988 |
| 180514A00032 | 5/14/2018 | 3.27 | 5/14/2026 | 5/14/2018 | 118.43219 | 118.4321861 | 118.4321861 | 118.4321861 | 115.4885627 | 109.5243044 | 103.9112371 | 98.62677613 | 93.64990742 |
| 180515A00035 | 5/16/2018 | 2.98 | 5/17/2021 | 5/16/2018 | 102.19108 | 102.1910822 | 102.1910822 | 102.1910822 | 102.0819367 | 101.2776542 | 100.4860413 | 99.70679998 | 98.93964161 |
| 180518A00020 | 5/21/2018 | 3.08 | 3/15/2022 | 5/21/2018 | 104.58257 | 104.5825683 | 104.5825683 | 104.5825683 | 104.2919858 | 102.6602234 | 101.0619739 | 99.49627015 | 97.96218194 |
| 180522A00005 | 5/22/2018 | 3.16 | 5/22/2023 | 5/22/2018 | 108.11904 | 108.1190395 | 108.1190395 | 108.1190395 | 107.464834 | 104.62422 | 101.8737589 | 99.21008293 | 96.62997087 |
| 180522A00038 | 5/22/2018 | 3.23 | 5/22/2025 | 5/22/2018 | 115.13252 | 115.1325236 | 115.1325236 | 115.1325236 | 113.2275153 | 108.2830467 | 103.5866183 | 99.12447547 | 94.88369815 |
| 180523A00014 | 5/23/2018 | 2.79 | 5/24/2021 | 5/23/2018 | 102.20264 | 102.2026407 | 102.2026407 | 102.2026407 | 102.0897147 | 101.2646737 | 100.4529546 | 99.65423633 | 98.86820836 |
| 180524A00006 | 5/24/2018 | 2.71 | 2/16/2021 | 5/24/2018 | 101.43917 | 101.4391739 | 101.4391739 | 101.4391739 | 101.3750759 | 100.819502 | 100.2700186 | 99.72652577 | 99.18892578 |
| 180529A00043 | 5/29/2018 | 2.99 | 5/30/2023 | 5/29/2018 | 107.69659 | 107.6965905 | 107.6965905 | 107.6965905 | 107.0347972 | 104.1791182 | 101.4147185 | 98.73820021 | 96.1463107 |
| 180529A00063 | 5/29/2018 | 2.95 | 5/31/2022 | 5/29/2018 | 104.93656 | 104.9365567 | 104.9365567 | 104.9365567 | 104.5972226 | 102.754926 | 100.9540917 | 99.19354779 | 97.47216287 |
| 180530A00028 | 5/30/2018 | 3.67 | 5/31/2033 | 5/30/2018 | 142.93694 | 142.9369416 | 142.9369416 | 139.6954535 | 126.0053583 | 113.3208568 | 102.1147396 | 92.20387587 | 83.42880629 |
| 180530A00057 | 5/30/2018 | 2.76 | 5/28/2021 | 5/30/2018 | 102.08221 | 102.0822104 | 102.0822104 | 102.0822104 | 101.9675621 | 101.1338011 | 100.3136522 | 99.50678407 | 98.71287615 |
| 180531A00032 | 5/31/2018 | 2.8 | 6/1/2021 | 5/31/2018 | 102.14373 | 102.1437323 | 102.1437323 | 102.1437323 | 102.0270065 | 101.1820349 | 100.3510334 | 99.53365766 | 98.72957462 |
| 180605A00010 | 6/5/2018 | 2.87 | 6/5/2023 | 6/5/2018 | 107.92688 | 107.9268806 | 107.9268806 | 107.9268806 | 107.254429 | 104.3672936 | 101.573158 | 98.86853801 | 96.25009899 |
| 180612A00018 | 6/12/2018 | 2.88 | 6/10/2022 | 6/12/2018 | 105.20218 | 105.2021777 | 105.2021777 | 105.2021777 | 104.8543125 | 102.9761958 | 101.1410113 | 99.34752628 | 97.59455135 |
| 180619A00019 | 6/19/2018 | 2.89 | 6/18/2021 | 6/19/2018 | 102.3433 | 102.3432975 | 102.3432975 | 102.3432975 | 102.2175604 | 101.325189 | 100.4483866 | 99.58674834 | 98.73988291 |
| 180619A00031 | 6/19/2018 | 2.74 | 6/21/2021 | 6/19/2018 | 102.36503 | 102.3650291 | 102.3650291 | 102.3650291 | 102.2374303 | 101.3348886 | 100.448263 | 99.5771351 | 98.72110096 |
| 180620A00015 | 6/20/2018 | 3.04 | 6/20/2023 | 6/20/2018 | 107.9979 | 107.9979005 | 107.9979005 | 107.9979005 | 107.3110273 | 104.3940591 | 101.5720423 | 98.84138109 | 96.19863578 |
| 180620A00017 | 6/20/2018 | 3.24 | 6/20/2028 | 6/20/2018 | 124.86127 | 124.8612662 | 124.8612662 | 124.8612662 | 118.7345161 | 110.6485159 | 103.1866515 | 96.2972367 | 89.93312031 |
| 180621A00051 | 6/25/2018 | 3.63 | 6/23/2023 | 6/25/2018 | 109.74512 | 109.7451204 | 109.7451204 | 109.7451204 | 109.0498822 | 106.0992317 | 103.2446759 | 100.4825695 | 97.80942554 |
| 180627A00030 | 6/27/2018 | 3.02 | 6/27/2023 | 6/27/2018 | 107.99203 | 107.9920313 | 107.9920313 | 107.9920313 | 107.297073 | 104.3612069 | 101.5214952 | 98.77427434 | 96.11604056 |
| 180702A00034 | 7/2/2018 | 2.86 | 7/3/2023 | 7/2/2018 | 108.11045 | 108.1104486 | 108.1104486 | 108.1104486 | 107.4046137 | 104.4385571 | 101.5704105 | 98.79641398 | 96.11297337 |
| 180706A00010 | 7/6/2018 | 2.92 | 7/6/2021 | 7/6/2018 | 102.5024 | 102.5023999 | 102.5023999 | 102.5023999 | 102.3668836 | 101.4245873 | 100.4996216 | 99.59151136 | 98.6997988 |
| 180716A00056 | 7/16/2018 | 3.1 | 7/16/2025 | 7/16/2018 | 114.9531 | 114.9530973 | 114.9530973 | 114.9530973 | 112.9235156 | 107.8384847 | 103.0160432 | 98.44124513 | 94.10007217 |
| 180718A00026 | 7/18/2018 | 3.03 | 7/18/2023 | 7/18/2018 | 108.17968 | 108.1796786 | 108.1796786 | 108.1796786 | 107.4585335 | 104.4645401 | 101.5704144 | 98.77227802 | 96.06642569 |
| 180720A00011 | 7/20/2018 | 2.93 | 7/20/2021 | 7/20/2018 | 102.60551 | 102.6055139 | 102.6055139 | 102.6055139 | 102.4620095 | 101.4811238 | 100.5190049 | 99.57511757 | 98.64894698 |
| 180731A00004 | 7/31/2018 | 2.97 | 7/31/2023 | 7/31/2018 | 108.65704 | 108.6570403 | 108.6570403 | 108.6570403 | 107.9148635 | 104.8666432 | 101.9214742 | 99.07529876 | 96.32424267 |
| 180731A00022 | 7/31/2018 | 3.47 | 7/31/2028 | 7/31/2018 | 125.36522 | 125.3652213 | 125.3652213 | 125.3652213 | 119.1221077 | 110.9878413 | 103.4865471 | 96.56530458 | 90.1758846 |
| 180801A00010 | 8/1/2018 | 2.99 | 4/15/2021 | 8/1/2018 | 101.95658 | 101.9565761 | 101.9565761 | 101.9565761 | 101.8639085 | 101.1482613 | 100.4426675 | 99.74691626 | 99.06080242 |
| 180809A00016 | 8/9/2018 | 3.1 | 8/9/2023 | 8/9/2018 | 108.55925 | 108.5592525 | 108.5592525 | 108.5592525 | 107.8093743 | 104.7518204 | 101.7979487 | 98.94366047 | 96.18504381 |
| 180814A00010 | 8/14/2018 | 3.1 | 8/14/2025 | 8/14/2018 | 115.192 | 115.1919958 | 115.1919958 | 115.1919958 | 113.0916106 | 107.9257688 | 103.0303067 | 98.38962452 | 93.98910487 |
| 180814A00032 | 8/14/2018 | 3.1 | 8/14/2025 | 8/14/2018 | 115.192 | 115.1919958 | 115.1919958 | 115.1919958 | 113.0916106 | 107.9257688 | 103.0303067 | 98.38962452 | 93.98910487 |

Classification | Public

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 180815A00011 | 8/15/2018 | 2.97 | 8/15/2022 | 8/15/2018 | 105.51642 | 105.5164238 | 105.5164238 | 105.5164238 | 105.1201652 | 103.0684609 | 101.0673894 | 99.11537153 | 97.21088872 |
| 180816A00044 | 8/16/2018 | 2.83 | 8/17/2020 | 8/16/2018 | 100.12127 | 100.1212678 | 100.1212678 | 100.1212678 | 100.1177551 | 100.0705866 | 100.0234794 | 99.97643361 | 99.92944899 |
| 180820A00002 | 8/20/2018 | 2.91 | 8/20/2021 | 8/20/2018 | 102.81245 | 102.8124495 | 102.8124495 | 102.8124495 | 102.6492904 | 101.5828572 | 100.538564 | 99.51572618 | 98.5136872 |
| 180823A00001 | 8/23/2018 | 2.88 | 8/23/2021 | 8/23/2018 | 102.80209 | 102.8020926 | 102.8020926 | 102.8020926 | 102.6369518 | 101.5624212 | 100.5103663 | 99.48008698 | 98.47091199 |
| 180828A00032 | 8/28/2018 | 3.49 | 8/29/2033 | 8/28/2018 | 144.38601 | 144.3860087 | 144.3860087 | 140.6777013 | 126.4701939 | 113.397121 | 101.8810502 | 91.72520986 | 82.75876025 |
| 180905A00011 | 9/5/2018 | 2.85 | 9/8/2020 | 9/5/2018 | 100.28016 | 100.2801628 | 100.2801628 | 100.2801628 | 100.2713299 | 100.1631425 | 100.055199 | 99.94749872 | 99.84004073 |
| 180905A00024 | 9/5/2018 | 2.9 | 9/5/2023 | 9/5/2018 | 108.7218 | 108.7217957 | 108.7217957 | 108.7217957 | 107.9325186 | 104.7872205 | 101.7507155 | 98.81861083 | 95.98671871 |
| 180914A00028 | 9/14/2018 | 3.37 | 9/12/2025 | 9/14/2018 | 115.78189 | 115.781893 | 115.781893 | 115.781893 | 113.6220649 | 108.3981359 | 103.4499659 | 98.76149764 | 94.317695 |
| 180917A00032 | 9/17/2018 | 3.17 | 9/15/2023 | 9/17/2018 | 109.06573 | 109.0657258 | 109.0657258 | 109.0657258 | 108.2661051 | 105.1018652 | 102.0474855 | 99.09850839 | 96.25068611 |
| 180918A00023 | 9/18/2018 | 3.17 | 9/18/2023 | 9/18/2018 | 109.08942 | 109.0894153 | 109.0894153 | 109.0894153 | 108.2857541 | 105.1129854 | 102.0505986 | 99.09410532 | 96.23922845 |
| 180920A00035 | 9/20/2018 | 3.16 | 9/20/2022 | 9/20/2018 | 106.19297 | 106.1929657 | 106.1929657 | 106.1929657 | 105.7668894 | 103.6105162 | 101.5090095 | 99.46058891 | 97.46354655 |
| 180920A00062 | 9/20/2018 | 3.12 | 9/20/2023 | 9/20/2018 | 109.53616 | 109.5361572 | 109.5361572 | 109.5361572 | 108.7243411 | 105.5251284 | 102.4376181 | 99.45725115 | 96.57968438 |
| 180920A00063 | 9/20/2018 | 3 | 9/20/2021 | 9/20/2018 | 103.3273 | 103.3273012 | 103.3273012 | 103.3273012 | 103.1415549 | 101.9850157 | 100.8543933 | 99.74882351 | 98.66747987 |
| 180924A00021 | 9/24/2018 | 2.88 | 9/24/2020 | 9/24/2018 | 100.42191 | 100.4219056 | 100.4219056 | 100.4219056 | 100.4081936 | 100.2553638 | 100.1030081 | 99.95112424 | 99.79971012 |
| 180924A00043 | 9/24/2018 | 2.99 | 9/24/2020 | 9/24/2018 | 100.41766 | 100.4176575 | 100.4176575 | 100.4176575 | 100.4039657 | 100.2513593 | 100.0992239 | 99.94755726 | 99.79635725 |
| 180924A00052 | 9/24/2018 | 3.22 | 9/22/2023 | 9/24/2018 | 109.27968 | 109.2796762 | 109.2796762 | 109.2796762 | 108.4701253 | 105.2834783 | 102.2079764 | 99.23908728 | 96.37249279 |
| 180927A00030 | 9/27/2018 | 3.01 | 10/27/2020 | 9/27/2018 | 100.67566 | 100.6756618 | 100.6756618 | 100.6756618 | 100.6509763 | 100.4067835 | 100.1637778 | 99.92195041 | 99.68129289 |
| 181001A00074 | 10/1/2018 | 3.03 | 10/3/2022 | 10/1/2018 | 106.41268 | 106.4126795 | 106.4126795 | 106.4126795 | 105.9740602 | 103.7719989 | 101.62678 | 99.53652866 | 97.49944755 |
| 181004A00029 | 10/4/2018 | 3.7 | 10/4/2028 | 10/4/2018 | 127.80664 | 127.8066367 | 127.8066367 | 127.8066367 | 121.2304686 | 112.8486404 | 105.1294546 | 98.01658918 | 91.45880192 |
| 181009A00035 | 10/9/2018 | 3.12 | 10/11/2022 | 10/9/2018 | 106.67748 | 106.6774776 | 106.6774776 | 106.6774776 | 106.2318153 | 104.0053889 | 101.8368616 | 99.72430664 | 97.66587817 |
| 181017A00023 | 10/17/2018 | 3.07 | 10/14/2020 | 10/17/2018 | 100.58622 | 100.5862169 | 100.5862169 | 100.5862169 | 100.5659475 | 100.3578268 | 100.1505802 | 99.9442022 | 99.7386872 |
| 181026A00002 | 10/26/2018 | 3.28 | 10/26/2023 | 10/26/2018 | 109.7495 | 109.7495036 | 109.7495036 | 109.7495036 | 108.8925654 | 105.6081723 | 102.4410075 | 99.38616904 | 96.43899417 |
| 181029A00081 | 10/29/2018 | 3.27 | 4/28/2023 | 10/29/2018 | 108.23397 | 108.2339667 | 108.2339667 | 108.2339667 | 107.6055657 | 104.826983 | 102.13482 | 99.52581684 | 96.99686206 |
| 181114A00014 | 11/14/2018 | 3.17 | 11/14/2023 | 11/14/2018 | 110.15947 | 110.1594673 | 110.1594673 | 110.1594673 | 109.270201 | 105.9128119 | 102.677212 | 99.55829152 | 96.55118663 |
| 181115A00076 | 11/15/2018 | 3.22 | 12/31/2021 | 11/15/2018 | 104.22754 | 104.2275391 | 104.2275391 | 104.2275391 | 103.9803747 | 102.5561915 | 101.1585243 | 99.78669651 | 98.44005416 |
| 181126A00046 | 11/26/2018 | 3.13 | 11/25/2020 | 11/26/2018 | 100.93687 | 100.936875 | 100.936875 | 100.936875 | 100.9028448 | 100.5780896 | 100.2554263 | 99.93483486 | 99.6162953 |
| 181128A00010 | 11/28/2018 | 2.95 | 11/30/2020 | 11/28/2018 | 100.95941 | 100.9594095 | 100.9594095 | 100.9594095 | 100.9237352 | 100.5846591 | 100.2478559 | 99.91330299 | 99.58097778 |
| 181129A00027 | 11/29/2018 | 3.16 | 11/29/2021 | 11/29/2018 | 103.87209 | 103.872092 | 103.872092 | 103.872092 | 103.642079 | 102.3055633 | 100.992925 | 99.70357243 | 98.43693282 |
| 181206A00009 | 12/6/2018 | 3.03 | 12/4/2020 | 12/6/2018 | 100.97392 | 100.9739153 | 100.9739153 | 100.9739153 | 100.9370039 | 100.5873442 | 100.2401065 | 99.89526587 | 99.55279739 |
| 181211A00009 | 12/11/2018 | 3.14 | 12/11/2023 | 12/11/2018 | 109.6518 | 109.6518049 | 109.6518049 | 109.6518049 | 108.7309845 | 105.3248375 | 102.044461 | 98.88455902 | 95.84008629 |
| 181211A00018 | 12/11/2018 | 3.14 | 12/11/2023 | 12/11/2018 | 109.6518 | 109.6518049 | 109.6518049 | 109.6518049 | 108.7309845 | 105.3248375 | 102.044461 | 98.88455902 | 95.84008629 |
| 181212A00019 | 12/12/2018 | 3.19 | 12/12/2023 | 12/12/2018 | 109.82945 | 109.8294536 | 109.8294536 | 109.8294536 | 108.906581 | 105.494817 | 102.2090949 | 99.0441037 | 95.99478444 |
| 181217A00052 | 12/17/2018 | 3.04 | 12/17/2021 | 12/17/2018 | 103.86183 | 103.8618266 | 103.8618266 | 103.8618266 | 103.6223562 | 102.2381062 | 100.8790305 | 99.54450102 | 98.2339102 |

Classification | Public

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 181220A00020 | 12/20/2018 | 2.78 | 12/20/2021 | 12/20/2018 | 103.74509 | 103.7450943 | 103.7450943 | 103.7450943 | 103.5035114 | 102.108542 | 100.7391257 | 99.39462102 | 98.07440708 |
| 181226A00033 | 12/26/2018 | 2.87 | 12/28/2020 | 12/26/2018 | 101.09296 | 101.0929594 | 101.0929594 | 101.0929594 | 101.0483077 | 100.6322025 | 100.2195199 | 99.81021776 | 99.40425463 |
| 181226A00034 | 12/26/2018 | 2.9 | 12/27/2021 | 12/26/2018 | 103.73897 | 103.7389652 | 103.7389652 | 103.7389652 | 103.4944201 | 102.0845076 | 100.7006748 | 99.34226064 | 98.0086259 |
| 181226A00035 | 12/26/2018 | 2.95 | 12/27/2022 | 12/26/2018 | 106.45683 | 106.4568318 | 106.4568318 | 106.4568318 | 105.9490299 | 103.5265749 | 101.1720476 | 98.88316577 | 96.65773783 |
| 181226A00061 | 12/26/2018 | 2.95 | 12/27/2022 | 12/26/2018 | 106.45683 | 106.4568318 | 106.4568318 | 106.4568318 | 105.9490299 | 103.5265749 | 101.1720476 | 98.88316577 | 96.65773783 |
| 181226A00062 | 12/26/2018 | 3.02 | 12/26/2023 | 12/26/2018 | 109.35715 | 109.3571543 | 109.3571543 | 109.3571543 | 108.4160087 | 104.9756403 | 101.6637534 | 98.47487758 | 95.40380446 |
| 181231A00007 | 12/31/2018 | 2.86 | 12/31/2021 | 12/31/2018 | 103.71063 | 103.7106265 | 103.7106265 | 103.7106265 | 103.4640314 | 102.0437156 | 100.6498488 | 99.2817564 | 97.93878622 |
| 190102A00058 | 1/2/2019 | 2.91 | 1/2/2024 | 1/2/2019 | 109.02975 | 109.0297458 | 109.0297458 | 109.0297458 | 108.0797512 | 104.6267406 | 101.3034042 | 98.10419096 | 95.02381738 |
| 190103A00010 | 1/3/2019 | 2.7 | 1/3/2024 | 1/3/2019 | 108.95188 | 108.9518794 | 108.9518794 | 108.9518794 | 107.9955227 | 104.5252695 | 101.185821 | 97.97155884 | 94.87713656 |
| 190104A00003 | 1/4/2019 | 2.81 | 1/4/2022 | 1/4/2019 | 103.66692 | 103.666925 | 103.666925 | 103.666925 | 103.4181527 | 101.9875493 | 100.5837844 | 99.2061683 | 97.85403458 |
| 190104A00012 | 1/4/2019 | 2.76 | 1/4/2021 | 1/4/2019 | 101.09606 | 101.0960576 | 101.0960576 | 101.0960576 | 101.0489888 | 100.6135931 | 100.1819458 | 99.75399853 | 99.32970396 |
| 190107A00006 | 1/7/2019 | 2.82 | 3/29/2021 | 1/7/2019 | 101.71417 | 101.7141715 | 101.7141715 | 101.7141715 | 101.630347 | 100.9622521 | 100.3029257 | 99.65219608 | 99.00989588 |
| 190108A00039 | 1/8/2019 | 3.04 | 4/30/2024 | 1/8/2019 | 110.37544 | 110.3754399 | 110.3754399 | 110.3754399 | 109.2399873 | 105.444955 | 101.8035206 | 98.30856927 | 94.95336198 |
| 190110A00016 | 1/10/2019 | 2.88 | 1/25/2022 | 1/10/2019 | 103.90467 | 103.9046655 | 103.9046655 | 103.9046655 | 103.6439924 | 102.1561383 | 100.6972557 | 99.26657214 | 97.8633422 |
| 190110A00077 | 1/10/2019 | 2.68 | 12/8/2020 | 1/10/2019 | 100.92487 | 100.9248739 | 100.9248739 | 100.9248739 | 100.8866303 | 100.5255151 | 100.1669922 | 99.81103372 | 99.45761206 |
| 190110A00087 | 1/10/2019 | 2.89 | 8/7/2020 | 1/10/2019 | 100.05091 | 100.0509117 | 100.0509117 | 100.0509117 | 100.0494652 | 100.0300393 | 100.0106333 | 99.99124724 | 99.97188099 |
| 190110A00090 | 1/10/2019 | 2.88 | 10/7/2020 | 1/10/2019 | 100.49558 | 100.4955767 | 100.4955767 | 100.4955767 | 100.4776896 | 100.2890488 | 100.1011242 | 99.91391174 | 99.72740729 |
| 190117A00002 | 1/17/2019 | 2.87 | 1/7/2021 | 1/17/2019 | 101.16587 | 101.1658712 | 101.1658712 | 101.1658712 | 101.1176941 | 100.6738505 | 100.2339041 | 99.79780387 | 99.36549934 |
| 190122A00007 | 1/22/2019 | 3.03 | 1/22/2024 | 1/22/2019 | 109.59484 | 109.5948365 | 109.5948365 | 109.5948365 | 108.6136262 | 105.098771 | 101.7178124 | 98.46493092 | 95.33459208 |
| 190130A00011 | 1/30/2019 | 2.88 | 1/29/2021 | 1/30/2019 | 101.33132 | 101.3313194 | 101.3313194 | 101.3313194 | 101.2751082 | 100.7702488 | 100.2704138 | 99.77552868 | 99.28552019 |
| 190130A00018 | 1/30/2019 | 2.95 | 10/17/2022 | 1/30/2019 | 105.93678 | 105.9367804 | 105.9367804 | 105.9367804 | 105.4894325 | 103.2634379 | 101.0955615 | 98.98386033 | 96.92647328 |
| 190211A00002 | 2/11/2019 | 2.88 | 2/12/2024 | 2/11/2019 | 109.21729 | 109.2172882 | 109.2172882 | 109.2172882 | 108.206468 | 104.6413386 | 101.2139917 | 97.91835016 | 94.74863974 |
| 190214A00004 | 2/14/2019 | 2.6 | 2/14/2022 | 2/14/2019 | 103.87698 | 103.8769825 | 103.8769825 | 103.8769825 | 103.603808 | 102.0545954 | 100.5363487 | 99.04821148 | 97.58935858 |
| 190215A00003 | 2/15/2019 | 2.82 | 2/15/2022 | 2/15/2019 | 103.96058 | 103.9605772 | 103.9605772 | 103.9605772 | 103.6875489 | 102.1391622 | 100.6216843 | 99.1342606 | 97.67606781 |
| 190215A00017 | 2/15/2019 | 2.89 | 2/15/2024 | 2/15/2019 | 109.27422 | 109.2742213 | 109.2742213 | 109.2742213 | 108.2587071 | 104.6842086 | 101.2480938 | 97.94424779 | 94.76686105 |
| 190220A00007 | 2/20/2019 | 2.87 | 2/20/2024 | 2/20/2019 | 109.23789 | 109.237891 | 109.237891 | 109.237891 | 108.2150577 | 104.6272762 | 101.1788171 | 97.86350459 | 94.67547241 |
| 190221A00002 | 2/21/2019 | 2.81 | 2/22/2022 | 2/21/2019 | 103.99332 | 103.9933191 | 103.9933191 | 103.9933191 | 103.7160749 | 102.1468189 | 100.609103 | 99.10204504 | 97.62479567 |
| 190222A00021 | 2/22/2019 | 2.95 | 8/21/2024 | 2/22/2019 | 110.85935 | 110.8593453 | 110.8593453 | 110.8593453 | 109.5328556 | 105.4328002 | 101.5106668 | 97.75777414 | 94.16591289 |
| 190228A00035 | 2/28/2019 | 2.8 | 2/26/2021 | 2/28/2019 | 101.48188 | 101.4818824 | 101.4818824 | 101.4818824 | 101.4134968 | 100.831265 | 100.2557057 | 99.68670483 | 99.12415079 |
| 190314A00027 | 3/22/2019 | 2.92 | 3/21/2025 | 3/22/2019 | 112.26093 | 112.2609273 | 112.2609273 | 112.2609273 | 110.5209042 | 105.8329573 | 101.3730759 | 97.12892804 | 93.08891673 |
| 190318A00021 | 3/18/2019 | 2.76 | 3/18/2024 | 3/18/2019 | 109.02585 | 109.0258523 | 109.0258523 | 109.0258523 | 107.9629131 | 104.3070652 | 100.7955333 | 97.42181107 | 94.17972456 |
| 190319A00013 | 3/19/2019 | 2.72 | 3/18/2022 | 3/19/2019 | 103.99566 | 103.9956608 | 103.9956608 | 103.9956608 | 103.7041007 | 102.0696232 | 100.4688307 | 98.90074701 | 97.36443329 |
| 190321A00004 | 3/21/2019 | 2.62 | 3/22/2021 | 3/21/2019 | 101.53444 | 101.5344412 | 101.5344412 | 101.5344412 | 101.4541819 | 100.8059341 | 100.1659631 | 99.53411095 | 98.91022373 |

Classification | Public

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 190321A00020 | 3/21/2019 | 2.62 | 3/22/2021 | 3/21/2019 | 101.53444 | 101.5344412 | 101.5344412 | 101.5344412 | 101.4541819 | 100.8059341 | 100.1659631 | 99.53411095 | 98.91022373 |
| 190321A00044 | 3/21/2019 | 2.45 | 3/21/2022 | 3/21/2019 | 103.86858 | 103.8685836 | 103.8685836 | 103.8685836 | 103.5744036 | 101.9279011 | 100.3155252 | 98.73628042 | 97.18921017 |
| 190322A00022 | 3/22/2019 | 2.56 | 7/22/2021 | 3/22/2019 | 102.2549 | 102.254898 | 102.254898 | 102.254898 | 102.1104954 | 101.126021 | 100.1604953 | 99.21337497 | 98.28413726 |
| 190325A00014 | 3/25/2019 | 2.43 | 9/25/2020 | 3/25/2019 | 100.35958 | 100.3595804 | 100.3595804 | 100.3595804 | 100.3455718 | 100.190051 | 100.0350197 | 99.88047553 | 99.72641614 |
| 190326A00002 | 3/26/2019 | 2.56 | 9/26/2022 | 3/26/2019 | 104.93305 | 104.9330521 | 104.9330521 | 104.9330521 | 104.5045474 | 102.3456511 | 100.2420622 | 98.19197314 | 96.1936507 |
| 190327A00011 | 3/27/2019 | 2.51 | 9/28/2020 | 3/27/2019 | 100.36934 | 100.3693352 | 100.3693352 | 100.3693352 | 100.354438 | 100.1908385 | 100.0277726 | 99.86523746 | 99.70323069 |
| 190327A00031 | 3/27/2019 | 2.53 | 3/27/2024 | 3/27/2019 | 108.23877 | 108.2387679 | 108.2387679 | 108.2387679 | 107.1652534 | 103.5004008 | 99.98114535 | 96.60088299 | 93.35334967 |
| 190328A00003 | 3/28/2019 | 2.64 | 9/30/2024 | 3/28/2019 | 109.84812 | 109.8481246 | 109.8481246 | 109.8481246 | 108.455761 | 104.2706711 | 100.2714176 | 96.44872591 | 92.79383861 |
| 190328A00009 | 3/28/2019 | 2.33 | 3/28/2022 | 3/28/2019 | 103.71241 | 103.7124135 | 103.7124135 | 103.7124135 | 103.414235 | 101.7504391 | 100.1213901 | 98.52606492 | 96.96348041 |
| 190328A00019 | 3/28/2019 | 2.56 | 3/28/2024 | 3/28/2019 | 108.35563 | 108.3556316 | 108.3556316 | 108.3556316 | 107.2801228 | 103.6105504 | 100.0868264 | 96.70233194 | 93.45078887 |
| 190328A00022 | 3/28/2019 | 2.53 | 11/20/2020 | 3/28/2019 | 100.71034 | 100.7103354 | 100.7103354 | 100.7103354 | 100.6779375 | 100.3674321 | 100.0588487 | 99.75216957 | 99.44737695 |
| 190328A00046 | 3/28/2019 | 2.7 | 3/4/2025 | 3/28/2019 | 111.1208 | 111.120802 | 111.120802 | 111.120802 | 109.4229726 | 104.8044404 | 100.4090973 | 96.22496457 | 92.24077173 |
| 190328A00053 | 3/28/2019 | 2.33 | 3/28/2022 | 3/28/2019 | 103.71241 | 103.7124135 | 103.7124135 | 103.7124135 | 103.414235 | 101.7504391 | 100.1213901 | 98.52606492 | 96.96348041 |
| 190329A00016 | 3/29/2019 | 2.56 | 3/29/2022 | 3/29/2019 | 103.8009 | 103.8008991 | 103.8008991 | 103.8008991 | 103.5030141 | 101.8410361 | 100.2137184 | 98.62004082 | 97.05902356 |
| 190329A00017 | 3/29/2019 | 2.59 | 3/29/2023 | 3/29/2019 | 106.16187 | 106.1618664 | 106.1618664 | 106.1618664 | 105.5694938 | 102.9007452 | 100.3131632 | 97.80376568 | 95.3697018 |
| 190401A00006 | 4/1/2019 | 2.58 | 4/1/2022 | 4/1/2019 | 103.85344 | 103.8534353 | 103.8534353 | 103.8534353 | 103.5536675 | 101.8831974 | 100.2476812 | 98.64608605 | 97.07741967 |
| 190401A00009 | 4/1/2019 | 2.39 | 4/1/2022 | 4/1/2019 | 103.83834 | 103.8383429 | 103.8383429 | 103.8383429 | 103.5375737 | 101.8619524 | 100.2214779 | 98.61510935 | 97.04184721 |
| 190403A00006 | 4/3/2019 | 2.48 | 4/3/2024 | 4/3/2019 | 108.78322 | 108.7832204 | 108.7832204 | 108.7832204 | 107.6904338 | 103.9793929 | 100.416742 | 96.99570546 | 93.70985909 |
| 190404A00023 | 4/5/2019 | 2.62 | 5/16/2022 | 4/5/2019 | 104.22805 | 104.2280522 | 104.2280522 | 104.2280522 | 103.8994935 | 102.1036129 | 100.3474364 | 98.62979597 | 96.94956809 |
| 190409A00019 | 4/9/2019 | 2.91 | 4/9/2029 | 4/9/2019 | 124.48224 | 124.482237 | 124.482237 | 124.482237 | 117.0325872 | 108.2718119 | 100.2494684 | 92.89907679 | 86.16047969 |
| 190409A00020 | 4/9/2019 | 2.41 | 4/8/2022 | 4/9/2019 | 103.91657 | 103.9165702 | 103.9165702 | 103.9165702 | 103.6113646 | 101.9158054 | 100.2561157 | 98.63122212 | 97.04009458 |
| 190409A00031 | 4/9/2019 | 2.64 | 4/9/2024 | 4/9/2019 | 108.72807 | 108.7280704 | 108.7280704 | 108.7280704 | 107.6323869 | 103.9241782 | 100.3643933 | 96.94624463 | 93.66329739 |
| 190409A00033 | 4/9/2019 | 2.62 | 6/9/2023 | 4/9/2019 | 106.70343 | 106.7034304 | 106.7034304 | 106.7034304 | 106.0328529 | 103.164441 | 100.3886451 | 97.70198927 | 95.10114737 |
| 190411A00020 | 5/1/2019 | 2.63 | 5/2/2022 | 5/1/2019 | 104.13743 | 104.13743 | 104.13743 | 104.13743 | 103.8181258 | 102.0604998 | 100.3410552 | 98.65862311 | 97.01208286 |
| 190426A00033 | 6/27/2019 | 2.55 | 6/27/2022 | 6/27/2019 | 104.3444 | 104.3443999 | 104.3443999 | 104.3443999 | 103.9873479 | 102.0773673 | 100.211963 | 98.38982908 | 96.60970658 |
| 190501A00017 | 5/1/2019 | 2.61 | 5/1/2024 | 5/1/2019 | 108.75598 | 108.7559814 | 108.7559814 | 108.7559814 | 107.6257223 | 103.8583792 | 100.2439354 | 96.77530102 | 93.44576024 |
| 190506A00027 | 5/6/2019 | 2.38 | 5/6/2022 | 5/6/2019 | 104.04074 | 104.0407437 | 104.0407437 | 104.0407437 | 103.7178648 | 101.9447845 | 100.2105133 | 98.51387452 | 96.85373889 |
| 190510A00005 | 5/10/2019 | 2.47 | 5/10/2021 | 5/10/2019 | 101.72985 | 101.7298526 | 101.7298526 | 101.7298526 | 101.6245083 | 100.8414913 | 100.0705221 | 99.31132408 | 98.56362899 |
| 190514A00024 | 5/14/2019 | 2.34 | 5/14/2024 | 5/14/2019 | 108.51432 | 108.5143213 | 108.5143213 | 108.5143213 | 107.3574102 | 103.542308 | 99.88383224 | 96.37469893 | 93.00800542 |
| 190515A00008 | 5/15/2019 | 2.41 | 11/15/2021 | 5/15/2019 | 102.77954 | 102.7795428 | 102.7795428 | 102.7795428 | 102.5584732 | 101.2622901 | 99.99330309 | 98.75065968 | 97.53354327 |
| 190515A00015 | 5/15/2019 | 2.25 | 5/16/2022 | 5/15/2019 | 103.86758 | 103.8675838 | 103.8675838 | 103.8675838 | 103.5384649 | 101.7403996 | 99.9821903 | 98.2626622 | 96.5806851 |
| 190515A00055 | 5/15/2019 | 2.26 | 5/15/2023 | 5/15/2019 | 106.04488 | 106.0448841 | 106.0448841 | 106.0448841 | 105.4008475 | 102.5964869 | 99.88107375 | 97.25126197 | 94.7038537 |
| 190520A00034 | 5/20/2019 | 2.44 | 5/20/2021 | 5/20/2019 | 101.77478 | 101.7747752 | 101.7747752 | 101.7747752 | 101.6643281 | 100.8536915 | 100.0559616 | 99.27083168 | 98.49800491 |

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 190521A00005 | 5/21/2019 | 2.56 | 5/21/2024 | 5/21/2019 | 108.69144 | 108.6914399 | 108.6914399 | 108.6914399 | 107.529353 | 103.7115769 | 100.0507305 | 96.53953359 | 93.17108398 |
| 190521A00026 | 5/21/2019 | 2.54 | 5/19/2023 | 5/21/2019 | 106.34281 | 106.3428087 | 106.3428087 | 106.3428087 | 105.6966174 | 102.8890761 | 100.1706089 | 97.53788043 | 94.98770136 |
| 190522A00003 | 5/22/2019 | 2.55 | 5/22/2024 | 5/22/2019 | 108.65926 | 108.6592581 | 108.6592581 | 108.6592581 | 107.4957064 | 103.675963 | 100.0133355 | 96.50053461 | 93.13064926 |
| 190522A00017 | 5/23/2019 | 2.53 | 3/1/2023 | 5/23/2019 | 105.82789 | 105.827894 | 105.827894 | 105.827894 | 105.26356 | 102.6728478 | 100.1592823 | 97.72009659 | 95.3526421 |
| 190524A00005 | 5/24/2019 | 2.34 | 11/24/2020 | 5/24/2019 | 100.71576 | 100.7157567 | 100.7157567 | 100.7157567 | 100.6820392 | 100.3600331 | 100.0400916 | 99.72219477 | 99.40632295 |
| 190524A00015 | 5/24/2019 | 2.24 | 5/24/2022 | 5/24/2019 | 103.89653 | 103.896526 | 103.896526 | 103.896526 | 103.5621735 | 101.7425965 | 99.96375139 | 98.2244632 | 96.52359945 |
| 190528A00028 | 5/28/2019 | 2.42 | 5/30/2023 | 5/28/2019 | 106.06813 | 106.0681334 | 106.0681334 | 106.0681334 | 105.4107497 | 102.5783594 | 99.83668525 | 97.18234772 | 94.61211159 |
| 190529A00023 | 5/29/2019 | 2.38 | 5/29/2024 | 5/29/2019 | 108.04639 | 108.0463865 | 108.0463865 | 108.0463865 | 106.8742786 | 103.0481924 | 99.38030373 | 95.8632684 | 92.49012075 |
| 190529A00031 | 5/29/2019 | 2.36 | 5/30/2023 | 5/29/2019 | 105.89672 | 105.8967169 | 105.8967169 | 105.8967169 | 105.2397973 | 102.4098585 | 99.67057649 | 97.01857377 | 94.45061695 |
| 190529A00060 | 5/29/2019 | 2.31 | 11/29/2021 | 5/29/2019 | 102.72694 | 102.7269425 | 102.7269425 | 102.7269425 | 102.4980911 | 101.1696585 | 99.86496527 | 98.58342346 | 97.32446412 |
| 190530A00005 | 5/30/2019 | 2.36 | 5/28/2021 | 5/30/2019 | 101.74818 | 101.7481755 | 101.7481755 | 101.7481755 | 101.6337095 | 100.8014716 | 99.98282836 | 99.17744877 | 98.3850125 |
| 190530A00006 | 5/30/2019 | 2.25 | 5/30/2024 | 5/30/2019 | 108.26377 | 108.2637681 | 108.2637681 | 108.2637681 | 107.0820902 | 103.2302364 | 99.53816871 | 95.99845069 | 92.60402993 |
| 190530A00045 | 5/30/2019 | 2.44 | 5/30/2024 | 5/30/2019 | 108.28393 | 108.2839279 | 108.2839279 | 108.2839279 | 107.1091859 | 103.2760008 | 99.60135544 | 96.07789039 | 92.69862535 |
| 190531A00013 | 5/31/2019 | 2.31 | 12/6/2022 | 5/31/2019 | 104.78303 | 104.7830314 | 104.7830314 | 104.7830314 | 104.2967451 | 101.9498303 | 99.66744453 | 97.44746493 | 95.28785069 |
| 190603A00033 | 6/3/2019 | 2.05 | 6/3/2024 | 6/3/2019 | 107.50972 | 107.5097248 | 107.5097248 | 107.5097248 | 106.3247675 | 102.4767767 | 98.78899539 | 95.25394855 | 91.86454782 |
| 190605A00017 | 6/5/2019 | 2.12 | 6/4/2021 | 6/5/2019 | 101.58371 | 101.5837121 | 101.5837121 | 101.5837121 | 101.4657306 | 100.6151657 | 99.77881745 | 98.95633166 | 98.14736587 |
| 190605A00034 | 6/5/2019 | 2.11 | 6/6/2022 | 6/5/2019 | 103.41005 | 103.4100476 | 103.4100476 | 103.4100476 | 103.0688925 | 101.224767 | 99.42253957 | 97.66101603 | 95.93904394 |
| 190605A00058 | 6/5/2019 | 2.14 | 12/5/2022 | 6/5/2019 | 104.37424 | 104.3742398 | 104.3742398 | 104.3742398 | 103.889662 | 101.5502671 | 99.27515713 | 97.06221922 | 94.90942205 |
| 190606A00028 | 6/6/2019 | 2.74 | 6/6/2029 | 6/6/2019 | 121.5553 | 121.5553008 | 121.5553008 | 121.5553008 | 113.9940727 | 105.3020239 | 97.35424315 | 90.08283877 | 83.42644014 |
| 190607A00009 | 6/7/2019 | 2.14 | 6/7/2022 | 6/7/2019 | 103.47125 | 103.4712503 | 103.4712503 | 103.4712503 | 103.1293111 | 101.2818815 | 99.47647928 | 97.71190526 | 95.98700182 |
| 190611A00015 | 6/11/2019 | 2.32 | 6/11/2024 | 6/11/2019 | 107.88689 | 107.8868943 | 107.8868943 | 107.8868943 | 106.6942238 | 102.8369609 | 99.14059431 | 95.59759809 | 92.20083676 |
| 190611A00047 | 6/11/2019 | 2.26 | 6/11/2021 | 6/11/2019 | 101.74194 | 101.7419362 | 101.7419362 | 101.7419362 | 101.6202102 | 100.7498253 | 99.89431647 | 99.05330447 | 98.22642305 |
| 190614A00018 | 6/14/2019 | 2.21 | 6/14/2021 | 6/14/2019 | 101.71437 | 101.7143678 | 101.7143678 | 101.7143678 | 101.5910917 | 100.7126652 | 99.84939393 | 99.00088813 | 98.16677124 |
| 190620A00056 | 6/25/2019 | 2.07 | 1/17/2023 | 6/25/2019 | 104.41922 | 104.4192151 | 104.4192151 | 104.4192151 | 103.8973897 | 101.445167 | 99.0634181 | 96.74971827 | 94.50174107 |
| 190624A00052 | 6/24/2019 | 1.89 | 6/24/2022 | 6/24/2019 | 103.40577 | 103.4057735 | 103.4057735 | 103.4057735 | 103.0509998 | 101.1520274 | 99.29734884 | 97.48566818 | 95.71573606 |
| 190625A00023 | 6/25/2019 | 2.47 | 6/25/2027 | 6/25/2019 | 114.98696 | 114.9869606 | 114.9869606 | 114.9869606 | 110.5680182 | 103.7512523 | 97.40528951 | 91.49515725 | 85.98864947 |
| 190627A00009 | 6/27/2019 | 1.93 | 6/27/2023 | 6/27/2019 | 105.32892 | 105.3289173 | 105.3289173 | 105.3289173 | 104.6381542 | 101.7291254 | 98.91594975 | 96.19496092 | 93.56265317 |
| 190627A00038 | 6/27/2019 | 2.12 | 6/27/2023 | 6/27/2019 | 105.35139 | 105.3513936 | 105.3513936 | 105.3513936 | 104.663869 | 101.7667451 | 98.96482131 | 96.25446514 | 93.63220302 |
| 190703A00014 | 7/3/2019 | 2.23 | 10/5/2020 | 7/3/2019 | 100.36186 | 100.3618596 | 100.3618596 | 100.3618596 | 100.3446659 | 100.1617373 | 99.97948065 | 99.79789238 | 99.61696874 |
| 190703A00019 | 7/3/2019 | 2.08 | 7/5/2022 | 7/3/2019 | 103.4779 | 103.4778975 | 103.4778975 | 103.4778975 | 103.1164179 | 101.1937236 | 99.31642382 | 97.48317368 | 95.69267725 |
| 190708A00011 | 7/8/2019 | 2.2 | 7/8/2024 | 7/8/2019 | 107.56037 | 107.5603696 | 107.5603696 | 107.5603696 | 106.3245659 | 102.403152 | 98.64832382 | 95.05214708 | 91.60710673 |
| 190711A00016 | 7/11/2019 | 2.17 | 7/11/2022 | 7/11/2019 | 103.68451 | 103.6845064 | 103.6845064 | 103.6845064 | 103.3181948 | 101.3776937 | 99.48337075 | 97.63384653 | 95.82779203 |
| 190715A00010 | 7/15/2019 | 2.23 | 7/15/2024 | 7/15/2019 | 107.71675 | 107.7167469 | 107.7167469 | 107.7167469 | 106.4684587 | 102.5261555 | 98.75206098 | 95.13812626 | 91.67673002 |

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 190729A00009 | 7/29/2019 | 2.19 | 7/29/2024 | 7/29/2019 | 107.63015 | 107.6301539 | 107.6301539 | 107.6301539 | 106.3587451 | 102.3825633 | 98.57760959 | 94.93561315 | 91.44874687 |
| 190729A00019 | 7/29/2019 | 2.16 | 7/29/2021 | 7/29/2019 | 101.89656 | 101.8965562 | 101.8965562 | 101.8965562 | 101.7484381 | 100.7468631 | 99.76493809 | 98.80208943 | 97.85776545 |
| 190801A00010 | 8/1/2019 | 1.97 | 8/1/2023 | 8/1/2019 | 105.62613 | 105.6261326 | 105.6261326 | 105.6261326 | 104.8916314 | 101.8867262 | 98.98386478 | 96.17901933 | 93.4683446 |
| 190802A00017 | 8/2/2019 | 2.01 | 11/15/2023 | 8/2/2019 | 105.69457 | 105.6945682 | 105.6945682 | 105.6945682 | 104.8237593 | 101.5524618 | 98.40026764 | 95.36217966 | 92.43344062 |
| 190805A00008 | 8/5/2019 | 1.88 | 8/4/2023 | 8/5/2019 | 104.81343 | 104.8134343 | 104.8134343 | 104.8134343 | 104.0811107 | 101.0935899 | 98.20754375 | 95.41896632 | 92.72403353 |
| 190805A00048 | 8/5/2019 | 1.88 | 8/5/2022 | 8/5/2019 | 103.22402 | 103.2240238 | 103.2240238 | 103.2240238 | 102.8395956 | 100.8382555 | 98.88603088 | 96.98140537 | 95.12292032 |
| 190805A00049 | 8/5/2019 | 1.88 | 8/4/2023 | 8/5/2019 | 104.81343 | 104.8134343 | 104.8134343 | 104.8134343 | 104.0811107 | 101.0935899 | 98.20754375 | 95.41896632 | 92.72403353 |
| 190806A00012 | 8/6/2019 | 1.93 | 8/6/2021 | 8/6/2019 | 101.70175 | 101.7017451 | 101.7017451 | 101.7017451 | 101.5486641 | 100.5264618 | 99.52475953 | 98.54294531 | 97.58043145 |
| 190807A00005 | 8/7/2019 | 1.77 | 8/7/2024 | 8/7/2019 | 105.9749 | 105.9749046 | 105.9749046 | 105.9749046 | 104.6958823 | 100.7297841 | 96.93570783 | 93.30529374 | 89.83063336 |
| 190807A00017 | 8/7/2019 | 1.76 | 3/12/2024 | 8/7/2019 | 105.33875 | 105.3387493 | 105.3387493 | 105.3387493 | 104.2995604 | 100.725901 | 97.29350357 | 93.99600786 | 90.82737785 |
| 190808A00012 | 8/8/2019 | 1.89 | 8/8/2024 | 8/8/2019 | 106.46563 | 106.4656265 | 106.4656265 | 106.4656265 | 105.1825671 | 101.2041216 | 97.39820439 | 93.75642956 | 90.27086404 |
| 190808A00039 | 8/8/2019 | 1.84 | 8/8/2023 | 8/8/2019 | 104.70895 | 104.7089472 | 104.7089472 | 104.7089472 | 103.971839 | 100.9755425 | 98.08128868 | 95.28503758 | 92.58293332 |
| 190808A00047 | 8/8/2019 | 1.89 | 8/8/2024 | 8/8/2019 | 106.46563 | 106.4656265 | 106.4656265 | 106.4656265 | 105.1825671 | 101.2041216 | 97.39820439 | 93.75642956 | 90.27086404 |
| 190809A00021 | 8/9/2019 | 2.12 | 8/9/2029 | 8/9/2019 | 118.22493 | 118.2249256 | 118.2249256 | 118.2249256 | 110.3401236 | 101.5697366 | 93.57126235 | 86.27259761 | 79.60872125 |
| 190809A00022 | 8/9/2019 | 1.88 | 8/9/2024 | 8/9/2019 | 106.42943 | 106.4294331 | 106.4294331 | 106.4294331 | 105.1448271 | 101.1645635 | 97.35700393 | 93.71374939 | 90.22685469 |
| 190815A00015 | 8/15/2019 | 1.82 | 8/15/2022 | 8/15/2019 | 103.14413 | 103.1441323 | 103.1441323 | 103.1441323 | 102.7520079 | 100.7252133 | 98.74855839 | 96.82047794 | 94.9394671 |
| 190816A00014 | 8/16/2019 | 1.77 | 8/16/2024 | 8/16/2019 | 106.01144 | 106.0114438 | 106.0114438 | 106.0114438 | 104.7168122 | 100.7271661 | 96.91135167 | 93.26088187 | 89.76773047 |
| 190816A00020 | 8/16/2019 | 1.79 | 8/16/2024 | 8/16/2019 | 106.09299 | 106.0929932 | 106.0929932 | 106.0929932 | 104.7979721 | 100.8066871 | 96.98928541 | 93.33727808 | 89.84263685 |
| 190816A00039 | 8/16/2019 | 1.91 | 2/16/2021 | 8/16/2019 | 100.92341 | 100.9234105 | 100.9234105 | 100.9234105 | 100.8595922 | 100.3065457 | 99.75955536 | 99.21852205 | 98.68334876 |
| 190819A00022 | 8/19/2019 | 1.8 | 8/19/2024 | 8/19/2019 | 106.14619 | 106.1461947 | 106.1461947 | 106.1461947 | 104.8457736 | 100.8458138 | 97.02036911 | 93.36090683 | 89.8593582 |
| 190826A00038 | 8/26/2019 | 1.74 | 8/26/2022 | 8/26/2019 | 103.02312 | 103.0231211 | 103.0231211 | 103.0231211 | 102.6226007 | 100.5682142 | 98.56510176 | 96.61164348 | 94.7062831 |
| 190826A00063 | 8/26/2019 | 2.05 | 8/28/2028 | 8/26/2019 | 114.11553 | 114.1155329 | 114.1155329 | 114.1155329 | 107.9638147 | 100.1957082 | 93.0464827 | 86.46357991 | 80.39915948 |
| 190830A00002 | 8/30/2019 | 1.93 | 8/28/2026 | 8/30/2019 | 109.91767 | 109.9176651 | 109.9176651 | 109.9176651 | 106.7098484 | 100.7718825 | 95.20226734 | 89.9762632 | 85.07091615 |
| 190830A00010 | 9/3/2019 | 1.75 | 9/1/2023 | 9/3/2019 | 104.53086 | 104.5308627 | 104.5308627 | 104.5308627 | 103.7637264 | 100.7080509 | 97.75804866 | 94.90946573 | 92.15824585 |
| 190906A00004 | 9/6/2019 | 1.78 | 9/6/2022 | 9/6/2019 | 103.15192 | 103.1519166 | 103.1519166 | 103.1519166 | 102.7425188 | 100.6573985 | 98.62481298 | 96.64308239 | 94.71059361 |
| 190906A00005 | 9/6/2019 | 1.77 | 9/6/2023 | 9/6/2019 | 104.6134 | 104.6133988 | 104.6133988 | 104.6133988 | 103.839487 | 100.7692091 | 97.80546925 | 94.94396236 | 92.18058457 |
| 190910A00013 | 9/10/2019 | 1.9 | 9/9/2022 | 9/10/2019 | 103.41999 | 103.4199933 | 103.4199933 | 103.4199933 | 103.0077406 | 100.911597 | 98.86839883 | 96.87644739 | 94.9341118 |
| 190912A00033 | 9/12/2019 | 1.77 | 9/12/2023 | 9/12/2019 | 105.21045 | 105.2104497 | 105.2104497 | 105.2104497 | 104.4228655 | 101.3136304 | 98.3129515 | 95.41641309 | 92.6198073 |
| 190923A00017 | 9/23/2019 | 1.74 | 9/23/2024 | 9/23/2019 | 106.80659 | 106.8065882 | 106.8065882 | 106.8065882 | 105.4331105 | 101.307637 | 97.365962 | 93.598906 | 89.99780073 |
| 190924A00033 | 9/24/2019 | 1.84 | 9/30/2022 | 9/24/2019 | 103.38133 | 103.3813303 | 103.3813303 | 103.3813303 | 102.952574 | 100.8000216 | 98.70290843 | 96.65941383 | 94.66779195 |
| 190930A00011 | 9/30/2019 | 1.89 | 10/24/2022 | 9/30/2019 | 103.59674 | 103.5967436 | 103.5967436 | 103.5967436 | 103.1483113 | 100.9305275 | 98.77118111 | 96.66830138 | 94.62000142 |
| 190930A00012 | 9/30/2019 | 1.93 | 9/30/2024 | 9/30/2019 | 106.86547 | 106.865467 | 106.865467 | 106.865467 | 105.4881002 | 101.3646801 | 97.4251028 | 93.66017478 | 90.06121567 |
| 191002A00013 | 10/2/2019 | 1.78 | 10/3/2022 | 10/2/2019 | 103.26227 | 103.2622704 | 103.2622704 | 103.2622704 | 102.8313313 | 100.6722511 | 98.56894726 | 96.51958161 | 94.52239192 |

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 191003A00002 | 10/3/2019 | 1.58 | 10/4/2021 | 10/3/2019 | 101.74435 | 101.7443504 | 101.7443504 | 101.7443504 | 101.5500577 | 100.3653771 | 99.20817719 | 98.07751091 | 96.97247437 |
| 191004A00001 | 10/4/2019 | 2.47 | 10/4/2034 | 10/4/2019 | 130.45296 | 130.4529564 | 130.4529564 | 125.2607434 | 111.0017874 | 98.23957527 | 87.13150242 | 77.45209001 | 69.00773774 |
| 191004A00004 | 10/4/2019 | 1.54 | 10/4/2024 | 10/4/2019 | 106.01027 | 106.0102669 | 106.0102669 | 106.0102669 | 104.6210887 | 100.483533 | 96.53163982 | 92.75607394 | 89.14802389 |
| 191007A00020 | 10/7/2019 | 1.69 | 10/7/2022 | 10/7/2019 | 103.07989 | 103.0798876 | 103.0798876 | 103.0798876 | 102.6460872 | 100.4785871 | 98.36730861 | 96.31039044 | 94.30604852 |
| 191007A00029 | 10/7/2019 | 1.88 | 10/9/2029 | 10/7/2019 | 116.33483 | 116.3348328 | 116.3348328 | 116.3348328 | 108.2021647 | 99.3810719 | 91.35112049 | 84.03715795 | 77.37153397 |
| 191008A00006 | 10/8/2019 | 1.73 | 10/8/2021 | 10/8/2019 | 101.7497 | 101.7496998 | 101.7496998 | 101.7496998 | 101.5532517 | 100.360645 | 99.19590927 | 98.05807664 | 96.94622354 |
| 191011A00013 | 10/11/2019 | 1.88 | 10/11/2022 | 10/11/2019 | 103.51717 | 103.5171669 | 103.5171669 | 103.5171669 | 103.079322 | 100.8964518 | 98.77039382 | 96.69925905 | 94.68123742 |
| 191017A00003 | 10/17/2019 | 1.9 | 12/10/2021 | 10/17/2019 | 102.22383 | 102.2238275 | 102.2238275 | 102.2238275 | 101.989759 | 100.6361577 | 99.30688407 | 98.0013391 | 96.7189428 |
| 191024A00017 | 10/25/2019 | 1.9 | 7/15/2021 | 10/25/2019 | 101.57161 | 101.5716134 | 101.5716134 | 101.5716134 | 101.4316232 | 100.4697662 | 99.52608944 | 98.60008121 | 97.69124868 |
| 191025A00005 | 10/28/2019 | 1.98 | 10/28/2024 | 10/28/2019 | 107.16162 | 107.1616242 | 107.1616242 | 107.1616242 | 105.7326332 | 101.5335311 | 97.52443681 | 93.69570003 | 90.03821869 |
| 191031A00033 | 10/31/2019 | 2.2 | 5/31/2028 | 10/31/2019 | 114.87189 | 114.8718901 | 114.8718901 | 114.8718901 | 109.0793164 | 101.4802699 | 94.46940684 | 87.99814565 | 82.02214608 |
| 191031A00041 | 10/31/2019 | 1.72 | 10/31/2023 | 10/31/2019 | 105.26994 | 105.2699379 | 105.2699379 | 105.2699379 | 104.4166913 | 101.1777226 | 98.0557572 | 95.04585859 | 92.14333314 |
| 191105A00018 | 11/5/2019 | 1.78 | 11/6/2023 | 11/5/2019 | 105.49493 | 105.4949273 | 105.4949273 | 105.4949273 | 104.6326255 | 101.3738856 | 98.23335973 | 95.20606695 | 92.2872693 |
| 191113A00019 | 11/15/2019 | 1.93 | 3/15/2021 | 11/15/2019 | 101.05379 | 101.0537868 | 101.0537868 | 101.0537868 | 100.9772073 | 100.349861 | 99.7302979 | 99.11837356 | 98.51394727 |
| 191114A00008 | 11/18/2019 | 1.93 | 4/17/2023 | 11/18/2019 | 104.47438 | 104.4743765 | 104.4743765 | 104.4743765 | 103.8669203 | 101.1700366 | 98.55665017 | 96.02363594 | 93.5680094 |
| 191120A00006 | 11/20/2019 | 2.67 | 11/20/2035 | 11/20/2019 | 135.85162 | 135.8516217 | 135.8516217 | 129.0474028 | 113.5495194 | 99.82181247 | 87.98538204 | 77.76586364 | 68.93013284 |
| 191122A00020 | 11/26/2019 | 3.2 | 11/23/2037 | 11/26/2019 | 149.49817 | 149.498168 | 149.498168 | 139.9066676 | 121.8798052 | 106.1532704 | 92.79959149 | 81.43968617 | 71.75725395 |
| 191122A00021 | 11/26/2019 | 3.4 | 11/22/2038 | 11/26/2019 | 155.87855 | 155.8785465 | 155.8785465 | 144.8225468 | 125.5318687 | 108.8387909 | 94.76977999 | 82.88694192 | 72.82816584 |
| 191129A00012 | 11/29/2019 | 1.99 | 11/29/2024 | 11/29/2019 | 107.35181 | 107.3518138 | 107.3518138 | 107.3518138 | 105.8626442 | 101.5764346 | 97.4877358 | 93.58646278 | 89.86309561 |
| 191206A00013 | 12/6/2019 | 3.05 | 12/6/2044 | 12/6/2019 | 165.29784 | 165.2978443 | 165.2978443 | 143.6984332 | 119.5041248 | 99.84419228 | 84.08774847 | 71.41032083 | 61.16755033 |
| 191210A00010 | 12/10/2019 | 1.91 | 12/10/2020 | 12/10/2019 | 100.6099 | 100.6098952 | 100.6098952 | 100.6098952 | 100.571137 | 100.2057473 | 99.84301705 | 99.4829171 | 99.12541883 |
| 191212A00029 | 12/13/2019 | 1.94 | 5/16/2023 | 12/13/2019 | 104.63319 | 104.6331914 | 104.6331914 | 104.6331914 | 103.9947988 | 101.2192529 | 98.5317319 | 95.9289315 | 93.40769328 |
| 191218A00013 | 12/18/2019 | 1.94 | 12/19/2022 | 12/18/2019 | 103.96355 | 103.963548 | 103.963548 | 103.963548 | 103.4679382 | 101.0969291 | 98.79205418 | 96.5511076 | 94.37196994 |
| 191219A00047 | 12/19/2019 | 1.76 | 12/17/2021 | 12/19/2019 | 102.29619 | 102.2961912 | 102.2961912 | 102.2961912 | 102.0577216 | 100.6813537 | 99.33008022 | 98.00327459 | 96.70033052 |
| 200108A00018 | 1/8/2020 | 1.68 | 1/18/2022 | 1/8/2020 | 102.32304 | 102.3230372 | 102.3230372 | 102.3230372 | 102.0672999 | 100.606104 | 99.17309864 | 97.76753985 | 96.38870942 |
| 200110A00022 | 1/13/2020 | 2 | 1/6/2025 | 1/13/2020 | 107.57243 | 107.5724265 | 107.5724265 | 107.5724265 | 106.0095202 | 101.6230453 | 97.44308215 | 93.45886106 | 89.66022866 |
| 200121A00008 | 1/24/2020 | 1.84 | 1/20/2022 | 1/24/2020 | 102.318 | 102.3180033 | 102.3180033 | 102.3180033 | 102.0619444 | 100.5996348 | 99.16557473 | 97.75901776 | 96.37924308 |
| 200122A00035 | 1/22/2020 | 1.94 | 1/22/2025 | 1/22/2020 | 107.42226 | 107.4222593 | 107.4222593 | 107.4222593 | 105.8283263 | 101.4038021 | 97.1896062 | 93.17466207 | 89.34853377 |
| 200127A00023 | 1/27/2020 | 1.8 | 1/27/2025 | 1/27/2020 | 106.81106 | 106.811059 | 106.811059 | 106.811059 | 105.2108646 | 100.787427 | 96.5750544 | 92.56259401 | 88.73954019 |
| 200130A00015 | 1/30/2020 | 1.63 | 7/30/2021 | 1/30/2020 | 101.52722 | 101.5272228 | 101.5272228 | 101.5272228 | 101.3784319 | 100.3738345 | 99.38904582 | 98.4234849 | 97.47659323 |
| 200130A00025 | 1/30/2020 | 1.54 | 1/30/2023 | 1/30/2020 | 103.59979 | 103.5997911 | 103.5997911 | 103.5997911 | 103.0660541 | 100.5808085 | 98.16822603 | 95.82576389 | 93.55098445 |
| 200131A00015 | 2/5/2020 | 1.73 | 2/5/2025 | 2/5/2020 | 106.52923 | 106.5292342 | 106.5292342 | 106.5292342 | 104.9128782 | 100.4719275 | 96.24399998 | 92.21778185 | 88.38261923 |
| 200131A00016 | 1/31/2020 | 1.73 | 1/31/2025 | 1/31/2020 | 106.50994 | 106.5099402 | 106.5099402 | 106.5099402 | 104.9036816 | 100.476998 | 96.26211142 | 92.24780192 | 88.42350204 |

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 200204A00020 | 2/4/2020 | 1.6 | 2/4/2025 | 2/4/2020 | 106.76774 | 106.767741 | 106.767741 | 106.767741 | 105.1409058 | 100.6727369 | 96.41938502 | 92.36941862 | 88.51207439 |
| 200207A00016 | 2/7/2020 | 1.74 | 2/7/2024 | 2/7/2020 | 105.1316 | 105.1315998 | 105.1315998 | 105.1315998 | 104.1437257 | 100.6645148 | 97.32009383 | 94.10452126 | 91.01215078 |
| 200210A00021 | 2/10/2020 | 1.76 | 2/10/2025 | 2/10/2020 | 106.68549 | 106.6854944 | 106.6854944 | 106.6854944 | 105.0582447 | 100.5999667 | 96.35604779 | 92.31507526 | 88.46630398 |
| 200214A00007 | 2/14/2020 | 1.59 | 2/14/2025 | 2/14/2020 | 106.76243 | 106.7624267 | 106.7624267 | 106.7624267 | 105.1154447 | 100.61944 | 96.34071067 | 92.26763526 | 88.3892753 |
| 200218A00004 | 2/18/2020 | 1.73 | 2/21/2023 | 2/18/2020 | 103.70955 | 103.7095495 | 103.7095495 | 103.7095495 | 103.157658 | 100.61747 | 98.15264748 | 95.76050412 | 93.43846743 |
| 200218A00028 | 2/18/2020 | 1.73 | 2/21/2023 | 2/18/2020 | 103.70955 | 103.7095495 | 103.7095495 | 103.7095495 | 103.157658 | 100.61747 | 98.15264748 | 95.76050412 | 93.43846743 |
| 200221A00004 | 2/21/2020 | 1.69 | 2/21/2025 | 2/21/2020 | 106.40715 | 106.4071494 | 106.4071494 | 106.4071494 | 104.7595791 | 100.2771578 | 96.01156415 | 91.9511871 | 88.08509907 |
| 200221A00009 | 2/21/2020 | 1.69 | 2/22/2022 | 2/21/2020 | 102.22111 | 102.2211127 | 102.2211127 | 102.2211127 | 101.9460782 | 100.3913357 | 98.86787612 | 97.37482455 | 95.91133832 |
| 200224A00001 | 2/24/2020 | 1.59 | 2/24/2025 | 2/24/2020 | 105.95801 | 105.9580084 | 105.9580084 | 105.9580084 | 104.307114 | 99.82655218 | 95.56320018 | 91.50540517 | 87.64220155 |
| 200224A00002 | 2/24/2020 | 1.56 | 2/24/2023 | 2/24/2020 | 103.28001 | 103.2800098 | 103.2800098 | 103.2800098 | 102.7263774 | 100.1831548 | 97.71560325 | 95.32101752 | 92.99680743 |
| 200224A00025 | 2/24/2020 | 1.59 | 1/23/2025 | 2/24/2020 | 105.84611 | 105.8461059 | 105.8461059 | 105.8461059 | 104.259228 | 99.86712905 | 95.68440212 | 91.70000263 | 87.90352544 |
| 200224A00046 | 2/24/2020 | 1.59 | 2/24/2025 | 2/24/2020 | 105.95801 | 105.9580084 | 105.9580084 | 105.9580084 | 104.307114 | 99.82655218 | 95.56320018 | 91.50540517 | 87.64220155 |
| 200225A00006 | 2/25/2020 | 1.57 | 2/25/2022 | 2/25/2020 | 102.04168 | 102.0416786 | 102.0416786 | 102.0416786 | 101.7650946 | 100.2030725 | 98.67257654 | 97.17272075 | 95.70265192 |
| 200226A00005 | 2/26/2020 | 1.53 | 2/27/2023 | 2/26/2020 | 103.21215 | 103.2121464 | 103.2121464 | 103.2121464 | 102.6559227 | 100.1049674 | 97.63009634 | 95.22858215 | 92.89781361 |
| 200226A00016 | 2/26/2020 | 1.57 | 2/26/2025 | 2/26/2020 | 105.87277 | 105.8727719 | 105.8727719 | 105.8727719 | 104.2184012 | 99.73426046 | 95.4677524 | 91.407189 | 87.54157236 |
| 200227A00052 | 2/27/2020 | 1.41 | 2/27/2023 | 2/27/2020 | 102.89973 | 102.8997285 | 102.8997285 | 102.8997285 | 102.3442473 | 99.79738134 | 97.32650679 | 94.92889904 | 92.60194967 |
| 200228A00015 | 3/3/2020 | 1.34 | 10/16/2023 | 3/3/2020 | 103.3826 | 103.3825966 | 103.3825966 | 103.3825966 | 102.5600556 | 99.40468437 | 96.36207985 | 93.42754278 | 90.59660168 |
| 200228A00031 | 2/28/2020 | 1.35 | 2/28/2024 | 2/28/2020 | 103.80594 | 103.8059351 | 103.8059351 | 103.8059351 | 102.7923078 | 99.27944322 | 95.90464979 | 92.66175525 | 89.54489912 |
| 200228A00039 | 2/28/2020 | 1.33 | 4/28/2023 | 2/28/2020 | 102.86249 | 102.8624885 | 102.8624885 | 102.8624885 | 102.2479972 | 99.54397464 | 96.92460721 | 94.38669147 | 91.92717005 |
| 200228A00058 | 2/28/2020 | 1.31 | 2/28/2022 | 2/28/2020 | 101.63641 | 101.6364084 | 101.6364084 | 101.6364084 | 101.3585649 | 99.79115507 | 98.25548288 | 96.75065203 | 95.27579965 |
| 200228A00064 | 2/28/2020 | 1.35 | 2/28/2024 | 2/28/2020 | 103.80594 | 103.8059351 | 103.8059351 | 103.8059351 | 102.7923078 | 99.27944322 | 95.90464979 | 92.66175525 | 89.54489912 |
| 200302A00035 | 3/2/2020 | 1.22 | 7/3/2023 | 3/2/2020 | 102.72603 | 102.7260342 | 102.7260342 | 102.7260342 | 102.0388552 | 99.16466514 | 96.38574501 | 93.69843482 | 91.09923564 |
| 200303A00007 | 3/3/2020 | 1.11 | 3/4/2024 | 3/3/2020 | 103.60528 | 103.6052793 | 103.6052793 | 103.6052793 | 102.5791234 | 99.04003428 | 95.6409058 | 92.3754448 | 89.23767807 |
| 200304A00010 | 3/4/2020 | 1.2 | 3/4/2027 | 3/4/2020 | 107.20166 | 107.201664 | 107.201664 | 107.201664 | 103.2826875 | 96.93446447 | 91.01342255 | 85.48870782 | 80.3318458 |
| 200306A00012 | 3/6/2020 | 0.95 | 3/6/2024 | 3/6/2020 | 102.3743 | 102.3742975 | 102.3742975 | 102.3742975 | 101.3558068 | 97.85077237 | 94.48435465 | 91.25032376 | 88.14276637 |
| 200309A00005 | 3/9/2020 | 0.77 | 3/7/2025 | 3/9/2020 | 103.03152 | 103.031521 | 103.031521 | 103.031521 | 101.3642615 | 96.89654254 | 92.64820478 | 88.6073588 | 84.76282334 |
| 200309A00019 | 3/9/2020 | 0.89 | 3/11/2024 | 3/9/2020 | 102.16474 | 102.1647395 | 102.1647395 | 102.1647395 | 101.1395974 | 97.62577237 | 94.2513683 | 91.01009861 | 87.89599737 |
| 200316A00064 | 3/16/2020 | 0.99 | 3/16/2022 | 3/16/2020 | 101.13982 | 101.1398245 | 101.1398245 | 101.1398245 | 100.8531958 | 99.24824834 | 97.6763708 | 96.13660683 | 94.6280368 |
| 200317A00065 | 3/19/2020 | 2.05 | 3/19/2025 | 3/19/2020 | 108.18632 | 108.1863223 | 108.1863223 | 108.1863223 | 106.4751713 | 101.8855011 | 97.52014873 | 93.36696258 | 89.41451592 |
| 200323A00010 | 3/23/2020 | 1.19 | 3/23/2022 | 3/23/2020 | 101.48583 | 101.4858317 | 101.4858317 | 101.4858317 | 101.1946058 | 99.56837263 | 97.97589251 | 96.41617971 | 94.88828683 |
| 200327A00026 | 3/27/2020 | 0.57 | 3/29/2021 | 3/27/2020 | 100.30195 | 100.3019486 | 100.3019486 | 100.3019486 | 100.218558 | 99.55456027 | 98.89931379 | 98.25264661 | 97.61439125 |
| 200401A00020 | 4/1/2020 | 0.72 | 3/29/2022 | 4/1/2020 | 100.71165 | 100.7116492 | 100.7116492 | 100.7116492 | 100.4179108 | 98.78265294 | 97.1815729 | 95.61366407 | 94.07795942 |
| 200402A00011 | 4/2/2020 | 0.8 | 3/31/2023 | 4/2/2020 | 101.35646 | 101.3564595 | 101.3564595 | 101.3564595 | 100.7740991 | 98.16501767 | 95.63587942 | 93.18373422 | 90.80576231 |

Classification | Public

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 200403A00006 | 4/3/2020 | 1.05 | 4/3/2025 | 4/3/2020 | 103.55056 | 103.5505573 | 103.5505573 | 103.5505573 | 101.8370012 | 97.3163809 | 93.01980423 | 88.93500458 | 85.05045462 |
| 200429A00009 | 4/29/2020 | 0.78 | 4/29/2025 | 4/29/2020 | 103.1749 | 103.174899 | 103.174899 | 103.174899 | 101.3970465 | 96.79314167 | 92.42133133 | 88.26869698 | 84.32311274 |
| 200429A00047 | 5/1/2020 | 2.7 | 4/30/2025 | 5/1/2020 | 111.44632 | 111.4463244 | 111.4463244 | 111.4463244 | 109.627423 | 104.8555134 | 100.3207028 | 96.00990095 | 91.9108163 |
| 200429A00052 | 5/1/2020 | 1.43 | 4/30/2024 | 5/1/2020 | 104.28804 | 104.2880372 | 104.2880372 | 104.2880372 | 103.1781454 | 99.49691792 | 95.96590267 | 92.57811355 | 89.32693412 |
| 200505A00006 | 5/5/2020 | 0.39 | 11/4/2021 | 5/5/2020 | 100.34752 | 100.3475248 | 100.3475248 | 100.3475248 | 100.1343048 | 98.87681022 | 97.64909859 | 96.45011701 | 95.27886181 |
| 200511A00022 | 5/11/2020 | 1.6 | 2/1/2030 | 5/11/2020 | 112.30093 | 112.3009295 | 112.3009295 | 112.3009295 | 103.8250299 | 95.0290663 | 87.04765087 | 79.80116059 | 73.2181261 |
| 200511A00028 | 5/13/2020 | 1.02 | 5/13/2024 | 5/13/2020 | 102.76387 | 102.7638738 | 102.7638738 | 102.7638738 | 101.6399144 | 97.95460974 | 94.42125189 | 91.03276608 | 87.78244799 |
| 200527A00021 | 5/27/2020 | 0.53 | 11/26/2021 | 5/27/2020 | 100.32687 | 100.3268729 | 100.3268729 | 100.3268729 | 100.102115 | 98.79751653 | 97.51710679 | 96.26024855 | 95.02632684 |
| 200601A00009 | 6/1/2020 | 0.84 | 6/2/2025 | 6/1/2020 | 102.6028 | 102.6027957 | 102.6027957 | 102.6027957 | 100.7699273 | 96.12494097 | 91.71760454 | 87.53462664 | 83.56352287 |
| 200604A00009 | 6/4/2020 | 0.7 | 6/4/2025 | 6/4/2020 | 102.84888 | 102.8488776 | 102.8488776 | 102.8488776 | 100.9957896 | 96.31104705 | 91.86697232 | 87.65005538 | 83.64760944 |
| 200604A00013 | 6/4/2020 | 2.21 | 6/4/2035 | 6/4/2020 | 128.02302 | 128.0230166 | 128.0230166 | 121.9156973 | 107.2504895 | 94.27773726 | 83.06339948 | 73.35760205 | 64.94720612 |
| 200605A00007 | 6/5/2020 | 0.52 | 6/5/2023 | 6/5/2020 | 101.15645 | 101.1564482 | 101.1564482 | 101.1564482 | 100.5025396 | 97.71302503 | 95.01413421 | 92.40246035 | 89.87474312 |
| 200615A00004 | 6/15/2020 | 0.56 | 6/15/2022 | 6/15/2020 | 100.49991 | 100.4999149 | 100.4999149 | 100.4999149 | 100.1571712 | 98.31714674 | 96.5195427 | 94.76313522 | 93.04674353 |
| 200630A00004 | 6/30/2020 | 0.66 | 7/1/2024 | 6/30/2020 | 101.43879 | 101.4387937 | 101.4387937 | 101.4387937 | 100.2424525 | 96.45823751 | 92.83541114 | 89.36629223 | 86.04360453 |
| 200720A00034 | 7/20/2020 | 0.77 | 7/21/2025 | 7/20/2020 | 102.32404 | 102.3240445 | 102.3240445 | 102.3240445 | 100.3856672 | 95.62759503 | 91.11943451 | 86.84683818 | 82.7963534 |
| 200720A00039 | 7/22/2020 | 2.48 | 7/21/2025 | 7/22/2020 | 110.88278 | 110.8827799 | 110.8827799 | 110.8827799 | 108.8853541 | 103.9180839 | 99.20852626 | 94.74197545 | 90.50463951 |
| 050923A00096 | 9/23/2005 | 4.86 | 9/22/2025 | 9/23/2005 | 124.67041 | 124.6704098 | 124.6704098 | 124.6704098 | 122.4019796 | 116.8936039 | 111.6750351 | 106.7293719 | 102.0407925 |
| 051003A00008 | 10/3/2005 | 5.08 | 10/15/2020 | 10/3/2005 | 101.01821 | 101.0182092 | 101.0182092 | 101.0182092 | 100.9975414 | 100.786002 | 100.5753619 | 100.3656155 | 100.1567569 |
| 051107A00074 | 11/7/2005 | 5.24 | 11/16/2020 | 11/7/2005 | 101.53625 | 101.5362476 | 101.5362476 | 101.5362476 | 101.5049184 | 101.2034089 | 100.903705 | 100.6057904 | 100.309649 |
| 100930A00008 | 9/30/2010 | 3.82 | 9/30/2025 | 9/30/2010 | 118.27212 | 118.2721186 | 118.2721186 | 118.2721186 | 116.0479614 | 110.7135652 | 105.6621514 | 100.877136 | 96.34299782 |
| 101208A00006 | 12/8/2010 | 4.12 | 12/15/2020 | 12/8/2010 | 101.47358 | 101.47358 | 101.47358 | 101.47358 | 101.4330157 | 101.0518471 | 100.6735542 | 100.2981046 | 99.92546612 |
| 110805A00013 | 8/5/2011 | 3.43 | 8/16/2021 | 8/5/2011 | 103.33268 | 103.3326814 | 103.3326814 | 103.3326814 | 103.1717941 | 102.1133008 | 101.0765431 | 100.0608556 | 99.06560031 |
| 110805A00014 | 8/5/2011 | 4.06 | 8/17/2026 | 8/5/2011 | 122.80944 | 122.8094362 | 122.8094362 | 122.8094362 | 119.5102815 | 113.2196705 | 107.3109438 | 101.7587803 | 96.53966922 |
| 111006A00023 | 10/6/2011 | 3.81 | 10/15/2026 | 10/6/2011 | 121.85411 | 121.8541111 | 121.8541111 | 121.8541111 | 118.3432634 | 111.9307269 | 105.9168745 | 100.2746659 | 94.97904016 |
| 120112A00013 | 1/12/2012 | 2.76 | 1/16/2024 | 1/12/2012 | 109.255 | 109.2550041 | 109.2550041 | 109.2550041 | 108.2784552 | 104.7688758 | 101.3928334 | 98.1445351 | 95.01847108 |
| 120228A00010 | 2/28/2012 | 2.34 | 3/2/2022 | 2/28/2012 | 103.56893 | 103.5689259 | 103.5689259 | 103.5689259 | 103.2865596 | 101.6932286 | 100.1322629 | 98.60274401 | 97.10378804 |
| 120330A00009 | 3/30/2012 | 2.98 | 3/30/2022 | 3/30/2012 | 104.51349 | 104.5134883 | 104.5134883 | 104.5134883 | 104.2140468 | 102.5432482 | 100.9073134 | 99.30521537 | 97.73596723 |
| 120801A00015 | 8/1/2012 | 2.08 | 8/17/2020 | 8/1/2012 | 100.08586 | 100.0858591 | 100.0858591 | 100.0858591 | 100.0823487 | 100.0352105 | 99.98813374 | 99.94111823 | 99.89416388 |
| 120824A00023 | 8/24/2012 | 2.4 | 8/30/2022 | 8/24/2012 | 104.42795 | 104.4279462 | 104.4279462 | 104.4279462 | 104.0217865 | 101.9418893 | 99.91399231 | 97.93644667 | 96.00766864 |
| 121116A00006 | 11/16/2012 | 2.64 | 11/13/2025 | 11/16/2012 | 112.41802 | 112.4180195 | 112.4180195 | 112.4180195 | 110.1187779 | 104.8218813 | 99.8139618 | 95.07772583 | 90.59700578 |
| 130424A00004 | 4/24/2013 | 2.46 | 4/24/2025 | 4/24/2013 | 111.20649 | 111.2064897 | 111.2064897 | 111.2064897 | 109.3883134 | 104.6091889 | 100.0676743 | 95.75065278 | 91.64580739 |
| 130424A00005 | 4/24/2013 | 3.07 | 4/24/2030 | 4/24/2013 | 128.96636 | 128.9663565 | 128.9663565 | 128.9663565 | 119.487643 | 109.6766495 | 100.7766027 | 92.69742158 | 85.35839518 |
| 130513A00007 | 5/13/2013 | 2.54 | 5/15/2023 | 5/13/2013 | 106.31802 | 106.3180248 | 106.3180248 | 106.3180248 | 105.6762419 | 102.879526 | 100.1712479 | 97.54808944 | 95.0068787 |

Classification | Public

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 130517A00013 | 5/17/2013 | 2.07 | 5/17/2022 | 5/17/2013 | 103.54637 | 103.546367 | 103.546367 | 103.546367 | 103.2170758 | 101.4193505 | 99.66153378 | 97.94245238 | 96.2609774 |
| 130926A00009 | 9/26/2013 | 4 | 10/2/2028 | 9/26/2013 | 132.02501 | 132.0250135 | 132.0250135 | 132.0250135 | 125.2969936 | 116.6850852 | 108.7530108 | 101.4429932 | 94.70246896 |
| 131210A00003 | 12/10/2013 | 2.67 | 12/15/2020 | 12/10/2013 | 100.97089 | 100.9708933 | 100.9708933 | 100.9708933 | 100.9303861 | 100.5498326 | 100.1721596 | 99.79733433 | 99.42532444 |
| 140113A00012 | 1/13/2014 | 3.48 | 1/17/2023 | 1/13/2014 | 107.93077 | 107.9307709 | 107.9307709 | 107.9307709 | 107.4010899 | 104.9047999 | 102.4799566 | 100.1241054 | 97.83489159 |
| 140423A00035 | 4/23/2014 | 2.71 | 4/23/2021 | 4/23/2014 | 101.81045 | 101.8104513 | 101.8104513 | 101.8104513 | 101.7137267 | 100.9767584 | 100.2504563 | 99.53459015 | 98.82893601 |
| 140820A00025 | 8/20/2014 | 2.59 | 8/19/2022 | 8/20/2014 | 105.13546 | 105.1354638 | 105.1354638 | 105.1354638 | 104.735198 | 102.6697107 | 100.6555058 | 98.6909729 | 96.77456414 |
| 140911A00027 | 9/11/2014 | 3.18 | 9/16/2024 | 9/11/2014 | 112.00601 | 112.0060147 | 112.0060147 | 112.0060147 | 110.627866 | 106.435655 | 102.427639 | 98.59470972 | 94.92826178 |
| 000829A00072 | 8/29/2000 | 7.19 | 8/31/2020 | 8/29/2000 | 100.5965 | 100.5964965 | 100.5964965 | 100.5964965 | 100.5900678 | 100.5037604 | 100.4175988 | 100.3315826 | 100.2457116 |
| 001003A00016 | 10/3/2000 | 7.13 | 10/5/2020 | 10/3/2000 | 101.25988 | 101.2598802 | 101.2598802 | 101.2598802 | 101.2425789 | 101.0584269 | 100.8749506 | 100.6921463 | 100.5100103 |
| 011107A00022 | 11/7/2001 | 5.56 | 11/5/2021 | 11/7/2001 | 106.76854 | 106.7685413 | 106.7685413 | 106.7685413 | 106.5492509 | 105.2493048 | 103.9795028 | 102.7387954 | 101.5261813 |
| 020916A00006 | 9/16/2002 | 5.38 | 9/16/2022 | 9/16/2002 | 110.93703 | 110.9370274 | 110.9370274 | 110.9370274 | 110.5054114 | 108.3081878 | 106.1663996 | 104.0782594 | 102.0420521 |
| 050308A00058 | 3/8/2005 | 5.32 | 3/11/2025 | 3/8/2005 | 123.33686 | 123.3368583 | 123.3368583 | 123.3368583 | 121.5510461 | 116.6366242 | 111.9567647 | 107.4989361 | 103.2513467 |
| 051107A00075 | 11/7/2005 | 5.29 | 11/17/2025 | 11/7/2005 | 127.70718 | 127.7071794 | 127.7071794 | 127.7071794 | 125.2583583 | 119.5187818 | 114.0878925 | 108.947333 | 104.0799363 |
| 060908A00017 | 9/8/2006 | 5.27 | 9/15/2021 | 9/8/2006 | 105.87706 | 105.8770593 | 105.8770593 | 105.8770593 | 105.692854 | 104.5344743 | 103.4016471 | 102.2935315 | 101.2093235 |
| 071231A00068 | 12/31/2007 | 4.93 | 12/30/2022 | 12/31/2007 | 111.7706 | 111.7706029 | 111.7706029 | 111.7706029 | 111.2464963 | 108.7413585 | 106.306446 | 103.9393915 | 101.6379223 |
| 101130A00010 | 11/30/2010 | 3.25 | 11/30/2020 | 11/30/2010 | 101.06105 | 101.0610508 | 101.0610508 | 101.0610508 | 101.0253554 | 100.6860649 | 100.3490485 | 100.0142833 | 99.68174692 |
| 110113A00008 | 1/13/2011 | 4.15 | 1/15/2021 | 1/13/2011 | 101.82112 | 101.8211235 | 101.8211235 | 101.8211235 | 101.7698553 | 101.3021743 | 100.8388034 | 100.3796829 | 99.92475432 |
| 110302A00006 | 3/2/2011 | 4.26 | 3/15/2021 | 3/2/2011 | 102.52163 | 102.5216337 | 102.5216337 | 102.5216337 | 102.4444806 | 101.8119094 | 101.1871674 | 100.5701098 | 99.96059496 |
| 110818A00006 | 8/18/2011 | 3.09 | 8/30/2021 | 8/18/2011 | 103.08271 | 103.0827105 | 103.0827105 | 103.0827105 | 102.9127133 | 101.8175262 | 100.7456288 | 99.69628383 | 98.66878503 |
| 110824A00004 | 8/24/2011 | 3.11 | 8/30/2023 | 8/24/2011 | 109.33063 | 109.3306337 | 109.3306337 | 109.3306337 | 108.5474371 | 105.4090156 | 102.3786204 | 99.45191056 | 96.62474681 |
| 111024A00022 | 10/24/2011 | 3.11 | 10/30/2023 | 10/24/2011 | 109.83562 | 109.8356191 | 109.8356191 | 109.8356191 | 108.9684687 | 105.6574243 | 102.4652057 | 99.38681773 | 96.41751001 |
| 111201A00005 | 12/1/2011 | 3.16 | 12/15/2021 | 12/1/2011 | 103.99951 | 103.9995129 | 103.9995129 | 103.9995129 | 103.7609806 | 102.3812699 | 101.0265606 | 99.69623132 | 98.38968046 |
| 120126A00006 | 1/26/2012 | 2.93 | 1/31/2022 | 1/26/2012 | 104.02388 | 104.023875 | 104.023875 | 104.023875 | 103.7597271 | 102.2550465 | 100.7799682 | 99.33369522 | 97.91545836 |
| 120202A00020 | 2/2/2012 | 2.7 | 2/15/2022 | 2/2/2012 | 103.77302 | 103.7730205 | 103.7730205 | 103.7730205 | 103.5002226 | 101.9533545 | 100.4373684 | 98.95141049 | 97.49465811 |
| 120209A00012 | 2/9/2012 | 2.27 | 2/16/2021 | 2/9/2012 | 101.19482 | 101.1948223 | 101.1948223 | 101.1948223 | 101.1308076 | 100.5760159 | 100.0273086 | 99.48458565 | 98.94774958 |
| 120306A00004 | 3/6/2012 | 2.95 | 3/15/2023 | 3/6/2012 | 107.02628 | 107.026276 | 107.026276 | 107.026276 | 106.445415 | 103.8019625 | 101.2379679 | 98.75054813 | 96.33694497 |
| 120307A00002 | 3/7/2012 | 2.21 | 3/15/2021 | 3/7/2012 | 101.31799 | 101.3179929 | 101.3179929 | 101.3179929 | 101.2411705 | 100.6117788 | 99.99020734 | 99.37631083 | 98.76994756 |
| 120312A00009 | 3/12/2012 | 2.72 | 3/15/2024 | 3/12/2012 | 109.53909 | 109.5390915 | 109.5390915 | 109.5390915 | 108.4726522 | 104.7978073 | 101.2680916 | 97.87695974 | 94.61820094 |
| 120320A00005 | 3/20/2012 | 3.18 | 3/30/2022 | 3/20/2012 | 104.84983 | 104.8498292 | 104.8498292 | 104.8498292 | 104.5499353 | 102.8762233 | 101.2374278 | 99.6325202 | 98.06051225 |
| 120411A00013 | 4/11/2012 | 3.59 | 4/15/2027 | 4/11/2012 | 122.10855 | 122.1085521 | 122.1085521 | 122.1085521 | 117.879595 | 111.0011475 | 104.5810529 | 98.58617535 | 92.98594998 |
| 120517A00007 | 5/17/2012 | 2.42 | 5/31/2023 | 5/17/2012 | 106.59859 | 106.5985855 | 106.5985855 | 106.5985855 | 105.9355798 | 103.0811922 | 100.3184879 | 97.64404549 | 95.05458937 |
| 001003A00018 | 10/3/2000 | 7.13 | 10/5/2020 | 10/3/2000 | 101.25988 | 101.2598802 | 101.2598802 | 101.2598802 | 101.2425789 | 101.0584269 | 100.8749506 | 100.6921463 | 100.5100103 |
| 020920A00012 | 9/20/2002 | 5.4 | 9/20/2022 | 9/20/2002 | 111.03635 | 111.036349 | 111.036349 | 111.036349 | 110.6012989 | 108.3917599 | 106.2381668 | 104.1387078 | 102.0916449 |

Classification | Public

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 060308A00014 | 3/8/2006 | 5.44 | 3/16/2026 | 3/8/2006 | 129.0361 | 129.0361008 | 129.0361008 | 129.0361008 | 126.2231978 | 120.1584383 | 114.4360964 | 109.0348439 | 103.9347977 |
| 060808A00022 | 8/8/2006 | 5.57 | 6/15/2026 | 8/8/2006 | 131.07849 | 131.0784894 | 131.0784894 | 131.0784894 | 127.9291716 | 121.562549 | 115.5685897 | 109.9233441 | 104.604525 |
| 081219A00069 | 12/19/2008 | 4.26 | 12/22/2023 | 12/19/2008 | 113.57261 | 113.5726143 | 113.5726143 | 113.5726143 | 112.6221161 | 109.1205072 | 105.7485941 | 102.5008838 | 99.37214552 |
| 091210A00005 | 12/10/2009 | 5.08 | 12/16/2024 | 12/10/2009 | 121.06075 | 121.0607475 | 121.0607475 | 121.0607475 | 119.4641518 | 114.8381201 | 110.4235066 | 106.2095109 | 102.1859405 |
| 101006A00011 | 10/6/2010 | 2.9 | 10/15/2020 | 10/6/2010 | 100.58723 | 100.5872326 | 100.5872326 | 100.5872326 | 100.5665937 | 100.3553983 | 100.145105 | 99.93570799 | 99.72720144 |
| 110103A00009 | 1/3/2011 | 3.99 | 1/3/2022 | 1/3/2011 | 105.59805 | 105.5980534 | 105.5980534 | 105.5980534 | 105.3469876 | 103.900743 | 102.4816162 | 101.0889097 | 99.72194973 |
| 110104A00019 | 1/4/2011 | 3.78 | 1/15/2021 | 1/4/2011 | 101.7085 | 101.7085013 | 101.7085013 | 101.7085013 | 101.6571853 | 101.189102 | 100.7253423 | 100.2658464 | 99.81055537 |
| 111006A00021 | 10/6/2011 | 2.93 | 10/15/2020 | 10/6/2011 | 100.5645 | 100.5644963 | 100.5644963 | 100.5644963 | 100.5438913 | 100.3330403 | 100.1230864 | 99.91402379 | 99.70584679 |
| 121116A00022 | 11/16/2012 | 2.78 | 11/16/2029 | 11/16/2012 | 124.95859 | 124.9585858 | 124.9585858 | 124.9585858 | 116.4177909 | 107.1394752 | 98.6917681 | 90.99553746 | 83.97958255 |
| 130211A00015 | 2/11/2013 | 1.88 | 2/16/2021 | 2/11/2013 | 100.90676 | 100.906757 | 100.906757 | 100.906757 | 100.8429444 | 100.2899511 | 99.74301359 | 99.20203268 | 98.66691139 |
| 130212A00017 | 2/12/2013 | 2.29 | 2/15/2023 | 2/12/2013 | 105.12568 | 105.1256845 | 105.1256845 | 105.1256845 | 104.5760014 | 102.0347882 | 99.56849204 | 97.17445923 | 94.85014774 |
| 130821A00017 | 8/21/2013 | 2.8 | 8/28/2020 | 8/21/2013 | 100.20871 | 100.208708 | 100.208708 | 100.208708 | 100.2029138 | 100.1251217 | 100.0474558 | 99.96991589 | 99.8925016 |
| 130920A00020 | 9/20/2013 | 2.71 | 9/30/2020 | 9/20/2013 | 100.43909 | 100.4390922 | 100.4390922 | 100.4390922 | 100.4235601 | 100.2541081 | 100.0852256 | 99.91690974 | 99.74915776 |
| 131003A00005 | 10/3/2013 | 2.65 | 10/15/2020 | 10/3/2013 | 100.53446 | 100.5344643 | 100.5344643 | 100.5344643 | 100.5138327 | 100.3027175 | 100.0925041 | 99.88318672 | 99.67475955 |
| 131024A00019 | 10/24/2013 | 3.23 | 10/30/2023 | 10/24/2013 | 110.23016 | 110.2301617 | 110.2301617 | 110.2301617 | 109.3616933 | 106.0441967 | 102.8456985 | 99.76119743 | 96.78593749 |
| 140307A00010 | 3/7/2014 | 2.63 | 3/15/2021 | 3/7/2014 | 101.58271 | 101.582714 | 101.582714 | 101.582714 | 101.5057879 | 100.8754525 | 100.2529457 | 99.63812202 | 99.03083973 |
| 140827A00037 | 8/27/2014 | 2.55 | 8/30/2021 | 8/27/2014 | 102.49118 | 102.491176 | 102.491176 | 102.491176 | 102.3216331 | 101.2298975 | 100.1614003 | 99.11540568 | 98.09120843 |
| 140908A00062 | 9/8/2014 | 2.45 | 5/28/2021 | 9/8/2014 | 101.82333 | 101.8233334 | 101.8233334 | 101.8233334 | 101.7088264 | 100.8762457 | 100.0572637 | 99.25154921 | 98.45878182 |
| 140908A00065 | 9/8/2014 | 2.63 | 2/28/2022 | 9/8/2014 | 103.74698 | 103.7469819 | 103.7469819 | 103.7469819 | 103.4664748 | 101.8816258 | 100.3288248 | 98.80716689 | 97.31578096 |
| 141016A00024 | 10/16/2014 | 1.85 | 10/16/2020 | 10/16/2014 | 100.37042 | 100.37042 | 100.37042 | 100.37042 | 100.3494723 | 100.1358418 | 99.92313565 | 99.71134776 | 99.5004721 |
| 150105A00027 | 1/5/2015 | 2.23 | 1/5/2022 | 1/5/2015 | 103.06497 | 103.064974 | 103.064974 | 103.064974 | 102.8156121 | 101.3831531 | 99.9776795 | 98.5984955 | 97.2449286 |
| 150112A00014 | 1/12/2015 | 1.86 | 1/15/2021 | 1/12/2015 | 100.81279 | 100.8127946 | 100.8127946 | 100.8127946 | 100.7617339 | 100.2961262 | 99.83482545 | 99.37777198 | 98.92490714 |
| 010824A00019 | 8/24/2001 | 6.24 | 8/24/2021 | 8/24/2001 | 106.43415 | 106.4341456 | 106.4341456 | 106.4341456 | 106.2656046 | 105.167441 | 104.0921716 | 103.0390838 | 102.0074941 |
| 060613A00028 | 6/13/2006 | 5.47 | 6/15/2021 | 6/13/2006 | 104.7391 | 104.7391044 | 104.7391044 | 104.7391044 | 104.613257 | 103.7157054 | 102.8336394 | 101.9666598 | 101.1143809 |
| 061220A00034 | 12/20/2006 | 5.07 | 12/30/2021 | 12/20/2006 | 107.10469 | 107.1046926 | 107.1046926 | 107.1046926 | 106.8541871 | 105.4074276 | 103.9875859 | 102.5939742 | 101.2259278 |
| 081209A00008 | 12/9/2008 | 4.87 | 12/15/2023 | 12/9/2008 | 115.57298 | 115.5729774 | 115.5729774 | 115.5729774 | 114.6255056 | 111.1087357 | 107.7212429 | 104.4575856 | 101.3125806 |
| 100809A00028 | 8/9/2010 | 3.61 | 8/17/2020 | 8/9/2010 | 100.15809 | 100.1580928 | 100.1580928 | 100.1580928 | 100.1545778 | 100.1073777 | 100.060239 | 100.0131616 | 99.96614551 |
| 110527A00007 | 5/27/2011 | 3.98 | 6/1/2021 | 5/27/2011 | 103.14222 | 103.1422161 | 103.1422161 | 103.1422161 | 103.024937 | 102.1753605 | 101.3398076 | 100.517933 | 99.70940268 |
| 111006A00022 | 10/6/2011 | 3.08 | 10/15/2021 | 10/6/2011 | 103.42873 | 103.4287299 | 103.4287299 | 103.4287299 | 103.2261283 | 102.0038183 | 100.8104469 | 99.64499469 | 98.50648954 |
| 120411A00012 | 4/11/2012 | 2.87 | 4/15/2022 | 4/11/2012 | 104.44215 | 104.4421487 | 104.4421487 | 104.4421487 | 104.1329466 | 102.4189405 | 100.7414016 | 99.09923006 | 97.49137059 |
| 120503A00014 | 5/3/2012 | 2.4 | 5/16/2022 | 5/3/2012 | 104.13978 | 104.1397769 | 104.1397769 | 104.1397769 | 103.8102548 | 102.0096545 | 100.2489574 | 98.52698738 | 96.84261299 |
| 120718A00011 | 7/18/2012 | 2.29 | 7/30/2021 | 7/18/2012 | 102.03303 | 102.0330346 | 102.0330346 | 102.0330346 | 101.8842572 | 100.8792295 | 99.89396644 | 98.92788957 | 97.98044275 |
| 120907A00022 | 9/7/2012 | 1.88 | 9/15/2021 | 9/7/2012 | 102.00962 | 102.0096236 | 102.0096236 | 102.0096236 | 101.8285628 | 100.6936595 | 99.5839456 | 98.49858989 | 97.43679714 |

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 120907A00023 | 9/7/2012 | 2.05 | 9/15/2022 | 9/7/2012 | 104.1579 | 104.157897 | 104.157897 | 104.157897 | 103.737923 | 101.6099371 | 99.53609568 | 97.51464618 | 95.54390692 |
| 121116A00007 | 11/16/2012 | 1.99 | 11/16/2021 | 11/16/2012 | 102.23468 | 102.2346781 | 102.2346781 | 102.2346781 | 102.0135824 | 100.7188223 | 99.45094696 | 98.20912421 | 96.99255661 |
| 121121A00003 | 11/21/2012 | 2.3 | 11/30/2022 | 11/21/2012 | 104.72603 | 104.726034 | 104.726034 | 104.726034 | 104.2449821 | 101.9144862 | 99.64767168 | 97.44245678 | 95.2968397 |
| 130117A00011 | 1/17/2013 | 2.18 | 1/30/2023 | 1/17/2013 | 105.22038 | 105.2203841 | 105.2203841 | 105.2203841 | 104.6829423 | 102.1770362 | 99.74425455 | 97.38204051 | 95.08794277 |
| 130212A00016 | 2/12/2013 | 2.13 | 2/15/2022 | 2/12/2013 | 102.88213 | 102.8821263 | 102.8821263 | 102.8821263 | 102.6104222 | 101.0707678 | 99.56186795 | 98.08287248 | 96.63296205 |
| 130528A00028 | 5/28/2013 | 2.63 | 5/30/2023 | 5/28/2013 | 106.66809 | 106.6680913 | 106.6680913 | 106.6680913 | 106.009083 | 103.1681126 | 100.4180659 | 97.75555653 | 95.17734284 |
| 130531A00019 | 5/31/2013 | 2.09 | 6/1/2021 | 5/31/2013 | 101.66926 | 101.6692562 | 101.6692562 | 101.6692562 | 101.5525432 | 100.7080399 | 99.87753504 | 99.06068302 | 98.25714937 |
| 131011A00006 | 10/11/2013 | 3.28 | 10/15/2021 | 10/11/2013 | 103.67329 | 103.6732871 | 103.6732871 | 103.6732871 | 103.4704673 | 102.2465765 | 101.0516504 | 99.8846688 | 98.74465893 |
| 131029A00011 | 10/29/2013 | 2.47 | 10/30/2020 | 10/29/2013 | 100.59451 | 100.5945108 | 100.5945108 | 100.5945108 | 100.5687865 | 100.3160976 | 100.0646767 | 99.81451435 | 99.56560109 |
| 140113A00011 | 1/13/2014 | 2.88 | 1/15/2021 | 1/13/2014 | 101.22886 | 101.2288603 | 101.2288603 | 101.2288603 | 101.1777607 | 100.7117145 | 100.2499673 | 99.79245961 | 99.33913317 |
| 140131A00024 | 1/31/2014 | 2.71 | 2/1/2021 | 1/31/2014 | 101.2659 | 101.2659044 | 101.2659044 | 101.2659044 | 101.2085489 | 100.6956327 | 100.1879028 | 99.68528088 | 99.18769022 |
| 140922A00026 | 9/22/2014 | 3.02 | 9/30/2024 | 9/22/2014 | 112.23568 | 112.2356771 | 112.2356771 | 112.2356771 | 110.8223693 | 106.5658729 | 102.4983576 | 98.61038237 | 94.89303342 |
| 141009A00029 | 10/9/2014 | 3.5 | 10/9/2029 | 10/9/2014 | 129.36365 | 129.3636458 | 129.3636458 | 129.3636458 | 121.0116641 | 111.7118301 | 103.2273409 | 95.48173389 | 88.40611326 |
| 141024A00009 | 10/24/2014 | 2.05 | 10/26/2020 | 10/24/2014 | 100.46689 | 100.4668866 | 100.4668866 | 100.4668866 | 100.4425373 | 100.201115 | 99.96085897 | 99.7217609 | 99.48381235 |
| 141028A00012 | 10/28/2014 | 2.73 | 10/28/2022 | 10/28/2014 | 105.51874 | 105.5187426 | 105.5187426 | 105.5187426 | 105.0633122 | 102.8130115 | 100.6221068 | 98.48858836 | 96.41053256 |
| 141201A00024 | 12/1/2014 | 2.19 | 12/1/2020 | 12/1/2014 | 100.66386 | 100.663857 | 100.663857 | 100.663857 | 100.6279754 | 100.2872567 | 99.94883781 | 99.61269561 | 99.27880722 |
| 150202A00018 | 2/2/2015 | 1.89 | 2/2/2021 | 2/2/2015 | 100.84932 | 100.8493238 | 100.8493238 | 100.8493238 | 100.7916599 | 100.2772395 | 99.76805376 | 99.26402315 | 98.76506974 |
| 150220A00020 | 2/20/2015 | 2.42 | 2/18/2022 | 2/20/2015 | 103.35288 | 103.3528839 | 103.3528839 | 103.3528839 | 103.0788172 | 101.526544 | 100.0053597 | 98.51440049 | 97.0528342 |
| 150220A00022 | 2/20/2015 | 2.8 | 2/20/2025 | 2/20/2015 | 111.50155 | 111.5015543 | 111.5015543 | 111.5015543 | 109.825961 | 105.2315881 | 100.8577829 | 96.69278137 | 92.72550981 |
| 150303A00011 | 3/3/2015 | 2.06 | 3/3/2021 | 3/3/2015 | 101.15871 | 101.1587132 | 101.1587132 | 101.1587132 | 101.087947 | 100.492064 | 99.9031904 | 99.3212032 | 98.74598207 |
| 150319A00012 | 3/19/2015 | 3.13 | 3/19/2029 | 3/19/2015 | 124.40523 | 124.4052257 | 124.4052257 | 124.4052257 | 117.1467881 | 108.5135401 | 100.6004276 | 93.34320025 | 86.68366591 |
| 150601A00405 | 6/1/2015 | 4.63 | 1/17/2034 | 6/1/2015 | 156.96234 | 156.9623358 | 156.9623358 | 152.6933175 | 137.7031336 | 123.7772398 | 111.5180623 | 100.7122866 | 91.17514701 |
| 150601A00470 | 6/1/2015 | 2.98 | 5/31/2024 | 6/1/2015 | 110.93672 | 110.9367158 | 110.9367158 | 110.9367158 | 109.7417385 | 105.8360995 | 102.0920073 | 98.50195538 | 95.05882449 |
| 150601A00608 | 6/1/2015 | 2.45 | 6/30/2021 | 6/1/2015 | 101.98882 | 101.9888228 | 101.9888228 | 101.9888228 | 101.8570297 | 100.9336826 | 100.0270273 | 99.13661456 | 98.26201091 |
| 150601A00640 | 6/1/2015 | 2.57 | 12/31/2021 | 6/1/2015 | 103.24071 | 103.2407138 | 103.2407138 | 103.2407138 | 102.9946337 | 101.5778189 | 100.1873927 | 98.82268219 | 97.48303667 |
| 150601A00644 | 6/1/2015 | 2.64 | 6/30/2022 | 6/1/2015 | 104.46422 | 104.4642222 | 104.4642222 | 104.4642222 | 104.1049012 | 102.1855536 | 100.3111718 | 98.48043322 | 96.69206327 |
| 150601A00650 | 6/1/2015 | 2.75 | 3/31/2023 | 6/1/2015 | 106.50064 | 106.5006421 | 106.5006421 | 106.5006421 | 105.9054747 | 103.2268651 | 100.6298142 | 98.11132086 | 95.66851642 |
| 150601A00681 | 6/1/2015 | 2.7 | 2/7/2025 | 6/1/2015 | 110.77857 | 110.7785694 | 110.7785694 | 110.7785694 | 109.1335624 | 104.592163 | 100.2675466 | 96.14822124 | 92.22336516 |
| 150601A00688 | 6/1/2015 | 2.61 | 2/21/2025 | 6/1/2015 | 111.32274 | 111.3227355 | 111.3227355 | 111.3227355 | 109.6346679 | 105.016107 | 100.6201409 | 96.43485829 | 92.44904963 |
| 150601A00696 | 6/1/2015 | 2.83 | 3/13/2025 | 6/1/2015 | 111.59356 | 111.5935566 | 111.5935566 | 111.5935566 | 109.8742326 | 105.2220322 | 100.7954859 | 96.58243337 | 92.57143669 |
| 150601A00825 | 6/1/2015 | 2.87 | 5/29/2025 | 6/1/2015 | 112.26085 | 112.2608485 | 112.2608485 | 112.2608485 | 110.3734917 | 105.508826 | 100.8891656 | 96.50091844 | 92.33131388 |
| 150601A00839 | 6/1/2015 | 6.93 | 10/30/2020 | 6/1/2015 | 101.66049 | 101.6604867 | 101.6604867 | 101.6604867 | 101.6346303 | 101.380496 | 101.1276309 | 100.8760254 | 100.6256701 |
| 150601A00940 | 6/1/2015 | 6.58 | 2/16/2021 | 6/1/2015 | 103.45819 | 103.4581876 | 103.4581876 | 103.4581876 | 103.393506 | 102.8323519 | 102.2773179 | 101.7283041 | 101.1852124 |

Classification | Public

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 150601A01022 | 6/1/2015 | 5.28 | 2/22/2021 | 6/1/2015 | 102.82439 | 102.8243901 | 102.8243901 | 102.8243901 | 102.7572866 | 102.1816364 | 101.6124511 | 101.0496221 | 100.4930431 |
| 150623A00025 | 6/23/2015 | 2.65 | 6/30/2022 | 6/23/2015 | 104.55663 | 104.556631 | 104.556631 | 104.556631 | 104.1971658 | 102.276927 | 100.401671 | 98.57007474 | 96.78086315 |
| 150715A00009 | 7/15/2015 | 2.67 | 7/15/2022 | 7/15/2015 | 104.6939 | 104.6939041 | 104.6939041 | 104.6939041 | 104.3229297 | 102.3617502 | 100.4474449 | 98.57860602 | 96.75387767 |
| 150720A00012 | 7/20/2015 | 2.99 | 7/21/2025 | 7/20/2015 | 114.44108 | 114.4410827 | 114.4410827 | 114.4410827 | 112.4033794 | 107.3180245 | 102.4961387 | 97.92268124 | 93.58354745 |
| 150407A00008 | 4/7/2015 | 1.78 | 4/7/2021 | 4/7/2015 | 101.15309 | 101.1530945 | 101.1530945 | 101.1530945 | 101.0647406 | 100.372899 | 99.69050535 | 99.01736698 | 98.35329649 |
| 150408A00004 | 4/8/2015 | 2.17 | 4/10/2023 | 4/8/2015 | 105.59204 | 105.5920439 | 105.5920439 | 105.5920439 | 104.9861698 | 102.2819589 | 99.66109208 | 97.12046469 | 94.657111 |
| 150424A00035 | 4/24/2015 | 1.8 | 4/23/2021 | 4/24/2015 | 101.24157 | 101.2415663 | 101.2415663 | 101.2415663 | 101.1449244 | 100.4089362 | 99.68362906 | 98.9687718 | 98.26413974 |
| 150515A00003 | 5/15/2015 | 2.17 | 5/17/2021 | 5/15/2015 | 101.53933 | 101.5393274 | 101.5393274 | 101.5393274 | 101.4305226 | 100.6291192 | 99.84035346 | 99.06392791 | 98.29955451 |
| 150515A00057 | 5/15/2015 | 1.77 | 8/14/2020 | 5/15/2015 | 100.0643 | 100.0643024 | 100.0643024 | 100.0643024 | 100.0614077 | 100.0225356 | 99.98371153 | 99.94493541 | 99.90620711 |
| 150518A00014 | 5/18/2016 | 2.38 | 5/18/2021 | 5/18/2016 | 101.7142 | 101.7141999 | 101.7141999 | 101.7141999 | 101.6047974 | 100.799891 | 100.0077165 | 99.22797325 | 98.46037026 |
| 150601A00006 | 6/1/2015 | 4.71 | 6/27/2025 | 6/1/2015 | 122.44835 | 122.4483479 | 122.4483479 | 122.4483479 | 120.4123441 | 115.1951365 | 110.2421119 | 105.5384563 | 101.0702629 |
| 150601A00404 | 6/1/2015 | 4.29 | 1/17/2029 | 6/1/2015 | 133.24683 | 133.2468313 | 133.2468313 | 133.2468313 | 126.0818758 | 117.2383282 | 109.1112431 | 101.6381623 | 94.76239485 |
| 150601A00484 | 6/1/2015 | 2.45 | 6/23/2021 | 6/1/2015 | 102.08302 | 102.0830151 | 102.0830151 | 102.0830151 | 101.9545373 | 101.0479031 | 100.157359 | 99.28247929 | 98.42285343 |
| 150601A00603 | 6/1/2015 | 2.26 | 9/30/2020 | 6/1/2015 | 100.33321 | 100.3332076 | 100.3332076 | 100.3332076 | 100.3177097 | 100.1486367 | 99.98012924 | 99.81218455 | 99.64479984 |
| 150601A00632 | 6/1/2015 | 2.33 | 12/31/2020 | 6/1/2015 | 100.86926 | 100.8692564 | 100.8692564 | 100.8692564 | 100.8236989 | 100.3999006 | 99.97965206 | 99.56290909 | 99.14962799 |
| 150601A00664 | 6/1/2015 | 3.78 | 1/16/2032 | 6/1/2015 | 139.06889 | 139.0688862 | 139.0688862 | 137.8052605 | 125.6358056 | 114.1170682 | 103.816468 | 94.59679248 | 86.33701164 |
| 150601A00694 | 6/1/2015 | 3.56 | 3/6/2030 | 6/1/2015 | 130.72252 | 130.7225171 | 130.7225171 | 130.7225171 | 121.5803002 | 111.889334 | 103.0806417 | 95.06842754 | 87.77568056 |
| 150601A00731 | 6/1/2015 | 2.4 | 4/29/2022 | 6/1/2015 | 103.65143 | 103.6514258 | 103.6514258 | 103.6514258 | 103.3347215 | 101.5895127 | 99.8820881 | 98.2112856 | 96.57599133 |
| 150601A00733 | 6/1/2015 | 2.72 | 5/1/2025 | 6/1/2015 | 112.31156 | 112.3115551 | 112.3115551 | 112.3115551 | 110.4712976 | 105.6478765 | 101.0647638 | 96.70866053 | 92.56708048 |
| 150603A00017 | 6/3/2015 | 2.84 | 6/3/2025 | 6/3/2015 | 113.326 | 113.3260029 | 113.3260029 | 113.3260029 | 111.4060384 | 106.4733219 | 101.7901773 | 97.34270234 | 93.11783786 |
| 150630A00008 | 6/30/2015 | 2.41 | 6/30/2022 | 6/30/2015 | 104.44366 | 104.4436581 | 104.4436581 | 104.4436581 | 104.0830616 | 102.1574621 | 100.2770871 | 98.44060355 | 96.64672641 |
| 150831A00002 | 8/31/2015 | 1.97 | 8/31/2020 | 8/31/2015 | 100.1471 | 100.1470976 | 100.1470976 | 100.1470976 | 100.1406977 | 100.0547758 | 99.96899911 | 99.88336721 | 99.79787978 |
| 150902A00002 | 9/2/2015 | 2.25 | 9/2/2021 | 9/2/2015 | 102.17893 | 102.1789345 | 102.1789345 | 102.1789345 | 102.0075333 | 100.9094952 | 99.83501667 | 98.78334595 | 97.75376278 |
| 150904A00021 | 9/4/2015 | 2.52 | 9/5/2023 | 9/4/2015 | 107.53024 | 107.5302425 | 107.5302425 | 107.5302425 | 106.7446657 | 103.6179939 | 100.5996337 | 97.68520853 | 94.87054644 |
| 150914A00052 | 9/14/2015 | 1.77 | 9/14/2020 | 9/14/2015 | 100.20653 | 100.206529 | 100.206529 | 100.206529 | 100.19587 | 100.070981 | 99.94641868 | 99.82218182 | 99.69826905 |
| 151020A00008 | 10/20/2015 | 1.76 | 10/20/2020 | 10/20/2015 | 100.34073 | 100.3407333 | 100.3407333 | 100.3407333 | 100.3184661 | 100.0941351 | 99.87081804 | 99.64850801 | 99.42719816 |
| 151102A00012 | 11/2/2015 | 2.4 | 11/2/2022 | 11/2/2015 | 104.79966 | 104.7996552 | 104.7996552 | 104.7996552 | 104.3415712 | 102.0861999 | 99.89069975 | 97.75304337 | 95.67128991 |
| 151208A00019 | 12/8/2015 | 2.1 | 12/8/2020 | 12/8/2015 | 100.66921 | 100.6692118 | 100.6692118 | 100.6692118 | 100.631082 | 100.2710657 | 99.91362831 | 99.55874227 | 99.20638024 |
| 120726A00001 | 7/26/2012 | 2.36 | 8/1/2022 | 7/26/2012 | 104.1781 | 104.1780956 | 104.1780956 | 104.1780956 | 103.7951812 | 101.7945291 | 99.84277276 | 97.93840996 | 96.07999519 |
| 121227A00024 | 12/27/2012 | 2.2 | 12/30/2021 | 12/27/2012 | 102.75762 | 102.7576161 | 102.7576161 | 102.7576161 | 102.5125883 | 101.1020443 | 99.71773237 | 98.35898477 | 97.02515587 |
| 130523A00038 | 5/28/2013 | 2.58 | 5/23/2023 | 5/28/2013 | 106.4811 | 106.4810992 | 106.4810992 | 106.4810992 | 105.8301956 | 103.0102185 | 100.2799928 | 97.63616456 | 95.07552533 |
| 130821A00019 | 8/21/2013 | 3.81 | 8/29/2025 | 8/21/2013 | 118.9627 | 118.9626986 | 118.9626986 | 118.9626986 | 116.7986099 | 111.4996017 | 106.4783517 | 101.7187754 | 97.20580579 |
| 131217A00023 | 12/17/2013 | 3.74 | 1/2/2024 | 12/17/2013 | 111.89658 | 111.89658 | 111.89658 | 111.89658 | 110.9362088 | 107.4340426 | 104.062915 | 100.817226 | 97.69164525 |

Classification | Public

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 140423A00036 | 4/23/2014 | 4.03 | 4/23/2029 | 4/23/2014 | 132.5345 | 132.5345003 | 132.5345003 | 132.5345003 | 124.931392 | 115.8844261 | 107.5915614 | 99.98524966 | 93.00435138 |
| 140710A00026 | 7/10/2014 | 2.36 | 7/15/2021 | 7/10/2014 | 102.17148 | 102.1714812 | 102.1714812 | 102.1714812 | 102.0307602 | 101.0635839 | 100.1147046 | 99.18360653 | 98.26979309 |
| 140710A00027 | 7/10/2014 | 2.8 | 7/17/2023 | 7/10/2014 | 108.03692 | 108.0369244 | 108.0369244 | 108.0369244 | 107.3139327 | 104.3120001 | 101.4104034 | 98.6052394 | 95.89277965 |
| 140811A00037 | 8/11/2016 | 2.97 | 8/11/2020 | 8/11/2016 | 100.08274 | 100.082744 | 100.082744 | 100.082744 | 100.0804708 | 100.049942 | 100.019448 | 99.98898853 | 99.95856369 |
| 140820A00026 | 8/20/2014 | 2.94 | 8/19/2024 | 8/20/2014 | 111.57085 | 111.5708481 | 111.5708481 | 111.5708481 | 110.2361728 | 106.1059559 | 102.155157 | 98.37501236 | 94.75723498 |
| 140827A00038 | 8/27/2014 | 3.07 | 8/30/2024 | 8/27/2014 | 111.41893 | 111.4189338 | 111.4189338 | 111.4189338 | 110.0740664 | 105.9393342 | 101.984719 | 98.20139536 | 94.58101978 |
| 140908A00061 | 9/8/2014 | 2.39 | 2/26/2021 | 9/8/2014 | 101.24292 | 101.2429204 | 101.2429204 | 101.2429204 | 101.1746203 | 100.5931831 | 100.018412 | 99.45019286 | 98.88841416 |
| 140908A00064 | 9/8/2014 | 2.57 | 11/30/2021 | 9/8/2014 | 103.08353 | 103.0835345 | 103.0835345 | 103.0835345 | 102.853762 | 101.5204852 | 100.2107462 | 98.92397484 | 97.65961913 |
| 141009A00026 | 10/9/2014 | 2.23 | 10/9/2020 | 10/9/2014 | 100.38383 | 100.383826 | 100.383826 | 100.383826 | 100.3652759 | 100.1712664 | 99.97801679 | 99.78552265 | 99.59377949 |
| 141017A00029 | 10/17/2014 | 2.02 | 10/19/2020 | 10/17/2014 | 100.42263 | 100.4226336 | 100.4226336 | 100.4226336 | 100.4006621 | 100.1786574 | 99.95764827 | 99.73762781 | 99.51858936 |
| 150121A00004 | 1/21/2015 | 1.97 | 1/24/2022 | 1/21/2015 | 102.78525 | 102.7852512 | 102.7852512 | 102.7852512 | 102.5256496 | 101.0449993 | 99.59321147 | 98.16951641 | 96.7731714 |
| 150601A00485 | 6/1/2015 | 3.09 | 6/21/2024 | 6/1/2015 | 111.52687 | 111.5268719 | 111.5268719 | 111.5268719 | 110.2941506 | 106.3202435 | 102.5128843 | 98.86422904 | 95.36684406 |
| 150601A00494 | 6/1/2015 | 2.37 | 6/25/2021 | 6/1/2015 | 102.02378 | 102.0237831 | 102.0237831 | 102.0237831 | 101.8942937 | 100.9824863 | 100.0869567 | 99.20727191 | 98.3430142 |
| 150601A00606 | 6/1/2015 | 2.39 | 3/31/2021 | 6/1/2015 | 101.41362 | 101.4136161 | 101.4136161 | 101.4136161 | 101.3289195 | 100.656472 | 99.99292262 | 99.33809567 | 98.69182019 |
| 150601A00613 | 6/1/2015 | 2.63 | 3/31/2022 | 6/1/2015 | 103.86764 | 103.8676424 | 103.8676424 | 103.8676424 | 103.5684679 | 101.9005948 | 100.267578 | 98.66838919 | 97.1020402 |
| 150601A00665 | 6/1/2015 | 3.82 | 1/14/2033 | 6/1/2015 | 142.88287 | 142.8828699 | 142.8828699 | 140.200426 | 126.8799615 | 114.4545406 | 103.4390217 | 93.66316425 | 84.97820571 |
| 150601A00666 | 6/1/2015 | 3.88 | 1/16/2035 | 6/1/2015 | 150.48192 | 150.4819243 | 150.4819243 | 144.7279885 | 129.1218033 | 114.9443312 | 102.5893403 | 91.80765305 | 82.38558534 |
| 150601A01053 | 6/1/2015 | 5.28 | 2/26/2027 | 6/1/2015 | 133.78558 | 133.7855822 | 133.7855822 | 133.7855822 | 129.5658291 | 122.3843727 | 115.6683001 | 109.3846783 | 103.5030802 |
| 150610A00037 | 6/10/2015 | 2.48 | 6/10/2022 | 6/10/2015 | 104.44861 | 104.448614 | 104.448614 | 104.448614 | 104.1019186 | 102.2310708 | 100.4030176 | 98.61653009 | 96.87042253 |
| 051230A00040 | 12/30/2005 | 5.16 | 12/30/2020 | 12/30/2005 | 102.07383 | 102.0738311 | 102.0738311 | 102.0738311 | 102.0282864 | 101.6041996 | 101.1836375 | 100.7665564 | 100.3529131 |
| 061221A00005 | 12/21/2006 | 5.28 | 12/30/2021 | 12/21/2006 | 107.17157 | 107.171568 | 107.171568 | 107.171568 | 106.9216907 | 105.4781797 | 104.0614696 | 102.670877 | 101.3057411 |
| 081215A00091 | 12/15/2008 | 4.19 | 12/15/2023 | 12/15/2008 | 113.90461 | 113.904606 | 113.904606 | 113.904606 | 112.9580048 | 109.453622 | 106.0786908 | 102.8277434 | 99.69557245 |
| 100809A00029 | 8/9/2010 | 4.23 | 8/15/2025 | 8/9/2010 | 119.91039 | 119.9103948 | 119.9103948 | 119.9103948 | 117.7905836 | 112.5371687 | 107.5561926 | 102.8320243 | 98.35001274 |
| 110524A00009 | 5/24/2011 | 3.64 | 6/1/2021 | 5/24/2011 | 102.98173 | 102.9817262 | 102.9817262 | 102.9817262 | 102.8642846 | 102.0137181 | 101.1772209 | 100.3544457 | 99.5450569 |
| 110601A00013 | 6/1/2011 | 3.49 | 6/15/2021 | 6/1/2011 | 102.98561 | 102.9856149 | 102.9856149 | 102.9856149 | 102.8607992 | 101.9716995 | 101.0979826 | 100.2392512 | 99.39512174 |
| 110802A00008 | 8/2/2011 | 3.34 | 8/16/2021 | 8/2/2011 | 103.40713 | 103.4071315 | 103.4071315 | 103.4071315 | 103.2457896 | 102.1844062 | 101.1448547 | 100.1264657 | 99.12859727 |
| 111031A00013 | 10/31/2011 | 2.82 | 11/1/2021 | 10/31/2011 | 103.4343 | 103.4342965 | 103.4342965 | 103.4342965 | 103.2198434 | 101.9485979 | 100.7082404 | 99.49765329 | 98.31577251 |
| 111223A00006 | 12/23/2011 | 2.98 | 12/30/2021 | 12/23/2011 | 103.87544 | 103.8754351 | 103.8754351 | 103.8754351 | 103.6291792 | 102.2102864 | 100.8177697 | 99.45095747 | 98.10920017 |
| 120709A00016 | 7/9/2012 | 3.2 | 7/15/2027 | 7/9/2012 | 120.19956 | 120.1995615 | 120.1995615 | 120.1995615 | 115.6300624 | 108.5923188 | 102.0407542 | 95.93911875 | 90.25404546 |
| 120907A00024 | 9/7/2012 | 2.31 | 9/16/2024 | 9/7/2012 | 109.15688 | 109.1568792 | 109.1568792 | 109.1568792 | 107.7841735 | 103.6288426 | 99.65733708 | 95.86052648 | 92.22978598 |
| 130117A00010 | 1/17/2013 | 1.98 | 1/31/2022 | 1/17/2013 | 102.83647 | 102.8364654 | 102.8364654 | 102.8364654 | 102.5729181 | 101.0733512 | 99.6033715 | 98.16218087 | 96.74900919 |
| 130211A00017 | 2/11/2013 | 3.27 | 2/15/2028 | 2/11/2013 | 122.41971 | 122.4197078 | 122.4197078 | 122.4197078 | 116.9389571 | 109.3094194 | 102.2450175 | 95.70070608 | 89.63525695 |
| 130213A00039 | 2/13/2013 | 1.92 | 2/16/2021 | 2/13/2013 | 100.92896 | 100.9289616 | 100.9289616 | 100.9289616 | 100.8651415 | 100.3120772 | 99.76506928 | 99.2240185 | 98.68882789 |

Classification | Public

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 130314A00027 | 3/14/2013 | 2.38 | 3/15/2023 | 3/14/2013 | 106.00166 | 106.0016553 | 106.0016553 | 106.0016553 | 105.4207176 | 102.7804401 | 100.2198322 | 97.73599433 | 95.32615335 |
| 130509A00004 | 5/9/2013 | 2.4 | 5/15/2023 | 5/9/2013 | 105.92384 | 105.9238369 | 105.9238369 | 105.9238369 | 105.2830997 | 102.4919444 | 99.7890938 | 97.17123395 | 94.63519715 |
| 130523A00042 | 5/28/2013 | 2.38 | 5/23/2022 | 5/28/2013 | 103.83384 | 103.8338386 | 103.8338386 | 103.8338386 | 103.5013426 | 101.6906285 | 99.92030688 | 98.1892118 | 96.49621983 |
| 130712A00004 | 7/12/2013 | 2.82 | 7/15/2021 | 7/12/2013 | 102.61715 | 102.6171468 | 102.6171468 | 102.6171468 | 102.4761328 | 101.5066268 | 100.5554486 | 99.62208173 | 98.70602909 |
| 130821A00018 | 8/21/2013 | 3.37 | 8/30/2022 | 8/21/2013 | 106.85538 | 106.8553847 | 106.8553847 | 106.8553847 | 106.4433167 | 104.3300865 | 102.2696921 | 100.2604558 | 98.30076627 |
| 131106A00003 | 11/6/2013 | 3.57 | 11/15/2023 | 11/6/2013 | 110.87694 | 110.8769411 | 110.8769411 | 110.8769411 | 109.988499 | 106.6315796 | 103.3960715 | 100.2768963 | 97.2692193 |
| 131113A00040 | 11/13/2013 | 2.8 | 11/16/2020 | 11/13/2013 | 100.76599 | 100.7659858 | 100.7659858 | 100.7659858 | 100.7348472 | 100.4352654 | 100.1374747 | 99.84145903 | 99.54720239 |
| 131217A00024 | 12/17/2013 | 4.34 | 1/2/2029 | 12/17/2013 | 134.03282 | 134.0328176 | 134.0328176 | 134.0328176 | 126.9213477 | 118.0814968 | 109.9539082 | 102.476802 | 95.59407454 |
| 140204A00007 | 2/4/2014 | 2.68 | 2/16/2021 | 2/4/2014 | 101.35085 | 101.3508502 | 101.3508502 | 101.3508502 | 101.2868864 | 100.7324735 | 100.1841275 | 99.64174922 | 99.10524141 |
| 140307A00011 | 3/7/2014 | 3.19 | 3/15/2023 | 3/7/2014 | 108.15141 | 108.1514082 | 108.1514082 | 108.1514082 | 107.5652264 | 104.8962821 | 102.3076673 | 99.79646204 | 97.35987308 |
| 141015A00020 | 10/15/2014 | 2.13 | 10/15/2021 | 10/15/2014 | 102.46223 | 102.4622329 | 102.4622329 | 102.4622329 | 102.2599572 | 101.0409017 | 99.85080335 | 98.68863976 | 97.55343612 |
| 150105A00026 | 1/5/2015 | 2.54 | 1/5/2024 | 1/5/2015 | 108.41046 | 108.4104589 | 108.4104589 | 108.4104589 | 107.4531406 | 103.9869743 | 100.6517489 | 97.44182958 | 94.35185465 |
| 150116A00040 | 1/16/2015 | 2.07 | 1/18/2022 | 1/16/2015 | 102.65105 | 102.6510532 | 102.6510532 | 102.6510532 | 102.3957143 | 100.9360916 | 99.50456203 | 98.1003858 | 96.72284842 |
| 150123A00012 | 1/23/2015 | 2 | 1/29/2021 | 1/23/2015 | 100.88675 | 100.8867529 | 100.8867529 | 100.8867529 | 100.8306779 | 100.3271242 | 99.82858569 | 99.33498771 | 98.84625716 |
| 150206A00015 | 2/6/2015 | 1.87 | 2/8/2021 | 2/6/2015 | 100.93402 | 100.9340189 | 100.9340189 | 100.9340189 | 100.873603 | 100.3416285 | 99.81525834 | 99.29440408 | 98.77897931 |
| 150310A00019 | 3/10/2015 | 2.24 | 3/10/2021 | 3/10/2015 | 101.22151 | 101.2215127 | 101.2215127 | 101.2215127 | 101.1473599 | 100.5331119 | 99.92631527 | 99.32683476 | 98.73453853 |
| 150601A00182 | 6/1/2015 | 3.85 | 7/18/2022 | 6/1/2015 | 106.94742 | 106.9474236 | 106.9474236 | 106.9474236 | 106.5704481 | 104.5785016 | 102.6342496 | 100.7362547 | 98.88313251 |
| 150601A00360 | 6/1/2015 | 2.82 | 10/2/2020 | 6/1/2015 | 100.44051 | 100.4405129 | 100.4405129 | 100.4405129 | 100.4243258 | 100.249585 | 100.0754522 | 99.90192437 | 99.72899828 |
| 150601A00513 | 6/1/2015 | 2.87 | 7/15/2022 | 6/1/2015 | 105.00832 | 105.0083167 | 105.0083167 | 105.0083167 | 104.6368189 | 102.6724424 | 100.7550021 | 98.88308855 | 97.05534408 |
| 150601A00515 | 6/1/2015 | 2.95 | 1/16/2024 | 6/1/2015 | 109.77538 | 109.7753805 | 109.7753805 | 109.7753805 | 108.7968978 | 105.2782299 | 101.8933542 | 98.63646829 | 95.50205368 |
| 150601A00532 | 6/1/2015 | 2.48 | 9/24/2020 | 6/1/2015 | 100.33356 | 100.333556 | 100.333556 | 100.333556 | 100.319873 | 100.1673702 | 100.0153381 | 99.86377454 | 99.71267731 |
| 150601A00594 | 6/1/2015 | 3.2 | 10/20/2026 | 6/1/2015 | 117.80322 | 117.8032185 | 117.8032185 | 117.8032185 | 114.3169169 | 108.0141194 | 102.106049 | 96.56580809 | 91.36847517 |
| 150601A00611 | 6/1/2015 | 2.58 | 12/31/2021 | 6/1/2015 | 103.25486 | 103.2548642 | 103.2548642 | 103.2548642 | 103.0087686 | 101.5918479 | 100.2013176 | 98.83650474 | 97.49675864 |
| 150601A00638 | 6/1/2015 | 2.51 | 9/30/2021 | 6/1/2015 | 102.59527 | 102.5952719 | 102.5952719 | 102.5952719 | 102.4034266 | 101.2270804 | 100.0776822 | 98.95431416 | 97.85609972 |
| 150601A00646 | 6/1/2015 | 2.68 | 9/30/2022 | 6/1/2015 | 105.1373 | 105.1373013 | 105.1373013 | 105.1373013 | 104.705234 | 102.5331551 | 100.4169151 | 98.35468149 | 96.34469734 |
| 150601A00689 | 6/1/2015 | 2.81 | 2/28/2025 | 6/1/2015 | 111.41355 | 111.4135507 | 111.4135507 | 111.4135507 | 109.7223165 | 105.107426 | 100.7150251 | 96.53319833 | 92.55073314 |
| 150601A00717 | 6/1/2015 | 2.13 | 4/1/2022 | 6/1/2015 | 103.0425 | 103.0424974 | 103.0424974 | 103.0424974 | 102.7438221 | 101.080383 | 99.45177058 | 97.8569555 | 96.29494892 |
| 150610A00017 | 6/10/2015 | 2.9 | 6/15/2023 | 6/10/2015 | 107.55404 | 107.5540381 | 107.5540381 | 107.5540381 | 106.874184 | 103.9772299 | 101.1742131 | 98.4615908 | 95.83597355 |
| 150804A00002 | 8/4/2015 | 2.84 | 8/5/2024 | 8/4/2015 | 110.29738 | 110.29738 | 110.29738 | 110.29738 | 109.0014112 | 104.9541346 | 101.081191 | 97.37414128 | 93.82500056 |
| 150817A00097 | 8/17/2015 | 3.1 | 8/17/2026 | 8/17/2015 | 116.97703 | 116.9770332 | 116.9770332 | 116.9770332 | 113.7369861 | 107.6177038 | 101.8727817 | 96.47729845 | 91.40811911 |
| 150821A00016 | 8/21/2015 | 1.74 | 8/21/2020 | 8/21/2015 | 100.0947 | 100.0947038 | 100.0947038 | 100.0947038 | 100.090362 | 100.0320632 | 99.97384773 | 99.91571539 | 99.85766601 |
| 150821A00018 | 8/21/2015 | 2.6 | 8/21/2024 | 8/21/2015 | 110.19027 | 110.190271 | 110.190271 | 110.190271 | 108.8587288 | 104.7511757 | 100.8225665 | 97.06414395 | 93.46762773 |
| 150824A00048 | 8/24/2015 | 1.93 | 2/24/2021 | 8/24/2015 | 100.96566 | 100.9656569 | 100.9656569 | 100.9656569 | 100.8983309 | 100.3232939 | 99.75479365 | 99.19271916 | 98.63696201 |

Classification | Public

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 150824A00097 | 8/24/2015 | 2.67 | 8/25/2025 | 8/24/2015 | 113.07852 | 113.0785238 | 113.0785238 | 113.0785238 | 110.9665117 | 105.8249684 | 100.9545754 | 96.33959454 | 91.96528415 |
| 010824A00028 | 8/24/2001 | 6.24 | 8/24/2021 | 8/24/2001 | 106.43415 | 106.4341456 | 106.4341456 | 106.4341456 | 106.2656046 | 105.167441 | 104.0921716 | 103.0390838 | 102.0074941 |
| 011107A00031 | 11/7/2001 | 5.56 | 11/5/2021 | 11/7/2001 | 106.76854 | 106.7685413 | 106.7685413 | 106.7685413 | 106.5492509 | 105.2493048 | 103.9795028 | 102.7387954 | 101.5261813 |
| 050902A00032 | 9/2/2005 | 4.69 | 8/22/2025 | 9/2/2005 | 123.39471 | 123.3947082 | 123.3947082 | 123.3947082 | 121.2161361 | 115.8250551 | 110.7141297 | 105.8672297 | 101.2692408 |
| 050923A00095 | 9/23/2005 | 4.77 | 9/21/2020 | 9/23/2005 | 100.67187 | 100.6718734 | 100.6718734 | 100.6718734 | 100.6590455 | 100.5142208 | 100.3698253 | 100.2258571 | 100.0823143 |
| 051003A00009 | 10/3/2005 | 5.15 | 10/15/2025 | 10/3/2005 | 125.38591 | 125.3859139 | 125.3859139 | 125.3859139 | 123.0677168 | 117.5130275 | 112.2523489 | 107.2684131 | 102.5450645 |
| 081205A00033 | 12/5/2008 | 4.77 | 12/7/2023 | 12/5/2008 | 115.13399 | 115.1339943 | 115.1339943 | 115.1339943 | 114.1996879 | 110.7118765 | 107.3515977 | 104.1135135 | 100.9925374 |
| 100817A00002 | 8/17/2010 | 3.03 | 8/31/2020 | 8/17/2010 | 100.25087 | 100.2508732 | 100.2508732 | 100.2508732 | 100.244457 | 100.158318 | 100.0723259 | 99.98648031 | 99.90078099 |
| 100826A00013 | 8/26/2010 | 3.32 | 8/31/2020 | 8/26/2010 | 100.26332 | 100.2633215 | 100.2633215 | 100.2633215 | 100.2569141 | 100.1708925 | 100.0850163 | 99.99928499 | 99.91369834 |
| 100923A00051 | 9/23/2010 | 3.4 | 9/30/2021 | 9/23/2010 | 103.69011 | 103.6901054 | 103.6901054 | 103.6901054 | 103.4973316 | 102.3141498 | 101.1580249 | 100.0280362 | 98.92330438 |
| 110222A00011 | 2/22/2011 | 4.35 | 3/2/2021 | 2/22/2011 | 102.4306 | 102.4305954 | 102.4305954 | 102.4305954 | 102.3599922 | 101.7635977 | 101.1741564 | 100.5915473 | 100.0156519 |
| 110818A00012 | 8/18/2011 | 2.86 | 8/31/2022 | 8/18/2011 | 105.78772 | 105.7877204 | 105.7877204 | 105.7877204 | 105.3767704 | 103.2723147 | 101.2205748 | 99.21987456 | 97.26860406 |
| 110825A00016 | 8/25/2011 | 3.06 | 8/31/2022 | 8/25/2011 | 106.20995 | 106.2099479 | 106.2099479 | 106.2099479 | 105.7982401 | 103.6892526 | 101.6330719 | 99.62801928 | 97.67248225 |
| 120113A00013 | 1/13/2012 | 3.87 | 1/15/2032 | 1/13/2012 | 140.70385 | 140.7038542 | 140.7038542 | 139.4429833 | 127.2127729 | 115.6109367 | 105.2332554 | 95.94202197 | 87.61575517 |
| 120119A00010 | 1/18/2012 | 2.43 | 1/31/2022 | 1/18/2012 | 103.52206 | 103.5220616 | 103.5220616 | 103.5220616 | 103.2576997 | 101.7527117 | 100.2774062 | 98.83098241 | 97.41266775 |
| 120127A00018 | 1/27/2012 | 3.64 | 2/1/2027 | 1/27/2012 | 121.78447 | 121.7844692 | 121.7844692 | 121.7844692 | 117.8507275 | 111.1691203 | 104.9212215 | 99.07646685 | 93.60660165 |
| 121101A00011 | 11/1/2012 | 2.03 | 11/1/2022 | 11/1/2012 | 104.36384 | 104.3638431 | 104.3638431 | 104.3638431 | 103.9056105 | 101.6497474 | 99.45388695 | 97.31598944 | 95.23410282 |
| 130107A00002 | 1/7/2013 | 3.22 | 1/18/2028 | 1/7/2013 | 121.82054 | 121.8205444 | 121.8205444 | 121.8205444 | 116.465696 | 108.9255812 | 101.9392649 | 95.46298431 | 89.45665249 |
| 130211A00025 | 2/11/2013 | 1.88 | 2/16/2021 | 2/11/2013 | 100.90676 | 100.906757 | 100.906757 | 100.906757 | 100.8429444 | 100.2899511 | 99.74301359 | 99.20203268 | 98.66691139 |
| 130212A00015 | 2/12/2013 | 1.91 | 2/16/2021 | 2/12/2013 | 100.92341 | 100.9234105 | 100.9234105 | 100.9234105 | 100.8595922 | 100.3065457 | 99.75955536 | 99.21852205 | 98.68334876 |
| 130405A00007 | 4/5/2013 | 2.91 | 4/17/2028 | 4/5/2013 | 121.74133 | 121.7413277 | 121.7413277 | 121.7413277 | 115.9467353 | 108.1302969 | 100.9073675 | 94.22956 | 88.05268068 |
| 130508A00013 | 5/8/2013 | 2.23 | 5/15/2023 | 5/8/2013 | 105.9602 | 105.960197 | 105.960197 | 105.960197 | 105.3163858 | 102.5132229 | 99.79897866 | 97.17030803 | 94.62401398 |
| 130531A00020 | 5/31/2013 | 2.5 | 5/30/2023 | 5/31/2013 | 106.82136 | 106.821362 | 106.821362 | 106.821362 | 106.1588452 | 103.303898 | 100.5405507 | 97.86538359 | 95.27512341 |
| 130702A00018 | 7/2/2013 | 3.17 | 7/17/2023 | 7/2/2013 | 109.14592 | 109.1459212 | 109.1459212 | 109.1459212 | 108.4197108 | 105.4011712 | 102.4833831 | 99.66242944 | 96.93456861 |
| 140411A00009 | 4/11/2014 | 3.1 | 4/11/2024 | 4/11/2014 | 111.15515 | 111.1551471 | 111.1551471 | 111.1551471 | 110.0399623 | 106.2634711 | 102.6382899 | 99.1574833 | 95.81447735 |
| 020619A00062 | 6/19/2002 | 5.86 | 6/20/2022 | 6/19/2002 | 110.9753 | 110.9752977 | 110.9752977 | 110.9752977 | 110.6113251 | 108.6492279 | 106.7323507 | 104.8593785 | 103.0290435 |
| 020627A00001 | 6/27/2002 | 6.07 | 6/27/2022 | 6/27/2002 | 111.12946 | 111.1294561 | 111.1294561 | 111.1294561 | 110.7615687 | 108.7847663 | 106.8538177 | 104.967381 | 103.1241625 |
| 050927A00012 | 9/27/2005 | 5.06 | 9/21/2020 | 9/27/2005 | 100.69383 | 100.6938265 | 100.6938265 | 100.6938265 | 100.6810148 | 100.5363693 | 100.3921502 | 100.2483556 | 100.1049836 |
| 060613A00029 | 6/13/2006 | 5.47 | 6/15/2021 | 6/13/2006 | 104.7391 | 104.7391044 | 104.7391044 | 104.7391044 | 104.613257 | 103.7157054 | 102.8336394 | 101.9666598 | 101.1143809 |
| 081217A00076 | 12/17/2008 | 3.86 | 12/22/2023 | 12/17/2008 | 112.85011 | 112.8501117 | 112.8501117 | 112.8501117 | 111.8970952 | 108.391852 | 105.016925 | 101.7667787 | 98.63614274 |
| 090226A00006 | 2/26/2009 | 4.55 | 3/1/2024 | 2/26/2009 | 116.07772 | 116.0777161 | 116.0777161 | 116.0777161 | 115.0073109 | 111.2518143 | 107.6421812 | 104.1719164 | 100.8348525 |
| 100824A00009 | 8/24/2010 | 3.91 | 9/2/2025 | 8/24/2010 | 118.4645 | 118.4645017 | 118.4645017 | 118.4645017 | 116.3108663 | 111.0462931 | 106.0573813 | 101.3281803 | 96.84374831 |
| 100930A00007 | 9/30/2010 | 3.27 | 9/30/2020 | 9/30/2010 | 100.51057 | 100.5105669 | 100.5105669 | 100.5105669 | 100.4950498 | 100.3257523 | 100.157021 | 99.98885312 | 99.82124581 |

Classification | Public

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 110201A00004 | 2/1/2011 | 4.25 | 2/16/2021 | 2/1/2011 | 102.22238 | 102.2223831 | 102.2223831 | 102.2223831 | 102.1581227 | 101.6009237 | 101.0498137 | 100.5046929 | 99.96546407 |
| 110302A00007 | 3/2/2011 | 4.86 | 3/16/2026 | 3/2/2011 | 125.75599 | 125.755988 | 125.755988 | 125.755988 | 122.9717442 | 116.9970264 | 111.3610063 | 106.0425426 | 101.0219286 |
| 110505A00021 | 5/5/2011 | 4.08 | 5/17/2021 | 5/5/2011 | 103.07618 | 103.0761813 | 103.0761813 | 103.0761813 | 102.9665732 | 102.1583808 | 101.3629013 | 100.5798361 | 99.8088957 |
| 110505A00022 | 5/5/2011 | 4.59 | 5/15/2026 | 5/5/2011 | 124.93058 | 124.9305803 | 124.9305803 | 124.9305803 | 121.9494114 | 115.839476 | 110.0851336 | 104.6636773 | 99.55397038 |
| 110822A00010 | 8/22/2011 | 2.8 | 8/30/2021 | 8/22/2011 | 102.94025 | 102.9402478 | 102.9402478 | 102.9402478 | 102.7699306 | 101.6729883 | 100.5994203 | 99.54848545 | 98.51947366 |
| 110919A00026 | 9/19/2011 | 2.66 | 9/30/2021 | 9/19/2011 | 103.00515 | 103.0051526 | 103.0051526 | 103.0051526 | 102.8124571 | 101.6306943 | 100.4760333 | 99.34755013 | 98.24436217 |
| 111024A00027 | 10/24/2011 | 3.11 | 10/30/2023 | 10/24/2011 | 109.83562 | 109.8356191 | 109.8356191 | 109.8356191 | 108.9684687 | 105.6574243 | 102.4652057 | 99.38681773 | 96.41751001 |
| 120112A00014 | 1/12/2012 | 3.43 | 1/15/2032 | 1/12/2012 | 138.23053 | 138.2305274 | 138.2305274 | 136.942582 | 124.6302465 | 113.0384522 | 102.6805423 | 93.41693539 | 85.12456686 |
| 120127A00019 | 1/27/2012 | 3.87 | 1/30/2032 | 1/27/2012 | 140.84739 | 140.8473948 | 140.8473948 | 139.5306842 | 127.2535903 | 115.6150145 | 105.2082807 | 95.89437662 | 87.55072255 |
| 120130A00009 | 1/30/2012 | 2.79 | 1/31/2022 | 1/30/2012 | 103.81087 | 103.8108653 | 103.8108653 | 103.8108653 | 103.5469699 | 102.0439701 | 100.5705432 | 99.12589284 | 97.70925073 |
| 120928A00018 | 9/28/2012 | 1.87 | 9/30/2020 | 9/28/2012 | 100.27342 | 100.2734213 | 100.2734213 | 100.2734213 | 100.25793 | 100.0889326 | 99.92050062 | 99.75263117 | 99.58532149 |
| 130107A00001 | 1/7/2013 | 2.53 | 1/17/2023 | 1/7/2013 | 105.56483 | 105.564829 | 105.564829 | 105.564829 | 105.0404408 | 102.5738416 | 100.1780335 | 97.85058217 | 95.58915188 |
| 130501A00013 | 5/1/2013 | 1.82 | 5/3/2021 | 5/1/2013 | 101.19685 | 101.1968488 | 101.1968488 | 101.1968488 | 101.0952988 | 100.3335658 | 99.5832707 | 98.8441575 | 98.11597771 |
| 130531A00021 | 5/31/2013 | 3.22 | 5/30/2028 | 5/31/2013 | 124.52286 | 124.5228573 | 124.5228573 | 124.5228573 | 118.4940004 | 110.4717854 | 103.0648133 | 96.22246231 | 89.89852405 |
| 130606A00013 | 6/6/2013 | 2.94 | 6/15/2023 | 6/6/2013 | 107.67008 | 107.6700781 | 107.6700781 | 107.6700781 | 106.9899026 | 104.0912642 | 101.2866042 | 98.57237859 | 95.94519654 |
| 130904A00036 | 9/4/2013 | 3.57 | 9/15/2023 | 9/4/2013 | 110.91815 | 110.9181544 | 110.9181544 | 110.9181544 | 110.1086553 | 106.9013736 | 103.8054976 | 100.816501 | 97.93007041 |
| 150721A00027 | 7/21/2015 | 3.74 | 7/22/2030 | 7/21/2015 | 134.21743 | 134.2174266 | 134.2174266 | 134.2174266 | 124.233354 | 114.0825368 | 104.8845165 | 96.54374467 | 88.9747496 |
| 150803A00053 | 8/3/2015 | 2.49 | 8/3/2022 | 8/3/2015 | 104.45339 | 104.4533873 | 104.4533873 | 104.4533873 | 104.0684296 | 102.059642 | 100.100013 | 98.18802882 | 96.32223325 |
| 150817A00007 | 8/17/2015 | 1.83 | 8/17/2020 | 8/17/2015 | 100.08091 | 100.0809145 | 100.0809145 | 100.0809145 | 100.0773994 | 100.0301979 | 99.98305856 | 99.93598137 | 99.88896615 |
| 150817A00015 | 8/17/2015 | 2.01 | 8/17/2020 | 8/17/2015 | 100.08255 | 100.0825543 | 100.0825543 | 100.0825543 | 100.0790441 | 100.0319088 | 99.9848348 | 99.93782212 | 99.8908706 |
| 150817A00099 | 8/17/2015 | 3.19 | 8/17/2027 | 8/17/2015 | 120.38896 | 120.3889608 | 120.3889608 | 120.3889608 | 115.6842075 | 108.5615878 | 101.936502 | 95.77144455 | 90.0319262 |
| 150824A00049 | 8/24/2015 | 1.99 | 5/24/2021 | 8/24/2015 | 101.42003 | 101.4200295 | 101.4200295 | 101.4200295 | 101.3077639 | 100.4879176 | 99.68130171 | 98.88759796 | 98.10649811 |
| 150825A00016 | 8/25/2015 | 1.9 | 8/25/2020 | 8/25/2015 | 100.11377 | 100.1137667 | 100.1137667 | 100.1137667 | 100.1086055 | 100.0393082 | 99.97011652 | 99.90103016 | 99.83204892 |
| 150915A00048 | 9/15/2015 | 1.79 | 9/15/2020 | 9/15/2015 | 100.21367 | 100.213666 | 100.213666 | 100.213666 | 100.2027032 | 100.0750376 | 99.94771274 | 99.82072723 | 99.69407965 |
| 150923A00012 | 9/23/2015 | 1.86 | 9/23/2020 | 9/23/2015 | 100.24063 | 100.2406306 | 100.2406306 | 100.2406306 | 100.22726 | 100.0776342 | 99.92846364 | 99.77974608 | 99.63147948 |
| 150930A00011 | 9/30/2015 | 2.06 | 9/30/2021 | 9/30/2015 | 102.10721 | 102.1072102 | 102.1072102 | 102.1072102 | 101.9157812 | 100.7424978 | 99.59611338 | 98.47571149 | 97.38041686 |
| 151001A00048 | 10/1/2015 | 1.74 | 10/1/2020 | 10/1/2015 | 100.25553 | 100.255532 | 100.255532 | 100.255532 | 100.2397043 | 100.0679672 | 99.89681628 | 99.72624869 | 99.55626142 |
| 151002A00041 | 10/2/2015 | 1.76 | 10/4/2021 | 10/2/2015 | 101.95919 | 101.9591875 | 101.9591875 | 101.9591875 | 101.7647094 | 100.5786705 | 99.42013406 | 98.28815264 | 97.18182171 |
| 151002A00047 | 10/2/2015 | 1.64 | 9/2/2020 | 10/2/2015 | 100.12629 | 100.1262943 | 100.1262943 | 100.1262943 | 100.1192902 | 100.0278532 | 99.93658517 | 99.8454855 | 99.75455376 |
| 151002A00075 | 10/2/2015 | 2.04 | 10/3/2022 | 10/2/2015 | 104.23214 | 104.2321406 | 104.2321406 | 104.2321406 | 103.7976586 | 101.6199601 | 99.49860352 | 97.43172858 | 95.41755215 |
| 151005A00053 | 10/5/2015 | 1.99 | 10/5/2021 | 10/5/2015 | 102.04831 | 102.048312 | 102.048312 | 102.048312 | 101.8536016 | 100.6671887 | 99.50829846 | 98.3759818 | 97.26933297 |
| 151014A00030 | 10/14/2015 | 1.68 | 10/14/2020 | 10/14/2015 | 100.29674 | 100.2967449 | 100.2967449 | 100.2967449 | 100.276515 | 100.0688296 | 99.86201689 | 99.65607126 | 99.45098723 |
| 151116A00015 | 11/16/2015 | 2.02 | 11/16/2020 | 11/16/2015 | 100.5321 | 100.532098 | 100.532098 | 100.532098 | 100.5010035 | 100.2018772 | 99.90453985 | 99.60897545 | 99.31516807 |

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 151116A00027 | 11/16/2015 | 2.02 | 11/16/2020 | 11/16/2015 | 100.5321 | 100.532098 | 100.532098 | 100.532098 | 100.5010035 | 100.2018772 | 99.90453985 | 99.60897545 | 99.31516807 |
| 151211A00055 | 12/11/2015 | 2.62 | 12/11/2024 | 12/11/2015 | 111.0467 | 111.0467021 | 111.0467021 | 111.0467021 | 109.5039006 | 105.0826719 | 100.8662167 | 96.84400845 | 93.00611449 |
| 151223A00070 | 12/23/2015 | 2.57 | 12/26/2023 | 12/23/2015 | 108.44678 | 108.4467801 | 108.4467801 | 108.4467801 | 107.5038075 | 104.0631728 | 100.7515463 | 97.56341815 | 94.49354348 |
| 151229A00081 | 12/29/2015 | 3.76 | 12/31/2035 | 12/29/2015 | 152.75491 | 152.7549145 | 152.7549145 | 145.6170323 | 129.0066829 | 114.1039063 | 101.2234364 | 90.07352144 | 80.40620228 |
| 160107A00042 | 1/7/2016 | 2.05 | 1/7/2021 | 1/7/2016 | 100.80166 | 100.8016645 | 100.8016645 | 100.8016645 | 100.753586 | 100.3107056 | 99.87171629 | 99.43656698 | 99.00520733 |
| 160113A00030 | 1/13/2016 | 2.52 | 1/13/2025 | 1/13/2016 | 110.82427 | 110.8242662 | 110.8242662 | 110.8242662 | 109.217932 | 104.716556 | 100.4277153 | 96.34027297 | 92.44373324 |
| 160119A00019 | 1/19/2016 | 2.95 | 1/19/2027 | 1/19/2016 | 117.18297 | 117.1829732 | 117.1829732 | 117.1829732 | 113.3543366 | 106.8486933 | 100.7657776 | 95.07585755 | 89.75144011 |
| 151211A00004 | 12/11/2015 | 2.48 | 12/15/2023 | 12/11/2015 | 108.06475 | 108.0647542 | 108.0647542 | 108.0647542 | 107.1388754 | 103.7335354 | 100.4549216 | 97.29766343 | 94.25664661 |
| 151211A00007 | 12/11/2015 | 2.73 | 12/15/2025 | 12/11/2015 | 114.19344 | 114.1934379 | 114.1934379 | 114.1934379 | 111.7692452 | 106.3097242 | 101.1529142 | 96.28047298 | 91.67525985 |
| 160119A00005 | 1/19/2016 | 1.89 | 1/19/2021 | 1/19/2016 | 100.78546 | 100.7854626 | 100.7854626 | 100.7854626 | 100.73304 | 100.2572315 | 99.78591732 | 99.31903375 | 98.85651845 |
| 160119A00027 | 1/19/2016 | 3.25 | 1/18/2030 | 1/19/2016 | 127.86871 | 127.8687136 | 127.8687136 | 127.8687136 | 119.0462367 | 109.5898893 | 100.9869817 | 93.15534901 | 86.0211502 |
| 160120A00010 | 1/20/2016 | 1.99 | 10/20/2021 | 1/20/2016 | 102.11968 | 102.119684 | 102.119684 | 102.119684 | 101.914921 | 100.6875911 | 99.48969987 | 98.32019783 | 97.17808497 |
| 160122A00029 | 1/22/2016 | 2.48 | 1/22/2025 | 1/22/2016 | 110.70275 | 110.7027531 | 110.7027531 | 110.7027531 | 109.0791625 | 104.5573843 | 100.2502558 | 96.14646838 | 92.23536806 |
| 160329A00044 | 3/29/2016 | 1.79 | 3/29/2022 | 3/29/2016 | 102.8105 | 102.810502 | 102.810502 | 102.810502 | 102.5129364 | 100.8542997 | 99.23036121 | 97.64009739 | 96.08252515 |
| 160330A00054 | 3/30/2016 | 2.9 | 3/31/2031 | 3/30/2016 | 129.90045 | 129.900452 | 129.900452 | 129.6367354 | 118.4429778 | 107.8621834 | 98.34788208 | 89.78603062 | 82.07535895 |
| 160407A00007 | 4/7/2016 | 1.6 | 3/25/2021 | 4/7/2016 | 100.88328 | 100.8832818 | 100.8832818 | 100.8832818 | 100.8017933 | 100.1477291 | 99.50212679 | 98.86482296 | 98.2356584 |
| 160420A00005 | 4/20/2016 | 1.48 | 4/20/2021 | 4/20/2016 | 100.99392 | 100.993916 | 100.993916 | 100.993916 | 100.8989356 | 100.1721602 | 99.45582228 | 98.74969827 | 98.05357078 |
| 160429A00007 | 4/29/2016 | 1.52 | 4/29/2021 | 4/29/2016 | 101.05809 | 101.0580871 | 101.0580871 | 101.0580871 | 100.9584421 | 100.2068092 | 99.4663201 | 98.73672844 | 98.01779521 |
| 160429A00041 | 4/29/2016 | 1.71 | 4/29/2021 | 4/29/2016 | 101.09646 | 101.0964607 | 101.0964607 | 101.0964607 | 100.9969894 | 100.246581 | 99.50727756 | 98.7788343 | 98.06101341 |
| 160527A00026 | 5/27/2016 | 1.72 | 4/29/2021 | 5/27/2016 | 101.10401 | 101.1040082 | 101.1040082 | 101.1040082 | 101.0045332 | 100.2540933 | 99.51475882 | 98.78628478 | 98.06843343 |
| 160613A00047 | 6/15/2016 | 2.18 | 6/16/2025 | 6/15/2016 | 109.20165 | 109.2016495 | 109.2016495 | 109.2016495 | 107.2944723 | 102.456298 | 97.86515687 | 93.50719451 | 89.36940167 |
| 160624A00010 | 6/24/2016 | 1.66 | 6/24/2022 | 6/24/2016 | 102.61759 | 102.6175922 | 102.6175922 | 102.6175922 | 102.2653576 | 100.3804865 | 98.53950428 | 96.74112995 | 94.98412809 |
| 160627A00025 | 6/27/2016 | 1.65 | 6/27/2022 | 6/27/2016 | 102.60958 | 102.6095843 | 102.6095843 | 102.6095843 | 102.2553029 | 100.3624073 | 98.51376145 | 96.70806864 | 94.94407864 |
| 160628A00030 | 6/28/2016 | 1.48 | 6/28/2021 | 6/28/2016 | 101.1173 | 101.1173013 | 101.1173013 | 101.1173013 | 100.9870891 | 100.0735317 | 99.17641937 | 98.29531144 | 97.42978287 |
| 160629A00052 | 6/29/2016 | 1.29 | 6/29/2021 | 6/29/2016 | 101.08273 | 101.0827346 | 101.0827346 | 101.0827346 | 100.9517338 | 100.0337146 | 99.13229775 | 98.24703661 | 97.37750023 |
| 160630A00011 | 6/30/2016 | 1.8 | 6/30/2023 | 6/30/2016 | 104.42489 | 104.4248936 | 104.4248936 | 104.4248936 | 103.7365473 | 100.8450311 | 98.04889288 | 95.34448223 | 92.7283087 |
| 160630A00019 | 6/30/2016 | 1.52 | 7/1/2021 | 6/30/2016 | 101.16456 | 101.1645555 | 101.1645555 | 101.1645555 | 101.0327097 | 100.1107829 | 99.2055958 | 98.31669592 | 97.4436471 |
| 160630A00021 | 6/30/2016 | 1.59 | 6/30/2023 | 6/30/2016 | 104.34087 | 104.3408668 | 104.3408668 | 104.3408668 | 103.6494399 | 100.7469067 | 97.94038495 | 95.22619065 | 92.60080177 |
| 160630A00044 | 6/30/2016 | 1.42 | 10/30/2020 | 6/30/2016 | 100.29696 | 100.2969638 | 100.2969638 | 100.2969638 | 100.271323 | 100.0194879 | 99.76891296 | 99.51958879 | 99.27150609 |
| 160630A00091 | 6/30/2016 | 1.51 | 6/30/2021 | 6/30/2016 | 101.1518 | 101.1518036 | 101.1518036 | 101.1518036 | 101.02053 | 100.1013791 | 99.19886676 | 98.31254481 | 97.44198098 |
| 160705A00005 | 7/5/2016 | 1.49 | 7/5/2023 | 7/5/2016 | 104.06485 | 104.0648529 | 104.0648529 | 104.0648529 | 103.3680835 | 100.4566751 | 97.64203755 | 94.92043955 | 92.28831495 |
| 150626A00039 | 6/26/2015 | 3.23 | 6/26/2025 | 6/26/2015 | 114.43637 | 114.4363707 | 114.4363707 | 114.4363707 | 112.4718524 | 107.481708 | 102.7458755 | 98.2500684 | 93.98087458 |
| 150710A00040 | 7/10/2015 | 2.63 | 7/11/2022 | 7/10/2015 | 104.58897 | 104.5889731 | 104.5889731 | 104.5889731 | 104.2211797 | 102.2716015 | 100.3683769 | 98.51012137 | 96.6955011 |

Classification | Public

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 150807A00003 | 8/7/2015 | 1.9 | 8/7/2020 | 8/7/2015 | 100.03468 | 100.0346787 | 100.0346787 | 100.0346787 | 100.0332311 | 100.0137903 | 99.99436974 | 99.97496938 | 99.95558921 |
| 150813A00008 | 8/13/2015 | 3.03 | 8/13/2025 | 8/13/2015 | 113.8073 | 113.8072965 | 113.8072965 | 113.8072965 | 111.7354764 | 106.6382711 | 101.8073109 | 97.22727031 | 92.88378642 |
| 150817A00005 | 8/17/2015 | 1.83 | 8/17/2020 | 8/17/2015 | 100.08091 | 100.0809145 | 100.0809145 | 100.0809145 | 100.0773994 | 100.0301979 | 99.98305856 | 99.93598137 | 99.88896615 |
| 150817A00012 | 8/17/2015 | 2.01 | 8/17/2020 | 8/17/2015 | 100.08255 | 100.0825543 | 100.0825543 | 100.0825543 | 100.0790441 | 100.0319088 | 99.9848348 | 99.93782212 | 99.8908706 |
| 150817A00077 | 8/17/2015 | 2.49 | 8/17/2023 | 8/17/2015 | 107.31142 | 107.3114163 | 107.3114163 | 107.3114163 | 106.5512345 | 103.4784935 | 100.5109272 | 97.6443416 | 94.87473564 |
| 150824A00071 | 8/24/2015 | 2.86 | 8/25/2025 | 8/24/2015 | 113.02973 | 113.0297317 | 113.0297317 | 113.0297317 | 110.9346768 | 105.826292 | 100.9863928 | 96.39943938 | 92.05087356 |
| 150826A00038 | 8/26/2015 | 2.94 | 8/26/2026 | 8/26/2015 | 117.31166 | 117.3116563 | 117.3116563 | 117.3116563 | 114.0046843 | 107.8103146 | 101.9974266 | 96.54047437 | 91.41575378 |
| 150901A00002 | 9/1/2015 | 1.98 | 9/1/2020 | 9/1/2015 | 100.15271 | 100.152706 | 100.152706 | 100.152706 | 100.1460029 | 100.0573089 | 99.96877181 | 99.88039132 | 99.79216697 |
| 150923A00045 | 9/23/2015 | 1.97 | 9/23/2021 | 9/23/2015 | 102.15335 | 102.1533473 | 102.1533473 | 102.1533473 | 101.9664122 | 100.8089463 | 99.67764694 | 98.57163473 | 97.49006926 |
| 150925A00023 | 9/25/2015 | 3.03 | 9/25/2025 | 9/25/2015 | 114.12754 | 114.1275409 | 114.1275409 | 114.1275409 | 111.9467686 | 106.7304307 | 101.7917036 | 97.11430881 | 92.68301063 |
| 150930A00052 | 9/30/2015 | 1.79 | 9/30/2020 | 9/30/2015 | 100.25987 | 100.2598702 | 100.2598702 | 100.2598702 | 100.2443803 | 100.0754001 | 99.90698517 | 99.73913277 | 99.5718401 |
| 150930A00083 | 9/30/2015 | 2.06 | 9/30/2021 | 9/30/2015 | 102.10721 | 102.1072102 | 102.1072102 | 102.1072102 | 101.9157812 | 100.7424978 | 99.59611338 | 98.47571149 | 97.38041686 |
| 151001A00028 | 10/1/2015 | 1.74 | 10/1/2020 | 10/1/2015 | 100.25553 | 100.255532 | 100.255532 | 100.255532 | 100.2397043 | 100.0679672 | 99.89681628 | 99.72624869 | 99.55626142 |
| 151002A00048 | 10/2/2015 | 1.68 | 11/2/2020 | 10/2/2015 | 100.37459 | 100.3745876 | 100.3745876 | 100.3745876 | 100.347962 | 100.0877234 | 99.82883155 | 99.57127605 | 99.3150466 |
| 151002A00081 | 10/2/2015 | 2.29 | 10/2/2023 | 10/2/2015 | 106.97118 | 106.971175 | 106.971175 | 106.971175 | 106.1515535 | 102.9606358 | 99.88242678 | 96.91227809 | 94.04576411 |
| 151109A00020 | 11/9/2015 | 2.79 | 11/9/2023 | 11/9/2015 | 108.24467 | 108.2446697 | 108.2446697 | 108.2446697 | 107.3734942 | 104.0762364 | 100.8980984 | 97.834085 | 94.87944247 |
| 151211A00002 | 12/11/2015 | 2.05 | 12/15/2021 | 12/11/2015 | 102.69111 | 102.6911098 | 102.6911098 | 102.6911098 | 102.4532588 | 101.0793092 | 99.73032076 | 98.40567211 | 97.10476201 |
| 160104A00014 | 1/4/2016 | 2.49 | 1/4/2023 | 1/4/2016 | 105.38637 | 105.3863745 | 105.3863745 | 105.3863745 | 104.8739255 | 102.4436246 | 100.0821281 | 97.78710374 | 95.5563122 |
| 160108A00020 | 1/8/2016 | 2.04 | 1/8/2021 | 1/8/2016 | 100.80221 | 100.8022109 | 100.8022109 | 100.8022109 | 100.7537698 | 100.3081386 | 99.86644807 | 99.42864598 | 98.99468107 |
| 160119A00028 | 1/19/2016 | 3.34 | 1/21/2031 | 1/19/2016 | 131.7274 | 131.7273993 | 131.7273993 | 131.6734561 | 120.7802669 | 110.361047 | 100.9671128 | 92.49106506 | 84.8373037 |
| 160119A00030 | 1/19/2016 | 3.44 | 1/18/2033 | 1/19/2016 | 138.88955 | 138.8895459 | 138.8895459 | 136.199157 | 123.0470705 | 110.8372811 | 100.0210278 | 90.42944925 | 81.91504173 |
| 160307A00026 | 3/7/2016 | 2.2 | 3/7/2023 | 3/7/2016 | 104.9985 | 104.9984976 | 104.9984976 | 104.9984976 | 104.4303225 | 101.8347744 | 99.31695336 | 96.87405579 | 94.50339848 |
| 150904A00015 | 9/4/2015 | 1.79 | 10/15/2020 | 9/4/2015 | 100.35294 | 100.3529413 | 100.3529413 | 100.3529413 | 100.3323348 | 100.1214954 | 99.91155694 | 99.70251355 | 99.49435942 |
| 150923A00041 | 9/23/2015 | 2.23 | 9/23/2022 | 9/23/2015 | 104.59214 | 104.5921439 | 104.5921439 | 104.5921439 | 104.1649907 | 102.0103568 | 99.91092748 | 97.86490032 | 95.87054656 |
| 151013A00099 | 10/15/2015 | 2.44 | 10/15/2020 | 10/15/2015 | 100.49014 | 100.4901389 | 100.4901389 | 100.4901389 | 100.4695134 | 100.2584656 | 100.0483193 | 99.83906885 | 99.63070835 |
| 151014A00024 | 10/14/2015 | 1.51 | 10/14/2020 | 10/14/2015 | 100.28997 | 100.2899707 | 100.2899707 | 100.2899707 | 100.2697115 | 100.0617315 | 99.85462893 | 99.64839815 | 99.4430336 |
| 151015A00063 | 10/15/2015 | 1.68 | 10/15/2020 | 10/15/2015 | 100.30071 | 100.3007098 | 100.3007098 | 100.3007098 | 100.2801412 | 100.0696905 | 99.8601355 | 99.65147049 | 99.44368974 |
| 151119A00030 | 11/19/2015 | 2.1 | 11/19/2020 | 11/19/2015 | 100.57149 | 100.5714892 | 100.5714892 | 100.5714892 | 100.5394356 | 100.2319635 | 99.92637913 | 99.62266502 | 99.320804 |
| 151120A00017 | 11/20/2015 | 2.11 | 11/20/2020 | 11/20/2015 | 100.57973 | 100.579733 | 100.579733 | 100.579733 | 100.5473606 | 100.2371163 | 99.92879272 | 99.62237217 | 99.31783697 |
| 151211A00012 | 12/11/2015 | 1.89 | 12/11/2020 | 12/11/2015 | 100.65444 | 100.6544448 | 100.6544448 | 100.6544448 | 100.6152972 | 100.2465133 | 99.88044062 | 99.51704934 | 99.1563099 |
| 151223A00077 | 12/23/2015 | 3.57 | 12/24/2035 | 12/23/2015 | 153.42151 | 153.4215075 | 153.4215075 | 146.1210957 | 129.2191518 | 114.1042371 | 101.0514777 | 89.76240948 | 79.98347252 |
| 151229A00080 | 12/29/2015 | 3.49 | 12/30/2030 | 12/29/2015 | 133.10706 | 133.107057 | 133.107057 | 133.107057 | 122.2433607 | 111.8024115 | 102.3816227 | 93.87479892 | 86.18734266 |
| 160113A00006 | 1/13/2016 | 1.95 | 1/11/2021 | 1/13/2016 | 100.7762 | 100.7762024 | 100.7762024 | 100.7762024 | 100.726681 | 100.2728739 | 99.82315627 | 99.37747294 | 98.93576966 |

Classification | Public

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 160114A00007 | 1/14/2016 | 1.92 | 1/14/2021 | 1/14/2016 | 100.77651 | 100.7765102 | 100.7765102 | 100.7765102 | 100.7259016 | 100.263851 | 99.80604048 | 99.35241176 | 98.90290763 |
| 160119A00025 | 1/19/2016 | 3.05 | 1/19/2028 | 1/19/2016 | 120.55521 | 120.5552139 | 120.5552139 | 120.5552139 | 115.216529 | 107.7192779 | 100.773807 | 94.33645913 | 88.36724757 |
| 160129A00067 | 1/29/2016 | 2.53 | 1/29/2026 | 1/29/2016 | 113.40618 | 113.4061827 | 113.4061827 | 113.4061827 | 110.8528337 | 105.3015787 | 100.0650338 | 95.12370998 | 90.45942375 |
| 160204A00024 | 2/4/2016 | 1.68 | 2/4/2021 | 2/4/2016 | 100.74874 | 100.7487367 | 100.7487367 | 100.7487367 | 100.6902288 | 100.1706251 | 99.65636909 | 99.14737867 | 98.64357326 |
| 160212A00043 | 2/12/2016 | 1.8 | 2/14/2022 | 2/12/2016 | 102.36223 | 102.3622278 | 102.3622278 | 102.3622278 | 102.0917544 | 100.5592327 | 99.05730283 | 97.58512061 | 96.14187234 |
| 160328A00013 | 3/28/2016 | 2.17 | 3/28/2024 | 3/28/2016 | 107.59617 | 107.5961726 | 107.5961726 | 107.5961726 | 106.5175427 | 102.8441699 | 99.31736801 | 95.93046525 | 92.67713437 |
| 160331A00023 | 3/31/2016 | 1.68 | 3/31/2021 | 3/31/2016 | 100.95966 | 100.9596625 | 100.9596625 | 100.9596625 | 100.8751573 | 100.2044221 | 99.54256877 | 98.88942207 | 98.24481121 |
| 160510A00011 | 5/10/2016 | 1.59 | 4/5/2021 | 5/10/2016 | 100.91741 | 100.9174056 | 100.9174056 | 100.9174056 | 100.8303481 | 100.1461216 | 99.47114926 | 98.80524438 | 98.14822518 |
| 160603A00004 | 6/3/2016 | 1.65 | 6/3/2021 | 6/3/2016 | 101.17828 | 101.1782805 | 101.1782805 | 101.1782805 | 101.0610476 | 100.2150897 | 99.38323403 | 98.56513034 | 97.76043994 |
| 160606A00040 | 6/8/2016 | 1.98 | 12/15/2020 | 6/8/2016 | 100.65966 | 100.6596605 | 100.6596605 | 100.6596605 | 100.6192869 | 100.2400208 | 99.86361983 | 99.49005162 | 99.11928412 |
| 160606A00043 | 6/8/2016 | 2.23 | 12/15/2021 | 6/8/2016 | 102.70542 | 102.7054196 | 102.7054196 | 102.7054196 | 102.4682575 | 101.0979612 | 99.75250487 | 98.43127132 | 97.13366339 |
| 160614A00066 | 6/14/2016 | 1.35 | 6/14/2021 | 6/14/2016 | 101.08702 | 101.087017 | 101.087017 | 101.087017 | 100.9638403 | 100.0866144 | 99.22456583 | 98.37730323 | 97.54444871 |
| 160615A00023 | 6/15/2016 | 1.38 | 6/15/2021 | 6/15/2016 | 101.117 | 101.1169973 | 101.1169973 | 101.1169973 | 100.993281 | 100.1131882 | 99.2483684 | 98.39842679 | 97.56298192 |
| 140313A00030 | 3/13/2014 | 3.27 | 3/15/2024 | 3/13/2014 | 111.55584 | 111.5558439 | 111.5558439 | 111.5558439 | 110.4813737 | 106.7699243 | 103.2046673 | 99.77901768 | 96.48672694 |
| 140521A00019 | 5/21/2014 | 3.43 | 5/22/2028 | 5/21/2014 | 126.11033 | 126.1103307 | 126.1103307 | 126.1103307 | 120.0879374 | 112.0253609 | 104.5782793 | 97.69620008 | 91.33302648 |
| 140626A00036 | 6/26/2014 | 3.55 | 6/26/2029 | 6/26/2014 | 130.83084 | 130.8308399 | 130.8308399 | 130.8308399 | 122.8590879 | 113.6531941 | 105.2341508 | 97.52999163 | 90.47569483 |
| 140815A00029 | 8/15/2014 | 2.56 | 10/15/2021 | 8/15/2014 | 102.79288 | 102.7928812 | 102.7928812 | 102.7928812 | 102.5908469 | 101.372647 | 100.1833179 | 99.02184199 | 97.88724912 |
| 140815A00030 | 8/15/2014 | 2.96 | 10/16/2023 | 8/15/2014 | 108.63062 | 108.6306187 | 108.6306187 | 108.6306187 | 107.7909122 | 104.5508949 | 101.4258841 | 98.41110279 | 95.50200534 |
| 140930A00030 | 9/30/2014 | 2.36 | 9/30/2020 | 9/30/2014 | 100.35642 | 100.3564223 | 100.3564223 | 100.3564223 | 100.3409219 | 100.1718195 | 100.0032828 | 99.83530885 | 99.667895 |
| 141009A00027 | 10/9/2014 | 2.69 | 10/11/2022 | 10/9/2014 | 105.31551 | 105.3155071 | 105.3155071 | 105.3155071 | 104.8742124 | 102.6711029 | 100.5252226 | 98.43467033 | 96.39762418 |
| 141015A00025 | 10/15/2014 | 2.48 | 10/17/2022 | 10/15/2014 | 104.88552 | 104.8855185 | 104.8855185 | 104.8855185 | 104.4402071 | 102.2261277 | 100.0699201 | 97.96964836 | 95.9234585 |
| 141016A00022 | 10/16/2014 | 2.13 | 10/18/2021 | 10/16/2014 | 102.47899 | 102.4789882 | 102.4789882 | 102.4789882 | 102.27469 | 101.0473941 | 99.84944283 | 98.6797932 | 97.53745132 |
| 141024A00008 | 10/24/2014 | 2.52 | 10/24/2022 | 10/24/2014 | 105.42921 | 105.4292057 | 105.4292057 | 105.4292057 | 104.9753753 | 102.7285089 | 100.5408801 | 98.41048827 | 96.33541847 |
| 141128A00003 | 11/28/2014 | 2.62 | 11/30/2023 | 11/28/2014 | 108.43898 | 108.4389799 | 108.4389799 | 108.4389799 | 107.5332519 | 104.1609255 | 100.9126552 | 97.78324275 | 94.76773477 |
| 150316A00043 | 3/16/2015 | 2.37 | 3/16/2023 | 3/16/2015 | 105.98136 | 105.9813553 | 105.9813553 | 105.9813553 | 105.3994886 | 102.7568373 | 100.1939905 | 97.70804123 | 95.29620928 |
| 150317A00012 | 3/17/2015 | 2.46 | 3/18/2024 | 3/17/2015 | 108.60516 | 108.6051622 | 108.6051622 | 108.6051622 | 107.5378269 | 103.8720904 | 100.3515601 | 96.96967102 | 93.72019471 |
| 150413A00034 | 4/13/2015 | 2.25 | 4/13/2022 | 4/13/2015 | 103.3613 | 103.3613047 | 103.3613047 | 103.3613047 | 103.054833 | 101.3558805 | 99.69301618 | 98.06515443 | 96.47125338 |
| 150422A00017 | 4/22/2015 | 2.16 | 4/22/2022 | 4/22/2015 | 103.25272 | 103.2527239 | 103.2527239 | 103.2527239 | 102.9408831 | 101.2183647 | 99.53283885 | 97.88317835 | 96.26830233 |
| 150422A00019 | 4/22/2015 | 2.62 | 4/22/2025 | 4/22/2015 | 111.01328 | 111.0132761 | 111.0132761 | 111.0132761 | 109.214084 | 104.4731773 | 99.96700983 | 95.68267113 | 91.60803493 |
| 150601A00148 | 6/1/2015 | 3.45 | 7/30/2021 | 6/1/2015 | 103.31452 | 103.3145204 | 103.3145204 | 103.3145204 | 103.1644918 | 102.1501893 | 101.1558293 | 100.1808276 | 99.22462286 |
| 150601A00149 | 6/1/2015 | 3.45 | 7/30/2021 | 6/1/2015 | 103.31452 | 103.3145204 | 103.3145204 | 103.3145204 | 103.1644918 | 102.1501893 | 101.1558293 | 100.1808276 | 99.22462286 |
| 150601A00222 | 6/1/2015 | 2.2 | 9/27/2022 | 6/1/2015 | 104.08565 | 104.0856543 | 104.0856543 | 104.0856543 | 103.6579398 | 101.5056766 | 99.40865058 | 97.3650541 | 95.37315359 |
| 150601A00531 | 6/1/2015 | 3.28 | 7/24/2024 | 6/1/2015 | 111.7906 | 111.7906019 | 111.7906019 | 111.7906019 | 110.5082644 | 106.4624227 | 102.5892753 | 98.88053071 | 95.32833997 |

Classification | Public

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 150601A00630 | 6/1/2015 | 2.27 | 9/30/2020 | 6/1/2015 | 100.33487 | 100.3348737 | 100.3348737 | 100.3348737 | 100.3193757 | 100.1503005 | 99.98179098 | 99.81384418 | 99.64645738 |
| 150601A00634 | 6/1/2015 | 2.39 | 3/31/2021 | 6/1/2015 | 101.41362 | 101.4136161 | 101.4136161 | 101.4136161 | 101.3289195 | 100.656472 | 99.99292262 | 99.33809567 | 98.69182019 |
| 150601A00642 | 6/1/2015 | 2.6 | 3/31/2022 | 6/1/2015 | 103.81784 | 103.8178352 | 103.8178352 | 103.8178352 | 103.5187278 | 101.851287 | 100.2186947 | 98.61992268 | 97.05398314 |
| 150601A00830 | 6/1/2015 | 6.743 | 7/31/2025 | 6/1/2015 | 133.00518 | 133.0051795 | 133.0051795 | 133.0051795 | 130.8143425 | 125.2457936 | 119.9606015 | 114.9426966 | 110.1770076 |
| 011029A00020 | 10/29/2001 | 5.73 | 10/29/2021 | 10/29/2001 | 107.08679 | 107.0867905 | 107.0867905 | 107.0867905 | 106.8708433 | 105.5830643 | 104.3265757 | 103.1002439 | 101.90299 |
| 050912A00098 | 9/12/2005 | 4.74 | 9/21/2020 | 9/12/2005 | 100.66754 | 100.6675406 | 100.6675406 | 100.6675406 | 100.6547132 | 100.5098937 | 100.3655034 | 100.2215405 | 100.0780028 |
| 050916A00047 | 9/16/2005 | 4.98 | 9/21/2020 | 9/16/2005 | 100.68227 | 100.6822745 | 100.6822745 | 100.6822745 | 100.669464 | 100.5248324 | 100.3806272 | 100.2368464 | 100.0934882 |
| 080909A00042 | 9/9/2008 | 4.74 | 9/11/2023 | 9/9/2008 | 114.56812 | 114.5681247 | 114.5681247 | 114.5681247 | 113.7525565 | 110.4989808 | 107.3576075 | 104.3239008 | 101.3935378 |
| 080910A00065 | 9/10/2008 | 5.03 | 9/15/2023 | 9/10/2008 | 114.9326 | 114.9326004 | 114.9326004 | 114.9326004 | 114.1145649 | 110.8580786 | 107.7138466 | 104.6773296 | 101.7442015 |
| 081211A00029 | 12/11/2008 | 4.57 | 12/15/2023 | 12/11/2008 | 114.55162 | 114.551619 | 114.551619 | 114.551619 | 113.6077604 | 110.1082653 | 106.7375731 | 103.4902591 | 100.3611562 |
| 091112A00011 | 11/12/2009 | 4.77 | 11/15/2024 | 11/12/2009 | 120.20683 | 120.2068345 | 120.2068345 | 120.2068345 | 118.6651117 | 114.1170118 | 109.7740002 | 105.6256829 | 101.6622518 |
| 101101A00006 | 11/1/2010 | 3.34 | 11/16/2020 | 11/1/2010 | 100.92791 | 100.9279081 | 100.9279081 | 100.9279081 | 100.8967389 | 100.5968419 | 100.2987374 | 100.0024092 | 99.70784153 |
| 110810A00020 | 8/10/2011 | 2.86 | 8/16/2021 | 8/10/2011 | 102.89948 | 102.8994759 | 102.8994759 | 102.8994759 | 102.7385073 | 101.6799988 | 100.6432806 | 99.62768466 | 98.6325699 |
| 111024A00009 | 10/24/2011 | 2.65 | 10/30/2020 | 10/24/2011 | 100.64 | 100.6400018 | 100.6400018 | 100.6400018 | 100.6142702 | 100.3615045 | 100.1100071 | 99.85976855 | 99.61077938 |
| 111024A00010 | 10/24/2011 | 3.11 | 10/30/2023 | 10/24/2011 | 109.83562 | 109.8356191 | 109.8356191 | 109.8356191 | 108.9684687 | 105.6574243 | 102.4652057 | 99.38681773 | 96.41751001 |
| 111024A00021 | 10/24/2011 | 2.65 | 10/30/2020 | 10/24/2011 | 100.64 | 100.6400018 | 100.6400018 | 100.6400018 | 100.6142702 | 100.3615045 | 100.1100071 | 99.85976855 | 99.61077938 |
| 111024A00026 | 10/24/2011 | 2.65 | 10/30/2020 | 10/24/2011 | 100.64 | 100.6400018 | 100.6400018 | 100.6400018 | 100.6142702 | 100.3615045 | 100.1100071 | 99.85976855 | 99.61077938 |
| 111216A00001 | 12/16/2011 | 3.95 | 12/30/2031 | 12/16/2011 | 141.46087 | 141.4608717 | 141.4608717 | 140.2590772 | 128.043756 | 116.4339688 | 106.0437539 | 96.73646827 | 88.39150782 |
| 120113A00012 | 1/13/2012 | 3.62 | 1/15/2027 | 1/13/2012 | 121.50025 | 121.5002465 | 121.5002465 | 121.5002465 | 117.6367769 | 111.0058087 | 104.8025436 | 98.99703744 | 93.56159301 |
| 120315A00021 | 3/15/2012 | 3.12 | 3/15/2022 | 3/15/2012 | 104.64818 | 104.6481837 | 104.6481837 | 104.6481837 | 104.3575156 | 102.7251975 | 101.1264023 | 99.56016257 | 98.02554776 |
| 120515A00020 | 5/15/2012 | 2.28 | 5/16/2022 | 5/15/2012 | 103.92202 | 103.9220224 | 103.9220224 | 103.9220224 | 103.5928229 | 101.7942505 | 100.0355437 | 98.31552724 | 96.63307068 |
| 120601A00012 | 6/1/2012 | 1.93 | 6/15/2021 | 6/1/2012 | 101.60408 | 101.6040778 | 101.6040778 | 101.6040778 | 101.4800749 | 100.5976343 | 99.73049532 | 98.87826253 | 98.04055391 |
| 120709A00015 | 7/9/2012 | 2.5 | 7/15/2022 | 7/9/2012 | 104.35777 | 104.3577671 | 104.3577671 | 104.3577671 | 103.9873474 | 102.0295593 | 100.1185797 | 98.25300265 | 96.43147415 |
| 121031A00004 | 10/31/2012 | 2.07 | 10/31/2022 | 10/31/2012 | 104.44976 | 104.4497584 | 104.4497584 | 104.4497584 | 103.9921851 | 101.7380591 | 99.54382106 | 97.40743252 | 95.32694284 |
| 121116A00021 | 11/16/2012 | 2.35 | 11/17/2025 | 11/16/2012 | 111.9557 | 111.955696 | 111.955696 | 111.955696 | 109.6298442 | 104.3004637 | 99.2636045 | 94.50168894 | 89.99828662 |
| 130405A00006 | 4/5/2013 | 2.41 | 4/7/2025 | 4/5/2013 | 110.85967 | 110.8596713 | 110.8596713 | 110.8596713 | 109.080139 | 104.3540085 | 99.8609272 | 95.58814026 | 91.52366293 |
| 130530A00008 | 5/30/2013 | 2.29 | 6/1/2021 | 5/30/2013 | 101.71218 | 101.7121842 | 101.7121842 | 101.7121842 | 101.5956975 | 100.7527163 | 99.92368187 | 99.10825052 | 98.30608961 |
| 130712A00005 | 7/12/2013 | 3.25 | 7/17/2023 | 7/12/2013 | 109.3857 | 109.3857042 | 109.3857042 | 109.3857042 | 108.658798 | 105.6366677 | 102.7153787 | 99.89101107 | 97.15982028 |
| 130904A00035 | 9/4/2013 | 2.85 | 9/15/2020 | 9/4/2013 | 100.34909 | 100.3490923 | 100.3490923 | 100.3490923 | 100.3381167 | 100.2102968 | 100.0828181 | 99.95567905 | 99.82887829 |
| 130926A00008 | 9/26/2013 | 2.91 | 9/30/2021 | 9/26/2013 | 103.30076 | 103.3007638 | 103.3007638 | 103.3007638 | 103.1078167 | 101.9242019 | 100.7677185 | 99.63744169 | 98.53248818 |
| 131106A00002 | 11/6/2013 | 2.76 | 11/16/2020 | 11/6/2013 | 100.75399 | 100.7539915 | 100.7539915 | 100.7539915 | 100.7228552 | 100.4232968 | 100.1255294 | 99.8295368 | 99.53530319 |
| 131113A00036 | 11/13/2013 | 3.14 | 11/15/2021 | 11/13/2013 | 103.73475 | 103.7347451 | 103.7347451 | 103.7347451 | 103.5127422 | 102.2099891 | 100.9345441 | 99.68555144 | 98.46219163 |
| 140416A00014 | 4/16/2014 | 2.66 | 4/30/2021 | 4/16/2014 | 101.82012 | 101.8201216 | 101.8201216 | 101.8201216 | 101.719787 | 100.963636 | 100.2187003 | 99.48473188 | 98.76149 |

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 140815A00032 | 8/15/2014 | 3.59 | 10/15/2029 | 8/15/2014 | 130.24422 | 130.244224 | 130.244224 | 130.244224 | 121.8402065 | 112.4891496 | 103.9582812 | 96.17061327 | 89.05678516 |
| 141017A00020 | 10/17/2014 | 2.28 | 10/18/2021 | 10/17/2014 | 102.66384 | 102.6638437 | 102.6638437 | 102.6638437 | 102.4593787 | 101.2308783 | 100.0317424 | 98.86092762 | 97.71743957 |
| 141024A00010 | 10/24/2014 | 2.81 | 10/24/2024 | 10/24/2014 | 111.52877 | 111.5287698 | 111.5287698 | 111.5287698 | 110.0745997 | 105.7701611 | 101.6595505 | 97.7329479 | 93.98109004 |
| 141202A00012 | 12/2/2014 | 2.32 | 12/2/2021 | 12/2/2014 | 102.98784 | 102.9878389 | 102.9878389 | 102.9878389 | 102.7564463 | 101.4149116 | 100.0971978 | 98.80272479 | 97.5309309 |
| 150123A00010 | 1/23/2015 | 2.02 | 1/31/2022 | 1/23/2015 | 102.89741 | 102.8974073 | 102.8974073 | 102.8974073 | 102.6337875 | 101.1337388 | 99.6632857 | 98.2216299 | 96.80800106 |
| 150130A00050 | 1/30/2015 | 1.87 | 1/31/2022 | 1/30/2015 | 102.66888 | 102.6688752 | 102.6688752 | 102.6688752 | 102.405527 | 100.9072853 | 99.43860747 | 97.99869605 | 96.58678154 |
| 150220A00021 | 2/20/2015 | 2.72 | 2/20/2024 | 2/20/2015 | 108.69959 | 108.6995873 | 108.6995873 | 108.6995873 | 107.6788279 | 104.1006212 | 100.6614635 | 97.35518875 | 94.1759404 |
| 150317A00013 | 3/17/2015 | 2.58 | 3/17/2025 | 3/17/2015 | 111.5225 | 111.5225018 | 111.5225018 | 111.5225018 | 109.7832465 | 105.0963416 | 100.6379604 | 96.39573105 | 92.35801969 |
| 150518A00020 | 5/18/2015 | 1.99 | 5/18/2021 | 5/18/2015 | 101.5118 | 101.5118002 | 101.5118002 | 101.5118002 | 101.4022883 | 100.5967688 | 99.80401709 | 99.02373131 | 98.25561894 |
| 150601A00039 | 6/1/2015 | 5.76 | 6/12/2026 | 6/1/2015 | 132.95681 | 132.956814 | 132.956814 | 132.956814 | 129.7725413 | 123.3179563 | 117.2412526 | 111.5181327 | 106.1259865 |
| 150601A00522 | 6/1/2015 | 4.52 | 7/25/2030 | 6/1/2015 | 141.37596 | 141.3759555 | 141.3759555 | 141.3759555 | 131.162484 | 120.6738706 | 111.1618252 | 102.5288099 | 94.68755017 |
| 150601A00523 | 6/1/2015 | 4.55 | 7/25/2031 | 6/1/2015 | 145.77465 | 145.7746454 | 145.7746454 | 145.132845 | 133.211661 | 121.7082027 | 111.366049 | 102.0596411 | 93.67768193 |
| 150601A00548 | 6/1/2015 | 2.55 | 8/13/2021 | 6/1/2015 | 102.34433 | 102.3443263 | 102.3443263 | 102.3443263 | 102.1861503 | 101.1413798 | 100.1179317 | 99.11515791 | 98.13243638 |
| 150601A00604 | 6/1/2015 | 2.33 | 12/31/2020 | 6/1/2015 | 100.86926 | 100.8692564 | 100.8692564 | 100.8692564 | 100.8236989 | 100.3999006 | 99.97965206 | 99.56290909 | 99.14962799 |
| 150601A00648 | 6/1/2015 | 2.71 | 12/30/2022 | 6/1/2015 | 105.7993 | 105.7993016 | 105.7993016 | 105.7993016 | 105.2903547 | 102.868054 | 100.5139341 | 98.22569679 | 96.00113528 |
| 150603A00018 | 6/3/2015 | 2.84 | 6/3/2025 | 6/3/2015 | 113.326 | 113.3260029 | 113.3260029 | 113.3260029 | 111.4060384 | 106.4733219 | 101.7901773 | 97.34270234 | 93.11783786 |
| 150610A00009 | 6/10/2015 | 3.03 | 6/10/2025 | 6/10/2015 | 114.3126 | 114.3126021 | 114.3126021 | 114.3126021 | 112.3702013 | 107.3952215 | 102.6725554 | 98.18810529 | 93.92863146 |
| 150814A00004 | 8/14/2015 | 2.32 | 8/15/2022 | 8/14/2015 | 104.55001 | 104.5500106 | 104.5500106 | 104.5500106 | 104.1539402 | 102.1052813 | 100.1073561 | 98.15857811 | 96.25742193 |
| 150817A00073 | 8/17/2015 | 2.06 | 8/17/2021 | 8/17/2015 | 102.05878 | 102.0587752 | 102.0587752 | 102.0587752 | 101.8977612 | 100.8412944 | 99.80666113 | 98.7931898 | 97.8002361 |
| 130904A00039 | 9/4/2013 | 4.19 | 9/15/2028 | 9/4/2013 | 133.40231 | 133.4023089 | 133.4023089 | 133.4023089 | 126.725307 | 118.1022803 | 110.1553537 | 102.8274 | 96.06641898 |
| 130911A00009 | 9/11/2013 | 2.87 | 9/15/2020 | 9/11/2013 | 100.35165 | 100.3516475 | 100.3516475 | 100.3516475 | 100.3406717 | 100.2128489 | 100.0853673 | 99.95822531 | 99.83142166 |
| 131011A00005 | 10/11/2013 | 2.97 | 10/15/2020 | 10/11/2013 | 100.57294 | 100.5729375 | 100.5729375 | 100.5729375 | 100.5523313 | 100.3414675 | 100.1315008 | 99.9224255 | 99.71423581 |
| 131024A00018 | 10/24/2013 | 2.8 | 11/1/2021 | 10/24/2013 | 103.40887 | 103.4088725 | 103.4088725 | 103.4088725 | 103.1944433 | 101.9233681 | 100.683178 | 99.47275553 | 98.2910366 |
| 140131A00025 | 1/31/2014 | 3.28 | 1/30/2023 | 1/31/2014 | 107.53983 | 107.5398306 | 107.5398306 | 107.5398306 | 106.9994023 | 104.4736538 | 102.0212159 | 99.63953401 | 97.32615896 |
| 140402A00010 | 4/2/2014 | 2.62 | 4/2/2021 | 4/2/2014 | 101.70147 | 101.701471 | 101.701471 | 101.701471 | 101.6154617 | 100.9352316 | 100.2640925 | 99.60186289 | 98.94836636 |
| 140701A00001 | 7/1/2014 | 3.22 | 7/1/2024 | 7/1/2014 | 111.55393 | 111.5539331 | 111.5539331 | 111.5539331 | 110.3118346 | 106.3303738 | 102.5163749 | 98.86191969 | 95.35950607 |
| 140905A00017 | 9/5/2014 | 2.19 | 9/8/2020 | 9/5/2014 | 100.22453 | 100.2245328 | 100.2245328 | 100.2245328 | 100.2156912 | 100.1073995 | 99.9993538 | 99.8915533 | 99.78399711 |
| 140908A00059 | 9/8/2014 | 2.28 | 8/31/2020 | 9/8/2014 | 100.17379 | 100.1737861 | 100.1737861 | 100.1737861 | 100.1673844 | 100.0814397 | 99.99564009 | 99.90998537 | 99.82447516 |
| 140908A00063 | 9/8/2014 | 2.5 | 8/31/2021 | 9/8/2014 | 102.44258 | 102.4425775 | 102.4425775 | 102.4425775 | 102.2724095 | 101.1782459 | 100.1074298 | 99.0592202 | 98.03290698 |
| 141208A00008 | 12/8/2014 | 3.02 | 12/16/2024 | 12/8/2014 | 111.97392 | 111.9739201 | 111.9739201 | 111.9739201 | 110.4271386 | 105.997985 | 101.7736317 | 97.74355646 | 93.89783081 |
| 150115A00002 | 1/15/2015 | 1.72 | 1/15/2021 | 1/15/2015 | 100.74748 | 100.7474827 | 100.7474827 | 100.7474827 | 100.6964406 | 100.2310134 | 99.76989193 | 99.31301655 | 98.86032862 |
| 150206A00017 | 2/6/2015 | 2.05 | 2/7/2022 | 2/6/2015 | 102.9804 | 102.9803986 | 102.9803986 | 102.9803986 | 102.7125017 | 101.1911671 | 99.70005078 | 98.23832705 | 96.80519992 |
| 150401A00008 | 4/1/2015 | 2.62 | 4/1/2025 | 4/1/2015 | 110.92938 | 110.929383 | 110.929383 | 110.929383 | 109.1746145 | 104.4891272 | 100.0332208 | 95.7944035 | 91.76093309 |

Classification | Public

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 150406A00003 | 4/6/2015 | 1.9 | 4/6/2021 | 4/6/2015 | 101.1353 | 101.1352959 | 101.1352959 | 101.1352959 | 101.0476298 | 100.359834 | 99.68137565 | 99.01206557 | 98.35171963 |
| 150407A00009 | 4/7/2015 | 2.03 | 4/7/2022 | 4/7/2015 | 103.26175 | 103.2617458 | 103.2617458 | 103.2617458 | 102.9580566 | 101.2710044 | 99.61961498 | 98.00282263 | 96.41960431 |
| 150518A00026 | 5/18/2015 | 2.08 | 11/18/2021 | 5/18/2015 | 102.586 | 102.5860048 | 102.5860048 | 102.5860048 | 102.3627985 | 101.0574632 | 99.77868454 | 98.52566149 | 97.29762555 |
| 150519A00013 | 5/19/2015 | 2.98 | 5/19/2025 | 5/19/2015 | 112.92427 | 112.9242748 | 112.9242748 | 112.9242748 | 111.0544207 | 106.1994171 | 101.5874881 | 97.20518039 | 93.03985618 |
| 150601A00147 | 6/1/2015 | 3.45 | 7/30/2021 | 6/1/2015 | 103.31452 | 103.3145204 | 103.3145204 | 103.3145204 | 103.1644918 | 102.1501893 | 101.1558293 | 100.1808276 | 99.22462286 |
| 150601A00495 | 6/1/2015 | 2.99 | 6/27/2024 | 6/1/2015 | 111.18552 | 111.1855207 | 111.1855207 | 111.1855207 | 109.9443047 | 105.9608125 | 102.1450046 | 98.48895084 | 94.98513764 |
| 150601A00530 | 6/1/2015 | 3.08 | 7/24/2024 | 6/1/2015 | 111.75373 | 111.7537281 | 111.7537281 | 111.7537281 | 110.4636948 | 106.3981212 | 102.5066126 | 98.78078959 | 95.21272158 |
| 150601A00547 | 6/1/2015 | 2.29 | 8/13/2020 | 6/1/2015 | 100.07188 | 100.0718831 | 100.0718831 | 100.0718831 | 100.0691982 | 100.0331427 | 99.99713011 | 99.96116046 | 99.92523362 |
| 150601A00615 | 6/1/2015 | 2.67 | 6/30/2022 | 6/1/2015 | 104.52147 | 104.5214679 | 104.5214679 | 104.5214679 | 104.162055 | 102.2421412 | 100.3672041 | 98.53592079 | 96.74701635 |
| 150601A00616 | 6/1/2015 | 2.72 | 9/30/2022 | 6/1/2015 | 105.22365 | 105.2236482 | 105.2236482 | 105.2236482 | 104.7914183 | 102.6183801 | 100.5012004 | 98.43804628 | 96.42716004 |
| 160209A00047 | 2/9/2016 | 1.5 | 8/10/2020 | 2/9/2016 | 100.03413 | 100.0341289 | 100.0341289 | 100.0341289 | 100.0320651 | 100.0043489 | 99.97666342 | 99.9490086 | 99.92138438 |
| 160216A00028 | 2/16/2016 | 1.69 | 2/16/2022 | 2/16/2016 | 102.46389 | 102.46389 | 102.46389 | 102.46389 | 102.1912605 | 100.6476211 | 99.13492321 | 97.65230826 | 96.19894909 |
| 160223A00014 | 2/23/2016 | 1.75 | 2/23/2021 | 2/23/2016 | 100.85766 | 100.8576645 | 100.8576645 | 100.8576645 | 100.7908142 | 100.2188717 | 99.65340243 | 99.09429695 | 98.54144832 |
| 160307A00027 | 3/7/2016 | 2.71 | 3/6/2026 | 3/7/2016 | 113.53117 | 113.5311737 | 113.5311737 | 113.5311737 | 110.8858785 | 105.2713857 | 99.97898759 | 94.98849419 | 90.28108605 |
| 160329A00004 | 3/29/2016 | 1.78 | 3/25/2021 | 3/29/2016 | 101.00167 | 101.001669 | 101.001669 | 101.001669 | 100.920132 | 100.2656309 | 99.6195956 | 98.98186278 | 98.35227311 |
| 160329A00006 | 3/29/2016 | 2.12 | 3/29/2023 | 3/29/2016 | 104.89937 | 104.8993739 | 104.8993739 | 104.8993739 | 104.3101339 | 101.6584084 | 99.0874547 | 96.59430316 | 94.17611484 |
| 160330A00034 | 3/30/2016 | 1.95 | 3/30/2022 | 3/30/2016 | 102.78133 | 102.781333 | 102.781333 | 102.781333 | 102.4842212 | 100.8284263 | 99.20722431 | 97.61959551 | 96.06456035 |
| 160427A00019 | 4/27/2016 | 1.78 | 4/27/2021 | 4/27/2016 | 101.14087 | 101.1408651 | 101.1408651 | 101.1408651 | 101.0424001 | 100.2972598 | 99.56306977 | 98.83958999 | 98.12658752 |
| 160516A00027 | 5/16/2016 | 2.01 | 5/16/2023 | 5/16/2016 | 104.83048 | 104.8304781 | 104.8304781 | 104.8304781 | 104.1915614 | 101.41323 | 98.72299004 | 96.11753534 | 93.59370531 |
| 160610A00009 | 6/10/2016 | 1.89 | 6/12/2023 | 6/10/2016 | 104.61089 | 104.6108947 | 104.6108947 | 104.6108947 | 103.9426282 | 101.0964069 | 98.34257173 | 95.67764272 | 93.09828982 |
| 160615A00031 | 6/15/2016 | 2.51 | 6/17/2030 | 6/15/2016 | 123.82498 | 123.8249782 | 123.8249782 | 123.8249782 | 114.2033365 | 104.5117734 | 95.738942 | 87.79252576 | 80.58993008 |
| 160616A00027 | 6/16/2016 | 2.27 | 6/16/2026 | 6/16/2016 | 111.6018 | 111.6018029 | 111.6018029 | 111.6018029 | 108.6348776 | 102.8226304 | 97.35948666 | 92.22270781 | 87.39114644 |
| 160624A00011 | 6/24/2016 | 1.83 | 6/26/2023 | 6/24/2016 | 104.49631 | 104.4963086 | 104.4963086 | 104.4963086 | 103.8123352 | 100.9304224 | 98.14323004 | 95.44714543 | 92.83871385 |
| 160627A00070 | 6/27/2016 | 1.52 | 9/27/2021 | 6/27/2016 | 101.45903 | 101.4590266 | 101.4590266 | 101.4590266 | 101.2702932 | 100.1091317 | 98.97444198 | 97.86532742 | 96.78093145 |
| 160628A00054 | 6/28/2016 | 1.28 | 6/28/2021 | 6/28/2016 | 101.07027 | 101.070272 | 101.070272 | 101.070272 | 100.9398006 | 100.0245628 | 99.12583068 | 98.24316126 | 97.37612721 |
| 160701A00018 | 7/1/2016 | 1.42 | 7/1/2021 | 7/1/2016 | 101.07163 | 101.0716256 | 101.0716256 | 101.0716256 | 100.9398375 | 100.0183773 | 99.11365071 | 98.22520559 | 97.35260584 |
| 160707A00032 | 7/7/2016 | 1.52 | 7/7/2023 | 7/7/2016 | 104.16155 | 104.1615451 | 104.1615451 | 104.1615451 | 103.4620494 | 100.5440296 | 97.723161 | 94.99569113 | 92.35803361 |
| 160712A00023 | 7/12/2016 | 1.79 | 7/12/2023 | 7/12/2016 | 104.44501 | 104.4450085 | 104.4450085 | 104.4450085 | 103.7419902 | 100.8192661 | 97.99398152 | 95.26236516 | 92.62081329 |
| 160714A00053 | 7/14/2016 | 1.58 | 7/15/2021 | 7/14/2016 | 101.26184 | 101.2618428 | 101.2618428 | 101.2618428 | 101.1220559 | 100.1618153 | 99.21973365 | 98.29529958 | 97.38802078 |
| 160726A00005 | 7/26/2016 | 2.28 | 7/27/2026 | 7/26/2016 | 111.88184 | 111.8818431 | 111.8818431 | 111.8818431 | 108.7686726 | 102.8493524 | 97.29181612 | 92.0720791 | 87.16786563 |
| 160727A00002 | 7/27/2016 | 1.87 | 7/27/2023 | 7/27/2016 | 104.74826 | 104.7482627 | 104.7482627 | 104.7482627 | 104.0260998 | 101.0602253 | 98.19449721 | 95.42498715 | 92.74794367 |
| 160727A00017 | 7/27/2016 | 2.03 | 7/29/2024 | 7/27/2016 | 106.98566 | 106.9856618 | 106.9856618 | 106.9856618 | 105.7172662 | 101.7538861 | 97.96133387 | 94.33135451 | 90.85613601 |
| 160802A00003 | 8/2/2016 | 2.53 | 8/1/2031 | 8/2/2016 | 126.73633 | 126.7363253 | 126.7363253 | 126.0593252 | 114.6401316 | 103.9709795 | 94.41321849 | 85.84444504 | 78.15633959 |

Classification | Public

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 160815A00006 | 8/15/2016 | 2.23 | 8/17/2026 | 8/15/2016 | 111.69142 | 111.691418 | 111.691418 | 111.691418 | 108.504937 | 102.5409214 | 96.94444719 | 91.69095553 | 86.75765182 |
| 160706A00026 | 7/6/2016 | 2.19 | 7/6/2027 | 7/6/2016 | 113.10441 | 113.104412 | 113.104412 | 113.104412 | 108.6676175 | 101.887804 | 95.57941731 | 89.70724739 | 84.23888331 |
| 160725A00010 | 7/25/2016 | 1.61 | 7/26/2021 | 7/25/2016 | 101.33168 | 101.3316819 | 101.3316819 | 101.3316819 | 101.1856442 | 100.1952414 | 99.22413517 | 98.27176591 | 97.33759561 |
| 160727A00018 | 7/27/2016 | 2.27 | 7/27/2026 | 7/27/2016 | 111.82166 | 111.8216614 | 111.8216614 | 111.8216614 | 108.7090886 | 102.7915205 | 97.23566003 | 92.01752649 | 87.11484799 |
| 160808A00012 | 8/8/2016 | 1.6 | 8/9/2021 | 8/8/2016 | 101.37323 | 101.373226 | 101.373226 | 101.373226 | 101.2183973 | 100.1898957 | 99.18219781 | 98.19467754 | 97.2267336 |
| 160809A00002 | 8/9/2016 | 1.6 | 8/9/2021 | 8/9/2016 | 101.37323 | 101.373226 | 101.373226 | 101.373226 | 101.2183973 | 100.1898957 | 99.18219781 | 98.19467754 | 97.2267336 |
| 160815A00005 | 8/15/2016 | 2.23 | 8/17/2026 | 8/15/2016 | 111.69142 | 111.691418 | 111.691418 | 111.691418 | 108.504937 | 102.5409214 | 96.94444719 | 91.69095553 | 86.75765182 |
| 160825A00055 | 8/29/2016 | 2.32 | 8/30/2021 | 8/29/2016 | 102.23923 | 102.2392262 | 102.2392262 | 102.2392262 | 102.0698766 | 100.9796112 | 99.91256227 | 98.86799462 | 97.84520359 |
| 160829A00039 | 8/29/2016 | 1.61 | 3/26/2021 | 8/29/2016 | 100.89363 | 100.8936254 | 100.8936254 | 100.8936254 | 100.8116352 | 100.1548015 | 99.50649927 | 98.86656309 | 98.23483185 |
| 160830A00035 | 8/30/2016 | 2.06 | 8/30/2024 | 8/30/2016 | 107.26189 | 107.2618911 | 107.2618911 | 107.2618911 | 105.9371957 | 101.8867534 | 98.01374751 | 94.30946004 | 90.76564991 |
| 160830A00038 | 8/30/2016 | 2.24 | 8/28/2026 | 8/30/2016 | 111.81034 | 111.8103403 | 111.8103403 | 111.8103403 | 108.5831436 | 102.5893225 | 96.96631545 | 91.68925134 | 86.73505281 |
| 160916A00014 | 9/16/2016 | 1.66 | 9/16/2021 | 9/16/2016 | 101.58121 | 101.5812144 | 101.5812144 | 101.5812144 | 101.4002507 | 100.2679636 | 99.16084039 | 98.07804949 | 97.01879569 |
| 160922A00051 | 9/22/2016 | 2.5 | 9/22/2028 | 9/22/2016 | 117.90513 | 117.9051348 | 117.9051348 | 117.9051348 | 111.5739852 | 103.6033283 | 96.26899824 | 89.51671784 | 83.29710917 |
| 160926A00046 | 9/26/2016 | 1.66 | 9/26/2023 | 9/26/2016 | 104.92305 | 104.9230481 | 104.9230481 | 104.9230481 | 104.1179684 | 100.9756955 | 97.94424322 | 95.01905579 | 92.19579462 |
| 161123A00008 | 11/23/2016 | 2.2 | 11/23/2021 | 11/23/2016 | 102.54704 | 102.5470372 | 102.5470372 | 102.5470372 | 102.3217215 | 101.0085148 | 99.72050139 | 98.45697962 | 97.21727407 |
| 161212A00040 | 12/12/2016 | 2.45 | 12/12/2023 | 12/12/2016 | 107.94293 | 107.9429333 | 107.9429333 | 107.9429333 | 107.0217741 | 103.6263463 | 100.3570176 | 97.20845552 | 94.1755812 |
| 170111A00012 | 1/11/2017 | 3.31 | 1/11/2030 | 1/11/2017 | 128.37977 | 128.3797705 | 128.3797705 | 128.3797705 | 119.579474 | 110.1155479 | 101.5035733 | 93.66171174 | 86.51639783 |
| 170111A00016 | 1/11/2017 | 3.51 | 1/11/2033 | 1/11/2017 | 139.698 | 139.6979962 | 139.6979962 | 137.0345643 | 123.8642762 | 111.6218603 | 100.7733111 | 91.15005791 | 82.60481351 |
| 170120A00008 | 1/20/2017 | 3.63 | 1/20/2034 | 1/20/2017 | 144.50176 | 144.501756 | 144.501756 | 140.2766068 | 125.9066619 | 112.7162326 | 101.1288742 | 90.93761316 | 81.96333608 |
| 170120A00011 | 1/20/2017 | 3.75 | 1/20/2037 | 1/20/2017 | 156.11767 | 156.1176724 | 156.1176724 | 147.5161892 | 129.7564909 | 114.0168222 | 100.532284 | 88.95920406 | 79.0083613 |
| 170215A00009 | 2/15/2017 | 2.21 | 2/16/2021 | 2/15/2017 | 101.08995 | 101.0899454 | 101.0899454 | 101.0899454 | 101.0260705 | 100.4724916 | 99.92497309 | 99.38341575 | 98.84772252 |
| 170217A00014 | 2/17/2017 | 2.27 | 2/14/2022 | 2/17/2017 | 103.09553 | 103.0955253 | 103.0955253 | 103.0955253 | 102.8241535 | 101.285704 | 99.77795107 | 98.30004745 | 96.85117672 |
| 170228A00014 | 2/28/2017 | 2.89 | 3/1/2027 | 2/28/2017 | 118.43305 | 118.4330506 | 118.4330506 | 118.4330506 | 114.3885071 | 107.6887465 | 101.4322224 | 95.58721283 | 90.12442769 |
| 170313A00035 | 3/13/2017 | 3.31 | 3/15/2027 | 3/13/2017 | 119.97023 | 119.9702349 | 119.9702349 | 119.9702349 | 115.891797 | 109.1584553 | 102.870086 | 96.99482219 | 91.50324359 |
| 170405A00013 | 4/5/2017 | 2.07 | 4/5/2022 | 4/5/2017 | 103.3192 | 103.3191973 | 103.3191973 | 103.3191973 | 103.016663 | 101.3345902 | 99.68798644 | 98.07579485 | 96.49700084 |
| 160307A00028 | 3/7/2016 | 2.91 | 3/7/2028 | 3/7/2016 | 119.84494 | 119.8449427 | 119.8449427 | 119.8449427 | 114.3195006 | 106.7319618 | 99.71218692 | 93.21454978 | 87.19732005 |
| 160328A00014 | 3/28/2016 | 2.49 | 3/27/2026 | 3/28/2016 | 113.55615 | 113.5561536 | 113.5561536 | 113.5561536 | 110.8192996 | 105.1142441 | 99.74049078 | 94.67703663 | 89.90432095 |
| 160415A00014 | 4/15/2016 | 2.05 | 4/14/2023 | 4/15/2016 | 104.78853 | 104.7885337 | 104.7885337 | 104.7885337 | 104.183338 | 101.4902063 | 98.8802154 | 96.35026274 | 93.89738482 |
| 160422A00021 | 4/22/2016 | 2.17 | 4/21/2023 | 4/22/2016 | 105.15222 | 105.1522223 | 105.1522223 | 105.1522223 | 104.5389507 | 101.8219834 | 99.18934531 | 96.63786976 | 94.16453333 |
| 160516A00019 | 5/16/2016 | 1.44 | 5/17/2021 | 5/16/2016 | 101.06378 | 101.0637792 | 101.0637792 | 101.0637792 | 100.955009 | 100.1542061 | 99.36606308 | 98.59028138 | 97.82657183 |
| 160524A00011 | 5/24/2016 | 1.78 | 5/19/2021 | 5/24/2016 | 101.23399 | 101.2339916 | 101.2339916 | 101.2339916 | 101.1243358 | 100.3188334 | 99.52612477 | 98.74590687 | 97.97788616 |
| 160526A00011 | 5/26/2016 | 1.58 | 5/26/2021 | 5/26/2016 | 101.21305 | 101.2130523 | 101.2130523 | 101.2130523 | 101.0996465 | 100.2736177 | 99.46103373 | 98.66156842 | 97.87490613 |
| 160606A00003 | 6/6/2016 | 1.66 | 6/7/2021 | 6/6/2016 | 101.2022 | 101.2022024 | 101.2022024 | 101.2022024 | 101.0828721 | 100.2259268 | 99.38345477 | 98.55509168 | 97.74048542 |

Classification | Public

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 160606A00005 | 6/6/2016 | 2.92 | 6/6/2031 | 6/6/2016 | 128.29008 | 128.2900777 | 128.2900777 | 127.815414 | 116.6558185 | 106.126553 | 96.6717068 | 88.17503872 | 80.53346075 |
| 160614A00025 | 6/14/2016 | 1.83 | 6/14/2023 | 6/14/2016 | 104.44576 | 104.4457557 | 104.4457557 | 104.4457557 | 103.7756554 | 100.9264865 | 98.16998313 | 95.50264813 | 92.92113548 |
| 160614A00067 | 6/14/2016 | 1.51 | 2/16/2021 | 6/14/2016 | 100.70136 | 100.7013639 | 100.7013639 | 100.7013639 | 100.6376212 | 100.0852845 | 99.53899838 | 98.99866378 | 98.46418375 |
| 160616A00044 | 6/20/2016 | 2.31 | 6/18/2021 | 6/20/2016 | 101.8252 | 101.8251965 | 101.8251965 | 101.8251965 | 101.6997671 | 100.8099098 | 99.93559075 | 99.07640557 | 98.2319637 |
| 160624A00005 | 6/24/2016 | 1.52 | 6/24/2021 | 6/24/2016 | 101.14029 | 101.1402872 | 101.1402872 | 101.1402872 | 101.0121421 | 100.1093226 | 99.22256843 | 98.35145378 | 97.49556787 |
| 160628A00038 | 6/28/2016 | 1.88 | 6/27/2025 | 6/28/2016 | 108.74189 | 108.7418919 | 108.7418919 | 108.7418919 | 106.798484 | 101.9131448 | 97.2797178 | 92.88394897 | 88.71246147 |
| 160628A00039 | 6/28/2016 | 2.01 | 6/29/2026 | 6/28/2016 | 111.30267 | 111.3026686 | 111.3026686 | 111.3026686 | 108.2660147 | 102.3894771 | 96.8693998 | 91.68236007 | 86.8065882 |
| 160630A00034 | 6/30/2016 | 1.51 | 6/28/2021 | 6/30/2016 | 101.14493 | 101.1449309 | 101.1449309 | 101.1449309 | 101.0147017 | 100.1010066 | 99.20375837 | 98.32251621 | 97.45685508 |
| 160630A00049 | 6/30/2016 | 1.51 | 6/30/2021 | 6/30/2016 | 101.1518 | 101.1518036 | 101.1518036 | 101.1518036 | 101.02053 | 100.1013791 | 99.19886676 | 98.31254481 | 97.44198098 |
| 160701A00007 | 7/1/2016 | 1.42 | 7/1/2021 | 7/1/2016 | 101.07163 | 101.0716256 | 101.0716256 | 101.0716256 | 100.9398375 | 100.0183773 | 99.11365071 | 98.22520559 | 97.35260584 |
| 160701A00026 | 7/1/2016 | 1.43 | 7/1/2021 | 7/1/2016 | 101.08092 | 101.0809186 | 101.0809186 | 101.0809186 | 100.9491247 | 100.0276178 | 99.12284521 | 98.23435462 | 97.36170996 |
| 160714A00020 | 9/6/2016 | 2.28 | 9/4/2026 | 9/6/2016 | 112.09222 | 112.0922246 | 112.0922246 | 112.0922246 | 108.8367197 | 102.8175526 | 97.17161535 | 91.87381536 | 86.90087428 |
| 160726A00024 | 7/26/2016 | 1.61 | 7/26/2021 | 7/26/2016 | 101.33168 | 101.3316819 | 101.3316819 | 101.3316819 | 101.1856442 | 100.1952414 | 99.22413517 | 98.27176591 | 97.33759561 |
| 160810A00032 | 8/10/2016 | 1.32 | 8/10/2021 | 8/10/2016 | 101.25071 | 101.2507126 | 101.2507126 | 101.2507126 | 101.0949274 | 100.0620088 | 99.0500811 | 98.05850955 | 97.08668497 |
| 160815A00007 | 8/15/2016 | 2.23 | 8/17/2026 | 8/15/2016 | 111.69142 | 111.691418 | 111.691418 | 111.691418 | 108.504937 | 102.5409214 | 96.94444719 | 91.69095553 | 86.75765182 |
| 160830A00030 | 8/30/2016 | 1.52 | 8/28/2020 | 8/30/2016 | 100.09787 | 100.09787 | 100.09787 | 100.09787 | 100.0920915 | 100.0145093 | 99.93705173 | 99.8597185 | 99.78250934 |
| 160616A00034 | 6/16/2016 | 1.97 | 6/17/2024 | 6/16/2016 | 106.55069 | 106.5506888 | 106.5506888 | 106.5506888 | 105.3541212 | 101.5068251 | 97.82094109 | 94.28888274 | 90.90345898 |
| 160624A00006 | 6/24/2016 | 1.52 | 6/24/2021 | 6/24/2016 | 101.14029 | 101.1402872 | 101.1402872 | 101.1402872 | 101.0121421 | 100.1093226 | 99.22256843 | 98.35145378 | 97.49556787 |
| 160624A00026 | 6/24/2016 | 1.52 | 6/24/2021 | 6/24/2016 | 101.14029 | 101.1402872 | 101.1402872 | 101.1402872 | 101.0121421 | 100.1093226 | 99.22256843 | 98.35145378 | 97.49556787 |
| 160701A00028 | 7/1/2016 | 2.16 | 7/1/2026 | 7/1/2016 | 111.02781 | 111.0278116 | 111.0278116 | 111.0278116 | 108.0146321 | 102.1819223 | 96.70214283 | 91.55214695 | 86.71041833 |
| 160714A00029 | 8/10/2016 | 2.27 | 8/10/2026 | 8/10/2016 | 111.89685 | 111.8968468 | 111.8968468 | 111.8968468 | 108.7334514 | 102.7801802 | 97.1927361 | 91.94673859 | 87.01955385 |
| 160829A00037 | 8/31/2016 | 2.35 | 8/31/2021 | 8/31/2016 | 102.27785 | 102.2778469 | 102.2778469 | 102.2778469 | 102.1078058 | 101.0146055 | 99.94473836 | 98.89746367 | 97.87207176 |
| 160922A00009 | 9/22/2016 | 1.55 | 9/22/2022 | 9/22/2016 | 103.10928 | 103.1092782 | 103.1092782 | 103.1092782 | 102.6856857 | 100.5501432 | 98.46935095 | 96.44152228 | 94.46494334 |
| 160923A00030 | 9/23/2016 | 1.41 | 9/23/2021 | 9/23/2016 | 101.50205 | 101.5020519 | 101.5020519 | 101.5020519 | 101.31566 | 100.1622171 | 99.03487743 | 97.93276327 | 96.85503578 |
| 160926A00022 | 9/26/2016 | 1.6 | 9/24/2021 | 9/26/2016 | 101.5419 | 101.5418998 | 101.5418998 | 101.5418998 | 101.3552429 | 100.2016437 | 99.07416279 | 97.9719215 | 96.89407997 |
| 160926A00074 | 9/26/2016 | 1.38 | 9/27/2021 | 9/26/2016 | 101.48114 | 101.481139 | 101.481139 | 101.481139 | 101.2918934 | 100.1277759 | 98.99024351 | 97.87839431 | 96.79136688 |
| 161014A00024 | 10/18/2016 | 2.34 | 10/16/2020 | 10/18/2016 | 100.44789 | 100.4478866 | 100.4478866 | 100.4478866 | 100.4269571 | 100.2134995 | 100.0009621 | 99.78933868 | 99.57862344 |
| 161031A00006 | 10/31/2016 | 1.76 | 11/1/2021 | 10/31/2016 | 101.88469 | 101.8846931 | 101.8846931 | 101.8846931 | 101.6722702 | 100.4145498 | 99.18740997 | 97.98974463 | 96.82050043 |
| 161031A00007 | 10/31/2016 | 1.91 | 10/31/2022 | 10/31/2016 | 103.67315 | 103.6731467 | 103.6731467 | 103.6731467 | 103.2189471 | 100.9819867 | 98.80435688 | 96.68404198 | 94.61911281 |
| 161213A00013 | 12/13/2016 | 1.85 | 12/14/2020 | 12/13/2016 | 100.65411 | 100.6541109 | 100.6541109 | 100.6541109 | 100.6139993 | 100.2369442 | 99.86272385 | 99.49130635 | 99.1226601 |
| 161213A00014 | 12/13/2016 | 2.07 | 12/13/2021 | 12/13/2016 | 102.70814 | 102.7081391 | 102.7081391 | 102.7081391 | 102.4713101 | 101.1025455 | 99.75856167 | 98.43874386 | 97.14249704 |
| 170110A00021 | 1/10/2017 | 1.89 | 1/11/2021 | 1/10/2017 | 100.80709 | 100.8070946 | 100.8070946 | 100.8070946 | 100.7574877 | 100.3029071 | 99.85243149 | 99.40600546 | 98.96357439 |
| 170111A00011 | 1/11/2017 | 3.24 | 1/11/2029 | 1/11/2017 | 124.82539 | 124.8253852 | 124.8253852 | 124.8253852 | 117.8645414 | 109.3712277 | 101.5722762 | 94.40691527 | 87.81999422 |

Classification | Public

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 170117A00046 | 1/17/2017 | 2.55 | 1/17/2024 | 1/17/2017 | 107.87947 | 107.879465 | 107.879465 | 107.879465 | 106.9118736 | 103.4397939 | 100.0997847 | 96.88612211 | 93.79336135 |
| 170130A00011 | 1/30/2017 | 2.15 | 2/1/2021 | 1/30/2017 | 100.97834 | 100.9783379 | 100.9783379 | 100.9783379 | 100.9210719 | 100.4090117 | 99.90213139 | 99.40035293 | 98.9035996 |
| 170203A00012 | 2/3/2017 | 3.63 | 2/2/2035 | 2/3/2017 | 147.84361 | 147.843615 | 147.843615 | 142.0408279 | 126.5395532 | 112.5001087 | 100.2764535 | 89.61916516 | 80.31449205 |
| 170206A00012 | 2/6/2017 | 2.04 | 2/5/2021 | 2/6/2017 | 100.94151 | 100.9415113 | 100.9415113 | 100.9415113 | 100.8825041 | 100.3595729 | 99.84205163 | 99.32985677 | 98.82290637 |
| 170216A00028 | 2/16/2017 | 1.97 | 2/16/2021 | 2/16/2017 | 101.02822 | 101.0282189 | 101.0282189 | 101.0282189 | 100.9642611 | 100.4100027 | 99.86182444 | 99.31962648 | 98.78331126 |
| 170216A00041 | 2/16/2017 | 2.37 | 2/16/2022 | 2/16/2017 | 103.26293 | 103.2629333 | 103.2629333 | 103.2629333 | 102.9901669 | 101.4444943 | 99.9297195 | 98.44498689 | 96.98947206 |
| 170223A00003 | 2/23/2017 | 2.05 | 2/23/2022 | 2/23/2017 | 103.06562 | 103.0656215 | 103.0656215 | 103.0656215 | 102.7880737 | 101.2189389 | 99.68146196 | 98.17475443 | 96.69796065 |
| 160920A00004 | 9/20/2016 | 1.68 | 9/20/2021 | 9/20/2016 | 101.61957 | 101.6195682 | 101.6195682 | 101.6195682 | 101.4357095 | 100.2924079 | 99.17475193 | 98.08188637 | 97.01299369 |
| 160922A00014 | 9/22/2016 | 2.06 | 9/22/2026 | 9/22/2016 | 112.05679 | 112.0567869 | 112.0567869 | 112.0567869 | 108.7040492 | 102.5982769 | 96.87524675 | 91.50897149 | 86.47536162 |
| 160923A00033 | 9/23/2016 | 2.04 | 9/23/2026 | 9/23/2016 | 111.93788 | 111.9378791 | 111.9378791 | 111.9378791 | 108.5826928 | 102.4779944 | 96.75618438 | 91.39125353 | 86.35909279 |
| 160926A00018 | 9/26/2016 | 1.47 | 9/28/2020 | 9/26/2016 | 100.19895 | 100.1989458 | 100.1989458 | 100.1989458 | 100.184067 | 100.020683 | 99.85783192 | 99.6955111 | 99.53371802 |
| 161109A00018 | 11/9/2016 | 2.63 | 11/9/2026 | 11/9/2016 | 114.65383 | 114.6538276 | 114.6538276 | 114.6538276 | 111.1263014 | 104.869969 | 99.01024328 | 93.5198655 | 88.37359112 |
| 161117A00014 | 11/17/2016 | 1.88 | 11/17/2020 | 11/17/2016 | 100.49464 | 100.4946417 | 100.4946417 | 100.4946417 | 100.4632372 | 100.1614282 | 99.86144052 | 99.56325761 | 99.26686314 |
| 170111A00014 | 1/11/2017 | 3.47 | 1/12/2032 | 1/11/2017 | 136.11058 | 136.1105822 | 136.1105822 | 134.8635464 | 122.8203441 | 111.4635189 | 101.3111643 | 92.22745026 | 84.09257261 |
| 170207A00023 | 2/7/2017 | 2.26 | 2/7/2022 | 2/7/2017 | 103.0422 | 103.0421971 | 103.0421971 | 103.0421971 | 102.7750508 | 101.2575665 | 99.77015575 | 98.31199863 | 96.88230441 |
| 170215A00017 | 2/15/2017 | 3.26 | 2/16/2027 | 2/15/2017 | 119.42143 | 119.4214337 | 119.4214337 | 119.4214337 | 115.456545 | 108.8090447 | 102.5968677 | 96.78911918 | 91.35725389 |
| 170216A00044 | 2/16/2017 | 3.52 | 2/17/2032 | 2/16/2017 | 136.99089 | 136.9908855 | 136.9908855 | 135.612255 | 123.4350424 | 111.9608766 | 101.7118299 | 92.54876774 | 84.34908993 |
| 170224A00020 | 2/24/2017 | 3.08 | 2/24/2027 | 2/24/2017 | 118.29796 | 118.2979642 | 118.2979642 | 118.2979642 | 114.3151622 | 107.6819207 | 101.4850473 | 95.69345942 | 90.27844657 |
| 170313A00033 | 3/13/2017 | 3.31 | 3/15/2027 | 3/13/2017 | 119.97023 | 119.9702349 | 119.9702349 | 119.9702349 | 115.891797 | 109.1584553 | 102.870086 | 96.99482219 | 91.50324359 |
| 170322A00026 | 3/22/2017 | 3.22 | 3/22/2028 | 3/22/2017 | 122.32594 | 122.3259382 | 122.3259382 | 122.3259382 | 116.6963228 | 108.9837034 | 101.8489395 | 95.24546783 | 89.13071489 |
| 170417A00094 | 4/17/2017 | 1.95 | 4/19/2022 | 4/17/2017 | 103.18609 | 103.1860883 | 103.1860883 | 103.1860883 | 102.8751084 | 101.1558591 | 99.47348981 | 97.82687942 | 96.21495248 |
| 170419A00024 | 4/19/2017 | 2.45 | 4/21/2025 | 4/19/2017 | 111.13932 | 111.1393242 | 111.1393242 | 111.1393242 | 109.3280077 | 104.5583774 | 100.0255438 | 95.71645485 | 91.6188526 |
| 170515A00022 | 5/15/2017 | 2.04 | 5/17/2021 | 5/15/2017 | 101.43472 | 101.4347248 | 101.4347248 | 101.4347248 | 101.3259746 | 100.5250334 | 99.73672455 | 98.96075091 | 98.19682449 |
| 170515A00038 | 5/15/2017 | 2.43 | 5/15/2023 | 5/15/2017 | 106.00831 | 106.0083057 | 106.0083057 | 106.0083057 | 105.3673445 | 102.5749976 | 99.87098397 | 97.2519887 | 94.7148432 |
| 170522A00044 | 5/22/2017 | 1.99 | 5/24/2021 | 5/22/2017 | 101.42003 | 101.4200295 | 101.4200295 | 101.4200295 | 101.3077639 | 100.4879176 | 99.68130171 | 98.88759796 | 98.10649811 |
| 170602A00007 | 6/2/2017 | 1.94 | 6/2/2021 | 6/2/2017 | 101.42065 | 101.4206507 | 101.4206507 | 101.4206507 | 101.3038039 | 100.459444 | 99.62910728 | 98.81244681 | 98.00912695 |
| 170608A00021 | 6/8/2017 | 1.8 | 6/8/2021 | 6/8/2017 | 101.45632 | 101.4563234 | 101.4563234 | 101.4563234 | 101.3360674 | 100.4734371 | 99.62544336 | 98.79171614 | 97.97189762 |
| 170609A00043 | 6/9/2017 | 3.07 | 6/9/2032 | 6/9/2017 | 135.25452 | 135.2545215 | 135.2545215 | 133.4104298 | 120.8135166 | 109.0905208 | 98.65975789 | 89.37036082 | 81.08984344 |
| 170616A00017 | 6/16/2017 | 2.11 | 6/16/2023 | 6/16/2017 | 105.79788 | 105.7978794 | 105.7978794 | 105.7978794 | 105.1185217 | 102.2323207 | 99.4402497 | 96.73874359 | 94.12439204 |
| 170619A00067 | 6/19/2017 | 1.84 | 9/20/2021 | 6/19/2017 | 101.98784 | 101.9878424 | 101.9878424 | 101.9878424 | 101.8032028 | 100.6548844 | 99.53235438 | 98.43475167 | 97.36125321 |
| 170622A00038 | 6/22/2017 | 3.32 | 6/22/2034 | 6/22/2017 | 141.57828 | 141.5782784 | 141.5782784 | 136.7381983 | 122.1302109 | 108.8506259 | 97.23639203 | 87.06625155 | 78.14953621 |
| 150601A00930 | 6/1/2015 | 7.1 | 8/30/2030 | 6/1/2015 | 167.38249 | 167.3824904 | 167.3824904 | 167.3824904 | 156.175028 | 144.3920746 | 133.6845053 | 123.9457435 | 115.0804037 |
| 150817A00003 | 8/17/2015 | 1.83 | 8/17/2020 | 8/17/2015 | 100.08091 | 100.0809145 | 100.0809145 | 100.0809145 | 100.0773994 | 100.0301979 | 99.98305856 | 99.93598137 | 99.88896615 |

Classification | Public

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 150817A00016 | 8/17/2015 | 2.24 | 8/17/2021 | 8/17/2015 | 102.08071 | 102.0807052 | 102.0807052 | 102.0807052 | 101.9200753 | 100.865948 | 99.8335658 | 98.82226087 | 97.83139252 |
| 150819A00012 | 8/19/2015 | 3.04 | 8/19/2025 | 8/19/2015 | 113.90293 | 113.9029276 | 113.9029276 | 113.9029276 | 111.8160279 | 106.7011765 | 101.8541446 | 97.2594787 | 92.90269835 |
| 150819A00013 | 8/19/2015 | 3.51 | 8/19/2030 | 8/19/2015 | 132.16787 | 132.1678714 | 132.1678714 | 132.1678714 | 122.089962 | 111.9745841 | 102.8175794 | 94.52208141 | 87.00151369 |
| 150824A00047 | 8/24/2015 | 1.88 | 11/24/2020 | 8/24/2015 | 100.52631 | 100.5263074 | 100.5263074 | 100.5263074 | 100.492677 | 100.1715209 | 99.85241891 | 99.53535129 | 99.22029865 |
| 150824A00093 | 8/24/2015 | 1.87 | 8/24/2021 | 8/24/2015 | 101.89136 | 101.8913556 | 101.8913556 | 101.8913556 | 101.7258231 | 100.6512964 | 99.59937464 | 98.56935034 | 97.56054534 |
| 150824A00095 | 8/24/2015 | 2.34 | 8/24/2023 | 8/24/2015 | 106.89203 | 106.8920312 | 106.8920312 | 106.8920312 | 106.1240854 | 103.0393679 | 100.060756 | 97.18399723 | 94.40503584 |
| 150827A00005 | 8/27/2015 | 2.07 | 8/27/2021 | 8/27/2015 | 102.12358 | 102.1235767 | 102.1235767 | 102.1235767 | 101.9558783 | 100.8718596 | 99.81080413 | 98.77198841 | 97.75471895 |
| 150827A00029 | 8/27/2015 | 2.74 | 8/27/2024 | 8/27/2015 | 110.80868 | 110.808685 | 110.808685 | 110.808685 | 109.4636285 | 105.3278796 | 101.372706 | 97.58924698 | 93.96912612 |
| 150909A00018 | 9/9/2015 | 2.28 | 9/9/2021 | 9/9/2015 | 102.25081 | 102.2508062 | 102.2508062 | 102.2508062 | 102.0743221 | 100.9569077 | 99.86388627 | 98.79446572 | 97.74788775 |
| 150914A00018 | 9/14/2015 | 3.05 | 9/15/2025 | 9/14/2015 | 114.15635 | 114.1563536 | 114.1563536 | 114.1563536 | 112.0007419 | 106.8097953 | 101.8938404 | 97.23682513 | 92.82372051 |
| 150914A00053 | 9/14/2015 | 1.77 | 9/14/2020 | 9/14/2015 | 100.20653 | 100.206529 | 100.206529 | 100.206529 | 100.19587 | 100.070981 | 99.94641868 | 99.82218182 | 99.69826905 |
| 150921A00037 | 9/21/2015 | 1.92 | 9/21/2020 | 9/21/2015 | 100.24041 | 100.2404102 | 100.2404102 | 100.2404102 | 100.2276447 | 100.0835451 | 99.93987053 | 99.79661907 | 99.65378885 |
| 150921A00051 | 9/21/2015 | 1.92 | 9/21/2020 | 9/21/2015 | 100.24041 | 100.2404102 | 100.2404102 | 100.2404102 | 100.2276447 | 100.0835451 | 99.93987053 | 99.79661907 | 99.65378885 |
| 151001A00038 | 10/1/2015 | 1.75 | 10/1/2020 | 10/1/2015 | 100.25725 | 100.2572537 | 100.2572537 | 100.2572537 | 100.2414257 | 100.0696864 | 99.89853333 | 99.72796353 | 99.55797407 |
| 151001A00051 | 10/1/2015 | 1.75 | 10/1/2020 | 10/1/2015 | 100.25725 | 100.2572537 | 100.2572537 | 100.2572537 | 100.2414257 | 100.0696864 | 99.89853333 | 99.72796353 | 99.55797407 |
| 151008A00049 | 10/8/2015 | 1.75 | 10/8/2020 | 10/8/2015 | 100.28637 | 100.2863676 | 100.2863676 | 100.2863676 | 100.2681682 | 100.0770587 | 99.88668652 | 99.69704739 | 99.50813703 |
| 151116A00025 | 11/16/2015 | 3.04 | 11/14/2025 | 11/16/2015 | 114.55327 | 114.5532673 | 114.5532673 | 114.5532673 | 112.2346967 | 106.8798989 | 101.8165277 | 97.02716458 | 92.49552405 |
| 151223A00066 | 12/23/2015 | 2.34 | 12/23/2022 | 12/23/2015 | 105.39151 | 105.391512 | 105.391512 | 105.391512 | 104.8873309 | 102.4793783 | 100.1389291 | 97.86371808 | 95.65156979 |
| 160119A00029 | 1/19/2016 | 3.39 | 1/20/2032 | 1/19/2016 | 135.26393 | 135.263927 | 135.263927 | 133.9877703 | 121.9561913 | 110.6282631 | 100.5051601 | 91.4506942 | 83.34477968 |
| 160122A00022 | 1/22/2016 | 1.9 | 1/22/2021 | 1/22/2016 | 100.80404 | 100.8040361 | 100.8040361 | 100.8040361 | 100.7505213 | 100.2664231 | 99.78697347 | 99.31210575 | 98.8417544 |
| 160128A00058 | 1/28/2016 | 1.83 | 1/28/2021 | 1/28/2016 | 100.79647 | 100.7964652 | 100.7964652 | 100.7964652 | 100.7407799 | 100.2402353 | 99.74465133 | 99.25395463 | 98.76807319 |
| 160129A00066 | 1/29/2016 | 3.04 | 1/29/2031 | 1/29/2016 | 130.91727 | 130.9172736 | 130.9172736 | 130.8411711 | 119.7912669 | 109.2917504 | 99.83404091 | 91.30832808 | 83.6169308 |
| 150824A00039 | 8/24/2015 | 1.93 | 1/25/2021 | 8/24/2015 | 100.83266 | 100.8326579 | 100.8326579 | 100.8326579 | 100.778048 | 100.2856317 | 99.79802008 | 99.31514303 | 98.83693185 |
| 150824A00040 | 8/24/2015 | 2.36 | 8/24/2022 | 8/24/2015 | 104.3095 | 104.3094957 | 104.3094957 | 104.3094957 | 103.9082634 | 101.8454633 | 99.83399721 | 97.87224777 | 95.95866068 |
| 150826A00039 | 8/26/2015 | 3.22 | 8/27/2029 | 8/26/2015 | 128.39459 | 128.3945929 | 128.3945929 | 128.3945929 | 120.174051 | 110.9301119 | 102.4922844 | 94.78548933 | 87.74202051 |
| 150827A00004 | 8/27/2015 | 1.82 | 8/27/2020 | 8/27/2015 | 100.12776 | 100.1277615 | 100.1277615 | 100.1277615 | 100.1221789 | 100.0472268 | 99.97239426 | 99.89768098 | 99.8230867 |
| 151005A00012 | 10/5/2015 | 1.53 | 10/5/2020 | 10/5/2015 | 100.25881 | 100.2588058 | 100.2588058 | 100.2588058 | 100.2415992 | 100.0585452 | 99.87616693 | 99.69446049 | 99.51342216 |
| 151013A00030 | 10/13/2015 | 1.89 | 4/14/2021 | 10/13/2015 | 101.16453 | 101.1645347 | 101.1645347 | 101.1645347 | 101.072741 | 100.3629788 | 99.66316211 | 98.97308296 | 98.292539 |
| 151120A00016 | 11/20/2015 | 2.11 | 11/20/2020 | 11/20/2015 | 100.57973 | 100.579733 | 100.579733 | 100.579733 | 100.5473606 | 100.2371163 | 99.92879272 | 99.62237217 | 99.31783697 |
| 160107A00039 | 1/7/2016 | 2.06 | 2/10/2021 | 1/7/2016 | 100.97154 | 100.9715376 | 100.9715376 | 100.9715376 | 100.9103381 | 100.373659 | 99.84268089 | 99.31731316 | 98.79746717 |
| 160328A00045 | 3/28/2016 | 2.49 | 3/27/2026 | 3/28/2016 | 113.55615 | 113.5561536 | 113.5561536 | 113.5561536 | 110.8192996 | 105.1142441 | 99.74049078 | 94.67703663 | 89.90432095 |
| 160330A00035 | 3/30/2016 | 2.32 | 4/1/2024 | 3/30/2016 | 107.49223 | 107.4922262 | 107.4922262 | 107.4922262 | 106.4140804 | 102.7499017 | 99.23187735 | 95.85335407 | 92.60802248 |
| 160330A00056 | 3/30/2016 | 2.26 | 3/31/2025 | 3/30/2016 | 110.10743 | 110.107425 | 110.107425 | 110.107425 | 108.3475507 | 103.6572979 | 99.19773034 | 94.95626227 | 90.92106512 |

Classification | Public

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 160401A00055 | 4/1/2016 | 1.66 | 4/1/2021 | 4/1/2016 | 100.95006 | 100.9500565 | 100.9500565 | 100.9500565 | 100.8650412 | 100.191611 | 99.52713693 | 98.87144132 | 98.22435124 |
| 160408A00015 | 4/8/2016 | 2.01 | 4/7/2023 | 4/8/2016 | 104.64635 | 104.6463497 | 104.6463497 | 104.6463497 | 104.0486576 | 101.3762956 | 98.78596567 | 96.27462628 | 93.83937112 |
| 160419A00005 | 4/19/2016 | 1.66 | 4/19/2021 | 4/19/2016 | 101.01991 | 101.0199133 | 101.0199133 | 101.0199133 | 100.9256157 | 100.2027875 | 99.49028284 | 98.78788183 | 98.0953706 |
| 160420A00002 | 4/20/2016 | 1.96 | 11/16/2022 | 4/20/2016 | 103.86017 | 103.8601726 | 103.8601726 | 103.8601726 | 103.392432 | 101.1100463 | 98.88919949 | 96.72784509 | 94.62401937 |
| 160504A00004 | 5/4/2016 | 2.3 | 5/4/2026 | 5/4/2016 | 112.69863 | 112.6986327 | 112.6986327 | 112.6986327 | 109.8425621 | 104.0651102 | 98.62905439 | 93.5124038 | 88.69470139 |
| 160524A00035 | 5/24/2016 | 1.79 | 5/24/2021 | 5/24/2016 | 101.25523 | 101.2552293 | 101.2552293 | 101.2552293 | 101.1430522 | 100.3239491 | 99.51806787 | 98.72509052 | 97.94470895 |
| 160609A00010 | 6/9/2016 | 1.58 | 6/9/2022 | 6/9/2016 | 102.74905 | 102.7490501 | 102.7490501 | 102.7490501 | 102.4056839 | 100.553951 | 98.74458255 | 96.97636364 | 95.2481218 |
| 160610A00036 | 6/10/2016 | 1.42 | 6/10/2021 | 6/10/2016 | 101.13439 | 101.1343889 | 101.1343889 | 101.1343889 | 101.0132727 | 100.1467139 | 99.29496019 | 98.4576347 | 97.63437317 |
| 160620A00026 | 6/20/2016 | 1.39 | 6/21/2021 | 6/20/2016 | 101.14699 | 101.146993 | 101.146993 | 101.146993 | 101.0201271 | 100.1235544 | 99.24282401 | 98.37751886 | 97.52723655 |
| 160624A00065 | 6/28/2016 | 2.08 | 6/28/2021 | 6/28/2016 | 101.66989 | 101.6698932 | 101.6698932 | 101.6698932 | 101.5393408 | 100.6230302 | 99.72319937 | 98.83940688 | 97.97122703 |
| 160701A00020 | 7/1/2016 | 2.13 | 7/1/2026 | 7/1/2016 | 110.84939 | 110.8493931 | 110.8493931 | 110.8493931 | 107.8379421 | 102.0103687 | 96.53550415 | 91.39021325 | 86.55299057 |
| 160705A00006 | 7/5/2016 | 1.38 | 7/5/2022 | 7/5/2016 | 102.46365 | 102.4636494 | 102.4636494 | 102.4636494 | 102.1024894 | 100.1833939 | 98.30976442 | 96.48025054 | 94.69355112 |
| 160706A00010 | 7/6/2016 | 1.99 | 7/7/2025 | 7/6/2016 | 108.36557 | 108.3655687 | 108.3655687 | 108.3655687 | 106.4171935 | 101.5459918 | 96.92656611 | 92.54463102 | 88.38678286 |
| 160830A00034 | 8/30/2016 | 1.9 | 8/30/2023 | 8/30/2016 | 104.98939 | 104.9893869 | 104.9893869 | 104.9893869 | 104.2234186 | 101.1658751 | 98.21386619 | 95.36315066 | 92.60968419 |
| 160922A00049 | 9/22/2016 | 1.79 | 9/22/2022 | 9/22/2016 | 103.23894 | 103.2389416 | 103.2389416 | 103.2389416 | 102.816761 | 100.687406 | 98.61249775 | 96.59026334 | 94.61900226 |
| 161013A00037 | 10/13/2016 | 1.52 | 10/13/2021 | 10/13/2016 | 101.70778 | 101.7077767 | 101.7077767 | 101.7077767 | 101.5075097 | 100.2987416 | 99.11859432 | 97.9660611 | 96.84018191 |
| 161013A00038 | 10/13/2016 | 1.52 | 10/13/2021 | 10/13/2016 | 101.70778 | 101.7077767 | 101.7077767 | 101.7077767 | 101.5075097 | 100.2987416 | 99.11859432 | 97.9660611 | 96.84018191 |
| 161020A00002 | 10/20/2016 | 1.96 | 8/15/2023 | 10/20/2016 | 105.10707 | 105.1070717 | 105.1070717 | 105.1070717 | 104.3598525 | 101.3393383 | 98.42209068 | 95.60400245 | 92.8811544 |
| 161208A00007 | 12/8/2016 | 2.6 | 12/8/2023 | 12/8/2016 | 107.80025 | 107.8002484 | 107.8002484 | 107.8002484 | 106.8901981 | 103.5230571 | 100.2802685 | 97.1566019 | 94.14707428 |
| 161213A00017 | 12/13/2016 | 2.24 | 12/13/2022 | 12/13/2016 | 105.09 | 105.0899992 | 105.0899992 | 105.0899992 | 104.5950479 | 102.2171688 | 99.90529286 | 97.65722767 | 95.47086656 |
| 161222A00030 | 12/22/2016 | 3.09 | 12/22/2026 | 12/22/2016 | 119.19873 | 119.1987314 | 119.1987314 | 119.1987314 | 115.4189105 | 108.8708979 | 102.7441676 | 97.0093682 | 91.63933809 |
| 170110A00020 | 1/10/2017 | 2.4 | 1/10/2024 | 1/10/2017 | 107.95579 | 107.9557935 | 107.9557935 | 107.9557935 | 106.9928201 | 103.5214524 | 100.1817969 | 96.96816171 | 93.87513217 |
| 170110A00023 | 1/10/2017 | 2.08 | 1/10/2022 | 1/10/2017 | 102.87448 | 102.8744795 | 102.8744795 | 102.8744795 | 102.6225512 | 101.1782793 | 99.76146705 | 98.37139978 | 97.00738725 |
| 170119A00004 | 1/19/2017 | 2.36 | 1/18/2022 | 1/19/2017 | 103.08186 | 103.0818608 | 103.0818608 | 103.0818608 | 102.8260259 | 101.3630753 | 99.92827586 | 98.52088605 | 97.14018988 |
| 170215A00033 | 2/15/2017 | 2.24 | 11/9/2020 | 2/15/2017 | 100.55941 | 100.5594068 | 100.5594068 | 100.5594068 | 100.5305285 | 100.250652 | 99.97234052 | 99.6955809 | 99.42036012 |
| 170224A00039 | 5/24/2017 | 3.17 | 5/24/2027 | 5/24/2017 | 119.58526 | 119.5852636 | 119.5852636 | 119.5852636 | 115.2324729 | 108.341066 | 101.9170101 | 95.92607867 | 90.33672137 |
| 170303A00021 | 3/3/2017 | 2.2 | 3/3/2022 | 3/3/2017 | 103.34976 | 103.3497612 | 103.3497612 | 103.3497612 | 103.0670728 | 101.4728997 | 99.91114835 | 98.38089732 | 96.88125984 |
| 170313A00032 | 3/13/2017 | 3.69 | 6/14/2032 | 3/13/2017 | 140.01678 | 140.0167822 | 140.0167822 | 138.1898168 | 125.5679699 | 113.7035879 | 103.132905 | 93.70581984 | 85.29044138 |
| 170317A00059 | 3/17/2017 | 2.47 | 3/17/2023 | 3/17/2017 | 106.25355 | 106.2535507 | 106.2535507 | 106.2535507 | 105.6700398 | 103.0211074 | 100.4522045 | 97.96041412 | 95.54294612 |
| 170320A00014 | 3/20/2017 | 2.22 | 3/21/2022 | 3/20/2017 | 103.48692 | 103.4869231 | 103.4869231 | 103.4869231 | 103.1932484 | 101.5500151 | 99.94084943 | 98.36475773 | 96.82078485 |
| 170321A00013 | 3/21/2017 | 2.18 | 3/21/2022 | 3/21/2017 | 103.42055 | 103.4205474 | 103.4205474 | 103.4205474 | 103.1269605 | 101.4842957 | 99.87568843 | 98.30014509 | 96.75671088 |
| 170322A00011 | 3/22/2017 | 2.48 | 3/22/2024 | 3/22/2017 | 108.70481 | 108.7048118 | 108.7048118 | 108.7048118 | 107.6309244 | 103.9529182 | 100.4209319 | 97.02834798 | 93.76888895 |
| 170322A00022 | 3/22/2017 | 3.89 | 9/23/2041 | 3/22/2017 | 174.42893 | 174.4289292 | 174.4289292 | 158.3034009 | 135.3450498 | 115.9330914 | 99.90418829 | 86.62777995 | 75.59539807 |

Classification | Public

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 170327A00070 | 3/29/2017 | 3.05 | 3/29/2027 | 3/29/2017 | 119.72358 | 119.723576 | 119.723576 | 119.723576 | 115.5505399 | 108.7410393 | 102.3857156 | 96.45178129 | 90.90898581 |
| 170327A00072 | 3/29/2017 | 3.09 | 3/29/2027 | 3/29/2017 | 119.99271 | 119.9927059 | 119.9927059 | 119.9927059 | 115.8162971 | 108.9981147 | 102.6345243 | 96.69271458 | 91.14241281 |
| 170419A00022 | 4/19/2017 | 1.75 | 4/19/2021 | 4/19/2017 | 101.18655 | 101.1865476 | 101.1865476 | 101.1865476 | 101.0919929 | 100.367172 | 99.65271904 | 98.94841277 | 98.25403801 |
| 170425A00069 | 4/25/2017 | 2.06 | 4/26/2021 | 4/25/2017 | 101.34565 | 101.3456506 | 101.3456506 | 101.3456506 | 101.2476018 | 100.5043435 | 99.77196585 | 99.05023142 | 98.33890947 |
| 170428A00030 | 4/28/2017 | 2.25 | 4/28/2022 | 4/28/2017 | 103.44213 | 103.4421258 | 103.4421258 | 103.4421258 | 103.1263371 | 101.3857664 | 99.68284043 | 98.01640305 | 96.38534576 |
| 170501A00008 | 5/1/2017 | 2.23 | 5/2/2022 | 5/1/2017 | 103.42827 | 103.4282739 | 103.4282739 | 103.4282739 | 103.1099888 | 101.3588176 | 99.64570872 | 97.96949669 | 96.32906402 |
| 170515A00041 | 5/15/2017 | 3.02 | 5/17/2027 | 5/15/2017 | 118.50782 | 118.5078229 | 118.5078229 | 118.5078229 | 114.1970535 | 107.3576512 | 100.9815766 | 95.03492935 | 89.48646053 |
| 170518A00011 | 5/18/2017 | 1.94 | 5/18/2022 | 5/18/2017 | 103.31516 | 103.3151606 | 103.3151606 | 103.3151606 | 102.9855651 | 101.187348 | 99.4291075 | 97.70967163 | 96.02791231 |
| 170518A00034 | 5/18/2017 | 2.15 | 5/18/2023 | 5/18/2017 | 105.75125 | 105.7512544 | 105.7512544 | 105.7512544 | 105.1047268 | 102.2966337 | 99.57786222 | 96.94505672 | 94.39500931 |
| 170530A00026 | 5/30/2017 | 1.81 | 6/1/2021 | 5/30/2017 | 101.43216 | 101.4321648 | 101.4321648 | 101.4321648 | 101.3155834 | 100.4721754 | 99.64275309 | 98.82697105 | 98.0244951 |
| 170531A00018 | 5/31/2017 | 1.97 | 5/28/2021 | 5/31/2017 | 101.42249 | 101.4224916 | 101.4224916 | 101.4224916 | 101.3082033 | 100.4774504 | 99.66027516 | 98.85634685 | 98.06534544 |
| 170602A00026 | 6/2/2017 | 2.25 | 6/3/2024 | 6/2/2017 | 108.28733 | 108.2873327 | 108.2873327 | 108.2873327 | 107.0989618 | 103.2360468 | 99.53379487 | 95.98471348 | 92.58169754 |
| 170606A00014 | 6/6/2017 | 1.9 | 6/6/2022 | 6/6/2017 | 103.33622 | 103.3362169 | 103.3362169 | 103.3362169 | 102.9940195 | 101.1448177 | 99.33772946 | 97.57155198 | 95.84512435 |
| 170612A00013 | 6/12/2017 | 1.83 | 6/14/2021 | 6/12/2017 | 101.51077 | 101.5107735 | 101.5107735 | 101.5107735 | 101.3873484 | 100.5080859 | 99.64402527 | 98.79477489 | 97.95995633 |
| 170622A00016 | 6/22/2017 | 2.11 | 6/22/2022 | 6/22/2017 | 103.47127 | 103.4712741 | 103.4712741 | 103.4712741 | 103.1190614 | 101.2312416 | 99.38722917 | 97.58574874 | 95.8255705 |
| 170628A00008 | 6/28/2017 | 2.04 | 9/15/2021 | 6/28/2017 | 102.01049 | 102.0104927 | 102.0104927 | 102.0104927 | 101.8298966 | 100.697704 | 99.59059628 | 98.50774662 | 97.44836436 |
| 170629A00017 | 6/29/2017 | 2 | 4/26/2021 | 6/29/2017 | 101.30087 | 101.300865 | 101.300865 | 101.300865 | 101.2028376 | 100.4597641 | 99.72756941 | 99.00601603 | 98.29487328 |
| 170629A00067 | 6/29/2017 | 2.19 | 6/29/2022 | 6/29/2017 | 103.66091 | 103.6609136 | 103.6609136 | 103.6609136 | 103.3035745 | 101.3948986 | 99.53091334 | 97.71030594 | 95.93181085 |
| 170630A00009 | 6/30/2017 | 2.53 | 6/30/2025 | 6/30/2017 | 111.98773 | 111.9877253 | 111.9877253 | 111.9877253 | 110.0156144 | 105.0437969 | 100.327606 | 95.85258703 | 91.60517519 |
| 170706A00090 | 7/6/2017 | 2.48 | 7/6/2023 | 7/6/2017 | 106.46183 | 106.461826 | 106.461826 | 106.461826 | 105.7603655 | 102.8232639 | 99.98331189 | 97.23677438 | 94.58008103 |
| 170724A00014 | 7/24/2017 | 2.14 | 7/25/2022 | 7/24/2017 | 103.69702 | 103.6970183 | 103.6970183 | 103.6970183 | 103.3201991 | 101.3428606 | 99.41345731 | 97.53052952 | 95.69267224 |
| 170725A00047 | 7/25/2017 | 2.19 | 7/25/2022 | 7/25/2017 | 103.79726 | 103.7972627 | 103.7972627 | 103.7972627 | 103.4202752 | 101.4419122 | 99.51150429 | 97.62759136 | 95.78876781 |
| 170728A00040 | 7/28/2017 | 2.44 | 1/27/2025 | 7/28/2017 | 110.55357 | 110.5535719 | 110.5535719 | 110.5535719 | 108.9208754 | 104.3896068 | 100.0741032 | 95.96296264 | 92.04544522 |
| 170803A00019 | 8/3/2017 | 2.14 | 8/3/2022 | 8/3/2017 | 103.74298 | 103.7429795 | 103.7429795 | 103.7429795 | 103.3592335 | 101.3577904 | 99.40536146 | 97.50043725 | 95.64156543 |
| 170803A00032 | 8/3/2017 | 2.12 | 8/3/2023 | 8/3/2017 | 106.09304 | 106.0930435 | 106.0930435 | 106.0930435 | 105.3545826 | 102.3373388 | 99.42262533 | 96.60639038 | 93.88476632 |
| 170809A00023 | 8/9/2017 | 2.86 | 8/9/2027 | 8/9/2017 | 118.0006 | 118.0006022 | 118.0006022 | 118.0006022 | 113.3615144 | 106.3386289 | 99.80663949 | 93.72856906 | 88.07041 |
| 170822A00011 | 8/22/2017 | 1.83 | 8/24/2020 | 8/22/2017 | 100.10455 | 100.1045504 | 100.1045504 | 100.1045504 | 100.0995959 | 100.0330729 | 99.96664952 | 99.9003254 | 99.83410037 |
| 170824A00038 | 8/24/2017 | 2.23 | 8/24/2023 | 8/24/2017 | 105.98373 | 105.9837253 | 105.9837253 | 105.9837253 | 105.2223669 | 102.1649999 | 99.21263128 | 96.36106114 | 93.60628335 |
| 170310A00026 | 3/10/2017 | 2.15 | 9/8/2020 | 3/10/2017 | 100.20435 | 100.2043501 | 100.2043501 | 100.2043501 | 100.1955235 | 100.0874145 | 99.97954925 | 99.871927 | 99.7645469 |
| 170313A00027 | 3/13/2017 | 2.27 | 3/14/2022 | 3/13/2017 | 103.5281 | 103.5281 | 103.5281 | 103.5281 | 103.2385745 | 101.6136165 | 100.0220951 | 98.46304445 | 96.935536 |
| 170314A00005 | 3/14/2017 | 2.29 | 3/14/2022 | 3/14/2017 | 103.5609 | 103.5608998 | 103.5608998 | 103.5608998 | 103.2713315 | 101.6460956 | 100.0543012 | 98.49498253 | 96.96721073 |
| 170417A00069 | 4/17/2018 | 2.07 | 4/16/2021 | 4/17/2018 | 101.30294 | 101.3029383 | 101.3029383 | 101.3029383 | 101.210053 | 100.494277 | 99.78860516 | 99.09282466 | 98.40672844 |
| 170504A00038 | 5/4/2017 | 2.09 | 5/4/2022 | 5/4/2017 | 103.5116 | 103.511601 | 103.511601 | 103.511601 | 103.1907872 | 101.427872 | 99.70346242 | 98.01638405 | 96.36551034 |

Classification | Public

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 170515A00005 | 5/15/2017 | 2.04 | 5/16/2022 | 5/15/2017 | 103.48651 | 103.4865135 | 103.4865135 | 103.4865135 | 103.157959 | 101.3634427 | 99.60871637 | 97.89260695 | 96.21398607 |
| 170519A00002 | 5/19/2017 | 2.15 | 5/19/2022 | 5/19/2017 | 103.39203 | 103.3920314 | 103.3920314 | 103.3920314 | 103.0627745 | 101.2667517 | 99.51061157 | 97.79319024 | 96.11336739 |
| 170524A00011 | 5/24/2017 | 2.54 | 5/24/2024 | 5/24/2017 | 108.6332 | 108.633199 | 108.633199 | 108.633199 | 107.4665531 | 103.6421506 | 99.97525848 | 96.45856859 | 93.0851511 |
| 170525A00028 | 5/25/2017 | 1.97 | 5/25/2022 | 5/25/2017 | 103.40573 | 103.4057294 | 103.4057294 | 103.4057294 | 103.0714674 | 101.2538654 | 99.47701806 | 97.73975273 | 96.04093898 |
| 170531A00003 | 5/31/2017 | 1.94 | 5/31/2022 | 5/31/2017 | 103.38087 | 103.3808703 | 103.3808703 | 103.3808703 | 103.0427628 | 101.2095178 | 99.41768218 | 97.66608287 | 95.95358745 |
| 170601A00018 | 6/1/2017 | 1.96 | 6/1/2022 | 6/1/2017 | 103.42309 | 103.4230929 | 103.4230929 | 103.4230929 | 103.0842277 | 101.2478492 | 99.45300591 | 97.6985197 | 95.98325317 |
| 170608A00017 | 6/8/2017 | 1.95 | 6/8/2022 | 6/8/2017 | 103.44 | 103.4400001 | 103.4400001 | 103.4400001 | 103.0962565 | 101.2405981 | 99.4273107 | 97.65518084 | 95.92303747 |
| 170609A00007 | 6/9/2017 | 1.96 | 6/9/2022 | 6/9/2017 | 103.46388 | 103.4638825 | 103.4638825 | 103.4638825 | 103.1194088 | 101.2607901 | 99.44466643 | 97.6698189 | 95.9350716 |
| 170609A00026 | 6/9/2017 | 2.3 | 6/9/2023 | 6/9/2017 | 105.7804 | 105.7803973 | 105.7803973 | 105.7803973 | 105.1123551 | 102.2572674 | 99.49447122 | 96.82050145 | 94.23204188 |
| 170613A00032 | 6/13/2017 | 2.45 | 6/13/2025 | 6/13/2017 | 111.48066 | 111.4806625 | 111.4806625 | 111.4806625 | 109.5503035 | 104.6354016 | 99.97111904 | 95.54340434 | 91.33906341 |
| 170615A00034 | 6/15/2017 | 2.13 | 6/15/2022 | 6/15/2017 | 103.47417 | 103.4741717 | 103.4741717 | 103.4741717 | 103.1267792 | 101.2579305 | 99.43204893 | 97.64789511 | 95.90427347 |
| 170616A00019 | 6/16/2017 | 2.64 | 6/16/2027 | 6/16/2017 | 117.51379 | 117.5137871 | 117.5137871 | 117.5137871 | 113.0501652 | 106.1187402 | 99.66468178 | 93.65260115 | 88.0499045 |
| 170629A00073 | 6/29/2017 | 2.2 | 6/29/2023 | 6/29/2017 | 106.13475 | 106.1347531 | 106.1347531 | 106.1347531 | 105.4393989 | 102.5131089 | 99.68331133 | 96.94631029 | 94.2985724 |
| 170724A00015 | 7/24/2017 | 2.32 | 7/24/2023 | 7/24/2017 | 106.08898 | 106.0889849 | 106.0889849 | 106.0889849 | 105.3665585 | 102.38826 | 99.51009203 | 96.72814042 | 94.03866668 |
| 170731A00004 | 7/31/2017 | 2.16 | 7/29/2022 | 7/31/2017 | 103.75777 | 103.757766 | 103.757766 | 103.757766 | 103.3778495 | 101.3894095 | 99.44942282 | 97.55640612 | 95.708932 |
| 170801A00018 | 8/1/2017 | 1.87 | 8/3/2020 | 8/1/2017 | 100.01332 | 100.0133212 | 100.0133212 | 100.0133212 | 100.0127019 | 100.004383 | 99.99607172 | 99.98776806 | 99.97947198 |
| 170815A00027 | 8/15/2017 | 1.85 | 8/17/2020 | 8/15/2017 | 100.075 | 100.0750004 | 100.0750004 | 100.0750004 | 100.0714907 | 100.0243619 | 99.97729439 | 99.93028817 | 99.88334311 |
| 170822A00020 | 8/22/2017 | 2.59 | 8/22/2025 | 8/22/2017 | 111.63373 | 111.6337267 | 111.6337267 | 111.6337267 | 109.5557995 | 104.4897021 | 99.69003491 | 95.14138169 | 90.82929883 |
| 170824A00037 | 8/24/2017 | 1.98 | 8/24/2021 | 8/24/2017 | 101.83838 | 101.8383818 | 101.8383818 | 101.8383818 | 101.673304 | 100.6016049 | 99.55241249 | 98.52502366 | 97.51876418 |
| 170524A00047 | 5/24/2017 | 2.22 | 5/24/2023 | 5/24/2017 | 105.98438 | 105.9843805 | 105.9843805 | 105.9843805 | 105.3306822 | 102.5035023 | 99.76667509 | 97.11681674 | 94.55069018 |
| 170530A00006 | 5/30/2017 | 2.15 | 5/31/2022 | 5/30/2017 | 103.45401 | 103.4540119 | 103.4540119 | 103.4540119 | 103.1169298 | 101.2886993 | 99.50166677 | 97.75466775 | 96.046578 |
| 170530A00058 | 5/30/2017 | 1.96 | 3/26/2021 | 5/30/2017 | 101.12479 | 101.1247933 | 101.1247933 | 101.1247933 | 101.042708 | 100.3850182 | 99.7358677 | 99.09509106 | 98.46252702 |
| 170530A00064 | 5/30/2017 | 2.32 | 3/27/2023 | 5/30/2017 | 105.42542 | 105.4254181 | 105.4254181 | 105.4254181 | 104.8368118 | 102.1832248 | 99.61029146 | 97.11505244 | 94.6946783 |
| 170602A00015 | 6/2/2017 | 1.76 | 6/2/2021 | 6/2/2017 | 101.39438 | 101.394377 | 101.394377 | 101.394377 | 101.2772936 | 100.4313302 | 99.59944279 | 98.78128256 | 97.97651199 |
| 170602A00023 | 6/2/2017 | 2.09 | 6/2/2023 | 6/2/2017 | 105.66332 | 105.663316 | 105.663316 | 105.663316 | 105.0005374 | 102.1541579 | 99.39947485 | 96.73305827 | 94.15162517 |
| 170602A00033 | 6/2/2017 | 2.09 | 6/2/2022 | 6/2/2017 | 103.35276 | 103.3527648 | 103.3527648 | 103.3527648 | 103.0144568 | 101.1817499 | 99.39045833 | 97.63940818 | 95.92746626 |
| 170602A00034 | 6/2/2017 | 1.76 | 6/2/2021 | 6/2/2017 | 101.39438 | 101.394377 | 101.394377 | 101.394377 | 101.2772936 | 100.4313302 | 99.59944279 | 98.78128256 | 97.97651199 |
| 170609A00009 | 6/9/2017 | 1.82 | 6/9/2021 | 6/9/2017 | 101.47836 | 101.4783634 | 101.4783634 | 101.4783634 | 101.3575717 | 100.492108 | 99.64137541 | 98.80500035 | 97.98262157 |
| 170613A00033 | 6/13/2017 | 2.3 | 6/13/2024 | 6/13/2017 | 108.542 | 108.5419991 | 108.5419991 | 108.5419991 | 107.3359218 | 103.4413734 | 99.70983028 | 96.13364126 | 92.70555359 |
| 170619A00084 | 6/19/2017 | 1.95 | 6/20/2022 | 6/19/2017 | 103.50085 | 103.500852 | 103.500852 | 103.500852 | 103.1486978 | 101.2597 | 99.41452812 | 97.61190667 | 95.85060567 |
| 170719A00006 | 7/19/2017 | 1.93 | 1/19/2021 | 7/19/2017 | 100.80456 | 100.8045604 | 100.8045604 | 100.8045604 | 100.7521323 | 100.2762701 | 99.80490251 | 99.33796593 | 98.87539799 |
| 170731A00006 | 7/31/2017 | 2.16 | 8/1/2022 | 7/31/2017 | 103.77325 | 103.7732524 | 103.7732524 | 103.7732524 | 103.3910261 | 101.3945482 | 99.44688421 | 97.54653418 | 95.69205487 |
| 170809A00005 | 8/9/2017 | 2.61 | 8/11/2025 | 8/9/2017 | 111.6661 | 111.6661019 | 111.6661019 | 111.6661019 | 109.6141748 | 104.5749723 | 99.79952879 | 95.27265261 | 90.9801057 |

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 170811A00015 | 8/11/2017 | 1.81 | 8/11/2020 | 8/11/2017 | 100.04731 | 100.0473076 | 100.0473076 | 100.0473076 | 100.0450366 | 100.0145382 | 99.98407454 | 99.95364547 | 99.92325095 |
| 170814A00084 | 8/14/2017 | 1.91 | 8/15/2022 | 8/14/2017 | 103.70262 | 103.702621 | 103.702621 | 103.702621 | 103.3080311 | 101.2682909 | 99.27910752 | 97.33889936 | 95.44614601 |
| 170815A00006 | 8/15/2017 | 2.5 | 8/15/2024 | 8/15/2017 | 108.98193 | 108.9819327 | 108.9819327 | 108.9819327 | 107.6748461 | 103.6280728 | 99.75681436 | 96.0525229 | 92.50711382 |
| 170818A00003 | 8/18/2017 | 2.23 | 8/20/2024 | 8/18/2017 | 108.66505 | 108.6650484 | 108.6650484 | 108.6650484 | 107.3426013 | 103.2684785 | 99.37211749 | 95.64481437 | 92.07833967 |
| 170829A00035 | 8/29/2017 | 1.58 | 8/31/2020 | 8/29/2017 | 100.12602 | 100.1260246 | 100.1260246 | 100.1260246 | 100.1196164 | 100.0335846 | 99.9476996 | 99.86196097 | 99.77636838 |
| 170831A00006 | 8/31/2017 | 1.87 | 8/31/2022 | 8/31/2017 | 103.69769 | 103.6976946 | 103.6976946 | 103.6976946 | 103.2904955 | 101.2084721 | 99.17871407 | 97.19955816 | 95.26940705 |
| 170907A00050 | 9/7/2017 | 1.69 | 9/7/2021 | 9/7/2017 | 101.75803 | 101.7580298 | 101.7580298 | 101.7580298 | 101.582925 | 100.4712126 | 99.38371252 | 98.31964074 | 97.2782467 |
| 170920A00028 | 9/21/2017 | 2.16 | 9/21/2022 | 9/21/2017 | 104.03587 | 104.0358739 | 104.0358739 | 104.0358739 | 103.6130031 | 101.4775937 | 99.39668957 | 97.36851855 | 95.39138063 |
| 171003A00005 | 10/3/2017 | 1.92 | 10/5/2020 | 10/3/2017 | 100.30505 | 100.305046 | 100.305046 | 100.305046 | 100.2878592 | 100.1050079 | 99.92282847 | 99.74131713 | 99.56047019 |
| 171010A00004 | 10/10/2017 | 1.92 | 10/12/2021 | 10/10/2017 | 102.19017 | 102.1901747 | 102.1901747 | 102.1901747 | 101.9901477 | 100.7809766 | 99.6003495 | 98.44726513 | 97.32076839 |
| 170622A00039 | 6/22/2017 | 3.36 | 6/22/2035 | 6/22/2017 | 145.09112 | 145.0911221 | 145.0911221 | 138.7635408 | 123.0717601 | 108.9754745 | 96.75191507 | 86.13747416 | 76.90711229 |
| 170629A00014 | 6/29/2017 | 1.89 | 8/25/2020 | 6/29/2017 | 100.11307 | 100.1130724 | 100.1130724 | 100.1130724 | 100.1079113 | 100.0386146 | 99.96942347 | 99.9003377 | 99.83135706 |
| 170629A00015 | 6/29/2017 | 1.92 | 10/26/2020 | 6/29/2017 | 100.40467 | 100.4046678 | 100.4046678 | 100.4046678 | 100.3803623 | 100.1393767 | 99.89955154 | 99.66087844 | 99.42334913 |
| 170720A00009 | 7/20/2017 | 2.14 | 7/20/2022 | 7/20/2017 | 103.67148 | 103.6714828 | 103.6714828 | 103.6714828 | 103.2984505 | 101.3344761 | 99.41780239 | 97.54699864 | 95.72068734 |
| 170724A00016 | 7/24/2017 | 2.5 | 7/24/2024 | 7/24/2017 | 108.84853 | 108.8485335 | 108.8485335 | 108.8485335 | 107.5798578 | 103.5922519 | 99.77552628 | 96.12146094 | 92.62227506 |
| 170726A00011 | 7/26/2017 | 2.2 | 7/26/2022 | 7/26/2017 | 103.82258 | 103.8225844 | 103.8225844 | 103.8225844 | 103.4448052 | 101.4635617 | 99.5304047 | 97.64386807 | 95.80254061 |
| 170728A00031 | 7/28/2017 | 2.27 | 1/27/2023 | 7/28/2017 | 104.97189 | 104.9718865 | 104.9718865 | 104.9718865 | 104.4399688 | 101.9547021 | 99.54156503 | 97.19804934 | 94.92174976 |
| 170728A00033 | 7/28/2017 | 2.46 | 1/29/2024 | 7/28/2017 | 107.63646 | 107.6364584 | 107.6364584 | 107.6364584 | 106.6523857 | 103.1535845 | 99.78910819 | 96.55308033 | 93.4399142 |
| 170731A00027 | 7/31/2017 | 2 | 7/30/2021 | 7/31/2017 | 101.74026 | 101.7402555 | 101.7402555 | 101.7402555 | 101.5916801 | 100.5882375 | 99.60453771 | 98.64000281 | 97.69407717 |
| 170801A00020 | 8/1/2017 | 2.02 | 8/2/2021 | 8/1/2017 | 101.77498 | 101.7749788 | 101.7749788 | 101.7749788 | 101.6244914 | 100.6127263 | 99.62102922 | 98.64880782 | 97.69549292 |
| 170802A00027 | 8/2/2017 | 2.16 | 8/2/2022 | 8/2/2017 | 103.77841 | 103.7784133 | 103.7784133 | 103.7784133 | 103.3953925 | 101.3962221 | 99.44596978 | 97.54313074 | 95.68625708 |
| 170808A00014 | 8/8/2017 | 1.67 | 8/10/2020 | 8/8/2017 | 100.04315 | 100.0431527 | 100.0431527 | 100.0431527 | 100.0410852 | 100.0133197 | 99.98558545 | 99.95788233 | 99.93021033 |
| 170818A00037 | 8/18/2017 | 2.08 | 8/18/2022 | 8/18/2017 | 103.6953 | 103.6952969 | 103.6952969 | 103.6952969 | 103.2998581 | 101.2593747 | 99.26946099 | 97.32853351 | 95.43507006 |
| 170822A00012 | 8/22/2017 | 2.11 | 8/22/2022 | 8/22/2017 | 103.77752 | 103.7775231 | 103.7775231 | 103.7775231 | 103.3788014 | 101.3269158 | 99.3260398 | 97.37456911 | 95.47096213 |
| 170822A00018 | 8/22/2017 | 2.25 | 8/22/2023 | 8/22/2017 | 106.03481 | 106.0348128 | 106.0348128 | 106.0348128 | 105.2758541 | 102.2229033 | 99.27466125 | 96.42694542 | 93.67576601 |
| 170822A00019 | 8/22/2017 | 2.44 | 8/22/2024 | 8/22/2017 | 108.77874 | 108.7787379 | 108.7787379 | 108.7787379 | 107.4605126 | 103.3998388 | 99.51596104 | 95.80023693 | 92.24449435 |
| 170831A00004 | 8/31/2017 | 2 | 8/31/2023 | 8/31/2017 | 105.87369 | 105.8736875 | 105.8736875 | 105.8736875 | 105.099851 | 102.0125751 | 99.03209899 | 96.15411932 | 93.37453316 |
| 170831A00029 | 8/31/2017 | 1.87 | 8/31/2022 | 8/31/2017 | 103.69769 | 103.6976946 | 103.6976946 | 103.6976946 | 103.2904955 | 101.2084721 | 99.17871407 | 97.19955816 | 95.26940705 |
| 170831A00054 | 8/31/2017 | 1.85 | 6/30/2022 | 8/31/2017 | 103.35763 | 103.3576293 | 103.3576293 | 103.3576293 | 102.9987802 | 101.0839413 | 99.2141202 | 97.3879895 | 95.60426993 |
| 170905A00072 | 9/5/2017 | 1.84 | 3/5/2021 | 9/5/2017 | 100.95305 | 100.9530467 | 100.9530467 | 100.9530467 | 100.8814862 | 100.2818583 | 99.68934026 | 99.10380622 | 98.52513322 |
| 170906A00005 | 9/6/2017 | 1.69 | 9/7/2021 | 9/6/2017 | 101.75803 | 101.7580298 | 101.7580298 | 101.7580298 | 101.582925 | 100.4712126 | 99.38371252 | 98.31964074 | 97.2782467 |
| 170906A00028 | 9/6/2017 | 1.57 | 9/8/2020 | 9/6/2017 | 100.15737 | 100.1573743 | 100.1573743 | 100.1573743 | 100.1485383 | 100.0403161 | 99.93233979 | 99.82460853 | 99.71712144 |
| 170911A00032 | 9/11/2017 | 1.85 | 9/12/2022 | 9/11/2017 | 103.71298 | 103.7129807 | 103.7129807 | 103.7129807 | 103.2962111 | 101.1812729 | 99.12002244 | 97.11072759 | 95.15172585 |

Classification | Public

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 170915A00005 | 9/15/2017 | 1.81 | 9/15/2021 | 9/15/2017 | 101.92977 | 101.929765 | 101.929765 | 101.929765 | 101.7487692 | 100.6143506 | 99.505114 | 98.42022826 | 97.35889837 |
| 150601A00636 | 6/1/2015 | 2.45 | 6/30/2021 | 6/1/2015 | 101.98882 | 101.9888228 | 101.9888228 | 101.9888228 | 101.8570297 | 100.9336826 | 100.0270273 | 99.13661456 | 98.26201091 |
| 150601A00667 | 6/1/2015 | 3.88 | 1/16/2036 | 6/1/2015 | 153.8892 | 153.8892049 | 153.8892049 | 146.6778388 | 129.959775 | 114.9566272 | 101.9917759 | 90.77064109 | 81.042951 |
| 150601A00668 | 6/1/2015 | 3.89 | 1/16/2037 | 6/1/2015 | 157.44725 | 157.447248 | 157.447248 | 148.84099 | 131.0039953 | 115.1784258 | 101.6154104 | 89.97065294 | 79.9543442 |
| 150601A00704 | 6/1/2015 | 2.3 | 3/25/2022 | 6/1/2015 | 103.28696 | 103.2869571 | 103.2869571 | 103.2869571 | 102.9921459 | 101.3451685 | 99.73240479 | 98.15285327 | 96.60555147 |
| 150601A00737 | 6/1/2015 | 2.68 | 12/31/2024 | 6/1/2015 | 111.27881 | 111.2788064 | 111.2788064 | 111.2788064 | 109.6959139 | 105.2180515 | 100.9498867 | 96.88051966 | 92.99967279 |
| 150601A00768 | 6/1/2015 | 2.34 | 5/13/2022 | 6/1/2015 | 103.62508 | 103.6250752 | 103.6250752 | 103.6250752 | 103.2994038 | 101.5173549 | 99.7745719 | 98.06989 | 96.40218948 |
| 150601A00833 | 6/1/2015 | 7.14 | 8/28/2020 | 6/1/2015 | 100.53713 | 100.5371269 | 100.5371269 | 100.5371269 | 100.5313116 | 100.4532373 | 100.3752897 | 100.2974685 | 100.2197733 |
| 150601A00916 | 6/1/2015 | 7.27 | 4/5/2030 | 6/1/2015 | 166.35061 | 166.3506109 | 166.3506109 | 166.3506109 | 156.0574796 | 144.6959921 | 134.335202 | 124.8792623 | 116.2420713 |
| 150601A01024 | 6/1/2015 | 5.33 | 2/27/2026 | 6/1/2015 | 127.7506 | 127.7505979 | 127.7505979 | 127.7505979 | 125.0055089 | 119.0212388 | 113.3730194 | 108.0400443 | 103.0029068 |
| 150610A00008 | 6/10/2015 | 3.58 | 6/10/2030 | 6/10/2015 | 134.41832 | 134.4183164 | 134.4183164 | 134.4183164 | 124.5254284 | 114.3614735 | 105.1459193 | 96.78434071 | 89.1921937 |
| 150717A00009 | 7/17/2015 | 2.18 | 7/19/2021 | 7/17/2015 | 102.01999 | 102.0199923 | 102.0199923 | 102.0199923 | 101.8771008 | 100.8998075 | 99.94121338 | 99.00078551 | 98.07801104 |
| 150720A00011 | 7/20/2015 | 2.69 | 7/20/2023 | 7/20/2015 | 107.72859 | 107.7285925 | 107.7285925 | 107.7285925 | 107.0027801 | 103.9975653 | 101.093099 | 98.28545075 | 95.57086646 |
| 150722A00014 | 7/22/2015 | 2.32 | 7/22/2021 | 7/22/2015 | 102.01792 | 102.0179165 | 102.0179165 | 102.0179165 | 101.8736733 | 100.8904576 | 99.9261737 | 98.9802786 | 98.05224992 |
| 150803A00049 | 8/3/2015 | 2.01 | 8/3/2020 | 8/3/2015 | 100.01449 | 100.0144876 | 100.0144876 | 100.0144876 | 100.0138682 | 100.0055483 | 99.99723604 | 99.98893138 | 99.9806343 |
| 150825A00007 | 8/25/2015 | 2.46 | 8/25/2022 | 8/25/2015 | 104.52426 | 104.5242555 | 104.5242555 | 104.5242555 | 104.1218565 | 102.0541337 | 100.037897 | 98.07152256 | 96.15344998 |
| 150825A00011 | 8/25/2015 | 1.9 | 8/25/2020 | 8/25/2015 | 100.11377 | 100.1137667 | 100.1137667 | 100.1137667 | 100.1086055 | 100.0393082 | 99.97011652 | 99.90103016 | 99.83204892 |
| 150910A00039 | 9/10/2015 | 1.81 | 9/10/2020 | 9/10/2015 | 100.19276 | 100.1927569 | 100.1927569 | 100.1927569 | 100.1833116 | 100.0695135 | 99.95598771 | 99.84273319 | 99.72974891 |
| 151008A00024 | 10/8/2015 | 1.58 | 10/8/2020 | 10/8/2015 | 100.28016 | 100.2801645 | 100.2801645 | 100.2801645 | 100.2619389 | 100.0705596 | 99.87992188 | 99.69002138 | 99.50085378 |
| 151102A00009 | 11/2/2015 | 1.89 | 11/2/2020 | 11/2/2015 | 100.4294 | 100.4293976 | 100.4293976 | 100.4293976 | 100.4027631 | 100.1424295 | 99.88344314 | 99.62579348 | 99.36947025 |
| 151106A00011 | 11/6/2015 | 3.1 | 1/15/2026 | 11/6/2015 | 115.34635 | 115.3463494 | 115.3463494 | 115.3463494 | 112.8408744 | 107.3087303 | 102.0862153 | 97.15436313 | 92.49546514 |
| 151217A00014 | 12/17/2015 | 3 | 12/17/2025 | 12/17/2015 | 114.58335 | 114.5833472 | 114.5833472 | 114.5833472 | 112.1703148 | 106.7307513 | 101.591839 | 96.73540102 | 92.14444936 |
| 151223A00065 | 12/23/2015 | 2.15 | 12/23/2021 | 12/23/2015 | 102.87555 | 102.8755475 | 102.8755475 | 102.8755475 | 102.6333383 | 101.2368005 | 99.8659827 | 98.52023602 | 97.19893306 |
| 151223A00074 | 12/23/2015 | 3.01 | 12/23/2027 | 12/23/2015 | 121.59707 | 121.5970682 | 121.5970682 | 121.5970682 | 116.2949766 | 108.7640519 | 101.7838517 | 95.31109576 | 89.30611736 |
| 160113A00005 | 1/13/2016 | 1.95 | 1/13/2021 | 1/13/2016 | 100.78568 | 100.7856791 | 100.7856791 | 100.7856791 | 100.7354303 | 100.2761019 | 99.82096343 | 99.36995763 | 98.92302827 |
| 170825A00025 | 8/25/2017 | 2.12 | 8/25/2022 | 8/25/2017 | 103.8135 | 103.8134968 | 103.8134968 | 103.8134968 | 103.4123576 | 101.3521911 | 99.34336 | 97.38424478 | 95.47328931 |
| 170829A00017 | 8/29/2017 | 1.76 | 8/31/2020 | 8/29/2017 | 100.12902 | 100.1290184 | 100.1290184 | 100.1290184 | 100.1226196 | 100.0367132 | 99.950952 | 99.86533556 | 99.77986356 |
| 170830A00030 | 8/30/2017 | 2 | 3/30/2022 | 8/30/2017 | 102.86542 | 102.8654182 | 102.8654182 | 102.8654182 | 102.5681933 | 100.9116701 | 99.28975291 | 97.70142171 | 96.14569661 |
| 170830A00033 | 8/30/2017 | 1.93 | 8/30/2021 | 8/30/2017 | 101.81201 | 101.8120069 | 101.8120069 | 101.8120069 | 101.6429853 | 100.5552126 | 99.4906195 | 98.44847152 | 97.42806493 |
| 170831A00050 | 8/31/2017 | 1.72 | 6/14/2021 | 8/31/2017 | 101.41366 | 101.4136627 | 101.4136627 | 101.4136627 | 101.2902945 | 100.4114987 | 99.54789914 | 98.6991043 | 97.86473583 |
| 170831A00052 | 8/31/2017 | 1.78 | 11/30/2021 | 8/31/2017 | 102.24574 | 102.2457389 | 102.2457389 | 102.2457389 | 102.0161451 | 100.6851914 | 99.3777893 | 98.09336767 | 96.83137328 |
| 170912A00007 | 9/12/2017 | 1.84 | 12/15/2020 | 9/12/2017 | 100.60641 | 100.6064134 | 100.6064134 | 100.6064134 | 100.5660523 | 100.1869106 | 99.81063348 | 99.43718834 | 99.06654324 |
| 170912A00008 | 9/12/2017 | 1.98 | 12/15/2021 | 9/12/2017 | 102.35755 | 102.357545 | 102.357545 | 102.357545 | 102.1207512 | 100.7529858 | 99.41001676 | 98.0912283 | 96.79602439 |

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 170921A00062 | 9/21/2017 | 1.95 | 9/21/2020 | 9/21/2017 | 100.24474 | 100.2447422 | 100.2447422 | 100.2447422 | 100.2319762 | 100.0878714 | 99.94419167 | 99.80093502 | 99.65809962 |
| 170926A00002 | 9/26/2017 | 1.73 | 12/3/2020 | 9/26/2017 | 100.55951 | 100.5595086 | 100.5595086 | 100.5595086 | 100.5229531 | 100.1764443 | 99.8323229 | 99.49056417 | 99.15114383 |
| 171005A00006 | 10/5/2017 | 2.32 | 10/7/2024 | 10/5/2017 | 109.32641 | 109.326413 | 109.326413 | 109.326413 | 107.9149081 | 103.7006634 | 99.67497779 | 95.82837559 | 92.15191291 |
| 171016A00033 | 10/16/2017 | 2.2 | 10/17/2022 | 10/16/2017 | 104.25923 | 104.2592348 | 104.2592348 | 104.2592348 | 103.8151367 | 101.6081557 | 99.45889963 | 97.36543697 | 95.32591779 |
| 171025A00027 | 10/25/2017 | 2.36 | 10/25/2022 | 10/25/2017 | 104.66279 | 104.6627932 | 104.6627932 | 104.6627932 | 104.2114667 | 101.978874 | 99.80509677 | 97.68815058 | 95.62613538 |
| 171030A00022 | 10/30/2017 | 2.28 | 10/31/2022 | 10/30/2017 | 104.51503 | 104.5150281 | 104.5150281 | 104.5150281 | 104.0591611 | 101.8125062 | 99.62538465 | 97.4957746 | 95.42174115 |
| 171030A00094 | 10/30/2017 | 2.13 | 11/1/2021 | 10/30/2017 | 102.35453 | 102.3545349 | 102.3545349 | 102.3545349 | 102.1416715 | 100.8808092 | 99.6505811 | 98.4498795 | 97.27764963 |
| 171101A00021 | 11/1/2017 | 2.51 | 11/1/2023 | 11/1/2017 | 107.2705 | 107.2705009 | 107.2705009 | 107.2705009 | 106.4136648 | 103.1539048 | 100.0113544 | 96.98108801 | 94.05842092 |
| 171101A00023 | 11/1/2017 | 2.78 | 11/3/2025 | 11/1/2017 | 113.09526 | 113.0952637 | 113.0952637 | 113.0952637 | 110.8186285 | 105.529983 | 100.528227 | 95.7962377 | 91.31800904 |
| 171103A00017 | 11/3/2017 | 2.09 | 11/3/2022 | 11/3/2017 | 104.51173 | 104.5117297 | 104.5117297 | 104.5117297 | 104.0515423 | 101.7885093 | 99.58578613 | 97.44132847 | 95.3531791 |
| 171122A00009 | 11/22/2017 | 2.2 | 11/22/2022 | 11/22/2017 | 104.87292 | 104.8729163 | 104.8729163 | 104.8729163 | 104.3962189 | 102.0770897 | 99.82096738 | 97.62576777 | 95.48948963 |
| 171130A00005 | 11/30/2017 | 2.45 | 11/30/2022 | 11/30/2017 | 105.07975 | 105.0797501 | 105.0797501 | 105.0797501 | 104.5979635 | 102.2632542 | 99.99231616 | 97.78306504 | 95.63349641 |
| 171130A00053 | 11/30/2017 | 2.19 | 8/17/2020 | 11/30/2017 | 100.09105 | 100.0910524 | 100.0910524 | 100.0910524 | 100.0875417 | 100.040399 | 99.99331777 | 99.94629782 | 99.89933903 |
| 171205A00013 | 12/5/2017 | 2.4 | 12/6/2021 | 12/5/2017 | 102.88921 | 102.88921 | 102.88921 | 102.88921 | 102.6565212 | 101.3087179 | 99.98496466 | 98.68467305 | 97.40727324 |
| 171208A00006 | 12/8/2017 | 2.67 | 12/8/2026 | 12/8/2017 | 116.3866 | 116.3865992 | 116.3865992 | 116.3865992 | 112.6935933 | 106.2668989 | 100.2529783 | 94.62317266 | 89.35095212 |
| 171212A00027 | 12/12/2017 | 2.21 | 12/13/2021 | 12/12/2017 | 102.90241 | 102.9024137 | 102.9024137 | 102.9024137 | 102.6653797 | 101.295204 | 99.94983345 | 98.62865244 | 97.33106537 |
| 170828A00031 | 8/28/2017 | 2.07 | 8/1/2022 | 8/28/2017 | 103.59107 | 103.591073 | 103.591073 | 103.591073 | 103.2091563 | 101.2145568 | 99.26873436 | 97.37019008 | 95.51748172 |
| 170831A00009 | 8/31/2017 | 1.93 | 8/30/2021 | 8/31/2017 | 101.81201 | 101.8120069 | 101.8120069 | 101.8120069 | 101.6429853 | 100.5552126 | 99.4906195 | 98.44847152 | 97.42806493 |
| 170831A00021 | 8/31/2017 | 1.99 | 2/25/2022 | 8/31/2017 | 102.70974 | 102.7097398 | 102.7097398 | 102.7097398 | 102.4323175 | 100.8647983 | 99.32890285 | 97.82374236 | 96.3484611 |
| 170831A00047 | 8/31/2017 | 1.6 | 8/31/2020 | 8/31/2017 | 100.12775 | 100.1277467 | 100.1277467 | 100.1277467 | 100.1213384 | 100.0353051 | 99.94941859 | 99.86367848 | 99.77808441 |
| 170831A00048 | 8/31/2017 | 1.64 | 11/16/2020 | 8/31/2017 | 100.4565 | 100.4564966 | 100.4564966 | 100.4564966 | 100.4253714 | 100.1259671 | 99.82835891 | 99.53253045 | 99.23846573 |
| 170831A00049 | 8/31/2017 | 1.68 | 3/1/2021 | 8/31/2017 | 100.92318 | 100.9231802 | 100.9231802 | 100.9231802 | 100.8534986 | 100.263901 | 99.68117394 | 99.10519804 | 98.53585653 |
| 170906A00036 | 9/6/2017 | 1.81 | 9/6/2022 | 9/6/2017 | 103.59912 | 103.5991159 | 103.5991159 | 103.5991159 | 103.1873235 | 101.0899873 | 99.04560196 | 97.05247057 | 95.10896405 |
| 170906A00037 | 9/6/2017 | 1.99 | 9/6/2022 | 9/6/2017 | 103.59787 | 103.5978702 | 103.5978702 | 103.5978702 | 103.1876655 | 101.0977333 | 99.06043277 | 97.0740811 | 95.13706253 |
| 170911A00023 | 9/11/2017 | 1.77 | 9/11/2020 | 9/11/2017 | 100.17569 | 100.175688 | 100.175688 | 100.175688 | 100.1659559 | 100.0495818 | 99.93349094 | 99.81768227 | 99.70215471 |
| 170912A00009 | 9/12/2017 | 2.11 | 12/15/2022 | 9/12/2017 | 104.35326 | 104.3532618 | 104.3532618 | 104.3532618 | 103.8602196 | 101.4949223 | 99.19529992 | 96.95917133 | 94.78444041 |
| 170913A00024 | 9/13/2017 | 1.8 | 8/17/2020 | 9/13/2017 | 100.07264 | 100.0726399 | 100.0726399 | 100.0726399 | 100.0691303 | 100.0220035 | 99.97493801 | 99.92793382 | 99.88099077 |
| 170913A00027 | 9/13/2017 | 2.08 | 9/13/2022 | 9/13/2017 | 103.82338 | 103.8233779 | 103.8233779 | 103.8233779 | 103.4072274 | 101.2958562 | 99.23799115 | 97.23190779 | 95.2759512 |
| 170915A00001 | 9/15/2017 | 2.43 | 9/16/2024 | 9/15/2017 | 108.88413 | 108.8841251 | 108.8841251 | 108.8841251 | 107.5214286 | 103.3932104 | 99.44713382 | 95.67417359 | 92.06580326 |
| 170915A00009 | 9/15/2017 | 1.86 | 9/15/2020 | 9/15/2017 | 100.20509 | 100.205093 | 100.205093 | 100.205093 | 100.1941466 | 100.0666704 | 99.93953233 | 99.81273116 | 99.68626547 |
| 170918A00007 | 9/18/2017 | 2.8 | 9/20/2027 | 9/18/2017 | 117.86252 | 117.8625221 | 117.8625221 | 117.8625221 | 113.0573226 | 105.9389616 | 99.32521956 | 93.17757406 | 87.46063865 |
| 170928A00044 | 9/28/2017 | 1.9 | 9/28/2021 | 9/28/2017 | 102.09662 | 102.0966198 | 102.0966198 | 102.0966198 | 101.9061355 | 100.7354761 | 99.5915841 | 98.47355012 | 97.38050539 |
| 171003A00008 | 10/3/2017 | 2.88 | 10/4/2027 | 10/3/2017 | 118.53327 | 118.5332703 | 118.5332703 | 118.5332703 | 113.6620186 | 106.487155 | 99.82285194 | 93.62997299 | 87.87258193 |

Classification | Public

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 171018A00002 | 10/18/2017 | 1.82 | 10/19/2020 | 10/18/2017 | 100.3782 | 100.3781973 | 100.3781973 | 100.3781973 | 100.3562323 | 100.1342975 | 99.91335784 | 99.69340669 | 99.4744373 |
| 171026A00004 | 10/26/2017 | 2 | 10/26/2020 | 10/26/2017 | 100.42399 | 100.4239933 | 100.4239933 | 100.4239933 | 100.3996849 | 100.1586674 | 99.91881055 | 99.68010586 | 99.44254507 |
| 171030A00020 | 10/30/2017 | 2.16 | 1/14/2022 | 10/30/2017 | 102.77867 | 102.778669 | 102.778669 | 102.778669 | 102.5253503 | 101.0750493 | 99.65246551 | 98.25687388 | 96.88757417 |
| 171116A00021 | 11/16/2017 | 2.16 | 11/16/2022 | 11/16/2017 | 104.74537 | 104.7453725 | 104.7453725 | 104.7453725 | 104.2739192 | 101.9726716 | 99.7335696 | 97.55454243 | 95.4336033 |
| 171120A00017 | 11/20/2017 | 2.41 | 11/21/2022 | 11/20/2017 | 104.93304 | 104.9330424 | 104.9330424 | 104.9330424 | 104.4589904 | 102.150441 | 99.90438221 | 97.71874945 | 95.59156029 |
| 171130A00003 | 11/30/2017 | 2.22 | 11/30/2020 | 11/30/2017 | 100.66861 | 100.6686131 | 100.6686131 | 100.6686131 | 100.6330517 | 100.2950793 | 99.95936744 | 99.6258937 | 99.29463579 |
| 171208A00007 | 12/8/2017 | 2.47 | 12/9/2024 | 12/8/2017 | 110.3713 | 110.3713019 | 110.3713019 | 110.3713019 | 108.8360732 | 104.4346323 | 100.2370011 | 96.23270967 | 92.41187854 |
| 171010A00038 | 10/10/2017 | 2.23 | 10/11/2022 | 10/10/2017 | 104.29423 | 104.2942275 | 104.2942275 | 104.2942275 | 103.8548919 | 101.6632763 | 99.52865318 | 97.44912812 | 95.42288602 |
| 171012A00020 | 10/12/2017 | 1.93 | 10/13/2020 | 10/12/2017 | 100.34415 | 100.3441494 | 100.3441494 | 100.3441494 | 100.3242512 | 100.1192548 | 99.9151083 | 99.71180645 | 99.50934395 |
| 171012A00026 | 10/12/2017 | 2.09 | 10/12/2021 | 10/12/2017 | 102.20307 | 102.203067 | 102.203067 | 102.203067 | 102.0035576 | 100.7972658 | 99.61939974 | 98.46896361 | 97.34500768 |
| 171017A00023 | 10/17/2017 | 1.97 | 10/19/2020 | 10/17/2017 | 100.38317 | 100.383168 | 100.383168 | 100.383168 | 100.3612329 | 100.1395943 | 99.91894612 | 99.69928158 | 99.48059408 |
| 171018A00003 | 10/18/2017 | 2.23 | 10/18/2023 | 10/18/2017 | 106.87213 | 106.8721257 | 106.8721257 | 106.8721257 | 106.0311311 | 102.7999098 | 99.68412195 | 96.67894872 | 93.77980554 |
| 171026A00009 | 10/26/2017 | 2.75 | 10/27/2025 | 10/26/2017 | 112.88971 | 112.8897143 | 112.8897143 | 112.8897143 | 110.6336368 | 105.3680112 | 100.3871839 | 95.67419618 | 91.21319379 |
| 171026A00010 | 10/26/2017 | 2.84 | 10/26/2026 | 10/26/2017 | 115.88111 | 115.8811115 | 115.8811115 | 115.8811115 | 112.3930515 | 106.1338069 | 100.2684903 | 94.77016113 | 89.61386462 |
| 171027A00049 | 10/27/2017 | 2.04 | 10/27/2020 | 10/27/2017 | 100.43865 | 100.4386473 | 100.4386473 | 100.4386473 | 100.4139985 | 100.1701984 | 99.92758394 | 99.68614636 | 99.44587716 |
| 171030A00023 | 10/30/2017 | 2.9 | 11/1/2027 | 10/30/2017 | 118.87495 | 118.8749509 | 118.8749509 | 118.8749509 | 113.885487 | 106.6333437 | 99.90185319 | 93.65075156 | 87.84309736 |
| 171031A00007 | 10/31/2017 | 2.15 | 12/27/2021 | 10/31/2017 | 102.67036 | 102.6703646 | 102.6703646 | 102.6703646 | 102.4269852 | 101.0250138 | 99.64898514 | 98.29824207 | 96.97214898 |
| 171031A00029 | 10/31/2017 | 2.43 | 10/31/2023 | 10/31/2017 | 107.00196 | 107.0019609 | 107.0019609 | 107.0019609 | 106.1474022 | 102.894712 | 99.75892994 | 96.73514118 | 93.81867175 |
| 171031A00060 | 10/31/2017 | 1.98 | 10/30/2020 | 10/31/2017 | 100.43846 | 100.4384606 | 100.4384606 | 100.4384606 | 100.4127975 | 100.1607238 | 99.90991121 | 99.6603503 | 99.41203177 |
| 171101A00022 | 11/1/2017 | 2.65 | 11/1/2024 | 11/1/2017 | 110.05282 | 110.0528196 | 110.0528196 | 110.0528196 | 108.6014827 | 104.33125 | 100.2539124 | 96.35967479 | 92.63929853 |
| 171115A00028 | 11/15/2017 | 2.25 | 8/18/2021 | 11/15/2017 | 102.09678 | 102.0967799 | 102.0967799 | 102.0967799 | 101.9354765 | 100.8785475 | 99.8434761 | 98.82958955 | 97.83624225 |
| 171121A00013 | 11/21/2017 | 1.98 | 11/23/2020 | 11/21/2017 | 100.59462 | 100.5946209 | 100.5946209 | 100.5946209 | 100.5612453 | 100.2422472 | 99.9252787 | 99.61032032 | 99.29735294 |
| 171129A00010 | 11/29/2017 | 2.32 | 11/29/2021 | 11/29/2017 | 102.74041 | 102.7404149 | 102.7404149 | 102.7404149 | 102.5115498 | 101.1830221 | 99.87823538 | 98.59660169 | 97.33755199 |
| 171206A00040 | 12/6/2017 | 2.23 | 12/6/2022 | 12/6/2017 | 105.02503 | 105.0250273 | 105.0250273 | 105.0250273 | 104.5362209 | 102.1776066 | 99.88399236 | 97.65323481 | 95.48327369 |
| 171206A00042 | 12/6/2017 | 2.24 | 12/7/2020 | 12/6/2017 | 100.7142 | 100.7141955 | 100.7141955 | 100.7141955 | 100.6763767 | 100.3190147 | 99.96419195 | 99.61188138 | 99.26205633 |
| 171207A00019 | 12/7/2017 | 2.41 | 6/16/2022 | 12/7/2017 | 104.01044 | 104.0104396 | 104.0104396 | 104.0104396 | 103.6615181 | 101.78475 | 99.95116755 | 98.15952342 | 96.4086145 |
| 171220A00004 | 12/20/2017 | 2.52 | 12/20/2021 | 12/20/2017 | 103.15398 | 103.1539844 | 103.1539844 | 103.1539844 | 102.9137099 | 101.5266804 | 100.1650107 | 98.82806537 | 97.51522968 |
| 180102A00021 | 1/2/2018 | 2.82 | 1/2/2026 | 1/2/2018 | 113.71926 | 113.7192552 | 113.7192552 | 113.7192552 | 111.2664457 | 105.8099102 | 100.6575713 | 95.79089115 | 91.19255364 |
| 180109A00025 | 1/9/2018 | 2.33 | 1/11/2021 | 1/9/2018 | 100.9492 | 100.949198 | 100.949198 | 100.949198 | 100.8996286 | 100.4453537 | 99.99517143 | 99.54902645 | 99.10686454 |
| 180110A00027 | 1/10/2018 | 2.6 | 1/10/2023 | 1/10/2018 | 105.69459 | 105.6945884 | 105.6945884 | 105.6945884 | 105.1761297 | 102.7262633 | 100.3461771 | 98.03349012 | 95.78591706 |
| 180110A00028 | 1/10/2018 | 2.85 | 1/10/2025 | 1/10/2018 | 111.39869 | 111.398691 | 111.398691 | 111.398691 | 109.8064012 | 105.3257845 | 101.0554979 | 96.98457436 | 93.1026753 |
| 160203A00001 | 2/3/2016 | 1.44 | 8/3/2020 | 2/3/2016 | 100.01103 | 100.0110293 | 100.0110293 | 100.0110293 | 100.0104092 | 100.0020801 | 99.9937587 | 99.98544507 | 99.97713917 |
| 160211A00033 | 2/11/2016 | 1.67 | 2/11/2022 | 2/11/2016 | 102.14813 | 102.1481265 | 102.1481265 | 102.1481265 | 101.8796906 | 100.3576617 | 98.86593039 | 97.40366464 | 95.97006259 |

Classification | Public

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 160212A00029 | 2/12/2016 | 1.8 | 2/11/2022 | 2/12/2016 | 102.34988 | 102.3498751 | 102.3498751 | 102.3498751 | 102.0811937 | 100.5575422 | 99.06421672 | 97.60038468 | 96.16524339 |
| 160212A00044 | 2/12/2016 | 1.93 | 2/13/2023 | 2/12/2016 | 104.19147 | 104.1914711 | 104.1914711 | 104.1914711 | 103.6458126 | 101.1224591 | 98.6734641 | 96.29619748 | 93.9881394 |
| 160329A00045 | 3/29/2016 | 2.12 | 3/29/2024 | 3/29/2016 | 107.41658 | 107.4165754 | 107.4165754 | 107.4165754 | 106.3371408 | 102.6644651 | 99.13845442 | 95.75242787 | 92.50004977 |
| 160502A00002 | 5/2/2016 | 1.68 | 5/3/2021 | 5/2/2016 | 101.08963 | 101.0896325 | 101.0896325 | 101.0896325 | 100.9881351 | 100.2268544 | 99.47700689 | 98.73833653 | 98.01059496 |
| 160502A00018 | 5/2/2016 | 2.09 | 5/2/2023 | 5/2/2016 | 104.98656 | 104.9865575 | 104.9865575 | 104.9865575 | 104.3623625 | 101.6182768 | 98.96016206 | 96.38476709 | 93.88898853 |
| 160509A00020 | 5/9/2016 | 2.01 | 5/9/2023 | 5/9/2016 | 104.79732 | 104.7973247 | 104.7973247 | 104.7973247 | 104.1660577 | 101.4063941 | 98.73372169 | 96.14476337 | 93.63638858 |
| 160523A00018 | 5/23/2016 | 1.77 | 5/24/2021 | 5/23/2016 | 101.23875 | 101.2387493 | 101.2387493 | 101.2387493 | 101.1265811 | 100.3075522 | 99.50174449 | 98.70883977 | 97.92853003 |
| 160526A00010 | 5/26/2016 | 1.58 | 5/26/2021 | 5/26/2016 | 101.21305 | 101.2130523 | 101.2130523 | 101.2130523 | 101.0996465 | 100.2736177 | 99.46103373 | 98.66156842 | 97.87490613 |
| 160601A00016 | 6/1/2016 | 1.74 | 6/1/2021 | 6/1/2016 | 101.24679 | 101.2467891 | 101.2467891 | 101.2467891 | 101.1305604 | 100.2897255 | 99.46281255 | 98.64947811 | 97.84939009 |
| 160603A00021 | 6/3/2016 | 1.66 | 6/3/2021 | 6/3/2016 | 101.1868 | 101.1867977 | 101.1867977 | 101.1867977 | 101.06956 | 100.2235626 | 99.39166781 | 98.5735255 | 97.76879693 |
| 160615A00043 | 6/15/2016 | 1.59 | 6/15/2021 | 6/15/2016 | 101.17106 | 101.1710646 | 101.1710646 | 101.1710646 | 101.0475858 | 100.1690499 | 99.30573148 | 98.45723768 | 97.62318914 |
| 160616A00028 | 6/16/2016 | 1.81 | 6/16/2023 | 6/16/2016 | 104.39611 | 104.3961061 | 104.3961061 | 104.3961061 | 103.7238543 | 100.87007 | 98.10927166 | 95.43794376 | 92.85272293 |
| 160617A00045 | 6/17/2016 | 1.55 | 6/17/2021 | 6/17/2016 | 101.14276 | 101.1427589 | 101.1427589 | 101.1427589 | 101.0182555 | 100.1344249 | 99.26599785 | 98.41257442 | 97.57376834 |
| 160627A00040 | 6/27/2016 | 1.28 | 6/28/2021 | 6/27/2016 | 101.07027 | 101.070272 | 101.070272 | 101.070272 | 100.9398006 | 100.0245628 | 99.12583068 | 98.24316126 | 97.37612721 |
| 160628A00040 | 6/28/2016 | 1.56 | 6/28/2023 | 6/28/2016 | 104.24439 | 104.2443879 | 104.2443879 | 104.2443879 | 103.5555356 | 100.6597793 | 97.8596545 | 95.15149775 | 92.53180662 |
| 160628A00050 | 6/28/2016 | 1.56 | 6/28/2023 | 6/28/2016 | 104.24439 | 104.2443879 | 104.2443879 | 104.2443879 | 103.5555356 | 100.6597793 | 97.8596545 | 95.15149775 | 92.53180662 |
| 160701A00034 | 7/1/2016 | 1.43 | 7/21/2021 | 7/1/2016 | 101.1359 | 101.1358997 | 101.1358997 | 101.1358997 | 100.9928132 | 100.0169885 | 99.05992947 | 98.1210989 | 97.19997997 |
| 160705A00009 | 7/5/2016 | 1.21 | 7/6/2021 | 7/5/2016 | 101.03001 | 101.0300087 | 101.0300087 | 101.0300087 | 100.8951264 | 99.95835416 | 99.03888253 | 98.13623588 | 97.2499559 |
| 160706A00027 | 7/6/2016 | 2.29 | 7/6/2028 | 7/6/2016 | 115.77178 | 115.7717806 | 115.7717806 | 115.7717806 | 109.8125094 | 102.0979545 | 94.98681255 | 88.42869433 | 82.3776597 |
| 160707A00034 | 7/7/2016 | 1.25 | 7/7/2021 | 7/7/2016 | 101.07091 | 101.0709087 | 101.0709087 | 101.0709087 | 100.9354348 | 99.99573733 | 99.07344451 | 98.16807647 | 97.27917084 |
| 160801A00001 | 8/1/2016 | 1.97 | 8/1/2024 | 8/1/2016 | 106.75781 | 106.7578074 | 106.7578074 | 106.7578074 | 105.4854063 | 101.5189502 | 97.72381841 | 94.09171526 | 90.61479134 |
| 160811A00011 | 8/11/2016 | 2.25 | 8/11/2026 | 8/11/2016 | 111.78104 | 111.7810352 | 111.7810352 | 111.7810352 | 108.6152105 | 102.6629344 | 97.07661908 | 91.83186462 | 86.90601975 |
| 160706A00028 | 7/6/2016 | 2.39 | 7/6/2029 | 7/6/2016 | 118.62495 | 118.6249502 | 118.6249502 | 118.6249502 | 110.991864 | 102.3565437 | 94.4701252 | 87.26355982 | 80.67449667 |
| 160706A00030 | 7/6/2016 | 2.59 | 7/7/2031 | 7/6/2016 | 124.90907 | 124.9090733 | 124.9090733 | 124.3324457 | 113.2099307 | 102.7888862 | 93.44395995 | 85.05759962 | 77.52566991 |
| 160714A00023 | 8/10/2016 | 2.49 | 8/10/2028 | 8/10/2016 | 117.56907 | 117.5690702 | 117.5690702 | 117.5690702 | 111.4284365 | 103.5681437 | 96.32780333 | 89.65515406 | 83.50259581 |
| 160727A00016 | 7/27/2016 | 1.78 | 7/27/2022 | 7/27/2016 | 102.98348 | 102.9834848 | 102.9834848 | 102.9834848 | 102.6063705 | 100.6311031 | 98.70388075 | 96.82323623 | 94.98775745 |
| 160728A00022 | 7/28/2016 | 1.37 | 7/28/2021 | 7/28/2016 | 101.25755 | 101.257548 | 101.257548 | 101.257548 | 101.1100746 | 100.1123684 | 99.13424157 | 98.17512271 | 97.23446226 |
| 160808A00011 | 8/8/2016 | 1.6 | 8/9/2021 | 8/8/2016 | 101.37323 | 101.373226 | 101.373226 | 101.373226 | 101.2183973 | 100.1898957 | 99.18219781 | 98.19467754 | 97.2267336 |
| 160815A00074 | 8/15/2016 | 1.57 | 8/13/2021 | 8/15/2016 | 101.3565 | 101.3564966 | 101.3564966 | 101.3564966 | 101.1990397 | 100.1598214 | 99.14184624 | 98.14446809 | 97.16706674 |
| 160825A00054 | 8/29/2016 | 2.49 | 8/30/2021 | 8/29/2016 | 102.42545 | 102.42545 | 102.42545 | 102.42545 | 102.2559575 | 101.1646054 | 100.096486 | 99.05086367 | 98.02703326 |
| 160830A00061 | 8/30/2018 | 1.89 | 8/30/2023 | 8/30/2018 | 104.95828 | 104.9582848 | 104.9582848 | 104.9582848 | 104.1924121 | 101.135351 | 98.18381204 | 95.33355455 | 92.58053455 |
| 160916A00016 | 9/16/2016 | 1.66 | 9/16/2021 | 9/16/2016 | 101.58121 | 101.5812144 | 101.5812144 | 101.5812144 | 101.4002507 | 100.2679636 | 99.16084039 | 98.07804949 | 97.01879569 |
| 160921A00020 | 9/21/2016 | 1.97 | 9/21/2023 | 9/21/2016 | 105.30821 | 105.308214 | 105.308214 | 105.308214 | 104.5125507 | 101.3913787 | 98.37954558 | 95.47258512 | 92.66624249 |

Classification | Public

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 160922A00050 | 9/22/2016 | 2.24 | 9/22/2025 | 9/22/2016 | 110.01512 | 110.0151184 | 110.0151184 | 110.0151184 | 107.8721906 | 102.7674925 | 97.93562826 | 93.36057524 | 89.02733767 |
| 160926A00023 | 9/26/2016 | 1.74 | 9/26/2022 | 9/26/2016 | 103.14645 | 103.14645 | 103.14645 | 103.14645 | 102.7212879 | 100.5821426 | 98.49790182 | 96.4667701 | 94.48702531 |
| 160928A00014 | 9/28/2016 | 1.37 | 9/28/2021 | 9/28/2016 | 101.47286 | 101.4728645 | 101.4728645 | 101.4728645 | 101.2829082 | 100.116142 | 98.97608132 | 97.86181828 | 96.77248577 |
| 160930A00010 | 9/30/2016 | 1.47 | 9/30/2022 | 9/30/2016 | 102.96543 | 102.9654289 | 102.9654289 | 102.9654289 | 102.5357677 | 100.3801021 | 98.28012119 | 96.23399158 | 94.23995565 |
| 161006A00013 | 10/6/2016 | 2.07 | 10/6/2025 | 10/6/2016 | 110.22925 | 110.2292538 | 110.2292538 | 110.2292538 | 108.0311184 | 102.8528127 | 97.95393713 | 93.31793258 | 88.92931121 |
| 161102A00026 | 11/2/2016 | 1.54 | 10/30/2020 | 11/2/2016 | 100.32728 | 100.3272845 | 100.3272845 | 100.3272845 | 100.301639 | 100.0497527 | 99.79912687 | 99.54975197 | 99.30161874 |
| 161115A00010 | 11/15/2016 | 2.09 | 11/15/2021 | 11/15/2016 | 102.36082 | 102.360824 | 102.360824 | 102.360824 | 102.1401635 | 100.8468604 | 99.58070431 | 98.34084411 | 97.12646453 |
| 161115A00011 | 11/15/2016 | 2.46 | 11/15/2023 | 11/15/2016 | 107.18948 | 107.1894834 | 107.1894834 | 107.1894834 | 106.313588 | 103.0175919 | 99.84136491 | 96.77988639 | 93.82837678 |
| 161117A00015 | 11/17/2016 | 2.08 | 11/17/2021 | 11/17/2016 | 102.35764 | 102.3576446 | 102.3576446 | 102.3576446 | 102.1358696 | 100.8379362 | 99.56665448 | 98.32121076 | 97.10082461 |
| 161206A00008 | 12/6/2016 | 2.6 | 12/6/2023 | 12/6/2016 | 107.78755 | 107.7875483 | 107.7875483 | 107.7875483 | 106.8803789 | 103.5186442 | 100.2808813 | 97.1618833 | 94.15668948 |
| 161213A00016 | 12/13/2016 | 2.06 | 12/14/2020 | 12/13/2016 | 100.68504 | 100.6850428 | 100.6850428 | 100.6850428 | 100.6449841 | 100.2684112 | 99.89466245 | 99.52370612 | 99.15551088 |
| 170109A00031 | 1/9/2017 | 2.29 | 1/10/2022 | 1/9/2017 | 102.94803 | 102.9480276 | 102.9480276 | 102.9480276 | 102.6967311 | 101.2556933 | 99.84199574 | 98.45492822 | 97.09380476 |
| 170215A00036 | 2/15/2017 | 2.61 | 7/30/2021 | 2/15/2017 | 102.3561 | 102.3561012 | 102.3561012 | 102.3561012 | 102.2071008 | 101.2003241 | 100.2133361 | 99.24555771 | 98.29643235 |
| 171002A00011 | 10/2/2017 | 1.9 | 8/31/2020 | 10/2/2017 | 100.14107 | 100.1410712 | 100.1410712 | 100.1410712 | 100.1346717 | 100.048755 | 99.96298341 | 99.87735666 | 99.79187438 |
| 171004A00034 | 10/4/2017 | 1.73 | 10/5/2020 | 10/4/2017 | 100.29547 | 100.2954666 | 100.2954666 | 100.2954666 | 100.2782556 | 100.0951516 | 99.91272342 | 99.73096727 | 99.54987938 |
| 171016A00005 | 10/16/2017 | 2.2 | 10/17/2022 | 10/16/2017 | 104.25923 | 104.2592348 | 104.2592348 | 104.2592348 | 103.8151367 | 101.6081557 | 99.45889963 | 97.36543697 | 95.32591779 |
| 171016A00060 | 10/16/2017 | 1.93 | 10/16/2020 | 10/16/2017 | 100.36023 | 100.3602251 | 100.3602251 | 100.3602251 | 100.3393079 | 100.1259845 | 99.91358081 | 99.70209071 | 99.4915083 |
| 171025A00020 | 10/25/2017 | 2.02 | 10/26/2020 | 10/25/2017 | 100.42882 | 100.4288247 | 100.4288247 | 100.4288247 | 100.4045155 | 100.1634901 | 99.9236253 | 99.68491271 | 99.44734406 |
| 171026A00005 | 10/26/2017 | 2.16 | 10/26/2021 | 10/26/2017 | 102.36128 | 102.3612831 | 102.3612831 | 102.3612831 | 102.1523036 | 100.9072084 | 99.69235051 | 98.50663879 | 97.34903407 |
| 171026A00008 | 10/26/2017 | 2.6 | 10/25/2024 | 10/26/2017 | 109.79432 | 109.7943218 | 109.7943218 | 109.7943218 | 108.3571331 | 104.1103222 | 100.0546759 | 96.18051906 | 92.47872416 |
| 171026A00023 | 10/26/2017 | 2 | 10/26/2020 | 10/26/2017 | 100.42399 | 100.4239933 | 100.4239933 | 100.4239933 | 100.3996849 | 100.1586674 | 99.91881055 | 99.68010586 | 99.44254507 |
| 171027A00029 | 10/27/2017 | 2.04 | 10/27/2020 | 10/27/2017 | 100.43865 | 100.4386473 | 100.4386473 | 100.4386473 | 100.4139985 | 100.1701984 | 99.92758394 | 99.68614636 | 99.44587716 |
| 171031A00006 | 10/31/2017 | 2.02 | 1/25/2021 | 10/31/2017 | 100.87713 | 100.8771262 | 100.8771262 | 100.8771262 | 100.822503 | 100.3299581 | 99.84221892 | 99.35921519 | 98.88087821 |
| 171116A00009 | 11/16/2017 | 2.17 | 10/20/2020 | 11/16/2017 | 100.43295 | 100.4329474 | 100.4329474 | 100.4329474 | 100.4106668 | 100.1861901 | 99.96272775 | 99.74027298 | 99.5188189 |
| 171116A00013 | 11/16/2017 | 2.2 | 1/15/2021 | 11/16/2017 | 100.91174 | 100.9117431 | 100.9117431 | 100.9117431 | 100.8607337 | 100.3955627 | 99.93468492 | 99.47804084 | 99.02557224 |
| 171116A00022 | 11/16/2017 | 1.92 | 11/16/2020 | 11/16/2017 | 100.54048 | 100.5404772 | 100.5404772 | 100.5404772 | 100.5093361 | 100.2097682 | 99.91199694 | 99.61600623 | 99.32177998 |
| 171122A00012 | 11/22/2017 | 2.22 | 11/23/2020 | 11/22/2017 | 100.63034 | 100.6303404 | 100.6303404 | 100.6303404 | 100.5970064 | 100.2783928 | 99.96180068 | 99.64721076 | 99.33460408 |
| 171201A00025 | 12/1/2017 | 2.08 | 5/3/2021 | 12/1/2017 | 101.50277 | 101.5027747 | 101.5027747 | 101.5027747 | 101.400877 | 100.6364406 | 99.88349721 | 99.14178929 | 98.41106676 |
| 171205A00004 | 12/6/2017 | 2.07 | 12/7/2020 | 12/6/2017 | 100.69923 | 100.6992304 | 100.6992304 | 100.6992304 | 100.6613586 | 100.303508 | 99.94820656 | 99.59542706 | 99.2451426 |
| 171205A00012 | 12/5/2017 | 2.28 | 12/7/2020 | 12/5/2017 | 100.72852 | 100.728521 | 100.728521 | 100.728521 | 100.690699 | 100.3333052 | 99.97845081 | 99.62610876 | 99.27625239 |
| 171207A00017 | 12/7/2017 | 2.23 | 10/16/2020 | 12/7/2017 | 100.42437 | 100.4243676 | 100.4243676 | 100.4243676 | 100.4034414 | 100.1900199 | 99.97751831 | 99.76593069 | 99.55525109 |
| 171212A00023 | 12/12/2017 | 2.3 | 2/12/2021 | 12/12/2017 | 101.11198 | 101.1119797 | 101.1119797 | 101.1119797 | 101.0498576 | 100.5072516 | 99.97046769 | 99.43941241 | 98.91399432 |
| 171213A00032 | 12/13/2017 | 2.17 | 12/13/2021 | 12/13/2017 | 102.84691 | 102.8469067 | 102.8469067 | 102.8469067 | 102.6099312 | 101.2401587 | 99.89518437 | 98.57439285 | 97.27718871 |

Classification | Public

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 171213A00034 | 12/13/2017 | 2.05 | 12/15/2020 | 12/13/2017 | 100.73501 | 100.7350142 | 100.7350142 | 100.7350142 | 100.6945623 | 100.314561 | 99.93743702 | 99.56315768 | 99.19169071 |
| 180108A00006 | 1/8/2018 | 2.18 | 1/8/2021 | 1/8/2018 | 100.92198 | 100.9219765 | 100.9219765 | 100.9219765 | 100.8734278 | 100.4268023 | 99.98413403 | 99.54537057 | 99.11046024 |
| 180116A00031 | 1/16/2018 | 2.58 | 1/17/2023 | 1/16/2018 | 105.68935 | 105.6893523 | 105.6893523 | 105.6893523 | 105.1646855 | 102.6965236 | 100.2991873 | 97.97024128 | 95.7073487 |
| 180116A00039 | 1/16/2018 | 2.37 | 1/19/2021 | 1/16/2018 | 101.01464 | 101.0146367 | 101.0146367 | 101.0146367 | 100.9621474 | 100.4856941 | 100.0137395 | 99.54621991 | 99.0830729 |
| 180110A00048 | 1/10/2018 | 2.37 | 1/7/2021 | 1/10/2018 | 100.94379 | 100.9437939 | 100.9437939 | 100.9437939 | 100.8956769 | 100.4524206 | 100.0130579 | 99.57753747 | 99.14580909 |
| 180116A00008 | 1/16/2018 | 2.37 | 1/15/2021 | 1/16/2018 | 100.99102 | 100.9910224 | 100.9910224 | 100.9910224 | 100.9399904 | 100.4746007 | 100.0135055 | 99.55664553 | 99.10396247 |
| 180117A00017 | 1/17/2018 | 2.45 | 6/17/2021 | 1/17/2018 | 101.94422 | 101.9442151 | 101.9442151 | 101.9442151 | 101.8192374 | 100.9315284 | 100.0592704 | 99.20206246 | 98.35951734 |
| 180118A00037 | 1/18/2018 | 2.88 | 1/21/2025 | 1/18/2018 | 111.65783 | 111.6578258 | 111.6578258 | 111.6578258 | 110.0416884 | 105.5259218 | 101.2234518 | 97.12308429 | 93.21427101 |
| 180124A00038 | 1/24/2018 | 2.51 | 9/1/2021 | 1/24/2018 | 102.45973 | 102.4597333 | 102.4597333 | 102.4597333 | 102.2888332 | 101.1918569 | 100.1183472 | 99.06755737 | 98.0387719 |
| 180201A00033 | 2/1/2018 | 2.53 | 2/1/2022 | 2/1/2018 | 103.68107 | 103.6810735 | 103.6810735 | 103.6810735 | 103.4159236 | 101.9067203 | 100.4273087 | 98.97688351 | 97.55466785 |
| 180202A00004 | 2/2/2018 | 2.57 | 2/2/2022 | 2/2/2018 | 103.74889 | 103.7488944 | 103.7488944 | 103.7488944 | 103.4830644 | 101.9703655 | 100.4875548 | 99.03382297 | 97.6083894 |
| 180205A00018 | 2/5/2018 | 2.66 | 2/3/2023 | 2/5/2018 | 106.4639 | 106.4639012 | 106.4639012 | 106.4639012 | 105.9199133 | 103.3866842 | 100.9275182 | 98.53981684 | 96.2210895 |
| 180205A00050 | 2/5/2018 | 2.81 | 2/6/2023 | 2/5/2018 | 106.40057 | 106.4005667 | 106.4005667 | 106.4005667 | 105.8562677 | 103.3248452 | 100.8674182 | 98.48138938 | 96.16426944 |
| 180226A00043 | 2/26/2018 | 2.73 | 9/27/2021 | 2/26/2018 | 102.87831 | 102.8783059 | 102.8783059 | 102.8783059 | 102.6883768 | 101.5183914 | 100.3750177 | 99.25735519 | 98.1645439 |
| 180306A00010 | 3/6/2018 | 2.8 | 2/15/2022 | 3/6/2018 | 103.92932 | 103.9293178 | 103.9293178 | 103.9293178 | 103.6563279 | 102.1081943 | 100.590965 | 99.10378558 | 97.64583286 |
| 180315A00017 | 3/15/2018 | 2.72 | 3/15/2021 | 3/15/2018 | 101.55147 | 101.5514688 | 101.5514688 | 101.5514688 | 101.4746948 | 100.845577 | 100.224258 | 99.61059314 | 99.00444155 |
| 180328A00006 | 3/28/2018 | 2.73 | 3/26/2021 | 3/28/2018 | 101.63336 | 101.6333627 | 101.6333627 | 101.6333627 | 101.5510681 | 100.8914948 | 100.2404783 | 99.59785261 | 98.9634564 |
| 180328A00010 | 3/28/2018 | 3.1 | 3/28/2025 | 3/28/2018 | 113.15583 | 113.155826 | 113.155826 | 113.155826 | 111.3957663 | 106.6693516 | 102.1733752 | 97.89534211 | 93.82350486 |
| 180329A00010 | 3/29/2018 | 2.76 | 3/29/2021 | 3/29/2018 | 101.67404 | 101.6740436 | 101.6740436 | 101.6740436 | 101.5902358 | 100.922291 | 100.2631133 | 99.61253096 | 98.97037672 |
| 180402A00005 | 4/2/2018 | 2.94 | 4/3/2023 | 4/2/2018 | 107.13844 | 107.1384427 | 107.1384427 | 107.1384427 | 106.5386049 | 103.8432371 | 101.230083 | 98.69610997 | 96.23841944 |
| 180416A00027 | 4/16/2018 | 2.86 | 4/16/2021 | 4/16/2018 | 101.87071 | 101.870713 | 101.870713 | 101.870713 | 101.7775687 | 101.0595236 | 100.3516054 | 99.65360079 | 98.96530242 |
| 180425A00008 | 4/25/2018 | 2.89 | 4/25/2022 | 4/25/2018 | 104.86755 | 104.8675495 | 104.8675495 | 104.8675495 | 104.5504843 | 102.7996311 | 101.0865597 | 99.41011258 | 97.76917995 |
| 180511A00035 | 5/11/2018 | 2.93 | 5/11/2023 | 5/11/2018 | 107.90507 | 107.9050716 | 107.9050716 | 107.9050716 | 107.2604823 | 104.4404462 | 101.7093542 | 99.06385686 | 96.50075426 |
| 180517A00036 | 5/17/2018 | 2.74 | 9/17/2020 | 5/17/2018 | 100.34959 | 100.34959 | 100.34959 | 100.34959 | 100.3380078 | 100.2046477 | 100.0716572 | 99.93903459 | 99.80677843 |
| 180517A00059 | 5/17/2018 | 3.13 | 5/17/2022 | 5/17/2018 | 105.15991 | 105.1599097 | 105.1599097 | 105.1599097 | 104.8293245 | 103.0221228 | 101.2548944 | 99.5264667 | 97.83571165 |
| 180522A00004 | 5/22/2018 | 2.98 | 5/21/2021 | 5/22/2018 | 102.22133 | 102.2213308 | 102.2213308 | 102.2213308 | 102.1101401 | 101.2947767 | 100.4924284 | 99.7027854 | 98.92554728 |
| 180525A00005 | 5/25/2018 | 3.32 | 5/25/2028 | 5/25/2018 | 125.26945 | 125.2694545 | 125.2694545 | 125.2694545 | 119.2489674 | 111.2106633 | 103.7872589 | 96.92824588 | 90.58751592 |
| 180525A00016 | 5/25/2018 | 2.72 | 5/25/2021 | 5/25/2018 | 102.15215 | 102.1521469 | 102.1521469 | 102.1521469 | 102.0387399 | 101.2111861 | 100.3970387 | 99.59597367 | 98.80767744 |
| 180102A00020 | 1/2/2018 | 2.5 | 1/3/2023 | 1/2/2018 | 105.40483 | 105.4048289 | 105.4048289 | 105.4048289 | 104.8932276 | 102.4653208 | 100.1060752 | 97.81316609 | 95.58436122 |
| 180103A00027 | 1/3/2018 | 2.51 | 1/3/2023 | 1/3/2018 | 105.42935 | 105.4293476 | 105.4293476 | 105.4293476 | 104.9176926 | 102.4894827 | 100.1299406 | 97.83674144 | 95.60765275 |
| 180104A00013 | 1/4/2018 | 2.39 | 1/4/2023 | 1/4/2018 | 105.58843 | 105.5884254 | 105.5884254 | 105.5884254 | 105.0733697 | 102.6313092 | 100.2585493 | 97.9527351 | 95.71160631 |
| 180111A00016 | 1/11/2018 | 2.57 | 1/11/2023 | 1/11/2018 | 105.62674 | 105.6267383 | 105.6267383 | 105.6267383 | 105.1075413 | 102.6558969 | 100.2741633 | 97.95995239 | 95.71097198 |
| 180112A00025 | 1/12/2018 | 2.39 | 1/12/2021 | 1/12/2018 | 100.98247 | 100.9824722 | 100.9824722 | 100.9824722 | 100.9325307 | 100.4754151 | 100.0224428 | 99.5735574 | 99.12870375 |

Classification | Public

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 180123A00023 | 1/23/2018 | 2.43 | 1/29/2021 | 1/23/2018 | 101.10398 | 101.1039843 | 101.1039843 | 101.1039843 | 101.0478427 | 100.543651 | 100.044479 | 99.55025205 | 99.06089705 |
| 180123A00025 | 1/23/2018 | 2.44 | 3/1/2021 | 1/23/2018 | 101.29012 | 101.2901235 | 101.2901235 | 101.2901235 | 101.2204339 | 100.6306266 | 100.0476746 | 99.47145891 | 98.90186341 |
| 180212A00042 | 2/12/2018 | 2.57 | 2/11/2022 | 2/12/2018 | 103.80981 | 103.8098073 | 103.8098073 | 103.8098073 | 103.538512 | 101.9987106 | 100.4895983 | 99.01033075 | 97.56009409 |
| 180214A00003 | 2/14/2018 | 2.45 | 2/16/2021 | 2/14/2018 | 101.29478 | 101.2947843 | 101.2947843 | 101.2947843 | 101.2307356 | 100.6756239 | 100.126599 | 99.58356115 | 99.04641257 |
| 180222A00014 | 2/22/2018 | 2.68 | 2/19/2021 | 2/22/2018 | 101.37092 | 101.3709206 | 101.3709206 | 101.3709206 | 101.3056344 | 100.7429168 | 100.1864463 | 99.63611922 | 99.09183413 |
| 180226A00034 | 2/26/2018 | 2.82 | 6/27/2022 | 2/26/2018 | 104.86484 | 104.8648445 | 104.8648445 | 104.8648445 | 104.5069615 | 102.5918553 | 100.7214234 | 98.89435721 | 97.10939496 |
| 180227A00004 | 2/27/2018 | 2.67 | 3/26/2021 | 2/27/2018 | 101.59373 | 101.5937339 | 101.5937339 | 101.5937339 | 101.5114556 | 100.8520291 | 100.2011579 | 99.55867638 | 98.92442294 |
| 180227A00016 | 2/27/2018 | 2.66 | 2/26/2021 | 2/27/2018 | 101.40029 | 101.4002856 | 101.4002856 | 101.4002856 | 101.3319292 | 100.7499687 | 100.1746786 | 99.60594465 | 99.04365536 |
| 180307A00010 | 3/7/2018 | 2.68 | 2/16/2021 | 3/7/2018 | 101.35085 | 101.3508502 | 101.3508502 | 101.3508502 | 101.2868864 | 100.7324735 | 100.1841275 | 99.64174922 | 99.10524141 |
| 180308A00016 | 3/8/2018 | 2.88 | 6/1/2022 | 3/8/2018 | 104.81399 | 104.8139882 | 104.8139882 | 104.8139882 | 104.4741459 | 102.6302733 | 100.8279591 | 99.06602739 | 97.34334243 |
| 180313A00022 | 3/13/2018 | 2.54 | 3/12/2021 | 3/13/2018 | 101.50581 | 101.5058071 | 101.5058071 | 101.5058071 | 101.4304114 | 100.8085961 | 100.1944035 | 99.58769361 | 98.9883302 |
| 180406A00014 | 4/6/2018 | 2.95 | 4/6/2023 | 4/6/2018 | 107.18734 | 107.1873427 | 107.1873427 | 107.1873427 | 106.5842923 | 103.8800866 | 101.2585671 | 98.71667527 | 96.2514882 |
| 180411A00014 | 4/11/2018 | 2.88 | 6/27/2022 | 4/11/2018 | 104.9805 | 104.9804989 | 104.9804989 | 104.9804989 | 104.6224311 | 102.7061859 | 100.8346368 | 99.00647458 | 97.22043682 |
| 180425A00020 | 4/25/2018 | 3.11 | 10/25/2022 | 4/25/2018 | 106.35689 | 106.3568932 | 106.3568932 | 106.3568932 | 105.9022427 | 103.6502718 | 101.4575196 | 99.32198951 | 97.24177021 |
| 180430A00010 | 4/30/2018 | 2.88 | 1/15/2021 | 4/30/2018 | 101.22886 | 101.2288603 | 101.2288603 | 101.2288603 | 101.1777607 | 100.7117145 | 100.2499673 | 99.79245961 | 99.33913317 |
| 180430A00066 | 4/30/2018 | 2.84 | 3/30/2022 | 4/30/2018 | 104.5837 | 104.5837026 | 104.5837026 | 104.5837026 | 104.2831482 | 102.6064695 | 100.9648601 | 99.35728473 | 97.78274887 |
| 180430A00078 | 10/30/2018 | 3.24 | 10/30/2023 | 10/30/2018 | 109.65128 | 109.6512798 | 109.6512798 | 109.6512798 | 108.7892429 | 105.4959361 | 102.3205161 | 99.25803849 | 96.30380118 |
| 180510A00024 | 5/10/2018 | 2.77 | 5/10/2021 | 5/10/2018 | 102.08306 | 102.0830552 | 102.0830552 | 102.0830552 | 101.9773108 | 101.1912022 | 100.4172048 | 99.65503995 | 98.90443768 |
| 180514A00030 | 5/14/2018 | 2.9 | 5/16/2022 | 5/14/2018 | 105.04709 | 105.0470871 | 105.0470871 | 105.0470871 | 104.7162213 | 102.9071708 | 101.138181 | 99.4080713 | 97.71570594 |
| 160114A00015 | 1/14/2016 | 1.92 | 1/14/2021 | 1/14/2016 | 100.77651 | 100.7765102 | 100.7765102 | 100.7765102 | 100.7259016 | 100.263851 | 99.80604048 | 99.35241176 | 98.90290763 |
| 160301A00009 | 3/1/2016 | 2.06 | 3/1/2023 | 3/1/2016 | 104.60167 | 104.6016655 | 104.6016655 | 104.6016655 | 104.0402533 | 101.4656209 | 98.96776913 | 96.54394259 | 94.19150356 |
| 160328A00012 | 3/28/2016 | 1.85 | 3/28/2022 | 3/28/2016 | 102.90659 | 102.90659 | 102.90659 | 102.90659 | 102.6094936 | 100.9526731 | 99.33047349 | 97.74187499 | 96.18589794 |
| 160330A00042 | 3/30/2016 | 1.53 | 3/30/2021 | 3/30/2016 | 100.94825 | 100.9482524 | 100.9482524 | 100.9482524 | 100.8640933 | 100.1949373 | 99.53462523 | 98.88298277 | 98.23984014 |
| 160401A00016 | 4/1/2016 | 2.42 | 4/1/2025 | 4/1/2016 | 109.98888 | 109.988882 | 109.988882 | 109.988882 | 108.2398956 | 103.5760658 | 99.14104968 | 94.9223893 | 90.90837445 |
| 160407A00004 | 4/7/2016 | 1.41 | 4/7/2021 | 4/7/2016 | 100.89627 | 100.8962687 | 100.8962687 | 100.8962687 | 100.8080271 | 100.1171809 | 99.43577289 | 98.76361073 | 98.10050712 |
| 160415A00010 | 4/15/2016 | 1.66 | 4/15/2021 | 4/15/2016 | 101.00439 | 101.0043894 | 101.0043894 | 101.0043894 | 100.9121543 | 100.2002994 | 99.49846017 | 98.80642638 | 98.12399345 |
| 160505A00007 | 5/5/2016 | 1.45 | 5/5/2021 | 5/5/2016 | 101.02742 | 101.0274199 | 101.0274199 | 101.0274199 | 100.9247432 | 100.1568535 | 99.4006033 | 98.65572963 | 97.92197726 |
| 160510A00010 | 5/10/2016 | 1.6 | 5/3/2021 | 5/10/2016 | 101.02837 | 101.028366 | 101.028366 | 101.028366 | 100.9268987 | 100.1658765 | 99.41628471 | 98.67786741 | 97.95037625 |
| 160510A00012 | 5/10/2016 | 1.49 | 10/12/2021 | 5/10/2016 | 101.66741 | 101.6674116 | 101.6674116 | 101.6674116 | 101.4678476 | 100.2620404 | 99.0847221 | 97.9348928 | 96.81159887 |
| 160523A00013 | 5/23/2016 | 2.11 | 5/23/2023 | 5/23/2016 | 105.1474 | 105.1473981 | 105.1473981 | 105.1473981 | 104.5000719 | 101.6990485 | 98.98732022 | 96.361548 | 93.81853756 |
| 160606A00004 | 6/6/2016 | 2.43 | 6/8/2026 | 6/6/2016 | 112.50057 | 112.5005706 | 112.5005706 | 112.5005706 | 109.5527457 | 103.734699 | 98.26443582 | 93.11939678 | 88.27859467 |
| 160614A00009 | 6/14/2016 | 1.55 | 6/14/2021 | 6/14/2016 | 101.13212 | 101.1321196 | 101.1321196 | 101.1321196 | 101.0091842 | 100.1335515 | 99.27304015 | 98.42726115 | 97.59583857 |
| 160616A00006 | 6/16/2016 | 1.51 | 6/16/2021 | 6/16/2016 | 101.1037 | 101.103703 | 101.103703 | 101.103703 | 100.9797432 | 100.0988164 | 99.23319696 | 98.38248848 | 97.54630824 |

Classification | Public

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 160620A00003 | 6/20/2016 | 1.59 | 6/21/2021 | 6/20/2016 | 101.19301 | 101.1930084 | 101.1930084 | 101.1930084 | 101.0663929 | 100.1714572 | 99.29230561 | 98.42852329 | 97.57970997 |
| 160624A00063 | 6/24/2016 | 1.52 | 6/24/2022 | 6/24/2016 | 102.69437 | 102.6943714 | 102.6943714 | 102.6943714 | 102.3407306 | 100.4487529 | 98.60093529 | 96.79598562 | 95.03265814 |
| 160628A00031 | 6/28/2016 | 1.77 | 6/28/2023 | 6/28/2016 | 104.32853 | 104.3285265 | 104.3285265 | 104.3285265 | 103.642738 | 100.757958 | 97.96817903 | 95.26977104 | 92.65926302 |
| 160628A00049 | 6/28/2016 | 1.88 | 6/27/2025 | 6/28/2016 | 108.74189 | 108.7418919 | 108.7418919 | 108.7418919 | 106.798484 | 101.9131448 | 97.2797178 | 92.88394897 | 88.71246147 |
| 160628A00068 | 6/28/2016 | 1.28 | 6/28/2021 | 6/28/2016 | 101.07027 | 101.070272 | 101.070272 | 101.070272 | 100.9398006 | 100.0245628 | 99.12583068 | 98.24316126 | 97.37612721 |
| 160630A00012 | 6/30/2016 | 2.11 | 6/30/2025 | 6/30/2016 | 108.92694 | 108.9269361 | 108.9269361 | 108.9269361 | 106.9906241 | 102.1231488 | 97.50613754 | 93.12543796 | 88.96776778 |
| 160701A00019 | 7/1/2016 | 1.73 | 7/3/2023 | 7/1/2016 | 104.23082 | 104.2308212 | 104.2308212 | 104.2308212 | 103.5393712 | 100.6429864 | 97.8424206 | 95.13399579 | 92.51419567 |
| 160701A00039 | 7/1/2016 | 1.92 | 7/1/2026 | 7/1/2016 | 110.7748 | 110.7747985 | 110.7747985 | 110.7747985 | 107.736224 | 101.8700379 | 96.36026266 | 91.1834495 | 86.31780641 |
| 160706A00006 | 7/6/2016 | 1.47 | 7/6/2023 | 7/6/2016 | 104.00932 | 104.0093179 | 104.0093179 | 104.0093179 | 103.3114825 | 100.3983093 | 97.58205881 | 94.85899033 | 92.22552885 |
| 160706A00019 | 7/6/2016 | 1.41 | 7/6/2021 | 7/6/2016 | 101.07824 | 101.0782422 | 101.0782422 | 101.0782422 | 100.9436297 | 100.0085862 | 99.09077985 | 98.18973747 | 97.30500319 |
| 171211A00033 | 12/11/2017 | 2.26 | 12/12/2022 | 12/11/2017 | 105.13205 | 105.1320467 | 105.1320467 | 105.1320467 | 104.6378643 | 102.2621159 | 99.95224033 | 97.70605186 | 95.52145008 |
| 171211A00045 | 12/11/2017 | 2.32 | 6/11/2021 | 12/11/2017 | 101.79437 | 101.7943691 | 101.7943691 | 101.7943691 | 101.6726127 | 100.8019785 | 99.94622323 | 99.10496775 | 98.27784573 |
| 180102A00004 | 1/2/2018 | 2.28 | 1/8/2021 | 1/2/2018 | 100.90947 | 100.9094739 | 100.9094739 | 100.9094739 | 100.8610035 | 100.415087 | 99.973113 | 99.53502928 | 99.10078454 |
| 180103A00007 | 1/3/2018 | 2.44 | 1/7/2022 | 1/3/2018 | 103.14956 | 103.1495584 | 103.1495584 | 103.1495584 | 102.8996979 | 101.4650579 | 100.0574862 | 98.67628364 | 97.32077439 |
| 180116A00015 | 1/16/2018 | 3.06 | 1/18/2028 | 1/16/2018 | 120.62262 | 120.6226211 | 120.6226211 | 120.6226211 | 115.2869726 | 107.7896306 | 100.8438364 | 94.40596861 | 88.43607134 |
| 180124A00019 | 1/24/2018 | 2.41 | 1/24/2022 | 1/24/2018 | 103.44707 | 103.4470718 | 103.4470718 | 103.4470718 | 103.1866959 | 101.7008713 | 100.2439996 | 98.81530862 | 97.41405334 |
| 180126A00029 | 1/26/2018 | 2.88 | 1/27/2025 | 1/26/2018 | 111.70041 | 111.700407 | 111.700407 | 111.700407 | 110.0721455 | 105.5401252 | 101.2228976 | 97.10915059 | 93.18822703 |
| 180129A00004 | 1/29/2018 | 2.63 | 1/31/2022 | 1/29/2018 | 103.56743 | 103.5674257 | 103.5674257 | 103.5674257 | 103.3038189 | 101.80274 | 100.3312003 | 98.88840441 | 97.47358487 |
| 180202A00011 | 2/2/2018 | 2.45 | 2/2/2021 | 2/2/2018 | 101.20458 | 101.2045801 | 101.2045801 | 101.2045801 | 101.1467127 | 100.6304253 | 100.1193991 | 99.61355403 | 99.11281159 |
| 180207A00022 | 2/7/2018 | 2.79 | 2/7/2023 | 2/7/2018 | 106.35646 | 106.3564584 | 106.3564584 | 106.3564584 | 105.8113318 | 103.2775537 | 100.8179014 | 98.42977062 | 96.11066527 |
| 180222A00023 | 2/22/2018 | 2.84 | 2/22/2022 | 2/22/2018 | 104.04079 | 104.040789 | 104.040789 | 104.040789 | 103.7634855 | 102.1938408 | 100.655743 | 99.14830987 | 97.67069185 |
| 180302A00020 | 3/2/2018 | 2.79 | 3/17/2022 | 3/2/2018 | 104.10415 | 104.1041497 | 104.1041497 | 104.1041497 | 103.8130466 | 102.1803027 | 100.58117 | 99.01467541 | 97.47988363 |
| 180402A00041 | 4/2/2018 | 2.77 | 4/6/2021 | 4/2/2018 | 101.73645 | 101.7364474 | 101.7364474 | 101.7364474 | 101.6485201 | 100.9584069 | 100.2776535 | 99.60607021 | 98.94347272 |
| 180403A00006 | 4/3/2018 | 3.07 | 4/3/2028 | 4/3/2018 | 122.87383 | 122.8738297 | 122.8738297 | 122.8738297 | 117.1197088 | 109.295616 | 102.0620388 | 95.3710848 | 89.17899155 |
| 180403A00009 | 4/3/2018 | 2.91 | 4/3/2025 | 4/3/2018 | 113.19844 | 113.1984403 | 113.1984403 | 113.1984403 | 111.4130277 | 106.6433889 | 102.107722 | 97.79326894 | 93.68803909 |
| 180403A00041 | 4/3/2018 | 2.91 | 4/3/2025 | 4/3/2018 | 113.19844 | 113.1984403 | 113.1984403 | 113.1984403 | 111.4130277 | 106.6433889 | 102.107722 | 97.79326894 | 93.68803909 |
| 180410A00016 | 4/10/2018 | 2.89 | 4/11/2022 | 4/10/2018 | 104.44804 | 104.4480412 | 104.4480412 | 104.4480412 | 104.1412982 | 102.4382104 | 100.7711819 | 99.13913159 | 97.5410215 |
| 180411A00001 | 4/11/2018 | 2.84 | 1/25/2022 | 4/11/2018 | 103.84447 | 103.8444694 | 103.8444694 | 103.8444694 | 103.5838667 | 102.0964831 | 100.6380627 | 99.20783332 | 97.80504983 |
| 180412A00034 | 4/12/2018 | 3.23 | 4/15/2030 | 4/12/2018 | 130.45979 | 130.4597924 | 130.4597924 | 130.4597924 | 120.9872195 | 111.1285402 | 102.1813341 | 94.05576475 | 86.67131283 |
| 180416A00015 | 4/16/2018 | 2.79 | 4/14/2022 | 4/16/2018 | 104.6105 | 104.6105034 | 104.6105034 | 104.6105034 | 104.3006224 | 102.5824025 | 100.9007792 | 99.2546481 | 97.64294981 |
| 180416A00016 | 4/16/2018 | 2.85 | 4/17/2023 | 4/16/2018 | 107.49863 | 107.4986302 | 107.4986302 | 107.4986302 | 106.8806679 | 104.1311734 | 101.4667197 | 98.88412175 | 96.38033828 |
| 180427A00010 | 4/27/2018 | 2.95 | 4/27/2023 | 4/27/2018 | 107.85151 | 107.8515137 | 107.8515137 | 107.8515137 | 107.22227 | 104.4404662 | 101.7453817 | 99.13373981 | 96.60241319 |
| 180503A00040 | 5/3/2018 | 3.3 | 5/5/2025 | 5/3/2018 | 114.35583 | 114.3558315 | 114.3558315 | 114.3558315 | 112.5074924 | 107.6546407 | 103.0425798 | 98.65803012 | 94.48852003 |

Classification | Public

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 180507A00025 | 5/7/2018 | 2.92 | 5/7/2021 | 5/7/2018 | 102.06885 | 102.068846 | 102.068846 | 102.068846 | 101.9648374 | 101.1884669 | 100.4239095 | 99.67089694 | 98.9291691 |
| 160811A00014 | 8/11/2016 | 1.18 | 8/11/2020 | 8/11/2016 | 100.0325 | 100.0324973 | 100.0324973 | 100.0324973 | 100.030224 | 99.99969541 | 99.96920198 | 99.93874367 | 99.9083204 |
| 160906A00017 | 9/6/2016 | 1.65 | 9/7/2021 | 9/6/2016 | 101.53565 | 101.5356539 | 101.5356539 | 101.5356539 | 101.3611707 | 100.253424 | 99.16976895 | 98.10942652 | 97.07165091 |
| 160913A00021 | 9/13/2016 | 1.52 | 9/14/2020 | 9/13/2016 | 100.15694 | 100.1569407 | 100.1569407 | 100.1569407 | 100.1463025 | 100.0216572 | 99.89733593 | 99.77333736 | 99.64966023 |
| 160923A00032 | 9/23/2016 | 1.67 | 9/25/2023 | 9/23/2016 | 104.9507 | 104.9506973 | 104.9506973 | 104.9506973 | 104.146843 | 101.0068115 | 97.97744106 | 95.05418597 | 92.23271694 |
| 160929A00004 | 9/29/2016 | 1.74 | 9/29/2022 | 9/29/2016 | 103.15837 | 103.1583722 | 103.1583722 | 103.1583722 | 102.7308231 | 100.5834432 | 98.49133103 | 96.45267327 | 94.4657311 |
| 161006A00010 | 10/6/2016 | 1.35 | 10/6/2020 | 10/6/2016 | 100.22924 | 100.2292369 | 100.2292369 | 100.2292369 | 100.2116951 | 100.0259168 | 99.84083569 | 99.65644798 | 99.47274968 |
| 161014A00006 | 10/14/2016 | 1.74 | 10/14/2021 | 10/14/2016 | 101.78613 | 101.7861306 | 101.7861306 | 101.7861306 | 101.5856595 | 100.3766597 | 99.19629607 | 98.04356067 | 96.91749237 |
| 161027A00013 | 10/28/2016 | 1.66 | 3/15/2021 | 10/28/2016 | 100.88369 | 100.8836929 | 100.8836929 | 100.8836929 | 100.8071799 | 100.1804391 | 99.5614761 | 98.95014662 | 98.34630998 |
| 161214A00023 | 12/14/2016 | 3.3 | 12/15/2031 | 12/14/2016 | 136.45932 | 136.459316 | 136.459316 | 135.2894383 | 123.1318223 | 111.6934822 | 101.4671583 | 92.3164968 | 84.1211836 |
| 161215A00001 | 12/15/2016 | 2.5 | 12/15/2021 | 12/15/2016 | 103.08112 | 103.0811241 | 103.0811241 | 103.0811241 | 102.8435642 | 101.4705347 | 100.122392 | 98.79851777 | 97.49831351 |
| 161223A00028 | 12/23/2016 | 2.23 | 12/23/2021 | 12/23/2016 | 102.98878 | 102.98878 | 102.98878 | 102.98878 | 102.7464482 | 101.3490732 | 99.9774325 | 98.630877 | 97.30877887 |
| 170111A00013 | 1/11/2017 | 3.4 | 1/10/2031 | 1/11/2017 | 132.26306 | 132.2630575 | 132.2630575 | 132.2373629 | 121.3625321 | 110.939755 | 101.5391856 | 93.05407043 | 85.3893502 |
| 170117A00037 | 1/17/2017 | 2 | 1/18/2022 | 1/17/2017 | 102.79904 | 102.7990376 | 102.7990376 | 102.7990376 | 102.5427511 | 101.0778706 | 99.64124498 | 98.23212843 | 96.84980102 |
| 170117A00045 | 1/17/2017 | 2.21 | 1/18/2022 | 1/17/2017 | 102.85903 | 102.8590293 | 102.8590293 | 102.8590293 | 102.6034509 | 101.1422216 | 99.70911353 | 98.30338592 | 96.92432361 |
| 170119A00006 | 1/19/2017 | 2.85 | 1/21/2025 | 1/19/2017 | 111.5225 | 111.5225038 | 111.5225038 | 111.5225038 | 109.9071384 | 105.3943666 | 101.094789 | 96.99721581 | 93.09110281 |
| 170120A00010 | 1/20/2017 | 3.71 | 1/22/2036 | 1/20/2017 | 152.18992 | 152.1899233 | 152.1899233 | 144.9748066 | 128.3456231 | 113.4456207 | 100.5759219 | 89.44249169 | 79.79559483 |
| 170130A00031 | 1/30/2017 | 2.96 | 7/30/2025 | 1/30/2017 | 113.35071 | 113.3507099 | 113.3507099 | 113.3507099 | 111.3155947 | 106.2652742 | 101.477308 | 96.93667971 | 92.62930996 |
| 170203A00031 | 2/3/2017 | 2.09 | 2/3/2022 | 2/3/2017 | 103.02037 | 103.0203675 | 103.0203675 | 103.0203675 | 102.7548103 | 101.2449445 | 99.76495247 | 98.31402369 | 96.89137662 |
| 170207A00013 | 2/7/2017 | 2.05 | 2/7/2022 | 2/7/2017 | 102.9804 | 102.9803986 | 102.9803986 | 102.9803986 | 102.7125017 | 101.1911671 | 99.70005078 | 98.23832705 | 96.80519992 |
| 170215A00034 | 2/15/2017 | 2.69 | 12/18/2020 | 2/15/2017 | 100.95008 | 100.9500775 | 100.9500775 | 100.9500775 | 100.9086723 | 100.5204606 | 100.1352429 | 99.75298463 | 99.3736516 |
| 170215A00035 | 2/15/2017 | 2.51 | 5/7/2021 | 2/15/2017 | 101.75031 | 101.7503096 | 101.7503096 | 101.7503096 | 101.6464604 | 100.8714525 | 100.108243 | 99.35656413 | 98.61615577 |
| 170224A00019 | 2/24/2017 | 2.21 | 2/24/2022 | 2/24/2017 | 103.05443 | 103.0544254 | 103.0544254 | 103.0544254 | 102.7771643 | 101.209738 | 99.67389563 | 98.16875086 | 96.69345039 |
| 170313A00034 | 3/13/2017 | 3.31 | 3/15/2027 | 3/13/2017 | 119.97023 | 119.9702349 | 119.9702349 | 119.9702349 | 115.891797 | 109.1584553 | 102.870086 | 96.99482219 | 91.50324359 |
| 170316A00018 | 3/16/2017 | 2.8 | 3/18/2024 | 3/16/2017 | 109.17237 | 109.1723674 | 109.1723674 | 109.1723674 | 108.1088444 | 104.4503389 | 100.9362267 | 97.55999825 | 94.31547709 |
| 180529A00056 | 5/29/2018 | 3 | 5/26/2023 | 5/29/2018 | 107.69531 | 107.6953062 | 107.6953062 | 107.6953062 | 107.0378755 | 104.1927412 | 101.4382495 | 98.77101994 | 96.187818 |
| 180530A00038 | 5/30/2018 | 2.77 | 5/28/2021 | 5/30/2018 | 102.09056 | 102.0905612 | 102.0905612 | 102.0905612 | 101.9759084 | 101.1421093 | 100.3219227 | 99.51501745 | 98.72107274 |
| 180531A00015 | 5/31/2018 | 2.95 | 5/31/2023 | 5/31/2018 | 107.58964 | 107.5896391 | 107.5896391 | 107.5896391 | 106.9270453 | 104.070266 | 101.3048894 | 98.62751433 | 96.03488471 |
| 180601A00018 | 6/1/2018 | 2.87 | 6/1/2023 | 6/1/2018 | 107.89643 | 107.8964347 | 107.8964347 | 107.8964347 | 107.2287331 | 104.3529829 | 101.5695384 | 98.87495398 | 96.26593105 |
| 180614A00006 | 6/14/2018 | 2.94 | 6/14/2021 | 6/14/2018 | 102.35837 | 102.3583695 | 102.3583695 | 102.3583695 | 102.2347167 | 101.3532001 | 100.4868761 | 99.63535433 | 98.79825737 |
| 180618A00026 | 6/18/2018 | 3.05 | 4/13/2023 | 6/18/2018 | 107.51119 | 107.5111925 | 107.5111925 | 107.5111925 | 106.9001128 | 104.1724129 | 101.5285745 | 98.96547567 | 96.48013449 |
| 180620A00038 | 6/20/2018 | 3.4 | 6/20/2028 | 6/20/2018 | 124.45996 | 124.4599559 | 124.4599559 | 124.4599559 | 118.4108069 | 110.4062057 | 103.0170762 | 96.19260204 | 89.88641363 |
| 180625A00040 | 6/25/2018 | 3 | 6/24/2022 | 6/25/2018 | 105.18944 | 105.1894373 | 105.1894373 | 105.1894373 | 104.8331171 | 102.9230171 | 101.0572875 | 99.23463341 | 97.45380651 |

Classification | Public

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 180703A00015 | 7/3/2018 | 3.06 | 7/3/2023 | 7/3/2018 | 108.15507 | 108.1550695 | 108.1550695 | 108.1550695 | 107.4524816 | 104.4982163 | 101.641202 | 98.87771359 | 96.20418949 |
| 180713A00030 | 7/13/2018 | 2.8 | 7/13/2021 | 7/13/2018 | 102.58288 | 102.5828788 | 102.5828788 | 102.5828788 | 102.4430252 | 101.4791699 | 100.5334342 | 99.60531019 | 98.69430903 |
| 180713A00035 | 7/13/2018 | 3.02 | 7/13/2022 | 7/13/2018 | 105.37088 | 105.3708773 | 105.3708773 | 105.3708773 | 105.0002941 | 103.037576 | 101.1216134 | 99.25100619 | 97.42440571 |
| 180719A00059 | 7/19/2018 | 2.98 | 7/19/2021 | 7/19/2018 | 102.6569 | 102.6568958 | 102.6568958 | 102.6568958 | 102.5139027 | 101.5353332 | 100.5754356 | 99.63367887 | 98.70955193 |
| 180723A00026 | 10/23/2018 | 3.2 | 10/23/2023 | 10/23/2018 | 109.46413 | 109.4641299 | 109.4641299 | 109.4641299 | 108.6122042 | 105.3403344 | 102.1850452 | 99.14147183 | 96.20498595 |
| 180726A00032 | 7/26/2018 | 2.95 | 10/26/2020 | 7/26/2018 | 100.65348 | 100.6534837 | 100.6534837 | 100.6534837 | 100.62914 | 100.3877446 | 100.1475112 | 99.9084314 | 99.67049688 |
| 180730A00002 | 7/30/2018 | 3.03 | 7/30/2021 | 7/30/2018 | 102.78013 | 102.7801262 | 102.7801262 | 102.7801262 | 102.6308331 | 101.6217608 | 100.6325087 | 99.66249715 | 98.7111687 |
| 180730A00081 | 7/30/2018 | 3.5 | 7/28/2028 | 7/30/2018 | 125.57967 | 125.5796743 | 125.5796743 | 125.5796743 | 119.3455836 | 111.2100705 | 103.7068423 | 96.78309433 | 90.39069813 |
| 180808A00009 | 8/8/2018 | 3.12 | 8/7/2023 | 8/8/2018 | 108.60473 | 108.6047257 | 108.6047257 | 108.6047257 | 107.8572908 | 104.8043271 | 101.8547541 | 99.00449036 | 96.24964027 |
| 180813A00026 | 8/13/2018 | 2.87 | 8/11/2023 | 8/13/2018 | 108.43726 | 108.4372643 | 108.4372643 | 108.4372643 | 107.6814582 | 104.6073285 | 101.6378763 | 98.76894744 | 95.99657759 |
| 180815A00009 | 8/15/2018 | 2.93 | 8/16/2021 | 8/15/2018 | 102.80435 | 102.8043499 | 102.8043499 | 102.8043499 | 102.6438504 | 101.5883436 | 100.5545293 | 99.54174354 | 98.54934901 |
| 180815A00024 | 8/15/2018 | 2.71 | 8/17/2020 | 8/15/2018 | 100.12247 | 100.1224659 | 100.1224659 | 100.1224659 | 100.1189481 | 100.0717109 | 100.0245359 | 99.97742311 | 99.93037232 |
| 180827A00020 | 8/27/2018 | 3.21 | 8/27/2025 | 8/27/2018 | 114.83093 | 114.8309313 | 114.8309313 | 114.8309313 | 112.7181912 | 107.5598714 | 102.6722343 | 98.03961955 | 93.64735557 |
| 180827A00060 | 8/27/2018 | 2.9 | 8/27/2021 | 8/27/2018 | 102.85274 | 102.8527358 | 102.8527358 | 102.8527358 | 102.6849043 | 101.5992098 | 100.5364457 | 99.49589108 | 98.47685492 |
| 180830A00005 | 8/30/2018 | 2.88 | 8/28/2020 | 8/30/2018 | 100.20362 | 100.203624 | 100.203624 | 100.203624 | 100.1978388 | 100.1201658 | 100.0426176 | 99.96519394 | 99.88789448 |
| 180904A00012 | 9/4/2018 | 3.35 | 9/4/2030 | 9/4/2018 | 132.89436 | 132.8943568 | 132.8943568 | 132.8943568 | 122.5629126 | 112.2812661 | 102.9815736 | 94.56391554 | 86.93905333 |
| 180515A00018 | 5/15/2018 | 2.98 | 5/14/2021 | 5/15/2018 | 102.16044 | 102.1604432 | 102.1604432 | 102.1604432 | 102.0528508 | 101.2570216 | 100.4736005 | 99.70229872 | 98.94283642 |
| 180522A00035 | 5/22/2018 | 2.83 | 5/21/2021 | 5/22/2018 | 102.21303 | 102.2130317 | 102.2130317 | 102.2130317 | 102.1016255 | 101.2847643 | 100.4809651 | 99.68991592 | 98.91131506 |
| 180522A00039 | 5/22/2018 | 3.43 | 5/22/2028 | 5/22/2018 | 126.11033 | 126.1103307 | 126.1103307 | 126.1103307 | 120.0879374 | 112.0253609 | 104.5782793 | 97.69620008 | 91.33302648 |
| 180524A00029 | 5/24/2018 | 2.74 | 5/24/2021 | 5/24/2018 | 102.16141 | 102.1614129 | 102.1614129 | 102.1614129 | 102.0485092 | 101.2236544 | 100.4121193 | 99.61358309 | 98.8277351 |
| 180529A00014 | 5/29/2018 | 2.83 | 5/30/2023 | 5/29/2018 | 107.76662 | 107.7666228 | 107.7666228 | 107.7666228 | 107.1015391 | 104.2330389 | 101.4564669 | 98.76839296 | 96.16553352 |
| 180530A00005 | 5/30/2018 | 2.78 | 5/30/2023 | 5/30/2018 | 107.6234 | 107.6234014 | 107.6234014 | 107.6234014 | 106.9587067 | 104.0922599 | 101.3176917 | 98.63157336 | 96.0306229 |
| 180530A00024 | 5/30/2018 | 3.44 | 5/30/2029 | 5/30/2018 | 127.69429 | 127.694286 | 127.694286 | 127.694286 | 120.0247249 | 111.0931913 | 102.9186114 | 95.43236825 | 88.57240614 |
| 180531A00014 | 5/31/2018 | 2.8 | 5/31/2023 | 5/31/2018 | 107.68812 | 107.6881196 | 107.6881196 | 107.6881196 | 107.0221513 | 104.152128 | 101.3741675 | 98.68483576 | 96.08084557 |
| 180604A00045 | 6/4/2018 | 2.87 | 6/4/2021 | 6/4/2018 | 102.22458 | 102.2245762 | 102.2245762 | 102.2245762 | 102.1062348 | 101.2526858 | 100.4133885 | 99.58798802 | 98.77614127 |
| 180618A00011 | 6/18/2018 | 3.02 | 6/20/2022 | 6/18/2018 | 105.19778 | 105.1977751 | 105.1977751 | 105.1977751 | 104.8442175 | 102.9449785 | 101.0896263 | 99.27688716 | 97.50553225 |
| 180619A00021 | 6/19/2018 | 3.24 | 6/19/2028 | 6/19/2018 | 124.85268 | 124.8526823 | 124.8526823 | 124.8526823 | 118.7304587 | 110.6472145 | 103.1876964 | 96.30026838 | 89.9378237 |
| 180619A00023 | 6/19/2018 | 3.04 | 6/19/2023 | 6/19/2018 | 107.99036 | 107.990356 | 107.990356 | 107.990356 | 107.3046616 | 104.3905168 | 101.5711491 | 98.84297244 | 96.20255625 |
| 180621A00052 | 6/25/2018 | 3.35 | 6/23/2023 | 6/25/2018 | 108.92667 | 108.9266726 | 108.9266726 | 108.9266726 | 108.2337262 | 105.2950411 | 102.4521569 | 99.70143763 | 97.03940578 |
| 180622A00018 | 6/22/2018 | 2.92 | 6/22/2023 | 6/22/2018 | 108.20268 | 108.2026803 | 108.2026803 | 108.2026803 | 107.5096347 | 104.5719973 | 101.7303876 | 98.98115374 | 96.3208035 |
| 180626A00045 | 6/26/2018 | 2.91 | 6/25/2021 | 6/26/2018 | 102.41237 | 102.4123673 | 102.4123673 | 102.4123673 | 102.2829268 | 101.3711043 | 100.4755209 | 99.59574535 | 98.73136176 |
| 180627A00017 | 6/27/2018 | 2.9 | 6/25/2021 | 6/27/2018 | 102.40324 | 102.4032405 | 102.4032405 | 102.4032405 | 102.2738056 | 101.3620283 | 100.4664894 | 99.58675787 | 98.72241774 |
| 180627A00026 | 6/27/2018 | 2.87 | 6/27/2023 | 6/27/2018 | 108.09433 | 108.0943332 | 108.0943332 | 108.0943332 | 107.395763 | 104.4460557 | 101.5932061 | 98.83351474 | 96.16344426 |

Classification | Public

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 180628A00027 | 6/28/2018 | 2.72 | 6/28/2021 | 6/28/2018 | 102.39748 | 102.3974795 | 102.3974795 | 102.3974795 | 102.2661897 | 101.3443281 | 100.4390558 | 99.5499281 | 98.67651595 |
| 180629A00008 | 6/29/2018 | 3.02 | 6/29/2023 | 6/29/2018 | 108.00701 | 108.0070114 | 108.0070114 | 108.0070114 | 107.309697 | 104.3681931 | 101.5231946 | 98.77101799 | 96.10814114 |
| 180702A00012 | 7/2/2018 | 3.01 | 7/3/2023 | 7/2/2018 | 108.00754 | 108.0075414 | 108.0075414 | 108.0075414 | 107.3053722 | 104.3532828 | 101.4983907 | 98.73697232 | 96.06546791 |
| 180705A00060 | 7/5/2018 | 3 | 7/6/2022 | 7/5/2018 | 105.27907 | 105.2790711 | 105.2790711 | 105.2790711 | 104.9139185 | 102.9706472 | 101.0732396 | 99.22033556 | 97.41062444 |
| 180705A00062 | 7/5/2018 | 3.04 | 7/6/2023 | 7/5/2018 | 108.11877 | 108.1187659 | 108.1187659 | 108.1187659 | 107.4125826 | 104.4509752 | 101.5871248 | 98.81727638 | 96.13784034 |
| 180716A00054 | 7/16/2018 | 3.59 | 7/16/2040 | 7/16/2018 | 169.45777 | 169.4577672 | 169.4577672 | 155.1564821 | 133.1273494 | 114.3704785 | 98.76999396 | 85.76067087 | 74.88226212 |
| 180717A00047 | 7/17/2018 | 3.3 | 9/17/2025 | 7/17/2018 | 115.46226 | 115.4622571 | 115.4622571 | 115.4622571 | 113.2920153 | 108.0629588 | 103.110681 | 98.41902518 | 93.97286505 |
| 170322A00010 | 3/22/2017 | 2.11 | 3/22/2022 | 3/22/2017 | 103.30992 | 103.3099167 | 103.3099167 | 103.3099167 | 103.0158765 | 101.3715022 | 99.76125979 | 98.18415227 | 96.63922139 |
| 170322A00015 | 3/22/2017 | 2.31 | 3/22/2022 | 3/22/2017 | 103.34209 | 103.3420889 | 103.3420889 | 103.3420889 | 103.0489981 | 101.4094971 | 99.80394439 | 98.2313503 | 96.6907636 |
| 170323A00009 | 3/23/2017 | 2.1 | 3/23/2022 | 3/23/2017 | 103.29879 | 103.2987941 | 103.2987941 | 103.2987941 | 103.004169 | 101.3572334 | 99.74451956 | 98.16502658 | 96.6177924 |
| 170331A00004 | 3/31/2017 | 2.12 | 3/31/2021 | 3/31/2017 | 101.25637 | 101.2563742 | 101.2563742 | 101.2563742 | 101.1717442 | 100.499892 | 99.83693225 | 99.18268943 | 98.53699263 |
| 170424A00009 | 4/24/2017 | 2.04 | 4/25/2022 | 4/24/2017 | 103.3746 | 103.3745977 | 103.3745977 | 103.3745977 | 103.0596546 | 101.3222857 | 99.6224508 | 97.95899914 | 96.33082776 |
| 170515A00039 | 5/15/2017 | 2.58 | 5/15/2024 | 5/15/2017 | 108.73049 | 108.7304896 | 108.7304896 | 108.7304896 | 107.5778605 | 103.7748234 | 100.1275132 | 96.6287071 | 93.27155904 |
| 170516A00015 | 5/16/2017 | 1.88 | 5/17/2021 | 5/16/2017 | 101.41804 | 101.4180365 | 101.4180365 | 101.4180365 | 101.3090808 | 100.5067106 | 99.71701761 | 98.93970311 | 98.17447756 |
| 170530A00005 | 5/30/2017 | 1.99 | 5/28/2021 | 5/30/2017 | 101.43919 | 101.4391933 | 101.4391933 | 101.4391933 | 101.3248959 | 100.4940669 | 99.67681635 | 98.87281361 | 98.08173862 |
| 170530A00027 | 5/30/2017 | 1.97 | 5/31/2022 | 5/30/2017 | 103.43656 | 103.4365562 | 103.4365562 | 103.4365562 | 103.0983638 | 101.2645894 | 99.47223428 | 97.72012514 | 96.00712932 |
| 170609A00006 | 6/9/2017 | 1.89 | 12/9/2021 | 6/9/2017 | 102.43868 | 102.4386836 | 102.4386836 | 102.4386836 | 102.2042167 | 100.848016 | 99.51619938 | 98.20816609 | 96.92333455 |
| 170613A00007 | 6/13/2017 | 2.01 | 6/11/2021 | 6/13/2017 | 101.52347 | 101.5234658 | 101.5234658 | 101.5234658 | 101.4018661 | 100.5325205 | 99.6780383 | 98.83804079 | 98.01216188 |
| 170622A00036 | 6/22/2017 | 3.23 | 6/22/2032 | 6/22/2017 | 134.6403 | 134.6402966 | 134.6402966 | 132.7889922 | 120.3684935 | 108.7774447 | 98.46120901 | 89.27107305 | 81.07643768 |
| 170626A00017 | 6/26/2017 | 1.8 | 6/28/2021 | 6/26/2017 | 101.54954 | 101.5495414 | 101.5495414 | 101.5495414 | 101.4187744 | 100.5011447 | 99.60005086 | 98.71504928 | 97.84571203 |
| 170706A00013 | 7/6/2017 | 2.27 | 7/6/2022 | 7/6/2017 | 103.8538 | 103.8537999 | 103.8537999 | 103.8537999 | 103.490961 | 101.5618968 | 99.67842276 | 97.83918659 | 96.04288501 |
| 170726A00034 | 7/26/2017 | 2.05 | 7/26/2021 | 7/26/2017 | 101.77102 | 101.7710232 | 101.7710232 | 101.7710232 | 101.6246862 | 100.6319271 | 99.65849649 | 98.70383427 | 97.76740163 |
| 170728A00030 | 7/28/2017 | 2.18 | 7/27/2022 | 7/28/2017 | 103.78765 | 103.7876489 | 103.7876489 | 103.7876489 | 103.4091796 | 101.4256727 | 99.49037164 | 97.60180485 | 95.75855577 |
| 170731A00012 | 7/31/2017 | 1.82 | 8/2/2021 | 7/31/2017 | 101.73339 | 101.7333884 | 101.7333884 | 101.7333884 | 101.5825614 | 100.5686883 | 99.5749631 | 98.60079025 | 97.64559731 |
| 170731A00029 | 7/31/2017 | 2.34 | 7/31/2023 | 7/31/2017 | 106.18865 | 106.1886512 | 106.1886512 | 106.1886512 | 105.4573701 | 102.4594321 | 99.56288644 | 96.76374498 | 94.05819974 |
| 170803A00005 | 8/3/2017 | 1.67 | 8/3/2020 | 8/3/2017 | 100.01295 | 100.0129458 | 100.0129458 | 100.0129458 | 100.0123255 | 100.0039948 | 99.99567176 | 99.98735648 | 99.97904894 |
| 170803A00020 | 8/3/2017 | 2.84 | 8/3/2027 | 8/3/2017 | 117.81825 | 117.8182493 | 117.8182493 | 117.8182493 | 113.2056933 | 106.2031316 | 99.68922051 | 93.62721474 | 87.9833147 |
| 170803A00021 | 8/3/2017 | 2.5 | 8/5/2024 | 8/3/2017 | 108.9213 | 108.9213031 | 108.9213031 | 108.9213031 | 107.6318215 | 103.6120034 | 99.76565661 | 96.08437613 | 92.56020964 |
| 170804A00020 | 8/4/2017 | 2.13 | 8/1/2022 | 8/4/2017 | 103.71253 | 103.7125259 | 103.7125259 | 103.7125259 | 103.3304028 | 101.3345511 | 99.38750093 | 97.48775282 | 95.63386382 |
| 170818A00004 | 8/18/2017 | 1.95 | 8/18/2021 | 8/18/2017 | 101.77812 | 101.7781194 | 101.7781194 | 101.7781194 | 101.6170515 | 100.5619323 | 99.52864459 | 98.51651624 | 97.52490225 |
| 170822A00017 | 8/22/2017 | 2.11 | 8/22/2022 | 8/22/2017 | 103.77752 | 103.7775231 | 103.7775231 | 103.7775231 | 103.3788014 | 101.3269158 | 99.3260398 | 97.37456911 | 95.47096213 |
| 180123A00026 | 1/23/2018 | 2.57 | 1/14/2022 | 1/23/2018 | 103.38325 | 103.3832525 | 103.3832525 | 103.3832525 | 103.1292442 | 101.6743044 | 100.2471623 | 98.84709082 | 97.47338751 |
| 180124A00020 | 1/24/2018 | 2.53 | 1/24/2023 | 1/24/2018 | 106.06654 | 106.0665387 | 106.0665387 | 106.0665387 | 105.5325289 | 103.0316691 | 100.603259 | 98.24478255 | 95.95382691 |

Classification | Public

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 180125A00022 | 1/25/2018 | 2.69 | 1/25/2023 | 1/25/2018 | 106.01623 | 106.0162296 | 106.0162296 | 106.0162296 | 105.4837187 | 102.9904568 | 100.5693163 | 98.21779595 | 95.93349677 |
| 180207A00012 | 2/7/2018 | 2.53 | 2/7/2022 | 2/7/2018 | 103.72102 | 103.7210167 | 103.7210167 | 103.7210167 | 103.4522249 | 101.9249617 | 100.4280211 | 98.96057483 | 97.521824 |
| 180223A00026 | 2/23/2018 | 2.92 | 12/15/2022 | 2/23/2018 | 106.29683 | 106.2968345 | 106.2968345 | 106.2968345 | 105.7996577 | 103.410816 | 101.0881569 | 98.8294841 | 96.63268667 |
| 180308A00010 | 3/8/2018 | 2.72 | 4/8/2021 | 3/8/2018 | 101.71554 | 101.7155377 | 101.7155377 | 101.7155377 | 101.6265881 | 100.9310743 | 100.2450707 | 99.56838318 | 98.90082268 |
| 180308A00011 | 3/8/2018 | 2.9 | 9/15/2022 | 3/8/2018 | 105.59491 | 105.5949115 | 105.5949115 | 105.5949115 | 105.1739241 | 103.0377962 | 100.9558026 | 98.92619595 | 96.94729962 |
| 180314A00005 | 3/14/2018 | 2.74 | 3/15/2021 | 3/14/2018 | 101.56407 | 101.5640683 | 101.5640683 | 101.5640683 | 101.4872895 | 100.8581268 | 100.2367633 | 99.62305439 | 99.01685912 |
| 180316A00010 | 3/16/2018 | 2.58 | 3/16/2021 | 3/16/2018 | 101.55804 | 101.5580375 | 101.5580375 | 101.5580375 | 101.4806211 | 100.8476248 | 100.2225246 | 99.60517303 | 98.99542653 |
| 180320A00007 | 3/20/2018 | 2.92 | 3/21/2022 | 3/20/2018 | 104.34717 | 104.3471723 | 104.3471723 | 104.3471723 | 104.053351 | 102.4079055 | 100.7964716 | 99.21805957 | 97.67171779 |
| 180321A00005 | 3/21/2018 | 2.65 | 3/22/2021 | 3/21/2018 | 101.64455 | 101.6445458 | 101.6445458 | 101.6445458 | 101.5640944 | 100.9142953 | 100.2728072 | 99.63947111 | 99.01413223 |
| 180412A00016 | 4/12/2018 | 2.79 | 4/12/2021 | 4/12/2018 | 101.79235 | 101.7923491 | 101.7923491 | 101.7923491 | 101.7013028 | 100.994528 | 100.2975706 | 99.61022678 | 98.93229853 |
| 180426A00016 | 4/26/2018 | 2.77 | 4/26/2021 | 4/26/2018 | 101.98 | 101.98 | 101.98 | 101.98 | 101.8814599 | 101.1342132 | 100.3979139 | 99.67232269 | 98.95720719 |
| 180430A00013 | 4/30/2018 | 3.01 | 2/15/2022 | 4/30/2018 | 104.25754 | 104.257542 | 104.257542 | 104.257542 | 103.984149 | 102.4333578 | 100.9135178 | 99.42377327 | 97.96329983 |
| 180430A00015 | 4/30/2018 | 3.02 | 4/15/2022 | 4/30/2018 | 104.70104 | 104.7010362 | 104.7010362 | 104.7010362 | 104.391474 | 102.675169 | 100.995373 | 99.35098517 | 97.74094903 |
| 180518A00012 | 5/18/2018 | 3.1 | 5/18/2022 | 5/18/2018 | 105.11326 | 105.1132646 | 105.1132646 | 105.1132646 | 104.782099 | 102.9726715 | 101.2033174 | 99.47286445 | 97.78018459 |
| 180524A00050 | 5/24/2018 | 2.9 | 5/24/2021 | 5/24/2018 | 102.16987 | 102.1698704 | 102.1698704 | 102.1698704 | 102.0572017 | 101.2339743 | 100.4240157 | 99.6270068 | 98.84263876 |
| 180529A00007 | 5/29/2018 | 2.83 | 6/1/2021 | 5/29/2018 | 102.16912 | 102.1691174 | 102.1691174 | 102.1691174 | 102.0523776 | 101.207289 | 100.3761718 | 99.55868161 | 98.7544855 |
| 180529A00026 | 5/29/2018 | 2.67 | 6/1/2021 | 5/29/2018 | 102.16037 | 102.160374 | 102.160374 | 102.160374 | 102.0433884 | 101.1966162 | 100.3638691 | 99.54480066 | 98.73907605 |
| 180529A00066 | 5/29/2018 | 2.99 | 5/26/2023 | 5/29/2018 | 107.66685 | 107.6668469 | 107.6668469 | 107.6668469 | 107.0094929 | 104.1647642 | 101.4106682 | 98.74382496 | 96.16100017 |
| 180530A00025 | 5/30/2018 | 3.49 | 5/30/2030 | 5/30/2018 | 131.27205 | 131.2720505 | 131.2720505 | 131.2720505 | 121.6634441 | 111.7628541 | 102.7824854 | 94.63110572 | 87.22698778 |
| 180530A00039 | 5/30/2018 | 2.93 | 5/30/2023 | 5/30/2018 | 107.52517 | 107.525174 | 107.525174 | 107.525174 | 106.8638449 | 104.0106173 | 101.2486097 | 98.57442627 | 95.98481606 |
| 180530A00044 | 5/30/2018 | 2.87 | 5/31/2022 | 5/30/2018 | 104.7883 | 104.7883023 | 104.7883023 | 104.7883023 | 104.4491933 | 102.6083033 | 100.8088492 | 99.04965978 | 97.32960438 |
| 180601A00023 | 6/1/2018 | 3.3 | 6/1/2028 | 6/1/2018 | 125.17291 | 125.1729094 | 125.1729094 | 125.1729094 | 119.1237005 | 111.0723339 | 103.6383166 | 96.77084785 | 90.42355658 |
| 180514A00033 | 5/14/2018 | 3.36 | 5/15/2028 | 5/14/2018 | 125.49592 | 125.4959187 | 125.4959187 | 125.4959187 | 119.5148971 | 111.4919488 | 104.0806058 | 97.23075603 | 90.89664795 |
| 180521A00025 | 5/21/2018 | 3.24 | 5/21/2025 | 5/21/2018 | 115.17253 | 115.1725317 | 115.1725317 | 115.1725317 | 113.2694879 | 108.3266724 | 103.6316761 | 99.17075963 | 94.93101745 |
| 180521A00072 | 5/21/2018 | 2.96 | 5/23/2022 | 5/21/2018 | 105.21114 | 105.2111359 | 105.2111359 | 105.2111359 | 104.8754593 | 103.0461718 | 101.2577383 | 99.50897729 | 97.7987503 |
| 180522A00008 | 5/22/2018 | 2.98 | 5/24/2021 | 5/22/2018 | 102.23579 | 102.2357905 | 102.2357905 | 102.2357905 | 102.1230864 | 101.2995617 | 100.4893092 | 99.69200977 | 98.90735443 |
| 180522A00018 | 5/22/2018 | 3.1 | 5/23/2022 | 5/22/2018 | 105.15221 | 105.1522135 | 105.1522135 | 105.1522135 | 104.8177437 | 102.9946561 | 101.212192 | 99.46917907 | 97.76448754 |
| 180524A00020 | 5/24/2018 | 2.74 | 5/24/2021 | 5/24/2018 | 102.16141 | 102.1614129 | 102.1614129 | 102.1614129 | 102.0485092 | 101.2236544 | 100.4121193 | 99.61358309 | 98.8277351 |
| 180529A00044 | 5/29/2018 | 3.11 | 5/29/2024 | 5/29/2018 | 110.86465 | 110.8646458 | 110.8646458 | 110.8646458 | 109.680281 | 105.8004431 | 102.0804277 | 98.51282803 | 95.0906188 |
| 180529A00060 | 5/29/2018 | 2.83 | 6/1/2021 | 5/29/2018 | 102.16912 | 102.1691174 | 102.1691174 | 102.1691174 | 102.0523776 | 101.207289 | 100.3761718 | 99.55868161 | 98.7544855 |
| 180614A00038 | 6/14/2018 | 3.08 | 6/14/2023 | 6/14/2018 | 108.06856 | 108.0685634 | 108.0685634 | 108.0685634 | 107.3884427 | 104.4867367 | 101.6789795 | 98.96163199 | 96.33130795 |
| 180622A00005 | 6/22/2018 | 3.5 | 7/2/2029 | 6/22/2018 | 128.50895 | 128.5089482 | 128.5089482 | 128.5089482 | 120.6624343 | 111.621178 | 103.3526836 | 95.78628398 | 88.85812924 |
| 180627A00027 | 6/27/2018 | 2.87 | 6/27/2023 | 6/27/2018 | 108.09433 | 108.0943332 | 108.0943332 | 108.0943332 | 107.395763 | 104.4460557 | 101.5932061 | 98.83351474 | 96.16344426 |

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 180629A00039 | 6/29/2018 | 2.91 | 6/29/2021 | 6/29/2018 | 102.44163 | 102.4416273 | 102.4416273 | 102.4416273 | 102.3100767 | 101.3871927 | 100.4809329 | 99.59085123 | 98.71651734 |
| 180705A00003 | 7/5/2018 | 3.04 | 7/5/2023 | 7/5/2018 | 108.1112 | 108.1111967 | 108.1111967 | 108.1111967 | 107.4062676 | 104.4473975 | 101.5861085 | 98.81865564 | 96.141459 |
| 180712A00002 | 7/12/2018 | 3.06 | 7/12/2023 | 7/12/2018 | 108.22369 | 108.2236882 | 108.2236882 | 108.2236882 | 107.5098089 | 104.5308967 | 101.6508221 | 98.8657678 | 96.17208561 |
| 180716A00016 | 7/16/2018 | 3.03 | 7/14/2023 | 7/16/2018 | 108.14951 | 108.1495116 | 108.1495116 | 108.1495116 | 107.4333812 | 104.4503261 | 101.5664293 | 98.77785414 | 96.08093406 |
| 180719A00065 | 7/19/2018 | 3.36 | 7/20/2026 | 7/19/2018 | 118.32307 | 118.3230682 | 118.3230682 | 118.3230682 | 115.1710153 | 109.0813957 | 103.3595782 | 97.98136267 | 92.9242632 |
| 180723A00029 | 6/21/2019 | 3.17 | 6/21/2022 | 6/21/2019 | 105.49194 | 105.4919374 | 105.4919374 | 105.4919374 | 105.1372209 | 103.2323715 | 101.3715848 | 99.55358009 | 97.77712224 |
| 180725A00029 | 7/25/2018 | 2.98 | 4/16/2021 | 7/25/2018 | 101.95696 | 101.9569573 | 101.9569573 | 101.9569573 | 101.8637736 | 101.1453838 | 100.4371244 | 99.73878198 | 99.0501491 |
| 180801A00013 | 8/1/2018 | 3.04 | 10/15/2021 | 8/1/2018 | 103.37982 | 103.3798185 | 103.3798185 | 103.3798185 | 103.1772605 | 101.9552667 | 100.7622062 | 99.59705986 | 98.45885566 |
| 180802A00006 | 8/2/2018 | 2.99 | 8/2/2023 | 8/2/2018 | 108.73367 | 108.7336666 | 108.7336666 | 108.7336666 | 107.9886637 | 104.9339543 | 101.9826357 | 99.13063113 | 96.37404877 |
| 180809A00029 | 8/9/2018 | 2.99 | 9/9/2021 | 8/9/2018 | 103.04822 | 103.0482226 | 103.0482226 | 103.0482226 | 102.8711044 | 101.7489242 | 100.6512097 | 99.57716673 | 98.5260352 |
| 180813A00059 | 8/13/2018 | 3.01 | 8/11/2023 | 8/13/2018 | 108.2995 | 108.2995049 | 108.2995049 | 108.2995049 | 107.5478261 | 104.4889567 | 101.5339784 | 98.67877776 | 95.91942946 |
| 180816A00024 | 8/16/2018 | 3.01 | 8/16/2023 | 8/16/2018 | 108.33693 | 108.336929 | 108.336929 | 108.336929 | 107.5786987 | 104.5060791 | 101.5381402 | 98.67072336 | 95.89986049 |
| 180816A00038 | 8/16/2018 | 3.38 | 8/16/2028 | 8/16/2018 | 124.77729 | 124.7772942 | 124.7772942 | 124.7772942 | 118.4752471 | 110.3260987 | 102.8144865 | 95.8868551 | 89.49441909 |
| 180719A00011 | 7/19/2018 | 3 | 11/12/2021 | 7/19/2018 | 103.5421 | 103.5420951 | 103.5420951 | 103.5420951 | 103.3219293 | 102.0273262 | 100.7607586 | 99.52131569 | 98.30812621 |
| 180723A00028 | 1/23/2019 | 3.22 | 1/23/2024 | 1/23/2019 | 110.2696 | 110.2695977 | 110.2695977 | 110.2695977 | 109.284421 | 105.7552067 | 102.3604183 | 99.09421122 | 95.95102733 |
| 180723A00030 | 6/21/2019 | 3.24 | 6/21/2024 | 6/21/2019 | 111.55222 | 111.5522176 | 111.5522176 | 111.5522176 | 110.3267545 | 106.3720747 | 102.5826417 | 98.9506932 | 95.46887147 |
| 180727A00028 | 7/27/2018 | 3.25 | 7/27/2026 | 7/27/2018 | 118.95446 | 118.9544555 | 118.9544555 | 118.9544555 | 115.7416397 | 109.5740232 | 103.7811346 | 98.33817999 | 93.22213154 |
| 180730A00004 | 7/30/2018 | 3.14 | 7/28/2023 | 7/30/2018 | 108.58723 | 108.5872291 | 108.5872291 | 108.5872291 | 107.8525741 | 104.8262397 | 101.9016814 | 99.07491204 | 96.34212386 |
| 180730A00023 | 7/30/2018 | 3.13 | 7/30/2024 | 7/30/2018 | 112.18341 | 112.1834139 | 112.1834139 | 112.1834139 | 110.8810508 | 106.7912134 | 102.8770636 | 99.13011267 | 95.54232815 |
| 180801A00014 | 8/1/2018 | 3.03 | 8/2/2021 | 8/1/2018 | 102.80305 | 102.8030497 | 102.8030497 | 102.8030497 | 102.6518449 | 101.6344709 | 100.6372426 | 99.6595659 | 98.70086991 |
| 180801A00015 | 8/1/2018 | 3.16 | 8/1/2023 | 8/1/2018 | 108.67922 | 108.6792165 | 108.6792165 | 108.6792165 | 107.9393014 | 104.9010693 | 101.9653323 | 99.1280615 | 96.38541033 |
| 180807A00017 | 8/7/2018 | 2.77 | 8/7/2020 | 8/7/2018 | 100.05159 | 100.0515937 | 100.0515937 | 100.0515937 | 100.050145 | 100.0306897 | 100.0112546 | 99.9918397 | 99.97244502 |
| 180814A00033 | 8/14/2018 | 3.25 | 8/13/2027 | 8/14/2018 | 122.25128 | 122.251276 | 122.251276 | 122.251276 | 117.4862808 | 110.2551629 | 103.5293224 | 97.27064614 | 91.44408891 |
| 180815A00010 | 8/15/2018 | 3.02 | 8/15/2023 | 8/15/2018 | 108.36013 | 108.3601334 | 108.3601334 | 108.3601334 | 107.603121 | 104.5327809 | 101.5669754 | 98.70155442 | 95.93255797 |
| 180816A00043 | 8/16/2018 | 2.83 | 8/16/2022 | 8/16/2018 | 105.6116 | 105.6115995 | 105.6115995 | 105.6115995 | 105.2128799 | 103.1503743 | 101.1389308 | 99.17695138 | 97.26289973 |
| 180821A00011 | 8/21/2018 | 2.98 | 8/21/2023 | 8/21/2018 | 108.28179 | 108.2817901 | 108.2817901 | 108.2817901 | 107.5172902 | 104.4323499 | 101.4528473 | 98.57457892 | 95.79353498 |
| 180821A00014 | 8/21/2018 | 2.68 | 8/21/2020 | 8/21/2018 | 100.14953 | 100.1495316 | 100.1495316 | 100.1495316 | 100.1451863 | 100.0868404 | 100.0285779 | 99.97039857 | 99.91230227 |
| 180821A00028 | 8/21/2018 | 2.99 | 8/21/2023 | 8/21/2018 | 108.31264 | 108.3126445 | 108.3126445 | 108.3126445 | 107.5480509 | 104.4626357 | 101.4826702 | 98.60395065 | 95.8224669 |
| 180823A00033 | 8/23/2018 | 2.85 | 8/23/2023 | 8/23/2018 | 108.46672 | 108.4667191 | 108.4667191 | 108.4667191 | 107.6952581 | 104.5888247 | 101.5889643 | 98.69141227 | 95.89210134 |
| 180823A00035 | 8/23/2018 | 3.05 | 8/22/2025 | 8/23/2018 | 115.00202 | 115.0020203 | 115.0020203 | 115.0020203 | 112.8835045 | 107.7016829 | 102.7920783 | 98.13893107 | 93.72747692 |
| 180824A00023 | 8/24/2018 | 2.79 | 8/24/2021 | 8/24/2018 | 102.88478 | 102.88478 | 102.88478 | 102.88478 | 102.7184975 | 101.6382397 | 100.5806709 | 99.54508155 | 98.53079155 |
| 180827A00034 | 8/27/2018 | 2.99 | 8/28/2023 | 8/27/2018 | 108.36465 | 108.3646535 | 108.3646535 | 108.3646535 | 107.5908937 | 104.486254 | 101.4881799 | 98.59240299 | 95.79485249 |
| 180830A00006 | 8/30/2018 | 2.99 | 8/30/2022 | 8/30/2018 | 105.66947 | 105.6694651 | 105.6694651 | 105.6694651 | 105.2610866 | 103.1679115 | 101.1270021 | 99.13670223 | 97.19542057 |

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 180831A00019 | 8/31/2018 | 3.21 | 9/2/2025 | 8/31/2018 | 114.87862 | 114.8786174 | 114.8786174 | 114.8786174 | 112.7508193 | 107.575849 | 102.6731332 | 98.02688051 | 93.62229973 |
| 180904A00004 | 9/4/2018 | 2.89 | 9/5/2023 | 9/4/2018 | 108.69044 | 108.690439 | 108.690439 | 108.690439 | 107.9012593 | 104.7564514 | 101.7204239 | 98.78878445 | 95.95734575 |
| 180905A00015 | 9/5/2018 | 2.85 | 9/1/2022 | 9/5/2018 | 105.77417 | 105.774172 | 105.774172 | 105.774172 | 105.3624441 | 103.2553746 | 101.2011362 | 99.19804732 | 97.24449263 |
| 180910A00033 | 9/10/2018 | 3.43 | 9/8/2028 | 9/10/2018 | 125.37504 | 125.3750387 | 125.3750387 | 125.3750387 | 118.9609338 | 110.7349699 | 103.1563562 | 96.17038926 | 89.72726736 |
| 170215A00037 | 2/15/2017 | 2.71 | 5/23/2022 | 2/15/2017 | 104.43809 | 104.4380938 | 104.4380938 | 104.4380938 | 104.1046931 | 102.2883078 | 100.5124209 | 98.77586346 | 97.0775092 |
| 170215A00039 | 2/15/2017 | 2.72 | 11/7/2022 | 2/15/2017 | 105.56291 | 105.562909 | 105.562909 | 105.562909 | 105.0991634 | 102.8213387 | 100.6042469 | 98.44584618 | 96.34418002 |
| 170216A00010 | 2/16/2017 | 2.37 | 2/16/2022 | 2/16/2017 | 103.26293 | 103.2629333 | 103.2629333 | 103.2629333 | 102.9901669 | 101.4444943 | 99.9297195 | 98.44498689 | 96.98947206 |
| 170217A00035 | 2/17/2017 | 1.9 | 2/17/2021 | 2/17/2017 | 100.99426 | 100.9942613 | 100.9942613 | 100.9942613 | 100.9298763 | 100.3729791 | 99.82222107 | 99.27750086 | 98.73871951 |
| 170224A00044 | 5/24/2017 | 3.29 | 5/24/2029 | 5/24/2017 | 126.32044 | 126.3204438 | 126.3204438 | 126.3204438 | 118.7107467 | 109.8496203 | 101.7395809 | 94.31256922 | 87.5070324 |
| 170228A00018 | 2/28/2017 | 2.25 | 2/28/2022 | 2/28/2017 | 103.13939 | 103.1393925 | 103.1393925 | 103.1393925 | 102.8596523 | 101.2798236 | 99.73195364 | 98.21513988 | 96.72851362 |
| 170303A00023 | 3/3/2017 | 2 | 3/3/2021 | 3/3/2017 | 101.12289 | 101.1228943 | 101.1228943 | 101.1228943 | 101.0521412 | 100.4563796 | 99.86762651 | 99.28575874 | 98.71065604 |
| 170310A00032 | 3/10/2017 | 2.27 | 3/10/2022 | 3/10/2017 | 103.50422 | 103.5042184 | 103.5042184 | 103.5042184 | 103.2171269 | 101.6030207 | 100.0219862 | 98.47307373 | 96.95536972 |
| 170317A00060 | 3/17/2017 | 2.04 | 3/17/2021 | 3/17/2017 | 101.22152 | 101.2215224 | 101.2215224 | 101.2215224 | 101.1437389 | 100.509203 | 99.8826206 | 99.26384272 | 98.65272398 |
| 170322A00025 | 3/22/2017 | 3.58 | 3/22/2033 | 3/22/2017 | 141.17613 | 141.1761319 | 141.1761319 | 138.228332 | 124.8030057 | 112.3457923 | 101.3241284 | 91.56222107 | 82.90675539 |
| 170404A00049 | 4/6/2017 | 2.42 | 4/6/2022 | 4/6/2017 | 103.61277 | 103.6127668 | 103.6127668 | 103.6127668 | 103.3102493 | 101.6281981 | 99.98156588 | 98.36929787 | 96.79038151 |
| 170410A00007 | 4/10/2017 | 2.1 | 4/11/2022 | 4/10/2017 | 103.40315 | 103.4031533 | 103.4031533 | 103.4031533 | 103.0968023 | 101.3975367 | 99.73436421 | 98.10620014 | 96.51200336 |
| 170417A00014 | 4/17/2017 | 1.95 | 4/18/2022 | 4/17/2017 | 103.18102 | 103.1810163 | 103.1810163 | 103.1810163 | 102.8706595 | 101.1541926 | 99.47450165 | 97.83047025 | 96.22102742 |
| 170509A00006 | 5/9/2017 | 2.3 | 5/9/2022 | 5/9/2017 | 103.59124 | 103.5912369 | 103.5912369 | 103.5912369 | 103.2681994 | 101.4970458 | 99.76472454 | 98.07007061 | 96.41196507 |
| 170515A00007 | 5/15/2017 | 2.04 | 5/14/2021 | 5/15/2017 | 101.41193 | 101.4119346 | 101.4119346 | 101.4119346 | 101.3047286 | 100.5121749 | 99.73199334 | 98.96389579 | 98.20760297 |
| 170515A00043 | 5/15/2017 | 3.1 | 5/15/2028 | 5/15/2017 | 121.81586 | 121.8158573 | 121.8158573 | 121.8158573 | 115.9674614 | 108.1462317 | 100.9215489 | 94.24456857 | 88.07069115 |
| 170531A00080 | 5/31/2017 | 2.3 | 5/31/2024 | 5/31/2017 | 108.46366 | 108.4636554 | 108.4636554 | 108.4636554 | 107.2794877 | 103.421216 | 99.72305481 | 96.17755309 | 92.77764431 |
| 170608A00020 | 6/8/2017 | 2.27 | 6/10/2024 | 6/8/2017 | 108.4067 | 108.406698 | 108.406698 | 108.406698 | 107.2061952 | 103.3222762 | 99.60062337 | 96.03363477 | 92.6141034 |
| 170609A00025 | 6/9/2017 | 2.13 | 6/9/2022 | 6/9/2017 | 103.46269 | 103.46269 | 103.46269 | 103.46269 | 103.1193842 | 101.2666008 | 99.45608068 | 97.68661454 | 95.95703528 |
| 170612A00039 | 6/12/2017 | 2.29 | 6/12/2024 | 6/12/2017 | 108.49684 | 108.4968434 | 108.4968434 | 108.4968434 | 107.2926249 | 103.4016216 | 99.6733769 | 96.10025617 | 92.67502189 |
| 170616A00018 | 6/16/2017 | 2.4 | 6/16/2025 | 6/16/2017 | 111.25334 | 111.2533377 | 111.2533377 | 111.2533377 | 109.3177329 | 104.4004203 | 99.73432633 | 95.30534162 | 91.1002192 |
| 170622A00015 | 6/22/2017 | 1.99 | 6/22/2021 | 6/22/2017 | 101.55841 | 101.5584103 | 101.5584103 | 101.5584103 | 101.4310539 | 100.5316109 | 99.64806891 | 98.78000896 | 97.92702684 |
| 170623A00028 | 6/23/2017 | 2.79 | 6/23/2027 | 6/23/2017 | 117.1894 | 117.1893982 | 117.1893982 | 117.1893982 | 112.748715 | 105.8636465 | 99.45228861 | 93.47953399 | 87.91304766 |
| 170629A00022 | 6/29/2017 | 2.2 | 6/29/2023 | 6/29/2017 | 106.13475 | 106.1347531 | 106.1347531 | 106.1347531 | 105.4393989 | 102.5131089 | 99.68331133 | 96.94631029 | 94.2985724 |
| 170829A00044 | 8/29/2017 | 2.01 | 8/29/2022 | 8/29/2017 | 103.60253 | 103.6025339 | 103.6025339 | 103.6025339 | 103.1986332 | 101.1301921 | 99.11346778 | 97.14682153 | 95.22867933 |
| 170830A00009 | 8/30/2017 | 1.94 | 3/2/2023 | 8/30/2017 | 104.76825 | 104.7682452 | 104.7682452 | 104.7682452 | 104.2029853 | 101.6133495 | 99.10118957 | 96.66371612 | 94.2982595 |
| 170830A00034 | 8/30/2017 | 2.05 | 8/30/2022 | 8/30/2017 | 103.69145 | 103.691452 | 103.691452 | 103.691452 | 103.2866085 | 101.2145881 | 99.1944102 | 97.22443066 | 95.30307004 |
| 170830A00047 | 8/30/2017 | 1.61 | 8/31/2020 | 8/30/2017 | 100.12861 | 100.1286077 | 100.1286077 | 100.1286077 | 100.1221993 | 100.0361653 | 99.95027808 | 99.86453723 | 99.77894243 |
| 170905A00071 | 9/5/2017 | 1.78 | 9/8/2020 | 9/5/2017 | 100.16428 | 100.1642777 | 100.1642777 | 100.1642777 | 100.1554545 | 100.0473868 | 99.93956294 | 99.83198195 | 99.72464302 |

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 170906A00020 | 9/6/2017 | 2.14 | 9/6/2023 | 9/6/2017 | 105.7713 | 105.7713029 | 105.7713029 | 105.7713029 | 104.9938009 | 101.9054551 | 98.92411369 | 96.04545573 | 93.26536217 |
| 170906A00034 | 9/6/2017 | 1.87 | 9/7/2021 | 9/6/2017 | 101.78152 | 101.7815224 | 101.7815224 | 101.7815224 | 101.6068451 | 100.4976359 | 99.4125405 | 98.35077932 | 97.31160601 |
| 170907A00002 | 9/7/2017 | 1.69 | 9/7/2021 | 9/7/2017 | 101.75803 | 101.7580298 | 101.7580298 | 101.7580298 | 101.582925 | 100.4712126 | 99.38371252 | 98.31964074 | 97.2782467 |
| 170919A00076 | 9/19/2017 | 1.97 | 9/19/2022 | 9/19/2017 | 104.00618 | 104.0061809 | 104.0061809 | 104.0061809 | 103.5833036 | 101.4460564 | 99.36339974 | 97.33355873 | 95.35483049 |
| 170926A00031 | 9/26/2017 | 1.94 | 9/28/2020 | 9/26/2017 | 100.27595 | 100.2759487 | 100.2759487 | 100.2759487 | 100.2610616 | 100.0975802 | 99.93463201 | 99.77221436 | 99.61032471 |
| 171002A00012 | 10/2/2017 | 2.08 | 10/1/2021 | 10/2/2017 | 102.13584 | 102.1358427 | 102.1358427 | 102.1358427 | 101.9437227 | 100.7675589 | 99.61842253 | 98.49539066 | 97.39758182 |
| 171002A00013 | 10/2/2017 | 2.23 | 11/30/2022 | 10/2/2017 | 104.56097 | 104.5609665 | 104.5609665 | 104.5609665 | 104.0802575 | 101.7517278 | 99.48683758 | 97.28350625 | 95.13973323 |
| 171010A00005 | 10/10/2017 | 2.06 | 10/11/2022 | 10/10/2017 | 104.31927 | 104.3192674 | 104.3192674 | 104.3192674 | 103.8781403 | 101.6783179 | 99.53584516 | 97.44881151 | 95.4153866 |
| 171012A00025 | 10/12/2017 | 1.93 | 10/13/2020 | 10/12/2017 | 100.34415 | 100.3441494 | 100.3441494 | 100.3441494 | 100.3242512 | 100.1192548 | 99.9151083 | 99.71180645 | 99.50934395 |
| 171013A00020 | 10/13/2017 | 1.9 | 10/15/2020 | 10/13/2017 | 100.34714 | 100.3471362 | 100.3471362 | 100.3471362 | 100.3265612 | 100.11604 | 99.90641485 | 99.69767987 | 99.48982938 |
| 171026A00011 | 10/26/2017 | 2.94 | 10/26/2027 | 10/26/2017 | 119.12296 | 119.122964 | 119.122964 | 119.122964 | 114.1540458 | 106.907354 | 100.1797032 | 93.93103612 | 88.12459496 |
| 171027A00005 | 10/27/2017 | 1.88 | 10/27/2020 | 10/27/2017 | 100.43071 | 100.4307089 | 100.4307089 | 100.4307089 | 100.4060264 | 100.161901 | 99.91896673 | 99.67721484 | 99.43663671 |
| 171031A00061 | 10/31/2017 | 2.28 | 10/31/2022 | 10/31/2017 | 104.51503 | 104.5150281 | 104.5150281 | 104.5150281 | 104.0591611 | 101.8125062 | 99.62538465 | 97.4957746 | 95.42174115 |
| 171127A00016 | 11/27/2017 | 2.28 | 11/27/2023 | 11/27/2017 | 107.27402 | 107.2740207 | 107.2740207 | 107.2740207 | 106.3765133 | 103.0317936 | 99.81002751 | 96.7060575 | 93.71497012 |
| 171129A00020 | 11/29/2017 | 2.89 | 11/30/2026 | 11/29/2017 | 116.44052 | 116.4405223 | 116.4405223 | 116.4405223 | 112.813586 | 106.4507058 | 100.4936079 | 94.91429251 | 89.6868274 |
| 171206A00008 | 12/6/2017 | 2.36 | 12/6/2021 | 12/6/2017 | 102.83455 | 102.8345459 | 102.8345459 | 102.8345459 | 102.6019137 | 101.2545014 | 99.9311325 | 98.63121872 | 97.35419039 |
| 171208A00021 | 12/8/2017 | 2.24 | 12/8/2020 | 12/8/2017 | 100.71974 | 100.7197395 | 100.7197395 | 100.7197395 | 100.6815985 | 100.3214691 | 99.96391936 | 99.60892154 | 99.25644829 |
| 171211A00024 | 12/11/2017 | 2.26 | 12/11/2020 | 12/11/2017 | 100.74376 | 100.7437564 | 100.7437564 | 100.7437564 | 100.7046469 | 100.3361994 | 99.9704536 | 99.60737986 | 99.24694886 |
| 171212A00024 | 12/12/2017 | 2.29 | 12/12/2022 | 12/12/2017 | 105.20394 | 105.2039407 | 105.2039407 | 105.2039407 | 104.7096057 | 102.3329871 | 100.0222602 | 97.77523849 | 95.58982116 |
| 180611A00030 | 6/11/2018 | 2.91 | 6/12/2023 | 6/11/2018 | 108.09618 | 108.0961774 | 108.0961774 | 108.0961774 | 107.4150933 | 104.5063564 | 101.6918805 | 98.96811227 | 96.33165206 |
| 180614A00008 | 6/14/2018 | 2.94 | 6/14/2021 | 6/14/2018 | 102.35837 | 102.3583695 | 102.3583695 | 102.3583695 | 102.2347167 | 101.3532001 | 100.4868761 | 99.63535433 | 98.79825737 |
| 180615A00063 | 6/15/2018 | 3.2 | 6/15/2026 | 6/15/2018 | 118.29478 | 118.294785 | 118.294785 | 118.294785 | 115.2399874 | 109.1978106 | 103.516419 | 98.17236274 | 93.14383209 |
| 180618A00032 | 6/18/2018 | 2.93 | 6/18/2021 | 6/18/2018 | 102.37903 | 102.3790287 | 102.3790287 | 102.3790287 | 102.2532703 | 101.3607255 | 100.4837519 | 99.6219444 | 98.77491183 |
| 180625A00009 | 6/25/2018 | 3 | 6/27/2022 | 6/25/2018 | 105.21181 | 105.2118076 | 105.2118076 | 105.2118076 | 104.8533705 | 102.9348472 | 101.0610637 | 99.2307093 | 97.44252054 |
| 180713A00027 | 7/13/2018 | 3.23 | 7/13/2028 | 7/13/2018 | 124.97855 | 124.978548 | 124.978548 | 124.978548 | 118.7486526 | 110.6034079 | 103.0914718 | 96.16001291 | 89.76086979 |
| 180719A00060 | 7/19/2018 | 3.05 | 7/19/2022 | 7/19/2018 | 105.47575 | 105.475748 | 105.475748 | 105.475748 | 105.100466 | 103.120814 | 101.1886925 | 99.30266649 | 97.46135424 |
| 180720A00006 | 7/20/2018 | 3.03 | 7/17/2023 | 7/20/2018 | 108.17214 | 108.1721369 | 108.1721369 | 108.1721369 | 107.4522454 | 104.4609862 | 101.5694173 | 98.77367059 | 96.07005052 |
| 180720A00008 | 7/20/2018 | 3 | 7/20/2022 | 7/20/2018 | 105.38381 | 105.3838136 | 105.3838136 | 105.3838136 | 105.0079305 | 103.0265669 | 101.0928419 | 99.20531526 | 97.36260021 |
| 180720A00030 | 7/20/2018 | 2.79 | 7/20/2021 | 7/20/2018 | 102.62517 | 102.6251712 | 102.6251712 | 102.6251712 | 102.4813073 | 101.4980831 | 100.5337046 | 99.58763357 | 98.65935201 |
| 180724A00075 | 7/24/2018 | 2.98 | 7/24/2023 | 7/24/2018 | 108.63192 | 108.6319179 | 108.6319179 | 108.6319179 | 107.898506 | 104.8691535 | 101.9415978 | 99.11185512 | 96.37612122 |
| 180727A00038 | 7/27/2018 | 3.36 | 7/25/2025 | 7/27/2018 | 115.32075 | 115.3207514 | 115.3207514 | 115.3207514 | 113.2834672 | 108.1975133 | 103.3743863 | 98.79910224 | 94.45760871 |
| 180731A00002 | 7/31/2018 | 2.83 | 2/16/2021 | 7/31/2018 | 101.50582 | 101.5058152 | 101.5058152 | 101.5058152 | 101.4416945 | 100.8859073 | 100.3362123 | 99.79250944 | 99.25470111 |
| 180731A00009 | 7/31/2018 | 2.97 | 7/31/2023 | 7/31/2018 | 108.65704 | 108.6570403 | 108.6570403 | 108.6570403 | 107.9148635 | 104.8666432 | 101.9214742 | 99.07529876 | 96.32424267 |

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 180731A00046 | 7/31/2018 | 2.84 | 3/26/2021 | 7/31/2018 | 101.79823 | 101.7982306 | 101.7982306 | 101.7982306 | 101.7157159 | 101.0543575 | 100.4015928 | 99.75725522 | 99.1211821 |
| 180801A00011 | 8/1/2018 | 3 | 5/14/2021 | 8/1/2018 | 102.17637 | 102.1763689 | 102.1763689 | 102.1763689 | 102.0687683 | 101.2728694 | 100.4893793 | 99.71800942 | 98.95847968 |
| 180806A00008 | 8/6/2018 | 2.95 | 8/7/2023 | 8/6/2018 | 108.65121 | 108.6512143 | 108.6512143 | 108.6512143 | 107.8999605 | 104.8331956 | 101.8705673 | 99.00795479 | 96.24142506 |
| 180813A00037 | 8/13/2018 | 2.95 | 2/14/2022 | 8/13/2018 | 104.15647 | 104.1564663 | 104.1564663 | 104.1564663 | 103.8837947 | 102.336769 | 100.8205911 | 99.33440968 | 97.87740433 |
| 180815A00008 | 8/15/2018 | 2.85 | 8/14/2020 | 8/15/2018 | 100.10065 | 100.1006451 | 100.1006451 | 100.1006451 | 100.0977522 | 100.0589041 | 100.0201034 | 99.98135001 | 99.94264381 |
| 180816A00032 | 8/16/2018 | 3.02 | 8/16/2023 | 8/16/2018 | 108.36765 | 108.3676458 | 108.3676458 | 108.3676458 | 107.6093229 | 104.5362324 | 101.5678346 | 98.69997047 | 95.92867149 |
| 180817A00022 | 8/17/2018 | 2.87 | 8/17/2023 | 8/17/2018 | 108.48299 | 108.4829886 | 108.4829886 | 108.4829886 | 107.71926 | 104.6284963 | 101.6433676 | 98.75966431 | 95.97337053 |
| 180820A00036 | 8/20/2018 | 3 | 8/21/2023 | 8/20/2018 | 108.3435 | 108.3434989 | 108.3434989 | 108.3434989 | 107.5788117 | 104.4929214 | 101.512493 | 98.63332238 | 95.85139882 |
| 180823A00053 | 8/23/2018 | 3.2 | 8/23/2028 | 8/23/2018 | 125.08553 | 125.0855259 | 125.0855259 | 125.0855259 | 118.6722371 | 110.4264141 | 102.8295999 | 95.82700418 | 89.36873845 |
| 180823A00055 | 8/23/2018 | 3.44 | 8/23/2033 | 8/23/2018 | 143.67323 | 143.6732279 | 143.6732279 | 139.9932379 | 125.8361994 | 112.815653 | 101.3455302 | 91.2299985 | 82.29901538 |
| 160708A00002 | 7/8/2016 | 1.46 | 7/8/2021 | 7/8/2016 | 101.13204 | 101.1320406 | 101.1320406 | 101.1320406 | 100.9962658 | 100.0555285 | 99.13223397 | 98.22590067 | 97.33606462 |
| 160712A00016 | 7/12/2016 | 1.32 | 7/12/2021 | 7/12/2016 | 101.15387 | 101.153871 | 101.153871 | 101.153871 | 101.0155159 | 100.0618081 | 99.12601971 | 98.20764937 | 97.30621435 |
| 160714A00054 | 7/14/2016 | 2.03 | 7/15/2024 | 7/14/2016 | 106.91882 | 106.9188167 | 106.9188167 | 106.9188167 | 105.6741992 | 101.7476022 | 97.98872661 | 94.38954269 | 90.94244737 |
| 160718A00010 | 7/18/2016 | 1.65 | 7/18/2023 | 7/18/2016 | 104.59429 | 104.5942873 | 104.5942873 | 104.5942873 | 103.880061 | 100.927089 | 98.0733369 | 95.31493409 | 92.64818349 |
| 160804A00014 | 8/4/2016 | 1.99 | 8/5/2024 | 8/4/2016 | 106.85719 | 106.8571876 | 106.8571876 | 106.8571876 | 105.577437 | 101.5988066 | 97.79235504 | 94.1497284 | 90.66302326 |
| 160812A00005 | 8/12/2016 | 1.69 | 8/12/2022 | 8/12/2016 | 102.86437 | 102.8643695 | 102.8643695 | 102.8643695 | 102.4750795 | 100.4590933 | 98.49287535 | 96.57487703 | 94.70360915 |
| 160816A00003 | 8/16/2016 | 1.63 | 8/16/2023 | 8/16/2016 | 104.65577 | 104.6557742 | 104.6557742 | 104.6557742 | 103.9049137 | 100.8756297 | 97.95032251 | 95.12484227 | 92.39523004 |
| 160830A00007 | 8/30/2016 | 1.65 | 8/30/2021 | 8/30/2016 | 101.50529 | 101.5052853 | 101.5052853 | 101.5052853 | 101.3364993 | 100.2505162 | 99.18768623 | 98.14727544 | 97.12858077 |
| 160830A00032 | 8/30/2016 | 1.82 | 8/30/2022 | 8/30/2016 | 103.20747 | 103.20747 | 103.20747 | 103.20747 | 102.8034915 | 100.7366472 | 98.72154196 | 96.75653443 | 94.8400481 |
| 160907A00009 | 9/7/2016 | 1.36 | 9/8/2021 | 9/7/2016 | 101.39232 | 101.3923157 | 101.3923157 | 101.3923157 | 101.2167823 | 100.1045456 | 99.01660674 | 97.95217671 | 96.91050032 |
| 160926A00002 | 9/26/2016 | 1.6 | 9/27/2021 | 9/26/2016 | 101.55286 | 101.5528633 | 101.5528633 | 101.5528633 | 101.3640508 | 100.2023059 | 99.06704203 | 97.95736231 | 96.87240996 |
| 161006A00011 | 10/6/2016 | 1.64 | 10/6/2022 | 10/6/2016 | 103.36378 | 103.3637775 | 103.3637775 | 103.3637775 | 102.9285223 | 100.7526315 | 98.63325142 | 96.56850924 | 94.55660999 |
| 161006A00012 | 10/6/2016 | 1.98 | 10/7/2024 | 10/6/2016 | 107.88606 | 107.8860584 | 107.8860584 | 107.8860584 | 106.4818801 | 102.2976374 | 98.30097802 | 94.48246619 | 90.83319597 |
| 161031A00005 | 10/31/2016 | 1.56 | 11/2/2020 | 10/31/2016 | 100.34327 | 100.3432676 | 100.3432676 | 100.3432676 | 100.3166472 | 100.0564628 | 99.79762493 | 99.54012323 | 99.28394736 |
| 161215A00014 | 12/15/2016 | 2.66 | 12/15/2022 | 12/15/2016 | 105.67297 | 105.6729717 | 105.6729717 | 105.6729717 | 105.177122 | 102.7958377 | 100.4805732 | 98.22913679 | 96.03942244 |
| 170110A00022 | 1/10/2017 | 2.27 | 1/10/2023 | 1/10/2017 | 105.32899 | 105.3289913 | 105.3289913 | 105.3289913 | 104.8091478 | 102.354492 | 99.96996427 | 97.65316555 | 95.40179348 |
| 170120A00009 | 1/20/2017 | 3.67 | 1/22/2035 | 1/20/2017 | 148.32099 | 148.3209939 | 148.3209939 | 142.558936 | 127.0583766 | 113.0070486 | 100.768572 | 90.09447238 | 80.77173758 |
| 170130A00010 | 1/30/2017 | 2.92 | 1/30/2025 | 1/30/2017 | 111.90312 | 111.9031154 | 111.9031154 | 111.9031154 | 110.2677478 | 105.7235728 | 101.3950788 | 97.27088858 | 93.34028469 |
| 170130A00054 | 3/30/2017 | 2.33 | 4/29/2022 | 3/30/2017 | 103.58868 | 103.5886826 | 103.5886826 | 103.5886826 | 103.2720712 | 101.527449 | 99.82060009 | 98.15036275 | 96.51562336 |
| 170213A00010 | 2/13/2017 | 2 | 8/13/2020 | 2/13/2017 | 100.06277 | 100.0627686 | 100.0627686 | 100.0627686 | 100.0600843 | 100.0240366 | 99.98803181 | 99.95206996 | 99.91615091 |
| 170213A00011 | 2/13/2017 | 2.13 | 2/16/2021 | 2/13/2017 | 101.04554 | 101.0455361 | 101.0455361 | 101.0455361 | 100.9816763 | 100.4282394 | 99.8808617 | 99.3394441 | 98.80388952 |
| 170215A00040 | 2/15/2017 | 2.59 | 5/15/2023 | 2/15/2017 | 106.45881 | 106.4588062 | 106.4588062 | 106.4588062 | 105.8166498 | 103.017948 | 100.3077316 | 97.68268068 | 95.13962211 |
| 170215A00041 | 2/15/2017 | 2.6 | 10/16/2023 | 2/15/2017 | 107.46439 | 107.4643916 | 107.4643916 | 107.4643916 | 106.6284996 | 103.4072926 | 100.3005942 | 97.30364501 | 94.41191564 |

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 170215A00043 | 2/15/2017 | 2.7 | 8/28/2024 | 2/15/2017 | 109.88283 | 109.8828313 | 109.8828313 | 109.8828313 | 108.5488868 | 104.4504549 | 100.5307424 | 96.78099267 | 93.1929267 |
| 170712A00019 | 7/12/2017 | 2.18 | 7/12/2022 | 7/12/2017 | 103.70939 | 103.7093862 | 103.7093862 | 103.7093862 | 103.3422844 | 101.3989092 | 99.50184161 | 97.64969622 | 95.84113859 |
| 170721A00017 | 7/21/2017 | 1.8 | 7/21/2021 | 7/21/2017 | 101.65696 | 101.656959 | 101.656959 | 101.656959 | 101.5131765 | 100.5323574 | 99.57041869 | 98.62681934 | 97.70103866 |
| 170731A00028 | 7/31/2017 | 2.16 | 8/1/2022 | 7/31/2017 | 103.77325 | 103.7732524 | 103.7732524 | 103.7732524 | 103.3910261 | 101.3945482 | 99.44688421 | 97.54653418 | 95.69205487 |
| 170731A00069 | 7/31/2017 | 1.75 | 1/29/2021 | 7/31/2017 | 100.82497 | 100.8249711 | 100.8249711 | 100.8249711 | 100.768826 | 100.2646721 | 99.76555007 | 99.27138484 | 98.78210288 |
| 170803A00013 | 8/3/2017 | 2.14 | 8/3/2022 | 8/3/2017 | 103.74298 | 103.7429795 | 103.7429795 | 103.7429795 | 103.3592335 | 101.3577904 | 99.40536146 | 97.50043725 | 95.64156543 |
| 170803A00027 | 8/3/2017 | 1.67 | 8/3/2020 | 8/3/2017 | 100.01295 | 100.0129458 | 100.0129458 | 100.0129458 | 100.0123255 | 100.0039948 | 99.99567176 | 99.98735648 | 99.97904894 |
| 170808A00037 | 8/8/2017 | 2.19 | 12/15/2022 | 8/8/2017 | 104.54522 | 104.5452196 | 104.5452196 | 104.5452196 | 104.0517691 | 101.6841463 | 99.38224876 | 97.14389358 | 94.96698325 |
| 170810A00001 | 8/11/2017 | 1.66 | 8/11/2020 | 8/11/2017 | 100.04716 | 100.0471625 | 100.0471625 | 100.0471625 | 100.0448883 | 100.0143471 | 99.98384104 | 99.95337015 | 99.92293432 |
| 170811A00018 | 8/11/2017 | 1.63 | 8/11/2020 | 8/11/2017 | 100.04625 | 100.0462459 | 100.0462459 | 100.0462459 | 100.0439718 | 100.0134313 | 99.9829261 | 99.952456 | 99.92202095 |
| 170818A00025 | 8/18/2017 | 1.77 | 8/18/2021 | 8/18/2017 | 101.75585 | 101.7558496 | 101.7558496 | 101.7558496 | 101.5943963 | 100.5369343 | 99.50139269 | 98.48709543 | 97.4933939 |
| 170824A00031 | 8/24/2017 | 1.98 | 8/24/2021 | 8/24/2017 | 101.83838 | 101.8383818 | 101.8383818 | 101.8383818 | 101.673304 | 100.6016049 | 99.55241249 | 98.52502366 | 97.51876418 |
| 170828A00030 | 8/28/2017 | 1.96 | 9/1/2021 | 8/28/2017 | 101.8542 | 101.8541986 | 101.8541986 | 101.8541986 | 101.6837665 | 100.59034 | 99.52032707 | 98.47298231 | 97.44759154 |
| 170829A00018 | 8/29/2017 | 1.9 | 8/30/2021 | 8/29/2017 | 101.77914 | 101.7791439 | 101.7791439 | 101.7791439 | 101.6101475 | 100.5225666 | 99.45816237 | 98.41620051 | 97.39597734 |
| 170829A00021 | 8/29/2017 | 1.58 | 8/31/2020 | 8/29/2017 | 100.12602 | 100.1260246 | 100.1260246 | 100.1260246 | 100.1196164 | 100.0335846 | 99.9476996 | 99.86196097 | 99.77636838 |
| 170829A00022 | 8/29/2017 | 1.72 | 8/30/2021 | 8/29/2017 | 101.75608 | 101.7560772 | 101.7560772 | 101.7560772 | 101.586671 | 100.4966509 | 99.4299022 | 98.38568618 | 97.36329525 |
| 170830A00044 | 8/30/2017 | 1.94 | 8/30/2021 | 8/30/2017 | 101.82296 | 101.8229612 | 101.8229612 | 101.8229612 | 101.6539313 | 100.5660946 | 99.50143855 | 98.45922852 | 97.43876079 |
| 170831A00051 | 8/31/2017 | 1.75 | 8/31/2021 | 8/31/2017 | 101.7935 | 101.793503 | 101.793503 | 101.793503 | 101.6234051 | 100.5304541 | 99.46089113 | 98.41397231 | 97.38898492 |
| 170831A00053 | 8/31/2017 | 1.81 | 3/1/2022 | 8/31/2017 | 102.71267 | 102.7126683 | 102.7126683 | 102.7126683 | 102.4319889 | 100.8484261 | 99.29701306 | 97.77683863 | 96.28702601 |
| 170906A00039 | 9/6/2017 | 1.99 | 9/6/2022 | 9/6/2017 | 103.59787 | 103.5978702 | 103.5978702 | 103.5978702 | 103.1876655 | 101.0977333 | 99.06043277 | 97.0740811 | 95.13706253 |
| 170908A00017 | 9/9/2019 | 2.32 | 9/9/2024 | 9/9/2019 | 108.38746 | 108.3874604 | 108.3874604 | 108.3874604 | 107.0396229 | 102.9400429 | 99.02076466 | 95.27288641 | 91.68799606 |
| 170913A00025 | 9/13/2017 | 1.94 | 8/16/2021 | 9/13/2017 | 101.75825 | 101.7582536 | 101.7582536 | 101.7582536 | 101.598522 | 100.5489282 | 99.52094209 | 98.51390159 | 97.52717142 |
| 171003A00007 | 10/3/2017 | 2.22 | 10/3/2022 | 10/3/2017 | 104.22943 | 104.2294347 | 104.2294347 | 104.2294347 | 103.7966652 | 101.6268047 | 99.5129417 | 97.45323133 | 95.44590521 |
| 171010A00037 | 10/10/2017 | 2.09 | 10/12/2021 | 10/10/2017 | 102.20307 | 102.203067 | 102.203067 | 102.203067 | 102.0035576 | 100.7972658 | 99.61939974 | 98.46896361 | 97.34500768 |
| 171012A00027 | 10/12/2017 | 2.21 | 10/12/2022 | 10/12/2017 | 104.25512 | 104.2551204 | 104.2551204 | 104.2551204 | 103.8150547 | 101.6212521 | 99.48455583 | 97.4030658 | 95.37496127 |
| 180914A00011 | 9/14/2018 | 3.01 | 4/12/2021 | 9/14/2018 | 101.94802 | 101.9480239 | 101.9480239 | 101.9480239 | 101.8569079 | 101.1495196 | 100.4519547 | 99.7640093 | 99.08548533 |
| 180914A00012 | 9/14/2018 | 2.97 | 10/13/2020 | 9/14/2018 | 100.55785 | 100.5578457 | 100.5578457 | 100.5578457 | 100.5379188 | 100.332604 | 100.1281402 | 99.92452208 | 99.72174435 |
| 180914A00026 | 9/14/2018 | 3.15 | 9/14/2023 | 9/14/2018 | 108.9948 | 108.9947997 | 108.9947997 | 108.9947997 | 108.1967235 | 105.0363172 | 101.9855716 | 99.04004057 | 96.19548674 |
| 180918A00012 | 9/18/2018 | 3.06 | 9/17/2021 | 9/18/2018 | 103.18841 | 103.1884147 | 103.1884147 | 103.1884147 | 103.0054223 | 101.8606585 | 100.7413295 | 99.64659395 | 98.57564731 |
| 180918A00013 | 9/18/2018 | 3.11 | 9/16/2022 | 9/18/2018 | 106.05384 | 106.0538357 | 106.0538357 | 106.0538357 | 105.6312073 | 103.4873292 | 101.3978063 | 99.36088272 | 97.37487335 |
| 180920A00011 | 9/20/2018 | 2.89 | 9/18/2020 | 9/20/2018 | 100.37728 | 100.3772795 | 100.3772795 | 100.3772795 | 100.3653914 | 100.2292294 | 100.0934514 | 99.95805587 | 99.8230411 |
| 180920A00030 | 9/20/2018 | 3.12 | 9/20/2023 | 9/20/2018 | 109.53616 | 109.5361572 | 109.5361572 | 109.5361572 | 108.7243411 | 105.5251284 | 102.4376181 | 99.45725115 | 96.57968437 |
| 180925A00060 | 9/25/2018 | 3.23 | 8/25/2023 | 9/25/2018 | 109.08551 | 109.0855114 | 109.0855114 | 109.0855114 | 108.3134125 | 105.2055315 | 102.2040309 | 99.30466032 | 96.50336544 |

Classification | Public

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 180927A00015 | 9/27/2018 | 3.02 | 9/27/2022 | 9/27/2018 | 106.34242 | 106.3424187 | 106.3424187 | 106.3424187 | 105.9087887 | 103.7237944 | 101.5948871 | 99.52022895 | 97.49805761 |
| 181005A00037 | 10/9/2018 | 3.4 | 10/3/2025 | 10/9/2018 | 117.17355 | 117.1735497 | 117.1735497 | 117.1735497 | 114.9315987 | 109.5839416 | 104.5217652 | 99.72825531 | 95.18768094 |
| 181016A00087 | 10/16/2018 | 3.31 | 10/16/2023 | 10/16/2018 | 109.76445 | 109.7644507 | 109.7644507 | 109.7644507 | 108.9210355 | 105.6627305 | 102.5199158 | 99.48779785 | 96.56181478 |
| 181022A00026 | 10/22/2018 | 3.18 | 10/15/2021 | 10/22/2018 | 103.55101 | 103.5510085 | 103.5510085 | 103.5510085 | 103.3482978 | 102.1251974 | 100.9310487 | 99.76483174 | 98.62557424 |
| 181025A00021 | 10/25/2018 | 2.97 | 10/26/2020 | 10/25/2018 | 100.68918 | 100.6891767 | 100.6891767 | 100.6891767 | 100.6647932 | 100.4230043 | 100.1823831 | 99.94292119 | 99.70461018 |
| 181102A00007 | 11/2/2018 | 3.01 | 11/2/2020 | 11/2/2018 | 100.75507 | 100.755067 | 100.755067 | 100.755067 | 100.7283412 | 100.4670784 | 100.2071714 | 99.94860934 | 99.69138199 |
| 181107A00008 | 11/7/2018 | 3.42 | 11/7/2023 | 11/7/2018 | 110.31 | 110.3099957 | 110.3099957 | 110.3099957 | 109.4346378 | 106.1088691 | 102.9027577 | 99.81129033 | 96.82969658 |
| 181109A00029 | 11/9/2018 | 3.72 | 11/9/2026 | 11/9/2018 | 121.52553 | 121.5255259 | 121.5255259 | 121.5255259 | 117.9226224 | 111.4572832 | 105.398025 | 99.71707081 | 94.38869002 |
| 181115A00055 | 11/15/2018 | 3.01 | 11/15/2021 | 11/15/2018 | 103.78802 | 103.7880242 | 103.7880242 | 103.7880242 | 103.5653255 | 102.2587195 | 100.9795558 | 99.72697319 | 98.5001468 |
| 181121A00015 | 11/21/2018 | 3.24 | 11/21/2022 | 11/21/2018 | 106.86967 | 106.8696653 | 106.8696653 | 106.8696653 | 106.3916451 | 104.0602497 | 101.7918292 | 99.58430467 | 97.43567974 |
| 181206A00011 | 12/6/2018 | 3.11 | 12/6/2022 | 12/6/2018 | 106.68275 | 106.682754 | 106.682754 | 106.682754 | 106.1924832 | 103.8227839 | 101.518102 | 99.27629991 | 97.09532279 |
| 181211A00020 | 12/11/2018 | 3.04 | 12/11/2020 | 12/11/2018 | 101.03176 | 101.031761 | 101.031761 | 101.031761 | 100.9925859 | 100.6234815 | 100.2570823 | 99.89335879 | 99.53228148 |
| 181212A00033 | 12/12/2018 | 2.99 | 12/12/2023 | 12/12/2018 | 109.78262 | 109.7826155 | 109.7826155 | 109.7826155 | 108.8549536 | 105.4283978 | 102.1287962 | 98.95078574 | 95.88925843 |
| 181219A00023 | 12/19/2018 | 2.97 | 12/20/2021 | 12/19/2018 | 103.78643 | 103.7864294 | 103.7864294 | 103.7864294 | 103.5454767 | 102.1538041 | 100.7875711 | 99.4461401 | 98.12889425 |
| 190102A00041 | 1/2/2019 | 2.91 | 1/2/2024 | 1/2/2019 | 109.02975 | 109.0297458 | 109.0297458 | 109.0297458 | 108.0797512 | 104.6267406 | 101.3034042 | 98.10419096 | 95.02381738 |
| 190103A00014 | 1/3/2019 | 2.8 | 1/4/2021 | 1/3/2019 | 101.11349 | 101.1134909 | 101.1134909 | 101.1134909 | 101.0664175 | 100.6309765 | 100.1992841 | 99.77129213 | 99.34695311 |
| 180904A00036 | 9/4/2018 | 2.83 | 9/4/2020 | 9/4/2018 | 100.24957 | 100.2495666 | 100.2495666 | 100.2495666 | 100.2419478 | 100.1448615 | 100.0479685 | 99.95126835 | 99.85476046 |
| 180910A00028 | 9/10/2018 | 3.56 | 9/9/2033 | 9/10/2018 | 145.41104 | 145.4110373 | 145.4110373 | 141.6521165 | 127.3649382 | 114.2114429 | 102.6257775 | 92.40954685 | 83.39054075 |
| 180911A00042 | 9/11/2018 | 2.99 | 9/11/2023 | 9/11/2018 | 109.05165 | 109.0516532 | 109.0516532 | 109.0516532 | 108.2533575 | 105.0864575 | 102.0295105 | 99.07805768 | 96.22784947 |
| 180912A00011 | 9/12/2018 | 3.41 | 9/11/2026 | 9/12/2018 | 119.07202 | 119.072024 | 119.072024 | 119.072024 | 115.7184764 | 109.474873 | 103.6157815 | 98.11540821 | 92.94982426 |
| 180912A00030 | 9/12/2018 | 3 | 9/13/2021 | 9/12/2018 | 103.08958 | 103.0895761 | 103.0895761 | 103.0895761 | 102.9095442 | 101.7762466 | 100.6678952 | 99.58367274 | 98.52279695 |
| 180914A00034 | 9/14/2018 | 2.85 | 9/15/2020 | 9/14/2018 | 100.34909 | 100.3490923 | 100.3490923 | 100.3490923 | 100.3381167 | 100.2102968 | 100.0828181 | 99.95567905 | 99.82887829 |
| 180920A00027 | 9/20/2018 | 3.04 | 9/20/2022 | 9/20/2018 | 106.32951 | 106.329512 | 106.329512 | 106.329512 | 105.9015235 | 103.7359829 | 101.6256734 | 99.56879901 | 97.56363671 |
| 180924A00044 | 9/24/2018 | 3.1 | 9/24/2021 | 9/24/2018 | 103.28888 | 103.2888779 | 103.2888779 | 103.2888779 | 103.1007624 | 101.9363695 | 100.7982649 | 99.68556532 | 98.59742669 |
| 180928A00011 | 9/28/2018 | 3.12 | 7/15/2022 | 9/28/2018 | 105.58368 | 105.5836786 | 105.5836786 | 105.5836786 | 105.2112359 | 103.2410792 | 101.3179706 | 99.44049729 | 97.60729875 |
| 180928A00029 | 9/28/2018 | 2.87 | 9/28/2020 | 9/28/2018 | 100.45093 | 100.450925 | 100.450925 | 100.450925 | 100.4359972 | 100.2720588 | 100.1086575 | 99.94579084 | 99.7834561 |
| 181004A00028 | 10/4/2018 | 3.31 | 10/4/2023 | 10/4/2018 | 109.66478 | 109.6647752 | 109.6647752 | 109.6647752 | 108.8379827 | 105.6129212 | 102.5012312 | 99.4982491 | 96.59953436 |
| 181009A00024 | 10/9/2018 | 3.06 | 10/9/2020 | 10/9/2018 | 100.54516 | 100.5451559 | 100.5451559 | 100.5451559 | 100.5265852 | 100.332345 | 100.1388655 | 99.94614218 | 99.75417054 |
| 181010A00018 | 10/10/2018 | 3.17 | 6/1/2021 | 10/10/2018 | 102.45682 | 102.4568162 | 102.4568162 | 102.4568162 | 102.3399169 | 101.4935014 | 100.6610728 | 99.84228637 | 99.03680884 |
| 181010A00020 | 10/10/2018 | 3.27 | 12/1/2022 | 10/10/2018 | 107.02161 | 107.0216147 | 107.0216147 | 107.0216147 | 106.5349342 | 104.1744389 | 101.8783482 | 99.64455627 | 97.47103793 |
| 181016A00084 | 10/16/2018 | 3.21 | 10/17/2022 | 10/16/2018 | 106.51833 | 106.5183296 | 106.5183296 | 106.5183296 | 106.069855 | 103.837269 | 101.6629376 | 99.54491376 | 97.48133251 |
| 181018A00014 | 10/18/2018 | 3.21 | 10/18/2021 | 10/18/2018 | 103.6121 | 103.6120977 | 103.6120977 | 103.6120977 | 103.4073226 | 102.1756774 | 100.9733757 | 99.79937716 | 98.65269022 |
| 181022A00051 | 10/22/2018 | 3.11 | 10/22/2020 | 10/22/2018 | 100.66029 | 100.6602884 | 100.6602884 | 100.6602884 | 100.6372976 | 100.4069367 | 100.1776397 | 99.94939928 | 99.72220799 |

Classification | Public

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 181025A00010 | 10/25/2018 | 3.07 | 10/25/2022 | 10/25/2018 | 106.6808 | 106.6807952 | 106.6807952 | 106.6807952 | 106.22369 | 103.9598194 | 101.7556117 | 99.60905126 | 97.51820851 |
| 181102A00006 | 11/2/2018 | 3.07 | 11/2/2021 | 11/2/2018 | 103.76028 | 103.7602772 | 103.7602772 | 103.7602772 | 103.5449523 | 102.2691647 | 101.0240523 | 99.80851483 | 98.62150394 |
| 181109A00023 | 11/9/2018 | 3.39 | 11/9/2022 | 11/9/2018 | 107.11738 | 107.1173798 | 107.1173798 | 107.1173798 | 106.6488517 | 104.3474815 | 102.1074967 | 99.92684022 | 97.80354049 |
| 181114A00026 | 11/14/2018 | 3.32 | 12/14/2022 | 11/14/2018 | 107.24827 | 107.2482688 | 107.2482688 | 107.2482688 | 106.7499281 | 104.3522131 | 102.0207879 | 99.75345541 | 97.54810431 |
| 181115A00036 | 11/15/2018 | 3.2 | 11/15/2021 | 11/15/2018 | 103.81325 | 103.8132549 | 103.8132549 | 103.8132549 | 103.5911752 | 102.2878822 | 101.0119063 | 99.76239186 | 98.5385189 |
| 181121A00016 | 11/21/2018 | 3.29 | 11/21/2023 | 11/21/2018 | 109.99611 | 109.9961071 | 109.9961071 | 109.9961071 | 109.1023091 | 105.7436474 | 102.5071351 | 99.38766507 | 96.38037301 |
| 181123A00015 | 11/23/2018 | 3.14 | 11/23/2021 | 11/23/2018 | 103.79783 | 103.7978317 | 103.7978317 | 103.7978317 | 103.5712669 | 102.2493264 | 100.9527282 | 99.68076643 | 98.43276173 |
| 171227A00018 | 12/27/2017 | 2.83 | 12/27/2024 | 12/27/2017 | 111.21207 | 111.2120669 | 111.2120669 | 111.2120669 | 109.6483096 | 105.2075276 | 100.9735782 | 96.93576344 | 93.08399342 |
| 180103A00018 | 1/3/2018 | 2.29 | 1/4/2021 | 1/3/2018 | 100.89122 | 100.8912168 | 100.8912168 | 100.8912168 | 100.8442023 | 100.4093388 | 99.97822039 | 99.55079875 | 99.12702649 |
| 180110A00029 | 1/10/2018 | 3.13 | 1/10/2028 | 1/10/2018 | 121.08527 | 121.0852719 | 121.0852719 | 121.0852719 | 115.7752123 | 108.2799474 | 101.3342262 | 94.8947193 | 88.92172781 |
| 180116A00009 | 1/16/2018 | 2.49 | 1/14/2022 | 1/16/2018 | 103.26528 | 103.2652849 | 103.2652849 | 103.2652849 | 103.0114112 | 101.5573766 | 100.1311239 | 98.73192654 | 97.35908247 |
| 180118A00010 | 1/18/2018 | 2.51 | 8/18/2021 | 1/18/2018 | 102.37295 | 102.3729524 | 102.3729524 | 102.3729524 | 102.2114449 | 101.1529473 | 100.1163301 | 99.10091976 | 98.10607024 |
| 180124A00018 | 1/24/2018 | 2.3 | 1/25/2021 | 1/24/2018 | 101.07868 | 101.0786815 | 101.0786815 | 101.0786815 | 101.0239114 | 100.5300223 | 100.0409603 | 99.55665485 | 99.07703664 |
| 180125A00026 | 1/26/2018 | 2.46 | 1/25/2021 | 1/26/2018 | 101.09453 | 101.0945267 | 101.0945267 | 101.0945267 | 101.0398381 | 100.5466651 | 100.0583022 | 99.57467905 | 99.09572705 |
| 180201A00003 | 2/1/2018 | 2.54 | 2/1/2021 | 2/1/2018 | 101.17861 | 101.1786075 | 101.1786075 | 101.1786075 | 101.1212791 | 100.6086227 | 100.1011508 | 99.5987849 | 99.10144842 |
| 180207A00002 | 2/7/2018 | 3.13 | 2/6/2026 | 2/7/2018 | 115.68058 | 115.6805757 | 115.6805757 | 115.6805757 | 113.1050073 | 107.5074604 | 102.2262553 | 97.24182144 | 92.53589925 |
| 180215A00044 | 2/15/2018 | 2.64 | 2/1/2021 | 2/15/2018 | 101.22996 | 101.2299586 | 101.2299586 | 101.2299586 | 101.1726143 | 100.6598051 | 100.1521814 | 99.64966489 | 99.15217889 |
| 180216A00001 | 2/16/2018 | 2.5 | 2/16/2021 | 2/16/2018 | 101.32255 | 101.3225515 | 101.3225515 | 101.3225515 | 101.2584933 | 100.7032928 | 100.1541797 | 99.61105435 | 99.07381895 |
| 180216A00004 | 2/16/2018 | 2.75 | 2/16/2023 | 2/16/2018 | 106.78715 | 106.7871533 | 106.7871533 | 106.7871533 | 106.2302487 | 103.6546139 | 101.1550187 | 98.72876286 | 96.37326021 |
| 180220A00027 | 2/20/2018 | 2.69 | 2/19/2021 | 2/20/2018 | 101.37655 | 101.3765549 | 101.3765549 | 101.3765549 | 101.3112669 | 100.748531 | 100.1920424 | 99.64169737 | 99.09739447 |
| 180223A00022 | 2/23/2018 | 2.93 | 2/23/2023 | 2/23/2018 | 106.82826 | 106.8282625 | 106.8282625 | 106.8282625 | 106.2671631 | 103.6805542 | 101.1705202 | 98.73433128 | 96.36937305 |
| 180226A00040 | 2/26/2018 | 2.79 | 2/28/2022 | 2/26/2018 | 104.00281 | 104.002809 | 104.002809 | 104.002809 | 103.721979 | 102.1350162 | 100.580139 | 99.05644142 | 97.56305143 |
| 180329A00033 | 4/2/2018 | 2.79 | 4/1/2021 | 4/2/2018 | 101.7152 | 101.7151988 | 101.7151988 | 101.7151988 | 101.6298599 | 100.9535376 | 100.2861987 | 99.62766509 | 98.9777635 |
| 180417A00005 | 4/17/2018 | 2.67 | 4/19/2021 | 4/17/2018 | 101.85578 | 101.8557804 | 101.8557804 | 101.8557804 | 101.7609158 | 101.0333892 | 100.3162581 | 99.60930045 | 98.91230084 |
| 180418A00021 | 4/18/2018 | 2.85 | 4/19/2021 | 4/18/2018 | 101.88507 | 101.8850662 | 101.8850662 | 101.8850662 | 101.7903684 | 101.0640478 | 100.3480861 | 99.64226269 | 98.94636314 |
| 180420A00012 | 4/20/2018 | 2.91 | 4/20/2021 | 4/20/2018 | 101.93603 | 101.9360337 | 101.9360337 | 101.9360337 | 101.8407968 | 101.111531 | 100.3927037 | 99.68409172 | 98.98547822 |
| 180426A00011 | 4/26/2018 | 2.94 | 4/26/2023 | 4/26/2018 | 107.81598 | 107.8159762 | 107.8159762 | 107.8159762 | 107.1878621 | 104.4092952 | 101.7172789 | 99.10854573 | 96.57997701 |
| 180507A00005 | 5/7/2018 | 3.06 | 5/5/2023 | 5/7/2018 | 107.70587 | 107.7058701 | 107.7058701 | 107.7058701 | 107.0713183 | 104.2814202 | 101.5788604 | 98.96034683 | 96.42273582 |
| 180516A00019 | 5/16/2018 | 3.19 | 5/16/2023 | 5/16/2018 | 108.15617 | 108.1561693 | 108.1561693 | 108.1561693 | 107.5084174 | 104.6831285 | 101.9470558 | 99.29685705 | 96.72933676 |
| 180518A00014 | 5/18/2018 | 3.17 | 5/18/2023 | 5/18/2018 | 108.11566 | 108.1156639 | 108.1156639 | 108.1156639 | 107.4658353 | 104.6358336 | 101.8953506 | 99.24103541 | 96.66968458 |
| 180523A00025 | 5/23/2018 | 2.86 | 12/15/2021 | 5/23/2018 | 103.81962 | 103.8196199 | 103.8196199 | 103.8196199 | 103.5805714 | 102.1983952 | 100.8413217 | 99.50872547 | 98.20000162 |
| 180831A00016 | 8/31/2018 | 2.99 | 8/31/2023 | 8/31/2018 | 108.38695 | 108.386946 | 108.386946 | 108.386946 | 107.6092569 | 104.4963861 | 101.4905621 | 98.58748851 | 95.7830685 |
| 180831A00018 | 8/31/2018 | 2.95 | 8/31/2022 | 8/31/2018 | 105.59264 | 105.5926369 | 105.5926369 | 105.5926369 | 105.1836057 | 103.0885979 | 101.0459482 | 99.05399559 | 97.11114436 |

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 180911A00012 | 9/11/2018 | 3.06 | 9/9/2022 | 9/11/2018 | 105.89296 | 105.8929597 | 105.8929597 | 105.8929597 | 105.4762093 | 103.3532818 | 101.2838395 | 99.26616802 | 97.29862157 |
| 180914A00013 | 9/14/2018 | 3.48 | 9/14/2028 | 9/14/2018 | 125.83262 | 125.83262 | 125.83262 | 125.83262 | 119.383279 | 111.1253658 | 103.5180937 | 96.50640327 | 90.04017646 |
| 180917A00078 | 9/17/2018 | 3.05 | 9/15/2023 | 9/17/2018 | 109.27322 | 109.2732185 | 109.2732185 | 109.2732185 | 108.4688978 | 105.2875486 | 102.2169306 | 99.25254035 | 96.39008676 |
| 180918A00038 | 9/18/2018 | 3.11 | 9/16/2022 | 9/18/2018 | 106.05384 | 106.0538357 | 106.0538357 | 106.0538357 | 105.6312073 | 103.4873292 | 101.3978063 | 99.36088272 | 97.37487335 |
| 180918A00041 | 9/18/2018 | 3.18 | 9/18/2024 | 9/18/2018 | 112.80891 | 112.8089111 | 112.8089111 | 112.8089111 | 111.414443 | 107.1786002 | 103.1294428 | 99.25771 | 95.55465409 |
| 180920A00028 | 9/20/2018 | 3.12 | 9/20/2023 | 9/20/2018 | 109.53616 | 109.5361572 | 109.5361572 | 109.5361572 | 108.7243411 | 105.5251284 | 102.4376181 | 99.45725115 | 96.57968437 |
| 180921A00021 | 9/21/2018 | 2.99 | 9/21/2021 | 9/21/2018 | 103.32371 | 103.3237145 | 103.3237145 | 103.3237145 | 103.1372485 | 101.978005 | 100.8447991 | 99.73676054 | 98.65305733 |
| 180921A00024 | 9/21/2018 | 2.99 | 9/21/2021 | 9/21/2018 | 103.32371 | 103.3237145 | 103.3237145 | 103.3237145 | 103.1372485 | 101.978005 | 100.8447991 | 99.73676054 | 98.65305733 |
| 180924A00056 | 9/24/2018 | 3.14 | 9/23/2022 | 9/24/2018 | 106.17323 | 106.1732337 | 106.1732337 | 106.1732337 | 105.744801 | 103.5804178 | 101.4712584 | 99.41552499 | 97.41149313 |
| 180927A00029 | 9/27/2018 | 3.01 | 10/27/2020 | 9/27/2018 | 100.67566 | 100.6756618 | 100.6756618 | 100.6756618 | 100.6509763 | 100.4067835 | 100.1637778 | 99.92195041 | 99.68129289 |
| 180927A00042 | 9/27/2018 | 3.02 | 9/27/2022 | 9/27/2018 | 106.34242 | 106.3424187 | 106.3424187 | 106.3424187 | 105.9087887 | 103.7237944 | 101.5948871 | 99.52022895 | 97.49805761 |
| 181005A00017 | 10/5/2018 | 3.27 | 4/11/2023 | 10/5/2018 | 108.09487 | 108.0948744 | 108.0948744 | 108.0948744 | 107.4843801 | 104.7541615 | 102.1076838 | 99.54183651 | 97.05364787 |
| 181009A00008 | 10/9/2018 | 3.24 | 10/7/2022 | 10/9/2018 | 106.50405 | 106.5040498 | 106.5040498 | 106.5040498 | 106.0637247 | 103.8578718 | 101.7090288 | 99.61531123 | 97.57491274 |
| 181023A00020 | 10/23/2018 | 3.15 | 10/22/2021 | 10/23/2018 | 103.57011 | 103.5701088 | 103.5701088 | 103.5701088 | 103.3626929 | 102.1204617 | 100.9080849 | 99.7244952 | 98.5686755 |
| 181023A00025 | 10/23/2018 | 3.27 | 10/23/2023 | 10/23/2018 | 109.69224 | 109.6922442 | 109.6922442 | 109.6922442 | 108.8395655 | 105.5639956 | 102.4051047 | 99.35802449 | 96.41812342 |
| 181106A00003 | 11/6/2018 | 3.31 | 11/5/2021 | 11/6/2018 | 103.88649 | 103.8864887 | 103.8864887 | 103.8864887 | 103.6699338 | 102.3894216 | 101.1387224 | 99.91679585 | 98.72264993 |
| 181109A00027 | 11/13/2018 | 3.48 | 4/15/2024 | 11/13/2018 | 111.90806 | 111.908059 | 111.908059 | 111.908059 | 110.7898686 | 107.0067931 | 103.3750874 | 99.8878156 | 96.53840367 |
| 181109A00028 | 11/9/2018 | 3.72 | 11/9/2026 | 11/9/2018 | 121.52553 | 121.5255259 | 121.5255259 | 121.5255259 | 117.9226224 | 111.4572832 | 105.398025 | 99.71707081 | 94.38869002 |
| 181115A00012 | 11/15/2018 | 3.14 | 11/16/2020 | 11/15/2018 | 100.86794 | 100.8679368 | 100.8679368 | 100.8679368 | 100.836779 | 100.5369987 | 100.2390105 | 99.94279803 | 99.64834555 |
| 181120A00007 | 11/20/2018 | 3.15 | 11/15/2021 | 11/20/2018 | 103.74783 | 103.7478301 | 103.7478301 | 103.7478301 | 103.5258143 | 102.2229713 | 100.9474378 | 99.69835818 | 98.47491284 |
| 181121A00013 | 11/21/2018 | 3.11 | 11/20/2020 | 11/21/2018 | 100.89069 | 100.8906909 | 100.8906909 | 100.8906909 | 100.858258 | 100.5473921 | 100.2384499 | 99.9314136 | 99.6262655 |
| 181123A00013 | 11/23/2018 | 3.14 | 11/23/2021 | 11/23/2018 | 103.79783 | 103.7978317 | 103.7978317 | 103.7978317 | 103.5712669 | 102.2493264 | 100.9527282 | 99.68076643 | 98.43276173 |
| 171016A00021 | 10/16/2017 | 2.2 | 10/17/2022 | 10/16/2017 | 104.25923 | 104.2592348 | 104.2592348 | 104.2592348 | 103.8151367 | 101.6081557 | 99.45889963 | 97.36543697 | 95.32591779 |
| 171018A00001 | 10/18/2017 | 1.96 | 10/18/2021 | 10/18/2017 | 102.26949 | 102.2694853 | 102.2694853 | 102.2694853 | 102.0653761 | 100.8394455 | 99.64283671 | 98.47450753 | 97.33346465 |
| 171030A00019 | 10/30/2017 | 2.04 | 3/16/2021 | 10/30/2017 | 101.12804 | 101.1280431 | 101.1280431 | 101.1280431 | 101.0509365 | 100.4205889 | 99.79809472 | 99.18330755 | 98.57608483 |
| 171102A00001 | 11/3/2017 | 1.84 | 11/3/2020 | 11/3/2017 | 100.4544 | 100.4544048 | 100.4544048 | 100.4544048 | 100.4274103 | 100.1639059 | 99.9017856 | 99.6410386 | 99.38165404 |
| 171115A00006 | 11/15/2017 | 2.14 | 11/16/2020 | 11/15/2017 | 100.56808 | 100.5680807 | 100.5680807 | 100.5680807 | 100.5369794 | 100.237783 | 99.94037599 | 99.64474216 | 99.35086566 |
| 171205A00005 | 12/6/2017 | 2.27 | 12/6/2022 | 12/6/2017 | 105.12022 | 105.1202213 | 105.1202213 | 105.1202213 | 104.6312147 | 102.2714559 | 99.97672177 | 97.74486815 | 95.5738341 |
| 171205A00014 | 12/5/2017 | 2.49 | 12/5/2022 | 12/5/2017 | 105.2044 | 105.2044032 | 105.2044032 | 105.2044032 | 104.718087 | 102.3687467 | 100.0839044 | 97.86144073 | 95.69931828 |
| 171206A00010 | 12/6/2017 | 2.45 | 12/6/2022 | 12/6/2017 | 105.11548 | 105.1154829 | 105.1154829 | 105.1154829 | 104.6284992 | 102.2775972 | 99.99130959 | 97.76751105 | 95.60415831 |
| 171206A00029 | 12/6/2017 | 2.21 | 9/16/2020 | 12/6/2017 | 100.25522 | 100.2552163 | 100.2552163 | 100.2552163 | 100.2439624 | 100.1136645 | 99.98371901 | 99.85412449 | 99.72487949 |
| 171206A00041 | 12/6/2017 | 2.44 | 12/6/2024 | 12/6/2017 | 110.21973 | 110.2197278 | 110.2197278 | 110.2197278 | 108.6911403 | 104.3007044 | 100.1132614 | 96.11840006 | 92.30629538 |
| 171207A00036 | 12/7/2017 | 2.23 | 12/7/2022 | 12/7/2017 | 105.03088 | 105.0308815 | 105.0308815 | 105.0308815 | 104.5412045 | 102.1798792 | 99.88369599 | 97.65050451 | 95.47823795 |

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 171214A00005 | 12/14/2017 | 2.29 | 12/14/2022 | 12/14/2017 | 105.21598 | 105.2159815 | 105.2159815 | 105.2159815 | 104.7199038 | 102.3378572 | 100.0219881 | 97.77009623 | 95.58006734 |
| 171221A00003 | 12/21/2017 | 2.35 | 12/21/2020 | 12/21/2017 | 100.83548 | 100.8354808 | 100.8354808 | 100.8354808 | 100.7931402 | 100.3969414 | 100.0038615 | 99.61386348 | 99.22691125 |
| 180103A00019 | 1/3/2018 | 2.51 | 1/3/2023 | 1/3/2018 | 105.42935 | 105.4293476 | 105.4293476 | 105.4293476 | 104.9176926 | 102.4894827 | 100.1299406 | 97.83674144 | 95.60765275 |
| 180104A00017 | 1/4/2018 | 2.77 | 1/3/2025 | 1/4/2018 | 110.99296 | 110.9929648 | 110.9929648 | 110.9929648 | 109.4168041 | 104.9629476 | 100.7174285 | 96.66942624 | 92.8087374 |
| 180117A00011 | 1/17/2018 | 2.4 | 1/14/2021 | 1/17/2018 | 100.99903 | 100.999026 | 100.999026 | 100.999026 | 100.9483545 | 100.4856928 | 100.0272752 | 99.57304355 | 99.12294043 |
| 180118A00004 | 1/18/2018 | 2.88 | 1/17/2025 | 1/18/2018 | 111.62944 | 111.6294384 | 111.6294384 | 111.6294384 | 110.0213853 | 105.5164589 | 101.2238342 | 97.13239539 | 93.23166635 |
| 180118A00039 | 1/18/2018 | 3.09 | 1/19/2027 | 1/18/2018 | 118.09264 | 118.0926441 | 118.0926441 | 118.0926441 | 114.2533512 | 107.7192438 | 101.6091883 | 95.89337857 | 90.54425203 |
| 180123A00045 | 1/23/2018 | 2.43 | 1/25/2021 | 1/23/2018 | 101.0797 | 101.0797039 | 101.0797039 | 101.0797039 | 101.0250198 | 100.5318896 | 100.0435692 | 99.55998833 | 99.08107826 |
| 180129A00006 | 1/29/2018 | 2.49 | 11/30/2020 | 1/29/2018 | 100.76007 | 100.7600656 | 100.7600656 | 100.7600656 | 100.7244852 | 100.3863202 | 100.0504167 | 99.71675226 | 99.3853046 |
| 180130A00084 | 1/30/2018 | 2.59 | 1/30/2023 | 1/30/2018 | 106.25858 | 106.2585765 | 106.2585765 | 106.2585765 | 105.7187613 | 103.1996195 | 100.7538978 | 98.37903022 | 96.0725567 |
| 180206A00013 | 2/6/2018 | 2.72 | 2/6/2024 | 2/6/2018 | 109.26596 | 109.2659636 | 109.2659636 | 109.2659636 | 108.2583335 | 104.6924034 | 101.2641751 | 97.96758262 | 94.79686202 |
| 180214A00004 | 2/14/2018 | 2.71 | 2/14/2023 | 2/14/2018 | 106.66969 | 106.6696879 | 106.6696879 | 106.6696879 | 106.1149301 | 103.5466999 | 101.0541833 | 98.63469666 | 96.28566906 |
| 180215A00029 | 2/15/2018 | 2.65 | 2/16/2021 | 2/15/2018 | 101.3342 | 101.3341967 | 101.3341967 | 101.3341967 | 101.2702386 | 100.7158789 | 100.1675858 | 99.62525985 | 99.08880403 |
| 170216A00045 | 2/16/2017 | 3.73 | 2/17/2037 | 2/16/2017 | 156.04382 | 156.0438162 | 156.0438162 | 147.3446731 | 129.5198606 | 113.7401896 | 100.2311096 | 88.64514045 | 78.69008332 |
| 170224A00021 | 2/24/2017 | 3.4 | 2/24/2032 | 2/24/2017 | 135.6677 | 135.667697 | 135.667697 | 134.2650547 | 122.1202954 | 110.701173 | 100.5052194 | 91.39319374 | 83.24243505 |
| 170228A00015 | 2/28/2017 | 2.87 | 5/28/2025 | 2/28/2017 | 112.45596 | 112.4559636 | 112.4559636 | 112.4559636 | 110.5694899 | 105.7026814 | 101.0807996 | 96.690261 | 92.5183035 |
| 170309A00024 | 3/9/2017 | 2.27 | 3/9/2021 | 3/9/2017 | 101.2344 | 101.2343995 | 101.2343995 | 101.2343995 | 101.1607403 | 100.5491876 | 99.94501947 | 99.34810274 | 98.75830729 |
| 170322A00023 | 3/22/2017 | 3.82 | 9/22/2039 | 3/22/2017 | 166.26255 | 166.262546 | 166.262546 | 153.7460548 | 132.9988737 | 115.1148896 | 100.1176082 | 87.51005192 | 76.88412446 |
| 170329A00015 | 3/29/2017 | 2.11 | 3/29/2021 | 3/29/2017 | 101.23932 | 101.2393244 | 101.2393244 | 101.2393244 | 101.1556979 | 100.489379 | 99.83181204 | 99.18282553 | 98.54225243 |
| 170330A00012 | 3/30/2017 | 2.11 | 3/30/2021 | 3/30/2017 | 101.24448 | 101.2444776 | 101.2444776 | 101.2444776 | 101.1603508 | 100.491278 | 99.83102723 | 99.17942493 | 98.53630214 |
| 170404A00007 | 4/4/2017 | 2.22 | 4/4/2022 | 4/4/2017 | 103.26195 | 103.2619471 | 103.2619471 | 103.2619471 | 102.9611362 | 101.2876158 | 99.64925725 | 98.0450165 | 96.47389105 |
| 170417A00043 | 4/17/2017 | 2.14 | 4/18/2022 | 4/17/2017 | 103.19748 | 103.1974822 | 103.1974822 | 103.1974822 | 102.8881714 | 101.1770438 | 99.50248862 | 97.86339767 | 96.25870797 |
| 170427A00046 | 4/27/2017 | 3.1 | 4/27/2028 | 4/27/2017 | 121.67929 | 121.6792899 | 121.6792899 | 121.6792899 | 115.909437 | 108.1350248 | 100.9503189 | 94.30724442 | 88.16189446 |
| 170427A00047 | 4/27/2017 | 3.18 | 4/27/2029 | 4/27/2017 | 125.14021 | 125.1402139 | 125.1402139 | 125.1402139 | 117.6843905 | 108.9323088 | 100.9176207 | 93.57386282 | 86.84090462 |
| 170501A00007 | 5/1/2017 | 2.04 | 5/3/2021 | 5/1/2017 | 101.36533 | 101.3653317 | 101.3653317 | 101.3653317 | 101.2636989 | 100.5012551 | 99.75025669 | 99.01044759 | 98.28157918 |
| 170505A00003 | 5/5/2017 | 2.09 | 5/5/2021 | 5/5/2017 | 101.41381 | 101.4138136 | 101.4138136 | 101.4138136 | 101.3111448 | 100.5430358 | 99.78654187 | 99.04140102 | 98.30735913 |
| 170517A00098 | 5/19/2017 | 2.32 | 5/19/2022 | 5/19/2017 | 103.70144 | 103.7014355 | 103.7014355 | 103.7014355 | 103.3717188 | 101.5728083 | 99.81383427 | 98.09363131 | 96.41107765 |
| 170519A00034 | 5/19/2017 | 1.97 | 5/19/2022 | 5/19/2017 | 103.3749 | 103.3749032 | 103.3749032 | 103.3749032 | 103.0445715 | 101.2431475 | 99.48181917 | 97.759414 | 96.07480345 |
| 170524A00046 | 5/24/2017 | 1.84 | 5/24/2021 | 5/24/2017 | 101.41931 | 101.4193133 | 101.4193133 | 101.4193133 | 101.3068091 | 100.4853061 | 99.67708469 | 98.88182477 | 98.09921638 |
| 170530A00002 | 5/30/2017 | 2.15 | 5/31/2022 | 5/30/2017 | 103.45401 | 103.4540119 | 103.4540119 | 103.4540119 | 103.1169298 | 101.2886993 | 99.50166677 | 97.75466775 | 96.046578 |
| 170530A00003 | 5/30/2017 | 1.99 | 5/28/2021 | 5/30/2017 | 101.43919 | 101.4391933 | 101.4391933 | 101.4391933 | 101.3248959 | 100.4940669 | 99.67681635 | 98.87281361 | 98.08173862 |
| 170531A00005 | 5/31/2017 | 1.94 | 5/31/2022 | 5/31/2017 | 103.38087 | 103.3808703 | 103.3808703 | 103.3808703 | 103.0427628 | 101.2095178 | 99.41768218 | 97.66608287 | 95.95358745 |
| 170606A00017 | 6/6/2017 | 1.9 | 6/6/2022 | 6/6/2017 | 103.33622 | 103.3362169 | 103.3362169 | 103.3362169 | 102.9940195 | 101.1448177 | 99.33772947 | 97.57155198 | 95.84512435 |

Classification | Public

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 170614A00012 | 6/14/2017 | 1.9 | 6/14/2022 | 6/14/2017 | 103.37568 | 103.3756763 | 103.3756763 | 103.3756763 | 103.0278754 | 101.156464 | 99.32813098 | 97.54163259 | 95.79576897 |
| 170616A00016 | 6/16/2017 | 1.82 | 6/16/2021 | 6/16/2017 | 101.51138 | 101.5113781 | 101.5113781 | 101.5113781 | 101.3869068 | 100.502185 | 99.63285373 | 98.77851399 | 97.93878041 |
| 170626A00042 | 6/26/2017 | 1.92 | 6/27/2022 | 6/26/2017 | 103.47842 | 103.4784183 | 103.4784183 | 103.4784183 | 103.1214514 | 101.2135863 | 99.35039448 | 97.53056382 | 95.75282954 |
| 170629A00016 | 6/29/2017 | 1.94 | 12/21/2020 | 6/29/2017 | 100.67272 | 100.6727168 | 100.6727168 | 100.6727168 | 100.6304157 | 100.2346103 | 99.84192133 | 99.45231211 | 99.0657464 |
| 180529A00042 | 5/29/2018 | 3.42 | 5/30/2028 | 5/29/2018 | 124.44101 | 124.441009 | 124.441009 | 124.441009 | 118.482474 | 110.5288313 | 103.1825781 | 96.39389842 | 90.11730754 |
| 180530A00006 | 5/30/2018 | 2.87 | 5/31/2022 | 5/30/2018 | 104.7883 | 104.7883023 | 104.7883023 | 104.7883023 | 104.4491933 | 102.6083033 | 100.8088492 | 99.04965978 | 97.32960439 |
| 180530A00007 | 5/30/2018 | 2.66 | 11/30/2021 | 5/30/2018 | 103.43517 | 103.4351703 | 103.4351703 | 103.4351703 | 103.2043646 | 101.8649849 | 100.5493014 | 99.25673876 | 97.98673998 |
| 180530A00067 | 5/30/2018 | 2.76 | 5/28/2021 | 5/30/2018 | 102.08221 | 102.0822104 | 102.0822104 | 102.0822104 | 101.9675621 | 101.1338011 | 100.3136522 | 99.50678407 | 98.71287615 |
| 180530A00084 | 5/30/2018 | 2.61 | 6/1/2021 | 5/30/2018 | 102.10957 | 102.1095687 | 102.1095687 | 102.1095687 | 101.9926113 | 101.1460739 | 100.3135587 | 99.49471953 | 98.68922157 |
| 180601A00022 | 6/1/2018 | 3.03 | 6/1/2023 | 6/1/2018 | 107.82593 | 107.8259317 | 107.8259317 | 107.8259317 | 107.1615384 | 104.2986581 | 101.5274315 | 98.8444452 | 96.24643185 |
| 180604A00027 | 6/4/2018 | 2.87 | 6/4/2021 | 6/4/2018 | 102.22458 | 102.2245762 | 102.2245762 | 102.2245762 | 102.1062348 | 101.2526858 | 100.4133885 | 99.58798802 | 98.77614127 |
| 180604A00047 | 6/4/2018 | 2.97 | 6/3/2022 | 6/4/2018 | 104.99583 | 104.9958286 | 104.9958286 | 104.9958286 | 104.65432 | 102.8032376 | 100.9939831 | 99.22536934 | 97.49625049 |
| 180604A00050 | 6/4/2018 | 3.15 | 6/4/2024 | 6/4/2018 | 111.06607 | 111.0660734 | 111.0660734 | 111.0660734 | 109.8709644 | 105.9713257 | 102.2329139 | 98.64823743 | 95.21019094 |
| 180615A00031 | 6/15/2018 | 2.92 | 6/15/2021 | 6/15/2018 | 102.34807 | 102.3480682 | 102.3480682 | 102.3480682 | 102.223898 | 101.3396985 | 100.4707851 | 99.61676381 | 98.77725382 |
| 180620A00026 | 6/20/2018 | 2.91 | 6/18/2021 | 6/20/2018 | 102.36116 | 102.3611631 | 102.3611631 | 102.3611631 | 102.2354154 | 101.3429572 | 100.4660693 | 99.60434637 | 98.75739737 |
| 180622A00003 | 6/22/2018 | 2.87 | 6/22/2022 | 6/22/2018 | 105.27479 | 105.2747864 | 105.2747864 | 105.2747864 | 104.9184317 | 103.0065832 | 101.1391353 | 99.31479288 | 97.53230688 |
| 180622A00004 | 6/22/2018 | 3.47 | 12/22/2028 | 6/22/2018 | 126.59959 | 126.5995923 | 126.5995923 | 126.5995923 | 119.6925986 | 111.1738531 | 103.3457722 | 96.14834091 | 89.52705781 |
| 180622A00006 | 6/22/2018 | 3.53 | 12/21/2029 | 6/22/2018 | 130.27488 | 130.2748838 | 130.2748838 | 130.2748838 | 121.5318491 | 112.0299651 | 103.3765713 | 95.49072051 | 88.29959595 |
| 180628A00034 | 6/28/2018 | 2.72 | 6/28/2021 | 6/28/2018 | 102.39748 | 102.3974795 | 102.3974795 | 102.3974795 | 102.2661897 | 101.3443281 | 100.4390558 | 99.5499281 | 98.67651595 |
| 180628A00081 | 6/28/2018 | 2.72 | 6/21/2021 | 6/28/2018 | 102.34698 | 102.3469841 | 102.3469841 | 102.3469841 | 102.2193962 | 101.3169429 | 100.4304047 | 99.55936301 | 98.70341408 |
| 180705A00061 | 7/5/2018 | 3 | 7/6/2022 | 7/5/2018 | 105.27907 | 105.2790711 | 105.2790711 | 105.2790711 | 104.9139185 | 102.9706472 | 101.0732396 | 99.22033556 | 97.41062444 |
| 180713A00011 | 7/13/2018 | 2.95 | 7/13/2021 | 7/13/2018 | 102.57321 | 102.5732067 | 102.5732067 | 102.5732067 | 102.4336936 | 101.4720652 | 100.528481 | 99.60243648 | 98.69344539 |
| 180716A00037 | 7/16/2018 | 3.01 | 7/18/2022 | 7/16/2018 | 105.38871 | 105.3887059 | 105.3887059 | 105.3887059 | 105.0143226 | 103.0381977 | 101.1094602 | 99.22668124 | 97.38848496 |
| 180719A00004 | 7/19/2018 | 3.07 | 7/19/2023 | 7/19/2018 | 108.307 | 108.3070048 | 108.3070048 | 108.3070048 | 107.5842585 | 104.5857387 | 101.6873091 | 98.88507946 | 96.17533322 |
| 180719A00064 | 7/19/2018 | 3.3 | 7/21/2025 | 7/19/2018 | 114.98697 | 114.9869688 | 114.9869688 | 114.9869688 | 112.9612274 | 107.8936399 | 103.0875059 | 98.5279477 | 94.20101063 |
| 180720A00049 | 7/20/2018 | 2.93 | 7/20/2021 | 7/20/2018 | 102.60551 | 102.6055139 | 102.6055139 | 102.6055139 | 102.4620095 | 101.4811238 | 100.5190049 | 99.57511757 | 98.64894698 |
| 180720A00068 | 7/20/2018 | 2.89 | 7/20/2023 | 7/20/2018 | 108.32971 | 108.3297109 | 108.3297109 | 108.3297109 | 107.6021467 | 104.5879066 | 101.6746413 | 98.85841284 | 96.13545987 |
| 180727A00037 | 7/27/2018 | 3.13 | 7/27/2023 | 7/27/2018 | 108.54922 | 108.5492181 | 108.5492181 | 108.5492181 | 107.8159071 | 104.7927684 | 101.8712154 | 99.04727154 | 96.31713956 |
| 181127A00026 | 11/27/2018 | 3.2 | 11/26/2021 | 11/27/2018 | 103.90183 | 103.9018253 | 103.9018253 | 103.9018253 | 103.6734692 | 102.3437714 | 101.0386907 | 99.75757808 | 98.49980699 |
| 181127A00027 | 11/27/2018 | 3.25 | 11/28/2022 | 11/27/2018 | 106.94996 | 106.9499574 | 106.9499574 | 106.9499574 | 106.4659482 | 104.1144276 | 101.826874 | 99.60119322 | 97.43537197 |
| 181128A00031 | 11/28/2018 | 3.29 | 11/28/2023 | 11/28/2018 | 110.05367 | 110.0536655 | 110.0536655 | 110.0536655 | 109.1499284 | 105.771314 | 102.5161999 | 99.3794274 | 96.35608108 |
| 181129A00023 | 11/29/2018 | 3.16 | 11/29/2021 | 11/29/2018 | 103.87209 | 103.872092 | 103.872092 | 103.872092 | 103.642079 | 102.3055633 | 100.992925 | 99.70357243 | 98.43693282 |
| 181203A00053 | 12/4/2018 | 3.23 | 12/1/2023 | 12/4/2018 | 109.8764 | 109.8764011 | 109.8764011 | 109.8764011 | 108.9690699 | 105.5853807 | 102.3256795 | 99.18478441 | 96.15775698 |

Classification | Public

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 181207A00018 | 12/7/2018 | 3.21 | 7/15/2024 | 12/7/2018 | 111.6266 | 111.6266046 | 111.6266046 | 111.6266046 | 110.3603301 | 106.3410666 | 102.4923994 | 98.80618575 | 95.27471504 |
| 181213A00031 | 12/13/2018 | 2.97 | 12/13/2023 | 12/13/2018 | 109.72237 | 109.7223734 | 109.7223734 | 109.7223734 | 108.7934871 | 105.3653114 | 102.064253 | 98.88493781 | 95.82224756 |
| 181214A00012 | 12/14/2018 | 3.07 | 12/14/2021 | 12/14/2018 | 103.86656 | 103.8665619 | 103.8665619 | 103.8665619 | 103.6286915 | 102.2526076 | 100.9014174 | 99.57450325 | 98.27126717 |
| 181218A00033 | 12/18/2018 | 2.96 | 12/18/2020 | 12/18/2018 | 101.05502 | 101.055016 | 101.055016 | 101.055016 | 101.0135857 | 100.6251245 | 100.2396587 | 99.85715367 | 99.47757534 |
| 181219A00006 | 12/19/2018 | 3.06 | 12/19/2023 | 12/19/2018 | 109.44124 | 109.441241 | 109.441241 | 109.441241 | 108.5097623 | 105.0862448 | 101.7899161 | 98.61538826 | 95.55753044 |
| 181227A00022 | 12/27/2019 | 2.91 | 12/27/2022 | 12/27/2019 | 106.35953 | 106.3595292 | 106.3595292 | 106.3595292 | 105.8519381 | 103.4306771 | 101.0773177 | 98.78957871 | 96.56526915 |
| 181227A00026 | 12/27/2018 | 3.03 | 12/27/2023 | 12/27/2018 | 109.39903 | 109.3990344 | 109.3990344 | 109.3990344 | 108.4563152 | 105.0126224 | 101.6976217 | 98.50582977 | 95.43202636 |
| 181227A00029 | 12/27/2018 | 2.91 | 12/27/2021 | 12/27/2018 | 103.75321 | 103.7532132 | 103.7532132 | 103.7532132 | 103.5086526 | 102.0986342 | 100.7146973 | 99.35618089 | 98.02244559 |
| 190102A00003 | 1/2/2019 | 2.8 | 1/27/2021 | 1/2/2019 | 101.27671 | 101.2767111 | 101.2767111 | 101.2767111 | 101.2212422 | 100.7220423 | 100.2277607 | 99.73832498 | 99.25366408 |
| 190102A00043 | 1/2/2019 | 2.79 | 1/4/2021 | 1/2/2019 | 101.10913 | 101.1091326 | 101.1091326 | 101.1091326 | 101.0620603 | 100.6266306 | 100.1949495 | 99.76696873 | 99.34264082 |
| 190104A00021 | 1/4/2019 | 2.58 | 1/4/2021 | 1/4/2019 | 101.07345 | 101.0734515 | 101.0734515 | 101.0734515 | 101.0263163 | 100.5903223 | 100.1580903 | 99.72957168 | 99.30471879 |
| 190107A00020 | 1/7/2019 | 2.8 | 1/7/2021 | 1/7/2019 | 101.13478 | 101.1347803 | 101.1347803 | 101.1347803 | 101.0866117 | 100.6428503 | 100.2029857 | 99.76696657 | 99.3347427 |
| 190107A00029 | 1/7/2019 | 2.59 | 1/7/2021 | 1/7/2019 | 101.09841 | 101.0984127 | 101.0984127 | 101.0984127 | 101.0501795 | 100.6058427 | 100.1654165 | 99.72884941 | 99.29609072 |
| 190110A00002 | 1/10/2019 | 2.93 | 1/10/2023 | 1/10/2019 | 106.51007 | 106.5100732 | 106.5100732 | 106.5100732 | 105.9898095 | 103.529785 | 101.1397639 | 98.81735838 | 96.56027664 |
| 190110A00010 | 1/10/2019 | 2.97 | 1/16/2024 | 1/10/2019 | 109.3401 | 109.3401037 | 109.3401037 | 109.3401037 | 108.3685784 | 104.8737681 | 101.5115397 | 98.27615651 | 95.16216157 |
| 190110A00014 | 1/10/2019 | 2.97 | 1/17/2024 | 1/10/2019 | 109.34747 | 109.3474692 | 109.3474692 | 109.3474692 | 108.37446 | 104.8769192 | 101.512162 | 98.27443855 | 95.15827953 |
| 190110A00022 | 1/10/2019 | 2.86 | 5/10/2021 | 1/10/2019 | 102.03608 | 102.0360805 | 102.0360805 | 102.0360805 | 101.9305809 | 101.1462409 | 100.373963 | 99.61347048 | 98.86449471 |
| 190114A00030 | 1/14/2019 | 2.85 | 1/14/2021 | 1/14/2019 | 101.20763 | 101.2076346 | 101.2076346 | 101.2076346 | 101.1569041 | 100.6936694 | 100.2346828 | 99.77988584 | 99.32922118 |
| 190114A00045 | 1/14/2019 | 2.84 | 1/14/2021 | 1/14/2019 | 101.203 | 101.2029989 | 101.2029989 | 101.2029989 | 101.1522696 | 100.6890477 | 100.2300738 | 99.77528935 | 99.32463717 |
| 181126A00047 | 11/26/2018 | 3.19 | 11/26/2021 | 11/26/2018 | 103.88844 | 103.888436 | 103.888436 | 103.888436 | 103.6600933 | 102.3304895 | 101.0255013 | 99.74447947 | 98.4867977 |
| 181126A00050 | 11/26/2018 | 3.29 | 11/24/2023 | 11/26/2018 | 110.02077 | 110.0207749 | 110.0207749 | 110.0207749 | 109.122717 | 105.755503 | 102.5110164 | 99.38412821 | 96.36995229 |
| 181211A00031 | 12/11/2018 | 2.95 | 12/11/2023 | 12/11/2018 | 109.6385 | 109.6385038 | 109.6385038 | 109.6385038 | 108.7127884 | 105.2913095 | 101.9965268 | 98.82309186 | 95.76591004 |
| 181213A00025 | 12/13/2018 | 3.05 | 12/11/2020 | 12/13/2018 | 101.03545 | 101.0354534 | 101.0354534 | 101.0354534 | 100.9962775 | 100.6271646 | 100.2607571 | 99.89702519 | 99.53593959 |
| 181214A00016 | 12/14/2018 | 3.03 | 12/14/2020 | 12/14/2018 | 101.05128 | 101.0512773 | 101.0512773 | 101.0512773 | 101.0111334 | 100.6337094 | 100.2591144 | 99.88731648 | 99.51828425 |
| 181221A00015 | 12/21/2018 | 2.96 | 12/21/2020 | 12/21/2018 | 101.07764 | 101.077642 | 101.077642 | 101.077642 | 101.0352424 | 100.6384585 | 100.2447968 | 99.8542204 | 99.46669311 |
| 181221A00018 | 12/21/2018 | 2.98 | 12/21/2021 | 12/21/2018 | 103.80798 | 103.8079788 | 103.8079788 | 103.8079788 | 103.5664822 | 102.171994 | 100.8030401 | 99.45897935 | 98.13919172 |
| 181224A00038 | 12/24/2018 | 3.04 | 12/22/2023 | 12/24/2018 | 109.39561 | 109.3956101 | 109.3956101 | 109.3956101 | 108.4600214 | 105.029441 | 101.7265983 | 98.54607025 | 95.48269299 |
| 181228A00006 | 12/28/2018 | 2.86 | 11/13/2020 | 12/28/2018 | 100.76225 | 100.7622464 | 100.7622464 | 100.7622464 | 100.7320613 | 100.4407663 | 100.1511652 | 99.86324322 | 99.57698576 |
| 190102A00050 | 1/2/2019 | 3.38 | 1/3/2034 | 1/2/2019 | 144.07032 | 144.0703172 | 144.0703172 | 139.8182341 | 125.2915392 | 112.0074717 | 100.3441343 | 90.09196086 | 81.06960781 |
| 190107A00034 | 1/7/2019 | 2.8 | 4/15/2021 | 1/7/2019 | 101.82055 | 101.8205494 | 101.8205494 | 101.8205494 | 101.7279436 | 101.0128381 | 100.3077807 | 99.61256057 | 98.92697256 |
| 190109A00023 | 1/9/2019 | 2.92 | 10/9/2020 | 1/9/2019 | 100.51794 | 100.5179437 | 100.5179437 | 100.5179437 | 100.4993764 | 100.3051751 | 100.1117344 | 99.91904973 | 99.72711663 |
| 190110A00013 | 1/10/2019 | 2.97 | 1/17/2024 | 1/10/2019 | 109.34747 | 109.3474692 | 109.3474692 | 109.3474692 | 108.37446 | 104.8769192 | 101.512162 | 98.27443855 | 95.15827953 |
| 190110A00015 | 1/10/2019 | 2.88 | 1/18/2022 | 1/10/2019 | 103.85434 | 103.8543433 | 103.8543433 | 103.8543433 | 103.597619 | 102.1287013 | 100.6880386 | 99.27488649 | 97.88852629 |

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 190111A00013 | 1/11/2019 | 2.87 | 1/7/2022 | 1/11/2019 | 103.77531 | 103.7753078 | 103.7753078 | 103.7753078 | 103.5247456 | 102.0853634 | 100.6731317 | 99.28734897 | 97.92733732 |
| 190115A00025 | 1/15/2019 | 2.96 | 1/12/2024 | 1/15/2019 | 109.27583 | 109.2758265 | 109.2758265 | 109.2758265 | 108.3103654 | 104.8270802 | 101.475555 | 98.25010594 | 95.14532564 |
| 190122A00042 | 1/22/2019 | 2.79 | 1/23/2023 | 1/22/2019 | 106.71318 | 106.7131797 | 106.7131797 | 106.7131797 | 106.1786011 | 103.672196 | 101.2382703 | 98.87431043 | 96.57790569 |
| 190122A00046 | 1/22/2019 | 3.29 | 1/22/2029 | 1/22/2019 | 127.14421 | 127.1442092 | 127.1442092 | 127.1442092 | 119.9979814 | 111.3126078 | 103.3407342 | 96.01959666 | 89.29226748 |
| 190123A00033 | 1/23/2019 | 2.8 | 1/23/2023 | 1/23/2019 | 106.73831 | 106.7383076 | 106.7383076 | 106.7383076 | 106.2036721 | 103.6969489 | 101.2627122 | 98.89844819 | 96.60174593 |
| 190123A00035 | 1/23/2019 | 3.18 | 1/22/2027 | 1/23/2019 | 120.04198 | 120.0419837 | 120.0419837 | 120.0419837 | 116.1296409 | 109.4791968 | 103.2614292 | 97.44583757 | 92.00422433 |
| 190205A00047 | 2/5/2019 | 2.85 | 2/5/2021 | 2/5/2019 | 101.36644 | 101.3664423 | 101.3664423 | 101.3664423 | 101.3072994 | 100.783077 | 100.2642742 | 99.7508073 | 99.2425943 |
| 190211A00011 | 2/11/2019 | 2.8 | 2/11/2022 | 2/11/2019 | 103.90179 | 103.9017876 | 103.9017876 | 103.9017876 | 103.6312178 | 102.095084 | 100.5894962 | 99.11361575 | 97.66663413 |
| 190212A00024 | 2/12/2019 | 2.79 | 2/12/2021 | 2/12/2019 | 101.37854 | 101.3785421 | 101.3785421 | 101.3785421 | 101.3163312 | 100.772888 | 100.2352733 | 99.70339365 | 99.17715747 |
| 190215A00005 | 2/15/2019 | 2.89 | 2/15/2024 | 2/15/2019 | 109.27422 | 109.2742213 | 109.2742213 | 109.2742213 | 108.2587071 | 104.6842086 | 101.2480938 | 97.94424779 | 94.76686105 |
| 180222A00025 | 2/22/2018 | 3.48 | 2/22/2033 | 2/22/2018 | 142.52558 | 142.5255752 | 142.5255752 | 139.6218751 | 126.0066456 | 113.3896443 | 102.2252032 | 92.33579453 | 83.5665378 |
| 180226A00015 | 2/26/2018 | 2.85 | 9/28/2022 | 2/26/2018 | 105.57897 | 105.5789737 | 105.5789737 | 105.5789737 | 105.1476694 | 102.9761675 | 100.8603606 | 98.79842539 | 96.78861319 |
| 180306A00038 | 3/6/2018 | 2.7 | 3/5/2021 | 3/6/2018 | 101.47098 | 101.4709797 | 101.4709797 | 101.4709797 | 101.3992275 | 100.7978303 | 100.203558 | 99.61628443 | 99.03588646 |
| 180308A00014 | 3/8/2018 | 2.79 | 9/15/2021 | 3/8/2018 | 102.86529 | 102.8652931 | 102.8652931 | 102.8652931 | 102.6840033 | 101.5466315 | 100.4344244 | 99.34655328 | 98.28222541 |
| 180323A00005 | 3/23/2018 | 2.79 | 3/23/2021 | 3/23/2018 | 101.65188 | 101.6518757 | 101.6518757 | 101.6518757 | 101.5710701 | 100.9196516 | 100.2765827 | 99.6417035 | 99.01485819 |
| 180328A00019 | 3/28/2018 | 2.55 | 3/29/2021 | 3/28/2018 | 101.62686 | 101.6268574 | 101.6268574 | 101.6268574 | 101.5429137 | 100.873953 | 100.21379 | 99.56225197 | 98.91917068 |
| 180329A00003 | 3/29/2018 | 3.08 | 3/29/2028 | 3/29/2018 | 122.91058 | 122.9105777 | 122.9105777 | 122.9105777 | 117.1772286 | 109.3638492 | 102.1392116 | 95.45564255 | 89.26957274 |
| 180406A00005 | 4/6/2018 | 2.76 | 4/6/2021 | 4/6/2018 | 101.72954 | 101.7295377 | 101.7295377 | 101.7295377 | 101.6416134 | 100.9515268 | 100.2707997 | 99.59924257 | 98.93667096 |
| 180410A00017 | 4/10/2018 | 3.02 | 10/10/2023 | 4/10/2018 | 108.77994 | 108.7799384 | 108.7799384 | 108.7799384 | 107.9478667 | 104.7211817 | 101.6085296 | 98.60519576 | 95.7066924 |
| 180412A00036 | 4/12/2018 | 3.54 | 4/15/2038 | 4/12/2018 | 160.81068 | 160.8106804 | 160.8106804 | 150.2054266 | 130.7294226 | 113.7636717 | 99.39438825 | 87.19965745 | 76.82872109 |
| 180425A00007 | 4/25/2018 | 2.98 | 4/25/2023 | 4/25/2018 | 107.91887 | 107.9188707 | 107.9188707 | 107.9188707 | 107.291528 | 104.5142764 | 101.8234523 | 99.2157961 | 96.68819627 |
| 180425A00023 | 4/25/2018 | 2.97 | 4/23/2021 | 4/25/2018 | 102.00236 | 102.0023595 | 102.0023595 | 102.0023595 | 101.9055446 | 101.1677916 | 100.4407129 | 99.7240779 | 99.01766275 |
| 180426A00017 | 4/26/2018 | 2.85 | 4/26/2022 | 4/26/2018 | 104.80486 | 104.8048597 | 104.8048597 | 104.8048597 | 104.4872634 | 102.7342203 | 101.0190534 | 99.34060051 | 97.69774784 |
| 180430A00070 | 4/30/2018 | 2.91 | 3/30/2023 | 4/30/2018 | 107.52431 | 107.5243139 | 107.5243139 | 107.5243139 | 106.9249105 | 104.2243948 | 101.6061589 | 99.06717214 | 96.60453795 |
| 180521A00005 | 5/21/2018 | 3.02 | 5/22/2023 | 5/21/2018 | 108.24656 | 108.2465569 | 108.2465569 | 108.2465569 | 107.5889643 | 104.7348418 | 101.9715306 | 99.29563029 | 96.70388861 |
| 180521A00022 | 5/21/2018 | 2.99 | 5/21/2021 | 5/21/2018 | 102.22949 | 102.229488 | 102.229488 | 102.229488 | 102.118293 | 101.3028931 | 100.5005088 | 99.71083011 | 98.93355673 |
| 180522A00019 | 5/22/2018 | 3.16 | 5/22/2023 | 5/22/2018 | 108.11904 | 108.1190395 | 108.1190395 | 108.1190395 | 107.464834 | 104.62422 | 101.8737589 | 99.21008293 | 96.62997087 |
| 180522A00037 | 5/22/2018 | 3.01 | 5/22/2023 | 5/22/2018 | 108.21813 | 108.2181342 | 108.2181342 | 108.2181342 | 107.5606179 | 104.7069 | 101.9439836 | 99.26846867 | 96.67710326 |
| 180530A00002 | 5/30/2018 | 2.75 | 11/30/2022 | 5/30/2018 | 106.21878 | 106.2187828 | 106.2187828 | 106.2187828 | 105.7326409 | 103.3756216 | 101.0830671 | 98.85286599 | 96.68298825 |
| 180530A00016 | 5/30/2018 | 2.76 | 5/28/2021 | 5/30/2018 | 102.08221 | 102.0822104 | 102.0822104 | 102.0822104 | 101.9675621 | 101.1338011 | 100.3136522 | 99.50678407 | 98.71287615 |
| 180601A00003 | 6/1/2018 | 2.65 | 12/1/2020 | 6/1/2018 | 100.8648 | 100.8648026 | 100.8648026 | 100.8648026 | 100.8288259 | 100.4871851 | 100.1478557 | 99.81081435 | 99.47603792 |
| 180604A00048 | 6/4/2018 | 3.01 | 6/5/2023 | 6/4/2018 | 107.79853 | 107.7985298 | 107.7985298 | 107.7985298 | 107.1295769 | 104.25622 | 101.4751845 | 98.78301982 | 96.17642342 |
| 180614A00034 | 6/15/2018 | 2.89 | 1/11/2021 | 6/15/2018 | 101.20414 | 101.204139 | 101.204139 | 101.204139 | 101.1544987 | 100.6995345 | 100.2486675 | 99.80184216 | 99.35900437 |

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 180615A00066 | 6/15/2018 | 3 | 6/14/2024 | 6/15/2018 | 111.29094 | 111.2909415 | 111.2909415 | 111.2909415 | 110.0709759 | 106.1205972 | 102.3350692 | 98.70666204 | 95.22804865 |
| 190107A00010 | 1/7/2019 | 2.66 | 1/9/2023 | 1/7/2019 | 106.28789 | 106.287894 | 106.287894 | 106.287894 | 105.7668186 | 103.3028365 | 100.9090958 | 98.58319692 | 96.32283735 |
| 190107A00019 | 1/7/2019 | 2.92 | 1/5/2024 | 1/7/2019 | 109.08597 | 109.08597 | 109.08597 | 109.08597 | 108.1314007 | 104.669613 | 101.3381152 | 98.13131689 | 95.04389796 |
| 190107A00024 | 1/7/2019 | 2.91 | 1/5/2024 | 1/7/2019 | 109.05135 | 109.0513474 | 109.0513474 | 109.0513474 | 108.0969039 | 104.6357112 | 101.3047919 | 98.09855613 | 95.01168436 |
| 190110A00004 | 1/10/2019 | 3.09 | 1/10/2025 | 1/10/2019 | 112.47379 | 112.4737889 | 112.4737889 | 112.4737889 | 110.8754413 | 106.3711865 | 102.0780665 | 97.98507998 | 94.0818559 |
| 190110A00073 | 1/10/2019 | 2.68 | 8/6/2021 | 1/10/2019 | 102.63799 | 102.6379851 | 102.6379851 | 102.6379851 | 102.4838628 | 101.4541215 | 100.4450377 | 99.4559943 | 98.48639851 |
| 190110A00075 | 1/10/2019 | 2.67 | 4/7/2021 | 1/10/2019 | 101.77086 | 101.7708648 | 101.7708648 | 101.7708648 | 101.6822406 | 100.9880048 | 100.3032402 | 99.62775362 | 98.96135739 |
| 190110A00080 | 1/10/2019 | 2.68 | 6/7/2021 | 1/10/2019 | 102.21146 | 102.2114573 | 102.2114573 | 102.2114573 | 102.0912939 | 101.2278379 | 100.3789676 | 99.54431545 | 98.72352635 |
| 190111A00026 | 1/11/2019 | 3.48 | 1/11/2034 | 1/11/2019 | 145.49508 | 145.4950794 | 145.4950794 | 141.2018113 | 126.5823302 | 113.1992694 | 101.44855 | 91.11899619 | 82.02789658 |
| 190115A00034 | 1/15/2019 | 2.91 | 1/17/2023 | 1/15/2019 | 106.51121 | 106.5112058 | 106.5112058 | 106.5112058 | 105.9847005 | 103.5062249 | 101.0988027 | 98.75999147 | 96.48744776 |
| 190117A00004 | 1/17/2019 | 2.9 | 1/18/2022 | 1/17/2019 | 103.88405 | 103.8840542 | 103.8840542 | 103.8840542 | 103.6272957 | 102.1581485 | 100.7172602 | 99.30388651 | 97.91730846 |
| 190122A00041 | 1/22/2019 | 2.71 | 1/22/2021 | 1/22/2019 | 101.25973 | 101.2597334 | 101.2597334 | 101.2597334 | 101.2059995 | 100.7198543 | 100.2383838 | 99.76152063 | 99.28919868 |
| 190131A00017 | 1/31/2019 | 2.83 | 3/25/2022 | 1/31/2019 | 104.22613 | 104.2261349 | 104.2261349 | 104.2261349 | 103.9300759 | 102.2750389 | 100.6543608 | 99.06703587 | 97.51209786 |
| 190131A00027 | 1/31/2019 | 2.86 | 1/31/2023 | 1/31/2019 | 106.48587 | 106.4858672 | 106.4858672 | 106.4858672 | 105.9469513 | 103.4319788 | 100.9901712 | 98.6189752 | 96.31594261 |
| 190131A00036 | 1/31/2019 | 2.69 | 7/31/2023 | 1/31/2019 | 107.80695 | 107.8069497 | 107.8069497 | 107.8069497 | 107.0672867 | 104.0319505 | 101.0993401 | 98.26540855 | 95.52629217 |
| 190131A00053 | 1/31/2019 | 2.67 | 1/31/2023 | 1/31/2019 | 106.46822 | 106.4682232 | 106.4682232 | 106.4682232 | 105.9270326 | 103.4025748 | 100.951751 | 98.57198506 | 96.26080767 |
| 190201A00013 | 2/1/2019 | 2.89 | 2/1/2024 | 2/1/2019 | 109.17498 | 109.1749805 | 109.1749805 | 109.1749805 | 108.1807404 | 104.6470381 | 101.2490091 | 97.98071083 | 94.83649413 |
| 190208A00005 | 2/8/2019 | 2.63 | 2/8/2023 | 2/8/2019 | 106.42223 | 106.4222341 | 106.4222341 | 106.4222341 | 105.8736651 | 103.3262689 | 100.8536441 | 98.45315505 | 96.12227594 |
| 190212A00017 | 2/12/2019 | 2.86 | 6/30/2023 | 2/12/2019 | 107.54374 | 107.543736 | 107.543736 | 107.543736 | 106.8465754 | 103.9091847 | 101.0683047 | 98.32024787 | 95.66148794 |
| 190213A00023 | 2/13/2019 | 2.93 | 2/13/2024 | 2/13/2019 | 109.40282 | 109.4028221 | 109.4028221 | 109.4028221 | 108.3898013 | 104.8186015 | 101.3854684 | 98.08430921 | 94.90933485 |
| 190222A00029 | 2/22/2019 | 2.62 | 2/22/2021 | 2/22/2019 | 101.43068 | 101.4306832 | 101.4306832 | 101.4306832 | 101.3639515 | 100.7918891 | 100.2262787 | 99.66701171 | 99.11398162 |
| 190225A00039 | 2/25/2019 | 2.62 | 2/25/2022 | 2/25/2019 | 103.9842 | 103.9842038 | 103.9842038 | 103.9842038 | 103.704308 | 102.1217143 | 100.5710947 | 99.05154887 | 97.56221019 |
| 190226A00006 | 2/26/2019 | 2.64 | 2/26/2024 | 2/26/2019 | 109.12018 | 109.1201807 | 109.1201807 | 109.1201807 | 108.0830378 | 104.4635489 | 100.9855491 | 97.64272663 | 94.42908844 |
| 190228A00036 | 2/28/2019 | 2.81 | 2/28/2022 | 2/28/2019 | 104.03479 | 104.0347874 | 104.0347874 | 104.0347874 | 103.753917 | 102.16669 | 100.6115532 | 99.08760073 | 97.59396023 |
| 190318A00008 | 3/18/2019 | 2.76 | 3/18/2024 | 3/18/2019 | 109.02585 | 109.0258523 | 109.0258523 | 109.0258523 | 107.9629131 | 104.3070652 | 100.7955333 | 97.42181107 | 94.17972456 |
| 170629A00020 | 6/29/2017 | 2.03 | 6/29/2021 | 6/29/2017 | 101.62872 | 101.6287206 | 101.6287206 | 101.6287206 | 101.4976723 | 100.5788485 | 99.67659766 | 98.7904747 | 97.92005035 |
| 170630A00008 | 6/30/2017 | 2.35 | 7/1/2024 | 6/30/2017 | 108.84876 | 108.8487596 | 108.8487596 | 108.8487596 | 107.6114132 | 103.6629044 | 99.88156483 | 96.25945619 | 92.78905865 |
| 170630A00036 | 6/30/2017 | 2.01 | 6/30/2022 | 6/30/2017 | 103.66792 | 103.6679233 | 103.6679233 | 103.6679233 | 103.3085749 | 101.3906615 | 99.51782503 | 97.68873637 | 95.90211463 |
| 170706A00028 | 7/6/2017 | 2.09 | 7/6/2022 | 7/6/2017 | 103.85589 | 103.8558853 | 103.8558853 | 103.8558853 | 103.49171 | 101.5560823 | 99.66631303 | 97.82103865 | 96.01894533 |
| 170728A00029 | 7/28/2017 | 2.1 | 1/27/2022 | 7/28/2017 | 102.7409 | 102.7409043 | 102.7409043 | 102.7409043 | 102.4804876 | 100.9964615 | 99.54145133 | 98.11468105 | 96.71540173 |
| 170728A00032 | 7/28/2017 | 2.36 | 7/27/2023 | 7/28/2017 | 106.22641 | 106.2264121 | 106.2264121 | 106.2264121 | 105.4999137 | 102.5117698 | 99.62433205 | 96.8336533 | 94.13596429 |
| 170808A00036 | 8/8/2017 | 2.04 | 11/15/2021 | 8/8/2017 | 102.2954 | 102.2953992 | 102.2953992 | 102.2953992 | 102.0748026 | 100.7819495 | 99.51623576 | 98.27681043 | 97.06285848 |
| 170821A00038 | 8/23/2017 | 2.39 | 8/23/2024 | 8/23/2017 | 109.34049 | 109.3404897 | 109.3404897 | 109.3404897 | 108.0095474 | 103.9139838 | 99.99722783 | 96.25051488 | 92.66555873 |

Classification | Public

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 170829A00023 | 8/29/2017 | 1.83 | 8/29/2022 | 8/29/2017 | 103.60375 | 103.6037523 | 103.6037523 | 103.6037523 | 103.1982983 | 101.122569 | 99.09886874 | 97.12554528 | 95.20101156 |
| 170831A00008 | 8/31/2017 | 1.78 | 8/31/2020 | 8/31/2017 | 100.13074 | 100.1307402 | 100.1307402 | 100.1307402 | 100.1243413 | 100.0384335 | 99.95267077 | 99.86705286 | 99.78157939 |
| 170907A00059 | 9/7/2017 | 1.99 | 9/7/2022 | 9/7/2017 | 103.60253 | 103.6025339 | 103.6025339 | 103.6025339 | 103.1915302 | 101.0988347 | 99.05888924 | 97.07000536 | 95.13056188 |
| 170911A00044 | 9/11/2017 | 1.73 | 9/13/2021 | 9/11/2017 | 101.82957 | 101.8295675 | 101.8295675 | 101.8295675 | 101.6500912 | 100.5216971 | 99.4182365 | 98.33889005 | 97.28287411 |
| 170914A00039 | 9/14/2017 | 2.23 | 9/16/2024 | 9/14/2017 | 108.82262 | 108.8226155 | 108.8226155 | 108.8226155 | 107.4515699 | 103.3031109 | 99.33825635 | 95.54788456 | 91.92337928 |
| 170915A00031 | 9/15/2017 | 2.1 | 9/15/2023 | 9/15/2017 | 106.26805 | 106.2680472 | 106.2680472 | 106.2680472 | 105.4731868 | 102.3392145 | 99.31474089 | 96.39530465 | 93.57665509 |
| 170918A00108 | 9/18/2017 | 1.97 | 9/20/2022 | 9/18/2017 | 104.01131 | 104.0113058 | 104.0113058 | 104.0113058 | 103.5876234 | 101.4475903 | 99.36226924 | 97.32987934 | 95.34871218 |
| 170921A00063 | 9/21/2017 | 2.23 | 9/21/2022 | 9/21/2017 | 104.18742 | 104.1874229 | 104.1874229 | 104.1874229 | 103.7642708 | 101.6271958 | 99.54465999 | 97.51489013 | 95.53618527 |
| 170926A00036 | 9/26/2017 | 1.7 | 9/25/2020 | 9/26/2017 | 100.24604 | 100.2460414 | 100.2460414 | 100.2460414 | 100.2320448 | 100.0766651 | 99.92177449 | 99.76737058 | 99.6134511 |
| 170928A00020 | 9/29/2017 | 2.29 | 9/29/2022 | 9/29/2017 | 104.36126 | 104.3612566 | 104.3612566 | 104.3612566 | 103.9314461 | 101.7707223 | 99.6655388 | 97.61407439 | 95.61458258 |
| 171010A00024 | 10/10/2017 | 2.38 | 10/10/2023 | 10/10/2017 | 106.71721 | 106.7172088 | 106.7172088 | 106.7172088 | 105.8918303 | 102.6982523 | 99.61783442 | 96.64589223 | 93.77796666 |
| 171011A00013 | 10/11/2017 | 2.77 | 10/13/2026 | 10/11/2017 | 115.355 | 115.3549999 | 115.3549999 | 115.3549999 | 111.9212818 | 105.7092311 | 99.8864761 | 94.42651424 | 89.30478673 |
| 171013A00021 | 10/13/2017 | 2 | 10/17/2022 | 10/13/2017 | 104.21709 | 104.2170932 | 104.2170932 | 104.2170932 | 103.7713067 | 101.556794 | 99.40035317 | 97.30003676 | 95.25397964 |
| 171025A00026 | 10/25/2017 | 2.64 | 10/25/2024 | 10/25/2017 | 109.96506 | 109.9650647 | 109.9650647 | 109.9650647 | 108.5269928 | 104.2765968 | 100.2174829 | 96.33997089 | 92.63492881 |
| 171031A00037 | 10/31/2017 | 1.98 | 10/30/2020 | 10/31/2017 | 100.43846 | 100.4384606 | 100.4384606 | 100.4384606 | 100.4127975 | 100.1607238 | 99.90991121 | 99.6603503 | 99.41203177 |
| 171206A00038 | 12/6/2017 | 2.69 | 12/6/2027 | 12/6/2017 | 119.08649 | 119.0864878 | 119.0864878 | 119.0864878 | 113.8945511 | 106.4927935 | 99.63102989 | 93.26698974 | 87.361915 |
| 190122A00008 | 1/22/2019 | 2.98 | 1/20/2023 | 1/22/2019 | 106.70778 | 106.7077842 | 106.7077842 | 106.7077842 | 106.1781643 | 103.689318 | 101.2720314 | 98.92383704 | 96.64236753 |
| 190122A00045 | 1/22/2019 | 3.17 | 1/22/2027 | 1/22/2019 | 119.97652 | 119.97652 | 119.97652 | 119.97652 | 116.06495 | 109.4165644 | 103.2007593 | 97.38703929 | 91.94721202 |
| 190123A00005 | 1/23/2019 | 2.94 | 1/24/2022 | 1/23/2019 | 103.9876 | 103.9876049 | 103.9876049 | 103.9876049 | 103.7273907 | 102.2415381 | 100.7845666 | 99.35570728 | 97.95421834 |
| 190123A00034 | 1/23/2019 | 2.98 | 1/23/2025 | 1/23/2019 | 112.97667 | 112.9766651 | 112.9766651 | 112.9766651 | 111.3380368 | 106.7631579 | 102.4049105 | 98.25189178 | 94.29335925 |
| 190128A00035 | 1/28/2019 | 3.04 | 1/26/2024 | 1/28/2019 | 109.66016 | 109.6601585 | 109.6601585 | 109.6601585 | 108.6728758 | 105.1464679 | 101.7547851 | 98.49195426 | 95.35239076 |
| 190129A00028 | 1/30/2019 | 2.92 | 2/1/2022 | 1/30/2019 | 104.01587 | 104.0158743 | 104.0158743 | 104.0158743 | 103.7511383 | 102.2435704 | 100.7656903 | 99.31669702 | 97.89581804 |
| 190130A00012 | 1/30/2019 | 2.92 | 1/31/2022 | 1/30/2019 | 104.00866 | 104.0086601 | 104.0086601 | 104.0086601 | 103.7445301 | 102.2399696 | 100.7650093 | 99.31885219 | 97.90072924 |
| 190130A00019 | 1/30/2019 | 3.01 | 1/30/2024 | 1/30/2019 | 109.58446 | 109.5844629 | 109.5844629 | 109.5844629 | 108.591636 | 105.0561487 | 101.6561475 | 98.38570774 | 95.23919702 |
| 190131A00007 | 1/31/2019 | 2.67 | 1/31/2023 | 1/31/2019 | 106.46822 | 106.4682232 | 106.4682232 | 106.4682232 | 105.9270326 | 103.4025748 | 100.951751 | 98.57198506 | 96.26080767 |
| 190208A00008 | 2/8/2019 | 2.86 | 2/8/2024 | 2/8/2019 | 109.11793 | 109.1179293 | 109.1179293 | 109.1179293 | 108.1134557 | 104.5612305 | 101.1459768 | 97.8616681 | 94.70257728 |
| 190211A00017 | 2/11/2019 | 3.12 | 2/11/2026 | 2/11/2019 | 115.66311 | 115.6631122 | 115.6631122 | 115.6631122 | 113.0720124 | 107.4611125 | 102.1680113 | 97.17300622 | 92.4577178 |
| 190214A00008 | 2/14/2019 | 2.64 | 2/14/2023 | 2/14/2019 | 106.48953 | 106.4895279 | 106.4895279 | 106.4895279 | 105.9351914 | 103.3692946 | 100.8790586 | 98.46180156 | 96.11495411 |
| 190222A00031 | 2/22/2019 | 2.63 | 8/21/2020 | 2/22/2019 | 100.14662 | 100.1466153 | 100.1466153 | 100.1466153 | 100.1422701 | 100.0839267 | 100.0256667 | 99.96748989 | 99.90939609 |
| 190225A00026 | 2/25/2019 | 3.43 | 2/27/2034 | 2/25/2019 | 145.24308 | 145.2430796 | 145.2430796 | 140.7542486 | 126.0193643 | 112.5635105 | 100.7640134 | 90.40469966 | 81.29878477 |
| 190321A00021 | 3/21/2019 | 2.67 | 3/21/2024 | 3/21/2019 | 108.71581 | 108.7158063 | 108.7158063 | 108.7158063 | 107.649524 | 103.9915177 | 100.4782292 | 97.10312067 | 93.85998902 |
| 190321A00029 | 3/21/2019 | 2.62 | 3/22/2021 | 3/21/2019 | 101.53444 | 101.5344412 | 101.5344412 | 101.5344412 | 101.4541819 | 100.8059341 | 100.1659631 | 99.53411095 | 98.91022373 |
| 190326A00021 | 3/26/2019 | 2.52 | 3/26/2021 | 3/26/2019 | 101.49466 | 101.4946619 | 101.4946619 | 101.4946619 | 101.4124244 | 100.7533648 | 100.1028572 | 99.46073582 | 98.82683929 |

Classification | Public

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 190328A00032 | 4/25/2019 | 2.48 | 4/26/2021 | 4/25/2019 | 101.65915 | 101.6591493 | 101.6591493 | 101.6591493 | 101.5609512 | 100.816399 | 100.0827409 | 99.35973912 | 98.64716277 |
| 190328A00065 | 3/28/2019 | 2.56 | 3/28/2024 | 3/28/2019 | 108.35563 | 108.3556316 | 108.3556316 | 108.3556316 | 107.2801228 | 103.6105504 | 100.0868264 | 96.70233194 | 93.45078887 |
| 190329A00018 | 3/29/2019 | 2.6 | 3/29/2024 | 3/29/2019 | 108.50959 | 108.509592 | 108.509592 | 108.509592 | 107.4319382 | 103.7569677 | 100.2281169 | 96.83875126 | 93.582578 |
| 190401A00010 | 4/1/2019 | 2.62 | 4/1/2024 | 4/1/2019 | 108.60263 | 108.6026285 | 108.6026285 | 108.6026285 | 107.5199826 | 103.8354632 | 100.2976933 | 96.89999753 | 93.6360451 |
| 190402A00014 | 4/2/2019 | 2.64 | 4/2/2024 | 4/2/2019 | 108.68308 | 108.6830822 | 108.6830822 | 108.6830822 | 107.5985439 | 103.909876 | 100.3682013 | 96.96682881 | 93.6994138 |
| 190408A00047 | 4/8/2019 | 2.43 | 4/7/2023 | 4/8/2019 | 106.28162 | 106.2816205 | 106.2816205 | 106.2816205 | 105.6770998 | 102.9716423 | 100.3492889 | 97.80695351 | 95.34168802 |
| 190416A00021 | 4/16/2019 | 2.73 | 4/16/2024 | 4/16/2019 | 109.10989 | 109.1098876 | 109.1098876 | 109.1098876 | 108.0016706 | 104.2676947 | 100.6837641 | 97.24298655 | 93.93883018 |
| 180727A00039 | 7/27/2018 | 3.48 | 7/27/2028 | 7/27/2018 | 125.4109 | 125.4109044 | 125.4109044 | 125.4109044 | 119.1842847 | 111.0574906 | 103.5622431 | 96.64580988 | 90.26012726 |
| 180806A00009 | 8/6/2018 | 2.9 | 8/6/2020 | 8/6/2018 | 100.04381 | 100.0438052 | 100.0438052 | 100.0438052 | 100.0425653 | 100.0259141 | 100.0092794 | 99.99266125 | 99.9760597 |
| 180810A00006 | 8/10/2018 | 2.73 | 8/10/2020 | 8/10/2018 | 100.07259 | 100.0725942 | 100.0725942 | 100.0725942 | 100.0705249 | 100.042734 | 100.0149745 | 99.98724611 | 99.95954888 |
| 180813A00013 | 8/13/2018 | 2.99 | 12/5/2022 | 8/13/2018 | 106.39035 | 106.390351 | 106.390351 | 106.390351 | 105.9015514 | 103.5380034 | 101.2392576 | 99.00318574 | 96.82774146 |
| 180829A00008 | 8/29/2018 | 3.23 | 8/30/2027 | 8/29/2018 | 122.25495 | 122.2549501 | 122.2549501 | 122.2549501 | 117.4201658 | 110.1474476 | 103.3857077 | 97.09620302 | 91.24332533 |
| 180904A00014 | 9/4/2018 | 3.37 | 9/1/2028 | 9/4/2018 | 124.82974 | 124.8297439 | 124.8297439 | 124.8297439 | 118.4568918 | 110.2685853 | 102.7237777 | 95.76818063 | 89.35236128 |
| 180906A00004 | 9/6/2018 | 2.92 | 9/7/2021 | 9/6/2018 | 102.95499 | 102.954986 | 102.954986 | 102.954986 | 102.7793818 | 101.6631926 | 100.5712229 | 99.5026904 | 98.45684624 |
| 180906A00020 | 9/6/2018 | 2.81 | 9/7/2021 | 9/6/2018 | 103.01091 | 103.0109127 | 103.0109127 | 103.0109127 | 102.8348164 | 101.7156378 | 100.6207848 | 99.54947053 | 98.5009416 |
| 180906A00047 | 9/6/2018 | 2.81 | 9/7/2021 | 9/6/2018 | 103.01091 | 103.0109127 | 103.0109127 | 103.0109127 | 102.8348164 | 101.7156378 | 100.6207848 | 99.54947053 | 98.50094161 |
| 180910A00032 | 9/10/2018 | 3.22 | 9/10/2024 | 9/10/2018 | 112.12446 | 112.1244557 | 112.1244557 | 112.1244557 | 110.7564769 | 106.5779488 | 102.5823793 | 98.76075235 | 95.1045479 |
| 180913A00029 | 9/13/2018 | 3.11 | 9/13/2023 | 9/13/2018 | 108.86101 | 108.861009 | 108.861009 | 108.861009 | 108.0646737 | 104.9090861 | 101.8629347 | 98.92178523 | 96.08141162 |
| 180913A00040 | 9/13/2018 | 2.89 | 9/13/2021 | 9/13/2018 | 103.1465 | 103.1465024 | 103.1465024 | 103.1465024 | 102.9659624 | 101.8296102 | 100.7183139 | 99.63125113 | 98.56763512 |
| 180914A00046 | 9/14/2018 | 2.93 | 9/14/2021 | 9/14/2018 | 103.19971 | 103.1997079 | 103.1997079 | 103.1997079 | 103.0184022 | 101.8790015 | 100.7647816 | 99.67491438 | 98.60860732 |
| 180925A00095 | 9/25/2018 | 3.01 | 9/25/2020 | 9/25/2018 | 100.42835 | 100.4283473 | 100.4283473 | 100.4283473 | 100.4143517 | 100.2589682 | 100.104071 | 99.94965808 | 99.79572702 |
| 181001A00020 | 10/1/2018 | 3.16 | 10/3/2022 | 10/1/2018 | 106.29565 | 106.2956493 | 106.2956493 | 106.2956493 | 105.8589693 | 103.6660785 | 101.5296571 | 99.44784664 | 97.41886541 |
| 181005A00011 | 10/5/2018 | 3.2 | 10/5/2023 | 10/5/2018 | 109.91822 | 109.9182183 | 109.9182183 | 109.9182183 | 109.0850005 | 105.8389881 | 102.7074452 | 99.68564852 | 96.76910141 |
| 181005A00016 | 10/5/2018 | 3.26 | 1/10/2023 | 10/5/2018 | 107.32556 | 107.3255581 | 107.3255581 | 107.3255581 | 106.8034893 | 104.3333067 | 101.9333507 | 99.60122664 | 97.33463621 |
| 181009A00060 | 10/9/2018 | 3.07 | 10/12/2021 | 10/9/2018 | 103.58826 | 103.5882622 | 103.5882622 | 103.5882622 | 103.386997 | 102.1688291 | 100.979353 | 99.81756323 | 98.68250082 |
| 181016A00004 | 10/16/2018 | 3.07 | 10/16/2020 | 10/16/2018 | 100.60397 | 100.6039667 | 100.6039667 | 100.6039667 | 100.5830154 | 100.3693189 | 100.1565433 | 99.94468263 | 99.73373088 |
| 181016A00011 | 10/16/2018 | 3.06 | 10/15/2021 | 10/16/2018 | 103.6006 | 103.6005985 | 103.6005985 | 103.6005985 | 103.3973051 | 102.1708776 | 100.9735289 | 99.80423346 | 98.66201316 |
| 181018A00011 | 10/18/2018 | 3.35 | 10/18/2023 | 10/18/2018 | 109.91086 | 109.9108642 | 109.9108642 | 109.9108642 | 109.0642535 | 105.7983137 | 102.6482747 | 99.60931921 | 96.6768632 |
| 181115A00051 | 11/15/2018 | 2.98 | 5/17/2021 | 11/15/2018 | 102.30368 | 102.3036797 | 102.3036797 | 102.3036797 | 102.1942603 | 101.3879717 | 100.5944039 | 99.81325744 | 99.04424191 |
| 181120A00023 | 11/20/2018 | 3.15 | 11/19/2021 | 11/20/2018 | 103.77948 | 103.779484 | 103.779484 | 103.779484 | 103.555187 | 102.2427478 | 100.9566341 | 99.69606484 | 98.46029016 |
| 181123A00007 | 11/23/2018 | 3.08 | 11/23/2020 | 11/23/2018 | 100.90492 | 100.9049248 | 100.9049248 | 100.9049248 | 100.8715362 | 100.5523638 | 100.2352155 | 99.92007209 | 99.60691453 |
| 180620A00014 | 6/20/2018 | 3.4 | 6/20/2028 | 6/20/2018 | 124.45996 | 124.4599559 | 124.4599559 | 124.4599559 | 118.4108069 | 110.4062057 | 103.0170762 | 96.19260204 | 89.88641363 |
| 180621A00017 | 6/21/2018 | 3.42 | 6/21/2028 | 6/21/2018 | 124.62648 | 124.6264786 | 124.6264786 | 124.6264786 | 118.5700245 | 110.5567798 | 103.1597366 | 96.32800773 | 90.01516018 |

Classification | Public

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 180629A00071 | 6/29/2018 | 3.02 | 6/29/2023 | 6/29/2018 | 108.00701 | 108.0070114 | 108.0070114 | 108.0070114 | 107.309697 | 104.3681931 | 101.5231946 | 98.77101799 | 96.10814114 |
| 180713A00013 | 7/13/2018 | 2.88 | 7/13/2023 | 7/13/2018 | 108.24611 | 108.2461108 | 108.2461108 | 108.2461108 | 107.5274754 | 104.5329752 | 101.6381854 | 98.83924181 | 96.13245239 |
| 180719A00061 | 7/19/2018 | 3.07 | 7/19/2023 | 7/19/2018 | 108.307 | 108.3070048 | 108.3070048 | 108.3070048 | 107.5842585 | 104.5857387 | 101.6873091 | 98.88507946 | 96.17533322 |
| 180719A00063 | 7/19/2018 | 3.21 | 7/19/2024 | 7/19/2018 | 111.65866 | 111.6586574 | 111.6586574 | 111.6586574 | 110.3854264 | 106.3551496 | 102.496376 | 98.80089776 | 95.26094395 |
| 180723A00024 | 10/23/2018 | 3.1 | 10/22/2021 | 10/23/2018 | 103.508 | 103.5080007 | 103.5080007 | 103.5080007 | 103.3006413 | 102.0588174 | 100.8468411 | 99.66364518 | 98.50821285 |
| 180810A00028 | 8/10/2018 | 2.91 | 8/10/2023 | 8/10/2018 | 108.55219 | 108.5521921 | 108.5521921 | 108.5521921 | 107.797339 | 104.7241084 | 101.7554438 | 98.88719864 | 96.11541568 |
| 180820A00054 | 8/20/2018 | 3 | 8/18/2023 | 8/20/2018 | 108.32113 | 108.3211269 | 108.3211269 | 108.3211269 | 107.5603693 | 104.4827233 | 101.510063 | 98.63821168 | 95.86318451 |
| 180820A00055 | 8/20/2018 | 3.37 | 8/21/2028 | 8/20/2018 | 124.73828 | 124.7382848 | 124.7382848 | 124.7382848 | 118.4151639 | 110.2559013 | 102.7359116 | 95.80142001 | 89.40344721 |
| 180823A00013 | 8/23/2018 | 2.97 | 8/23/2023 | 8/23/2018 | 108.26569 | 108.2656853 | 108.2656853 | 108.2656853 | 107.4986607 | 104.4087052 | 101.4244931 | 98.54180313 | 95.75660867 |
| 180830A00033 | 8/30/2018 | 2.87 | 8/31/2020 | 8/30/2018 | 100.22458 | 100.2245802 | 100.2245802 | 100.2245802 | 100.2181753 | 100.132187 | 100.0463439 | 99.96064573 | 99.87509216 |
| 180913A00030 | 9/13/2018 | 3.33 | 9/12/2025 | 9/13/2018 | 115.57589 | 115.5758919 | 115.5758919 | 115.5758919 | 113.4175633 | 108.1988082 | 103.2556147 | 98.5719344 | 94.13274026 |
| 180914A00008 | 9/14/2018 | 3.15 | 9/14/2023 | 9/14/2018 | 108.9948 | 108.9947996 | 108.9947996 | 108.9947996 | 108.1967235 | 105.0363172 | 101.9855716 | 99.04004057 | 96.19548674 |
| 180926A00004 | 9/26/2018 | 3.04 | 9/26/2022 | 9/26/2018 | 106.37805 | 106.3780482 | 106.3780482 | 106.3780482 | 105.9451536 | 103.7625223 | 101.6358637 | 99.56334582 | 97.54321168 |
| 180927A00008 | 9/27/2018 | 3.14 | 9/27/2022 | 9/27/2018 | 106.20458 | 106.2045839 | 106.2045839 | 106.2045839 | 105.7729027 | 103.5972089 | 101.4772303 | 99.41114523 | 97.39720669 |
| 180927A00017 | 9/27/2018 | 3 | 9/29/2020 | 9/27/2018 | 100.45722 | 100.4572223 | 100.4572223 | 100.4572223 | 100.4420129 | 100.2755391 | 100.1096152 | 99.94423833 | 99.77940595 |
| 181001A00049 | 10/1/2018 | 3.01 | 10/1/2020 | 10/1/2018 | 100.47418 | 100.4741824 | 100.4741824 | 100.4741824 | 100.4583304 | 100.2863121 | 100.1148808 | 99.94403353 | 99.77376742 |
| 181002A00018 | 10/2/2018 | 3.1 | 10/4/2021 | 10/2/2018 | 103.36705 | 103.3670484 | 103.3670484 | 103.3670484 | 103.1718684 | 101.979832 | 100.815326 | 99.67740442 | 98.56516411 |
| 181004A00049 | 10/4/2018 | 3.06 | 11/4/2020 | 10/4/2018 | 100.75036 | 100.7503647 | 100.7503647 | 100.7503647 | 100.7230418 | 100.4566248 | 100.1916186 | 99.92801178 | 99.66579341 |
| 181005A00041 | 10/5/2018 | 3.06 | 10/5/2020 | 10/5/2018 | 100.51397 | 100.5139733 | 100.5139733 | 100.5139733 | 100.4967614 | 100.3136255 | 100.1311623 | 99.94936804 | 99.76823903 |
| 181010A00017 | 10/10/2018 | 3.08 | 10/1/2020 | 10/10/2018 | 100.48623 | 100.486234 | 100.486234 | 100.486234 | 100.4703806 | 100.2983468 | 100.1269001 | 99.95603742 | 99.78575594 |
| 181010A00019 | 10/10/2018 | 3.21 | 9/15/2021 | 10/10/2018 | 103.34398 | 103.3439813 | 103.3439813 | 103.3439813 | 103.162303 | 102.0220309 | 100.9069682 | 99.81628502 | 98.7491876 |
| 181015A00008 | 10/15/2018 | 3.15 | 9/15/2021 | 10/15/2018 | 103.2756 | 103.2755973 | 103.2755973 | 103.2755973 | 103.0939745 | 101.9541167 | 100.8394619 | 99.74918048 | 98.68247871 |
| 190318A00015 | 3/18/2019 | 2.66 | 3/18/2021 | 3/18/2019 | 101.5337 | 101.5337043 | 101.5337043 | 101.5337043 | 101.4554406 | 100.8181596 | 100.188881 | 99.56745467 | 98.95373408 |
| 190321A00003 | 3/21/2019 | 2.67 | 3/21/2024 | 3/21/2019 | 108.71581 | 108.7158063 | 108.7158063 | 108.7158063 | 107.649524 | 103.9915177 | 100.4782292 | 97.10312067 | 93.85998902 |
| 190321A00038 | 3/21/2019 | 2.64 | 9/21/2020 | 3/21/2019 | 100.34438 | 100.3443783 | 100.3443783 | 100.3443783 | 100.3316022 | 100.1873774 | 100.043578 | 99.90020197 | 99.75724751 |
| 190326A00007 | 3/26/2019 | 2.5 | 3/26/2021 | 3/26/2019 | 101.48145 | 101.4814523 | 101.4814523 | 101.4814523 | 101.3992203 | 100.7402096 | 100.0897504 | 99.44767708 | 98.81382814 |
| 190326A00032 | 3/26/2019 | 2.4 | 3/26/2024 | 3/26/2019 | 108.43518 | 108.4351796 | 108.4351796 | 108.4351796 | 107.3562282 | 103.6727027 | 100.135816 | 96.73890492 | 93.47564995 |
| 190327A00062 | 3/27/2019 | 2.44 | 3/26/2021 | 3/27/2019 | 101.44182 | 101.4418235 | 101.4418235 | 101.4418235 | 101.3596078 | 100.7007439 | 100.0504301 | 99.40850086 | 98.77479468 |
| 190328A00011 | 3/28/2019 | 2.37 | 3/28/2024 | 3/28/2019 | 108.33673 | 108.3367275 | 108.3367275 | 108.3367275 | 107.2551015 | 103.5681626 | 100.0281917 | 96.62850197 | 93.36275204 |
| 190328A00030 | 4/25/2019 | 2.48 | 4/26/2021 | 4/25/2019 | 101.65915 | 101.6591493 | 101.6591493 | 101.6591493 | 101.5609512 | 100.816399 | 100.0827409 | 99.35973912 | 98.64716277 |
| 190328A00033 | 4/25/2019 | 2.56 | 4/25/2024 | 4/25/2019 | 108.52952 | 108.5295211 | 108.5295211 | 108.5295211 | 107.4096304 | 103.6624112 | 100.0667447 | 96.6156252 | 93.30241602 |
| 190401A00005 | 4/1/2019 | 2.54 | 4/1/2021 | 4/1/2019 | 101.54592 | 101.5459195 | 101.5459195 | 101.5459195 | 101.4606522 | 100.7849698 | 100.1182647 | 99.46035895 | 98.81107937 |
| 190402A00004 | 4/2/2019 | 2.9 | 4/2/2029 | 4/2/2019 | 124.34105 | 124.3410489 | 124.3410489 | 124.3410489 | 116.9277043 | 108.1890607 | 100.1856448 | 92.85138858 | 86.12649501 |

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 190402A00010 | 4/2/2019 | 2.4 | 4/6/2022 | 4/2/2019 | 103.88684 | 103.8868386 | 103.8868386 | 103.8868386 | 103.5829107 | 101.8931129 | 100.2389761 | 98.61943639 | 97.03347248 |
| 190403A00024 | 4/3/2019 | 2.61 | 7/29/2022 | 4/3/2019 | 104.66494 | 104.6649357 | 104.6649357 | 104.6649357 | 104.2834855 | 102.2857276 | 100.3366052 | 98.43462984 | 96.5783692 |
| 190408A00004 | 4/8/2019 | 2.6 | 10/8/2021 | 4/8/2019 | 102.79667 | 102.7966662 | 102.7966662 | 102.7966662 | 102.5993044 | 101.4000311 | 100.2287371 | 99.08445153 | 97.96624799 |
| 190409A00041 | 4/9/2019 | 2.57 | 4/5/2021 | 4/9/2019 | 101.59185 | 101.5918479 | 101.5918479 | 101.5918479 | 101.5044989 | 100.8176824 | 100.1401449 | 99.47169933 | 98.81216347 |
| 190411A00019 | 5/1/2019 | 2.63 | 5/2/2022 | 5/1/2019 | 104.13743 | 104.13743 | 104.13743 | 104.13743 | 103.8181258 | 102.0604998 | 100.3410552 | 98.65862311 | 97.01208286 |
| 190422A00084 | 4/22/2019 | 2.6 | 4/22/2021 | 4/22/2019 | 101.72277 | 101.7227723 | 101.7227723 | 101.7227723 | 101.6266041 | 100.8927299 | 100.1694405 | 99.45650811 | 98.75371123 |
| 190424A00015 | 4/24/2019 | 2.55 | 4/26/2021 | 4/24/2019 | 101.7114 | 101.7113991 | 101.7113991 | 101.7113991 | 101.6131761 | 100.8684082 | 100.1345367 | 99.41132374 | 98.69853832 |
| 190426A00008 | 4/26/2019 | 2.57 | 4/26/2022 | 4/26/2019 | 103.99337 | 103.9933692 | 103.9933692 | 103.9933692 | 103.6780241 | 101.9379284 | 100.2353613 | 98.56917321 | 96.93826232 |
| 190426A00016 | 5/1/2019 | 2.58 | 4/14/2023 | 5/1/2019 | 106.23556 | 106.235558 | 106.235558 | 106.235558 | 105.6266874 | 102.9137348 | 100.2843877 | 97.73552877 | 95.26418038 |
| 190429A00004 | 4/29/2019 | 2.65 | 4/15/2024 | 4/29/2019 | 108.80403 | 108.8040299 | 108.8040299 | 108.8040299 | 107.6986412 | 103.9729995 | 100.3970336 | 96.96387168 | 93.66700053 |
| 190507A00014 | 5/7/2019 | 2.6 | 5/7/2024 | 5/7/2019 | 108.7562 | 108.7561964 | 108.7561964 | 108.7561964 | 107.6162996 | 103.8334398 | 100.2046945 | 96.72291715 | 93.38133617 |
| 190509A00030 | 5/9/2019 | 2.48 | 11/9/2021 | 5/9/2019 | 102.84768 | 102.8476834 | 102.8476834 | 102.8476834 | 102.6298719 | 101.3470218 | 100.0928706 | 98.86645471 | 97.66685334 |
| 190510A00004 | 5/10/2019 | 2.54 | 11/10/2020 | 5/10/2019 | 100.64989 | 100.6498906 | 100.6498906 | 100.6498906 | 100.6206787 | 100.3378753 | 100.0566692 | 99.7770469 | 99.49899491 |
| 190219A00045 | 2/19/2019 | 2.8 | 2/28/2022 | 2/19/2019 | 104.0188 | 104.0187982 | 104.0187982 | 104.0187982 | 103.737948 | 102.1508531 | 100.5958461 | 99.07202107 | 97.57850583 |
| 190226A00020 | 2/26/2019 | 2.64 | 2/26/2024 | 2/26/2019 | 109.12018 | 109.1201807 | 109.1201807 | 109.1201807 | 108.0830378 | 104.4635489 | 100.9855491 | 97.64272663 | 94.42908844 |
| 190227A00002 | 2/27/2019 | 2.61 | 2/28/2022 | 2/27/2019 | 103.98891 | 103.9889148 | 103.9889148 | 103.9889148 | 103.70722 | 102.1157444 | 100.5565184 | 99.02862963 | 97.53119996 |
| 190308A00007 | 3/8/2019 | 2.8 | 3/8/2024 | 3/8/2019 | 109.10342 | 109.1034197 | 109.1034197 | 109.1034197 | 108.0554593 | 104.4242197 | 100.9354591 | 97.58279374 | 94.36016404 |
| 190328A00027 | 3/28/2019 | 2.51 | 9/21/2021 | 3/28/2019 | 102.58321 | 102.5832113 | 102.5832113 | 102.5832113 | 102.3978397 | 101.2459273 | 100.1198729 | 99.01881296 | 97.94192207 |
| 190401A00008 | 4/1/2019 | 2.62 | 4/1/2024 | 4/1/2019 | 108.60263 | 108.6026285 | 108.6026285 | 108.6026285 | 107.5199826 | 103.8354632 | 100.2976933 | 96.89999753 | 93.6360451 |
| 190401A00035 | 4/1/2019 | 2.53 | 10/1/2021 | 4/1/2019 | 102.66866 | 102.6686576 | 102.6686576 | 102.6686576 | 102.4760834 | 101.2965799 | 100.1441574 | 99.01789127 | 97.91689878 |
| 190404A00003 | 4/4/2019 | 2.47 | 4/4/2024 | 4/4/2019 | 108.75252 | 108.7525245 | 108.7525245 | 108.7525245 | 107.6582837 | 103.9451113 | 100.380515 | 96.95770592 | 93.67024773 |
| 190410A00005 | 4/10/2019 | 2.49 | 10/13/2020 | 4/10/2019 | 100.48751 | 100.4875096 | 100.4875096 | 100.4875096 | 100.4675624 | 100.2620516 | 100.0573962 | 99.85359072 | 99.65062989 |
| 190411A00037 | 4/11/2019 | 2.59 | 4/9/2021 | 4/11/2019 | 101.63145 | 101.6314489 | 101.6314489 | 101.6314489 | 101.5420207 | 100.8440947 | 100.1557515 | 99.47679468 | 98.80703302 |
| 190416A00018 | 4/16/2019 | 2.63 | 4/16/2021 | 4/16/2019 | 101.70541 | 101.7054115 | 101.7054115 | 101.7054115 | 101.6123426 | 100.8949581 | 100.1876939 | 99.49033685 | 98.80267961 |
| 190422A00008 | 4/22/2019 | 2.6 | 4/22/2021 | 4/22/2019 | 101.72277 | 101.7227723 | 101.7227723 | 101.7227723 | 101.6266041 | 100.8927299 | 100.1694405 | 99.45650811 | 98.75371123 |
| 190424A00019 | 4/24/2019 | 2.67 | 4/24/2024 | 4/24/2019 | 108.93741 | 108.9374103 | 108.9374103 | 108.9374103 | 107.8173819 | 104.065232 | 100.4646567 | 97.00865576 | 93.69059735 |
| 190426A00032 | 6/27/2019 | 2.55 | 6/27/2022 | 6/27/2019 | 104.3444 | 104.3443999 | 104.3443999 | 104.3443999 | 103.9873479 | 102.0773673 | 100.211963 | 98.38982908 | 96.60970658 |
| 190430A00001 | 4/30/2019 | 2.47 | 5/2/2024 | 4/30/2019 | 108.93448 | 108.9344835 | 108.9344835 | 108.9344835 | 107.7952107 | 104.00344 | 100.3660726 | 96.87593146 | 93.52621892 |
| 190430A00003 | 4/30/2019 | 2.43 | 8/2/2023 | 4/30/2019 | 107.03039 | 107.030386 | 107.030386 | 107.030386 | 106.290434 | 103.2615859 | 100.3354745 | 97.50804468 | 94.77542578 |
| 190507A00006 | 5/7/2019 | 2.57 | 5/8/2023 | 5/7/2019 | 106.35854 | 106.3585437 | 106.3585437 | 106.3585437 | 105.7242562 | 102.945316 | 100.2537332 | 97.6462181 | 95.11962821 |
| 190507A00023 | 5/7/2019 | 2.52 | 5/7/2021 | 5/7/2019 | 101.75808 | 101.7580788 | 101.7580788 | 101.7580788 | 101.6542257 | 100.8791845 | 100.1159422 | 99.36423078 | 98.62379024 |
| 190508A00008 | 5/8/2019 | 2.36 | 5/9/2022 | 5/8/2019 | 104.02366 | 104.0236616 | 104.0236616 | 104.0236616 | 103.6988582 | 101.917953 | 100.1761756 | 98.47234992 | 96.80534632 |
| 190509A00029 | 5/9/2019 | 2.34 | 6/9/2022 | 5/9/2019 | 104.17871 | 104.1787149 | 104.1787149 | 104.1787149 | 103.8331336 | 101.9676293 | 100.1447503 | 98.36327416 | 96.6220214 |

Classification | Public

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 190510A00018 | 5/10/2019 | 2.54 | 5/10/2023 | 5/10/2019 | 106.28705 | 106.2870451 | 106.2870451 | 106.2870451 | 105.6507733 | 102.8675931 | 100.1720584 | 97.56087197 | 95.03088361 |
| 190514A00020 | 5/14/2019 | 2.66 | 5/14/2025 | 5/14/2019 | 111.3455 | 111.3455019 | 111.3455019 | 111.3455019 | 109.4967403 | 104.6917101 | 100.1271597 | 95.78977766 | 91.66706117 |
| 190514A00021 | 5/14/2019 | 2.72 | 11/14/2025 | 5/14/2019 | 112.85016 | 112.8501617 | 112.8501617 | 112.8501617 | 110.5447919 | 105.2341285 | 100.2131594 | 95.46454936 | 90.97209145 |
| 190514A00025 | 5/14/2019 | 2.43 | 5/14/2021 | 5/14/2019 | 101.72249 | 101.7224861 | 101.7224861 | 101.7224861 | 101.6151197 | 100.821207 | 100.0396814 | 99.27025445 | 98.51264664 |
| 171207A00029 | 12/7/2017 | 2.04 | 12/7/2020 | 12/7/2017 | 100.68848 | 100.6884832 | 100.6884832 | 100.6884832 | 100.6506138 | 100.2927871 | 99.93750944 | 99.58475358 | 99.23449265 |
| 171219A00025 | 12/19/2017 | 2.33 | 12/19/2022 | 12/19/2017 | 105.34272 | 105.3427178 | 105.3427178 | 105.3427178 | 104.8420763 | 102.4452833 | 100.1154106 | 97.85022181 | 95.6475686 |
| 171220A00003 | 12/20/2017 | 2.36 | 12/21/2020 | 12/20/2017 | 100.83945 | 100.8394507 | 100.8394507 | 100.8394507 | 100.7971091 | 100.4009007 | 100.0078112 | 99.61780376 | 99.2308421 |
| 180111A00044 | 1/11/2018 | 2.34 | 1/11/2021 | 1/11/2018 | 100.95375 | 100.9537506 | 100.9537506 | 100.9537506 | 100.9041798 | 100.4498927 | 99.99969815 | 99.55354102 | 99.11136704 |
| 180116A00045 | 1/16/2018 | 2.49 | 1/11/2022 | 1/16/2018 | 103.24687 | 103.2468713 | 103.2468713 | 103.2468713 | 102.9946825 | 101.5487227 | 100.1302423 | 98.7385263 | 97.37288395 |
| 180117A00016 | 1/17/2018 | 2.46 | 7/19/2021 | 1/17/2018 | 102.14773 | 102.1477303 | 102.1477303 | 102.1477303 | 102.0050762 | 101.0291913 | 100.0719424 | 99.13279938 | 98.21125184 |
| 180125A00023 | 1/25/2018 | 2.57 | 1/25/2022 | 1/25/2018 | 103.43815 | 103.4381455 | 103.4381455 | 103.4381455 | 103.1780182 | 101.69381 | 100.2385096 | 98.81134628 | 97.41157638 |
| 180126A00028 | 1/26/2018 | 2.69 | 1/26/2023 | 1/26/2018 | 106.02285 | 106.0228454 | 106.0228454 | 106.0228454 | 105.4894307 | 102.9934617 | 100.5697673 | 98.2158381 | 95.92926757 |
| 180130A00085 | 1/30/2018 | 2.79 | 1/30/2025 | 1/30/2018 | 112.16677 | 112.1667679 | 112.1667679 | 112.1667679 | 110.518773 | 105.9438345 | 101.5866405 | 97.43567663 | 93.48009788 |
| 180130A00091 | 1/30/2018 | 2.74 | 1/25/2023 | 1/30/2018 | 106.14186 | 106.1418557 | 106.1418557 | 106.1418557 | 105.6090604 | 103.1142088 | 100.6915141 | 98.33847365 | 96.05268755 |
| 180205A00019 | 2/5/2018 | 2.88 | 2/5/2025 | 2/5/2018 | 112.62227 | 112.6222735 | 112.6222735 | 112.6222735 | 110.9593587 | 106.3573006 | 101.9748375 | 97.80032376 | 93.82279352 |
| 180207A00003 | 2/7/2018 | 3.28 | 2/7/2028 | 2/7/2018 | 122.43111 | 122.4311078 | 122.4311078 | 122.4311078 | 116.9834923 | 109.3736317 | 102.3259873 | 95.79585608 | 89.74231418 |
| 180215A00043 | 2/15/2018 | 2.63 | 1/7/2021 | 2/15/2018 | 101.05927 | 101.0592741 | 101.0592741 | 101.0592741 | 101.0111259 | 100.5675641 | 100.1278979 | 99.692076 | 99.26004802 |
| 180222A00026 | 2/22/2018 | 2.98 | 2/21/2025 | 2/22/2018 | 113.20536 | 113.2053626 | 113.2053626 | 113.2053626 | 111.5061213 | 106.8449639 | 102.4078876 | 98.18291668 | 94.15878038 |
| 180227A00005 | 2/27/2018 | 2.59 | 9/22/2020 | 2/27/2018 | 100.34363 | 100.3436274 | 100.3436274 | 100.3436274 | 100.3305486 | 100.1835608 | 100.0370132 | 99.89090392 | 99.745231 |
| 180306A00005 | 3/6/2018 | 2.65 | 3/4/2022 | 3/6/2018 | 104.08106 | 104.0810572 | 104.0810572 | 104.0810572 | 103.7968347 | 102.1939028 | 100.6235907 | 99.08496986 | 97.57714707 |
| 180326A00010 | 3/26/2018 | 2.6 | 3/26/2021 | 3/26/2018 | 101.63963 | 101.639634 | 101.639634 | 101.639634 | 101.5571847 | 100.8964145 | 100.2442327 | 99.60047251 | 98.96497158 |
| 180326A00012 | 3/26/2018 | 2.74 | 12/28/2020 | 3/26/2018 | 101.03883 | 101.0388261 | 101.0388261 | 101.0388261 | 100.9941881 | 100.5782183 | 100.1656703 | 99.75650181 | 99.3506716 |
| 180327A00024 | 3/27/2018 | 2.79 | 5/26/2023 | 3/27/2018 | 107.62244 | 107.6224388 | 107.6224388 | 107.6224388 | 106.9621342 | 104.1062939 | 101.3416902 | 98.66491215 | 96.0726962 |
| 180328A00014 | 3/28/2018 | 2.55 | 3/29/2021 | 3/28/2018 | 101.62686 | 101.6268574 | 101.6268574 | 101.6268574 | 101.5429137 | 100.873953 | 100.21379 | 99.56225197 | 98.91917068 |
| 180402A00028 | 4/2/2018 | 2.58 | 4/1/2021 | 4/2/2018 | 101.66743 | 101.6674345 | 101.6674345 | 101.6674345 | 101.5819567 | 100.9046038 | 100.2362656 | 99.57676288 | 98.92592148 |
| 180403A00005 | 4/3/2018 | 2.72 | 4/3/2023 | 4/3/2018 | 107.04096 | 107.0409622 | 107.0409622 | 107.0409622 | 106.4386719 | 103.7338187 | 101.1116973 | 98.56924829 | 96.10354825 |
| 180425A00004 | 4/25/2018 | 2.97 | 4/26/2021 | 4/25/2018 | 102.0249 | 102.0248978 | 102.0248978 | 102.0248978 | 101.9265255 | 101.1804637 | 100.4453118 | 99.72083144 | 99.00679162 |
| 180426A00053 | 4/26/2018 | 2.94 | 4/26/2023 | 4/26/2018 | 107.81598 | 107.8159762 | 107.8159762 | 107.8159762 | 107.1878621 | 104.4092952 | 101.7172789 | 99.10854573 | 96.57997701 |
| 180821A00002 | 8/22/2018 | 2.89 | 8/23/2021 | 8/22/2018 | 102.81285 | 102.8128531 | 102.8128531 | 102.8128531 | 102.6477042 | 101.5731118 | 100.520996 | 99.4906566 | 98.48142243 |
| 180821A00016 | 8/21/2018 | 2.76 | 8/20/2021 | 8/21/2018 | 102.82305 | 102.82305 | 102.82305 | 102.82305 | 102.6594755 | 101.5904842 | 100.5437258 | 99.51851161 | 98.51418139 |
| 180821A00021 | 8/21/2018 | 2.68 | 8/21/2020 | 8/21/2018 | 100.14953 | 100.1495316 | 100.1495316 | 100.1495316 | 100.1451863 | 100.0868404 | 100.0285779 | 99.97039857 | 99.91230227 |
| 180827A00030 | 8/27/2018 | 2.84 | 8/27/2020 | 8/27/2018 | 100.19335 | 100.1933523 | 100.1933523 | 100.1933523 | 100.1877738 | 100.1128757 | 100.0380959 | 99.96343407 | 99.88888995 |
| 180827A00031 | 8/27/2018 | 2.9 | 8/27/2021 | 8/27/2018 | 102.85274 | 102.8527358 | 102.8527358 | 102.8527358 | 102.6849043 | 101.5992098 | 100.5364457 | 99.49589108 | 98.47685492 |

Classification | Public

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 180827A00032 | 8/27/2018 | 2.96 | 8/29/2022 | 8/27/2018 | 105.59897 | 105.5989672 | 105.5989672 | 105.5989672 | 105.1915044 | 103.1017368 | 101.0641123 | 99.0769801 | 97.1387542 |
| 180829A00044 | 8/29/2018 | 2.98 | 8/26/2022 | 8/29/2018 | 105.61872 | 105.6187228 | 105.6187228 | 105.6187228 | 105.2135939 | 103.1315796 | 101.1013905 | 99.12139095 | 97.19000937 |
| 180830A00039 | 8/30/2018 | 3.03 | 8/30/2023 | 8/30/2018 | 108.50392 | 108.5039234 | 108.5039234 | 108.5039234 | 107.7271627 | 104.6151067 | 101.6099857 | 98.70751122 | 95.90359346 |
| 180910A00007 | 9/10/2018 | 2.96 | 9/8/2023 | 9/10/2018 | 108.93351 | 108.9335104 | 108.9335104 | 108.9335104 | 108.1395798 | 104.9827524 | 101.9353162 | 98.99284466 | 96.15111871 |
| 180911A00011 | 9/11/2018 | 3 | 9/10/2021 | 9/11/2018 | 103.06698 | 103.0669844 | 103.0669844 | 103.0669844 | 102.889131 | 101.7641209 | 100.6636972 | 99.58705986 | 98.53344336 |
| 180912A00028 | 9/12/2018 | 2.93 | 9/14/2020 | 9/12/2018 | 100.33314 | 100.3331383 | 100.3331383 | 100.3331383 | 100.3224837 | 100.1976403 | 100.0731213 | 99.9489255 | 99.82505158 |
| 180914A00029 | 9/14/2018 | 3.48 | 9/14/2028 | 9/14/2018 | 125.83262 | 125.83262 | 125.83262 | 125.83262 | 119.383279 | 111.1253658 | 103.5180937 | 96.50640327 | 90.04017646 |
| 180920A00014 | 9/20/2018 | 3.59 | 9/20/2028 | 9/20/2018 | 126.78106 | 126.7810627 | 126.7810627 | 126.7810627 | 120.2869395 | 111.9780755 | 104.3242286 | 97.26990976 | 90.76461616 |
| 180921A00039 | 9/21/2018 | 3.15 | 9/21/2022 | 9/21/2018 | 106.17921 | 106.1792086 | 106.1792086 | 106.1792086 | 105.75236 | 103.5933952 | 101.4894142 | 99.43863092 | 97.43933203 |
| 180924A00047 | 9/24/2018 | 3.14 | 9/23/2022 | 9/24/2018 | 106.17323 | 106.1732337 | 106.1732337 | 106.1732337 | 105.744801 | 103.5804178 | 101.4712584 | 99.41552499 | 97.41149313 |
| 180925A00045 | 9/25/2018 | 3.31 | 9/25/2025 | 9/25/2018 | 116.63206 | 116.6320635 | 116.6320635 | 116.6320635 | 114.4152264 | 109.1024428 | 104.0724476 | 99.30863932 | 94.79548188 |
| 180928A00050 | 9/28/2018 | 2.98 | 9/28/2020 | 9/28/2018 | 100.44634 | 100.4463381 | 100.4463381 | 100.4463381 | 100.4314325 | 100.2677357 | 100.1045726 | 99.94194072 | 99.77983738 |
| 181001A00059 | 10/1/2018 | 3.02 | 11/2/2020 | 10/1/2018 | 100.72433 | 100.7243275 | 100.7243275 | 100.7243275 | 100.6976448 | 100.4368005 | 100.1773055 | 99.91914919 | 99.66232136 |
| 181003A00021 | 10/3/2018 | 3.1 | 4/5/2021 | 10/3/2018 | 101.9566 | 101.9565974 | 101.9565974 | 101.9565974 | 101.8690907 | 101.1808735 | 100.5019487 | 99.83212905 | 99.17123214 |
| 181005A00005 | 10/5/2018 | 3.31 | 10/5/2023 | 10/5/2018 | 109.67308 | 109.6730814 | 109.6730814 | 109.6730814 | 108.8449035 | 105.6170707 | 102.5027851 | 99.49737257 | 96.59638241 |
| 181009A00036 | 10/9/2018 | 3.07 | 10/8/2021 | 10/9/2018 | 103.55549 | 103.5554931 | 103.5554931 | 103.5554931 | 103.3569468 | 102.1498994 | 100.9710278 | 99.81935335 | 98.69394249 |
| 181010A00023 | 10/10/2018 | 3.41 | 4/1/2024 | 10/10/2018 | 111.52669 | 111.526688 | 111.526688 | 111.526688 | 110.4321916 | 106.6941083 | 103.104342 | 99.65615864 | 96.34317134 |
| 181012A00012 | 10/12/2018 | 3.05 | 10/9/2020 | 10/12/2018 | 100.54321 | 100.5432122 | 100.5432122 | 100.5432122 | 100.5246417 | 100.3304043 | 100.1369276 | 99.94420701 | 99.75223812 |
| 181023A00021 | 10/23/2018 | 3.28 | 10/23/2023 | 10/23/2018 | 109.72483 | 109.7248319 | 109.7248319 | 109.7248319 | 108.8720456 | 105.5959472 | 102.4365418 | 99.38896059 | 96.44857163 |
| 181015A00024 | 10/15/2018 | 3.29 | 10/16/2023 | 10/15/2018 | 109.69966 | 109.6996603 | 109.6996603 | 109.6996603 | 108.8564571 | 105.5991971 | 102.4573997 | 99.42627242 | 96.50125424 |
| 181023A00036 | 10/23/2018 | 2.98 | 10/23/2020 | 10/23/2018 | 100.66774 | 100.6677362 | 100.6677362 | 100.6677362 | 100.644373 | 100.4109165 | 100.1785535 | 99.94727637 | 99.71707733 |
| 181023A00052 | 10/23/2018 | 3.15 | 10/23/2023 | 10/23/2018 | 109.90837 | 109.9083749 | 109.9083749 | 109.9083749 | 109.0505535 | 105.7568779 | 102.5808223 | 99.51746749 | 96.56213438 |
| 181026A00021 | 10/29/2018 | 3.11 | 1/15/2021 | 10/29/2018 | 101.33612 | 101.3361206 | 101.3361206 | 101.3361206 | 101.2849904 | 100.8186482 | 100.3566069 | 99.89880713 | 99.44519054 |
| 181108A00025 | 11/8/2018 | 3.44 | 7/31/2023 | 11/8/2018 | 109.51906 | 109.5190592 | 109.5190592 | 109.5190592 | 108.7779584 | 105.7296764 | 102.7840559 | 99.93706618 | 97.18485878 |
| 181114A00010 | 11/14/2018 | 3.08 | 11/15/2021 | 11/14/2018 | 103.87973 | 103.8797261 | 103.8797261 | 103.8797261 | 103.6569376 | 102.3496995 | 101.0699146 | 99.81672131 | 98.58929438 |
| 181115A00061 | 11/15/2018 | 2.95 | 11/16/2020 | 11/15/2018 | 100.84941 | 100.849406 | 100.849406 | 100.849406 | 100.8182065 | 100.5180362 | 100.2196654 | 99.92307782 | 99.6282574 |
| 181123A00016 | 11/23/2018 | 3.19 | 11/23/2022 | 11/23/2018 | 106.76894 | 106.7689443 | 106.7689443 | 106.7689443 | 106.2894671 | 103.9537833 | 101.681326 | 99.47001303 | 97.31784407 |
| 181130A00025 | 11/30/2018 | 3 | 6/1/2022 | 11/30/2018 | 105.35642 | 105.3564185 | 105.3564185 | 105.3564185 | 105.0146039 | 103.1598157 | 101.3469095 | 99.57469756 | 97.84203295 |
| 181220A00009 | 12/20/2018 | 2.95 | 12/21/2020 | 12/20/2018 | 101.07367 | 101.0736721 | 101.0736721 | 101.0736721 | 101.0312735 | 100.6344992 | 100.240847 | 99.85028012 | 99.46276226 |
| 181227A00028 | 12/27/2018 | 3.46 | 12/27/2028 | 12/27/2018 | 126.55829 | 126.5582923 | 126.5582923 | 126.5582923 | 119.6295636 | 111.1010715 | 103.2650989 | 96.06137985 | 89.43519337 |
| 190107A00022 | 1/7/2019 | 2.83 | 1/7/2022 | 1/7/2019 | 103.7171 | 103.7170985 | 103.7170985 | 103.7170985 | 103.4666016 | 102.0276606 | 100.6158624 | 99.23050568 | 97.87091286 |
| 190107A00028 | 1/7/2019 | 2.62 | 1/7/2022 | 1/7/2019 | 103.64493 | 103.6449256 | 103.6449256 | 103.6449256 | 103.3937992 | 101.9516288 | 100.5367197 | 99.14836622 | 97.78588641 |
| 190110A00028 | 1/10/2019 | 2.78 | 1/10/2024 | 1/10/2019 | 109.28087 | 109.2808692 | 109.2808692 | 109.2808692 | 108.3130342 | 104.8187429 | 101.4568046 | 98.22150426 | 95.10740514 |

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 190110A00078 | 1/10/2019 | 2.69 | 12/7/2021 | 1/10/2019 | 103.52568 | 103.5256771 | 103.5256771 | 103.5256771 | 103.2911199 | 101.9324177 | 100.5980529 | 99.28742752 | 97.99996255 |
| 190129A00061 | 1/30/2019 | 2.92 | 2/1/2022 | 1/30/2019 | 104.01587 | 104.0158743 | 104.0158743 | 104.0158743 | 103.7511383 | 102.2435704 | 100.7656903 | 99.31669702 | 97.89581804 |
| 190131A00014 | 1/31/2019 | 2.79 | 1/29/2021 | 1/31/2019 | 101.28585 | 101.2858524 | 101.2858524 | 101.2858524 | 101.2296551 | 100.7249292 | 100.2252268 | 99.73047336 | 99.24059556 |
| 190131A00019 | 1/31/2019 | 3.44 | 1/30/2034 | 1/31/2019 | 145.12631 | 145.1263087 | 145.1263087 | 140.7522523 | 126.1025254 | 112.7083988 | 100.9544612 | 90.62772446 | 81.54401403 |
| 190205A00013 | 2/5/2019 | 2.85 | 2/5/2021 | 2/5/2019 | 101.36644 | 101.3664423 | 101.3664423 | 101.3664423 | 101.3072994 | 100.783077 | 100.2642742 | 99.7508073 | 99.2425943 |
| 190211A00010 | 2/11/2019 | 2.79 | 2/11/2021 | 2/11/2019 | 101.37158 | 101.371577 | 101.371577 | 101.371577 | 101.3098071 | 100.7691342 | 100.2342306 | 99.70500433 | 99.18136514 |
| 190214A00012 | 2/14/2019 | 2.6 | 2/14/2022 | 2/14/2019 | 103.87698 | 103.8769825 | 103.8769825 | 103.8769825 | 103.603808 | 102.0545954 | 100.5363487 | 99.04821148 | 97.58935858 |
| 190214A00013 | 2/14/2019 | 2.64 | 2/14/2023 | 2/14/2019 | 106.48953 | 106.4895279 | 106.4895279 | 106.4895279 | 105.9351914 | 103.3692946 | 100.8790586 | 98.46180156 | 96.11495411 |
| 190219A00020 | 2/19/2019 | 2.88 | 2/16/2024 | 2/19/2019 | 109.24553 | 109.245533 | 109.245533 | 109.245533 | 108.2286367 | 104.6518603 | 101.2136443 | 97.90786202 | 94.72869291 |
| 190301A00009 | 3/1/2019 | 2.83 | 3/1/2022 | 3/1/2019 | 104.07381 | 104.0738128 | 104.0738128 | 104.0738128 | 103.7922929 | 102.2020807 | 100.6440529 | 99.11729943 | 97.62094421 |
| 190514A00022 | 5/14/2019 | 2.49 | 11/16/2020 | 5/14/2019 | 100.67303 | 100.6730304 | 100.6730304 | 100.6730304 | 100.6419093 | 100.3425085 | 100.0448981 | 99.74906171 | 99.45498362 |
| 190515A00014 | 5/15/2019 | 2.26 | 5/14/2021 | 5/15/2019 | 101.70614 | 101.7061401 | 101.7061401 | 101.7061401 | 101.5985563 | 100.8031243 | 100.0201266 | 99.24927308 | 98.4902827 |
| 190516A00012 | 5/16/2019 | 2.43 | 11/16/2021 | 5/16/2019 | 102.81163 | 102.811634 | 102.811634 | 102.811634 | 102.5899729 | 101.2912369 | 100.0194532 | 98.77378809 | 97.55344214 |
| 190517A00017 | 5/17/2019 | 2.33 | 2/22/2021 | 5/17/2019 | 101.2648 | 101.2648034 | 101.2648034 | 101.2648034 | 101.19813 | 100.6266117 | 100.0615411 | 99.50280944 | 98.95031044 |
| 190517A00019 | 5/17/2019 | 2.41 | 5/17/2021 | 5/17/2019 | 101.73244 | 101.7324399 | 101.7324399 | 101.7324399 | 101.6235342 | 100.8212778 | 100.0316684 | 99.25440852 | 98.48920995 |
| 190521A00027 | 5/21/2019 | 2.56 | 5/21/2024 | 5/21/2019 | 108.69144 | 108.6914399 | 108.6914399 | 108.6914399 | 107.529353 | 103.7115769 | 100.0507305 | 96.53953359 | 93.17108398 |
| 190521A00028 | 5/21/2019 | 2.47 | 11/22/2021 | 5/21/2019 | 102.90028 | 102.9002761 | 102.9002761 | 102.9002761 | 102.6751675 | 101.3618258 | 100.0739658 | 98.81086574 | 97.57183147 |
| 190523A00007 | 5/23/2019 | 2.28 | 5/23/2022 | 5/23/2019 | 103.964 | 103.9640008 | 103.9640008 | 103.9640008 | 103.6301958 | 101.8126384 | 100.0357155 | 98.29825176 | 96.5991147 |
| 190523A00009 | 5/23/2019 | 2.43 | 5/21/2021 | 5/23/2019 | 101.77268 | 101.7726834 | 101.7726834 | 101.7726834 | 101.661731 | 100.8483733 | 100.0480083 | 99.26032638 | 98.48502761 |
| 190523A00017 | 5/23/2019 | 2.51 | 3/15/2024 | 5/23/2019 | 108.09184 | 108.0918387 | 108.0918387 | 108.0918387 | 107.037191 | 103.4060458 | 99.91816238 | 96.56708982 | 93.34670651 |
| 190524A00013 | 5/24/2019 | 2.39 | 5/24/2021 | 5/24/2019 | 101.74963 | 101.7496299 | 101.7496299 | 101.7496299 | 101.6371871 | 100.8158546 | 100.0077694 | 99.21261283 | 98.43007642 |
| 190524A00032 | 5/24/2019 | 2.45 | 5/24/2023 | 5/24/2019 | 106.11815 | 106.1181513 | 106.1181513 | 106.1181513 | 105.4671369 | 102.6497039 | 99.92205587 | 97.28083852 | 94.7228429 |
| 190529A00006 | 5/29/2019 | 2.32 | 5/28/2021 | 5/29/2019 | 101.71477 | 101.7147721 | 101.7147721 | 101.7147721 | 101.6003243 | 100.7682387 | 99.94974598 | 99.14451524 | 98.35222614 |
| 190529A00016 | 5/29/2019 | 2.32 | 5/28/2021 | 5/29/2019 | 101.71477 | 101.7147721 | 101.7147721 | 101.7147721 | 101.6003243 | 100.7682387 | 99.94974598 | 99.14451524 | 98.35222614 |
| 190529A00028 | 5/29/2019 | 2.38 | 5/29/2024 | 5/29/2019 | 108.04639 | 108.0463865 | 108.0463865 | 108.0463865 | 106.8742786 | 103.0481924 | 99.38030373 | 95.8632684 | 92.49012075 |
| 190530A00002 | 5/30/2019 | 2.24 | 5/28/2021 | 5/30/2019 | 101.77271 | 101.7727079 | 101.7727079 | 101.7727079 | 101.6579838 | 100.8239423 | 100.0035494 | 99.19647217 | 98.40238842 |
| 190530A00024 | 5/30/2019 | 2.25 | 5/30/2024 | 5/30/2019 | 108.26377 | 108.2637681 | 108.2637681 | 108.2637681 | 107.0820902 | 103.2302364 | 99.53816871 | 95.99845069 | 92.60402993 |
| 190530A00042 | 5/30/2019 | 2.3 | 11/30/2020 | 5/30/2019 | 100.73919 | 100.7391867 | 100.7391867 | 100.7391867 | 100.7035581 | 100.3649465 | 100.0286055 | 99.69451233 | 99.36264464 |
| 190531A00003 | 5/31/2019 | 2.31 | 10/29/2021 | 5/31/2019 | 102.5662 | 102.5662006 | 102.5662006 | 102.5662006 | 102.3550322 | 101.1004854 | 99.87658691 | 98.68222433 | 97.51633845 |
| 190531A00007 | 6/5/2019 | 2.14 | 6/4/2021 | 6/5/2019 | 101.72841 | 101.7284068 | 101.7284068 | 101.7284068 | 101.6100896 | 100.7571091 | 99.91840809 | 99.09363034 | 98.28243131 |
| 190531A00035 | 5/31/2019 | 2.29 | 5/31/2022 | 5/31/2019 | 103.71346 | 103.7134573 | 103.7134573 | 103.7134573 | 103.375981 | 101.545289 | 99.75584113 | 98.00647176 | 96.29605536 |
| 190531A00047 | 5/31/2019 | 2.32 | 5/28/2021 | 5/31/2019 | 101.71477 | 101.7147721 | 101.7147721 | 101.7147721 | 101.6003243 | 100.7682387 | 99.94974598 | 99.14451524 | 98.35222614 |
| 190603A00003 | 6/3/2019 | 2.05 | 6/3/2024 | 6/3/2019 | 107.50972 | 107.5097248 | 107.5097248 | 107.5097248 | 106.3247675 | 102.4767767 | 98.78899539 | 95.25394855 | 91.86454782 |

Classification | Public

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 190603A00031 | 6/3/2019 | 1.98 | 6/3/2022 | 6/3/2019 | 103.47058 | 103.4705805 | 103.4705805 | 103.4705805 | 103.130256 | 101.2879605 | 99.48744605 | 97.72752416 | 96.0070477 |
| 190423A00002 | 4/23/2019 | 2.52 | 4/23/2024 | 4/23/2019 | 109.06472 | 109.0647154 | 109.0647154 | 109.0647154 | 107.9391832 | 104.1690244 | 100.5514909 | 97.07952167 | 93.74642732 |
| 190424A00004 | 4/24/2019 | 2.55 | 4/23/2021 | 4/24/2019 | 101.69235 | 101.6923539 | 101.6923539 | 101.6923539 | 101.5956849 | 100.8591995 | 100.1333754 | 99.4179823 | 98.71279647 |
| 190424A00021 | 4/24/2019 | 2.6 | 4/22/2022 | 4/24/2019 | 104.02064 | 104.0206376 | 104.0206376 | 104.0206376 | 103.7077141 | 101.9783056 | 100.2860157 | 98.62971373 | 97.00831552 |
| 190426A00012 | 5/1/2019 | 2.57 | 7/15/2022 | 5/1/2019 | 104.49618 | 104.4961765 | 104.4961765 | 104.4961765 | 104.1255283 | 102.1663438 | 100.2539948 | 98.38707462 | 96.56422854 |
| 190429A00003 | 4/29/2019 | 2.62 | 10/13/2023 | 4/29/2019 | 107.50996 | 107.5099572 | 107.5099572 | 107.5099572 | 106.6779608 | 103.4638374 | 100.3637252 | 97.37289627 | 94.48685056 |
| 190430A00013 | 4/30/2019 | 2.52 | 4/30/2021 | 4/30/2019 | 101.71407 | 101.7140694 | 101.7140694 | 101.7140694 | 101.6137861 | 100.8580778 | 100.11358 | 99.38004505 | 98.65723212 |
| 190501A00028 | 5/1/2019 | 2.42 | 5/1/2024 | 5/1/2019 | 108.73814 | 108.7381359 | 108.7381359 | 108.7381359 | 107.6013119 | 103.8158345 | 100.1844461 | 96.69998333 | 93.35566201 |
| 190502A00027 | 5/2/2019 | 2.42 | 5/2/2022 | 5/2/2019 | 104.08668 | 104.0866802 | 104.0866802 | 104.0866802 | 103.7663348 | 102.0034829 | 100.2790208 | 98.59177076 | 96.94060393 |
| 190506A00011 | 5/6/2019 | 2.45 | 11/6/2020 | 5/6/2019 | 100.63475 | 100.6347507 | 100.6347507 | 100.6347507 | 100.6067718 | 100.3346549 | 100.0640164 | 99.79484416 | 99.52712616 |
| 190510A00009 | 5/10/2019 | 2.47 | 11/10/2021 | 5/10/2019 | 102.84082 | 102.8408239 | 102.8408239 | 102.8408239 | 102.6224585 | 101.3373201 | 100.0806317 | 98.85144773 | 97.64886486 |
| 190513A00076 | 5/13/2019 | 2.42 | 11/12/2021 | 5/13/2019 | 102.78793 | 102.7879304 | 102.7879304 | 102.7879304 | 102.5684953 | 101.2790498 | 100.0175519 | 98.78309322 | 97.57480497 |
| 190515A00002 | 5/15/2019 | 2.44 | 5/16/2022 | 5/15/2019 | 103.90194 | 103.9019399 | 103.9019399 | 103.9019399 | 103.5738631 | 101.7810132 | 100.027811 | 98.31309017 | 96.63572865 |
| 190515A00060 | 5/15/2019 | 2.38 | 5/14/2021 | 5/15/2019 | 101.68267 | 101.6826718 | 101.6826718 | 101.6826718 | 101.575326 | 100.7815875 | 100.0002342 | 99.2309777 | 98.47353848 |
| 190516A00006 | 5/16/2019 | 2.43 | 5/13/2021 | 5/16/2019 | 101.71648 | 101.7164757 | 101.7164757 | 101.7164757 | 101.6096189 | 100.8184638 | 100.0396104 | 99.27277322 | 98.51767561 |
| 190517A00005 | 5/17/2019 | 2.31 | 5/17/2024 | 5/17/2019 | 108.41754 | 108.4175354 | 108.4175354 | 108.4175354 | 107.2561897 | 103.4351265 | 99.77125173 | 96.25725432 | 92.88620485 |
| 190521A00047 | 5/21/2019 | 2.54 | 5/19/2023 | 5/21/2019 | 106.34281 | 106.3428087 | 106.3428087 | 106.3428087 | 105.6966174 | 102.8890761 | 100.1706089 | 97.53788043 | 94.98770136 |
| 190522A00021 | 5/23/2019 | 2.47 | 10/15/2021 | 5/23/2019 | 102.68283 | 102.6828305 | 102.6828305 | 102.6828305 | 102.4808943 | 101.2634058 | 100.0747763 | 98.91398864 | 97.78007289 |
| 190523A00008 | 5/23/2019 | 2.29 | 5/23/2023 | 5/23/2019 | 106.17771 | 106.1777102 | 106.1777102 | 106.1777102 | 105.524583 | 102.697278 | 99.96023311 | 97.31006678 | 94.74354435 |
| 190523A00014 | 5/23/2019 | 2.5 | 11/15/2023 | 5/23/2019 | 107.32236 | 107.3223648 | 107.3223648 | 107.3223648 | 106.4460173 | 103.1478257 | 99.96946244 | 96.90590477 | 93.9523711 |
| 190523A00023 | 5/23/2019 | 2.48 | 3/22/2023 | 5/23/2019 | 105.82415 | 105.8241519 | 105.8241519 | 105.8241519 | 105.2394147 | 102.5935768 | 100.0278116 | 97.53919416 | 95.12492729 |
| 190524A00031 | 5/24/2019 | 2.43 | 5/24/2022 | 5/24/2019 | 103.93133 | 103.931331 | 103.931331 | 103.931331 | 103.5980433 | 101.7837717 | 100.0100183 | 98.2756166 | 96.57944253 |
| 190528A00002 | 5/28/2019 | 2.45 | 11/30/2020 | 5/28/2019 | 100.74652 | 100.7465171 | 100.7465171 | 100.7465171 | 100.7109395 | 100.372803 | 100.0369279 | 99.70329173 | 99.37187218 |
| 190528A00006 | 5/28/2019 | 2.43 | 9/15/2023 | 5/28/2019 | 106.73159 | 106.7315929 | 106.7315929 | 106.7315929 | 105.9392986 | 102.8117588 | 99.79312676 | 96.87897738 | 94.06509396 |
| 190528A00042 | 5/28/2019 | 2.38 | 11/29/2021 | 5/28/2019 | 102.82125 | 102.821249 | 102.821249 | 102.821249 | 102.5923019 | 101.2632036 | 99.95785607 | 98.67567103 | 97.41607919 |
| 190516A00010 | 5/16/2019 | 2.43 | 5/17/2021 | 5/16/2019 | 101.74853 | 101.7485326 | 101.7485326 | 101.7485326 | 101.6396185 | 100.837291 | 100.0476113 | 99.27028191 | 98.50501457 |
| 190516A00027 | 5/16/2019 | 2.43 | 5/17/2021 | 5/16/2019 | 101.74853 | 101.7485326 | 101.7485326 | 101.7485326 | 101.6396185 | 100.837291 | 100.0476113 | 99.27028191 | 98.50501457 |
| 190520A00007 | 5/20/2019 | 2.52 | 5/20/2024 | 5/20/2019 | 108.53177 | 108.5317709 | 108.5317709 | 108.5317709 | 107.371975 | 103.5598043 | 99.90426788 | 96.39809873 | 93.03440744 |
| 190520A00024 | 5/20/2019 | 2.32 | 5/20/2021 | 5/20/2019 | 101.79064 | 101.7906392 | 101.7906392 | 101.7906392 | 101.6799653 | 100.8677329 | 100.0684545 | 99.28182195 | 98.50753672 |
| 190521A00068 | 5/21/2019 | 2.47 | 9/15/2021 | 5/21/2019 | 102.50058 | 102.5005783 | 102.5005783 | 102.5005783 | 102.3195844 | 101.1844225 | 100.0743911 | 98.98866244 | 97.92644469 |
| 190522A00019 | 5/23/2019 | 2.55 | 5/15/2024 | 5/23/2019 | 108.61582 | 108.6158241 | 108.6158241 | 108.6158241 | 107.4636855 | 103.6628147 | 100.0176058 | 96.52083858 | 93.16566925 |
| 190523A00006 | 5/23/2019 | 2.31 | 5/24/2021 | 5/23/2019 | 101.80685 | 101.8068542 | 101.8068542 | 101.8068542 | 101.6941413 | 100.870888 | 100.0609361 | 99.26396523 | 98.47966504 |
| 190523A00016 | 5/23/2019 | 2.48 | 2/15/2023 | 5/23/2019 | 105.61406 | 105.6140619 | 105.6140619 | 105.6140619 | 105.0632381 | 102.515709 | 100.0432393 | 97.64317082 | 95.31295739 |

Classification | Public

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 190523A00018 | 5/23/2019 | 2.51 | 3/15/2024 | 5/23/2019 | 108.09184 | 108.0918387 | 108.0918387 | 108.0918387 | 107.037191 | 103.4060458 | 99.91816238 | 96.56708982 | 93.34670651 |
| 190523A00034 | 5/23/2019 | 2.31 | 5/21/2021 | 5/23/2019 | 101.78859 | 101.788592 | 101.788592 | 101.788592 | 101.6774116 | 100.862451 | 100.0605308 | 99.2713397 | 98.49457628 |
| 190528A00009 | 5/28/2019 | 2.45 | 5/15/2024 | 5/28/2019 | 108.23361 | 108.2336055 | 108.2336055 | 108.2336055 | 107.0831019 | 103.2894522 | 99.65124785 | 96.16127685 | 92.81270332 |
| 190529A00020 | 5/29/2019 | 2.38 | 5/29/2024 | 5/29/2019 | 108.04639 | 108.0463865 | 108.0463865 | 108.0463865 | 106.8742786 | 103.0481924 | 99.38030373 | 95.8632684 | 92.49012075 |
| 190530A00026 | 5/30/2019 | 2.36 | 5/26/2021 | 5/30/2019 | 101.73654 | 101.7365427 | 101.7365427 | 101.7365427 | 101.6230949 | 100.7963651 | 99.98305545 | 99.18284102 | 98.39540746 |
| 190530A00029 | 5/30/2019 | 2.25 | 5/30/2024 | 5/30/2019 | 108.26377 | 108.2637681 | 108.2637681 | 108.2637681 | 107.0820902 | 103.2302364 | 99.53816871 | 95.99845069 | 92.60402993 |
| 190603A00040 | 6/3/2019 | 2.11 | 6/3/2022 | 6/3/2019 | 103.39497 | 103.3949661 | 103.3949661 | 103.3949661 | 103.0559037 | 101.2200767 | 99.42579036 | 97.67186576 | 95.95716472 |
| 190603A00050 | 6/3/2019 | 2.19 | 6/3/2021 | 6/3/2019 | 101.63821 | 101.6382064 | 101.6382064 | 101.6382064 | 101.5207163 | 100.6726236 | 99.83865809 | 99.01846909 | 98.21171743 |
| 190604A00007 | 6/4/2019 | 2.23 | 7/8/2021 | 6/4/2019 | 101.86253 | 101.862533 | 101.862533 | 101.862533 | 101.7262909 | 100.7818126 | 99.85482548 | 98.94484708 | 98.05141236 |
| 190604A00033 | 6/4/2019 | 2.23 | 6/4/2021 | 6/4/2019 | 101.67771 | 101.6777055 | 101.6777055 | 101.6777055 | 101.5596712 | 100.7086687 | 99.87188787 | 99.04897459 | 98.23958627 |
| 190605A00005 | 6/5/2019 | 2.01 | 6/5/2024 | 6/5/2019 | 107.36465 | 107.3646526 | 107.3646526 | 107.3646526 | 106.1770264 | 102.3264992 | 98.63653287 | 95.09962537 | 91.70866319 |
| 190610A00017 | 6/10/2019 | 2.29 | 6/10/2024 | 6/10/2019 | 107.76454 | 107.7645418 | 107.7645418 | 107.7645418 | 106.5740523 | 102.7217852 | 99.03012571 | 95.49156595 | 92.09898711 |
| 190617A00027 | 6/17/2019 | 2.21 | 6/16/2023 | 6/17/2019 | 105.55761 | 105.5576074 | 105.5576074 | 105.5576074 | 104.8821341 | 102.0114753 | 99.23421516 | 96.54682469 | 93.94592757 |
| 190619A00009 | 6/19/2019 | 2.26 | 6/19/2024 | 6/19/2019 | 107.69616 | 107.6961594 | 107.6961594 | 107.6961594 | 106.4912159 | 102.6165126 | 98.90433297 | 95.347034 | 91.93737121 |
| 190620A00025 | 6/20/2019 | 2.04 | 6/20/2022 | 6/20/2019 | 103.3277 | 103.3276998 | 103.3276998 | 103.3276998 | 102.9770919 | 101.0960999 | 99.25864762 | 97.46347092 | 95.70935051 |
| 190701A00007 | 7/2/2019 | 2.09 | 7/1/2022 | 7/2/2019 | 103.47752 | 103.4775186 | 103.4775186 | 103.4775186 | 103.1190362 | 101.2068403 | 99.33954568 | 97.51582958 | 95.73441713 |
| 180430A00012 | 4/30/2018 | 2.95 | 7/15/2021 | 4/30/2018 | 102.58805 | 102.5880481 | 102.5880481 | 102.5880481 | 102.4473908 | 101.4802299 | 100.5313194 | 99.60014594 | 98.68621525 |
| 180514A00034 | 5/14/2018 | 3.07 | 5/14/2024 | 5/14/2018 | 111.31222 | 111.3122216 | 111.3122216 | 111.3122216 | 110.1433183 | 106.2752422 | 102.5653845 | 99.00640021 | 95.59132855 |
| 180514A00035 | 5/14/2018 | 3.07 | 5/14/2024 | 5/14/2018 | 111.31222 | 111.3122216 | 111.3122216 | 111.3122216 | 110.1433183 | 106.2752422 | 102.5653845 | 99.00640021 | 95.59132855 |
| 180524A00024 | 5/24/2018 | 3 | 3/21/2022 | 5/24/2018 | 104.47972 | 104.4797186 | 104.4797186 | 104.4797186 | 104.1857222 | 102.5391439 | 100.9265976 | 99.34709285 | 97.79967766 |
| 180525A00001 | 5/25/2018 | 3.04 | 5/25/2023 | 5/25/2018 | 107.80157 | 107.80157 | 107.80157 | 107.80157 | 107.1449435 | 104.3009298 | 101.5474364 | 98.88108614 | 96.29864761 |
| 180529A00037 | 5/29/2018 | 2.83 | 5/28/2021 | 5/29/2018 | 102.14067 | 102.1406665 | 102.1406665 | 102.1406665 | 102.0259863 | 101.1919587 | 100.3715463 | 99.56441775 | 98.77025229 |
| 180530A00014 | 5/30/2018 | 2.93 | 5/30/2023 | 5/30/2018 | 107.52517 | 107.525174 | 107.525174 | 107.525174 | 106.8638449 | 104.0106173 | 101.2486097 | 98.57442627 | 95.98481606 |
| 180530A00026 | 5/30/2018 | 3.55 | 5/30/2031 | 5/30/2018 | 135.04646 | 135.0464649 | 135.0464649 | 134.5940826 | 123.2164253 | 112.3655501 | 102.610311 | 93.83292082 | 85.92886084 |
| 180530A00027 | 5/30/2018 | 3.61 | 6/1/2032 | 5/30/2018 | 138.95603 | 138.9560307 | 138.9560307 | 137.1799026 | 124.6376998 | 112.8555504 | 102.3562628 | 92.99129487 | 84.63008466 |
| 180530A00030 | 5/30/2018 | 3.68 | 5/30/2034 | 5/30/2018 | 146.33769 | 146.3376857 | 146.3376857 | 141.5650839 | 126.7654349 | 113.2358184 | 101.3857735 | 90.99379673 | 81.86882144 |
| 180530A00069 | 5/30/2018 | 2.87 | 5/31/2022 | 5/30/2018 | 104.7883 | 104.7883023 | 104.7883023 | 104.7883023 | 104.4491933 | 102.6083033 | 100.8088492 | 99.04965978 | 97.32960438 |
| 180530A00072 | 5/30/2018 | 3.06 | 5/30/2024 | 5/30/2018 | 110.67922 | 110.6792207 | 110.6792207 | 110.6792207 | 109.4940492 | 105.6151495 | 101.8961722 | 98.32970478 | 94.90871614 |
| 180531A00065 | 5/31/2018 | 2.65 | 6/1/2021 | 5/31/2018 | 102.14344 | 102.1434389 | 102.1434389 | 102.1434389 | 102.0264627 | 101.1797688 | 100.347099 | 99.52810695 | 98.72245789 |
| 180607A00026 | 6/7/2018 | 2.92 | 6/7/2021 | 6/7/2018 | 102.28933 | 102.2893279 | 102.2893279 | 102.2893279 | 102.1693793 | 101.3073246 | 100.4598038 | 99.62645128 | 98.80691383 |
| 180612A00005 | 6/12/2018 | 3.09 | 6/12/2023 | 6/12/2018 | 108.08218 | 108.0821816 | 108.0821816 | 108.0821816 | 107.4043405 | 104.5078715 | 101.7050144 | 98.99224906 | 96.36620725 |
| 180615A00061 | 6/15/2018 | 3.28 | 6/15/2028 | 6/15/2018 | 125.13638 | 125.1363786 | 125.1363786 | 125.1363786 | 119.026508 | 110.9423221 | 103.480886 | 96.590721 | 90.22485739 |
| 180615A00069 | 6/15/2018 | 2.86 | 6/15/2022 | 6/15/2018 | 105.20246 | 105.2024642 | 105.2024642 | 105.2024642 | 104.8511083 | 102.9592246 | 101.110877 | 99.30480686 | 97.53980042 |

Classification | Public

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 180618A00024 | 6/18/2018 | 2.91 | 4/13/2021 | 6/18/2018 | 101.88461 | 101.884609 | 101.884609 | 101.884609 | 101.7930056 | 101.0831261 | 100.383144 | 99.69285305 | 99.01205289 |
| 180618A00025 | 6/18/2018 | 3.01 | 4/13/2022 | 6/18/2018 | 104.6688 | 104.6688009 | 104.6688009 | 104.6688009 | 104.3605183 | 102.6499901 | 100.9757609 | 99.33673918 | 97.73187752 |
| 180619A00020 | 6/19/2018 | 3.1 | 6/19/2025 | 6/19/2018 | 114.73077 | 114.730772 | 114.730772 | 114.730772 | 112.7650968 | 107.756053 | 103.0021189 | 98.48897748 | 94.20318688 |
| 180620A00044 | 6/20/2018 | 2.89 | 6/20/2023 | 6/20/2018 | 108.0995 | 108.0995039 | 108.0995039 | 108.0995039 | 107.4090796 | 104.4784185 | 101.6434011 | 98.90039653 | 96.24593195 |
| 180625A00039 | 6/25/2018 | 2.93 | 6/25/2021 | 6/25/2018 | 102.43062 | 102.4306208 | 102.4306208 | 102.4306208 | 102.3011691 | 101.3892564 | 100.4935839 | 99.61372032 | 98.74924979 |
| 180625A00041 | 6/25/2018 | 3.06 | 6/20/2023 | 6/25/2018 | 108.0562 | 108.0561958 | 108.0561958 | 108.0561958 | 107.3691601 | 104.4513418 | 101.6284959 | 98.89702575 | 96.25349097 |
| 180627A00057 | 6/27/2018 | 2.98 | 6/27/2022 | 6/27/2018 | 105.17326 | 105.1732562 | 105.1732562 | 105.1732562 | 104.8148806 | 102.896737 | 101.0233259 | 99.19333685 | 97.40550659 |
| 190313A00018 | 3/13/2019 | 2.68 | 3/12/2021 | 3/13/2019 | 101.50607 | 101.5060691 | 101.5060691 | 101.5060691 | 101.4308099 | 100.8100819 | 100.1969483 | 99.59127021 | 98.99291206 |
| 190313A00029 | 3/13/2019 | 2.56 | 3/13/2023 | 3/13/2019 | 106.46585 | 106.4658458 | 106.4658458 | 106.4658458 | 105.8857363 | 103.2445717 | 100.6829367 | 98.19794282 | 95.78682681 |
| 190314A00018 | 3/14/2019 | 2.53 | 3/14/2022 | 3/14/2019 | 103.9545 | 103.9544969 | 103.9544969 | 103.9544969 | 103.6644151 | 102.0358443 | 100.4407749 | 98.87823941 | 97.34730737 |
| 190318A00024 | 3/18/2019 | 2.57 | 3/18/2024 | 3/18/2019 | 109.00943 | 109.0094253 | 109.0094253 | 109.0094253 | 107.9404742 | 104.2673844 | 100.7397147 | 97.35089223 | 94.09468087 |
| 190319A00008 | 3/19/2019 | 2.72 | 3/21/2022 | 3/19/2019 | 104.01581 | 104.0158066 | 104.0158066 | 104.0158066 | 103.722423 | 102.0798094 | 100.4711567 | 98.89547635 | 97.3518181 |
| 190320A00005 | 3/20/2019 | 2.75 | 3/20/2024 | 3/20/2019 | 109.00274 | 109.0027384 | 109.0027384 | 109.0027384 | 107.9368361 | 104.2762115 | 100.7602678 | 97.38247381 | 94.1366329 |
| 190321A00018 | 3/21/2019 | 2.45 | 3/21/2022 | 3/21/2019 | 103.86858 | 103.8685836 | 103.8685836 | 103.8685836 | 103.5744036 | 101.9279011 | 100.3155252 | 98.73628042 | 97.18921017 |
| 190327A00006 | 3/27/2019 | 2.53 | 3/27/2024 | 3/27/2019 | 108.23877 | 108.2387679 | 108.2387679 | 108.2387679 | 107.1652534 | 103.5004008 | 99.98114535 | 96.60088299 | 93.35334967 |
| 190328A00025 | 3/28/2019 | 2.51 | 7/23/2021 | 3/28/2019 | 102.21173 | 102.2117288 | 102.2117288 | 102.2117288 | 102.0667892 | 101.0798242 | 100.1119084 | 99.16249414 | 98.23105452 |
| 190411A00017 | 4/15/2019 | 2.65 | 4/15/2024 | 4/15/2019 | 108.80403 | 108.8040299 | 108.8040299 | 108.8040299 | 107.6986412 | 103.9729995 | 100.3970336 | 96.96387168 | 93.66700053 |
| 190411A00029 | 4/11/2019 | 2.46 | 4/11/2024 | 4/11/2019 | 108.76059 | 108.7605938 | 108.7605938 | 108.7605938 | 107.6552677 | 103.9230823 | 100.3409 | 96.90183455 | 93.59935918 |
| 190424A00007 | 4/24/2019 | 2.66 | 4/24/2024 | 4/24/2019 | 108.89977 | 108.8997652 | 108.8997652 | 108.8997652 | 107.7798937 | 104.0284448 | 100.4285496 | 96.97320883 | 93.65579135 |
| 190426A00009 | 4/26/2019 | 2.63 | 4/26/2024 | 4/26/2019 | 108.79963 | 108.7996289 | 108.7996289 | 108.7996289 | 107.6770465 | 103.9221276 | 100.319114 | 96.86098062 | 93.54107232 |
| 190429A00076 | 4/29/2019 | 2.52 | 4/29/2021 | 4/29/2019 | 101.7078 | 101.7078023 | 101.7078023 | 101.7078023 | 101.6080362 | 100.8550819 | 100.1132593 | 99.38232298 | 98.6620347 |
| 190507A00004 | 5/7/2019 | 2.88 | 5/7/2029 | 5/7/2019 | 124.4316 | 124.4316005 | 124.4316005 | 124.4316005 | 116.8503022 | 108.0270395 | 99.95348798 | 92.56164722 | 85.79002809 |
| 190507A00027 | 5/7/2019 | 2.59 | 5/7/2024 | 5/7/2019 | 108.71819 | 108.7181942 | 108.7181942 | 108.7181942 | 107.5784584 | 103.7963126 | 100.16826 | 96.68715474 | 93.34622618 |
| 190514A00013 | 5/14/2019 | 2.49 | 11/16/2020 | 5/14/2019 | 100.67303 | 100.6730304 | 100.6730304 | 100.6730304 | 100.6419093 | 100.3425085 | 100.0448981 | 99.74906171 | 99.45498362 |
| 190514A00014 | 5/14/2019 | 2.43 | 5/14/2021 | 5/14/2019 | 101.72249 | 101.7224861 | 101.7224861 | 101.7224861 | 101.6151197 | 100.821207 | 100.0396814 | 99.27025445 | 98.51264664 |
| 190515A00003 | 5/15/2019 | 2.45 | 11/16/2020 | 5/15/2019 | 100.66104 | 100.6610361 | 100.6610361 | 100.6610361 | 100.6299173 | 100.3305399 | 100.0329527 | 99.73713948 | 99.44308442 |
| 190515A00023 | 5/15/2019 | 2.25 | 5/16/2022 | 5/15/2019 | 103.86758 | 103.8675838 | 103.8675838 | 103.8675838 | 103.5384649 | 101.7403996 | 99.9821903 | 98.2626622 | 96.5806851 |
| 190515A00024 | 5/15/2019 | 2.38 | 5/17/2021 | 5/15/2019 | 101.7083 | 101.7083009 | 101.7083009 | 101.7083009 | 101.5994077 | 100.7972579 | 100.007754 | 99.23059845 | 98.46550302 |
| 190515A00044 | 5/15/2019 | 2.38 | 5/17/2021 | 5/15/2019 | 101.7083 | 101.7083009 | 101.7083009 | 101.7083009 | 101.5994077 | 100.7972579 | 100.007754 | 99.23059845 | 98.46550302 |
| 190515A00059 | 5/15/2019 | 2.38 | 5/14/2021 | 5/15/2019 | 101.68267 | 101.6826718 | 101.6826718 | 101.6826718 | 101.575326 | 100.7815875 | 100.0002342 | 99.2309777 | 98.47353848 |
| 190520A00036 | 5/20/2019 | 2.43 | 11/19/2021 | 5/20/2019 | 102.8294 | 102.8293977 | 102.8293977 | 102.8293977 | 102.6060393 | 101.3001849 | 100.0205438 | 98.76633809 | 97.53682078 |
| 190606A00027 | 6/6/2019 | 2.51 | 6/5/2026 | 6/6/2019 | 112.95334 | 112.9533361 | 112.9533361 | 112.9533361 | 110.0116192 | 104.1881576 | 98.71212325 | 93.56101635 | 88.71390295 |
| 190607A00005 | 6/7/2019 | 1.92 | 6/7/2022 | 6/7/2019 | 103.37866 | 103.3786613 | 103.3786613 | 103.3786613 | 103.0357054 | 101.1833667 | 99.37326837 | 97.60420246 | 95.87500303 |

Classification | Public

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 190607A00012 | 6/7/2019 | 2.13 | 6/7/2022 | 6/7/2019 | 103.45253 | 103.4525251 | 103.4525251 | 103.4525251 | 103.1106148 | 101.2633646 | 99.4581385 | 97.69373727 | 95.96900343 |
| 190607A00019 | 6/7/2019 | 2.04 | 12/7/2020 | 6/7/2019 | 100.68848 | 100.6884832 | 100.6884832 | 100.6884832 | 100.6506138 | 100.2927871 | 99.93750944 | 99.58475358 | 99.23449265 |
| 190607A00023 | 6/7/2019 | 1.92 | 6/7/2022 | 6/7/2019 | 103.37866 | 103.3786613 | 103.3786613 | 103.3786613 | 103.0357054 | 101.1833667 | 99.37326837 | 97.60420246 | 95.87500303 |
| 190611A00046 | 6/11/2019 | 2.25 | 6/13/2022 | 6/11/2019 | 103.70971 | 103.7097108 | 103.7097108 | 103.7097108 | 103.3632612 | 101.4972221 | 99.67396799 | 97.89226797 | 96.15093445 |
| 190613A00022 | 6/13/2019 | 2.2 | 6/14/2021 | 6/13/2019 | 101.70555 | 101.7055458 | 101.7055458 | 101.7055458 | 101.5822749 | 100.7038907 | 99.84066129 | 98.99219681 | 98.15812074 |
| 190621A00015 | 6/21/2019 | 2.2 | 6/21/2024 | 6/21/2019 | 107.47149 | 107.4714942 | 107.4714942 | 107.4714942 | 106.2642774 | 102.3886523 | 98.67585373 | 95.11821317 | 91.70846272 |
| 190621A00019 | 6/21/2019 | 2.12 | 6/21/2021 | 6/21/2019 | 101.67085 | 101.6708513 | 101.6708513 | 101.6708513 | 101.5439487 | 100.6466753 | 99.76521483 | 98.89915193 | 98.04808576 |
| 190621A00061 | 6/21/2019 | 2.12 | 6/21/2021 | 6/21/2019 | 101.67085 | 101.6708513 | 101.6708513 | 101.6708513 | 101.5439487 | 100.6466753 | 99.76521483 | 98.89915193 | 98.04808576 |
| 190624A00008 | 6/24/2019 | 2.08 | 6/24/2022 | 6/24/2019 | 103.42369 | 103.4236929 | 103.4236929 | 103.4236929 | 103.0701778 | 101.1773991 | 99.3286602 | 97.52267581 | 95.7582064 |
| 190625A00003 | 6/25/2019 | 2.03 | 6/27/2022 | 6/25/2019 | 103.34206 | 103.342062 | 103.342062 | 103.342062 | 102.9866108 | 101.0865015 | 99.23077986 | 97.41814527 | 95.64734377 |
| 190625A00016 | 6/25/2019 | 2.13 | 6/25/2024 | 6/25/2019 | 107.21692 | 107.216925 | 107.216925 | 107.216925 | 106.0043021 | 102.1230893 | 98.40542412 | 94.84358281 | 91.43024605 |
| 190626A00015 | 6/26/2019 | 2.15 | 6/26/2024 | 6/26/2019 | 107.3007 | 107.3006987 | 107.3006987 | 107.3006987 | 106.0860632 | 102.2005931 | 98.47893896 | 94.91335973 | 91.49651995 |
| 190627A00052 | 6/27/2019 | 2.1 | 6/27/2022 | 6/27/2019 | 103.47699 | 103.4769921 | 103.4769921 | 103.4769921 | 103.1213254 | 101.2198873 | 99.3628622 | 97.54894886 | 95.77689261 |
| 190701A00009 | 7/3/2019 | 2.14 | 7/2/2024 | 7/3/2019 | 107.29169 | 107.291685 | 107.291685 | 107.291685 | 106.067187 | 102.166296 | 98.4305246 | 94.85203891 | 91.42341742 |
| 190703A00021 | 7/3/2019 | 2.11 | 7/2/2021 | 7/3/2019 | 101.71796 | 101.7179633 | 101.7179633 | 101.7179633 | 101.5852074 | 100.6577828 | 99.74723363 | 98.85310268 | 97.97494908 |
| 190708A00021 | 7/8/2019 | 1.99 | 7/8/2022 | 7/8/2019 | 103.67067 | 103.6706731 | 103.6706731 | 103.6706731 | 103.3052924 | 101.3662385 | 99.47325688 | 97.62497362 | 95.82006521 |
| 190711A00020 | 7/11/2019 | 1.98 | 7/11/2022 | 7/11/2019 | 103.66655 | 103.6665512 | 103.6665512 | 103.6665512 | 103.2989175 | 101.3519921 | 99.45151329 | 97.59609036 | 95.7843836 |
| 190711A00022 | 7/11/2019 | 2 | 7/11/2023 | 7/11/2019 | 105.60781 | 105.6078124 | 105.6078124 | 105.6078124 | 104.8992536 | 101.9493362 | 99.09779853 | 96.34082945 | 93.67478736 |
| 190711A00025 | 7/11/2019 | 2.18 | 7/12/2021 | 7/11/2019 | 101.8268 | 101.8267993 | 101.8267993 | 101.8267993 | 101.688338 | 100.7333017 | 99.79615669 | 98.87640362 | 97.97356158 |
| 190724A00024 | 7/24/2019 | 2.49 | 7/24/2029 | 7/24/2019 | 121.48965 | 121.4896454 | 121.4896454 | 121.4896454 | 113.6032011 | 104.7288245 | 96.6286024 | 89.23069469 | 82.47027784 |
| 190729A00006 | 7/29/2019 | 2.14 | 7/29/2022 | 7/29/2019 | 103.71745 | 103.7174473 | 103.7174473 | 103.7174473 | 103.337599 | 101.3495732 | 99.4099925 | 97.51737396 | 95.67029034 |
| 190805A00011 | 8/5/2019 | 1.91 | 8/5/2024 | 8/5/2019 | 106.5334 | 106.5334048 | 106.5334048 | 106.5334048 | 105.2551806 | 101.2830111 | 97.48281753 | 93.84625425 | 90.3654254 |
| 190529A00022 | 5/29/2019 | 2.32 | 5/28/2021 | 5/29/2019 | 101.71477 | 101.7147721 | 101.7147721 | 101.7147721 | 101.6003243 | 100.7682387 | 99.94974598 | 99.14451524 | 98.35222614 |
| 190529A00069 | 5/29/2019 | 2.34 | 11/29/2021 | 5/29/2019 | 102.76736 | 102.7673596 | 102.7673596 | 102.7673596 | 102.5384671 | 101.2097492 | 99.90477561 | 98.62295813 | 97.36372772 |
| 190530A00004 | 5/30/2019 | 2.24 | 5/30/2023 | 5/30/2019 | 106.07661 | 106.0766112 | 106.0766112 | 106.0766112 | 105.4161166 | 102.5718477 | 99.81891979 | 97.15392167 | 94.57358816 |
| 190530A00007 | 5/30/2019 | 2.35 | 11/30/2021 | 5/30/2019 | 102.78653 | 102.7865339 | 102.7865339 | 102.7865339 | 102.5570634 | 101.2258863 | 99.91821101 | 98.63346853 | 97.37110766 |
| 190530A00047 | 5/30/2019 | 2.36 | 5/28/2021 | 5/30/2019 | 101.74818 | 101.7481755 | 101.7481755 | 101.7481755 | 101.6337095 | 100.8014716 | 99.98282836 | 99.17744877 | 98.3850125 |
| 190530A00074 | 5/30/2019 | 2.4 | 5/31/2022 | 5/30/2019 | 103.91731 | 103.9173072 | 103.9173072 | 103.9173072 | 103.5795213 | 101.7468952 | 99.95554956 | 98.20431776 | 96.49207327 |
| 190531A00037 | 5/31/2019 | 2.61 | 5/31/2029 | 5/31/2019 | 122.20732 | 122.2073207 | 122.2073207 | 122.2073207 | 114.5629733 | 105.778743 | 97.74823406 | 90.40260814 | 83.67964499 |
| 190603A00002 | 6/3/2019 | 2.03 | 6/2/2023 | 6/3/2019 | 105.49095 | 105.4909522 | 105.4909522 | 105.4909522 | 104.8286436 | 101.9847424 | 99.23247733 | 96.56842055 | 93.98929089 |
| 190603A00009 | 6/3/2019 | 2.17 | 7/6/2022 | 6/3/2019 | 103.65856 | 103.6585572 | 103.6585572 | 103.6585572 | 103.2960353 | 101.3689172 | 99.48735196 | 97.6499881 | 95.85552345 |
| 190603A00041 | 6/3/2019 | 2.01 | 6/3/2021 | 6/3/2019 | 101.612 | 101.6120029 | 101.6120029 | 101.6120029 | 101.4942747 | 100.6445698 | 99.80904522 | 98.98734847 | 98.17913846 |
| 190603A00046 | 6/3/2019 | 2.17 | 6/3/2022 | 6/3/2019 | 103.50665 | 103.5066542 | 103.5066542 | 103.5066542 | 103.1674211 | 101.3305298 | 99.53519916 | 97.78024973 | 96.06454279 |

Classification | Public

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 190603A00048 | 6/3/2019 | 2.24 | 6/3/2024 | 6/3/2019 | 107.53258 | 107.5325841 | 107.5325841 | 107.5325841 | 106.3545952 | 102.5252664 | 98.85489595 | 95.33608645 | 91.96182202 |
| 190605A00012 | 6/5/2019 | 1.92 | 6/6/2022 | 6/5/2019 | 103.37367 | 103.3736734 | 103.3736734 | 103.3736734 | 103.0314182 | 101.1818572 | 99.3744165 | 97.60789313 | 95.88112604 |
| 190605A00035 | 6/5/2019 | 2.18 | 6/5/2023 | 6/5/2019 | 105.41355 | 105.4135543 | 105.4135543 | 105.4135543 | 104.7511151 | 101.9120579 | 99.16448906 | 96.50498539 | 93.93027014 |
| 190607A00011 | 6/7/2019 | 1.94 | 6/7/2021 | 6/7/2019 | 101.57254 | 101.572539 | 101.572539 | 101.572539 | 101.4527396 | 100.5922915 | 99.74639334 | 98.91467832 | 98.09679198 |
| 190607A00018 | 6/7/2019 | 2.19 | 6/7/2024 | 6/7/2019 | 107.35962 | 107.3596194 | 107.3596194 | 107.3596194 | 106.1758321 | 102.3392617 | 98.66241292 | 95.13783223 | 91.75845158 |
| 190617A00004 | 6/17/2019 | 2.2 | 6/15/2021 | 6/17/2019 | 101.71089 | 101.7108933 | 101.7108933 | 101.7108933 | 101.5870974 | 100.7059639 | 99.84007939 | 98.98905042 | 98.152497 |
| 190618A00002 | 6/18/2019 | 2.11 | 6/18/2025 | 6/18/2019 | 109.8339 | 109.8339021 | 109.8339021 | 109.8339021 | 107.9032968 | 103.0149478 | 98.37709158 | 93.97563108 | 89.7973325 |
| 190620A00010 | 6/20/2019 | 2.04 | 6/20/2022 | 6/20/2019 | 103.3277 | 103.3276998 | 103.3276998 | 103.3276998 | 102.9770919 | 101.0960999 | 99.25864762 | 97.46347092 | 95.70935051 |
| 190620A00027 | 6/20/2019 | 2.14 | 6/20/2024 | 6/20/2019 | 107.23102 | 107.2310167 | 107.2310167 | 107.2310167 | 106.0265116 | 102.1581761 | 98.45230674 | 94.90125584 | 91.49777495 |
| 190624A00026 | 6/24/2019 | 2.08 | 6/24/2022 | 6/24/2019 | 103.42369 | 103.4236929 | 103.4236929 | 103.4236929 | 103.0701778 | 101.1773991 | 99.3286602 | 97.52267581 | 95.7582064 |
| 190625A00008 | 6/25/2019 | 2.04 | 6/27/2022 | 6/25/2019 | 103.36134 | 103.3613377 | 103.3613377 | 103.3613377 | 103.0058557 | 101.1055566 | 99.24964877 | 97.4368315 | 95.66585075 |
| 190625A00027 | 6/25/2019 | 2.04 | 6/24/2022 | 6/25/2019 | 103.34692 | 103.3469214 | 103.3469214 | 103.3469214 | 102.9935282 | 101.1015026 | 99.2535025 | 97.44824287 | 95.68448466 |
| 190626A00020 | 6/26/2019 | 2.08 | 6/25/2021 | 6/26/2019 | 101.65485 | 101.654848 | 101.654848 | 101.654848 | 101.525869 | 100.6177919 | 99.72590706 | 98.84978423 | 97.98900847 |
| 181130A00037 | 11/30/2018 | 3.05 | 11/30/2023 | 11/30/2018 | 109.88964 | 109.8896375 | 109.8896375 | 109.8896375 | 108.978863 | 105.5822232 | 102.3103028 | 99.15787971 | 96.11997826 |
| 181211A00019 | 12/11/2018 | 3.04 | 12/11/2020 | 12/11/2018 | 101.03176 | 101.031761 | 101.031761 | 101.031761 | 100.9925859 | 100.6234815 | 100.2570823 | 99.89335879 | 99.53228148 |
| 181213A00024 | 12/13/2018 | 3.05 | 12/11/2020 | 12/13/2018 | 101.03545 | 101.0354534 | 101.0354534 | 101.0354534 | 100.9962775 | 100.6271646 | 100.2607571 | 99.89702519 | 99.53593959 |
| 181217A00010 | 12/17/2018 | 3.11 | 12/15/2023 | 12/17/2018 | 109.58101 | 109.5810081 | 109.5810081 | 109.5810081 | 108.6547337 | 105.2393095 | 101.9503802 | 98.78260353 | 95.73089085 |
| 181219A00005 | 12/19/2018 | 3.06 | 12/19/2023 | 12/19/2018 | 109.44124 | 109.441241 | 109.441241 | 109.441241 | 108.5097623 | 105.0862448 | 101.7899161 | 98.61538826 | 95.55753044 |
| 181226A00024 | 12/26/2018 | 2.9 | 12/27/2021 | 12/26/2018 | 103.73897 | 103.7389652 | 103.7389652 | 103.7389652 | 103.4944201 | 102.0845076 | 100.7006748 | 99.34226064 | 98.0086259 |
| 181228A00008 | 12/28/2018 | 2.9 | 12/28/2021 | 12/28/2018 | 103.74624 | 103.746239 | 103.746239 | 103.746239 | 103.5011656 | 102.0885448 | 100.7020975 | 99.34115909 | 98.00508718 |
| 190102A00004 | 1/2/2019 | 2.8 | 2/24/2021 | 1/2/2019 | 101.4679 | 101.4678966 | 101.4678966 | 101.4678966 | 101.4003927 | 100.823698 | 100.2535534 | 99.68984805 | 99.13247316 |
| 190102A00037 | 1/2/2019 | 2.8 | 7/2/2021 | 1/2/2019 | 102.36109 | 102.3610914 | 102.3610914 | 102.3610914 | 102.2279338 | 101.2972713 | 100.3835256 | 99.48623846 | 98.60496821 |
| 190104A00027 | 1/4/2019 | 2.76 | 1/4/2021 | 1/4/2019 | 101.09606 | 101.0960576 | 101.0960576 | 101.0960576 | 101.0489888 | 100.6135931 | 100.1819458 | 99.75399853 | 99.32970396 |
| 190109A00010 | 1/9/2019 | 2.98 | 1/9/2023 | 1/9/2019 | 106.62622 | 106.6262163 | 106.6262163 | 106.6262163 | 106.1065875 | 103.647753 | 101.2588043 | 98.93736024 | 96.68113539 |
| 190110A00001 | 1/10/2019 | 2.88 | 1/10/2022 | 1/10/2019 | 103.81151 | 103.81151 | 103.81151 | 103.81151 | 103.5592381 | 102.1116212 | 100.6914587 | 99.29803726 | 97.93066784 |
| 190110A00003 | 1/10/2019 | 2.97 | 1/10/2024 | 1/10/2019 | 109.29591 | 109.2959106 | 109.2959106 | 109.2959106 | 108.3332902 | 104.8548664 | 101.5078176 | 98.28648544 | 95.18548624 |
| 190110A00005 | 1/10/2019 | 3.2 | 1/9/2026 | 1/10/2019 | 115.84799 | 115.8479911 | 115.8479911 | 115.8479911 | 113.3566005 | 107.8260649 | 102.6039844 | 97.67152546 | 93.01109912 |
| 190110A00009 | 1/10/2019 | 2.97 | 1/16/2024 | 1/10/2019 | 109.3401 | 109.3401037 | 109.3401037 | 109.3401037 | 108.3685784 | 104.8737681 | 101.5115397 | 98.27615651 | 95.16216157 |
| 190110A00071 | 1/10/2019 | 2.67 | 2/8/2021 | 1/10/2019 | 101.36053 | 101.3605294 | 101.3605294 | 101.3605294 | 101.2999745 | 100.766683 | 100.2390059 | 99.71685455 | 99.20014248 |
| 190110A00079 | 1/10/2019 | 2.68 | 10/7/2021 | 1/10/2019 | 103.07858 | 103.0785754 | 103.0785754 | 103.0785754 | 102.8811173 | 101.679834 | 100.5065493 | 99.36029274 | 98.2401382 |
| 190130A00007 | 1/30/2019 | 2.89 | 5/14/2021 | 1/30/2019 | 102.08878 | 102.0887775 | 102.0887775 | 102.0887775 | 101.9812221 | 101.1857065 | 100.4025955 | 99.63160057 | 98.87244173 |
| 190131A00011 | 1/31/2019 | 3.13 | 1/30/2026 | 1/31/2019 | 115.62702 | 115.6270186 | 115.6270186 | 115.6270186 | 113.0737559 | 107.4967415 | 102.2339551 | 97.26601472 | 92.57483255 |
| 190131A00018 | 1/31/2019 | 2.83 | 3/25/2022 | 1/31/2019 | 104.22613 | 104.2261349 | 104.2261349 | 104.2261349 | 103.9300759 | 102.2750389 | 100.6543608 | 99.06703587 | 97.51209786 |

Classification | Public

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 190131A00049 | 1/31/2019 | 2.79 | 1/29/2021 | 1/31/2019 | 101.28585 | 101.2858524 | 101.2858524 | 101.2858524 | 101.2296551 | 100.7249292 | 100.2252268 | 99.73047336 | 99.24059556 |
| 190201A00009 | 2/1/2019 | 2.8 | 2/4/2022 | 2/1/2019 | 103.85361 | 103.8536101 | 103.8536101 | 103.8536101 | 103.587276 | 102.0721486 | 100.5869469 | 99.13085921 | 97.70310271 |
| 190206A00013 | 2/6/2019 | 2.68 | 2/6/2023 | 2/6/2019 | 106.53596 | 106.5359599 | 106.5359599 | 106.5359599 | 105.9889987 | 103.446021 | 100.977559 | 98.58099086 | 96.25380424 |
| 190208A00010 | 2/8/2019 | 2.77 | 2/8/2021 | 2/8/2019 | 101.34002 | 101.3400235 | 101.3400235 | 101.3400235 | 101.2795801 | 100.7472518 | 100.220516 | 99.69928471 | 99.18347201 |
| 190703A00015 | 7/3/2019 | 2.02 | 1/6/2021 | 7/3/2019 | 100.83987 | 100.839874 | 100.839874 | 100.839874 | 100.7920742 | 100.3511771 | 99.91413673 | 99.48090258 | 99.05142499 |
| 190711A00019 | 7/11/2019 | 2.19 | 7/11/2023 | 7/11/2019 | 105.62991 | 105.6299145 | 105.6299145 | 105.6299145 | 104.9247127 | 101.9869595 | 99.14691161 | 96.40079358 | 93.74499724 |
| 190715A00024 | 7/15/2019 | 2.17 | 7/15/2021 | 7/15/2019 | 101.83298 | 101.8329823 | 101.8329823 | 101.8329823 | 101.6928206 | 100.7295997 | 99.78457714 | 98.85724071 | 97.94709723 |
| 190715A00029 | 7/17/2019 | 2.16 | 4/18/2022 | 7/17/2019 | 103.23217 | 103.2321664 | 103.2321664 | 103.2321664 | 102.922807 | 101.21137 | 99.53651109 | 97.8971219 | 96.29213931 |
| 190724A00022 | 7/24/2019 | 1.94 | 7/23/2021 | 7/24/2019 | 101.80505 | 101.8050462 | 101.8050462 | 101.8050462 | 101.6600305 | 100.6729792 | 99.70502654 | 98.75562231 | 97.82423723 |
| 190729A00008 | 7/29/2019 | 2.18 | 1/29/2024 | 7/29/2019 | 106.64855 | 106.6485531 | 106.6485531 | 106.6485531 | 105.6681813 | 102.1866667 | 98.83898951 | 95.61929089 | 92.52200108 |
| 190730A00007 | 7/30/2019 | 2.19 | 7/30/2024 | 7/30/2019 | 107.63537 | 107.6353683 | 107.6353683 | 107.6353683 | 106.3622558 | 102.3834327 | 98.57606122 | 94.93185425 | 91.44296964 |
| 190802A00004 | 8/2/2019 | 2 | 8/2/2022 | 8/2/2019 | 103.4541 | 103.4540971 | 103.4540971 | 103.4540971 | 103.0716285 | 101.0758065 | 99.12883687 | 97.22921664 | 95.37549973 |
| 190802A00032 | 8/2/2019 | 2.01 | 8/2/2024 | 8/2/2019 | 106.92398 | 106.9239781 | 106.9239781 | 106.9239781 | 105.6490761 | 101.6767625 | 97.87607467 | 94.23869913 | 90.75676956 |
| 190807A00021 | 8/7/2019 | 2 | 8/7/2026 | 8/7/2019 | 110.24773 | 110.2477342 | 110.2477342 | 110.2477342 | 107.1116827 | 101.2138462 | 95.67887971 | 90.48259662 | 85.60254248 |
| 190807A00039 | 8/7/2019 | 2.02 | 8/7/2020 | 8/7/2019 | 100.034 | 100.0339989 | 100.0339989 | 100.0339989 | 100.0325536 | 100.0131422 | 99.99375072 | 99.97437911 | 99.95502733 |
| 190807A00054 | 8/7/2019 | 1.66 | 8/6/2021 | 8/7/2019 | 101.58751 | 101.5875133 | 101.5875133 | 101.5875133 | 101.4341367 | 100.4101978 | 99.40683496 | 98.42343302 | 97.45940103 |
| 190809A00001 | 8/9/2019 | 1.88 | 8/9/2022 | 8/9/2019 | 103.24158 | 103.2415758 | 103.2415758 | 103.2415758 | 102.8539826 | 100.841939 | 98.87942916 | 96.96491704 | 95.09692531 |
| 190809A00005 | 8/9/2019 | 1.88 | 7/11/2022 | 8/9/2019 | 103.1143 | 103.1142991 | 103.1142991 | 103.1142991 | 102.7489217 | 100.814143 | 98.92543207 | 97.08141239 | 95.28075805 |
| 190813A00007 | 8/13/2019 | 1.89 | 8/15/2022 | 8/13/2019 | 103.28853 | 103.2885326 | 103.2885326 | 103.2885326 | 102.8961566 | 100.8678458 | 98.88970462 | 96.96016711 | 95.07772754 |
| 190813A00021 | 8/13/2019 | 1.89 | 8/14/2023 | 8/13/2019 | 104.88784 | 104.8878445 | 104.8878445 | 104.8878445 | 104.142559 | 101.1279926 | 98.2164542 | 95.40384836 | 92.686267 |
| 190814A00003 | 8/14/2019 | 2.01 | 8/14/2029 | 8/14/2019 | 117.24932 | 117.2493233 | 117.2493233 | 117.2493233 | 109.3641805 | 100.6245853 | 92.65625866 | 85.38701798 | 78.75178216 |
| 190814A00008 | 8/14/2019 | 1.84 | 8/14/2024 | 8/14/2019 | 106.28836 | 106.2883626 | 106.2883626 | 106.2883626 | 104.9958412 | 101.0057053 | 97.18917846 | 93.53779481 | 90.04354755 |
| 190815A00008 | 8/15/2019 | 1.82 | 8/15/2022 | 8/15/2019 | 103.14413 | 103.1441323 | 103.1441323 | 103.1441323 | 102.7520079 | 100.7252133 | 98.74855839 | 96.82047794 | 94.9394671 |
| 190819A00020 | 8/19/2019 | 1.79 | 8/19/2022 | 8/19/2019 | 103.0988 | 103.0988049 | 103.0988049 | 103.0988049 | 102.7036282 | 100.6668064 | 98.68053478 | 96.74322835 | 94.85336367 |
| 190820A00019 | 8/20/2019 | 1.76 | 8/21/2023 | 8/20/2019 | 104.51755 | 104.5175543 | 104.5175543 | 104.5175543 | 103.7644781 | 100.7374884 | 97.81445603 | 94.99122771 | 92.26384132 |
| 190821A00009 | 8/21/2019 | 1.79 | 8/22/2022 | 8/21/2019 | 103.11122 | 103.1112238 | 103.1112238 | 103.1112238 | 102.7136772 | 100.6688493 | 98.67489051 | 96.73020067 | 94.83324205 |
| 190821A00016 | 8/21/2019 | 1.79 | 8/22/2022 | 8/21/2019 | 103.11122 | 103.1112238 | 103.1112238 | 103.1112238 | 102.7136772 | 100.6688493 | 98.67489051 | 96.73020067 | 94.83324205 |
| 190826A00028 | 8/26/2019 | 1.56 | 8/26/2022 | 8/26/2019 | 103.02324 | 103.023241 | 103.023241 | 103.023241 | 102.6211846 | 100.5595789 | 98.54955616 | 96.58948326 | 94.67779109 |
| 190521A00023 | 5/21/2019 | 2.47 | 11/22/2021 | 5/21/2019 | 102.90028 | 102.9002761 | 102.9002761 | 102.9002761 | 102.6751675 | 101.3618258 | 100.0739658 | 98.81086574 | 97.57183147 |
| 190523A00024 | 5/23/2019 | 2.47 | 10/31/2022 | 5/23/2019 | 104.94735 | 104.9473456 | 104.9473456 | 104.9473456 | 104.4906223 | 102.2389892 | 100.0469935 | 97.91261027 | 95.83390164 |
| 190524A00002 | 5/24/2019 | 2.39 | 5/24/2021 | 5/24/2019 | 101.74963 | 101.7496299 | 101.7496299 | 101.7496299 | 101.6371871 | 100.8158546 | 100.0077694 | 99.21261283 | 98.43007642 |
| 190529A00089 | 5/29/2019 | 2.38 | 5/29/2024 | 5/29/2019 | 108.04639 | 108.0463865 | 108.0463865 | 108.0463865 | 106.8742786 | 103.0481924 | 99.38030373 | 95.8632684 | 92.49012075 |
| 190603A00047 | 6/3/2019 | 2.22 | 6/2/2023 | 6/3/2019 | 105.51263 | 105.5126334 | 105.5126334 | 105.5126334 | 104.8533721 | 102.0209486 | 99.27954374 | 96.62576118 | 94.05634956 |

Classification | Public

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 190605A00004 | 6/5/2019 | 2.11 | 1/12/2022 | 6/5/2019 | 102.69477 | 102.6947658 | 102.6947658 | 102.6947658 | 102.442649 | 100.9982658 | 99.58138866 | 98.19130069 | 96.82730935 |
| 190605A00020 | 6/5/2019 | 2.19 | 2/5/2024 | 6/5/2019 | 106.7201 | 106.720105 | 106.720105 | 106.720105 | 105.7291722 | 102.2274901 | 98.86101544 | 95.62380166 | 92.51019731 |
| 190606A00023 | 6/6/2019 | 2.23 | 6/6/2024 | 6/6/2019 | 107.50973 | 107.5097349 | 107.5097349 | 107.5097349 | 106.3269269 | 102.4901151 | 98.81289628 | 95.2878285 | 91.90785451 |
| 190611A00006 | 6/11/2019 | 2.26 | 6/11/2021 | 6/11/2019 | 101.74194 | 101.7419362 | 101.7419362 | 101.7419362 | 101.6202102 | 100.7498253 | 99.89431647 | 99.05330447 | 98.22642305 |
| 190612A00011 | 6/12/2019 | 2.2 | 6/30/2022 | 6/12/2019 | 103.68549 | 103.6854942 | 103.6854942 | 103.6854942 | 103.3274273 | 101.4157999 | 99.54899023 | 97.7256799 | 95.94459822 |
| 190613A00011 | 6/13/2019 | 2.26 | 6/13/2024 | 6/13/2019 | 107.66388 | 107.6638761 | 107.6638761 | 107.6638761 | 106.4689118 | 102.6106614 | 98.91361072 | 95.3702085 | 91.97329593 |
| 190620A00024 | 6/20/2019 | 2.05 | 6/21/2021 | 6/20/2019 | 101.60774 | 101.60774 | 101.60774 | 101.60774 | 101.4808753 | 100.5839107 | 99.70275512 | 98.83699343 | 97.9862248 |
| 190621A00041 | 6/21/2019 | 2.12 | 6/21/2022 | 6/21/2019 | 103.48539 | 103.4853853 | 103.4853853 | 103.4853853 | 103.1338395 | 101.2485951 | 99.4070402 | 97.60790448 | 95.84996301 |
| 190625A00021 | 6/25/2019 | 1.88 | 6/26/2023 | 6/25/2019 | 105.17695 | 105.1769496 | 105.1769496 | 105.1769496 | 104.4877701 | 101.5836694 | 98.77519439 | 96.05869005 | 93.43066169 |
| 190626A00009 | 6/26/2019 | 2.08 | 6/25/2021 | 6/26/2019 | 101.65485 | 101.654848 | 101.654848 | 101.654848 | 101.525869 | 100.6177919 | 99.72590706 | 98.84978423 | 97.98900847 |
| 190626A00019 | 6/26/2019 | 2.1 | 6/24/2022 | 6/26/2019 | 103.46208 | 103.4620787 | 103.4620787 | 103.4620787 | 103.1085025 | 101.2153473 | 99.36623906 | 97.55989228 | 95.79506727 |
| 190627A00010 | 6/27/2019 | 1.97 | 6/27/2024 | 6/27/2019 | 107.32142 | 107.3214199 | 107.3214199 | 107.3214199 | 106.0976502 | 102.1895241 | 98.44676245 | 94.86152591 | 91.42638717 |
| 190628A00004 | 6/28/2019 | 2.12 | 6/28/2023 | 6/28/2019 | 105.3564 | 105.3564049 | 105.3564049 | 105.3564049 | 104.667719 | 101.7678452 | 98.96334446 | 96.25057462 | 93.62605291 |
| 190701A00006 | 7/1/2019 | 2.11 | 7/1/2021 | 7/1/2019 | 101.71284 | 101.7128422 | 101.7128422 | 101.7128422 | 101.5806553 | 100.6559763 | 99.74807183 | 98.8564889 | 97.98079054 |
| 190710A00022 | 7/10/2019 | 2.22 | 7/10/2024 | 7/10/2019 | 107.65037 | 107.6503704 | 107.6503704 | 107.6503704 | 106.410793 | 102.4825228 | 98.72132882 | 95.11924299 | 91.66871901 |
| 190712A00001 | 7/12/2019 | 2.05 | 7/12/2024 | 7/12/2019 | 107.71792 | 107.7179243 | 107.7179243 | 107.7179243 | 106.467047 | 102.5123883 | 98.72663588 | 95.10170302 | 91.62993274 |
| 190717A00007 | 7/17/2019 | 2.18 | 10/14/2022 | 7/17/2019 | 104.19886 | 104.1988595 | 104.1988595 | 104.1988595 | 103.7572924 | 101.5588716 | 99.41779071 | 97.33213746 | 95.30007984 |
| 190724A00025 | 7/24/2019 | 1.96 | 7/24/2023 | 7/24/2019 | 105.55492 | 105.5549217 | 105.5549217 | 105.5549217 | 104.8305247 | 101.8475314 | 98.96516935 | 96.17949371 | 93.48673739 |
| 190730A00016 | 7/30/2019 | 2 | 7/30/2024 | 7/30/2019 | 107.61186 | 107.6118625 | 107.6118625 | 107.6118625 | 106.330969 | 102.332259 | 98.50637912 | 94.84495395 | 91.3400589 |
| 190807A00027 | 8/7/2019 | 1.77 | 8/7/2024 | 8/7/2019 | 105.9749 | 105.9749046 | 105.9749046 | 105.9749046 | 104.6958823 | 100.7297841 | 96.93570783 | 93.30529374 | 89.83063336 |
| 190807A00060 | 8/7/2019 | 1.95 | 2/8/2021 | 8/7/2019 | 100.90304 | 100.9030365 | 100.9030365 | 100.9030365 | 100.8427353 | 100.3117543 | 99.78635556 | 99.26645132 | 98.75195566 |
| 190809A00008 | 8/9/2019 | 1.87 | 8/3/2023 | 8/9/2019 | 104.7787 | 104.7787005 | 104.7787005 | 104.7787005 | 104.047754 | 101.063352 | 98.18025955 | 95.39448008 | 92.70219812 |
| 190815A00012 | 8/15/2019 | 1.81 | 8/15/2024 | 8/15/2019 | 106.17037 | 106.1703729 | 106.1703729 | 106.1703729 | 104.8766979 | 100.8863939 | 97.06982312 | 93.41850883 | 89.92443395 |
| 190816A00022 | 8/16/2019 | 1.77 | 8/16/2024 | 8/16/2019 | 106.01144 | 106.0114438 | 106.0114438 | 106.0114438 | 104.7168122 | 100.7271661 | 96.91135167 | 93.26088187 | 89.76773047 |
| 190816A00035 | 8/16/2019 | 1.77 | 8/16/2023 | 8/16/2019 | 104.52805 | 104.5280479 | 104.5280479 | 104.5280479 | 103.7812997 | 100.7670691 | 97.85603257 | 95.04408153 | 92.32729568 |
| 190820A00005 | 8/21/2019 | 1.76 | 2/27/2023 | 8/21/2019 | 103.81095 | 103.8109473 | 103.8109473 | 103.8109473 | 103.2533005 | 100.6945072 | 98.2119763 | 95.80297478 | 93.46488615 |
| 190821A00002 | 8/21/2019 | 1.61 | 8/21/2024 | 8/21/2019 | 106.1249 | 106.1249026 | 106.1249026 | 106.1249026 | 104.8129535 | 100.7876064 | 96.93859504 | 93.25726646 | 89.7354399 |
| 190822A00002 | 8/22/2019 | 1.89 | 8/20/2021 | 8/22/2019 | 101.72335 | 101.7233542 | 101.7233542 | 101.7233542 | 101.5610055 | 100.5007866 | 99.46261771 | 98.44581628 | 97.44972784 |
| 190827A00022 | 8/27/2019 | 1.83 | 8/27/2021 | 8/27/2019 | 101.68951 | 101.6895111 | 101.6895111 | 101.6895111 | 101.5225645 | 100.4436132 | 99.38749296 | 98.35348519 | 97.34090128 |
| 190828A00031 | 8/28/2019 | 1.71 | 8/28/2024 | 8/28/2019 | 105.81354 | 105.8135399 | 105.8135399 | 105.8135399 | 104.4992973 | 100.4832743 | 96.64335292 | 92.97088115 | 89.45767998 |
| 190829A00021 | 8/30/2019 | 2.18 | 8/30/2021 | 8/30/2019 | 102.08587 | 102.0858654 | 102.0858654 | 102.0858654 | 101.9166336 | 100.827263 | 99.76109563 | 98.71739658 | 97.6954615 |
| 190829A00045 | 8/29/2019 | 1.9 | 8/28/2026 | 8/29/2019 | 109.7345 | 109.734503 | 109.734503 | 109.734503 | 106.5285617 | 100.5960012 | 95.03155301 | 89.81049015 | 84.90987066 |
| 190830A00021 | 8/30/2019 | 1.76 | 8/30/2024 | 8/30/2019 | 106.02713 | 106.027126 | 106.027126 | 106.027126 | 104.7084222 | 100.6830165 | 96.83425102 | 93.15343965 | 89.63237174 |

Classification | Public

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 190904A00019 | 9/4/2019 | 1.69 | 9/4/2024 | 9/4/2019 | 105.75811 | 105.7581066 | 105.7581066 | 105.7581066 | 104.4319647 | 100.3990649 | 96.54368439 | 92.85706798 | 89.33094116 |
| 190905A00003 | 9/5/2019 | 1.76 | 9/5/2024 | 9/5/2019 | 106.05118 | 106.0511835 | 106.0511835 | 106.0511835 | 104.721852 | 100.6803815 | 96.81683381 | 93.12243058 | 89.58887568 |
| 190906A00018 | 9/6/2019 | 1.76 | 9/6/2024 | 9/6/2019 | 106.05519 | 106.0551883 | 106.0551883 | 106.0551883 | 104.7240782 | 100.6799175 | 96.81389568 | 93.11721881 | 89.5815763 |
| 190912A00027 | 9/12/2019 | 1.95 | 9/12/2023 | 9/12/2019 | 105.20394 | 105.2039416 | 105.2039416 | 105.2039416 | 104.4203604 | 101.3248466 | 98.33711308 | 95.45278646 | 92.66769871 |
| 190912A00034 | 9/12/2019 | 1.76 | 9/12/2022 | 9/12/2019 | 103.51999 | 103.5199862 | 103.5199862 | 103.5199862 | 103.1035703 | 100.9907351 | 98.93154512 | 96.92426941 | 94.96724667 |
| 190913A00014 | 9/13/2019 | 2.08 | 9/13/2024 | 9/13/2019 | 107.4126 | 107.4125951 | 107.4125951 | 107.4125951 | 106.0624794 | 101.9722951 | 98.06263742 | 94.32456756 | 90.74963986 |
| 190918A00016 | 9/18/2019 | 1.78 | 9/18/2024 | 9/18/2019 | 106.95156 | 106.9515568 | 106.9515568 | 106.9515568 | 105.5862461 | 101.4709734 | 97.53850375 | 93.77973369 | 90.18606519 |
| 190924A00010 | 9/24/2019 | 1.95 | 9/24/2021 | 9/24/2019 | 101.94953 | 101.949528 | 101.949528 | 101.949528 | 101.7625308 | 100.606413 | 99.47645328 | 98.37177172 | 97.29152753 |
| 190925A00018 | 9/25/2019 | 1.7 | 9/25/2024 | 9/25/2019 | 106.64742 | 106.6474151 | 106.6474151 | 106.6474151 | 105.2711812 | 101.1437267 | 97.20040193 | 93.4319995 | 89.8298256 |
| 190926A00004 | 9/26/2019 | 1.93 | 9/21/2021 | 9/26/2019 | 101.91253 | 101.9125306 | 101.9125306 | 101.9125306 | 101.7277138 | 100.5799189 | 99.45791754 | 98.360848 | 97.28788637 |
| 190627A00037 | 6/27/2019 | 1.93 | 6/27/2023 | 6/27/2019 | 105.32892 | 105.3289173 | 105.3289173 | 105.3289173 | 104.6381542 | 101.7291254 | 98.91594975 | 96.19496092 | 93.56265317 |
| 190702A00002 | 7/2/2019 | 2.16 | 7/2/2024 | 7/2/2019 | 107.37076 | 107.3707644 | 107.3707644 | 107.3707644 | 106.1459083 | 102.2434742 | 98.50620719 | 94.92627162 | 91.49624416 |
| 190711A00027 | 7/11/2019 | 2.19 | 7/11/2023 | 7/11/2019 | 105.62991 | 105.6299145 | 105.6299145 | 105.6299145 | 104.9247127 | 101.9869595 | 99.14691161 | 96.40079358 | 93.74499724 |
| 190711A00028 | 7/11/2019 | 2.22 | 7/11/2024 | 7/11/2019 | 107.65567 | 107.6556663 | 107.6556663 | 107.6556663 | 106.4143834 | 102.4834633 | 98.71984072 | 95.11553176 | 91.66297529 |
| 190717A00008 | 7/17/2019 | 2.22 | 7/17/2024 | 7/17/2019 | 107.68744 | 107.6874424 | 107.6874424 | 107.6874424 | 106.4359272 | 102.4891117 | 98.71092459 | 95.09328589 | 91.62854546 |
| 190722A00035 | 7/22/2019 | 2.18 | 4/13/2021 | 7/22/2019 | 101.36603 | 101.3660278 | 101.3660278 | 101.3660278 | 101.2746577 | 100.5668293 | 99.86887797 | 99.18059791 | 98.50178899 |
| 190724A00023 | 7/24/2019 | 2.13 | 7/24/2025 | 7/24/2019 | 110.1327 | 110.1326999 | 110.1326999 | 110.1326999 | 108.1179432 | 103.1307107 | 98.40379421 | 93.92226581 | 89.67212957 |
| 190731A00028 | 7/31/2019 | 1.93 | 7/29/2022 | 7/31/2019 | 103.65853 | 103.6585254 | 103.6585254 | 103.6585254 | 103.2773545 | 101.2830861 | 99.33753856 | 97.43921699 | 95.58668286 |
| 190805A00021 | 8/5/2019 | 1.89 | 1/16/2024 | 8/5/2019 | 105.5682 | 105.5682044 | 105.5682044 | 105.5682044 | 104.6105819 | 101.1811423 | 97.88245506 | 94.70884965 | 91.65493228 |
| 190807A00036 | 8/7/2019 | 1.75 | 8/7/2023 | 8/7/2019 | 104.43046 | 104.4304606 | 104.4304606 | 104.4304606 | 103.6954552 | 100.7059844 | 97.81829679 | 95.02836493 | 92.33234464 |
| 190807A00053 | 8/7/2019 | 1.66 | 8/6/2021 | 8/7/2019 | 101.58751 | 101.5875133 | 101.5875133 | 101.5875133 | 101.4341367 | 100.4101978 | 99.40683496 | 98.42343302 | 97.45940103 |
| 190808A00011 | 8/8/2019 | 1.86 | 8/8/2023 | 8/8/2019 | 104.76994 | 104.7699404 | 104.7699404 | 104.7699404 | 104.0326503 | 101.0354253 | 98.14026645 | 95.34313305 | 92.64016847 |
| 190808A00045 | 8/8/2019 | 1.86 | 8/8/2023 | 8/8/2019 | 104.76994 | 104.7699404 | 104.7699404 | 104.7699404 | 104.0326503 | 101.0354253 | 98.14026645 | 95.34313305 | 92.64016847 |
| 190809A00010 | 8/9/2019 | 1.88 | 8/8/2024 | 8/9/2019 | 106.42507 | 106.4250714 | 106.4250714 | 106.4250714 | 105.1422038 | 101.1645691 | 97.35943729 | 93.71842334 | 90.23359519 |
| 190812A00003 | 8/12/2019 | 1.67 | 8/12/2024 | 8/12/2019 | 106.33264 | 106.3326375 | 106.3326375 | 106.3326375 | 105.0352724 | 101.0287634 | 97.19691003 | 93.5311825 | 90.02351411 |
| 190813A00016 | 8/13/2019 | 1.88 | 8/13/2024 | 8/13/2019 | 106.44688 | 106.4468801 | 106.4468801 | 106.4468801 | 105.1553208 | 101.1645435 | 97.34727652 | 93.69506406 | 90.19990853 |
| 190813A00020 | 8/13/2019 | 1.89 | 8/12/2022 | 8/13/2019 | 103.27529 | 103.2752857 | 103.2752857 | 103.2752857 | 102.8852834 | 100.8649988 | 98.89456748 | 96.9724383 | 95.09711972 |
| 190815A00007 | 8/15/2019 | 1.81 | 7/6/2023 | 8/15/2019 | 104.47942 | 104.4794158 | 104.4794158 | 104.4794158 | 103.7836058 | 100.8758236 | 98.06446428 | 95.34581662 | 92.71633329 |
| 190816A00006 | 8/16/2019 | 1.77 | 8/16/2024 | 8/16/2019 | 106.01144 | 106.0114438 | 106.0114438 | 106.0114438 | 104.7168122 | 100.7271661 | 96.91135167 | 93.26088187 | 89.76773047 |
| 190816A00025 | 8/16/2019 | 1.89 | 3/16/2021 | 8/16/2019 | 101.03313 | 101.0331306 | 101.0331306 | 101.0331306 | 100.9560612 | 100.3260528 | 99.70389475 | 99.08944077 | 98.4825483 |
| 190816A00033 | 8/16/2019 | 1.77 | 8/16/2024 | 8/16/2019 | 106.01144 | 106.0114438 | 106.0114438 | 106.0114438 | 104.7168122 | 100.7271661 | 96.91135167 | 93.26088187 | 89.76773047 |
| 190819A00026 | 8/19/2019 | 1.62 | 8/19/2024 | 8/19/2019 | 106.15765 | 106.1576542 | 106.1576542 | 106.1576542 | 104.8490081 | 100.8281119 | 96.98316884 | 93.30555385 | 89.78711189 |
| 190819A00030 | 8/19/2019 | 2.01 | 8/20/2029 | 8/19/2019 | 117.28054 | 117.2805411 | 117.2805411 | 117.2805411 | 109.3658807 | 100.6121051 | 92.63201022 | 85.35308405 | 78.70995853 |

Classification | Public

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 190820A00013 | 8/20/2019 | 1.76 | 8/21/2023 | 8/20/2019 | 104.51755 | 104.5175543 | 104.5175543 | 104.5175543 | 103.7644781 | 100.7374884 | 97.81445603 | 94.99122771 | 92.26384132 |
| 190827A00002 | 8/27/2019 | 1.74 | 8/27/2024 | 8/27/2019 | 105.93287 | 105.9328741 | 105.9328741 | 105.9328741 | 104.6197668 | 100.6038565 | 96.76392418 | 93.09132907 | 89.57790243 |
| 190828A00009 | 8/28/2019 | 1.71 | 8/28/2024 | 8/28/2019 | 105.81354 | 105.8135399 | 105.8135399 | 105.8135399 | 104.4992973 | 100.4832743 | 96.64335292 | 92.97088115 | 89.45767998 |
| 190828A00015 | 8/28/2019 | 2.04 | 8/28/2029 | 8/28/2019 | 115.74655 | 115.746546 | 115.746546 | 115.746546 | 107.9340765 | 99.309319 | 91.44644507 | 84.27407391 | 77.72785496 |
| 190829A00031 | 8/29/2019 | 1.54 | 8/29/2024 | 8/29/2019 | 105.86893 | 105.8689344 | 105.8689344 | 105.8689344 | 104.5443919 | 100.5038106 | 96.64101818 | 92.94725315 | 89.41423434 |
| 190904A00001 | 9/4/2019 | 1.5 | 9/4/2024 | 9/4/2019 | 105.7267 | 105.7266964 | 105.7266964 | 105.7266964 | 104.3922974 | 100.3389988 | 96.46466346 | 92.76044192 | 89.21797191 |
| 190904A00020 | 9/4/2019 | 1.69 | 9/1/2023 | 9/4/2019 | 104.34392 | 104.3439199 | 104.3439199 | 104.3439199 | 103.5773593 | 100.5245882 | 97.57741574 | 94.73159036 | 91.98305826 |
| 190905A00035 | 9/5/2019 | 1.82 | 9/7/2021 | 9/5/2019 | 101.72564 | 101.7256432 | 101.7256432 | 101.7256432 | 101.55101 | 100.4421332 | 99.35736514 | 98.29592641 | 97.25707076 |
| 190910A00027 | 9/10/2019 | 1.86 | 9/9/2022 | 9/10/2019 | 103.33472 | 103.3347186 | 103.3347186 | 103.3347186 | 102.9226209 | 100.8274009 | 98.78510778 | 96.79404323 | 94.85257698 |
| 190917A00021 | 9/17/2019 | 2.13 | 9/17/2020 | 9/17/2019 | 100.24997 | 100.2499667 | 100.2499667 | 100.2499667 | 100.2384107 | 100.1053545 | 99.97266493 | 99.84034045 | 99.70837952 |
| 190919A00017 | 9/19/2019 | 1.8 | 9/19/2022 | 9/19/2019 | 103.63834 | 103.6383388 | 103.6383388 | 103.6383388 | 103.2161436 | 101.0829389 | 99.00424267 | 96.9782822 | 95.00335701 |
| 190919A00025 | 9/19/2019 | 1.8 | 9/19/2024 | 9/19/2019 | 107.03988 | 107.039876 | 107.039876 | 107.039876 | 105.6723465 | 101.5526151 | 97.61596362 | 93.85327016 | 90.25591967 |
| 190923A00032 | 9/23/2019 | 1.72 | 9/22/2023 | 9/23/2019 | 105.09697 | 105.0969671 | 105.0969671 | 105.0969671 | 104.2965896 | 101.162284 | 98.13818789 | 95.2197844 | 92.40277132 |
| 190923A00081 | 9/23/2019 | 1.96 | 9/20/2024 | 9/23/2019 | 106.94596 | 106.9459552 | 106.9459552 | 106.9459552 | 105.5858012 | 101.4868469 | 97.56962251 | 93.82509112 | 90.24471706 |
| 190926A00010 | 9/26/2019 | 2.11 | 9/30/2020 | 9/26/2019 | 100.31407 | 100.3140749 | 100.3140749 | 100.3140749 | 100.2985791 | 100.1295303 | 99.96104698 | 99.79312636 | 99.62576566 |
| 190927A00019 | 9/30/2019 | 1.91 | 9/30/2022 | 9/30/2019 | 103.53462 | 103.5346179 | 103.5346179 | 103.5346179 | 103.1055731 | 100.9513184 | 98.85253778 | 96.80740955 | 94.81418687 |
| 191002A00005 | 10/2/2019 | 1.83 | 10/2/2020 | 10/2/2019 | 100.29952 | 100.2995208 | 100.2995208 | 100.2995208 | 100.283326 | 100.1085162 | 99.93431771 | 99.76072729 | 99.58774177 |
| 191002A00014 | 10/2/2019 | 1.78 | 10/3/2022 | 10/2/2019 | 103.26227 | 103.2622704 | 103.2622704 | 103.2622704 | 102.8313313 | 100.6722511 | 98.56894726 | 96.51958161 | 94.52239192 |
| 191008A00018 | 10/8/2019 | 1.74 | 10/11/2022 | 10/8/2019 | 103.20634 | 103.2063427 | 103.2063427 | 103.2063427 | 102.769094 | 100.589722 | 98.46709007 | 96.39931142 | 94.38457798 |
| 191009A00027 | 10/9/2019 | 1.74 | 10/6/2023 | 10/9/2019 | 104.63853 | 104.638529 | 104.638529 | 104.638529 | 103.8252405 | 100.675307 | 97.63697512 | 94.70563297 | 91.87688989 |
| 191015A00029 | 10/15/2019 | 1.91 | 10/15/2024 | 10/15/2019 | 106.84808 | 106.8480756 | 106.8480756 | 106.8480756 | 105.4436783 | 101.2827205 | 97.30882278 | 93.51255053 | 89.88500061 |
| 191104A00009 | 11/4/2019 | 1.91 | 11/6/2023 | 11/4/2019 | 105.32252 | 105.3225181 | 105.3225181 | 105.3225181 | 104.4653239 | 101.2240885 | 98.10013029 | 95.0885194 | 92.18456594 |
| 191104A00022 | 11/4/2019 | 2.17 | 8/4/2027 | 11/4/2019 | 113.11272 | 113.1127154 | 113.1127154 | 113.1127154 | 108.561823 | 101.7154491 | 95.35014793 | 89.4296098 | 83.92044288 |
| 191106A00012 | 11/6/2019 | 2.02 | 10/11/2024 | 11/6/2019 | 107.29573 | 107.2957286 | 107.2957286 | 107.2957286 | 105.8962805 | 101.7361012 | 97.76242151 | 93.96585901 | 90.33755869 |
| 191114A00020 | 11/18/2019 | 1.91 | 2/15/2022 | 11/18/2019 | 102.53827 | 102.5382723 | 102.5382723 | 102.5382723 | 102.2669905 | 100.7301203 | 99.2239555 | 97.74764728 | 96.30037761 |
| 181026A00019 | 10/29/2018 | 3.09 | 10/16/2020 | 10/29/2018 | 100.60824 | 100.6082429 | 100.6082429 | 100.6082429 | 100.587291 | 100.3735879 | 100.1608058 | 99.94893863 | 99.7379804 |
| 181030A00012 | 10/30/2018 | 3.32 | 10/30/2023 | 10/30/2018 | 109.91352 | 109.9135223 | 109.9135223 | 109.9135223 | 109.050612 | 105.7530281 | 102.5734451 | 99.50691476 | 96.54873103 |
| 181101A00020 | 11/1/2018 | 3.26 | 11/1/2021 | 11/1/2018 | 103.78946 | 103.7894571 | 103.7894571 | 103.7894571 | 103.5752484 | 102.3047907 | 101.0651308 | 99.85515628 | 98.67380799 |
| 181114A00012 | 11/14/2018 | 3.13 | 11/14/2022 | 11/14/2018 | 106.98342 | 106.9834168 | 106.9834168 | 106.9834168 | 106.509077 | 104.18703 | 101.9274088 | 99.72812986 | 97.58719492 |
| 181114A00021 | 11/14/2018 | 3.17 | 11/14/2023 | 11/14/2018 | 110.15947 | 110.1594673 | 110.1594673 | 110.1594673 | 109.270201 | 105.9128119 | 102.677212 | 99.55829152 | 96.55118663 |
| 181116A00015 | 11/19/2018 | 3.29 | 2/15/2024 | 11/19/2018 | 110.7042 | 110.7042018 | 110.7042018 | 110.7042018 | 109.6832129 | 106.083372 | 102.622637 | 99.29486637 | 96.09422524 |
| 181119A00018 | 11/19/2018 | 3.28 | 11/17/2023 | 11/19/2018 | 109.92994 | 109.9299414 | 109.9299414 | 109.9299414 | 109.0419373 | 105.6952323 | 102.4698931 | 99.3608419 | 96.36324405 |
| 181120A00024 | 11/20/2018 | 3.25 | 11/20/2023 | 11/20/2018 | 109.85445 | 109.8544531 | 109.8544531 | 109.8544531 | 108.9625321 | 105.6089349 | 102.3772348 | 99.26233404 | 96.25937771 |

Classification | Public

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 181121A00014 | 11/21/2018 | 3.18 | 11/19/2021 | 11/21/2018 | 103.81907 | 103.8190709 | 103.8190709 | 103.8190709 | 103.5947348 | 102.2820212 | 100.9956378 | 99.73480346 | 98.49876805 |
| 181126A00048 | 11/26/2018 | 3.24 | 11/25/2022 | 11/26/2018 | 106.9021 | 106.9021031 | 106.9021031 | 106.9021031 | 106.4206883 | 104.0779516 | 101.7987524 | 99.58100325 | 97.42269832 |
| 181204A00023 | 12/4/2018 | 3.16 | 12/3/2021 | 12/4/2018 | 103.90393 | 103.9039313 | 103.9039313 | 103.9039313 | 103.6717588 | 102.3246878 | 101.0015219 | 99.70167888 | 98.4245947 |
| 181218A00077 | 12/18/2018 | 3.09 | 12/18/2023 | 12/18/2018 | 109.53601 | 109.5360095 | 109.5360095 | 109.5360095 | 108.6056187 | 105.1831084 | 101.8876411 | 98.71383945 | 95.65658217 |
| 181220A00027 | 12/20/2018 | 2.97 | 2/28/2022 | 12/20/2018 | 104.29061 | 104.2906145 | 104.2906145 | 104.2906145 | 104.0094213 | 102.4200804 | 100.8628674 | 99.33687526 | 97.84123069 |
| 181221A00024 | 12/21/2018 | 2.96 | 12/28/2020 | 12/21/2018 | 101.13044 | 101.1304362 | 101.1304362 | 101.1304362 | 101.085775 | 100.6695762 | 100.2568005 | 99.84740572 | 99.44135057 |
| 181226A00036 | 12/26/2018 | 3.02 | 12/26/2023 | 12/26/2018 | 109.35715 | 109.3571543 | 109.3571543 | 109.3571543 | 108.4160087 | 104.9756403 | 101.6637534 | 98.47487758 | 95.40380446 |
| 181226A00045 | 12/26/2018 | 2.87 | 12/28/2020 | 12/26/2018 | 101.09296 | 101.0929594 | 101.0929594 | 101.0929594 | 101.0483077 | 100.6322025 | 100.2195199 | 99.81021776 | 99.40425463 |
| 181226A00059 | 12/26/2018 | 2.87 | 12/28/2020 | 12/26/2018 | 101.09296 | 101.0929594 | 101.0929594 | 101.0929594 | 101.0483077 | 100.6322025 | 100.2195199 | 99.81021776 | 99.40425463 |
| 190104A00033 | 1/4/2019 | 3.37 | 1/31/2029 | 1/4/2019 | 126.09128 | 126.0912829 | 126.0912829 | 126.0912829 | 119.0127186 | 110.4237741 | 102.5400446 | 95.29949114 | 88.64584528 |
| 190108A00002 | 1/8/2019 | 2.89 | 1/8/2021 | 1/8/2019 | 101.1821 | 101.1821004 | 101.1821004 | 101.1821004 | 101.1335558 | 100.6869142 | 100.2442197 | 99.80542016 | 99.37046419 |
| 190111A00010 | 1/11/2019 | 2.87 | 1/7/2022 | 1/11/2019 | 103.77531 | 103.7753078 | 103.7753078 | 103.7753078 | 103.5247456 | 102.0853634 | 100.6731317 | 99.28734897 | 97.92733732 |
| 190111A00037 | 1/11/2019 | 2.68 | 1/11/2022 | 1/11/2019 | 103.76078 | 103.7607793 | 103.7607793 | 103.7607793 | 103.5072895 | 102.0535897 | 100.6275675 | 99.22850131 | 97.85569392 |
| 190114A00040 | 1/14/2019 | 2.89 | 1/14/2025 | 1/14/2019 | 112.49957 | 112.4995694 | 112.4995694 | 112.4995694 | 110.8817228 | 106.340739 | 102.0138018 | 97.88970101 | 93.95787152 |
| 190114A00043 | 1/14/2019 | 2.88 | 1/14/2022 | 1/14/2019 | 103.84038 | 103.8403766 | 103.8403766 | 103.8403766 | 103.5858469 | 102.1273996 | 100.6968111 | 99.29335241 | 97.91631956 |
| 190114A00061 | 1/14/2019 | 2.98 | 1/31/2024 | 1/14/2019 | 109.48593 | 109.4859278 | 109.4859278 | 109.4859278 | 108.4920132 | 104.9556535 | 101.554932 | 98.28391264 | 95.13695215 |
| 180706A00013 | 7/6/2018 | 3.01 | 7/6/2023 | 7/6/2018 | 108.03 | 108.0300013 | 108.0300013 | 108.0300013 | 107.3240709 | 104.3637763 | 101.5012063 | 98.73260663 | 96.05438894 |
| 180716A00034 | 7/16/2018 | 2.89 | 7/14/2023 | 7/16/2018 | 108.28365 | 108.2836498 | 108.2836498 | 108.2836498 | 107.563665 | 104.5659623 | 101.6681599 | 98.8663826 | 96.15692827 |
| 180717A00076 | 7/17/2018 | 3.03 | 7/17/2023 | 7/17/2018 | 108.17214 | 108.1721369 | 108.1721369 | 108.1721369 | 107.4522454 | 104.4609862 | 101.5694173 | 98.77367059 | 96.07005052 |
| 180723A00027 | 1/23/2019 | 3.13 | 1/24/2022 | 1/23/2019 | 104.27301 | 104.273011 | 104.273011 | 104.273011 | 104.0124636 | 102.5243843 | 101.0652248 | 99.63421535 | 98.23061304 |
| 180724A00025 | 7/24/2018 | 2.93 | 7/25/2022 | 7/24/2018 | 105.64704 | 105.6470365 | 105.6470365 | 105.6470365 | 105.2655281 | 103.2614193 | 101.3059203 | 99.39754828 | 97.53487601 |
| 180725A00027 | 7/25/2018 | 2.95 | 12/17/2020 | 7/25/2018 | 101.04362 | 101.0436151 | 101.0436151 | 101.0436151 | 101.0025089 | 100.6168312 | 100.2341071 | 99.8543024 | 99.47738382 |
| 180730A00033 | 7/30/2018 | 3.11 | 7/29/2022 | 7/30/2018 | 105.6729 | 105.6729021 | 105.6729021 | 105.6729021 | 105.2897478 | 103.2816365 | 101.3223633 | 99.41043397 | 97.54441054 |
| 180730A00041 | 7/30/2018 | 3.14 | 7/31/2023 | 7/30/2018 | 108.61077 | 108.6107661 | 108.6107661 | 108.6107661 | 107.8723434 | 104.8377916 | 101.9055551 | 99.07161495 | 96.33213359 |
| 180730A00078 | 7/30/2018 | 3.14 | 7/28/2023 | 7/30/2018 | 108.58723 | 108.5872291 | 108.5872291 | 108.5872291 | 107.8525741 | 104.8262397 | 101.9016814 | 99.07491204 | 96.34212386 |
| 180801A00009 | 8/1/2018 | 2.98 | 3/15/2021 | 8/1/2018 | 101.71526 | 101.7152628 | 101.7152628 | 101.7152628 | 101.6384249 | 101.008724 | 100.3868271 | 99.77258945 | 99.16587004 |
| 180801A00012 | 8/1/2018 | 3.03 | 8/16/2021 | 8/1/2018 | 102.91002 | 102.9100162 | 102.9100162 | 102.9100162 | 102.7494392 | 101.693335 | 100.6589321 | 99.64556595 | 98.65259927 |
| 180803A00009 | 8/3/2018 | 2.93 | 10/30/2020 | 8/3/2018 | 100.6785 | 100.6785 | 100.6785 | 100.6785 | 100.6527989 | 100.4003205 | 100.1491047 | 99.89914214 | 99.65042354 |
| 180809A00030 | 8/9/2018 | 2.94 | 2/9/2021 | 8/9/2018 | 101.438 | 101.4379995 | 101.4379995 | 101.4379995 | 101.3770853 | 100.8417045 | 100.311977 | 99.78781359 | 99.26912678 |
| 180813A00016 | 8/13/2018 | 2.92 | 8/13/2021 | 8/13/2018 | 102.77178 | 102.7717757 | 102.7717757 | 102.7717757 | 102.6132905 | 101.5661303 | 100.5403264 | 99.53522995 | 98.55021825 |
| 180815A00021 | 8/15/2018 | 3.01 | 8/15/2023 | 8/15/2018 | 108.32944 | 108.3294442 | 108.3294442 | 108.3294442 | 107.5725241 | 104.5026541 | 101.5373067 | 98.67233223 | 95.90377114 |
| 180817A00013 | 8/17/2018 | 2.94 | 2/15/2022 | 8/17/2018 | 104.14813 | 104.1481339 | 104.1481339 | 104.1481339 | 103.8748753 | 102.32497 | 100.8060002 | 99.31711071 | 97.85747751 |
| 180817A00026 | 8/17/2018 | 2.83 | 8/17/2020 | 8/17/2018 | 100.12127 | 100.1212678 | 100.1212678 | 100.1212678 | 100.1177551 | 100.0705866 | 100.0234794 | 99.97643361 | 99.92944899 |

Classification | Public

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 180823A00044 | 8/23/2018 | 2.69 | 8/21/2020 | 8/23/2018 | 100.15011 | 100.1501149 | 100.1501149 | 100.1501149 | 100.1457696 | 100.0874232 | 100.0291601 | 99.9709803 | 99.91288351 |
| 180827A00010 | 8/27/2018 | 2.99 | 8/25/2023 | 8/27/2018 | 108.34236 | 108.3423639 | 108.3423639 | 108.3423639 | 107.5725322 | 104.4761305 | 101.4858152 | 98.59734596 | 95.80667784 |
| 180906A00013 | 9/6/2018 | 2.81 | 9/7/2021 | 9/6/2018 | 103.01091 | 103.0109127 | 103.0109127 | 103.0109127 | 102.8348164 | 101.7156378 | 100.6207848 | 99.54947053 | 98.50094161 |
| 180910A00013 | 9/10/2018 | 3.08 | 9/11/2023 | 9/10/2018 | 108.75125 | 108.7512494 | 108.7512494 | 108.7512494 | 107.9578999 | 104.8094676 | 101.7700868 | 98.83534541 | 96.00103779 |
| 180911A00080 | 9/11/2018 | 2.94 | 9/9/2022 | 9/11/2018 | 106.02692 | 106.026922 | 106.026922 | 106.026922 | 105.6083184 | 103.4764432 | 101.3984065 | 99.37247879 | 97.39699975 |
| 180917A00054 | 9/17/2018 | 3.17 | 9/15/2023 | 9/17/2018 | 109.06573 | 109.0657258 | 109.0657258 | 109.0657258 | 108.2661051 | 105.1018652 | 102.0474855 | 99.09850839 | 96.25068611 |
| 180918A00011 | 9/18/2018 | 3.17 | 9/18/2023 | 9/18/2018 | 109.08942 | 109.0894153 | 109.0894153 | 109.0894153 | 108.2857541 | 105.1129854 | 102.0505986 | 99.09410532 | 96.23922845 |
| 190926A00007 | 9/26/2019 | 1.88 | 9/26/2022 | 9/26/2019 | 103.45148 | 103.4514796 | 103.4514796 | 103.4514796 | 103.0257468 | 100.8832294 | 98.7956853 | 96.76131696 | 94.77840038 |
| 190926A00016 | 9/26/2019 | 2.28 | 5/24/2030 | 9/26/2019 | 119.35719 | 119.3571904 | 119.3571904 | 119.3571904 | 110.1225379 | 100.7781345 | 92.31512033 | 84.64547307 | 77.6903821 |
| 190926A00017 | 9/26/2019 | 2.23 | 9/26/2029 | 9/26/2019 | 117.62193 | 117.6219317 | 117.6219317 | 117.6219317 | 109.6259917 | 100.8589737 | 92.8703269 | 85.58668347 | 78.94194949 |
| 190930A00041 | 9/30/2019 | 1.94 | 10/25/2021 | 9/30/2019 | 102.08095 | 102.0809517 | 102.0809517 | 102.0809517 | 101.8728959 | 100.6323471 | 99.42187536 | 98.24039733 | 97.08688113 |
| 191002A00015 | 10/2/2019 | 1.78 | 10/3/2022 | 10/2/2019 | 103.26227 | 103.2622704 | 103.2622704 | 103.2622704 | 102.8313313 | 100.6722511 | 98.56894726 | 96.51958161 | 94.52239192 |
| 191002A00016 | 10/2/2019 | 1.79 | 10/2/2023 | 10/2/2019 | 104.78263 | 104.7826294 | 104.7826294 | 104.7826294 | 103.9742247 | 100.8322798 | 97.80131984 | 94.8767728 | 92.05428517 |
| 191004A00005 | 10/4/2019 | 1.54 | 10/4/2024 | 10/4/2019 | 106.01027 | 106.0102669 | 106.0102669 | 106.0102669 | 104.6210887 | 100.483533 | 96.53163982 | 92.75607394 | 89.14802389 |
| 191009A00026 | 10/9/2019 | 1.74 | 10/7/2022 | 10/9/2019 | 103.19034 | 103.1903445 | 103.1903445 | 103.1903445 | 102.7563336 | 100.5875962 | 98.47510603 | 96.41700079 | 94.41149575 |
| 191017A00026 | 10/17/2019 | 2.3 | 7/17/2029 | 10/17/2019 | 117.88017 | 117.8801673 | 117.8801673 | 117.8801673 | 110.2131872 | 101.5860494 | 93.71023779 | 86.51622463 | 79.94125006 |
| 191018A00006 | 10/18/2019 | 1.89 | 6/1/2022 | 10/18/2019 | 102.9766 | 102.9766043 | 102.9766043 | 102.9766043 | 102.6395586 | 100.8131443 | 99.02796023 | 97.28283953 | 95.57665551 |
| 191018A00007 | 10/18/2019 | 1.89 | 7/1/2022 | 10/18/2019 | 103.08979 | 103.0897945 | 103.0897945 | 103.0897945 | 102.7319355 | 100.8235779 | 98.96004774 | 97.1400246 | 95.36223554 |
| 191023A00006 | 10/23/2019 | 1.95 | 10/23/2024 | 10/23/2019 | 107.0107 | 107.0107043 | 107.0107043 | 107.0107043 | 105.5915256 | 101.4082054 | 97.41370225 | 93.5984521 | 89.95343262 |
| 191104A00018 | 11/5/2019 | 1.96 | 11/5/2024 | 11/5/2019 | 107.11235 | 107.1123517 | 107.1123517 | 107.1123517 | 105.6689266 | 101.4502722 | 97.42339575 | 93.57853457 | 89.90648015 |
| 191104A00019 | 11/5/2019 | 1.9 | 2/1/2022 | 11/5/2019 | 102.46113 | 102.4611262 | 102.4611262 | 102.4611262 | 102.1982379 | 100.7029602 | 99.23715448 | 97.8000259 | 96.39080751 |
| 191108A00011 | 11/8/2019 | 2.08 | 10/18/2024 | 11/8/2019 | 107.54051 | 107.540508 | 107.540508 | 107.540508 | 106.1276422 | 101.9458609 | 97.95217399 | 94.13708444 | 90.49163106 |
| 191126A00022 | 11/26/2019 | 1.72 | 5/26/2023 | 11/26/2019 | 104.56935 | 104.5693512 | 104.5693512 | 104.5693512 | 103.9172926 | 101.1050712 | 98.38303211 | 95.74779859 | 93.19613981 |
| 191203A00004 | 12/4/2019 | 1.87 | 12/4/2024 | 12/4/2019 | 106.84956 | 106.849558 | 106.849558 | 106.849558 | 105.3536457 | 101.0655876 | 96.97583271 | 93.07422766 | 89.35118897 |
| 191204A00013 | 12/4/2019 | 1.72 | 12/4/2024 | 12/4/2019 | 107.04132 | 107.0413231 | 107.0413231 | 107.0413231 | 105.5338677 | 101.21717 | 97.1006968 | 93.17416932 | 89.42788716 |
| 191212A00019 | 12/13/2019 | 1.93 | 12/19/2022 | 12/13/2019 | 103.93944 | 103.939443 | 103.939443 | 103.939443 | 103.4438848 | 101.0731689 | 98.76858095 | 96.52791516 | 94.34905232 |
| 191223A00056 | 12/23/2019 | 2.46 | 12/14/2029 | 12/23/2019 | 120.18766 | 120.18766 | 120.18766 | 120.18766 | 111.7431981 | 102.6984447 | 94.47092257 | 86.98224854 | 80.1619328 |
| 200103A00009 | 1/3/2020 | 1.9 | 1/3/2024 | 1/3/2020 | 105.54561 | 105.5456128 | 105.5456128 | 105.5456128 | 104.6067889 | 101.2109608 | 97.94334256 | 94.79843003 | 91.77098487 |
| 200110A00014 | 1/10/2020 | 1.73 | 1/10/2023 | 1/10/2020 | 103.99153 | 103.9915259 | 103.9915259 | 103.9915259 | 103.4746507 | 101.0366961 | 98.66850183 | 96.36768003 | 94.1319391 |
| 200113A00003 | 1/13/2020 | 1.72 | 1/13/2022 | 1/13/2020 | 102.3603 | 102.3603044 | 102.3603044 | 102.3603044 | 102.1072951 | 100.65902 | 99.23843688 | 97.84482128 | 96.47747363 |
| 200123A00049 | 1/23/2020 | 1.63 | 1/23/2023 | 1/23/2020 | 103.79834 | 103.7983428 | 103.7983428 | 103.7983428 | 103.2703606 | 100.8008538 | 98.40300658 | 96.07433032 | 93.81243853 |
| 190801A00007 | 8/1/2019 | 2.17 | 8/2/2021 | 8/1/2019 | 101.92766 | 101.9276626 | 101.9276626 | 101.9276626 | 101.7770687 | 100.7644706 | 99.771952 | 98.79892041 | 97.84480633 |
| 190805A00004 | 8/5/2019 | 1.7 | 8/5/2022 | 8/5/2019 | 103.22471 | 103.2247119 | 103.2247119 | 103.2247119 | 102.8388338 | 100.8305541 | 98.87168269 | 96.96069076 | 95.09610768 |

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 190805A00007 | 8/5/2019 | 1.88 | 8/5/2022 | 8/5/2019 | 103.22402 | 103.2240238 | 103.2240238 | 103.2240238 | 102.8395956 | 100.8382555 | 98.88603088 | 96.98140537 | 95.12292032 |
| 190806A00027 | 8/6/2019 | 1.71 | 8/7/2023 | 8/6/2019 | 104.86251 | 104.8625057 | 104.8625057 | 104.8625057 | 104.122566 | 101.1135812 | 98.20726667 | 95.39955087 | 92.68654793 |
| 190807A00020 | 8/7/2019 | 1.57 | 2/7/2024 | 8/7/2019 | 105.17398 | 105.1739783 | 105.1739783 | 105.1739783 | 104.1803994 | 100.683945 | 97.32332911 | 94.09254877 | 90.98590034 |
| 190807A00022 | 8/7/2019 | 1.76 | 1/17/2023 | 8/7/2019 | 103.64717 | 103.6471709 | 103.6471709 | 103.6471709 | 103.1270727 | 100.6845385 | 98.31226425 | 96.00783173 | 93.76892075 |
| 190807A00045 | 8/7/2019 | 1.77 | 8/7/2024 | 8/7/2019 | 105.9749 | 105.9749046 | 105.9749046 | 105.9749046 | 104.6958823 | 100.7297841 | 96.93570783 | 93.30529374 | 89.83063336 |
| 190807A00055 | 8/7/2019 | 1.76 | 8/8/2022 | 8/7/2019 | 102.99196 | 102.9919631 | 102.9919631 | 102.9919631 | 102.6055832 | 100.5987672 | 98.64132984 | 96.73174152 | 94.86853093 |
| 190808A00009 | 8/8/2019 | 1.89 | 8/8/2024 | 8/8/2019 | 106.46563 | 106.4656265 | 106.4656265 | 106.4656265 | 105.1825671 | 101.2041216 | 97.39820439 | 93.75642956 | 90.27086404 |
| 190808A00049 | 8/8/2019 | 1.89 | 8/8/2024 | 8/8/2019 | 106.46563 | 106.4656265 | 106.4656265 | 106.4656265 | 105.1825671 | 101.2041216 | 97.39820439 | 93.75642956 | 90.27086404 |
| 190809A00013 | 8/9/2019 | 1.91 | 8/10/2020 | 8/9/2019 | 100.04982 | 100.0498187 | 100.0498187 | 100.0498187 | 100.0477508 | 100.0199796 | 99.99223957 | 99.96453073 | 99.93685302 |
| 190814A00015 | 8/14/2019 | 1.84 | 8/14/2024 | 8/14/2019 | 106.28836 | 106.2883626 | 106.2883626 | 106.2883626 | 104.9958412 | 101.0057053 | 97.18917846 | 93.53779481 | 90.04354755 |
| 190816A00007 | 8/16/2019 | 1.77 | 8/16/2023 | 8/16/2019 | 104.52805 | 104.5280479 | 104.5280479 | 104.5280479 | 103.7812997 | 100.7670691 | 97.85603257 | 95.04408153 | 92.32729568 |
| 190816A00009 | 8/16/2019 | 2.01 | 8/17/2020 | 8/16/2019 | 100.08255 | 100.0825543 | 100.0825543 | 100.0825543 | 100.0790441 | 100.0319088 | 99.9848348 | 99.93782212 | 99.8908706 |
| 190816A00011 | 8/16/2019 | 1.77 | 8/16/2024 | 8/16/2019 | 106.01144 | 106.0114438 | 106.0114438 | 106.0114438 | 104.7168122 | 100.7271661 | 96.91135167 | 93.26088187 | 89.76773047 |
| 190819A00001 | 8/19/2019 | 1.82 | 8/19/2021 | 8/19/2019 | 101.64432 | 101.6443228 | 101.6443228 | 101.6443228 | 101.4826933 | 100.4256295 | 99.3904977 | 98.37662067 | 97.38334894 |
| 190820A00038 | 8/20/2019 | 1.76 | 8/20/2024 | 8/20/2019 | 105.9868 | 105.9867992 | 105.9867992 | 105.9867992 | 104.6854278 | 100.6861451 | 96.86147552 | 93.20287624 | 89.70226926 |
| 190820A00054 | 8/20/2019 | 1.76 | 8/18/2022 | 8/20/2019 | 103.03253 | 103.0325309 | 103.0325309 | 103.0325309 | 102.6382531 | 100.6047552 | 98.62168849 | 96.68747331 | 94.80059137 |
| 190821A00017 | 8/21/2019 | 1.8 | 8/21/2024 | 8/21/2019 | 106.15448 | 106.1544793 | 106.1544793 | 106.1544793 | 104.8505883 | 100.8453927 | 97.01511666 | 93.35119913 | 89.84554487 |
| 190821A00035 | 8/21/2019 | 2.03 | 8/21/2020 | 8/21/2019 | 100.10315 | 100.1031455 | 100.1031455 | 100.1031455 | 100.0988094 | 100.0405878 | 99.98244844 | 99.92439118 | 99.86641586 |
| 190822A00016 | 8/22/2019 | 1.84 | 8/22/2022 | 8/22/2019 | 103.21533 | 103.2153331 | 103.2153331 | 103.2153331 | 102.8176028 | 100.7716722 | 98.77663258 | 96.83088324 | 94.93288581 |
| 190823A00002 | 8/23/2019 | 1.89 | 8/24/2020 | 8/23/2019 | 100.11823 | 100.118232 | 100.118232 | 100.118232 | 100.1132693 | 100.0466374 | 99.98010616 | 99.9136755 | 99.84734514 |
| 190826A00029 | 8/26/2019 | 1.53 | 8/26/2024 | 8/26/2019 | 105.81593 | 105.8159259 | 105.8159259 | 105.8159259 | 104.4968249 | 100.4649696 | 96.6102617 | 92.92398418 | 89.39789733 |
| 190828A00008 | 8/28/2019 | 1.75 | 8/29/2022 | 8/28/2019 | 103.05614 | 103.0561416 | 103.0561416 | 103.0561416 | 102.6532158 | 100.5906115 | 98.57960716 | 96.61856761 | 94.705922 |
| 190211A00016 | 2/11/2019 | 3.01 | 2/11/2025 | 2/11/2019 | 112.39978 | 112.3997781 | 112.3997781 | 112.3997781 | 110.7371865 | 106.1481344 | 101.7781121 | 97.61549774 | 93.64934784 |
| 190228A00037 | 2/28/2019 | 2.85 | 2/28/2023 | 2/28/2019 | 106.65572 | 106.6557197 | 106.6557197 | 106.6557197 | 106.090389 | 103.4914638 | 100.969794 | 98.52261242 | 96.14727008 |
| 190301A00012 | 3/1/2019 | 3.41 | 3/1/2029 | 3/1/2019 | 126.67335 | 126.6733484 | 126.6733484 | 126.6733484 | 119.4488683 | 110.7640175 | 102.7978627 | 95.48668819 | 88.77275116 |
| 190308A00014 | 3/8/2019 | 2.69 | 3/8/2021 | 3/8/2019 | 101.48524 | 101.4852408 | 101.4852408 | 101.4852408 | 101.4119858 | 100.8023055 | 100.1999504 | 99.60478901 | 99.01669283 |
| 190311A00003 | 3/11/2019 | 2.68 | 9/10/2021 | 3/11/2019 | 102.7067 | 102.7066995 | 102.7066995 | 102.7066995 | 102.5291336 | 101.4062817 | 100.3079833 | 99.23343918 | 98.18188463 |
| 190313A00011 | 3/13/2019 | 2.53 | 3/11/2022 | 3/13/2019 | 103.93442 | 103.9344234 | 103.9344234 | 103.9344234 | 103.6461734 | 102.0257768 | 100.438607 | 98.88370858 | 97.36016246 |
| 190313A00019 | 3/13/2019 | 2.73 | 7/15/2022 | 3/13/2019 | 104.81254 | 104.8125407 | 104.8125407 | 104.8125407 | 104.4413705 | 102.4789941 | 100.563515 | 98.69352485 | 96.86766715 |
| 190315A00014 | 3/15/2019 | 2.74 | 3/15/2024 | 3/15/2019 | 108.9324 | 108.9324049 | 108.9324049 | 108.9324049 | 107.8744206 | 104.2280616 | 100.7254052 | 97.35998405 | 94.12566099 |
| 190315A00026 | 3/15/2019 | 2.66 | 1/19/2021 | 3/15/2019 | 101.1531 | 101.1530961 | 101.1530961 | 101.1530961 | 101.1005665 | 100.6237236 | 100.1513821 | 99.68347822 | 99.21994955 |
| 190326A00024 | 3/26/2019 | 2.59 | 3/26/2024 | 3/26/2019 | 108.45371 | 108.4537063 | 108.4537063 | 108.4537063 | 107.38085 | 103.7146619 | 100.1939965 | 96.81225787 | 93.56318975 |
| 190327A00013 | 3/27/2019 | 2.53 | 3/27/2024 | 3/27/2019 | 108.23877 | 108.2387679 | 108.2387679 | 108.2387679 | 107.1652534 | 103.5004008 | 99.98114535 | 96.60088299 | 93.35334967 |

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 190327A00024 | 3/27/2019 | 2.48 | 3/25/2022 | 3/27/2019 | 103.64238 | 103.6423754 | 103.6423754 | 103.6423754 | 103.3470938 | 101.6970763 | 100.0813271 | 98.49884335 | 96.948661 |
| 190327A00032 | 3/27/2019 | 2.53 | 1/26/2024 | 3/27/2019 | 107.86497 | 107.8649653 | 107.8649653 | 107.8649653 | 106.8843829 | 103.3893195 | 100.0280987 | 96.79487938 | 93.68410757 |
| 190328A00031 | 4/25/2019 | 2.56 | 4/25/2024 | 4/25/2019 | 108.52952 | 108.5295211 | 108.5295211 | 108.5295211 | 107.4096304 | 103.6624112 | 100.0667447 | 96.6156252 | 93.30241602 |
| 190329A00033 | 3/29/2019 | 2.52 | 3/29/2021 | 3/29/2019 | 101.51353 | 101.5135319 | 101.5135319 | 101.5135319 | 101.4297911 | 100.7624466 | 100.1038636 | 99.45387049 | 98.81230006 |
| 190401A00007 | 4/1/2019 | 2.6 | 4/3/2023 | 4/1/2019 | 106.22047 | 106.2204663 | 106.2204663 | 106.2204663 | 105.6229228 | 102.9399936 | 100.3389886 | 97.81688421 | 95.37079073 |
| 190401A00023 | 4/1/2019 | 2.54 | 4/1/2021 | 4/1/2019 | 101.54592 | 101.5459195 | 101.5459195 | 101.5459195 | 101.4606522 | 100.7849698 | 100.1182647 | 99.46035895 | 98.81107937 |
| 190416A00019 | 4/16/2019 | 2.7 | 4/14/2023 | 4/16/2019 | 106.56319 | 106.5631862 | 106.5631862 | 106.5631862 | 105.9534835 | 103.2360431 | 100.6023135 | 98.04917391 | 95.57364352 |
| 190424A00023 | 4/24/2019 | 2.43 | 4/24/2023 | 4/24/2019 | 106.39033 | 106.3903327 | 106.3903327 | 106.3903327 | 105.7679755 | 103.0146609 | 100.3471156 | 97.76210491 | 95.256541 |
| 190430A00021 | 4/30/2019 | 2.52 | 10/29/2021 | 4/30/2019 | 102.83112 | 102.8311237 | 102.8311237 | 102.8311237 | 102.6197092 | 101.3634013 | 100.1377716 | 98.94170692 | 97.77414715 |
| 190509A00019 | 5/9/2019 | 2.5 | 10/12/2021 | 5/9/2019 | 102.701 | 102.7010045 | 102.7010045 | 102.7010045 | 102.501055 | 101.291565 | 100.1105531 | 98.95702208 | 97.83002086 |
| 190515A00013 | 5/15/2019 | 2.45 | 11/16/2020 | 5/15/2019 | 100.66104 | 100.6610361 | 100.6610361 | 100.6610361 | 100.6299173 | 100.3305399 | 100.0329527 | 99.73713948 | 99.44308442 |
| 190521A00043 | 5/21/2019 | 2.54 | 5/22/2023 | 5/21/2019 | 106.3614 | 106.3613967 | 106.3613967 | 106.3613967 | 105.7118995 | 102.8962409 | 100.170135 | 97.53023361 | 94.97333386 |
| 190528A00005 | 5/28/2019 | 2.42 | 6/15/2023 | 5/28/2019 | 106.16156 | 106.1615582 | 106.1615582 | 106.1615582 | 105.4855609 | 102.6088187 | 99.82551969 | 97.13213734 | 94.52529766 |
| 190820A00021 | 8/20/2019 | 2.13 | 8/20/2029 | 8/20/2019 | 116.5241 | 116.5241025 | 116.5241025 | 116.5241025 | 108.7302226 | 100.0891098 | 92.20890292 | 85.01849204 | 78.45375479 |
| 190821A00021 | 8/21/2019 | 1.79 | 8/18/2022 | 8/21/2019 | 103.09467 | 103.0946652 | 103.0946652 | 103.0946652 | 102.7002786 | 100.6661258 | 98.68241716 | 96.74757271 | 94.86007375 |
| 190826A00006 | 8/26/2019 | 1.72 | 8/26/2024 | 8/26/2019 | 105.8468 | 105.8467982 | 105.8467982 | 105.8467982 | 104.53582 | 100.5241803 | 96.68826313 | 93.01944413 | 89.50956983 |
| 190826A00034 | 8/26/2019 | 1.9 | 8/24/2029 | 8/26/2019 | 116.2952 | 116.2952023 | 116.2952023 | 116.2952023 | 108.385478 | 99.66523968 | 91.71760672 | 84.47004458 | 77.85717493 |
| 190826A00056 | 8/26/2019 | 1.72 | 8/26/2024 | 8/26/2019 | 105.8468 | 105.8467982 | 105.8467982 | 105.8467982 | 104.53582 | 100.5241803 | 96.68826313 | 93.01944413 | 89.50956983 |
| 190826A00057 | 8/26/2019 | 1.87 | 8/26/2025 | 8/26/2019 | 107.98422 | 107.9842153 | 107.9842153 | 107.9842153 | 105.9228684 | 100.9375844 | 96.21627216 | 91.74359324 | 87.50518017 |
| 190829A00011 | 8/30/2019 | 1.98 | 12/15/2020 | 8/30/2019 | 100.65966 | 100.6596605 | 100.6596605 | 100.6596605 | 100.6192869 | 100.2400208 | 99.86361984 | 99.49005162 | 99.11928412 |
| 190905A00015 | 9/5/2019 | 1.78 | 9/6/2022 | 9/5/2019 | 103.15192 | 103.1519166 | 103.1519166 | 103.1519166 | 102.7425188 | 100.6573985 | 98.62481298 | 96.64308239 | 94.71059361 |
| 190913A00001 | 9/13/2019 | 1.96 | 9/14/2020 | 9/13/2019 | 100.23028 | 100.2302759 | 100.2302759 | 100.2302759 | 100.2196146 | 100.0946989 | 99.9701099 | 99.84584641 | 99.72190709 |
| 190913A00025 | 9/13/2019 | 2.04 | 3/15/2022 | 9/13/2019 | 102.87657 | 102.8765681 | 102.8765681 | 102.8765681 | 102.5882113 | 100.9708959 | 99.38683457 | 97.83506729 | 96.31467075 |
| 190916A00008 | 9/16/2019 | 2.05 | 9/16/2021 | 9/16/2019 | 102.02679 | 102.0267904 | 102.0267904 | 102.0267904 | 101.8454639 | 100.7104711 | 99.60068389 | 98.51526982 | 97.45343257 |
| 190917A00028 | 9/17/2019 | 2.02 | 3/1/2023 | 9/17/2019 | 104.49731 | 104.4973057 | 104.4973057 | 104.4973057 | 103.9361421 | 101.3628782 | 98.86636376 | 96.44384437 | 94.09268326 |
| 190920A00018 | 9/20/2019 | 1.98 | 9/20/2022 | 9/20/2019 | 103.64154 | 103.6415405 | 103.6415405 | 103.6415405 | 103.2201915 | 101.0918254 | 99.01775698 | 96.9962227 | 95.02553045 |
| 190920A00021 | 9/20/2019 | 1.96 | 9/18/2026 | 9/20/2019 | 111.41549 | 111.4154907 | 111.4154907 | 111.4154907 | 108.0842959 | 102.0076387 | 96.31164902 | 90.97050779 | 85.96027897 |
| 190923A00012 | 9/23/2019 | 2.43 | 9/25/2034 | 9/23/2019 | 132.9069 | 132.9069031 | 132.9069031 | 127.6049045 | 113.002038 | 99.94753502 | 88.58814471 | 78.69254517 | 70.06214734 |
| 190926A00019 | 9/26/2019 | 1.94 | 9/26/2024 | 9/26/2019 | 106.88948 | 106.8894777 | 106.8894777 | 106.8894777 | 105.5190337 | 101.4055571 | 97.47507112 | 93.71844529 | 90.12705751 |
| 190930A00014 | 9/30/2019 | 1.89 | 9/30/2022 | 9/30/2019 | 103.49082 | 103.4908215 | 103.4908215 | 103.4908215 | 103.0618591 | 100.9080907 | 98.80978654 | 96.76512506 | 94.77235975 |
| 191001A00005 | 10/1/2019 | 1.8 | 4/18/2023 | 10/1/2019 | 104.1225 | 104.1225037 | 104.1225037 | 104.1225037 | 103.5149269 | 100.8201972 | 98.20900374 | 95.67821646 | 93.2248463 |
| 191002A00017 | 10/2/2019 | 1.84 | 10/2/2024 | 10/2/2019 | 106.49588 | 106.4958832 | 106.4958832 | 106.4958832 | 105.1167616 | 100.9959352 | 97.05913292 | 93.29713949 | 89.7012545 |
| 191003A00013 | 10/3/2019 | 1.66 | 10/3/2022 | 10/3/2019 | 102.9985 | 102.9984984 | 102.9984984 | 102.9984984 | 102.5680584 | 100.4119183 | 98.31149423 | 96.26494987 | 94.27052466 |

Classification | Public

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 191003A00033 | 10/3/2019 | 1.54 | 10/3/2022 | 10/3/2019 | 103.13086 | 103.1308583 | 103.1308583 | 103.1308583 | 102.6984659 | 100.5330718 | 98.4237669 | 96.36869823 | 94.36608983 |
| 191004A00011 | 10/4/2019 | 1.77 | 10/5/2020 | 10/4/2019 | 100.3028 | 100.3027987 | 100.3027987 | 100.3027987 | 100.2855868 | 100.1024729 | 99.92003472 | 99.73826863 | 99.55717082 |
| 191008A00022 | 10/8/2019 | 1.55 | 10/8/2021 | 10/8/2019 | 101.72445 | 101.7244497 | 101.7244497 | 101.7244497 | 101.5275045 | 100.3321381 | 99.16475735 | 98.02438896 | 96.91010417 |
| 191009A00028 | 10/9/2019 | 1.76 | 10/9/2024 | 10/9/2019 | 106.18758 | 106.1875832 | 106.1875832 | 106.1875832 | 104.7973859 | 100.6653125 | 96.7185586 | 92.94780467 | 89.34425463 |
| 191115A00030 | 11/15/2019 | 2.35 | 11/9/2029 | 11/15/2019 | 118.9639 | 118.9638968 | 118.9638968 | 118.9638968 | 110.7222839 | 101.8049772 | 93.68716131 | 86.29272228 | 79.55316547 |
| 191120A00011 | 11/20/2019 | 1.88 | 1/20/2023 | 11/20/2019 | 103.95917 | 103.9591744 | 103.9591744 | 103.9591744 | 103.435731 | 100.9814855 | 98.59803434 | 96.2829333 | 94.0338375 |
| 191120A00024 | 11/20/2019 | 2.23 | 11/16/2029 | 11/20/2019 | 117.88706 | 117.8870585 | 117.8870585 | 117.8870585 | 109.6389708 | 100.7534676 | 92.66736134 | 85.30436782 | 78.59585034 |
| 191125A00036 | 11/25/2019 | 2.29 | 11/23/2029 | 11/25/2019 | 118.48214 | 118.4821435 | 118.4821435 | 118.4821435 | 110.1848231 | 101.2584816 | 93.13606871 | 85.74078271 | 79.00352631 |
| 191129A00010 | 11/29/2019 | 1.94 | 8/27/2021 | 11/29/2019 | 101.80909 | 101.8090949 | 101.8090949 | 101.8090949 | 101.6420574 | 100.5624129 | 99.5056096 | 98.47092879 | 97.45768156 |
| 191206A00021 | 12/6/2019 | 2.02 | 12/6/2024 | 12/6/2019 | 107.51571 | 107.5157133 | 107.5157133 | 107.5157133 | 106.0123922 | 101.7049723 | 97.59679534 | 93.6776525 | 89.93790876 |
| 191212A00028 | 12/13/2019 | 1.93 | 1/17/2023 | 12/13/2019 | 104.07055 | 104.0705499 | 104.0705499 | 104.0705499 | 103.5495046 | 101.1016573 | 98.72418733 | 96.41467273 | 94.17078996 |
| 191223A00009 | 12/23/2019 | 1.95 | 12/23/2022 | 12/23/2019 | 104.00596 | 104.00596 | 104.00596 | 104.00596 | 103.506863 | 101.1249073 | 98.80966024 | 96.55888748 | 94.37044292 |
| 191231A00006 | 12/31/2019 | 1.88 | 12/31/2021 | 12/31/2019 | 102.30348 | 102.3034757 | 102.3034757 | 102.3034757 | 102.0584303 | 100.6486421 | 99.26512094 | 97.9071972 | 96.57422349 |
| 200109A00012 | 1/14/2020 | 1.94 | 12/15/2022 | 1/14/2020 | 103.94535 | 103.9453515 | 103.9453515 | 103.9453515 | 103.4531771 | 101.0928211 | 98.79803363 | 96.56663655 | 94.39653687 |
| 200115A00022 | 1/15/2020 | 1.88 | 10/14/2022 | 1/15/2020 | 103.53032 | 103.5303244 | 103.5303244 | 103.5303244 | 103.0900461 | 100.8991761 | 98.76549005 | 96.68708035 | 94.66211938 |
| 200123A00013 | 1/27/2020 | 1.89 | 1/27/2025 | 1/27/2020 | 107.2185 | 107.2185047 | 107.2185047 | 107.2185047 | 105.6159714 | 101.1834852 | 96.96237467 | 92.94147373 | 89.11026409 |
| 200129A00017 | 2/3/2020 | 1.75 | 8/15/2022 | 2/3/2020 | 102.99973 | 102.9997319 | 102.9997319 | 102.9997319 | 102.6078592 | 100.5825808 | 98.60741215 | 96.68078876 | 94.80120665 |
| 200131A00014 | 2/5/2020 | 1.7 | 2/22/2022 | 2/5/2020 | 102.23694 | 102.236936 | 102.236936 | 102.236936 | 101.9618818 | 100.4070097 | 98.88342279 | 97.39024617 | 95.92663705 |
| 200131A00047 | 1/31/2020 | 1.68 | 1/31/2023 | 1/31/2020 | 103.50157 | 103.5015719 | 103.5015719 | 103.5015719 | 102.9694701 | 100.4924874 | 98.0878221 | 95.75294689 | 93.48543867 |
| 200203A00001 | 2/3/2020 | 1.7 | 2/3/2023 | 2/3/2020 | 103.56355 | 103.5635513 | 103.5635513 | 103.5635513 | 103.0285488 | 100.5421238 | 98.12845644 | 95.78499655 | 93.50929975 |
| 200203A00004 | 2/3/2020 | 1.7 | 2/3/2023 | 2/3/2020 | 103.56355 | 103.5635513 | 103.5635513 | 103.5635513 | 103.0285488 | 100.5421238 | 98.12845644 | 95.78499655 | 93.50929975 |
| 200205A00011 | 2/7/2020 | 2.31 | 2/7/2024 | 2/7/2020 | 107.15679 | 107.1567911 | 107.1567911 | 107.1567911 | 106.161242 | 102.6463537 | 99.2672671 | 96.01800376 | 92.89288206 |
| 200210A00005 | 2/10/2020 | 1.77 | 2/10/2027 | 2/10/2020 | 110.89786 | 110.8978574 | 110.8978574 | 110.8978574 | 107.0195391 | 100.609489 | 94.62492442 | 89.03543787 | 83.81294417 |
| 200214A00020 | 2/18/2020 | 1.78 | 1/15/2025 | 2/18/2020 | 106.62582 | 106.625816 | 106.625816 | 106.625816 | 105.0506719 | 100.6625466 | 96.48237163 | 92.49923668 | 88.70285976 |
| 200219A00007 | 2/19/2020 | 1.81 | 8/19/2021 | 2/19/2020 | 101.63367 | 101.6336731 | 101.6336731 | 101.6336731 | 101.4720515 | 100.4150483 | 99.37997626 | 98.36615813 | 97.37294445 |
| 200220A00008 | 2/20/2020 | 1.74 | 2/20/2024 | 2/20/2020 | 105.18267 | 105.1826699 | 105.1826699 | 105.1826699 | 104.1754595 | 100.659809 | 97.28141985 | 94.03419193 | 90.91233131 |
| 200221A00013 | 2/21/2020 | 1.69 | 2/21/2025 | 2/21/2020 | 106.40715 | 106.4071494 | 106.4071494 | 106.4071494 | 104.7595791 | 100.2771578 | 96.01156415 | 91.9511871 | 88.08509907 |
| 200224A00007 | 2/24/2020 | 1.59 | 2/24/2025 | 2/24/2020 | 105.95801 | 105.9580084 | 105.9580084 | 105.9580084 | 104.307114 | 99.82655218 | 95.56320018 | 91.50540517 | 87.64220155 |
| 200128A00015 | 1/28/2020 | 1.81 | 1/28/2025 | 1/28/2020 | 106.8605 | 106.8604953 | 106.8604953 | 106.8604953 | 105.258067 | 100.8310422 | 96.61536047 | 92.59984822 | 88.77398049 |
| 200129A00010 | 1/29/2020 | 1.76 | 1/31/2022 | 1/29/2020 | 102.24372 | 102.2437225 | 102.2437225 | 102.2437225 | 101.9816851 | 100.4910513 | 99.0297734 | 97.59706108 | 96.19215176 |
| 200131A00010 | 2/3/2020 | 1.68 | 2/3/2023 | 2/3/2020 | 103.5128 | 103.5128046 | 103.5128046 | 103.5128046 | 102.9779185 | 100.4921417 | 98.07910788 | 95.73626755 | 93.46117669 |
| 200131A00032 | 1/31/2020 | 2.1 | 1/31/2030 | 1/31/2020 | 117.0474 | 117.0474031 | 117.0474031 | 117.0474031 | 108.4490323 | 99.44481108 | 91.26837015 | 83.83910608 | 77.08464929 |
| 200203A00005 | 2/3/2020 | 1.7 | 5/3/2023 | 2/3/2020 | 103.90631 | 103.9063088 | 103.9063088 | 103.9063088 | 103.2838494 | 100.5522232 | 97.90636448 | 95.34302967 | 92.85912224 |

Classification | Public

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 200203A00006 | 2/3/2020 | 1.76 | 2/3/2025 | 2/3/2020 | 106.65791 | 106.6579073 | 106.6579073 | 106.6579073 | 105.0448011 | 100.6065153 | 96.38086663 | 92.35657429 | 88.52301478 |
| 200207A00017 | 2/7/2020 | 1.96 | 2/8/2027 | 2/7/2020 | 110.83997 | 110.8399713 | 110.8399713 | 110.8399713 | 107.0090024 | 100.6535516 | 94.71802522 | 89.17252475 | 83.98942715 |
| 200214A00013 | 2/18/2020 | 1.78 | 11/10/2021 | 2/18/2020 | 101.94745 | 101.947447 | 101.947447 | 101.947447 | 101.7299421 | 100.4508892 | 99.20018253 | 97.9768796 | 96.78007974 |
| 200220A00002 | 2/20/2020 | 1.76 | 2/20/2025 | 2/20/2020 | 106.72491 | 106.7249053 | 106.7249053 | 106.7249053 | 105.0774569 | 100.5906403 | 96.32065515 | 92.25589869 | 88.38545062 |
| 200224A00004 | 2/24/2020 | 1.68 | 2/24/2021 | 2/24/2020 | 100.82134 | 100.8213351 | 100.8213351 | 100.8213351 | 100.7540603 | 100.1794997 | 99.61147187 | 99.04986603 | 98.49457374 |
| 200225A00012 | 2/25/2020 | 1.57 | 2/25/2025 | 2/25/2020 | 105.86935 | 105.8693512 | 105.8693512 | 105.8693512 | 104.2169911 | 99.73567868 | 95.4717513 | 91.41354008 | 87.55006477 |
| 200226A00006 | 2/26/2020 | 1.57 | 2/26/2025 | 2/26/2020 | 105.87277 | 105.8727719 | 105.8727719 | 105.8727719 | 104.2184012 | 99.73426046 | 95.4677524 | 91.407189 | 87.54157236 |
| 200227A00005 | 2/27/2020 | 1.43 | 2/27/2024 | 2/27/2020 | 104.09171 | 104.0917124 | 104.0917124 | 104.0917124 | 103.0784395 | 99.56317772 | 96.18594453 | 92.94057451 | 89.82121346 |
| 200227A00026 | 2/27/2020 | 1.41 | 2/27/2023 | 2/27/2020 | 102.89973 | 102.8997285 | 102.8997285 | 102.8997285 | 102.3442473 | 99.79738134 | 97.32650679 | 94.92889904 | 92.60194967 |
| 200228A00019 | 2/28/2020 | 1.21 | 2/20/2025 | 2/28/2020 | 105.03404 | 105.0340419 | 105.0340419 | 105.0340419 | 103.3851792 | 98.91145497 | 94.65513111 | 90.60452983 | 86.7486626 |
| 200228A00030 | 2/28/2020 | 1.32 | 2/28/2023 | 2/28/2020 | 102.66817 | 102.6681709 | 102.6681709 | 102.6681709 | 102.112327 | 99.56563673 | 97.09501362 | 94.69772756 | 92.371165 |
| 200228A00073 | 2/28/2020 | 1.32 | 2/28/2023 | 2/28/2020 | 102.66817 | 102.6681709 | 102.6681709 | 102.6681709 | 102.112327 | 99.56563673 | 97.09501362 | 94.69772756 | 92.371165 |
| 200302A00033 | 3/2/2020 | 1.31 | 3/3/2025 | 3/2/2020 | 104.68813 | 104.6881346 | 104.6881346 | 104.6881346 | 103.0307262 | 98.56048566 | 94.3081122 | 90.26186641 | 86.41070427 |
| 200303A00002 | 3/3/2020 | 1.06 | 3/3/2023 | 3/3/2020 | 102.467 | 102.4669999 | 102.4669999 | 102.4669999 | 101.9062801 | 99.34432755 | 96.85929714 | 94.44841369 | 92.10902122 |
| 200304A00007 | 3/4/2020 | 1.01 | 3/15/2022 | 3/4/2020 | 101.18697 | 101.1869718 | 101.1869718 | 101.1869718 | 100.9008193 | 99.29781194 | 97.72780235 | 96.18983753 | 94.68300102 |
| 200304A00040 | 3/4/2020 | 1.12 | 3/1/2024 | 3/4/2020 | 102.97999 | 102.9799864 | 102.9799864 | 102.9799864 | 101.9666142 | 98.46330756 | 95.09801892 | 91.86456733 | 88.75708464 |
| 200305A00040 | 3/10/2020 | 0.99 | 3/10/2023 | 3/10/2020 | 101.82739 | 101.8273893 | 101.8273893 | 101.8273893 | 101.2639648 | 98.70253416 | 96.21828549 | 93.80842267 | 91.47027026 |
| 200306A00014 | 3/6/2020 | 1.38 | 3/6/2030 | 3/6/2020 | 110.30414 | 110.3041357 | 110.3041357 | 110.3041357 | 101.7210963 | 92.94328688 | 84.98799611 | 77.7740251 | 71.22856639 |
| 200306A00037 | 3/6/2020 | 1.11 | 3/6/2026 | 3/6/2020 | 104.52626 | 104.5262562 | 104.5262562 | 104.5262562 | 101.9588703 | 96.5904305 | 91.53396105 | 86.76977933 | 82.2795442 |
| 190903A00004 | 9/3/2019 | 1.77 | 9/6/2022 | 9/3/2019 | 103.13068 | 103.1306808 | 103.1306808 | 103.1306808 | 102.7213213 | 100.6364301 | 98.60406919 | 96.62255865 | 94.69028556 |
| 190906A00014 | 9/6/2019 | 1.57 | 9/6/2024 | 9/6/2019 | 106.02487 | 106.0248696 | 106.0248696 | 106.0248696 | 104.6854607 | 100.6208161 | 96.7357606 | 93.02140565 | 89.4693524 |
| 190909A00028 | 9/9/2019 | 1.84 | 9/9/2022 | 9/9/2019 | 103.29208 | 103.2920812 | 103.2920812 | 103.2920812 | 102.8800611 | 100.7853029 | 98.74346225 | 96.75284115 | 94.81180957 |
| 190917A00022 | 9/17/2019 | 2.02 | 9/16/2022 | 9/17/2019 | 103.70904 | 103.7090432 | 103.7090432 | 103.7090432 | 103.2907305 | 101.1724676 | 99.10804126 | 97.09571065 | 95.13380515 |
| 190917A00045 | 9/17/2019 | 1.86 | 9/17/2021 | 9/17/2019 | 101.99646 | 101.9964587 | 101.9964587 | 101.9964587 | 101.8139699 | 100.6737265 | 99.55891139 | 98.46868132 | 97.40223001 |
| 190918A00003 | 9/18/2019 | 1.95 | 9/19/2022 | 9/18/2019 | 103.57212 | 103.5721204 | 103.5721204 | 103.5721204 | 103.1516899 | 101.0267945 | 98.95606232 | 96.9377358 | 94.97012881 |
| 190925A00024 | 9/25/2019 | 1.88 | 4/14/2022 | 9/25/2019 | 102.72913 | 102.7291261 | 102.7291261 | 102.7291261 | 102.4229179 | 100.726843 | 99.06685598 | 97.44186944 | 95.85083993 |
| 190926A00006 | 9/26/2019 | 1.7 | 9/26/2022 | 9/26/2019 | 103.4526 | 103.4525989 | 103.4525989 | 103.4525989 | 103.0251918 | 100.8749784 | 98.78007541 | 96.73866999 | 94.74902388 |
| 190926A00012 | 9/26/2019 | 1.93 | 9/27/2021 | 9/26/2019 | 101.93994 | 101.9399394 | 101.9399394 | 101.9399394 | 101.7508008 | 100.5866495 | 99.44901721 | 98.33700625 | 97.24975881 |
| 190930A00035 | 9/30/2019 | 1.93 | 9/30/2024 | 9/30/2019 | 106.86547 | 106.865467 | 106.865467 | 106.865467 | 105.4881002 | 101.3646801 | 97.4251028 | 93.66017478 | 90.06121567 |
| 190930A00040 | 9/30/2019 | 1.92 | 2/25/2022 | 9/30/2019 | 102.5984 | 102.5983963 | 102.5983963 | 102.5983963 | 102.3211137 | 100.7545107 | 99.21951513 | 97.71523876 | 96.24082623 |
| 190930A00070 | 9/30/2019 | 1.93 | 9/27/2024 | 9/30/2019 | 106.85205 | 106.8520495 | 106.8520495 | 106.8520495 | 105.4800316 | 101.3647149 | 97.43258059 | 93.6744834 | 90.08178748 |
| 190930A00071 | 9/30/2019 | 2.05 | 9/29/2025 | 9/30/2019 | 109.06471 | 109.0647147 | 109.0647147 | 109.0647147 | 106.9112799 | 101.812757 | 96.98797244 | 92.4207892 | 88.09610816 |
| 191003A00014 | 10/3/2019 | 1.71 | 9/20/2024 | 10/3/2019 | 105.90258 | 105.9025821 | 105.9025821 | 105.9025821 | 104.547616 | 100.4701027 | 96.57362978 | 92.8491884 | 89.28826939 |

Classification | Public

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 191003A00019 | 10/3/2019 | 1.71 | 9/27/2024 | 10/3/2019 | 105.92966 | 105.9296567 | 105.9296567 | 105.9296567 | 104.5622613 | 100.465982 | 96.55227067 | 92.81200703 | 89.23657898 |
| 191003A00020 | 10/3/2019 | 1.72 | 10/3/2022 | 10/3/2019 | 103.13038 | 103.1303844 | 103.1303844 | 103.1303844 | 102.6996949 | 100.5420847 | 98.44022075 | 96.39226574 | 94.39645829 |
| 191004A00002 | 10/4/2019 | 2.08 | 10/4/2029 | 10/4/2019 | 116.2867 | 116.2867049 | 116.2867049 | 116.2867049 | 108.2858531 | 99.55934346 | 91.61075171 | 84.36652838 | 77.76043538 |
| 191004A00009 | 10/4/2019 | 1.71 | 10/4/2021 | 10/4/2019 | 101.7097 | 101.7096995 | 101.7096995 | 101.7096995 | 101.5159469 | 100.33437 | 99.18015509 | 98.05236075 | 96.95008823 |
| 191009A00018 | 10/9/2019 | 1.74 | 10/12/2021 | 10/9/2019 | 101.778 | 101.7779984 | 101.7779984 | 101.7779984 | 101.5788647 | 100.3753031 | 99.2001225 | 98.05232833 | 96.93097204 |
| 191010A00013 | 10/10/2019 | 1.59 | 10/7/2022 | 10/10/2019 | 103.25732 | 103.2573162 | 103.2573162 | 103.2573162 | 102.8214574 | 100.6441309 | 98.52341357 | 96.45742698 | 94.44437111 |
| 191015A00001 | 10/15/2019 | 1.87 | 10/15/2021 | 10/15/2019 | 101.94916 | 101.9491589 | 101.9491589 | 101.9491589 | 101.7478773 | 100.5351311 | 99.35116581 | 98.19496631 | 97.06556471 |
| 191021A00021 | 10/21/2019 | 2.22 | 12/21/2027 | 10/21/2019 | 114.18761 | 114.1876122 | 114.1876122 | 114.1876122 | 109.0680111 | 101.8633421 | 95.18836873 | 89.0014039 | 83.26423966 |
| 191021A00033 | 10/22/2019 | 1.9 | 7/18/2022 | 10/22/2019 | 103.18473 | 103.1847343 | 103.1847343 | 103.1847343 | 102.8140074 | 100.8602066 | 98.95335983 | 97.09205066 | 95.27491505 |
| 191104A00023 | 11/4/2019 | 2.24 | 8/4/2028 | 11/4/2019 | 115.52682 | 115.5268192 | 115.5268192 | 115.5268192 | 109.4499335 | 101.6808358 | 94.52521952 | 87.9313752 | 81.85220237 |
| 190115A00028 | 1/15/2019 | 2.86 | 11/8/2021 | 1/15/2019 | 103.3315 | 103.3314969 | 103.3314969 | 103.3314969 | 103.1137826 | 101.8299853 | 100.5751914 | 99.3484171 | 98.1487232 |
| 190115A00029 | 1/15/2019 | 2.86 | 11/8/2021 | 1/15/2019 | 103.3315 | 103.3314969 | 103.3314969 | 103.3314969 | 103.1137826 | 101.8299853 | 100.5751914 | 99.3484171 | 98.1487232 |
| 190115A00063 | 1/15/2019 | 2.96 | 1/16/2024 | 1/15/2019 | 109.30518 | 109.3051787 | 109.3051787 | 109.3051787 | 108.3337822 | 104.8395771 | 101.4779371 | 98.24312589 | 95.12968722 |
| 190118A00023 | 1/18/2019 | 2.9 | 1/19/2021 | 1/18/2019 | 101.26768 | 101.2676832 | 101.2676832 | 101.2676832 | 101.2151202 | 100.7379549 | 100.2652932 | 99.7970713 | 99.33322678 |
| 190123A00036 | 1/23/2019 | 3.32 | 1/23/2029 | 1/23/2019 | 127.40978 | 127.409777 | 127.409777 | 127.409777 | 120.2532564 | 111.5548913 | 103.5710597 | 96.23889942 | 89.50139473 |
| 190130A00020 | 1/30/2019 | 2.97 | 4/17/2023 | 1/30/2019 | 107.32242 | 107.3224157 | 107.3224157 | 107.3224157 | 106.7076958 | 103.9716874 | 101.3200955 | 98.74976564 | 96.25768531 |
| 190201A00016 | 2/1/2019 | 2.8 | 2/1/2022 | 2/1/2019 | 103.83296 | 103.8329628 | 103.8329628 | 103.8329628 | 103.5684441 | 102.0623221 | 100.5858625 | 99.13826512 | 97.71875797 |
| 190204A00036 | 2/4/2019 | 2.86 | 11/4/2021 | 2/4/2019 | 103.30294 | 103.3029387 | 103.3029387 | 103.3029387 | 103.0874996 | 101.8132651 | 100.5690254 | 99.35372396 | 98.16635357 |
| 190215A00004 | 2/15/2019 | 2.84 | 2/15/2023 | 2/15/2019 | 106.53941 | 106.5394086 | 106.5394086 | 106.5394086 | 105.9864233 | 103.4269274 | 100.9427603 | 98.53125594 | 96.18985989 |
| 190215A00046 | 2/15/2019 | 2.7 | 2/15/2024 | 2/15/2019 | 109.25884 | 109.2588424 | 109.2588424 | 109.2588424 | 108.2376984 | 104.6465995 | 101.1949297 | 97.87651213 | 94.6854793 |
| 190219A00026 | 2/19/2019 | 2.8 | 2/22/2022 | 2/19/2019 | 103.9775 | 103.9774959 | 103.9774959 | 103.9774959 | 103.7002714 | 102.1311449 | 100.5935563 | 99.08662343 | 97.60949694 |
| 190227A00005 | 2/27/2019 | 2.87 | 2/27/2024 | 2/27/2019 | 109.28713 | 109.2871275 | 109.2871275 | 109.2871275 | 108.2536664 | 104.6455239 | 101.1780749 | 97.84505575 | 94.64051846 |
| 190305A00010 | 3/5/2019 | 2.84 | 3/7/2022 | 3/5/2019 | 104.13228 | 104.1322779 | 104.1322779 | 104.1322779 | 103.8470823 | 102.2404123 | 100.6664686 | 99.12431733 | 97.61306008 |
| 190308A00003 | 3/8/2019 | 2.69 | 3/8/2021 | 3/8/2019 | 101.48524 | 101.4852408 | 101.4852408 | 101.4852408 | 101.4119858 | 100.8023055 | 100.1999504 | 99.60478901 | 99.01669283 |
| 190326A00003 | 3/26/2019 | 2.57 | 3/27/2023 | 3/26/2019 | 106.09558 | 106.0955787 | 106.0955787 | 106.0955787 | 105.5053142 | 102.8427079 | 100.2609643 | 97.75711717 | 95.32833096 |
| 190327A00041 | 3/27/2019 | 2.44 | 3/26/2021 | 3/27/2019 | 101.44182 | 101.4418235 | 101.4418235 | 101.4418235 | 101.3596078 | 100.7007439 | 100.0504301 | 99.40850086 | 98.77479468 |
| 190328A00007 | 3/28/2019 | 2.38 | 3/26/2021 | 3/28/2019 | 101.49425 | 101.4942538 | 101.4942538 | 101.4942538 | 101.4118643 | 100.7516334 | 100.0999858 | 99.45675501 | 98.82177859 |
| 190328A00018 | 3/28/2019 | 2.5 | 3/29/2021 | 3/28/2019 | 101.50016 | 101.5001559 | 101.5001559 | 101.5001559 | 101.4164207 | 100.7491262 | 100.0905928 | 99.44064879 | 98.799127 |
| 190328A00024 | 3/28/2019 | 2.5 | 4/23/2021 | 3/28/2019 | 101.65545 | 101.6554485 | 101.6554485 | 101.6554485 | 101.5587968 | 100.8224623 | 100.0967876 | 99.38154234 | 98.67650287 |
| 190328A00079 | 3/28/2019 | 2.37 | 3/28/2024 | 3/28/2019 | 108.33673 | 108.3367275 | 108.3367275 | 108.3367275 | 107.2551015 | 103.5681626 | 100.0281917 | 96.62850197 | 93.36275204 |
| 190329A00034 | 3/29/2019 | 2.56 | 3/29/2022 | 3/29/2019 | 103.8009 | 103.8008991 | 103.8008991 | 103.8008991 | 103.5030141 | 101.8410361 | 100.2137184 | 98.62004082 | 97.05902356 |
| 190409A00014 | 4/9/2019 | 2.59 | 10/12/2021 | 4/9/2019 | 102.81031 | 102.8103079 | 102.8103079 | 102.8103079 | 102.6102618 | 101.4000697 | 100.2183672 | 99.06415686 | 97.93648717 |
| 190412A00014 | 4/12/2019 | 2.63 | 4/12/2021 | 4/12/2019 | 101.67913 | 101.679131 | 101.679131 | 101.679131 | 101.5881355 | 100.8818069 | 100.1852913 | 99.49838496 | 98.82088994 |

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 190416A00026 | 4/16/2019 | 2.63 | 10/14/2021 | 4/16/2019 | 102.87195 | 102.8719466 | 102.8719466 | 102.8719466 | 102.6705097 | 101.454506 | 100.2672538 | 99.10774185 | 97.97500605 |
| 180918A00037 | 9/18/2018 | 3.06 | 9/17/2021 | 9/18/2018 | 103.18841 | 103.1884147 | 103.1884147 | 103.1884147 | 103.0054223 | 101.8606585 | 100.7413295 | 99.64659395 | 98.57564731 |
| 180919A00018 | 9/19/2018 | 3.12 | 6/20/2022 | 9/19/2018 | 105.3886 | 105.3885991 | 105.3885991 | 105.3885991 | 105.0347405 | 103.1336395 | 101.2764609 | 99.46192963 | 97.6888161 |
| 180926A00031 | 9/26/2018 | 3.24 | 9/26/2023 | 9/26/2018 | 109.3755 | 109.3755027 | 109.3755027 | 109.3755027 | 108.5603583 | 105.3613181 | 102.2741502 | 99.29427923 | 96.41734714 |
| 180928A00033 | 9/28/2018 | 2.87 | 9/28/2020 | 9/28/2018 | 100.45093 | 100.450925 | 100.450925 | 100.450925 | 100.4359972 | 100.2720588 | 100.1086575 | 99.94579084 | 99.7834561 |
| 181001A00019 | 10/1/2018 | 3.02 | 10/1/2020 | 10/1/2018 | 100.4759 | 100.475904 | 100.475904 | 100.475904 | 100.4600518 | 100.2880313 | 100.1165978 | 99.94574837 | 99.77548007 |
| 181002A00019 | 10/2/2018 | 2.98 | 10/4/2021 | 10/2/2018 | 103.41531 | 103.4153055 | 103.4153055 | 103.4153055 | 103.2195709 | 102.0243253 | 100.8567307 | 99.71583551 | 98.60073148 |
| 181002A00055 | 10/2/2018 | 3.14 | 10/3/2022 | 10/2/2018 | 106.25169 | 106.2516872 | 106.2516872 | 106.2516872 | 105.8150905 | 103.6226897 | 101.4867483 | 99.40540802 | 97.37688753 |
| 181005A00010 | 10/5/2018 | 2.95 | 10/5/2020 | 10/5/2018 | 100.5191 | 100.5190973 | 100.5190973 | 100.5190973 | 100.5018594 | 100.3184504 | 100.135718 | 99.95365863 | 99.7722684 |
| 181005A00012 | 10/5/2018 | 3.33 | 10/4/2024 | 10/5/2018 | 113.57847 | 113.5784696 | 113.5784696 | 113.5784696 | 112.1509283 | 107.8560286 | 103.7519009 | 99.82900139 | 96.07832017 |
| 181010A00021 | 10/10/2018 | 3.29 | 3/15/2023 | 10/10/2018 | 107.92645 | 107.9264516 | 107.9264516 | 107.9264516 | 107.3434007 | 104.6879745 | 102.1122813 | 99.61342939 | 97.18865224 |
| 181022A00029 | 10/22/2018 | 3.22 | 10/24/2022 | 10/22/2018 | 106.59728 | 106.5972782 | 106.5972782 | 106.5972782 | 106.1429675 | 103.8909006 | 101.6979838 | 99.56222521 | 97.48171778 |
| 181113A00066 | 11/13/2018 | 3.25 | 11/15/2021 | 11/13/2018 | 103.87868 | 103.8786797 | 103.8786797 | 103.8786797 | 103.6565361 | 102.3527931 | 101.0763749 | 99.82642554 | 98.60212495 |
| 181114A00024 | 11/14/2018 | 3.27 | 12/14/2021 | 11/14/2018 | 104.14431 | 104.1443083 | 104.1443083 | 104.1443083 | 103.9061445 | 102.5280437 | 101.1748713 | 99.84600846 | 98.54085647 |
| 181115A00028 | 11/15/2018 | 2.95 | 11/16/2020 | 11/15/2018 | 100.84941 | 100.849406 | 100.849406 | 100.849406 | 100.8182065 | 100.5180362 | 100.2196654 | 99.92307782 | 99.6282574 |
| 181123A00021 | 11/23/2018 | 3.25 | 11/22/2023 | 11/23/2018 | 109.87068 | 109.8706783 | 109.8706783 | 109.8706783 | 108.9759192 | 105.6166269 | 102.3796164 | 99.25977541 | 96.25223445 |
| 181206A00010 | 12/6/2018 | 3.09 | 12/6/2021 | 12/6/2018 | 103.83216 | 103.8321646 | 103.8321646 | 103.8321646 | 103.5985009 | 102.2439523 | 100.9135694 | 99.60676038 | 98.32295244 |
| 181206A00012 | 12/6/2018 | 3.14 | 12/6/2023 | 12/6/2018 | 109.61263 | 109.6126313 | 109.6126313 | 109.6126313 | 108.699081 | 105.3066943 | 102.0391162 | 98.89111043 | 95.85768764 |
| 181207A00004 | 12/7/2018 | 3.05 | 12/7/2020 | 12/7/2018 | 101.00429 | 101.0042866 | 101.0042866 | 101.0042866 | 100.9664038 | 100.6083975 | 100.2529339 | 99.89998584 | 99.54952665 |
| 181210A00015 | 12/10/2018 | 3.12 | 12/11/2023 | 12/10/2018 | 109.58393 | 109.5839343 | 109.5839343 | 109.5839343 | 108.6633528 | 105.2583501 | 101.9790867 | 98.82026747 | 95.77684839 |
| 181211A00043 | 12/11/2018 | 3.14 | 12/11/2023 | 12/11/2018 | 109.6518 | 109.6518049 | 109.6518049 | 109.6518049 | 108.7309845 | 105.3248375 | 102.044461 | 98.88455902 | 95.84008629 |
| 181212A00027 | 12/12/2018 | 2.99 | 12/12/2023 | 12/12/2018 | 109.78262 | 109.7826155 | 109.7826155 | 109.7826155 | 108.8549536 | 105.4283978 | 102.1287962 | 98.95078574 | 95.88925843 |
| 181214A00023 | 12/14/2018 | 3.07 | 12/14/2021 | 12/14/2018 | 103.86656 | 103.8665619 | 103.8665619 | 103.8665619 | 103.6286915 | 102.2526076 | 100.9014174 | 99.57450325 | 98.27126717 |
| 181218A00072 | 12/18/2018 | 3.04 | 12/19/2022 | 12/18/2018 | 106.6151 | 106.6151016 | 106.6151016 | 106.6151016 | 106.1138163 | 103.7105467 | 101.3741089 | 99.10227593 | 96.89290829 |
| 181226A00060 | 12/26/2018 | 2.9 | 12/27/2021 | 12/26/2018 | 103.73897 | 103.7389652 | 103.7389652 | 103.7389652 | 103.4944201 | 102.0845076 | 100.7006748 | 99.34226064 | 98.0086259 |
| 200224A00024 | 2/24/2020 | 1.59 | 2/24/2025 | 2/24/2020 | 105.95801 | 105.9580084 | 105.9580084 | 105.9580084 | 104.307114 | 99.82655218 | 95.56320018 | 91.50540517 | 87.64220155 |
| 200224A00035 | 2/24/2020 | 1.59 | 2/24/2025 | 2/24/2020 | 105.95801 | 105.9580084 | 105.9580084 | 105.9580084 | 104.307114 | 99.82655218 | 95.56320018 | 91.50540517 | 87.64220155 |
| 200225A00014 | 2/25/2020 | 1.57 | 2/25/2022 | 2/25/2020 | 102.04168 | 102.0416786 | 102.0416786 | 102.0416786 | 101.7650946 | 100.2030725 | 98.67257654 | 97.17272075 | 95.70265192 |
| 200225A00042 | 2/25/2020 | 1.39 | 2/25/2022 | 2/25/2020 | 102.02499 | 102.0249876 | 102.0249876 | 102.0249876 | 101.7475558 | 100.1811171 | 98.64636516 | 97.14240781 | 95.6683859 |
| 200226A00018 | 2/26/2020 | 1.38 | 2/26/2025 | 2/26/2020 | 105.83884 | 105.8388398 | 105.8388398 | 105.8388398 | 104.1731551 | 99.66457924 | 95.37552177 | 91.294162 | 87.40937899 |
| 200227A00012 | 2/27/2020 | 1.41 | 2/27/2023 | 2/27/2020 | 102.89973 | 102.8997285 | 102.8997285 | 102.8997285 | 102.3442473 | 99.79738134 | 97.32650679 | 94.92889904 | 92.60194967 |
| 200228A00014 | 2/28/2020 | 1.4 | 2/28/2025 | 2/28/2020 | 105.09509 | 105.0950931 | 105.0950931 | 105.0950931 | 103.4413689 | 98.96932951 | 94.71479966 | 90.6660798 | 86.81216215 |
| 200228A00041 | 2/28/2020 | 1.14 | 2/28/2023 | 2/28/2020 | 102.66816 | 102.66816 | 102.66816 | 102.66816 | 102.1098599 | 99.55306802 | 97.07284585 | 94.66643867 | 92.33120963 |

Classification | Public

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 200228A00067 | 2/28/2020 | 1.4 | 2/28/2025 | 2/28/2020 | 105.09509 | 105.0950931 | 105.0950931 | 105.0950931 | 103.4413689 | 98.96932951 | 94.71479966 | 90.6660798 | 86.81216215 |
| 200302A00008 | 3/2/2020 | 1.2 | 3/9/2023 | 3/2/2020 | 102.37798 | 102.3779802 | 102.3779802 | 102.3779802 | 101.8141859 | 99.24805005 | 96.75912566 | 94.34461879 | 92.001856 |
| 200302A00028 | 3/2/2020 | 1.25 | 2/26/2024 | 3/2/2020 | 103.4397 | 103.4397035 | 103.4397035 | 103.4397035 | 102.4304273 | 98.92952915 | 95.56613636 | 92.33410808 | 89.22761332 |
| 200304A00053 | 3/6/2020 | 2.33 | 3/6/2025 | 3/6/2020 | 109.42043 | 109.420426 | 109.420426 | 109.420426 | 107.7286146 | 103.1435706 | 98.78082975 | 94.62843545 | 90.67513915 |
| 200305A00011 | 3/5/2020 | 0.95 | 3/7/2022 | 3/5/2020 | 101.07375 | 101.0737479 | 101.0737479 | 101.0737479 | 100.7924739 | 99.21137336 | 97.66254271 | 96.14506077 | 94.65804122 |
| 200306A00065 | 3/6/2020 | 1.38 | 3/6/2030 | 3/6/2020 | 110.30414 | 110.3041357 | 110.3041357 | 110.3041357 | 101.7210963 | 92.94328688 | 84.98799611 | 77.7740251 | 71.22856639 |
| 200309A00003 | 3/9/2020 | 0.72 | 3/9/2022 | 3/9/2020 | 100.70397 | 100.7039744 | 100.7039744 | 100.7039744 | 100.4219938 | 98.83875651 | 97.28791061 | 95.76852862 | 94.27971832 |
| 200309A00064 | 3/9/2020 | 0.55 | 3/9/2022 | 3/9/2020 | 100.70131 | 100.7013097 | 100.7013097 | 100.7013097 | 100.4184367 | 98.83055212 | 97.27522754 | 95.75152887 | 94.25855762 |
| 200311A00006 | 3/13/2020 | 1.12 | 3/10/2025 | 3/13/2020 | 103.82566 | 103.8256577 | 103.8256577 | 103.8256577 | 102.1591956 | 97.69130508 | 93.44218133 | 89.39998885 | 85.55359613 |
| 200319A00024 | 3/19/2020 | 1.12 | 3/15/2022 | 3/19/2020 | 101.36741 | 101.3674142 | 101.3674142 | 101.3674142 | 101.0810263 | 99.47649081 | 97.90498055 | 96.36554168 | 94.85725701 |
| 200326A00030 | 3/26/2020 | 1.13 | 3/24/2023 | 3/26/2020 | 102.22851 | 102.2285122 | 102.2285122 | 102.2285122 | 101.6506925 | 99.04785912 | 96.52426504 | 94.07700498 | 91.70330105 |
| 200327A00036 | 3/27/2020 | 0.77 | 9/27/2023 | 3/27/2020 | 102.08238 | 102.0823843 | 102.0823843 | 102.0823843 | 101.2850757 | 98.18535044 | 95.19543145 | 92.31079332 | 89.52712682 |
| 200327A00075 | 3/31/2020 | 1.75 | 3/29/2024 | 3/31/2020 | 105.37046 | 105.3704578 | 105.3704578 | 105.3704578 | 104.3054791 | 100.6878915 | 97.2147476 | 93.87947537 | 90.67584199 |
| 200331A00030 | 4/2/2020 | 1.17 | 4/1/2022 | 4/2/2020 | 101.47444 | 101.4744389 | 101.4744389 | 101.4744389 | 101.177884 | 99.52808447 | 97.91286463 | 96.33120193 | 94.78211419 |
| 200401A00025 | 4/1/2020 | 0.54 | 4/1/2022 | 4/1/2020 | 100.71205 | 100.7120505 | 100.7120505 | 100.7120505 | 100.4155136 | 98.76711691 | 97.15337301 | 95.57325484 | 94.02577609 |
| 200406A00020 | 4/6/2020 | 0.65 | 4/6/2022 | 4/6/2020 | 100.90528 | 100.9052807 | 100.9052807 | 100.9052807 | 100.6054325 | 98.94180632 | 97.31336514 | 95.71905833 | 94.15787729 |
| 200306A00100 | 3/10/2020 | 1.82 | 3/10/2031 | 3/10/2020 | 116.02844 | 116.0284442 | 116.0284442 | 115.8375336 | 105.3287242 | 95.57211398 | 86.80822465 | 78.93069148 | 71.84504788 |
| 200309A00020 | 3/9/2020 | 0.96 | 3/10/2025 | 3/9/2020 | 103.0829 | 103.0828986 | 103.0828986 | 103.0828986 | 101.4208981 | 96.9699032 | 92.73708303 | 88.71062785 | 84.87943058 |
| 200311A00040 | 3/12/2020 | 1.3 | 3/11/2025 | 3/12/2020 | 104.66403 | 104.6640269 | 104.6640269 | 104.6640269 | 102.9904963 | 98.50106971 | 94.23130538 | 90.16932062 | 86.3039397 |
| 200311A00056 | 3/13/2020 | 1.27 | 4/10/2024 | 3/13/2020 | 103.62979 | 103.6297939 | 103.6297939 | 103.6297939 | 102.553442 | 98.93656059 | 95.46553982 | 92.13368236 | 88.93463997 |
| 200312A00004 | 3/13/2020 | 1.23 | 1/24/2025 | 3/13/2020 | 104.22284 | 104.2228447 | 104.2228447 | 104.2228447 | 102.6433108 | 98.28472184 | 94.13451042 | 90.18166549 | 86.41581432 |
| 200312A00042 | 3/16/2020 | 1.38 | 3/16/2023 | 3/16/2020 | 102.87259 | 102.8725854 | 102.8725854 | 102.8725854 | 102.3008679 | 99.71007856 | 97.19761644 | 94.76063055 | 92.39639376 |
| 200313A00032 | 3/18/2020 | 1.46 | 3/18/2025 | 3/18/2020 | 105.42965 | 105.4296501 | 105.4296501 | 105.4296501 | 103.7372542 | 99.21308249 | 94.91078182 | 90.81831567 | 86.92436607 |
| 200323A00007 | 3/23/2020 | 1.05 | 9/23/2021 | 3/23/2020 | 100.89921 | 100.8992095 | 100.8992095 | 100.8992095 | 100.7138031 | 99.56685928 | 98.44585139 | 97.34990819 | 96.27819706 |
| 200403A00016 | 4/3/2020 | 0.63 | 4/17/2023 | 4/3/2020 | 101.40388 | 101.4038771 | 101.4038771 | 101.4038771 | 100.801502 | 98.13594657 | 95.55345532 | 93.05090636 | 90.62531877 |
| 200413A00032 | 4/13/2020 | 0.82 | 4/13/2023 | 4/13/2020 | 101.42891 | 101.4289128 | 101.4289128 | 101.4289128 | 100.8332578 | 98.18879042 | 95.62623437 | 93.14252974 | 90.7347539 |
| 200429A00018 | 5/4/2020 | 0.73 | 4/17/2023 | 5/4/2020 | 101.18818 | 101.1881773 | 101.1881773 | 101.1881773 | 100.5891024 | 97.93736252 | 95.36805941 | 92.87810167 | 90.4645372 |
| 200430A00016 | 4/30/2020 | 0.82 | 4/30/2024 | 4/30/2020 | 101.98163 | 101.98163 | 101.98163 | 101.98163 | 100.8814228 | 97.24331381 | 93.75413441 | 90.4069471 | 87.19518194 |
| 200430A00017 | 4/30/2020 | 0.94 | 4/30/2025 | 4/30/2020 | 103.03217 | 103.032169 | 103.032169 | 103.032169 | 101.2665911 | 96.69152534 | 92.34649118 | 88.21871265 | 84.29619615 |
| 200511A00018 | 5/11/2020 | 0.98 | 2/2/2026 | 5/11/2020 | 103.73749 | 103.7374888 | 103.7374888 | 103.7374888 | 101.2746147 | 96.00965961 | 91.04681155 | 86.36725249 | 81.95342923 |
| 200511A00023 | 5/11/2020 | 1.7 | 2/3/2031 | 5/11/2020 | 114.62874 | 114.6287353 | 114.6287353 | 114.5406935 | 104.1715628 | 94.5531534 | 85.90725821 | 78.13039231 | 71.1305643 |
| 200513A00002 | 5/13/2020 | 0.56 | 5/13/2024 | 5/13/2020 | 101.69082 | 101.6908172 | 101.6908172 | 101.6908172 | 100.5647342 | 96.88133494 | 93.35047889 | 89.96504034 | 86.71826778 |
| 200513A00003 | 5/13/2020 | 0.68 | 5/13/2025 | 5/13/2020 | 102.71669 | 102.7166874 | 102.7166874 | 102.7166874 | 100.9118023 | 96.28429297 | 91.89189778 | 87.72148903 | 83.76074172 |

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 200604A00001 | 6/4/2020 | 0.65 | 6/5/2023 | 6/4/2020 | 101.01715 | 101.0171538 | 101.0171538 | 101.0171538 | 100.3667216 | 97.59089144 | 94.90501441 | 92.3057171 | 89.78977071 |
| 200720A00014 | 7/20/2020 | 0.35 | 7/20/2022 | 7/20/2020 | 100.46157 | 100.4615733 | 100.4615733 | 100.4615733 | 100.0925116 | 98.15448547 | 96.26340323 | 94.41784048 | 92.61642594 |
| 200720A00042 | 7/22/2020 | 2.04 | 7/21/2026 | 7/22/2020 | 110.40902 | 110.4090172 | 110.4090172 | 110.4090172 | 107.3315412 | 101.4692783 | 95.96513646 | 90.79541061 | 85.93808139 |
| 200728A00007 | 7/28/2020 | 0.52 | 1/27/2022 | 7/28/2020 | 100.35442 | 100.3544174 | 100.3544174 | 100.3544174 | 100.0968052 | 98.63149022 | 97.19486406 | 95.78615968 | 94.4046368 |
| 200730A00002 | 7/30/2020 | 0.67 | 11/6/2024 | 7/30/2020 | 101.56798 | 101.5679844 | 101.5679844 | 101.5679844 | 100.151774 | 96.04778352 | 92.13193822 | 88.39462218 | 84.82676617 |
| 200731A00005 | 7/31/2020 | 0.45 | 7/31/2024 | 7/31/2020 | 101.34207 | 101.3420728 | 101.3420728 | 101.3420728 | 100.0889639 | 96.21275276 | 92.50567107 | 88.95948258 | 85.56639578 |
| 191018A00005 | 10/18/2019 | 1.89 | 5/2/2022 | 10/18/2019 | 102.82549 | 102.8254912 | 102.8254912 | 102.8254912 | 102.5080724 | 100.7623878 | 99.05466422 | 97.38373923 | 95.74849801 |
| 191021A00034 | 10/22/2019 | 1.9 | 10/17/2022 | 10/22/2019 | 103.58822 | 103.5882165 | 103.5882165 | 103.5882165 | 103.1454184 | 100.9460429 | 98.80423488 | 96.71806763 | 94.68569559 |
| 191022A00018 | 10/22/2019 | 1.9 | 10/22/2020 | 10/22/2019 | 100.38143 | 100.3814262 | 100.3814262 | 100.3814262 | 100.3584767 | 100.1285631 | 99.89971179 | 99.67191536 | 99.44516652 |
| 191025A00010 | 10/25/2019 | 2.24 | 7/25/2028 | 10/25/2019 | 115.47425 | 115.4742534 | 115.4742534 | 115.4742534 | 109.4405185 | 101.6954375 | 94.56011624 | 87.98331143 | 81.91833325 |
| 191104A00024 | 11/4/2019 | 2.26 | 8/3/2029 | 11/4/2019 | 117.61156 | 117.6115585 | 117.6115585 | 117.6115585 | 109.8714639 | 101.2200537 | 93.32595012 | 86.1187276 | 79.5348496 |
| 191105A00007 | 11/5/2019 | 1.98 | 11/5/2026 | 11/5/2019 | 111.78592 | 111.7859217 | 111.7859217 | 111.7859217 | 108.2709384 | 102.0668819 | 96.25858091 | 90.81872415 | 85.72202643 |
| 191107A00011 | 11/8/2019 | 2.02 | 2/24/2023 | 11/8/2019 | 104.47381 | 104.473808 | 104.473808 | 104.473808 | 103.9173506 | 101.3585482 | 98.87577013 | 96.46630019 | 94.12753765 |
| 191120A00002 | 11/20/2019 | 1.73 | 11/20/2020 | 11/20/2019 | 100.50137 | 100.5013696 | 100.5013696 | 100.5013696 | 100.4689653 | 100.1584344 | 99.84983162 | 99.54313906 | 99.23833891 |
| 191120A00027 | 11/20/2019 | 1.73 | 11/20/2020 | 11/20/2019 | 100.50137 | 100.5013696 | 100.5013696 | 100.5013696 | 100.4689653 | 100.1584344 | 99.84983162 | 99.54313906 | 99.23833891 |
| 191120A00031 | 11/20/2019 | 1.69 | 11/21/2022 | 11/20/2019 | 103.67462 | 103.6746214 | 103.6746214 | 103.6746214 | 103.2012163 | 100.8989871 | 98.65932502 | 96.48015708 | 94.35949293 |
| 191121A00034 | 11/21/2019 | 2.28 | 11/2/2029 | 11/21/2019 | 118.27738 | 118.2773762 | 118.2773762 | 118.2773762 | 110.0872894 | 101.214774 | 93.1369803 | 85.77832739 | 79.07079545 |
| 191126A00015 | 11/27/2019 | 1.88 | 10/14/2022 | 11/27/2019 | 103.53032 | 103.5303244 | 103.5303244 | 103.5303244 | 103.0900461 | 100.8991761 | 98.76549005 | 96.68708035 | 94.66211938 |
| 191126A00026 | 11/26/2019 | 1.91 | 11/25/2026 | 11/26/2019 | 111.4414 | 111.4414031 | 111.4414031 | 111.4414031 | 107.8541644 | 101.6114311 | 95.7703481 | 90.30305331 | 85.18375182 |
| 191206A00019 | 12/6/2019 | 1.96 | 11/15/2023 | 12/6/2019 | 105.52847 | 105.5284665 | 105.5284665 | 105.5284665 | 104.6582227 | 101.3896695 | 98.24014572 | 95.20465669 | 92.27844771 |
| 191210A00011 | 12/10/2019 | 1.92 | 12/12/2022 | 12/10/2019 | 103.88388 | 103.8838802 | 103.8838802 | 103.8838802 | 103.3943838 | 101.0425968 | 98.75594297 | 96.53226528 | 94.36949079 |
| 191218A00014 | 12/18/2019 | 2.04 | 12/18/2024 | 12/18/2019 | 107.6606 | 107.6605953 | 107.6605953 | 107.6605953 | 106.1336551 | 101.7929276 | 97.65432266 | 93.70741445 | 89.94236696 |
| 191220A00002 | 12/20/2019 | 3.02 | 12/20/2038 | 12/20/2019 | 149.21614 | 149.2161428 | 149.2161428 | 138.2048339 | 119.3477348 | 103.1172698 | 89.4687118 | 77.96764879 | 68.25533418 |
| 200115A00015 | 1/17/2020 | 1.88 | 1/17/2023 | 1/17/2020 | 103.94603 | 103.9460267 | 103.9460267 | 103.9460267 | 103.4252599 | 100.9789753 | 98.60303348 | 96.29501361 | 94.05259313 |
| 200115A00018 | 1/15/2020 | 1.9 | 1/16/2024 | 1/15/2020 | 105.60313 | 105.6031294 | 105.6031294 | 105.6031294 | 104.6453782 | 101.2153333 | 97.9160577 | 94.74188027 | 91.68740662 |
| 200124A00008 | 1/24/2020 | 1.92 | 1/22/2027 | 1/24/2020 | 111.79356 | 111.7935632 | 111.7935632 | 111.7935632 | 107.9785845 | 101.5875197 | 95.61701607 | 90.03725396 | 84.82067336 |
| 200130A00011 | 1/30/2020 | 1.54 | 1/30/2023 | 1/30/2020 | 103.59979 | 103.5997911 | 103.5997911 | 103.5997911 | 103.0660541 | 100.5808085 | 98.16822603 | 95.82576389 | 93.55098445 |
| 200130A00021 | 1/30/2020 | 1.54 | 1/30/2023 | 1/30/2020 | 103.59979 | 103.5997911 | 103.5997911 | 103.5997911 | 103.0660541 | 100.5808085 | 98.16822603 | 95.82576389 | 93.55098445 |
| 200130A00048 | 1/30/2020 | 1.74 | 1/31/2022 | 1/30/2020 | 102.21329 | 102.2132925 | 102.2132925 | 102.2132925 | 101.9512912 | 100.4608975 | 98.99985554 | 97.56737502 | 96.16269353 |
| 200131A00017 | 1/31/2020 | 1.51 | 1/31/2024 | 1/31/2020 | 104.93328 | 104.9332823 | 104.9332823 | 104.9332823 | 103.9510061 | 100.4780911 | 97.13957445 | 93.92954263 | 90.84237511 |
| 191105A00014 | 11/5/2019 | 1.96 | 11/6/2023 | 11/5/2019 | 105.48738 | 105.4873822 | 105.4873822 | 105.4873822 | 104.6296338 | 101.3856942 | 98.25910418 | 95.24493152 | 92.33848383 |
| 191106A00004 | 11/6/2019 | 2.01 | 11/6/2024 | 11/6/2019 | 107.33195 | 107.3319467 | 107.3319467 | 107.3319467 | 105.8855167 | 101.6596128 | 97.6258702 | 93.77450702 | 90.09629621 |
| 191108A00013 | 11/8/2019 | 2.25 | 11/8/2029 | 11/8/2019 | 119.94167 | 119.9416661 | 119.9416661 | 119.9416661 | 111.5700222 | 102.5284263 | 94.30006885 | 86.80733033 | 79.98037967 |

Classification | Public

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 191113A00016 | 11/15/2019 | 2.02 | 8/15/2024 | 11/15/2019 | 107.02606 | 107.026065 | 107.026065 | 107.026065 | 105.7283082 | 101.7208179 | 97.88760306 | 94.22016529 | 90.71046695 |
| 191114A00021 | 11/18/2019 | 1.91 | 6/15/2022 | 11/18/2019 | 103.0574 | 103.0573968 | 103.0573968 | 103.0573968 | 102.7106558 | 100.8458462 | 99.02392704 | 97.24366124 | 95.50385527 |
| 191115A00016 | 11/18/2019 | 2.48 | 11/18/2024 | 11/18/2019 | 109.425 | 109.4249994 | 109.4249994 | 109.4249994 | 107.9451952 | 103.6434306 | 99.53808092 | 95.61914629 | 91.87718997 |
| 191115A00028 | 11/15/2019 | 2.34 | 9/28/2029 | 11/15/2019 | 118.64017 | 118.6401741 | 118.6401741 | 118.6401741 | 110.6094336 | 101.7944001 | 93.76128389 | 86.43640086 | 79.7533722 |
| 191120A00032 | 11/20/2019 | 1.73 | 5/20/2021 | 11/20/2019 | 101.3107 | 101.3107007 | 101.3107007 | 101.3107007 | 101.2002812 | 100.3901914 | 99.59303157 | 98.80849401 | 98.03628056 |
| 191122A00007 | 11/22/2019 | 1.87 | 11/21/2025 | 11/22/2019 | 109.40334 | 109.4033427 | 109.4033427 | 109.4033427 | 107.0862697 | 101.8131302 | 96.8310088 | 92.12237134 | 87.67082847 |
| 191126A00023 | 11/26/2019 | 1.81 | 5/27/2025 | 11/26/2019 | 108.2498 | 108.2497951 | 108.2497951 | 108.2497951 | 106.3787125 | 101.5851786 | 97.03498783 | 92.71457054 | 88.6111813 |
| 191206A00044 | 12/10/2019 | 2.01 | 10/31/2024 | 12/10/2019 | 107.30399 | 107.3039936 | 107.3039936 | 107.3039936 | 105.8688413 | 101.6591777 | 97.64027482 | 93.80242885 | 90.13648821 |
| 191212A00026 | 12/13/2019 | 1.92 | 6/16/2022 | 12/13/2019 | 103.08082 | 103.0808151 | 103.0808151 | 103.0808151 | 102.7333492 | 100.8656028 | 99.04087068 | 97.25791056 | 95.51552391 |
| 191217A00012 | 12/20/2019 | 2.03 | 12/20/2024 | 12/20/2019 | 107.62591 | 107.6259098 | 107.6259098 | 107.6259098 | 106.0953567 | 101.7503559 | 97.6079166 | 93.65757808 | 89.88947239 |
| 191223A00008 | 12/23/2019 | 1.93 | 12/23/2021 | 12/23/2019 | 102.33855 | 102.3385485 | 102.3385485 | 102.3385485 | 102.0975981 | 100.7086409 | 99.34521569 | 98.00667968 | 96.69241135 |
| 191223A00022 | 12/23/2019 | 1.93 | 12/30/2021 | 12/23/2019 | 102.37068 | 102.3706788 | 102.3706788 | 102.3706788 | 102.1260761 | 100.718422 | 99.33695021 | 97.98099422 | 96.64990976 |
| 191223A00043 | 12/23/2019 | 1.77 | 3/23/2021 | 12/23/2019 | 101.07738 | 101.0773846 | 101.0773846 | 101.0773846 | 100.9966638 | 100.3461991 | 99.70409551 | 99.07019244 | 98.44433347 |
| 191223A00055 | 12/23/2019 | 2.46 | 12/7/2029 | 12/23/2019 | 120.14687 | 120.146871 | 120.146871 | 120.146871 | 111.7380108 | 102.7095596 | 94.49539378 | 87.01755342 | 80.2059154 |
| 191226A00019 | 12/26/2019 | 2.4 | 12/22/2028 | 12/26/2019 | 117.60549 | 117.6054922 | 117.6054922 | 117.6054922 | 110.8842146 | 102.7225966 | 95.23084536 | 88.35037951 | 82.02802071 |
| 191226A00020 | 12/26/2019 | 2.44 | 12/21/2029 | 12/26/2019 | 120.04067 | 120.0406655 | 120.0406655 | 120.0406655 | 111.5655344 | 102.5127363 | 94.27959043 | 86.78732861 | 79.96513003 |
| 200108A00017 | 1/8/2020 | 2.55 | 1/8/2035 | 1/8/2020 | 135.31256 | 135.3125617 | 135.3125617 | 129.5639892 | 114.5812239 | 101.2101859 | 89.60136888 | 79.51049463 | 70.72838914 |
| 200108A00021 | 1/13/2020 | 1.97 | 1/13/2025 | 1/13/2020 | 107.47039 | 107.4703886 | 107.4703886 | 107.4703886 | 105.8943686 | 101.4926198 | 97.29897825 | 93.30254469 | 89.49304654 |
| 200114A00006 | 1/15/2020 | 1.99 | 1/15/2025 | 1/15/2020 | 107.5694 | 107.5694028 | 107.5694028 | 107.5694028 | 105.9889127 | 101.5799801 | 97.37970777 | 93.37715525 | 89.56201186 |
| 200115A00017 | 1/15/2020 | 1.88 | 1/17/2023 | 1/15/2020 | 103.94603 | 103.9460267 | 103.9460267 | 103.9460267 | 103.4252599 | 100.9789753 | 98.60303348 | 96.29501361 | 94.05259313 |
| 200115A00024 | 1/15/2020 | 1.88 | 1/17/2023 | 1/15/2020 | 103.94603 | 103.9460267 | 103.9460267 | 103.9460267 | 103.4252599 | 100.9789753 | 98.60303348 | 96.29501361 | 94.05259313 |
| 200413A00023 | 4/13/2020 | 0.74 | 2/7/2022 | 4/13/2020 | 100.7001 | 100.7001011 | 100.7001011 | 100.7001011 | 100.4357784 | 98.93700387 | 97.46797378 | 96.0278772 | 94.61593216 |
| 200424A00006 | 4/24/2020 | 0.6 | 4/24/2023 | 4/24/2020 | 101.33081 | 101.3308138 | 101.3308138 | 101.3308138 | 100.7215232 | 98.0383551 | 95.43929683 | 92.92116669 | 90.48092781 |
| 200428A00011 | 4/30/2020 | 1.95 | 4/29/2025 | 4/30/2020 | 107.85625 | 107.8562548 | 107.8562548 | 107.8562548 | 106.0622033 | 101.376843 | 96.92531861 | 92.69469443 | 88.67282468 |
| 200429A00015 | 4/29/2020 | 0.66 | 4/29/2024 | 4/29/2020 | 102.05278 | 102.0527801 | 102.0527801 | 102.0527801 | 100.9472811 | 97.29234869 | 93.78736168 | 90.42532265 | 87.19960545 |
| 200429A00046 | 5/1/2020 | 2.07 | 4/30/2025 | 5/1/2020 | 108.43444 | 108.4344392 | 108.4344392 | 108.4344392 | 106.6346252 | 101.9331768 | 97.46629751 | 93.22100969 | 89.18512841 |
| 200430A00006 | 4/30/2020 | 0.61 | 4/29/2022 | 4/30/2020 | 100.55357 | 100.5535688 | 100.5535688 | 100.5535688 | 100.2412939 | 98.52417789 | 96.84432939 | 95.20060082 | 93.59189223 |
| 200506A00010 | 5/6/2020 | 0.94 | 5/6/2026 | 5/6/2020 | 104.78634 | 104.7863435 | 104.7863435 | 104.7863435 | 101.9963773 | 96.4370542 | 91.21027471 | 86.29448494 | 81.66963961 |
| 200511A00016 | 5/11/2020 | 0.71 | 2/1/2024 | 5/11/2020 | 101.46546 | 101.4654557 | 101.4654557 | 101.4654557 | 100.5002063 | 97.1017053 | 93.83505655 | 90.69445649 | 87.67438907 |
| 200527A00022 | 5/27/2020 | 0.53 | 5/27/2022 | 5/27/2020 | 100.4491 | 100.4491029 | 100.4491029 | 100.4491029 | 100.1191298 | 98.32979464 | 96.58068902 | 94.87066383 | 93.19861056 |
| 200529A00004 | 5/29/2020 | 0.56 | 5/29/2024 | 5/29/2020 | 101.71044 | 101.7104447 | 101.7104447 | 101.7104447 | 100.5589755 | 96.83505831 | 93.26692152 | 89.84728502 | 86.56924588 |
| 200601A00006 | 6/1/2020 | 0.6 | 6/1/2023 | 6/1/2020 | 100.87018 | 100.8701774 | 100.8701774 | 100.8701774 | 100.2246721 | 97.46144989 | 94.7874675 | 92.19939013 | 89.69402541 |
| 200604A00004 | 6/4/2020 | 0.76 | 6/4/2024 | 6/4/2020 | 101.7998 | 101.7997973 | 101.7997973 | 101.7997973 | 100.6452836 | 96.9231015 | 93.35676336 | 89.93898511 | 86.66285946 |

Classification | Public

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 200604A00010 | 6/4/2020 | 0.89 | 6/4/2025 | 6/4/2020 | 102.84952 | 102.8495222 | 102.8495222 | 102.8495222 | 101.01069 | 96.35484139 | 91.93736629 | 87.74492112 | 83.76497316 |
| 200615A00005 | 6/15/2020 | 0.61 | 6/15/2023 | 6/15/2020 | 100.91075 | 100.9107489 | 100.9107489 | 100.9107489 | 100.249295 | 97.44876808 | 94.73982164 | 92.11898995 | 89.58295734 |
| 200626A00015 | 6/26/2020 | 0.43 | 6/26/2023 | 6/26/2020 | 100.91516 | 100.9151621 | 100.9151621 | 100.9151621 | 100.2379981 | 97.39653199 | 94.64914577 | 91.99223543 | 89.42235498 |
| 200709A00003 | 7/10/2020 | 1.63 | 7/10/2026 | 7/10/2020 | 107.90839 | 107.9083861 | 107.9083861 | 107.9083861 | 104.8939956 | 99.13003787 | 93.71779141 | 88.63404545 | 83.85723318 |
| 200709A00007 | 7/10/2020 | 1.67 | 7/9/2027 | 7/10/2020 | 109.49916 | 109.4991581 | 109.4991581 | 109.4991581 | 105.0997609 | 98.43342676 | 92.23357606 | 86.46523612 | 81.0962222 |
| 200709A00008 | 7/10/2020 | 1.88 | 7/10/2026 | 7/10/2020 | 109.40134 | 109.4013415 | 109.4013415 | 109.4013415 | 106.3723602 | 100.5652529 | 95.11172414 | 89.98846526 | 85.17381737 |
| 200720A00035 | 7/20/2020 | 1.81 | 7/20/2035 | 7/20/2020 | 122.32043 | 122.3204309 | 122.3204309 | 116.0960266 | 101.6630064 | 88.9922856 | 78.06705373 | 68.63624724 | 60.48609769 |
| 200720A00044 | 7/22/2020 | 2.22 | 7/21/2026 | 7/22/2020 | 111.48934 | 111.4893436 | 111.4893436 | 111.4893436 | 108.4011978 | 102.5075629 | 96.97341248 | 91.77496969 | 86.89014771 |
| 200722A00010 | 7/22/2020 | 0.66 | 7/22/2024 | 7/22/2020 | 101.4601 | 101.4600965 | 101.4600965 | 101.4600965 | 100.2290609 | 96.39266819 | 92.72216509 | 89.20954289 | 85.84722143 |
| 190528A00007 | 5/28/2019 | 2.44 | 11/15/2023 | 5/28/2019 | 107.12304 | 107.1230428 | 107.1230428 | 107.1230428 | 106.2473734 | 102.952475 | 99.77731614 | 96.71687721 | 93.76637962 |
| 190528A00015 | 5/28/2019 | 2.42 | 5/27/2022 | 5/28/2019 | 103.93073 | 103.9307255 | 103.9307255 | 103.9307255 | 103.5955016 | 101.7733101 | 99.99196328 | 98.25029471 | 96.54717925 |
| 190529A00005 | 5/29/2019 | 2.31 | 11/29/2021 | 5/29/2019 | 102.72694 | 102.7269425 | 102.7269425 | 102.7269425 | 102.4980911 | 101.1696585 | 99.86496527 | 98.58342346 | 97.32446412 |
| 190529A00009 | 5/29/2019 | 2.35 | 5/31/2022 | 5/29/2019 | 103.82465 | 103.8246481 | 103.8246481 | 103.8246481 | 103.487003 | 101.655256 | 99.864773 | 98.11438776 | 96.40297422 |
| 190529A00013 | 5/29/2019 | 2.38 | 5/29/2024 | 5/29/2019 | 108.04639 | 108.0463865 | 108.0463865 | 108.0463865 | 106.8742786 | 103.0481924 | 99.38030373 | 95.8632684 | 92.49012075 |
| 190529A00034 | 5/29/2019 | 2.32 | 5/28/2021 | 5/29/2019 | 101.71477 | 101.7147721 | 101.7147721 | 101.7147721 | 101.6003243 | 100.7682387 | 99.94974598 | 99.14451524 | 98.35222614 |
| 190529A00049 | 5/29/2019 | 2.32 | 6/29/2021 | 5/29/2019 | 101.89661 | 101.8966103 | 101.8966103 | 101.8966103 | 101.7653965 | 100.8452346 | 99.94166268 | 99.05423515 | 98.18252243 |
| 190529A00059 | 5/29/2019 | 2.32 | 5/28/2021 | 5/29/2019 | 101.71477 | 101.7147721 | 101.7147721 | 101.7147721 | 101.6003243 | 100.7682387 | 99.94974598 | 99.14451524 | 98.35222614 |
| 190529A00079 | 5/29/2019 | 2.32 | 5/28/2021 | 5/29/2019 | 101.71477 | 101.7147721 | 101.7147721 | 101.7147721 | 101.6003243 | 100.7682387 | 99.94974598 | 99.14451524 | 98.35222614 |
| 190530A00003 | 5/30/2019 | 2.21 | 5/27/2022 | 5/30/2019 | 103.85883 | 103.8588309 | 103.8588309 | 103.8588309 | 103.5225895 | 101.6954078 | 99.90928012 | 98.16303141 | 96.45552843 |
| 190530A00031 | 5/30/2019 | 2.21 | 5/31/2022 | 5/30/2019 | 103.88204 | 103.8820431 | 103.8820431 | 103.8820431 | 103.5431725 | 101.7051622 | 99.90865102 | 98.15246332 | 96.43546429 |
| 190603A00032 | 6/3/2019 | 1.98 | 6/3/2022 | 6/3/2019 | 103.47058 | 103.4705805 | 103.4705805 | 103.4705805 | 103.130256 | 101.2879605 | 99.48744605 | 97.72752416 | 96.0070477 |
| 190604A00008 | 6/4/2019 | 2.23 | 6/4/2021 | 6/4/2019 | 101.67771 | 101.6777055 | 101.6777055 | 101.6777055 | 101.5596712 | 100.7086687 | 99.87188787 | 99.04897459 | 98.23958627 |
| 190604A00031 | 6/4/2019 | 2.25 | 6/5/2023 | 6/4/2019 | 105.6147 | 105.6146968 | 105.6146968 | 105.6146968 | 104.9517083 | 102.1097583 | 99.35936699 | 96.69710878 | 94.11970475 |
| 190604A00048 | 6/4/2019 | 2.23 | 6/4/2021 | 6/4/2019 | 101.67771 | 101.6777055 | 101.6777055 | 101.6777055 | 101.5596712 | 100.7086687 | 99.87188787 | 99.04897459 | 98.23958627 |
| 190606A00009 | 6/6/2019 | 2 | 6/4/2021 | 6/6/2019 | 101.6087 | 101.6086957 | 101.6086957 | 101.6086957 | 101.4904459 | 100.6380237 | 99.7998745 | 98.97564208 | 98.16498206 |
| 190606A00025 | 6/6/2019 | 2.18 | 6/4/2021 | 6/6/2019 | 101.63498 | 101.6349812 | 101.6349812 | 101.6349812 | 101.5169709 | 100.6661673 | 99.82958313 | 99.00686417 | 98.19766791 |
| 190610A00018 | 6/10/2019 | 2.52 | 6/10/2026 | 6/10/2019 | 113.04223 | 113.0422344 | 113.0422344 | 113.0422344 | 110.0823431 | 104.2438641 | 98.75443445 | 93.59140134 | 88.73369195 |
| 190620A00044 | 6/20/2019 | 2.04 | 6/20/2022 | 6/20/2019 | 103.3277 | 103.3276998 | 103.3276998 | 103.3276998 | 102.9770919 | 101.0960999 | 99.25864762 | 97.46347092 | 95.70935051 |
| 190621A00040 | 6/21/2019 | 2.12 | 6/21/2021 | 6/21/2019 | 101.67085 | 101.6708513 | 101.6708513 | 101.6708513 | 101.5439487 | 100.6466753 | 99.76521483 | 98.89915193 | 98.04808576 |
| 190625A00013 | 6/25/2019 | 2.01 | 6/24/2022 | 6/25/2019 | 103.28934 | 103.2893428 | 103.2893428 | 103.2893428 | 102.9360411 | 101.0445803 | 99.19713422 | 97.39241817 | 95.62919335 |
| 190626A00033 | 6/26/2019 | 2.08 | 6/22/2021 | 6/26/2019 | 101.6398 | 101.6398028 | 101.6398028 | 101.6398028 | 101.5123973 | 100.6125551 | 99.72861877 | 98.86016935 | 98.0068025 |
| 190701A00028 | 7/1/2019 | 2.11 | 7/1/2021 | 7/1/2019 | 101.71284 | 101.7128422 | 101.7128422 | 101.7128422 | 101.5806553 | 100.6559763 | 99.74807183 | 98.8564889 | 97.98079054 |
| 190703A00017 | 7/3/2019 | 2.33 | 5/4/2026 | 7/3/2019 | 111.71853 | 111.7185264 | 111.7185264 | 111.7185264 | 108.8968449 | 103.1861271 | 97.81208173 | 92.75307055 | 87.98896131 |

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 181227A00027 | 12/27/2018 | 3.24 | 12/26/2025 | 12/27/2018 | 115.95459 | 115.9545867 | 115.9545867 | 115.9545867 | 113.5042787 | 108.0059896 | 102.8123036 | 97.90474615 | 93.26605554 |
| 190102A00026 | 1/2/2019 | 2.62 | 1/4/2022 | 1/2/2019 | 103.6241 | 103.6240994 | 103.6240994 | 103.6240994 | 103.3746707 | 101.9406434 | 100.5335754 | 99.1527726 | 97.79756417 |
| 190103A00005 | 1/3/2019 | 2.61 | 1/4/2021 | 1/3/2019 | 101.08653 | 101.0865308 | 101.0865308 | 101.0865308 | 101.0393921 | 100.6033641 | 100.1710982 | 99.74254606 | 99.31765977 |
| 190107A00021 | 1/7/2019 | 2.79 | 1/7/2021 | 1/7/2019 | 101.13034 | 101.1303388 | 101.1303388 | 101.1303388 | 101.0821714 | 100.6384217 | 100.1985687 | 99.76256124 | 99.3303489 |
| 190107A00023 | 1/7/2019 | 2.87 | 1/6/2023 | 1/7/2019 | 106.33336 | 106.3333555 | 106.3333555 | 106.3333555 | 105.8170473 | 103.3697577 | 100.9918266 | 98.68089845 | 96.43471196 |
| 190107A00035 | 1/7/2019 | 2.82 | 10/15/2021 | 1/7/2019 | 103.11081 | 103.1108056 | 103.1108056 | 103.1108056 | 102.9084876 | 101.6882326 | 100.4968824 | 99.33341834 | 98.19686933 |
| 190107A00036 | 1/7/2019 | 2.84 | 4/15/2022 | 1/7/2019 | 104.39037 | 104.3903713 | 104.3903713 | 104.3903713 | 104.0812411 | 102.3676948 | 100.6906073 | 99.04887904 | 97.4414549 |
| 190110A00006 | 1/10/2019 | 2.73 | 11/15/2022 | 1/10/2019 | 106.06308 | 106.063081 | 106.063081 | 106.063081 | 105.5897765 | 103.2757803 | 101.0241197 | 98.83271592 | 96.69957509 |
| 190110A00012 | 1/10/2019 | 2.97 | 1/18/2024 | 1/10/2019 | 109.35483 | 109.3548348 | 109.3548348 | 109.3548348 | 108.3803416 | 104.8800706 | 101.512785 | 98.27272161 | 95.15439904 |
| 190114A00042 | 1/14/2019 | 2.92 | 1/13/2023 | 1/14/2019 | 106.50711 | 106.507111 | 106.507111 | 106.507111 | 105.9841796 | 103.5162884 | 101.118849 | 98.78945011 | 96.52577797 |
| 190122A00043 | 1/22/2019 | 2.96 | 1/22/2025 | 1/22/2019 | 112.87811 | 112.8781134 | 112.8781134 | 112.8781134 | 111.2420572 | 106.6719599 | 102.3181712 | 98.16931149 | 94.21465943 |
| 190201A00011 | 2/1/2019 | 2.8 | 2/4/2022 | 2/1/2019 | 103.85361 | 103.8536101 | 103.8536101 | 103.8536101 | 103.587276 | 102.0721486 | 100.5869469 | 99.13085921 | 97.70310271 |
| 190208A00009 | 2/8/2019 | 2.67 | 2/8/2024 | 2/8/2019 | 109.10196 | 109.1019588 | 109.1019588 | 109.1019588 | 108.0919431 | 104.5232886 | 101.092637 | 97.79390094 | 94.62129628 |
| 190214A00006 | 2/14/2019 | 2.67 | 2/14/2024 | 2/14/2019 | 109.1442 | 109.1442031 | 109.1442031 | 109.1442031 | 108.125003 | 104.5387489 | 101.0916728 | 97.7776126 | 94.59071421 |
| 190215A00006 | 2/15/2019 | 2.89 | 2/15/2024 | 2/15/2019 | 109.27422 | 109.2742213 | 109.2742213 | 109.2742213 | 108.2587071 | 104.6842086 | 101.2480938 | 97.94424779 | 94.76686105 |
| 190222A00028 | 2/22/2019 | 2.62 | 2/22/2022 | 2/22/2019 | 103.96348 | 103.9634836 | 103.9634836 | 103.9634836 | 103.6854103 | 102.1118497 | 100.5699875 | 99.05893522 | 97.57783769 |
| 190228A00039 | 2/28/2019 | 2.88 | 2/28/2024 | 2/28/2019 | 109.33027 | 109.3302681 | 109.3302681 | 109.3302681 | 108.2951484 | 104.6834521 | 101.2126643 | 97.87650816 | 94.66902315 |
| 190311A00009 | 3/11/2019 | 2.54 | 3/11/2022 | 3/11/2019 | 103.95074 | 103.9507401 | 103.9507401 | 103.9507401 | 103.6624689 | 102.0419348 | 100.4546299 | 98.89959871 | 97.3759222 |
| 190313A00017 | 3/13/2019 | 2.73 | 7/15/2022 | 3/13/2019 | 104.81254 | 104.8125407 | 104.8125407 | 104.8125407 | 104.4413705 | 102.4789941 | 100.563515 | 98.69352485 | 96.86766715 |
| 190326A00001 | 3/26/2019 | 2.55 | 3/28/2022 | 3/26/2019 | 103.77786 | 103.7778636 | 103.7778636 | 103.7778636 | 103.4806075 | 101.8214763 | 100.1969097 | 98.60589195 | 97.04744698 |
| 190326A00004 | 3/26/2019 | 2.58 | 9/26/2023 | 3/26/2019 | 107.27373 | 107.2737329 | 107.2737329 | 107.2737329 | 106.4652817 | 103.299589 | 100.2448972 | 97.29666072 | 94.4505502 |
| 190326A00014 | 3/26/2019 | 2.56 | 9/28/2020 | 3/26/2019 | 100.37753 | 100.377527 | 100.377527 | 100.377527 | 100.3626289 | 100.1990191 | 100.0359428 | 99.87339738 | 99.71138034 |
| 190328A00023 | 3/28/2019 | 2.51 | 2/24/2021 | 3/28/2019 | 101.30048 | 101.3004833 | 101.3004833 | 101.3004833 | 101.2330388 | 100.6568966 | 100.0873002 | 99.52413842 | 98.96730278 |
| 190328A00083 | 3/28/2019 | 2.37 | 3/28/2024 | 3/28/2019 | 108.33673 | 108.3367275 | 108.3367275 | 108.3367275 | 107.2551015 | 103.5681626 | 100.0281917 | 96.62850197 | 93.36275204 |
| 190404A00024 | 4/5/2019 | 2.61 | 2/15/2022 | 4/5/2019 | 103.63235 | 103.632353 | 103.632353 | 103.632353 | 103.3597278 | 101.8139987 | 100.2991315 | 98.81427291 | 97.35860084 |
| 190409A00009 | 4/9/2019 | 2.57 | 4/9/2021 | 4/9/2019 | 101.61746 | 101.6174629 | 101.6174629 | 101.6174629 | 101.528041 | 100.8301695 | 100.1418803 | 99.46297692 | 98.79326823 |
| 190423A00049 | 4/23/2019 | 2.6 | 4/23/2021 | 4/23/2019 | 101.72926 | 101.7292593 | 101.7292593 | 101.7292593 | 101.632573 | 100.8959366 | 100.1699632 | 99.45442225 | 98.74909008 |
| 190430A00002 | 4/30/2019 | 2.4 | 11/2/2022 | 4/30/2019 | 105.21483 | 105.2148319 | 105.2148319 | 105.2148319 | 104.7540739 | 102.4856359 | 100.2775426 | 98.1277465 | 96.0342875 |
| 190514A00045 | 5/14/2019 | 2.49 | 5/13/2022 | 5/14/2019 | 103.95607 | 103.9560661 | 103.9560661 | 103.9560661 | 103.6299117 | 101.8448184 | 100.0990473 | 98.39143224 | 96.72085183 |
| 190514A00073 | 5/14/2019 | 2.53 | 5/14/2024 | 5/14/2019 | 108.53323 | 108.5332304 | 108.5332304 | 108.5332304 | 107.3830488 | 103.5863171 | 99.94499694 | 96.45187937 | 93.10013185 |
| 190515A00038 | 5/15/2019 | 2.38 | 5/14/2021 | 5/15/2019 | 101.68267 | 101.6826718 | 101.6826718 | 101.6826718 | 101.575326 | 100.7815875 | 100.0002342 | 99.2309777 | 98.47353848 |
| 190515A00041 | 5/15/2019 | 2.41 | 11/15/2021 | 5/15/2019 | 102.77954 | 102.7795428 | 102.7795428 | 102.7795428 | 102.5584732 | 101.2622901 | 99.99330309 | 98.75065968 | 97.53354327 |
| 190520A00054 | 5/20/2019 | 2.46 | 5/20/2021 | 5/20/2019 | 101.79103 | 101.7910342 | 101.7910342 | 101.7910342 | 101.6805785 | 100.8698694 | 100.0720678 | 99.28686709 | 98.51397024 |

Classification | Public

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 190521A00025 | 5/21/2019 | 2.47 | 5/21/2021 | 5/21/2019 | 101.80531 | 101.8053123 | 101.8053123 | 101.8053123 | 101.6943426 | 100.880839 | 100.0803298 | 99.29250522 | 98.51706541 |
| 190523A00015 | 5/23/2019 | 2.51 | 4/1/2024 | 5/23/2019 | 108.19548 | 108.195481 | 108.195481 | 108.195481 | 107.1144851 | 103.437424 | 99.90689413 | 96.51622826 | 93.25910348 |
| 190523A00022 | 5/23/2019 | 2.47 | 10/12/2022 | 5/23/2019 | 104.83308 | 104.8330827 | 104.8330827 | 104.8330827 | 104.3919066 | 102.1915915 | 100.0485172 | 97.96077935 | 95.92655359 |
| 190524A00026 | 5/28/2019 | 2.45 | 6/15/2023 | 5/28/2019 | 106.24859 | 106.2485882 | 106.2485882 | 106.2485882 | 105.5723499 | 102.6943444 | 99.90981302 | 97.21522819 | 94.60721491 |
| 190528A00039 | 5/28/2019 | 2.38 | 11/29/2021 | 5/28/2019 | 102.82125 | 102.821249 | 102.821249 | 102.821249 | 102.5923019 | 101.2632036 | 99.95785607 | 98.67567103 | 97.41607919 |
| 190529A00002 | 5/29/2019 | 2.32 | 5/28/2021 | 5/29/2019 | 101.71477 | 101.7147721 | 101.7147721 | 101.7147721 | 101.6003243 | 100.7682387 | 99.94974598 | 99.14451524 | 98.35222614 |
| 190529A00067 | 5/29/2019 | 2.32 | 6/1/2021 | 5/29/2019 | 101.73757 | 101.7375693 | 101.7375693 | 101.7375693 | 101.6210686 | 100.7779703 | 99.9488202 | 99.13327447 | 98.33100049 |
| 190529A00080 | 5/29/2019 | 2.31 | 11/29/2021 | 5/29/2019 | 102.72694 | 102.7269425 | 102.7269425 | 102.7269425 | 102.4980911 | 101.1696585 | 99.86496527 | 98.58342346 | 97.32446412 |
| 190530A00008 | 5/30/2019 | 2.38 | 5/30/2025 | 5/30/2019 | 111.04859 | 111.0485941 | 111.0485941 | 111.0485941 | 109.1526042 | 104.2847647 | 99.66345684 | 95.27495127 | 91.10635094 |
| 190530A00025 | 5/30/2019 | 2.36 | 6/1/2021 | 5/30/2019 | 101.77142 | 101.7714163 | 101.7714163 | 101.7714163 | 101.6548968 | 100.8116424 | 99.98233797 | 99.16663973 | 98.364215 |
| 190530A00034 | 5/30/2019 | 2.44 | 5/30/2024 | 5/30/2019 | 108.28393 | 108.2839279 | 108.2839279 | 108.2839279 | 107.1091859 | 103.2760008 | 99.60135544 | 96.07789039 | 92.69862535 |
| 190531A00009 | 6/5/2019 | 2.1 | 6/3/2022 | 6/5/2019 | 103.69432 | 103.6943216 | 103.6943216 | 103.6943216 | 103.3536545 | 101.5092222 | 99.70661133 | 97.94463216 | 96.2221365 |
| 190603A00019 | 6/3/2019 | 2.19 | 6/3/2021 | 6/3/2019 | 101.63821 | 101.6382064 | 101.6382064 | 101.6382064 | 101.5207163 | 100.6726236 | 99.83865809 | 99.01846909 | 98.21171743 |
| 190604A00030 | 6/4/2019 | 2.2 | 6/3/2022 | 6/4/2019 | 103.5625 | 103.5624982 | 103.5624982 | 103.5624982 | 103.2231798 | 101.3857563 | 99.58990356 | 97.83444171 | 96.11823183 |
| 190604A00047 | 6/4/2019 | 2.31 | 12/4/2020 | 6/4/2019 | 100.72205 | 100.7220503 | 100.7220503 | 100.7220503 | 100.685193 | 100.3360807 | 99.98938767 | 99.64508876 | 99.30315925 |
| 190424A00027 | 4/24/2019 | 2.55 | 4/23/2021 | 4/24/2019 | 101.69235 | 101.6923539 | 101.6923539 | 101.6923539 | 101.5956849 | 100.8591995 | 100.1333754 | 99.4179823 | 98.71279647 |
| 190426A00011 | 5/1/2019 | 2.56 | 3/15/2022 | 5/1/2019 | 103.72957 | 103.7295682 | 103.7295682 | 103.7295682 | 103.4400986 | 101.8155596 | 100.2244042 | 98.66566872 | 97.13842635 |
| 190501A00003 | 5/1/2019 | 2.61 | 5/1/2024 | 5/1/2019 | 108.75598 | 108.7559814 | 108.7559814 | 108.7559814 | 107.6257223 | 103.8583792 | 100.2439354 | 96.77530102 | 93.44576024 |
| 190503A00009 | 5/3/2019 | 2.57 | 5/3/2021 | 5/3/2019 | 101.77122 | 101.7712221 | 101.7712221 | 101.7712221 | 101.66939 | 100.9052338 | 100.1525411 | 99.41105554 | 98.68052816 |
| 190513A00013 | 5/13/2019 | 2.52 | 5/13/2024 | 5/13/2019 | 108.48891 | 108.4889136 | 108.4889136 | 108.4889136 | 107.3405249 | 103.5472084 | 99.90907477 | 96.41892581 | 93.06993925 |
| 190514A00015 | 5/14/2019 | 2.43 | 5/14/2021 | 5/14/2019 | 101.72249 | 101.7224861 | 101.7224861 | 101.7224861 | 101.6151197 | 100.821207 | 100.0396814 | 99.27025445 | 98.51264664 |
| 190514A00023 | 5/14/2019 | 2.43 | 5/14/2021 | 5/14/2019 | 101.72249 | 101.7224861 | 101.7224861 | 101.7224861 | 101.6151197 | 100.821207 | 100.0396814 | 99.27025445 | 98.51264664 |
| 190514A00056 | 5/14/2019 | 2.32 | 5/15/2023 | 5/14/2019 | 106.21426 | 106.2142582 | 106.2142582 | 106.2142582 | 105.569771 | 102.763015 | 100.0452639 | 97.41316986 | 94.86353313 |
| 190515A00011 | 5/15/2019 | 2.38 | 5/17/2021 | 5/15/2019 | 101.7083 | 101.7083009 | 101.7083009 | 101.7083009 | 101.5994077 | 100.7972579 | 100.007754 | 99.23059845 | 98.46550302 |
| 190515A00046 | 5/15/2019 | 2.4 | 5/14/2021 | 5/15/2019 | 101.6986 | 101.6985975 | 101.6985975 | 101.6985975 | 101.5912435 | 100.7974353 | 100.0160131 | 99.2466884 | 98.48918174 |
| 190515A00057 | 5/15/2019 | 2.25 | 5/16/2022 | 5/15/2019 | 103.86758 | 103.8675838 | 103.8675838 | 103.8675838 | 103.5384649 | 101.7403996 | 99.9821903 | 98.2626622 | 96.5806851 |
| 190520A00025 | 5/20/2019 | 2.32 | 5/20/2021 | 5/20/2019 | 101.79064 | 101.7906392 | 101.7906392 | 101.7906392 | 101.6799653 | 100.8677329 | 100.0684545 | 99.28182195 | 98.50753672 |
| 190521A00044 | 5/21/2019 | 2.47 | 5/17/2021 | 5/21/2019 | 101.78072 | 101.7807181 | 101.7807181 | 101.7807181 | 101.6717871 | 100.8693174 | 100.0794971 | 99.30202868 | 98.53662381 |
| 190523A00020 | 5/23/2019 | 2.5 | 2/9/2024 | 5/23/2019 | 107.84389 | 107.8438887 | 107.8438887 | 107.8438887 | 106.8427638 | 103.3102294 | 99.91421833 | 96.64871527 | 93.50800404 |
| 190524A00004 | 5/24/2019 | 2.27 | 5/24/2021 | 5/24/2019 | 101.77387 | 101.773872 | 101.773872 | 101.773872 | 101.6611769 | 100.8380725 | 100.0282679 | 99.23144264 | 98.44728643 |
| 190524A00014 | 5/24/2019 | 2.24 | 5/24/2022 | 5/24/2019 | 103.89653 | 103.896526 | 103.896526 | 103.896526 | 103.5621735 | 101.7425965 | 99.96375139 | 98.2244632 | 96.52359945 |
| 190524A00040 | 5/24/2019 | 2.47 | 5/24/2024 | 5/24/2019 | 108.36392 | 108.363916 | 108.363916 | 108.363916 | 107.1984345 | 103.3791508 | 99.71722312 | 96.20534933 | 92.83660521 |
| 190524A00044 | 5/24/2019 | 2.27 | 5/24/2021 | 5/24/2019 | 101.77387 | 101.773872 | 101.773872 | 101.773872 | 101.6611769 | 100.8380725 | 100.0282679 | 99.23144264 | 98.44728643 |

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 190528A00003 | 5/28/2019 | 2.42 | 5/31/2022 | 5/28/2019 | 103.95437 | 103.9543708 | 103.9543708 | 103.9543708 | 103.6165286 | 101.7835508 | 99.99186018 | 98.24028976 | 96.5277129 |
| 190529A00011 | 5/29/2019 | 2.36 | 5/30/2023 | 5/29/2019 | 105.89672 | 105.8967169 | 105.8967169 | 105.8967169 | 105.2397973 | 102.4098585 | 99.67057649 | 97.01857377 | 94.45061695 |
| 190529A00012 | 5/29/2019 | 2.34 | 11/29/2021 | 5/29/2019 | 102.76736 | 102.7673596 | 102.7673596 | 102.7673596 | 102.5384671 | 101.2097492 | 99.90477561 | 98.62295813 | 97.36372772 |
| 190529A00032 | 5/29/2019 | 2.38 | 5/29/2024 | 5/29/2019 | 108.04639 | 108.0463865 | 108.0463865 | 108.0463865 | 106.8742786 | 103.0481924 | 99.38030373 | 95.8632684 | 92.49012075 |
| 190529A00050 | 5/29/2019 | 2.31 | 11/29/2021 | 5/29/2019 | 102.72694 | 102.7269425 | 102.7269425 | 102.7269425 | 102.4980911 | 101.1696585 | 99.86496527 | 98.58342346 | 97.32446412 |
| 190529A00062 | 5/29/2019 | 2.32 | 5/28/2021 | 5/29/2019 | 101.71477 | 101.7147721 | 101.7147721 | 101.7147721 | 101.6003243 | 100.7682387 | 99.94974598 | 99.14451524 | 98.35222614 |
| 200131A00038 | 1/31/2020 | 1.73 | 1/30/2025 | 1/31/2020 | 106.50599 | 106.505994 | 106.505994 | 106.505994 | 104.901707 | 100.4775936 | 96.26503324 | 92.25282535 | 88.43042044 |
| 200204A00001 | 2/4/2020 | 1.79 | 2/4/2025 | 2/4/2020 | 106.79832 | 106.7983212 | 106.7983212 | 106.7983212 | 105.182404 | 100.7382167 | 96.50701693 | 92.47750076 | 88.63902305 |
| 200205A00013 | 2/5/2020 | 1.77 | 2/6/2023 | 2/5/2020 | 103.75314 | 103.7531415 | 103.7531415 | 103.7531415 | 103.2149434 | 100.717439 | 98.29317037 | 95.93956371 | 93.65415206 |
| 200214A00002 | 2/14/2020 | 1.58 | 11/15/2024 | 2/14/2020 | 106.34911 | 106.3491113 | 106.3491113 | 106.3491113 | 104.8810566 | 100.6286114 | 96.57144494 | 92.69957118 | 89.00356959 |
| 200214A00017 | 2/14/2020 | 1.59 | 2/14/2025 | 2/14/2020 | 106.76243 | 106.7624267 | 106.7624267 | 106.7624267 | 105.1154447 | 100.61944 | 96.34071067 | 92.26763526 | 88.3892753 |
| 200218A00023 | 2/18/2020 | 1.55 | 2/21/2023 | 2/18/2020 | 103.71173 | 103.711728 | 103.711728 | 103.711728 | 103.1574105 | 100.6071896 | 98.1328303 | 95.73162208 | 93.40096962 |
| 200219A00015 | 2/19/2020 | 1.77 | 2/19/2027 | 2/19/2020 | 110.93856 | 110.9385629 | 110.9385629 | 110.9385629 | 107.0246221 | 100.5898058 | 94.5835583 | 88.97515317 | 83.73621821 |
| 200220A00001 | 2/20/2020 | 1.74 | 2/22/2022 | 2/20/2020 | 102.30023 | 102.300229 | 102.300229 | 102.300229 | 102.025096 | 100.4697055 | 98.94560946 | 97.45193261 | 95.98783196 |
| 200220A00025 | 2/20/2020 | 1.72 | 2/21/2023 | 2/20/2020 | 103.68368 | 103.68368 | 103.68368 | 103.68368 | 103.1318495 | 100.5919981 | 98.12750457 | 95.73568282 | 93.41396057 |
| 200224A00020 | 2/24/2020 | 1.59 | 2/24/2025 | 2/24/2020 | 105.95801 | 105.9580084 | 105.9580084 | 105.9580084 | 104.307114 | 99.82655218 | 95.56320018 | 91.50540517 | 87.64220155 |
| 200225A00044 | 2/25/2020 | 1.57 | 2/25/2022 | 2/25/2020 | 102.04168 | 102.0416786 | 102.0416786 | 102.0416786 | 101.7650946 | 100.2030725 | 98.67257654 | 97.17272075 | 95.70265192 |
| 200226A00013 | 2/26/2020 | 1.35 | 2/26/2024 | 2/26/2020 | 104.4542 | 104.4541979 | 104.4541979 | 104.4541979 | 103.4352208 | 99.8993205 | 96.50250657 | 93.238556 | 90.10156042 |
| 200228A00012 | 3/3/2020 | 1.4 | 3/3/2025 | 3/3/2020 | 105.10421 | 105.1042109 | 105.1042109 | 105.1042109 | 103.4443223 | 98.96465502 | 94.70318409 | 90.64815578 | 86.78851252 |
| 200228A00013 | 3/3/2020 | 1.33 | 1/14/2022 | 3/3/2020 | 101.55476 | 101.554756 | 101.554756 | 101.554756 | 101.3028334 | 99.86192326 | 98.44856712 | 97.06204445 | 95.70165934 |
| 200228A00026 | 2/28/2020 | 2.14 | 2/28/2035 | 2/28/2020 | 126.52514 | 126.5251417 | 126.5251417 | 120.7932006 | 106.4209938 | 93.682535 | 82.6472317 | 73.07643316 | 64.7660991 |
| 200228A00027 | 2/28/2020 | 1.31 | 2/28/2022 | 2/28/2020 | 101.63641 | 101.6364084 | 101.6364084 | 101.6364084 | 101.3585649 | 99.79115507 | 98.25548288 | 96.75065203 | 95.27579965 |
| 200228A00059 | 2/28/2020 | 1.79 | 2/28/2030 | 2/28/2020 | 114.21254 | 114.2125359 | 114.2125359 | 114.2125359 | 105.5523497 | 96.61164957 | 88.5025579 | 81.14334417 | 74.46069664 |
| 200302A00034 | 3/2/2020 | 1.25 | 3/1/2024 | 3/2/2020 | 103.45009 | 103.4500888 | 103.4500888 | 103.4500888 | 102.4348834 | 98.92315501 | 95.54968673 | 92.30828867 | 89.19308412 |
| 200302A00036 | 3/2/2020 | 1.45 | 3/2/2026 | 3/2/2020 | 106.42725 | 106.4272471 | 106.4272471 | 106.4272471 | 103.8560321 | 98.44515704 | 93.34732499 | 88.54284508 | 84.01336499 |
| 200302A00053 | 3/2/2020 | 1.31 | 3/3/2025 | 3/2/2020 | 104.68813 | 104.6881346 | 104.6881346 | 104.6881346 | 103.0307262 | 98.56048566 | 94.3081122 | 90.26186641 | 86.41070427 |
| 200303A00001 | 3/3/2020 | 1.15 | 3/3/2025 | 3/3/2020 | 104.78845 | 104.7884501 | 104.7884501 | 104.7884501 | 103.1188503 | 98.62108091 | 94.34317948 | 90.27326834 | 86.40017522 |
| 200303A00012 | 3/3/2020 | 1.71 | 3/1/2030 | 3/3/2020 | 113.45031 | 113.4503138 | 113.4503138 | 113.4503138 | 104.8059565 | 95.89731689 | 87.81845184 | 80.48774383 | 73.83198745 |
| 200303A00034 | 3/3/2020 | 1.21 | 3/3/2025 | 3/3/2020 | 104.22583 | 104.2258276 | 104.2258276 | 104.2258276 | 102.571175 | 98.1114086 | 93.86914344 | 89.832656 | 85.99091733 |
| 200304A00008 | 3/4/2020 | 1.03 | 11/15/2021 | 3/4/2020 | 100.97382 | 100.973818 | 100.973818 | 100.973818 | 100.7545126 | 99.47074955 | 98.21397086 | 96.98333005 | 95.77801622 |
| 200304A00017 | 3/4/2020 | 0.83 | 3/16/2022 | 3/4/2020 | 101.17047 | 101.1704741 | 101.1704741 | 101.1704741 | 100.8828365 | 99.27259352 | 97.69560859 | 96.15091795 | 94.63759498 |
| 200305A00007 | 3/5/2020 | 1.14 | 3/5/2025 | 3/5/2020 | 103.90687 | 103.9068669 | 103.9068669 | 103.9068669 | 102.2500584 | 97.79260336 | 93.55284882 | 89.51904634 | 85.6801444 |
| 200305A00009 | 3/10/2020 | 1.04 | 10/18/2023 | 3/10/2020 | 102.41486 | 102.4148647 | 102.4148647 | 102.4148647 | 101.592837 | 98.4479971 | 95.41584987 | 92.49168917 | 89.67103747 |

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 200305A00029 | 3/5/2020 | 1.14 | 3/5/2025 | 3/5/2020 | 103.90687 | 103.9068669 | 103.9068669 | 103.9068669 | 102.2500584 | 97.79260336 | 93.55284882 | 89.51904634 | 85.6801444 |
| 200305A00036 | 3/5/2020 | 1.36 | 3/5/2027 | 3/5/2020 | 106.97909 | 106.9790851 | 106.9790851 | 106.9790851 | 103.0989383 | 96.80348425 | 90.9302843 | 85.44891745 | 80.33130339 |
| 200305A00043 | 3/5/2020 | 0.95 | 3/7/2022 | 3/5/2020 | 101.07375 | 101.0737479 | 101.0737479 | 101.0737479 | 100.7924739 | 99.21137336 | 97.66254271 | 96.14506077 | 94.65804122 |
| 200306A00030 | 3/6/2020 | 0.88 | 3/6/2023 | 3/6/2020 | 101.53117 | 101.5311728 | 101.5311728 | 101.5311728 | 100.9722914 | 98.42506427 | 95.95438232 | 93.55748184 | 91.23171789 |
| 200306A00046 | 3/6/2020 | 1.01 | 3/3/2025 | 3/6/2020 | 103.30121 | 103.3012136 | 103.3012136 | 103.3012136 | 101.6520726 | 97.21325448 | 92.99120592 | 88.97423517 | 85.15134345 |
| 200306A00063 | 3/6/2020 | 0.64 | 3/16/2022 | 3/6/2020 | 100.85782 | 100.8578229 | 100.8578229 | 100.8578229 | 100.5705951 | 98.96300941 | 97.38863414 | 95.84650674 | 94.33570187 |
| 200309A00016 | 3/9/2020 | 0.77 | 9/12/2022 | 3/9/2020 | 101.01487 | 101.0148734 | 101.0148734 | 101.0148734 | 100.6046482 | 98.52652259 | 96.50116815 | 94.52688421 | 92.60203841 |
| 200310A00022 | 3/10/2020 | 1.12 | 3/10/2027 | 3/10/2020 | 106.68551 | 106.6855092 | 106.6855092 | 106.6855092 | 102.749565 | 96.40409174 | 90.48685168 | 84.9668392 | 79.81544544 |
| 200310A00073 | 3/12/2020 | 2.12 | 3/11/2027 | 3/12/2020 | 112.04009 | 112.0400946 | 112.0400946 | 112.0400946 | 108.0748604 | 101.604301 | 95.56545682 | 89.92727793 | 84.66110309 |
| 200311A00016 | 3/11/2020 | 0.87 | 5/11/2021 | 3/11/2020 | 100.47522 | 100.4752201 | 100.4752201 | 100.4752201 | 100.3700084 | 99.58969694 | 98.82145882 | 98.0650155 | 97.32009698 |
| 200311A00058 | 3/16/2020 | 1.1 | 10/14/2022 | 3/16/2020 | 101.79213 | 101.7921332 | 101.7921332 | 101.7921332 | 101.3552058 | 99.18396772 | 97.06950835 | 95.00993189 | 93.0034222 |
| 200312A00016 | 3/16/2020 | 1.09 | 2/15/2023 | 3/16/2020 | 102.0412 | 102.0411958 | 102.0411958 | 102.0411958 | 101.4987173 | 98.99739382 | 96.5700885 | 94.2141755 | 91.9271394 |
| 200326A00028 | 3/26/2020 | 1.54 | 3/26/2025 | 3/26/2020 | 105.83017 | 105.8301656 | 105.8301656 | 105.8301656 | 104.1190311 | 99.56589103 | 95.23677955 | 91.11949943 | 87.20258464 |
| 200330A00041 | 4/1/2020 | 1.09 | 4/1/2025 | 4/1/2020 | 103.73455 | 103.7345504 | 103.7345504 | 103.7345504 | 102.0240155 | 97.50420708 | 93.20811154 | 89.12349485 | 85.23885943 |
| 200330A00045 | 3/30/2020 | 1.47 | 3/30/2027 | 3/30/2020 | 107.78688 | 107.7868839 | 107.7868839 | 107.7868839 | 103.8009471 | 97.42304042 | 91.47618093 | 85.92906702 | 80.75282606 |
| 200331A00029 | 4/2/2020 | 1.77 | 4/3/2023 | 4/2/2020 | 103.97952 | 103.9795238 | 103.9795238 | 103.9795238 | 103.3875812 | 100.7350169 | 98.16366988 | 95.67053898 | 93.25275593 |
| 200414A00016 | 4/16/2020 | 1.64 | 4/15/2024 | 4/16/2020 | 105.02684 | 105.0268379 | 105.0268379 | 105.0268379 | 103.9370272 | 100.2812748 | 96.7731369 | 93.40581944 | 90.17288346 |
| 200415A00030 | 4/15/2020 | 0.76 | 3/15/2023 | 4/15/2020 | 101.22809 | 101.2280862 | 101.2280862 | 101.2280862 | 100.6613307 | 98.0950026 | 95.60636085 | 93.19257768 | 90.85094813 |
| 200420A00011 | 4/20/2020 | 0.7 | 4/19/2024 | 4/20/2020 | 102.1884 | 102.1883981 | 102.1883981 | 102.1883981 | 101.097772 | 97.46634058 | 93.98292232 | 90.64065606 | 87.43304193 |
| 200427A00010 | 4/27/2020 | 0.68 | 4/27/2022 | 4/27/2020 | 100.67499 | 100.6749909 | 100.6749909 | 100.6749909 | 100.3637543 | 98.65091593 | 96.97515922 | 95.33534547 | 93.73038311 |
| 200429A00045 | 5/1/2020 | 1.54 | 4/30/2025 | 5/1/2020 | 105.90063 | 105.9006311 | 105.9006311 | 105.9006311 | 104.1168747 | 99.47470311 | 95.06497242 | 90.87479957 | 86.89208938 |
| 200117A00002 | 1/17/2020 | 1.72 | 1/19/2021 | 1/17/2020 | 100.76529 | 100.7652904 | 100.7652904 | 100.7652904 | 100.7127915 | 100.23631 | 99.76433868 | 99.29681355 | 98.83367188 |
| 200127A00019 | 1/27/2020 | 1.8 | 1/27/2025 | 1/27/2020 | 106.81106 | 106.811059 | 106.811059 | 106.811059 | 105.2108646 | 100.787427 | 96.5750544 | 92.56259401 | 88.73954019 |
| 200127A00030 | 1/27/2020 | 1.8 | 1/27/2025 | 1/27/2020 | 106.81106 | 106.811059 | 106.811059 | 106.811059 | 105.2108646 | 100.787427 | 96.5750544 | 92.56259401 | 88.73954019 |
| 200128A00028 | 1/28/2020 | 1.81 | 1/28/2025 | 1/28/2020 | 106.8605 | 106.8604953 | 106.8604953 | 106.8604953 | 105.258067 | 100.8310422 | 96.61536047 | 92.59984822 | 88.77398049 |
| 200129A00008 | 1/29/2020 | 1.76 | 1/31/2022 | 1/29/2020 | 102.24372 | 102.2437225 | 102.2437225 | 102.2437225 | 101.9816851 | 100.4910513 | 99.0297734 | 97.59706108 | 96.19215176 |
| 200203A00022 | 2/3/2020 | 1.75 | 2/3/2025 | 2/3/2020 | 106.61244 | 106.6124437 | 106.6124437 | 106.6124437 | 104.9996005 | 100.5623284 | 96.33765853 | 92.31431155 | 88.4816654 |
| 200214A00016 | 2/14/2020 | 1.57 | 2/14/2024 | 2/14/2020 | 105.20197 | 105.2019667 | 105.2019667 | 105.2019667 | 104.1978878 | 100.681641 | 97.30257392 | 94.05459779 | 90.93192874 |
| 200218A00024 | 2/20/2020 | 1.73 | 7/17/2023 | 2/20/2020 | 104.2863 | 104.2863034 | 104.2863034 | 104.2863034 | 103.5776576 | 100.6444363 | 97.80945617 | 95.06889735 | 92.41911026 |
| 200219A00016 | 2/19/2020 | 1.57 | 10/19/2022 | 2/19/2020 | 103.26137 | 103.2613675 | 103.2613675 | 103.2613675 | 102.815825 | 100.6069171 | 98.45610478 | 96.3614347 | 94.32103625 |
| 200220A00007 | 2/20/2020 | 1.72 | 2/21/2023 | 2/20/2020 | 103.68368 | 103.68368 | 103.68368 | 103.68368 | 103.1318495 | 100.5919981 | 98.12750457 | 95.73568282 | 93.41396057 |
| 200220A00019 | 2/20/2020 | 1.59 | 2/22/2021 | 2/20/2020 | 100.84152 | 100.8415239 | 100.8415239 | 100.8415239 | 100.7749992 | 100.2048695 | 99.6411761 | 99.08381056 | 98.53266672 |
| 200221A00006 | 2/21/2020 | 1.5 | 2/21/2025 | 2/21/2020 | 106.37534 | 106.3753432 | 106.3753432 | 106.3753432 | 104.7165346 | 100.2097288 | 95.92162602 | 91.84048353 | 87.95525172 |

Classification | Public

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 200221A00031 | 2/21/2020 | 1.69 | 2/21/2025 | 2/21/2020 | 106.40715 | 106.4071494 | 106.4071494 | 106.4071494 | 104.7595791 | 100.2771578 | 96.01156415 | 91.9511871 | 88.08509907 |
| 200224A00005 | 2/24/2020 | 1.59 | 2/24/2022 | 2/24/2020 | 102.06995 | 102.069954 | 102.069954 | 102.069954 | 101.7939257 | 100.2345873 | 98.70668939 | 97.20934963 | 95.74171849 |
| 200224A00016 | 2/24/2020 | 1.56 | 2/24/2023 | 2/24/2020 | 103.28001 | 103.2800098 | 103.2800098 | 103.2800098 | 102.7263774 | 100.1831548 | 97.71560325 | 95.32101752 | 92.99680743 |
| 200225A00005 | 2/25/2020 | 1.57 | 2/25/2025 | 2/25/2020 | 105.86935 | 105.8693512 | 105.8693512 | 105.8693512 | 104.2169911 | 99.73567868 | 95.4717513 | 91.41354008 | 87.55006477 |
| 200225A00018 | 2/25/2020 | 1.94 | 2/25/2030 | 2/25/2020 | 115.63581 | 115.6358142 | 115.6358142 | 115.6358142 | 106.9515964 | 97.95400979 | 89.7908924 | 82.38038374 | 75.64904363 |
| 200225A00046 | 2/25/2020 | 1.54 | 2/23/2024 | 2/25/2020 | 104.47507 | 104.4750685 | 104.4750685 | 104.4750685 | 103.4661787 | 99.954948 | 96.58118535 | 93.33876722 | 90.22187818 |
| 200226A00012 | 2/26/2020 | 1.54 | 2/28/2022 | 2/26/2020 | 102.00416 | 102.0041598 | 102.0041598 | 102.0041598 | 101.7258523 | 100.1554038 | 98.61674701 | 97.10898417 | 95.63125094 |
| 200226A00014 | 2/26/2020 | 1.53 | 2/27/2023 | 2/26/2020 | 103.21215 | 103.2121464 | 103.2121464 | 103.2121464 | 102.6559227 | 100.1049674 | 97.63009634 | 95.22858215 | 92.89781361 |
| 200226A00019 | 2/26/2020 | 1.38 | 2/26/2025 | 2/26/2020 | 105.83884 | 105.8388398 | 105.8388398 | 105.8388398 | 104.1731551 | 99.66457924 | 95.37552177 | 91.294162 | 87.40937899 |
| 200227A00004 | 2/27/2020 | 1.65 | 2/27/2030 | 2/27/2020 | 114.79467 | 114.7946672 | 114.7946672 | 114.7946672 | 106.0039536 | 96.95225971 | 88.74573395 | 81.30107865 | 74.54359731 |
| 200227A00009 | 2/27/2020 | 1.47 | 2/27/2025 | 2/27/2020 | 105.41498 | 105.4149815 | 105.4149815 | 105.4149815 | 103.7613381 | 99.28479557 | 95.02577003 | 90.97257008 | 87.11419513 |
| 200227A00011 | 2/27/2020 | 1.42 | 2/28/2022 | 2/27/2020 | 101.81229 | 101.8122895 | 101.8122895 | 101.8122895 | 101.5342241 | 99.96536096 | 98.42826138 | 96.92202827 | 95.4457981 |
| 200227A00016 | 2/27/2020 | 1.47 | 2/27/2025 | 2/27/2020 | 105.41498 | 105.4149815 | 105.4149815 | 105.4149815 | 103.7613381 | 99.28479557 | 95.02577003 | 90.97257008 | 87.11419513 |
| 200228A00020 | 2/28/2020 | 1.32 | 2/24/2023 | 2/28/2020 | 102.65716 | 102.6571586 | 102.6571586 | 102.6571586 | 102.1050001 | 99.5699061 | 97.11029879 | 94.72347874 | 92.40686123 |
| 200228A00023 | 2/28/2020 | 1.31 | 2/28/2022 | 2/28/2020 | 101.63641 | 101.6364084 | 101.6364084 | 101.6364084 | 101.3585649 | 99.79115507 | 98.25548288 | 96.75065203 | 95.27579965 |
| 200228A00061 | 2/28/2020 | 1.13 | 7/20/2022 | 2/28/2020 | 102.01749 | 102.0174854 | 102.0174854 | 102.0174854 | 101.6458269 | 99.69196322 | 97.78535192 | 95.92455983 | 94.10820723 |
| 200302A00031 | 3/2/2020 | 1.02 | 11/18/2022 | 3/2/2020 | 102.10048 | 102.1004821 | 102.1004821 | 102.1004821 | 101.6327762 | 99.35724294 | 97.14347013 | 94.98940259 | 92.89306806 |
| 200304A00021 | 3/4/2020 | 0.94 | 3/4/2024 | 3/4/2020 | 102.98709 | 102.987091 | 102.987091 | 102.987091 | 101.9633628 | 98.43540414 | 95.04708477 | 91.79212348 | 88.66455847 |
| 200304A00038 | 3/4/2020 | 1.01 | 3/1/2022 | 3/4/2020 | 101.15875 | 101.1587485 | 101.1587485 | 101.1587485 | 100.880916 | 99.3148312 | 97.78050129 | 96.27702804 | 94.80354681 |
| 200304A00052 | 3/6/2020 | 2.11 | 3/8/2027 | 3/6/2020 | 111.95896 | 111.9589562 | 111.9589562 | 111.9589562 | 108.0063762 | 101.5453784 | 95.51505217 | 89.88445249 | 84.62501261 |
| 200304A00054 | 3/6/2020 | 2.35 | 3/8/2027 | 3/6/2020 | 113.54975 | 113.5497463 | 113.5497463 | 113.5497463 | 109.5776998 | 103.0659894 | 96.98735079 | 91.31070244 | 86.00734984 |
| 200305A00002 | 3/5/2020 | 1.14 | 3/5/2025 | 3/5/2020 | 103.90687 | 103.9068669 | 103.9068669 | 103.9068669 | 102.2500584 | 97.79260336 | 93.55284882 | 89.51904634 | 85.6801444 |
| 200309A00027 | 3/9/2020 | 0.97 | 3/10/2025 | 3/9/2020 | 103.12932 | 103.1293211 | 103.1293211 | 103.1293211 | 101.4670417 | 97.01499082 | 92.78115168 | 88.75371291 | 84.92156592 |
| 200309A00056 | 3/9/2020 | 0.97 | 3/7/2025 | 3/9/2020 | 103.12374 | 103.1237366 | 103.1237366 | 103.1237366 | 101.46756 | 97.02297454 | 92.79591938 | 88.7746372 | 84.94806914 |
| 200324A00020 | 3/24/2020 | 1.23 | 3/24/2022 | 3/24/2020 | 101.55492 | 101.554923 | 101.554923 | 101.554923 | 101.2630133 | 99.63356614 | 98.03797335 | 96.47524485 | 94.94442915 |
| 200325A00029 | 3/25/2020 | 1.15 | 3/24/2023 | 3/25/2020 | 102.76297 | 102.7629744 | 102.7629744 | 102.7629744 | 102.1812343 | 99.56073626 | 97.02017349 | 94.55660909 | 92.16723522 |
| 200406A00013 | 4/6/2020 | 0.83 | 4/1/2022 | 4/6/2020 | 100.90078 | 100.9007802 | 100.9007802 | 100.9007802 | 100.6050001 | 98.96018491 | 97.34985921 | 95.77300292 | 94.22863627 |
| 200407A00001 | 4/8/2020 | 2.41 | 4/7/2025 | 4/8/2020 | 109.97652 | 109.9765235 | 109.9765235 | 109.9765235 | 108.2149003 | 103.5357099 | 99.08679974 | 94.85559229 | 90.83026771 |
| 200413A00031 | 4/13/2020 | 0.73 | 4/13/2022 | 4/13/2020 | 100.74631 | 100.7463123 | 100.7463123 | 100.7463123 | 100.4434622 | 98.76766127 | 97.12752682 | 95.52198493 | 93.9500051 |
| 200416A00005 | 4/16/2020 | 0.49 | 4/15/2022 | 4/16/2020 | 100.64191 | 100.641906 | 100.641906 | 100.641906 | 100.3369366 | 98.65128088 | 97.00167929 | 95.38704092 | 93.80631924 |
| 200417A00016 | 4/21/2020 | 2.18 | 4/21/2025 | 4/21/2020 | 108.91425 | 108.9142545 | 108.9142545 | 108.9142545 | 107.1303638 | 102.4409381 | 97.98425575 | 93.74750408 | 89.71864889 |
| 200428A00013 | 4/30/2020 | 1.49 | 4/29/2024 | 4/30/2020 | 104.51163 | 104.5116265 | 104.5116265 | 104.5116265 | 103.4023373 | 99.71953566 | 96.18686922 | 92.79736106 | 89.54440315 |
| 200429A00010 | 4/29/2020 | 0.78 | 4/29/2025 | 4/29/2020 | 103.1749 | 103.174899 | 103.174899 | 103.174899 | 101.3970465 | 96.79314167 | 92.42133133 | 88.26869698 | 84.32311274 |

Classification | Public

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 200429A00017 | 5/4/2020 | 0.66 | 8/15/2022 | 5/4/2020 | 100.75121 | 100.7512121 | 100.7512121 | 100.7512121 | 100.3632579 | 98.36158966 | 96.4095636 | 94.50562875 | 92.64829398 |
| 200429A00056 | 5/1/2020 | 1.54 | 4/30/2025 | 5/1/2020 | 105.90063 | 105.9006311 | 105.9006311 | 105.9006311 | 104.1168747 | 99.47470311 | 95.06497242 | 90.87479957 | 86.89208938 |
| 200506A00002 | 5/8/2020 | 0.97 | 5/5/2025 | 5/8/2020 | 103.18476 | 103.1847579 | 103.1847579 | 103.1847579 | 101.4075948 | 96.81681001 | 92.45738526 | 88.31646117 | 84.38196437 |
| 190530A00009 | 5/30/2019 | 2.25 | 5/30/2024 | 5/30/2019 | 108.26377 | 108.2637681 | 108.2637681 | 108.2637681 | 107.0820902 | 103.2302364 | 99.53816871 | 95.99845069 | 92.60402993 |
| 190530A00021 | 5/30/2019 | 2.21 | 5/27/2022 | 5/30/2019 | 103.85883 | 103.8588309 | 103.8588309 | 103.8588309 | 103.5225895 | 101.6954078 | 99.90928012 | 98.16303141 | 96.45552843 |
| 190530A00030 | 5/30/2019 | 2.36 | 5/28/2021 | 5/30/2019 | 101.74818 | 101.7481755 | 101.7481755 | 101.7481755 | 101.6337095 | 100.8014716 | 99.98282836 | 99.17744877 | 98.3850125 |
| 190531A00038 | 5/31/2019 | 2.82 | 5/31/2034 | 5/31/2019 | 137.59561 | 137.5956059 | 137.5956059 | 132.7509715 | 118.1793066 | 105.0270249 | 93.53708841 | 83.48791983 | 74.68861536 |
| 190603A00005 | 6/3/2019 | 2.25 | 6/3/2024 | 6/3/2019 | 107.57133 | 107.5713277 | 107.5713277 | 107.5713277 | 106.3931692 | 102.563099 | 98.89200957 | 95.3725027 | 91.99756169 |
| 190604A00009 | 6/4/2019 | 2.23 | 6/4/2021 | 6/4/2019 | 101.67771 | 101.6777055 | 101.6777055 | 101.6777055 | 101.5596712 | 100.7086687 | 99.87188787 | 99.04897459 | 98.23958627 |
| 190604A00028 | 6/4/2019 | 2.2 | 6/3/2022 | 6/4/2019 | 103.5625 | 103.5624982 | 103.5624982 | 103.5624982 | 103.2231798 | 101.3857563 | 99.58990356 | 97.83444171 | 96.11823183 |
| 190606A00029 | 6/6/2019 | 2.96 | 6/6/2034 | 6/6/2019 | 136.49984 | 136.4998437 | 136.4998437 | 131.7537283 | 117.4520075 | 104.5081002 | 93.19350119 | 83.29158432 | 74.61565505 |
| 190607A00003 | 6/7/2019 | 1.92 | 6/7/2022 | 6/7/2019 | 103.37866 | 103.3786613 | 103.3786613 | 103.3786613 | 103.0357054 | 101.1833667 | 99.37326837 | 97.60420246 | 95.87500303 |
| 190610A00016 | 6/10/2019 | 2.21 | 6/10/2022 | 6/10/2019 | 103.61824 | 103.6182368 | 103.6182368 | 103.6182368 | 103.2740003 | 101.4170022 | 99.60241467 | 97.82902247 | 96.09565292 |
| 190611A00007 | 6/11/2019 | 2.25 | 6/10/2022 | 6/11/2019 | 103.69347 | 103.693469 | 103.693469 | 103.693469 | 103.3491159 | 101.4913937 | 99.67609576 | 97.90200642 | 96.16795268 |
| 190617A00026 | 6/17/2019 | 2.17 | 6/17/2022 | 6/17/2019 | 103.56028 | 103.5602777 | 103.5602777 | 103.5602777 | 103.2113715 | 101.3362561 | 99.5043633 | 97.71444299 | 95.96528944 |
| 190619A00007 | 6/19/2019 | 2.21 | 6/20/2022 | 6/19/2019 | 103.6521 | 103.6521006 | 103.6521006 | 103.6521006 | 103.300981 | 101.4168237 | 99.57626637 | 97.77804313 | 96.02093306 |
| 190619A00024 | 6/19/2019 | 2.21 | 7/19/2022 | 6/19/2019 | 103.80556 | 103.8055582 | 103.8055582 | 103.8055582 | 103.433052 | 101.4703393 | 99.55482817 | 97.68509289 | 95.85976067 |
| 190620A00026 | 6/20/2019 | 2.09 | 6/20/2023 | 6/20/2019 | 105.22887 | 105.2288716 | 105.2288716 | 105.2288716 | 104.5497206 | 101.6731267 | 98.89049416 | 96.19825963 | 93.59301442 |
| 190620A00045 | 6/20/2019 | 2.14 | 6/20/2024 | 6/20/2019 | 107.23102 | 107.2310167 | 107.2310167 | 107.2310167 | 106.0265116 | 102.1581761 | 98.45230674 | 94.90125584 | 91.49777495 |
| 190621A00021 | 6/21/2019 | 2.12 | 6/21/2022 | 6/21/2019 | 103.48539 | 103.4853853 | 103.4853853 | 103.4853853 | 103.1338395 | 101.2485951 | 99.4070402 | 97.60790448 | 95.84996301 |
| 190621A00023 | 6/21/2019 | 1.93 | 6/21/2022 | 6/21/2019 | 103.46764 | 103.4676351 | 103.4676351 | 103.4676351 | 103.1148408 | 101.2234405 | 99.37598117 | 97.57118227 | 95.80780902 |
| 190624A00036 | 6/24/2019 | 1.95 | 12/28/2020 | 6/24/2019 | 100.76315 | 100.7631516 | 100.7631516 | 100.7631516 | 100.7185153 | 100.3026128 | 99.89014084 | 99.48105702 | 99.07531974 |
| 190625A00017 | 6/25/2019 | 2.02 | 12/15/2022 | 6/25/2019 | 104.13731 | 104.1373093 | 104.1373093 | 104.1373093 | 103.6447265 | 101.2820452 | 98.98498247 | 96.7513588 | 94.57907971 |
| 190626A00004 | 6/26/2019 | 2.15 | 6/26/2024 | 6/26/2019 | 107.3007 | 107.3006987 | 107.3006987 | 107.3006987 | 106.0860632 | 102.2005931 | 98.47893896 | 94.91335973 | 91.49651995 |
| 190626A00010 | 6/26/2019 | 2.1 | 6/26/2023 | 6/26/2019 | 105.28776 | 105.2877565 | 105.2877565 | 105.2877565 | 104.601558 | 101.7080437 | 98.90953536 | 96.20241105 | 93.58320705 |
| 190701A00008 | 7/3/2019 | 2.1 | 7/3/2023 | 7/3/2019 | 105.32253 | 105.3225294 | 105.3225294 | 105.3225294 | 104.6279809 | 101.7154939 | 98.89922445 | 96.17548119 | 93.5407353 |
| 190701A00017 | 7/1/2019 | 1.9 | 7/1/2022 | 7/1/2019 | 103.45954 | 103.4595388 | 103.4595388 | 103.4595388 | 103.0997728 | 101.181287 | 99.30796214 | 97.47846486 | 95.69151 |
| 190605A00055 | 6/5/2019 | 2.11 | 6/6/2022 | 6/5/2019 | 103.41005 | 103.4100476 | 103.4100476 | 103.4100476 | 103.0688925 | 101.224767 | 99.42253957 | 97.66101603 | 95.93904394 |
| 190606A00026 | 6/6/2019 | 2.23 | 6/6/2023 | 6/6/2019 | 105.56254 | 105.5625416 | 105.5625416 | 105.5625416 | 104.8985459 | 102.0546598 | 99.30248253 | 96.63857978 | 94.05966436 |
| 190614A00005 | 6/14/2019 | 1.99 | 6/14/2022 | 6/14/2019 | 103.54623 | 103.5462258 | 103.5462258 | 103.5462258 | 103.1981582 | 101.3250924 | 99.49513648 | 97.7070457 | 95.95961937 |
| 190620A00055 | 6/25/2019 | 2.08 | 4/17/2023 | 6/25/2019 | 104.88515 | 104.8851514 | 104.8851514 | 104.8851514 | 104.2766475 | 101.5741208 | 98.95522402 | 96.41682772 | 93.95594343 |
| 190620A00057 | 6/25/2019 | 2.09 | 5/15/2023 | 6/25/2019 | 105.05099 | 105.0509921 | 105.0509921 | 105.0509921 | 104.4125706 | 101.633728 | 98.94289538 | 96.33676825 | 93.81218801 |
| 190625A00007 | 6/25/2019 | 2.06 | 6/25/2021 | 6/25/2019 | 101.63659 | 101.6365945 | 101.6365945 | 101.6365945 | 101.5076266 | 100.5996398 | 99.70784407 | 98.83180927 | 97.97112044 |

Classification | Public

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 190625A00012 | 6/25/2019 | 2.12 | 6/25/2024 | 6/25/2019 | 107.17758 | 107.1775775 | 107.1775775 | 107.1775775 | 105.9651313 | 102.0846828 | 98.36775847 | 94.80663546 | 91.39399533 |
| 190625A00024 | 6/25/2019 | 2.26 | 6/25/2025 | 6/25/2019 | 109.64241 | 109.6424096 | 109.6424096 | 109.6424096 | 107.7123448 | 102.8404221 | 98.21828457 | 93.8318618 | 89.66794575 |
| 190628A00024 | 6/28/2019 | 2.09 | 6/28/2022 | 6/28/2019 | 103.46266 | 103.4626599 | 103.4626599 | 103.4626599 | 103.1063273 | 101.2023189 | 99.34284216 | 97.52659067 | 95.75230485 |
| 190701A00023 | 7/1/2019 | 1.95 | 7/1/2024 | 7/1/2019 | 107.26258 | 107.2625789 | 107.2625789 | 107.2625789 | 106.0324315 | 102.1149428 | 98.36366567 | 94.7706995 | 91.32856011 |
| 190703A00004 | 7/3/2019 | 2.08 | 7/5/2022 | 7/3/2019 | 103.4779 | 103.4778975 | 103.4778975 | 103.4778975 | 103.1164179 | 101.1937236 | 99.31642382 | 97.48317368 | 95.69267725 |
| 190708A00001 | 7/8/2019 | 1.99 | 7/8/2022 | 7/8/2019 | 103.67067 | 103.6706731 | 103.6706731 | 103.6706731 | 103.3052924 | 101.3662385 | 99.47325688 | 97.62497362 | 95.82006521 |
| 190711A00026 | 7/11/2019 | 2.17 | 7/11/2022 | 7/11/2019 | 103.68451 | 103.6845064 | 103.6845064 | 103.6845064 | 103.3181948 | 101.3776937 | 99.48337075 | 97.63384653 | 95.82779203 |
| 190712A00009 | 7/12/2019 | 2.19 | 7/12/2023 | 7/12/2019 | 105.63514 | 105.6351438 | 105.6351438 | 105.6351438 | 104.9287047 | 101.9882836 | 99.14574235 | 96.39729512 | 93.73932426 |
| 190712A00018 | 7/12/2019 | 2.25 | 7/12/2024 | 7/12/2019 | 107.7804 | 107.7804049 | 107.7804049 | 107.7804049 | 106.5368689 | 102.6009526 | 98.83262807 | 95.22389251 | 91.76716728 |
| 190715A00014 | 7/15/2019 | 2.16 | 3/30/2022 | 7/15/2019 | 103.13449 | 103.1344909 | 103.1344909 | 103.1344909 | 102.8369041 | 101.1780502 | 99.55384443 | 97.96326558 | 96.40533263 |
| 190715A00027 | 7/15/2019 | 1.99 | 7/15/2021 | 7/15/2019 | 101.81301 | 101.8130111 | 101.8130111 | 101.8130111 | 101.6725258 | 100.7072234 | 99.76019322 | 98.83091995 | 97.91890761 |
| 190715A00028 | 7/17/2019 | 2.17 | 1/18/2022 | 7/17/2019 | 102.79961 | 102.7996075 | 102.7996075 | 102.7996075 | 102.5440976 | 101.0833273 | 99.65067025 | 98.24538589 | 96.86675927 |
| 190716A00046 | 7/16/2019 | 2.19 | 7/18/2022 | 7/16/2019 | 103.76055 | 103.7605467 | 103.7605467 | 103.7605467 | 103.3888645 | 101.4292313 | 99.51666533 | 97.64974694 | 95.82710899 |
| 190719A00006 | 7/19/2019 | 2.17 | 7/19/2024 | 7/19/2019 | 107.498 | 107.4980031 | 107.4980031 | 107.4980031 | 106.244002 | 102.2958374 | 98.51662302 | 94.89825158 | 91.43304774 |
| 190724A00046 | 7/24/2019 | 2.12 | 7/23/2021 | 7/24/2019 | 101.82555 | 101.8255535 | 101.8255535 | 101.8255535 | 101.6808745 | 100.6959658 | 99.73007845 | 98.78266552 | 97.85320072 |
| 190726A00005 | 7/26/2019 | 1.97 | 7/26/2022 | 7/26/2019 | 103.7239 | 103.7239031 | 103.7239031 | 103.7239031 | 103.3448795 | 101.3578376 | 99.41914759 | 97.52733166 | 95.68096767 |
| 190729A00007 | 7/29/2019 | 2.17 | 7/28/2023 | 7/29/2019 | 105.65843 | 105.6584265 | 105.6584265 | 105.6584265 | 104.9323729 | 101.9502007 | 99.068694 | 96.28390256 | 93.59205421 |
| 190729A00017 | 7/29/2019 | 1.97 | 7/29/2021 | 7/29/2019 | 101.86563 | 101.8656345 | 101.8656345 | 101.8656345 | 101.7171765 | 100.7134655 | 99.72948375 | 98.76465406 | 97.81842168 |
| 190731A00004 | 7/31/2019 | 2.18 | 7/31/2024 | 7/31/2019 | 107.60025 | 107.6002475 | 107.6002475 | 107.6002475 | 106.3256192 | 102.3449571 | 98.53594595 | 94.89028328 | 91.40011276 |
| 190806A00007 | 8/6/2019 | 1.88 | 8/5/2022 | 8/6/2019 | 103.22402 | 103.2240238 | 103.2240238 | 103.2240238 | 102.8395956 | 100.8382555 | 98.88603088 | 96.98140537 | 95.12292032 |
| 190807A00014 | 8/7/2019 | 1.75 | 8/7/2023 | 8/7/2019 | 104.43046 | 104.4304606 | 104.4304606 | 104.4304606 | 103.6954552 | 100.7059844 | 97.81829679 | 95.02836493 | 92.33234464 |
| 190808A00015 | 8/8/2019 | 1.92 | 8/9/2021 | 8/8/2019 | 101.70515 | 101.7051548 | 101.7051548 | 101.7051548 | 101.5500883 | 100.5197425 | 99.51022646 | 98.52091343 | 97.55120154 |
| 190808A00023 | 8/8/2019 | 1.68 | 11/8/2023 | 8/8/2019 | 105.17284 | 105.1728358 | 105.1728358 | 105.1728358 | 104.3088561 | 101.0500617 | 97.90971026 | 94.88281217 | 91.96462043 |
| 190808A00050 | 8/8/2019 | 1.7 | 8/8/2024 | 8/8/2019 | 106.43757 | 106.4375743 | 106.4375743 | 106.4375743 | 105.14664 | 101.1482739 | 97.32382692 | 93.66482335 | 90.16324663 |
| 190809A00012 | 8/9/2019 | 1.69 | 8/9/2024 | 8/9/2019 | 106.40122 | 106.4012191 | 106.4012191 | 106.4012191 | 105.1087247 | 101.1085245 | 97.28242094 | 93.62192521 | 90.1190084 |
| 190809A00020 | 8/9/2019 | 2.44 | 8/9/2034 | 8/9/2019 | 132.75127 | 132.7512742 | 132.7512742 | 127.6432395 | 113.1606941 | 100.1918012 | 88.8936759 | 79.04005228 | 70.43644335 |
| 190809A00024 | 8/9/2019 | 2.07 | 8/10/2020 | 8/9/2019 | 100.04996 | 100.0499586 | 100.0499586 | 100.0499586 | 100.0478937 | 100.0201639 | 99.99246489 | 99.96479651 | 99.93715875 |
| 190814A00009 | 8/14/2019 | 1.84 | 8/14/2024 | 8/14/2019 | 106.28836 | 106.2883626 | 106.2883626 | 106.2883626 | 104.9958412 | 101.0057053 | 97.18917846 | 93.53779481 | 90.04354755 |
| 190814A00010 | 8/14/2019 | 1.84 | 4/5/2023 | 8/14/2019 | 104.177 | 104.1770035 | 104.1770035 | 104.1770035 | 103.5825293 | 100.9219201 | 98.34289204 | 95.84242503 | 93.41763318 |
| 190815A00004 | 8/15/2019 | 1.82 | 8/15/2022 | 8/15/2019 | 103.14413 | 103.1441323 | 103.1441323 | 103.1441323 | 102.7520079 | 100.7252133 | 98.74855839 | 96.82047794 | 94.9394671 |
| 190816A00015 | 8/16/2019 | 2.2 | 8/16/2029 | 8/16/2019 | 117.13758 | 117.1375826 | 117.1375826 | 117.1375826 | 109.3476463 | 100.6888836 | 92.79112587 | 85.5833551 | 79.00152342 |
| 190816A00016 | 8/16/2019 | 2.2 | 8/16/2029 | 8/16/2019 | 117.13758 | 117.1375826 | 117.1375826 | 117.1375826 | 109.3476463 | 100.6888836 | 92.79112587 | 85.5833551 | 79.00152342 |
| 190816A00031 | 8/16/2019 | 1.77 | 8/16/2024 | 8/16/2019 | 106.01144 | 106.0114438 | 106.0114438 | 106.0114438 | 104.7168122 | 100.7271661 | 96.91135167 | 93.26088187 | 89.76773047 |

Classification | Public

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 190819A00005 | 8/19/2019 | 1.62 | 8/21/2023 | 8/19/2019 | 104.64578 | 104.6457778 | 104.6457778 | 104.6457778 | 103.8885398 | 100.8463907 | 97.90898905 | 95.07214002 | 92.3318423 |
| 190820A00012 | 8/20/2019 | 1.76 | 8/19/2022 | 8/20/2019 | 103.03659 | 103.0365878 | 103.0365878 | 103.0365878 | 102.6415202 | 100.605355 | 98.61972697 | 96.68305142 | 94.79380532 |
| 190820A00030 | 8/20/2019 | 1.76 | 4/16/2024 | 8/20/2019 | 105.47962 | 105.4796231 | 105.4796231 | 105.4796231 | 104.3863965 | 100.7196386 | 97.20094231 | 93.82349044 | 90.58082242 |
| 190821A00027 | 8/21/2019 | 1.79 | 8/22/2022 | 8/21/2019 | 103.11122 | 103.1112238 | 103.1112238 | 103.1112238 | 102.7136772 | 100.6688493 | 98.67489051 | 96.73020067 | 94.83324205 |
| 190823A00005 | 8/23/2019 | 1.62 | 8/23/2024 | 8/23/2019 | 106.17428 | 106.1742797 | 106.1742797 | 106.1742797 | 104.858632 | 100.8271739 | 96.97248743 | 93.28588949 | 89.75917151 |
| 190826A00030 | 8/26/2019 | 1.72 | 8/26/2026 | 8/26/2019 | 109.82622 | 109.8262156 | 109.8262156 | 109.8262156 | 106.596104 | 100.6232664 | 95.02211992 | 89.76764212 | 84.83662024 |
| 190826A00058 | 8/26/2019 | 1.91 | 8/26/2026 | 8/26/2019 | 109.78678 | 109.78678 | 109.78678 | 109.78678 | 106.587446 | 100.6580731 | 95.09631669 | 89.87750139 | 84.97873166 |
| 190826A00060 | 8/26/2019 | 2.02 | 8/26/2027 | 8/26/2019 | 112.16051 | 112.1605146 | 112.1605146 | 112.1605146 | 107.5365724 | 100.6719395 | 94.29376021 | 88.36504559 | 82.85180073 |
| 190826A00065 | 8/26/2019 | 2.09 | 8/28/2029 | 8/26/2019 | 116.20049 | 116.2004861 | 116.2004861 | 116.2004861 | 108.3769554 | 99.73287081 | 91.8518746 | 84.66249738 | 78.10030732 |
| 190827A00039 | 8/27/2019 | 1.78 | 8/26/2022 | 8/27/2019 | 103.10685 | 103.1068502 | 103.1068502 | 103.1068502 | 102.7061811 | 100.6509034 | 98.64691753 | 96.69260307 | 94.7864033 |
| 190828A00019 | 8/28/2019 | 2 | 3/28/2028 | 8/28/2019 | 113.0076 | 113.0075981 | 113.0075981 | 113.0075981 | 107.5107025 | 100.1245931 | 93.30014431 | 86.99171115 | 81.15758308 |
| 190828A00020 | 8/28/2019 | 1.95 | 5/28/2027 | 8/28/2019 | 111.26116 | 111.2611567 | 111.2611567 | 111.2611567 | 107.001871 | 100.3745157 | 94.20251341 | 88.45228533 | 83.09288808 |
| 190829A00024 | 8/29/2019 | 1.54 | 8/29/2024 | 8/29/2019 | 105.86893 | 105.8689344 | 105.8689344 | 105.8689344 | 104.5443919 | 100.5038106 | 96.64101818 | 92.94725315 | 89.41423434 |
| 190829A00029 | 8/29/2019 | 1.75 | 7/14/2023 | 8/29/2019 | 104.33403 | 104.3340311 | 104.3340311 | 104.3340311 | 103.6288978 | 100.7026789 | 97.87420238 | 95.13967802 | 92.49548438 |
| 190829A00050 | 8/29/2019 | 1.73 | 8/29/2024 | 8/29/2019 | 105.8997 | 105.8996987 | 105.8996987 | 105.8996987 | 104.5833261 | 100.5630313 | 96.71909391 | 93.04284551 | 89.52609177 |
| 190830A00012 | 8/30/2019 | 1.76 | 8/30/2024 | 8/30/2019 | 106.02713 | 106.027126 | 106.027126 | 106.027126 | 104.7084222 | 100.6830165 | 96.83425102 | 93.15343965 | 89.63237174 |
| 190830A00023 | 8/30/2019 | 1.78 | 9/15/2022 | 8/30/2019 | 103.18867 | 103.1886744 | 103.1886744 | 103.1886744 | 102.7721083 | 100.6622349 | 98.60596457 | 96.60156544 | 94.64737561 |
| 190909A00025 | 9/9/2019 | 1.88 | 9/9/2024 | 9/9/2019 | 106.5644 | 106.5644009 | 106.5644009 | 106.5644009 | 105.2255143 | 101.1631377 | 97.27987358 | 93.56686785 | 90.0157541 |
| 190909A00029 | 9/9/2019 | 1.83 | 9/8/2023 | 9/9/2019 | 104.80959 | 104.809586 | 104.809586 | 104.809586 | 104.0324562 | 100.9537859 | 97.98206645 | 95.1129701 | 92.34237168 |
| 190909A00030 | 9/9/2019 | 1.83 | 9/9/2024 | 9/9/2019 | 106.35724 | 106.357235 | 106.357235 | 106.357235 | 105.0193656 | 100.9612167 | 97.08204504 | 93.37300211 | 89.82572661 |
| 190912A00026 | 9/12/2019 | 1.94 | 9/12/2022 | 9/12/2019 | 103.51885 | 103.5188452 | 103.5188452 | 103.5188452 | 103.1040424 | 100.998696 | 98.94667053 | 96.94624927 | 94.99578458 |
| 190912A00031 | 9/12/2019 | 1.75 | 9/12/2024 | 9/12/2019 | 106.79902 | 106.799015 | 106.799015 | 106.799015 | 105.445133 | 101.3488317 | 97.43392668 | 93.69141406 | 90.11278792 |
| 190917A00035 | 9/19/2019 | 2.02 | 10/16/2023 | 9/19/2019 | 105.58547 | 105.5854701 | 105.5854701 | 105.5854701 | 104.7557238 | 101.5648221 | 98.48762729 | 95.51940747 | 92.65566001 |
| 190917A00044 | 9/17/2019 | 1.86 | 9/17/2021 | 9/17/2019 | 101.99646 | 101.9964587 | 101.9964587 | 101.9964587 | 101.8139699 | 100.6737265 | 99.55891139 | 98.46868132 | 97.40223001 |
| 190925A00019 | 9/27/2019 | 1.93 | 9/27/2023 | 9/27/2019 | 105.20829 | 105.2082928 | 105.2082928 | 105.2082928 | 104.4051141 | 101.2695278 | 98.24425559 | 95.32477123 | 92.50676377 |
| 190926A00015 | 9/26/2019 | 2.32 | 11/26/2030 | 9/26/2019 | 120.75849 | 120.7584898 | 120.7584898 | 120.7584898 | 110.4851761 | 100.703023 | 91.88486886 | 83.93026976 | 76.7497278 |
| 190927A00036 | 9/27/2019 | 1.94 | 9/6/2024 | 9/27/2019 | 106.7995 | 106.7995041 | 106.7995041 | 106.7995041 | 105.4647523 | 101.4054314 | 97.52473337 | 93.81384474 | 90.26443642 |
| 190930A00077 | 9/30/2019 | 2.23 | 9/28/2029 | 9/30/2019 | 117.6323 | 117.6322989 | 117.6322989 | 117.6322989 | 109.6266034 | 100.8548371 | 92.86226917 | 85.57541666 | 78.92808554 |
| 191001A00006 | 10/1/2019 | 1.83 | 6/18/2024 | 10/1/2019 | 106.0071 | 106.0070981 | 106.0070981 | 106.0070981 | 104.8113193 | 100.9719099 | 97.29380818 | 93.76942504 | 90.39156717 |
| 191002A00006 | 10/2/2019 | 1.84 | 10/2/2024 | 10/2/2019 | 106.49588 | 106.4958832 | 106.4958832 | 106.4958832 | 105.1167616 | 100.9959352 | 97.05913292 | 93.29713949 | 89.7012545 |
| 191004A00003 | 10/4/2019 | 1.89 | 10/5/2026 | 10/4/2019 | 109.83728 | 109.8372817 | 109.8372817 | 109.8372817 | 106.4920958 | 100.4647698 | 94.81693655 | 89.52273739 | 84.55820863 |
| 191004A00012 | 10/4/2019 | 1.78 | 10/4/2024 | 10/4/2019 | 106.25167 | 106.251669 | 106.251669 | 106.251669 | 104.8701685 | 100.7493576 | 96.81283597 | 93.0513627 | 89.45621424 |
| 191004A00032 | 10/4/2019 | 2.01 | 1/3/2028 | 10/4/2019 | 112.69164 | 112.6916415 | 112.6916415 | 112.6916415 | 107.5433932 | 100.3626127 | 93.71325065 | 87.55325491 | 81.84410091 |

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 200429A00050 | 5/1/2020 | 2.61 | 4/30/2025 | 5/1/2020 | 111.01606 | 111.0160551 | 111.0160551 | 111.0160551 | 109.1998805 | 104.4380368 | 99.91293062 | 95.61148792 | 91.52143232 |
| 200429A00051 | 5/1/2020 | 2.54 | 4/30/2025 | 5/1/2020 | 110.6814 | 110.6814012 | 110.6814012 | 110.6814012 | 108.8673474 | 104.1133327 | 99.59577448 | 95.30161111 | 91.21857811 |
| 200429A00058 | 5/1/2020 | 1.83 | 4/30/2025 | 5/1/2020 | 107.28705 | 107.2870544 | 107.2870544 | 107.2870544 | 105.4945118 | 100.8199057 | 96.37890501 | 92.15857492 | 88.14677111 |
| 200504A00004 | 5/4/2020 | 0.75 | 5/5/2025 | 5/4/2020 | 103.04139 | 103.0413903 | 103.0413903 | 103.0413903 | 101.2515689 | 96.63599705 | 92.25386797 | 88.0921689 | 84.13868461 |
| 200504A00015 | 5/4/2020 | 0.68 | 5/4/2023 | 5/4/2020 | 101.06915 | 101.069153 | 101.069153 | 101.069153 | 100.4530257 | 97.75841399 | 95.14878237 | 92.62091347 | 90.17173567 |
| 200529A00008 | 5/29/2020 | 0.33 | 5/31/2022 | 5/29/2020 | 100.3924 | 100.3923954 | 100.3923954 | 100.3923954 | 100.058838 | 98.25400847 | 96.49005318 | 94.76581421 | 93.08017365 |
| 200529A00009 | 5/29/2020 | 0.42 | 5/30/2023 | 5/29/2020 | 100.86336 | 100.863355 | 100.863355 | 100.863355 | 100.2170166 | 97.44749525 | 94.76750323 | 92.1736882 | 89.66284147 |
| 200611A00011 | 6/11/2020 | 1.2 | 6/9/2028 | 6/11/2020 | 107.04312 | 107.0431217 | 107.0431217 | 107.0431217 | 101.3532321 | 94.02646957 | 87.27512476 | 81.05124979 | 75.31111009 |
| 200615A00023 | 6/17/2020 | 1.68 | 6/17/2024 | 6/17/2020 | 105.41598 | 105.4159793 | 105.4159793 | 105.4159793 | 104.2244614 | 100.3990891 | 96.73445909 | 93.22301095 | 89.85757839 |
| 200629A00005 | 6/29/2020 | 0.55 | 6/29/2022 | 6/29/2020 | 100.49064 | 100.4906351 | 100.4906351 | 100.4906351 | 100.1383764 | 98.26100296 | 96.4277209 | 94.63723433 | 92.88829397 |
| 200730A00001 | 7/30/2020 | 0.46 | 7/30/2024 | 7/30/2020 | 101.38161 | 101.3816065 | 101.3816065 | 101.3816065 | 100.1299726 | 96.25545386 | 92.54987109 | 89.00500314 | 85.61307249 |
| 200506A00005 | 5/6/2020 | 0.97 | 5/6/2025 | 5/6/2020 | 103.18659 | 103.1865911 | 103.1865911 | 103.1865911 | 101.407293 | 96.8140361 | 92.45238119 | 88.3094532 | 84.37316378 |
| 200507A00005 | 5/7/2020 | 0.67 | 5/5/2023 | 5/7/2020 | 101.04235 | 101.0423451 | 101.0423451 | 101.0423451 | 100.4252214 | 97.72843222 | 95.11676685 | 92.58700424 | 90.13606899 |
| 200508A00004 | 5/8/2020 | 0.43 | 5/8/2023 | 5/8/2020 | 100.8729 | 100.8728964 | 100.8728964 | 100.8728964 | 100.2501283 | 97.5368663 | 94.90971409 | 92.3654107 | 89.90084206 |
| 200511A00017 | 5/11/2020 | 0.83 | 2/3/2025 | 5/11/2020 | 102.4298 | 102.4297959 | 102.4297959 | 102.4297959 | 100.8411461 | 96.49713543 | 92.36251381 | 88.42613981 | 84.67752221 |
| 200611A00013 | 6/11/2020 | 0.59 | 6/12/2023 | 6/11/2020 | 100.85033 | 100.8503339 | 100.8503339 | 100.8503339 | 100.1924399 | 97.40065355 | 94.69992556 | 92.08681918 | 89.55804593 |
| 200709A00004 | 7/10/2020 | 1.4 | 7/10/2025 | 7/10/2020 | 105.44417 | 105.4441708 | 105.4441708 | 105.4441708 | 103.5089341 | 98.70132173 | 94.14362988 | 89.8216264 | 85.7219602 |
| 200709A00005 | 7/10/2020 | 2.23 | 7/10/2030 | 7/10/2020 | 119.1105 | 119.1105003 | 119.1105003 | 119.1105003 | 109.6379711 | 100.2095922 | 91.68169571 | 83.96327692 | 76.97296301 |
| 200720A00037 | 7/22/2020 | 2.1 | 7/21/2025 | 7/22/2020 | 108.98084 | 108.9808387 | 108.9808387 | 108.9808387 | 106.9965348 | 102.075753 | 97.41095031 | 92.9875005 | 88.79168704 |
| 200722A00011 | 7/22/2020 | 0.59 | 7/24/2023 | 7/22/2020 | 100.8845 | 100.8845002 | 100.8845002 | 100.8845002 | 100.177278 | 97.27718719 | 94.47526543 | 91.76766366 | 89.15070594 |
| 190709A00018 | 7/9/2019 | 2.24 | 7/9/2024 | 7/9/2019 | 107.72454 | 107.724538 | 107.724538 | 107.724538 | 106.4863034 | 102.5591254 | 98.79885055 | 95.19752483 | 91.74761488 |
| 190710A00012 | 7/10/2019 | 2.18 | 7/10/2023 | 7/10/2019 | 105.59499 | 105.5949868 | 105.5949868 | 105.5949868 | 104.8911075 | 101.9564632 | 99.11933889 | 96.37596973 | 93.72275747 |
| 190724A00005 | 7/24/2019 | 2.12 | 7/26/2021 | 7/24/2019 | 101.84092 | 101.8409184 | 101.8409184 | 101.8409184 | 101.6945337 | 100.7013998 | 99.72759943 | 98.77257242 | 97.83577986 |
| 190802A00003 | 8/2/2019 | 2.01 | 8/2/2024 | 8/2/2019 | 106.92398 | 106.9239781 | 106.9239781 | 106.9239781 | 105.6490761 | 101.6767625 | 97.87607467 | 94.23869913 | 90.75676956 |
| 190802A00015 | 8/2/2019 | 2 | 2/15/2023 | 8/2/2019 | 104.38027 | 104.3802664 | 104.3802664 | 104.3802664 | 103.8323244 | 101.3007513 | 98.84387785 | 96.45905733 | 94.14375406 |
| 190805A00029 | 8/5/2019 | 1.93 | 8/5/2022 | 8/5/2019 | 103.32579 | 103.3257867 | 103.3257867 | 103.3257867 | 102.9411842 | 100.9387893 | 98.98553061 | 97.07989117 | 95.22041176 |
| 190806A00026 | 8/6/2019 | 1.71 | 8/7/2023 | 8/6/2019 | 104.86251 | 104.8625057 | 104.8625057 | 104.8625057 | 104.122566 | 101.1135812 | 98.20726667 | 95.39955087 | 92.68654793 |
| 190808A00024 | 8/8/2019 | 1.69 | 2/8/2024 | 8/8/2019 | 105.60605 | 105.6060475 | 105.6060475 | 105.6060475 | 104.609339 | 101.1024887 | 97.73188329 | 94.4914998 | 91.3756156 |
| 190808A00041 | 8/8/2019 | 1.74 | 8/6/2021 | 8/8/2019 | 101.6699 | 101.6699033 | 101.6699033 | 101.6699033 | 101.5164681 | 100.4920741 | 99.48826263 | 98.50441821 | 97.53994985 |
| 190812A00006 | 8/12/2019 | 1.86 | 8/12/2024 | 8/12/2019 | 106.36119 | 106.3611885 | 106.3611885 | 106.3611885 | 105.071754 | 101.0852352 | 97.2719735 | 93.62352951 | 90.13192066 |
| 190813A00030 | 8/13/2019 | 1.71 | 8/15/2022 | 8/13/2019 | 103.28926 | 103.2892603 | 103.2892603 | 103.2892603 | 102.8953926 | 100.8600029 | 98.87508382 | 96.93905607 | 95.05040166 |
| 190814A00006 | 8/14/2019 | 1.84 | 8/14/2023 | 8/14/2019 | 104.73454 | 104.7345358 | 104.7345358 | 104.7345358 | 103.9897112 | 100.9774909 | 98.06823904 | 95.25786203 | 92.54245377 |
| 190816A00036 | 8/16/2019 | 1.77 | 8/16/2024 | 8/16/2019 | 106.01144 | 106.0114438 | 106.0114438 | 106.0114438 | 104.7168122 | 100.7271661 | 96.91135167 | 93.26088187 | 89.76773047 |

Classification | Public

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 190820A00020 | 8/20/2019 | 1.76 | 8/20/2024 | 8/20/2019 | 105.9868 | 105.9867992 | 105.9867992 | 105.9867992 | 104.6854278 | 100.6861451 | 96.86147552 | 93.20287624 | 89.70226926 |
| 190820A00029 | 8/20/2019 | 1.76 | 8/20/2024 | 8/20/2019 | 105.9868 | 105.9867992 | 105.9867992 | 105.9867992 | 104.6854278 | 100.6861451 | 96.86147552 | 93.20287624 | 89.70226926 |
| 190826A00004 | 8/26/2019 | 1.74 | 8/26/2022 | 8/26/2019 | 103.02312 | 103.0231211 | 103.0231211 | 103.0231211 | 102.6226007 | 100.5682142 | 98.56510176 | 96.61164348 | 94.7062831 |
| 190826A00014 | 8/26/2019 | 1.86 | 8/26/2020 | 8/26/2019 | 100.12592 | 100.1259182 | 100.1259182 | 100.1259182 | 100.1205422 | 100.0483622 | 99.97629535 | 99.90434139 | 99.83250005 |
| 190826A00025 | 8/26/2019 | 1.76 | 11/26/2024 | 8/26/2019 | 106.33606 | 106.3360565 | 106.3360565 | 106.3360565 | 104.8578901 | 100.6012258 | 96.540649 | 92.666145 | 88.96826115 |
| 190829A00005 | 8/30/2019 | 2.06 | 8/30/2023 | 8/30/2019 | 105.48702 | 105.4870204 | 105.4870204 | 105.4870204 | 104.719524 | 101.6542619 | 98.69473267 | 95.83668844 | 93.07607842 |
| 190829A00015 | 8/30/2019 | 2.06 | 8/30/2022 | 8/30/2019 | 103.71249 | 103.7124947 | 103.7124947 | 103.7124947 | 103.3076136 | 101.2353681 | 99.21496969 | 97.24477398 | 95.32320142 |
| 190904A00008 | 9/4/2019 | 1.69 | 9/3/2024 | 9/4/2019 | 105.75429 | 105.7542938 | 105.7542938 | 105.7542938 | 104.429928 | 100.3997112 | 96.54679814 | 92.86244925 | 89.33840443 |
| 190905A00002 | 9/5/2019 | 1.78 | 9/6/2022 | 9/5/2019 | 103.15192 | 103.1519166 | 103.1519166 | 103.1519166 | 102.7425188 | 100.6573985 | 98.62481298 | 96.64308239 | 94.71059361 |
| 190906A00012 | 9/6/2019 | 1.76 | 9/6/2024 | 9/6/2019 | 106.05519 | 106.0551883 | 106.0551883 | 106.0551883 | 104.7240782 | 100.6799175 | 96.81389568 | 93.11721881 | 89.5815763 |
| 190910A00004 | 9/11/2019 | 1.86 | 9/11/2024 | 9/11/2019 | 106.49009 | 106.4900929 | 106.4900929 | 106.4900929 | 105.1480492 | 101.0819631 | 97.19536977 | 93.47938594 | 89.92561813 |
| 191007A00024 | 10/7/2019 | 1.7 | 7/14/2022 | 10/7/2019 | 102.77205 | 102.7720537 | 102.7720537 | 102.7720537 | 102.4049973 | 100.4658188 | 98.57301451 | 96.72519288 | 94.92101368 |
| 191007A00027 | 10/7/2019 | 1.69 | 10/7/2022 | 10/7/2019 | 103.07989 | 103.0798876 | 103.0798876 | 103.0798876 | 102.6460872 | 100.4785871 | 98.36730861 | 96.31039044 | 94.30604852 |
| 191017A00025 | 10/17/2019 | 1.74 | 10/19/2020 | 10/17/2019 | 100.36042 | 100.3604229 | 100.3604229 | 100.3604229 | 100.3384604 | 100.1165535 | 99.89564167 | 99.67571824 | 99.45677648 |
| 191021A00002 | 10/21/2019 | 1.9 | 10/21/2020 | 10/21/2019 | 100.37682 | 100.3768236 | 100.3768236 | 100.3768236 | 100.354213 | 100.1270657 | 99.9009566 | 99.67587845 | 99.45182419 |
| 191025A00009 | 10/25/2019 | 2.26 | 5/25/2029 | 10/25/2019 | 117.2417 | 117.2416957 | 117.2416957 | 117.2416957 | 109.8353381 | 101.3486511 | 93.59055856 | 86.49459237 | 80.00066498 |
| 191031A00019 | 10/31/2019 | 1.88 | 10/31/2022 | 10/31/2019 | 103.60489 | 103.604886 | 103.604886 | 103.604886 | 103.1508217 | 100.9146473 | 98.73778707 | 96.61822582 | 94.55403483 |
| 191101A00006 | 11/1/2019 | 1.69 | 11/2/2020 | 11/1/2019 | 100.41047 | 100.4104709 | 100.4104709 | 100.4104709 | 100.3838015 | 100.1231363 | 99.86382426 | 99.60585496 | 99.34921793 |
| 191104A00025 | 11/4/2019 | 2.33 | 8/2/2030 | 11/4/2019 | 120.22933 | 120.2293295 | 120.2293295 | 120.2293295 | 110.6022878 | 101.0768522 | 92.46500157 | 84.67394939 | 77.62078194 |
| 191114A00009 | 11/18/2019 | 1.94 | 8/16/2023 | 11/18/2019 | 105.05023 | 105.0502332 | 105.0502332 | 105.0502332 | 104.3019108 | 101.2796753 | 98.36083765 | 95.54128243 | 92.81708279 |
| 191119A00027 | 11/19/2019 | 1.8 | 11/19/2024 | 11/19/2019 | 107.32338 | 107.3233834 | 107.3233834 | 107.3233834 | 105.8426615 | 101.5589148 | 97.4720749 | 93.57207385 | 89.84941225 |
| 191120A00010 | 11/20/2019 | 1.88 | 1/20/2022 | 11/20/2019 | 102.37765 | 102.3776463 | 102.3776463 | 102.3776463 | 102.1215184 | 100.6587465 | 99.22423223 | 97.81722888 | 96.43701542 |
| 191122A00005 | 11/22/2019 | 2.03 | 11/22/2027 | 11/22/2019 | 114.11406 | 114.1140619 | 114.1140619 | 114.1140619 | 109.0565253 | 101.8632137 | 95.19579251 | 89.01311274 | 83.2774432 |
| 191122A00006 | 11/22/2019 | 1.74 | 11/22/2023 | 11/22/2019 | 105.43434 | 105.4343401 | 105.4343401 | 105.4343401 | 104.5501189 | 101.249536 | 98.07012868 | 95.00680481 | 92.05471522 |
| 191122A00018 | 11/26/2019 | 3.11 | 11/22/2039 | 11/26/2019 | 153.32347 | 153.3234712 | 153.3234712 | 140.8968607 | 121.0274007 | 104.0675546 | 89.90849549 | 78.06023701 | 68.12154038 |
| 191202A00005 | 12/2/2019 | 2.03 | 12/2/2024 | 12/2/2019 | 107.54059 | 107.5405904 | 107.5405904 | 107.5405904 | 106.0447469 | 101.7468583 | 97.64730941 | 93.73596103 | 90.00324249 |
| 191209A00009 | 12/9/2019 | 1.91 | 12/9/2021 | 12/9/2019 | 102.2331 | 102.233097 | 102.233097 | 102.233097 | 101.9995357 | 100.6485067 | 99.32171661 | 98.01856949 | 96.73848845 |
| 191220A00001 | 12/20/2019 | 2.62 | 12/19/2031 | 12/20/2019 | 126.26161 | 126.2616124 | 126.2616124 | 125.1081438 | 113.5088222 | 102.7083042 | 93.06232595 | 84.44045145 | 76.72762132 |
| 191223A00007 | 12/23/2019 | 1.95 | 6/23/2021 | 12/23/2019 | 101.52689 | 101.5268907 | 101.5268907 | 101.5268907 | 101.399032 | 100.4970247 | 99.61101142 | 98.74056954 | 97.88529135 |
| 200109A00014 | 1/14/2020 | 1.93 | 8/15/2022 | 1/14/2020 | 103.37105 | 103.3710471 | 103.3710471 | 103.3710471 | 102.9785273 | 100.94935 | 98.97035962 | 97.0399895 | 95.15673351 |
| 200117A00026 | 1/17/2020 | 1.69 | 1/18/2022 | 1/17/2020 | 102.33791 | 102.3379122 | 102.3379122 | 102.3379122 | 102.0821578 | 100.6208467 | 99.18772821 | 97.78205824 | 96.40311853 |
| 200121A00009 | 1/24/2020 | 1.94 | 1/24/2025 | 1/24/2020 | 107.4313 | 107.4313009 | 107.4313009 | 107.4313009 | 105.8334078 | 101.4036874 | 97.18478288 | 93.16557905 | 89.33560427 |
| 200122A00028 | 1/22/2020 | 1.84 | 1/21/2022 | 1/22/2020 | 102.32232 | 102.3223158 | 102.3223158 | 102.3223158 | 102.0657003 | 100.6007277 | 99.16410618 | 97.75508509 | 96.37293991 |

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 200127A00016 | 1/27/2020 | 1.81 | 1/27/2025 | 1/27/2020 | 106.85633 | 106.8563308 | 106.8563308 | 106.8563308 | 105.2558765 | 100.8314335 | 96.61808999 | 92.60469176 | 88.78073173 |
| 200127A00018 | 1/27/2020 | 1.8 | 1/27/2025 | 1/27/2020 | 106.81106 | 106.811059 | 106.811059 | 106.811059 | 105.2108646 | 100.787427 | 96.5750544 | 92.56259401 | 88.73954019 |
| 200130A00006 | 1/30/2020 | 1.77 | 1/30/2025 | 1/30/2020 | 106.68741 | 106.6874098 | 106.6874098 | 106.6874098 | 105.0820781 | 100.653929 | 96.43747175 | 92.42149975 | 88.5954579 |
| 200131A00048 | 1/31/2020 | 1.69 | 1/31/2024 | 1/31/2020 | 104.92741 | 104.9274144 | 104.9274144 | 104.9274144 | 103.9506191 | 100.4941406 | 97.17104404 | 93.97547532 | 90.90186977 |
| 200203A00009 | 2/3/2020 | 1.52 | 2/3/2023 | 2/3/2020 | 103.56459 | 103.5645922 | 103.5645922 | 103.5645922 | 103.0272729 | 100.5311629 | 98.10828425 | 95.75606426 | 93.47203691 |
| 200204A00012 | 2/4/2020 | 1.98 | 2/4/2027 | 2/4/2020 | 110.95308 | 110.9530754 | 110.9530754 | 110.9530754 | 107.1361633 | 100.7874525 | 94.85751488 | 89.3165796 | 84.13713796 |
| 200204A00015 | 2/4/2020 | 1.72 | 2/6/2023 | 2/4/2020 | 103.62586 | 103.6258614 | 103.6258614 | 103.6258614 | 103.0879567 | 100.5920829 | 98.16940846 | 95.81736055 | 93.53347334 |
| 200207A00018 | 2/7/2020 | 2.14 | 2/7/2030 | 2/7/2020 | 117.46151 | 117.4615141 | 117.4615141 | 117.4615141 | 108.8171465 | 99.77871874 | 91.57228621 | 84.1167156 | 77.33917455 |
| 200211A00022 | 2/11/2020 | 1.73 | 2/10/2023 | 2/11/2020 | 103.66685 | 103.6668458 | 103.6668458 | 103.6668458 | 103.1251677 | 100.6172334 | 98.18307776 | 95.82009796 | 93.52579974 |
| 200214A00014 | 2/18/2020 | 1.8 | 2/18/2025 | 2/18/2020 | 106.90052 | 106.9005211 | 106.9005211 | 106.9005211 | 105.256033 | 100.7707949 | 96.5020359 | 92.43818513 | 88.56835162 |
| 200219A00006 | 2/19/2020 | 1.76 | 2/18/2022 | 2/19/2020 | 102.31585 | 102.3158475 | 102.3158475 | 102.3158475 | 102.0430626 | 100.4992278 | 98.98633263 | 97.50351748 | 96.04995412 |
| 200221A00001 | 2/21/2020 | 1.57 | 2/22/2021 | 2/21/2020 | 100.83008 | 100.830084 | 100.830084 | 100.830084 | 100.7635633 | 100.193471 | 99.62981488 | 99.07248627 | 98.52137905 |
| 200221A00014 | 2/21/2020 | 1.49 | 2/21/2023 | 2/21/2020 | 103.55614 | 103.5561421 | 103.5561421 | 103.5561421 | 103.0021923 | 100.4540008 | 97.98162491 | 95.58235553 | 93.25359868 |
| 200224A00019 | 2/24/2020 | 1.59 | 2/18/2025 | 2/24/2020 | 105.93716 | 105.9371561 | 105.9371561 | 105.9371561 | 104.2983322 | 99.83476165 | 95.5869182 | 91.5432635 | 87.69293738 |
| 200225A00045 | 2/25/2020 | 1.54 | 2/24/2023 | 2/25/2020 | 103.22811 | 103.2281056 | 103.2281056 | 103.2281056 | 102.674596 | 100.1320508 | 97.66516121 | 95.27122263 | 92.94764525 |
| 200225A00050 | 2/25/2020 | 1.57 | 2/25/2025 | 2/25/2020 | 105.86935 | 105.8693512 | 105.8693512 | 105.8693512 | 104.2169911 | 99.73567868 | 95.4717513 | 91.41354008 | 87.55006477 |
| 200226A00015 | 2/26/2020 | 1.53 | 2/26/2024 | 2/26/2020 | 104.44915 | 104.4491536 | 104.4491536 | 104.4491536 | 103.4359597 | 99.91702815 | 96.53611903 | 93.28707249 | 90.16403931 |
| 200227A00013 | 2/27/2020 | 1.43 | 2/27/2024 | 2/27/2020 | 104.09171 | 104.0917124 | 104.0917124 | 104.0917124 | 103.0784395 | 99.56317772 | 96.18594453 | 92.94057451 | 89.82121346 |
| 200227A00022 | 2/27/2020 | 1.41 | 2/27/2023 | 2/27/2020 | 102.89973 | 102.8997285 | 102.8997285 | 102.8997285 | 102.3442473 | 99.79738134 | 97.32650679 | 94.92889904 | 92.60194967 |
| 200227A00030 | 2/27/2020 | 1.59 | 2/27/2026 | 2/27/2020 | 107.20317 | 107.2031683 | 107.2031683 | 107.2031683 | 104.6346419 | 99.21001534 | 94.09847874 | 89.28037347 | 84.73737509 |
| 200228A00025 | 2/28/2020 | 1.57 | 3/2/2027 | 2/28/2020 | 108.35895 | 108.3589465 | 108.3589465 | 108.3589465 | 104.4735039 | 98.1409584 | 92.23183704 | 86.71569743 | 81.56443551 |
| 200228A00060 | 2/28/2020 | 1.31 | 2/28/2022 | 2/28/2020 | 101.63641 | 101.6364084 | 101.6364084 | 101.6364084 | 101.3585649 | 99.79115507 | 98.25548288 | 96.75065203 | 95.27579965 |
| 200228A00062 | 2/28/2020 | 1.32 | 2/28/2023 | 2/28/2020 | 102.66817 | 102.6681709 | 102.6681709 | 102.6681709 | 102.112327 | 99.56563673 | 97.09501362 | 94.69772756 | 92.371165 |
| 200228A00063 | 2/28/2020 | 1.32 | 2/28/2023 | 2/28/2020 | 102.66817 | 102.6681709 | 102.6681709 | 102.6681709 | 102.112327 | 99.56563673 | 97.09501362 | 94.69772756 | 92.371165 |
| 200228A00066 | 2/28/2020 | 1.35 | 2/28/2024 | 2/28/2020 | 103.80594 | 103.8059351 | 103.8059351 | 103.8059351 | 102.7923078 | 99.27944322 | 95.90464979 | 92.66175525 | 89.54489912 |
| 200302A00011 | 3/2/2020 | 1.31 | 2/27/2025 | 3/2/2020 | 104.67704 | 104.6770439 | 104.6770439 | 104.6770439 | 103.0277809 | 98.56792035 | 94.32499529 | 90.28733954 | 86.4439764 |
| 190703A00022 | 7/3/2019 | 2.08 | 7/5/2022 | 7/3/2019 | 103.4779 | 103.4778975 | 103.4778975 | 103.4778975 | 103.1164179 | 101.1937236 | 99.31642382 | 97.48317368 | 95.69267725 |
| 190719A00002 | 7/19/2019 | 2.12 | 4/21/2022 | 7/19/2019 | 103.17788 | 103.1778847 | 103.1778847 | 103.1778847 | 102.8667623 | 101.1476385 | 99.46539199 | 97.8189006 | 96.20708824 |
| 190724A00021 | 7/24/2019 | 2.33 | 7/23/2027 | 7/24/2019 | 115.58602 | 115.5860247 | 115.5860247 | 115.5860247 | 110.9997087 | 104.0442705 | 97.575787 | 91.55760954 | 85.95602692 |
| 190726A00017 | 7/26/2019 | 2.44 | 7/24/2026 | 7/26/2019 | 112.82725 | 112.8272467 | 112.8272467 | 112.8272467 | 109.7152853 | 103.7756177 | 98.19802768 | 92.95855847 | 88.03495738 |
| 190731A00029 | 7/31/2019 | 1.93 | 7/29/2022 | 7/31/2019 | 103.65853 | 103.6585254 | 103.6585254 | 103.6585254 | 103.2773545 | 101.2830861 | 99.33753856 | 97.43921699 | 95.58668286 |
| 190802A00016 | 8/2/2019 | 2.01 | 7/12/2023 | 8/2/2019 | 105.09958 | 105.0995829 | 105.0995829 | 105.0995829 | 104.3946832 | 101.4622258 | 98.62744998 | 95.88657664 | 93.23599432 |
| 190802A00029 | 8/2/2019 | 2 | 8/2/2022 | 8/2/2019 | 103.4541 | 103.4540971 | 103.4540971 | 103.4540971 | 103.0716285 | 101.0758065 | 99.12883687 | 97.22921664 | 95.37549973 |

Classification | Public

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 190805A00009 | 8/5/2019 | 1.91 | 8/5/2024 | 8/5/2019 | 106.5334 | 106.5334048 | 106.5334048 | 106.5334048 | 105.2551806 | 101.2830111 | 97.48281753 | 93.84625425 | 90.3654254 |
| 190805A00037 | 8/5/2019 | 2.17 | 8/6/2029 | 8/5/2019 | 118.66328 | 118.6632784 | 118.6632784 | 118.6632784 | 110.7823137 | 101.9997613 | 93.98911371 | 86.67834437 | 80.00249464 |
| 190805A00050 | 8/5/2019 | 1.91 | 8/5/2024 | 8/5/2019 | 106.5334 | 106.5334048 | 106.5334048 | 106.5334048 | 105.2551806 | 101.2830111 | 97.48281753 | 93.84625425 | 90.3654254 |
| 190806A00010 | 8/6/2019 | 1.7 | 8/5/2022 | 8/6/2019 | 103.22471 | 103.2247119 | 103.2247119 | 103.2247119 | 102.8388338 | 100.8305541 | 98.87168269 | 96.96069076 | 95.09610768 |
| 190807A00012 | 8/7/2019 | 1.76 | 2/7/2023 | 8/7/2019 | 103.73165 | 103.7316502 | 103.7316502 | 103.7316502 | 103.1925817 | 100.6924674 | 98.26572444 | 95.90977176 | 93.62213558 |
| 190807A00023 | 8/7/2019 | 1.77 | 8/7/2024 | 8/7/2019 | 105.9749 | 105.9749046 | 105.9749046 | 105.9749046 | 104.6958823 | 100.7297841 | 96.93570783 | 93.30529374 | 89.83063336 |
| 190808A00025 | 8/8/2019 | 1.7 | 8/8/2024 | 8/8/2019 | 106.43757 | 106.4375743 | 106.4375743 | 106.4375743 | 105.14664 | 101.1482739 | 97.32382692 | 93.66482335 | 90.16324663 |
| 190808A00052 | 8/8/2019 | 1.7 | 8/8/2024 | 8/8/2019 | 106.43757 | 106.4375743 | 106.4375743 | 106.4375743 | 105.14664 | 101.1482739 | 97.32382692 | 93.66482335 | 90.16324663 |
| 190809A00011 | 8/9/2019 | 1.69 | 8/9/2024 | 8/9/2019 | 106.40122 | 106.4012191 | 106.4012191 | 106.4012191 | 105.1087247 | 101.1085245 | 97.28242094 | 93.6219252 | 90.1190084 |
| 190809A00015 | 8/9/2019 | 1.88 | 8/9/2022 | 8/9/2019 | 103.24158 | 103.2415758 | 103.2415758 | 103.2415758 | 102.8539826 | 100.841939 | 98.87942916 | 96.96491704 | 95.09692531 |
| 190813A00008 | 8/13/2019 | 1.88 | 8/13/2024 | 8/13/2019 | 106.44688 | 106.4468801 | 106.4468801 | 106.4468801 | 105.1553208 | 101.1645435 | 97.34727652 | 93.69506406 | 90.19990853 |
| 190813A00022 | 8/13/2019 | 1.88 | 8/13/2024 | 8/13/2019 | 106.44688 | 106.4468801 | 106.4468801 | 106.4468801 | 105.1553208 | 101.1645435 | 97.34727652 | 93.69506406 | 90.19990853 |
| 190814A00005 | 8/14/2019 | 1.65 | 8/14/2024 | 8/14/2019 | 106.25948 | 106.259485 | 106.259485 | 106.259485 | 104.9590056 | 100.9488474 | 97.11370043 | 93.44500828 | 89.93467964 |
| 190815A00025 | 8/15/2019 | 1.97 | 8/15/2029 | 8/15/2019 | 116.88964 | 116.8896424 | 116.8896424 | 116.8896424 | 109.008453 | 100.2820443 | 92.32633677 | 85.0691642 | 78.44546305 |
| 190815A00032 | 8/15/2019 | 1.83 | 8/13/2021 | 8/15/2019 | 101.62907 | 101.6290688 | 101.6290688 | 101.6290688 | 101.4714139 | 100.4306661 | 99.41118316 | 98.41231852 | 97.43345148 |
| 190816A00013 | 8/16/2019 | 2.2 | 8/16/2029 | 8/16/2019 | 117.13758 | 117.1375826 | 117.1375826 | 117.1375826 | 109.3476463 | 100.6888836 | 92.79112587 | 85.5833551 | 79.00152342 |
| 190816A00021 | 8/16/2019 | 1.77 | 8/16/2023 | 8/16/2019 | 104.52805 | 104.5280479 | 104.5280479 | 104.5280479 | 103.7812997 | 100.7670691 | 97.85603257 | 95.04408153 | 92.32729568 |
| 190912A00028 | 9/12/2019 | 1.94 | 9/12/2024 | 9/12/2019 | 106.8265 | 106.8264958 | 106.8264958 | 106.8264958 | 105.4810338 | 101.4054571 | 97.50980798 | 93.78517867 | 90.22315278 |
| 190918A00007 | 9/20/2019 | 1.95 | 12/15/2022 | 9/20/2019 | 103.96935 | 103.9693462 | 103.9693462 | 103.9693462 | 103.4771208 | 101.1164741 | 98.82140224 | 96.58972684 | 94.41935473 |
| 190919A00007 | 9/19/2019 | 2.04 | 9/19/2024 | 9/19/2019 | 107.27506 | 107.2750615 | 107.2750615 | 107.2750615 | 105.9150355 | 101.8119382 | 97.89057196 | 94.14190704 | 90.55741393 |
| 190923A00020 | 9/23/2019 | 2.05 | 9/24/2029 | 9/23/2019 | 117.83166 | 117.8316582 | 117.8316582 | 117.8316582 | 109.7344207 | 100.8807733 | 92.81632447 | 85.46647871 | 78.76405304 |
| 190924A00026 | 9/24/2019 | 1.9 | 7/22/2022 | 9/24/2019 | 103.20251 | 103.2025119 | 103.2025119 | 103.2025119 | 102.8287653 | 100.8643236 | 98.94734105 | 97.07637803 | 95.2500487 |
| 190924A00035 | 9/24/2019 | 1.88 | 9/13/2024 | 9/24/2019 | 106.58174 | 106.5817371 | 106.5817371 | 106.5817371 | 105.2357198 | 101.1625341 | 97.2693306 | 93.54719225 | 89.98769436 |
| 190925A00004 | 9/25/2019 | 1.7 | 9/24/2024 | 9/25/2019 | 106.64305 | 106.6430487 | 106.6430487 | 106.6430487 | 105.2686133 | 101.1438827 | 97.20306019 | 93.43695463 | 89.83688711 |
| 190925A00011 | 9/25/2019 | 1.89 | 9/25/2024 | 9/25/2019 | 106.67562 | 106.6756185 | 106.6756185 | 106.6756185 | 105.3080054 | 101.2015503 | 97.27772687 | 93.52742655 | 89.94204733 |
| 190926A00034 | 9/26/2019 | 1.88 | 9/26/2022 | 9/26/2019 | 103.45148 | 103.4514796 | 103.4514796 | 103.4514796 | 103.0257468 | 100.8832294 | 98.7956853 | 96.76131696 | 94.77840038 |
| 190927A00012 | 10/1/2019 | 1.96 | 10/1/2024 | 10/1/2019 | 106.99607 | 106.9960737 | 106.9960737 | 106.9960737 | 105.6162406 | 101.4875894 | 97.54308277 | 93.77350775 | 90.1701658 |
| 190930A00069 | 9/30/2019 | 1.9 | 9/29/2023 | 9/30/2019 | 105.12148 | 105.1214805 | 105.1214805 | 105.1214805 | 104.3159694 | 101.176437 | 98.14752237 | 95.2246799 | 92.40358059 |
| 191001A00009 | 10/1/2019 | 1.84 | 10/1/2020 | 10/1/2019 | 100.29648 | 100.2964841 | 100.2964841 | 100.2964841 | 100.2806285 | 100.1085898 | 99.93714116 | 99.76627957 | 99.59600202 |
| 191003A00022 | 10/3/2019 | 1.72 | 2/3/2023 | 10/3/2019 | 103.6143 | 103.6142979 | 103.6142979 | 103.6142979 | 103.079179 | 100.592106 | 98.17780501 | 95.83372556 | 93.55742282 |
| 191007A00018 | 10/8/2019 | 1.77 | 7/16/2021 | 10/8/2019 | 101.45957 | 101.459569 | 101.459569 | 101.459569 | 101.3190667 | 100.3549458 | 99.40910446 | 98.48102665 | 97.57021542 |
| 191009A00006 | 10/9/2019 | 1.53 | 10/7/2022 | 10/9/2019 | 103.1245 | 103.1244975 | 103.1244975 | 103.1244975 | 102.6888924 | 100.5130571 | 98.39380027 | 96.32924436 | 94.31759023 |
| 191009A00017 | 10/9/2019 | 1.76 | 10/4/2024 | 10/9/2019 | 106.16743 | 106.1674311 | 106.1674311 | 106.1674311 | 104.7863561 | 100.6672914 | 96.73245931 | 92.97262137 | 89.37905617 |

Classification | Public

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 191009A00021 | 10/9/2019 | 1.71 | 10/7/2022 | 10/9/2019 | 103.12407 | 103.1240704 | 103.1240704 | 103.1240704 | 102.6901858 | 100.5221907 | 98.41042758 | 96.35303458 | 94.34822741 |
| 191010A00012 | 10/10/2019 | 1.61 | 10/8/2021 | 10/10/2019 | 101.79673 | 101.7967278 | 101.7967278 | 101.7967278 | 101.5997193 | 100.4038918 | 99.2360575 | 98.09524282 | 96.98051884 |
| 191015A00026 | 10/15/2019 | 1.69 | 10/15/2021 | 10/15/2019 | 101.92365 | 101.9236514 | 101.9236514 | 101.9236514 | 101.7218571 | 100.5062895 | 99.31962137 | 98.16083199 | 97.02894806 |
| 191025A00013 | 10/25/2019 | 1.98 | 10/25/2024 | 10/25/2019 | 107.14781 | 107.1478078 | 107.1478078 | 107.1478078 | 105.724308 | 101.5330652 | 97.53116793 | 93.70901567 | 90.05755212 |
| 191101A00002 | 11/1/2019 | 1.85 | 11/1/2022 | 11/1/2019 | 103.5409 | 103.5409005 | 103.5409005 | 103.5409005 | 103.0861404 | 100.8480005 | 98.66929348 | 96.54800272 | 94.48219802 |
| 191105A00008 | 11/5/2019 | 1.83 | 11/5/2024 | 11/5/2019 | 107.38789 | 107.3878931 | 107.3878931 | 107.3878931 | 105.9330472 | 101.6847589 | 97.63014655 | 93.75932582 | 90.06297468 |
| 191113A00017 | 11/15/2019 | 1.93 | 12/6/2021 | 11/15/2019 | 102.24691 | 102.2469076 | 102.2469076 | 102.2469076 | 102.0148828 | 100.6716741 | 99.35243682 | 98.05658459 | 96.78354972 |
| 191115A00011 | 11/15/2019 | 1.89 | 11/16/2020 | 11/15/2019 | 100.49312 | 100.4931167 | 100.4931167 | 100.4931167 | 100.4620295 | 100.1629791 | 99.86571737 | 99.57022819 | 99.27649569 |
| 200302A00051 | 3/2/2020 | 1.22 | 8/8/2023 | 3/2/2020 | 102.81816 | 102.8181574 | 102.8181574 | 102.8181574 | 102.0866871 | 99.1191758 | 96.25297796 | 93.48407806 | 90.80864363 |
| 200302A00054 | 3/2/2020 | 1.31 | 3/3/2025 | 3/2/2020 | 104.68813 | 104.6881346 | 104.6881346 | 104.6881346 | 103.0307262 | 98.56048566 | 94.3081122 | 90.26186641 | 86.41070427 |
| 200303A00010 | 3/3/2020 | 1.34 | 3/3/2025 | 3/3/2020 | 104.82683 | 104.8268267 | 104.8268267 | 104.8268267 | 103.1685916 | 98.69520878 | 94.43980283 | 90.39062954 | 86.53664035 |
| 200305A00020 | 3/5/2020 | 0.95 | 3/5/2025 | 3/5/2020 | 103.86455 | 103.8645549 | 103.8645549 | 103.8645549 | 102.196386 | 97.71465195 | 93.45250753 | 89.39807069 | 85.54016608 |
| 200305A00035 | 3/5/2020 | 1.25 | 3/5/2026 | 3/5/2020 | 105.31159 | 105.3115938 | 105.3115938 | 105.3115938 | 102.7405579 | 97.35302156 | 92.27807332 | 87.49601097 | 82.98847405 |
| 200306A00002 | 3/6/2020 | 0.64 | 3/7/2022 | 3/6/2020 | 100.84476 | 100.8447577 | 100.8447577 | 100.8447577 | 100.5628862 | 98.97905004 | 97.42761758 | 95.90766201 | 94.4182917 |
| 200306A00009 | 3/6/2020 | 0.82 | 3/7/2022 | 3/6/2020 | 100.86337 | 100.8633728 | 100.8633728 | 100.8633728 | 100.5823685 | 99.00302676 | 97.45592347 | 95.94013836 | 94.45478595 |
| 200309A00033 | 3/9/2020 | 1.06 | 3/9/2026 | 3/9/2020 | 104.25107 | 104.2510748 | 104.2510748 | 104.2510748 | 101.6766644 | 96.30869939 | 91.25318849 | 86.49039074 | 82.00191248 |
| 200309A00046 | 3/9/2020 | 0.78 | 3/11/2025 | 3/9/2020 | 103.08539 | 103.0853892 | 103.0853892 | 103.0853892 | 101.4096348 | 96.93081257 | 92.67232783 | 88.62221651 | 84.76922861 |
| 200310A00019 | 3/10/2020 | 0.95 | 3/10/2023 | 3/10/2020 | 101.72204 | 101.7220374 | 101.7220374 | 101.7220374 | 101.1588674 | 98.59883102 | 96.11594475 | 93.7074134 | 91.37056249 |
| 200310A00025 | 3/10/2020 | 0.87 | 3/11/2024 | 3/10/2020 | 102.74713 | 102.7471328 | 102.7471328 | 102.7471328 | 101.713778 | 98.17236225 | 94.77175386 | 91.50559014 | 88.36783367 |
| 200310A00037 | 3/10/2020 | 0.84 | 3/7/2022 | 3/10/2020 | 100.89574 | 100.8957382 | 100.8957382 | 100.8957382 | 100.6146924 | 99.03508009 | 97.48771105 | 95.97166488 | 94.48605599 |
| 200310A00042 | 3/10/2020 | 1.41 | 3/11/2030 | 3/10/2020 | 110.60684 | 110.6068394 | 110.6068394 | 110.6068394 | 101.9909062 | 93.18985212 | 85.21413541 | 77.98220106 | 71.42093111 |
| 200310A00065 | 3/13/2020 | 1.1 | 3/13/2025 | 3/13/2020 | 103.73947 | 103.7394656 | 103.7394656 | 103.7394656 | 102.067441 | 97.59415116 | 93.340239 | 89.29381783 | 85.44370921 |
| 200311A00022 | 3/11/2020 | 1.23 | 3/11/2026 | 3/11/2020 | 106.30437 | 106.3043656 | 106.3043656 | 106.3043656 | 103.6828588 | 98.21695464 | 93.06965575 | 88.22078827 | 83.65155886 |
| 200311A00036 | 3/16/2020 | 1.03 | 4/15/2022 | 3/16/2020 | 101.26646 | 101.2664631 | 101.2664631 | 101.2664631 | 100.9616769 | 99.27587155 | 97.6260191 | 96.01103408 | 94.42987503 |
| 200313A00022 | 3/13/2020 | 1.11 | 3/8/2022 | 3/13/2020 | 101.33496 | 101.3349634 | 101.3349634 | 101.3349634 | 101.0527623 | 99.46685528 | 97.91334554 | 96.39130694 | 94.89984848 |
| 200326A00026 | 3/26/2020 | 1.32 | 3/26/2024 | 3/26/2020 | 103.77394 | 103.7739384 | 103.7739384 | 103.7739384 | 102.7199101 | 99.13908915 | 95.70130166 | 92.40004489 | 89.22915116 |
| 200327A00074 | 3/31/2020 | 1.76 | 3/29/2024 | 3/31/2020 | 105.40739 | 105.4073888 | 105.4073888 | 105.4073888 | 104.342261 | 100.7239983 | 97.250199 | 93.91429038 | 90.71003889 |
| 200331A00060 | 3/31/2020 | 1.09 | 3/31/2025 | 3/31/2020 | 103.73239 | 103.7323874 | 103.7323874 | 103.7323874 | 102.0239432 | 97.50671188 | 93.21295119 | 89.13044685 | 85.24771935 |
| 200402A00021 | 4/2/2020 | 0.77 | 10/2/2024 | 4/2/2020 | 102.75106 | 102.7510584 | 102.7510584 | 102.7510584 | 101.3820021 | 97.31719794 | 93.43542816 | 89.7274794 | 86.18465534 |
| 200403A00021 | 4/3/2020 | 0.74 | 4/29/2022 | 4/3/2020 | 100.78297 | 100.7829669 | 100.7829669 | 100.7829669 | 100.4703643 | 98.7511693 | 97.06928009 | 95.42354795 | 93.81287191 |
| 200420A00047 | 4/20/2020 | 0.77 | 4/20/2023 | 4/20/2020 | 101.3016 | 101.3016012 | 101.3016012 | 101.3016012 | 100.6992134 | 98.03798789 | 95.45968934 | 92.96119956 | 90.53954135 |
| 200429A00003 | 4/29/2020 | 0.74 | 4/28/2023 | 4/29/2020 | 101.22889 | 101.2288945 | 101.2288945 | 101.2288945 | 100.6186335 | 97.93728655 | 95.34005797 | 92.82376158 | 90.3853565 |
| 191120A00005 | 11/20/2019 | 2.63 | 11/20/2034 | 11/20/2019 | 132.99463 | 132.9946285 | 132.9946285 | 127.5986575 | 113.0942289 | 100.1019996 | 88.80141281 | 78.96053819 | 70.38043192 |

Classification | Public

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 191121A00004 | 11/21/2019 | 1.77 | 11/21/2024 | 11/21/2019 | 107.20185 | 107.2018462 | 107.2018462 | 107.2018462 | 105.7180313 | 101.4316312 | 97.34252125 | 93.44061036 | 89.71637666 |
| 191121A00010 | 11/21/2019 | 2.59 | 11/20/2037 | 11/21/2019 | 142.94513 | 142.9451311 | 142.9451311 | 133.2277461 | 115.3568975 | 99.90416701 | 86.82091138 | 75.72500711 | 66.29802767 |
| 191206A00008 | 12/6/2019 | 2.44 | 12/6/2030 | 12/6/2019 | 122.05256 | 122.0525596 | 122.0525596 | 122.0525596 | 111.6821967 | 101.8186542 | 92.92771731 | 84.90791363 | 77.6688447 |
| 191206A00020 | 12/9/2019 | 1.91 | 12/15/2021 | 12/9/2019 | 102.26014 | 102.2601401 | 102.2601401 | 102.2601401 | 102.0234495 | 100.6563926 | 99.31412009 | 97.99601626 | 96.70148547 |
| 191210A00009 | 12/10/2019 | 1.92 | 12/10/2020 | 12/10/2019 | 100.61356 | 100.6135598 | 100.6135598 | 100.6135598 | 100.5748008 | 100.2094028 | 99.84666428 | 99.4865561 | 99.12904967 |
| 191212A00027 | 12/13/2019 | 1.93 | 10/17/2022 | 12/13/2019 | 103.65532 | 103.6553184 | 103.6553184 | 103.6553184 | 103.2123902 | 101.0122542 | 98.86970136 | 96.78280456 | 94.74971781 |
| 191212A00032 | 12/12/2019 | 1.99 | 12/12/2023 | 12/12/2019 | 105.75392 | 105.7539179 | 105.7539179 | 105.7539179 | 104.845407 | 101.5024145 | 98.28357941 | 95.18365775 | 92.19765463 |
| 191219A00036 | 12/20/2019 | 2.1 | 12/20/2024 | 12/20/2019 | 107.93545 | 107.9354526 | 107.9354526 | 107.9354526 | 106.4031952 | 102.0514719 | 97.90253646 | 93.94591872 | 90.17174166 |
| 191230A00012 | 12/30/2019 | 1.77 | 12/1/2023 | 12/30/2019 | 105.57598 | 105.5759755 | 105.5759755 | 105.5759755 | 104.6787882 | 101.3518584 | 98.14786295 | 95.0616383 | 92.08826446 |
| 200106A00015 | 1/6/2020 | 1.87 | 2/15/2024 | 1/6/2020 | 105.62777 | 105.6277711 | 105.6277711 | 105.6277711 | 104.6262175 | 101.1163417 | 97.74300848 | 94.50017041 | 91.38208237 |
| 200110A00004 | 1/10/2020 | 1.7 | 1/10/2022 | 1/10/2020 | 102.31766 | 102.3176583 | 102.3176583 | 102.3176583 | 102.0663602 | 100.6263392 | 99.21370377 | 97.82774151 | 96.46776412 |
| 200110A00005 | 1/10/2020 | 1.7 | 1/10/2022 | 1/10/2020 | 102.31766 | 102.3176583 | 102.3176583 | 102.3176583 | 102.0663602 | 100.6263392 | 99.21370377 | 97.82774151 | 96.46776412 |
| 200115A00014 | 1/17/2020 | 1.88 | 9/15/2022 | 1/17/2020 | 103.40352 | 103.403517 | 103.403517 | 103.403517 | 102.9865561 | 100.8743386 | 98.81577153 | 96.80912174 | 94.85272597 |
| 200116A00005 | 1/16/2020 | 1.92 | 7/16/2021 | 1/16/2020 | 101.6052 | 101.605197 | 101.605197 | 101.605197 | 101.4645988 | 100.4997159 | 99.55312273 | 98.62430292 | 97.71275936 |
| 200122A00003 | 1/22/2020 | 1.88 | 1/22/2021 | 1/22/2020 | 100.79432 | 100.7943207 | 100.7943207 | 100.7943207 | 100.7408088 | 100.2567383 | 99.77731619 | 99.3024758 | 98.83215158 |
| 200122A00010 | 1/22/2020 | 1.84 | 1/24/2022 | 1/22/2020 | 102.33525 | 102.3352535 | 102.3352535 | 102.3352535 | 102.0769681 | 100.6040077 | 99.15970316 | 97.74329211 | 96.35403851 |
| 200123A00048 | 1/23/2020 | 1.7 | 1/23/2025 | 1/23/2020 | 107.17217 | 107.1721679 | 107.1721679 | 107.1721679 | 105.5668373 | 101.1209621 | 96.88728709 | 92.85459936 | 89.01233637 |
| 200130A00005 | 1/30/2020 | 1.73 | 1/30/2024 | 1/30/2020 | 105.06481 | 105.0648057 | 105.0648057 | 105.0648057 | 104.088931 | 100.632587 | 97.3094955 | 94.11381302 | 91.03998476 |
| 200130A00010 | 1/30/2020 | 1.56 | 1/31/2022 | 1/30/2020 | 102.19658 | 102.1965756 | 102.1965756 | 102.1965756 | 101.9337886 | 100.4392814 | 98.97427247 | 97.5379661 | 96.12959454 |
| 200130A00012 | 1/30/2020 | 1.72 | 1/30/2023 | 1/30/2020 | 103.59879 | 103.5987924 | 103.5987924 | 103.5987924 | 103.0673496 | 100.59172 | 98.18828422 | 95.85452202 | 93.58801706 |
| 200131A00005 | 1/31/2020 | 1.64 | 2/1/2021 | 1/31/2020 | 100.78203 | 100.7820339 | 100.7820339 | 100.7820339 | 100.7247377 | 100.2124646 | 99.70538568 | 99.20342242 | 98.7064977 |
| 200131A00006 | 1/31/2020 | 1.52 | 1/31/2022 | 1/31/2020 | 102.13563 | 102.1356337 | 102.1356337 | 102.1356337 | 101.8729191 | 100.3788938 | 98.91435828 | 97.47851707 | 96.07060266 |
| 200203A00012 | 2/3/2020 | 1.57 | 2/3/2025 | 2/3/2020 | 106.62672 | 106.6267223 | 106.6267223 | 106.6267223 | 105.0027241 | 100.5405065 | 96.29275151 | 92.24805119 | 88.39566412 |
| 200203A00050 | 2/3/2020 | 1.54 | 2/3/2022 | 2/3/2020 | 102.17784 | 102.177842 | 102.177842 | 102.177842 | 101.9132932 | 100.410125 | 98.93671267 | 97.49224899 | 96.07595551 |
| 200204A00016 | 2/4/2020 | 1.72 | 2/6/2023 | 2/4/2020 | 103.62586 | 103.6258614 | 103.6258614 | 103.6258614 | 103.0879567 | 100.5920829 | 98.16940846 | 95.81736055 | 93.53347334 |
| 200207A00006 | 2/7/2020 | 1.76 | 2/8/2021 | 2/7/2020 | 100.80178 | 100.8017835 | 100.8017835 | 100.8017835 | 100.7415151 | 100.2108463 | 99.68575741 | 99.16616065 | 98.65197016 |
| 200210A00009 | 2/10/2020 | 1.57 | 2/10/2025 | 2/10/2020 | 106.65459 | 106.6545909 | 106.6545909 | 106.6545909 | 105.0163096 | 100.5339044 | 96.26770405 | 92.20616684 | 88.33842809 |
| 200214A00015 | 2/18/2020 | 1.76 | 8/6/2024 | 2/18/2020 | 105.93034 | 105.9303445 | 105.9303445 | 105.9303445 | 104.6532479 | 100.6905759 | 96.89969991 | 93.27227533 | 89.80040769 |
| 200218A00008 | 2/18/2020 | 1.77 | 2/18/2021 | 2/18/2020 | 100.85403 | 100.8540263 | 100.8540263 | 100.8540263 | 100.7893565 | 100.2310516 | 99.67892064 | 99.13286142 | 98.59277418 |
| 200218A00015 | 2/18/2020 | 1.77 | 2/18/2021 | 2/18/2020 | 100.85403 | 100.8540263 | 100.8540263 | 100.8540263 | 100.7893565 | 100.2310516 | 99.67892064 | 99.13286142 | 98.59277418 |
| 200220A00015 | 2/20/2020 | 1.57 | 2/20/2025 | 2/20/2020 | 106.6944 | 106.6944034 | 106.6944034 | 106.6944034 | 105.0357221 | 100.5244967 | 96.2319777 | 92.14643071 | 88.25681354 |
| 200224A00017 | 2/24/2020 | 1.59 | 2/24/2025 | 2/24/2020 | 105.95801 | 105.9580084 | 105.9580084 | 105.9580084 | 104.307114 | 99.82655218 | 95.56320018 | 91.50540517 | 87.64220155 |
| 200224A00018 | 2/24/2020 | 1.58 | 8/19/2024 | 2/24/2020 | 105.24734 | 105.2473407 | 105.2473407 | 105.2473407 | 103.9512272 | 99.96936697 | 96.16144966 | 92.51896536 | 89.03386708 |

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 200224A00021 | 2/24/2020 | 1.58 | 9/24/2024 | 2/24/2020 | 105.37407 | 105.3740727 | 105.3740727 | 105.3740727 | 104.0147209 | 99.93768934 | 96.04220921 | 92.31922271 | 88.76017589 |
| 200224A00029 | 2/24/2020 | 1.56 | 2/24/2023 | 2/24/2020 | 103.28001 | 103.2800098 | 103.2800098 | 103.2800098 | 102.7263774 | 100.1831548 | 97.71560325 | 95.32101752 | 92.99680743 |
| 200225A00003 | 2/25/2020 | 1.54 | 2/27/2023 | 2/25/2020 | 103.23818 | 103.2381812 | 103.2381812 | 103.2381812 | 102.6818956 | 100.1305995 | 97.65539547 | 95.25355574 | 92.92246894 |
| 200226A00002 | 2/26/2020 | 1.53 | 2/27/2023 | 2/26/2020 | 103.21215 | 103.2121464 | 103.2121464 | 103.2121464 | 102.6559227 | 100.1049674 | 97.63009634 | 95.22858215 | 92.89781361 |
| 200226A00009 | 2/26/2020 | 1.75 | 2/26/2030 | 2/26/2020 | 115.75626 | 115.7562611 | 115.7562611 | 115.7562611 | 106.944193 | 97.85164559 | 89.60665263 | 82.12576328 | 75.33413773 |
| 200226A00017 | 2/26/2020 | 1.53 | 2/27/2023 | 2/26/2020 | 103.21215 | 103.2121464 | 103.2121464 | 103.2121464 | 102.6559227 | 100.1049674 | 97.63009634 | 95.22858215 | 92.89781361 |
| 200226A00025 | 2/26/2020 | 1.38 | 2/26/2025 | 2/26/2020 | 105.83884 | 105.8388398 | 105.8388398 | 105.8388398 | 104.1731551 | 99.66457924 | 95.37552177 | 91.294162 | 87.40937899 |
| 200227A00006 | 2/27/2020 | 1.47 | 2/27/2025 | 2/27/2020 | 105.41498 | 105.4149815 | 105.4149815 | 105.4149815 | 103.7613381 | 99.28479557 | 95.02577003 | 90.97257008 | 87.11419513 |
| 200227A00023 | 2/27/2020 | 1.47 | 2/27/2025 | 2/27/2020 | 105.41498 | 105.4149815 | 105.4149815 | 105.4149815 | 103.7613381 | 99.28479557 | 95.02577003 | 90.97257008 | 87.11419513 |
| 200227A00027 | 2/27/2020 | 1.47 | 2/27/2025 | 2/27/2020 | 105.41498 | 105.4149815 | 105.4149815 | 105.4149815 | 103.7613381 | 99.28479557 | 95.02577003 | 90.97257008 | 87.11419513 |
| 200228A00016 | 2/28/2020 | 1.35 | 2/22/2024 | 2/28/2020 | 103.78879 | 103.788794 | 103.788794 | 103.788794 | 102.784023 | 99.28773884 | 95.92838407 | 92.69986027 | 89.59637567 |
| 200302A00045 | 3/4/2020 | 1.31 | 3/4/2025 | 3/4/2020 | 104.69093 | 104.6909273 | 104.6909273 | 104.6909273 | 103.0314685 | 98.55869679 | 94.30402078 | 90.25568301 | 86.40262286 |
| 200303A00004 | 3/3/2020 | 1.06 | 3/3/2022 | 3/3/2020 | 101.51494 | 101.5149384 | 101.5149384 | 101.5149384 | 101.2345867 | 99.65568331 | 98.10892905 | 96.59341002 | 95.10824672 |
| 200303A00018 | 3/3/2020 | 1.27 | 3/3/2025 | 3/3/2020 | 104.50321 | 104.5032118 | 104.5032118 | 104.5032118 | 102.8469057 | 98.38085484 | 94.1325247 | 90.09018225 | 86.24278949 |
| 190819A00004 | 8/20/2019 | 1.81 | 5/24/2024 | 8/20/2019 | 105.82496 | 105.8249627 | 105.8249627 | 105.8249627 | 104.6704588 | 100.899438 | 97.28431832 | 93.81785348 | 90.49317251 |
| 190819A00027 | 8/19/2019 | 2.03 | 8/19/2020 | 8/19/2019 | 100.09332 | 100.093322 | 100.093322 | 100.093322 | 100.0893988 | 100.0367197 | 99.98411206 | 99.93157582 | 99.87911082 |
| 190820A00008 | 8/20/2019 | 1.76 | 8/20/2024 | 8/20/2019 | 105.9868 | 105.9867992 | 105.9867992 | 105.9867992 | 104.6854278 | 100.6861451 | 96.86147552 | 93.20287624 | 89.70226926 |
| 190821A00028 | 8/21/2019 | 1.8 | 8/21/2023 | 8/21/2019 | 104.64097 | 104.6409719 | 104.6409719 | 104.6409719 | 103.8875211 | 100.8586314 | 97.93374754 | 95.10871463 | 92.37956898 |
| 190821A00030 | 8/21/2019 | 1.8 | 8/21/2024 | 8/21/2019 | 106.15448 | 106.1544793 | 106.1544793 | 106.1544793 | 104.8505883 | 100.8453927 | 97.01511666 | 93.35119913 | 89.84554487 |
| 190826A00018 | 8/26/2019 | 1.9 | 8/27/2029 | 8/26/2019 | 116.3099 | 116.3099046 | 116.3099046 | 116.3099046 | 108.3854972 | 99.65825022 | 91.7048103 | 84.45247811 | 77.83573189 |
| 190827A00001 | 8/27/2019 | 1.74 | 8/27/2024 | 8/27/2019 | 105.93287 | 105.9328741 | 105.9328741 | 105.9328741 | 104.6197668 | 100.6038565 | 96.76392418 | 93.09132907 | 89.57790243 |
| 190829A00012 | 8/29/2019 | 1.54 | 8/29/2024 | 8/29/2019 | 105.86893 | 105.8689344 | 105.8689344 | 105.8689344 | 104.5443919 | 100.5038106 | 96.64101818 | 92.94725315 | 89.41423434 |
| 190904A00007 | 9/4/2019 | 1.69 | 9/1/2023 | 9/4/2019 | 104.34392 | 104.3439199 | 104.3439199 | 104.3439199 | 103.5773593 | 100.5245882 | 97.57741574 | 94.73159036 | 91.98305826 |
| 190910A00009 | 9/10/2019 | 1.86 | 9/10/2020 | 9/10/2019 | 100.19845 | 100.1984506 | 100.1984506 | 100.1984506 | 100.1890048 | 100.0752007 | 99.96166879 | 99.84840821 | 99.73541789 |
| 190910A00017 | 9/16/2019 | 1.86 | 9/16/2024 | 9/16/2019 | 106.51149 | 106.511489 | 106.511489 | 106.511489 | 105.1605363 | 101.0809525 | 97.1819499 | 93.45456613 | 89.89033478 |
| 190910A00030 | 9/10/2019 | 1.86 | 9/10/2024 | 9/10/2019 | 106.48581 | 106.4858137 | 106.4858137 | 106.4858137 | 105.145552 | 101.0821661 | 97.19805565 | 93.4843532 | 89.93267979 |
| 190916A00009 | 9/16/2019 | 2.04 | 9/16/2022 | 9/16/2019 | 103.75207 | 103.7520669 | 103.7520669 | 103.7520669 | 103.333675 | 101.2149421 | 99.1500553 | 97.13727344 | 95.17492567 |
| 190917A00029 | 9/17/2019 | 2.02 | 12/6/2022 | 9/17/2019 | 104.09438 | 104.094382 | 104.094382 | 104.094382 | 103.60954 | 101.2708846 | 98.9965812 | 96.78451224 | 94.63264206 |
| 190923A00078 | 9/23/2019 | 1.96 | 6/28/2024 | 9/23/2019 | 106.56169 | 106.561688 | 106.561688 | 106.561688 | 105.3471118 | 101.4707654 | 97.75823025 | 94.20175156 | 90.79398174 |
| 190930A00008 | 9/30/2019 | 1.9 | 10/10/2023 | 9/30/2019 | 105.17016 | 105.1701615 | 105.1701615 | 105.1701615 | 104.3498029 | 101.1810552 | 98.12481308 | 95.17641459 | 92.33142236 |
| 190930A00075 | 9/30/2019 | 2.19 | 9/29/2027 | 9/30/2019 | 113.54016 | 113.5401625 | 113.5401625 | 113.5401625 | 108.7621537 | 101.7706773 | 95.27935817 | 89.24978216 | 83.64667789 |
| 191001A00023 | 10/1/2019 | 1.85 | 9/27/2024 | 10/1/2019 | 106.51663 | 106.5166339 | 106.5166339 | 106.5166339 | 105.146297 | 101.037903 | 97.11246789 | 93.36085563 | 89.77443893 |
| 191004A00013 | 10/4/2019 | 1.53 | 10/22/2021 | 10/4/2019 | 101.75525 | 101.75525 | 101.75525 | 101.75525 | 101.5489363 | 100.3155567 | 99.11195768 | 97.93707148 | 96.78988063 |

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 191008A00031 | 10/8/2019 | 1.52 | 10/8/2024 | 10/8/2019 | 105.94122 | 105.9412226 | 105.9412226 | 105.9412226 | 104.545118 | 100.3988485 | 96.43906179 | 92.65635956 | 89.04187214 |
| 191008A00033 | 10/8/2019 | 1.71 | 10/8/2024 | 10/8/2019 | 105.97241 | 105.9724094 | 105.9724094 | 105.9724094 | 104.585108 | 100.4600238 | 96.51989892 | 92.75543608 | 89.15785963 |
| 191010A00011 | 10/10/2019 | 1.6 | 10/10/2023 | 10/10/2019 | 104.78885 | 104.7888537 | 104.7888537 | 104.7888537 | 103.9654824 | 100.7887209 | 97.72511959 | 94.76997675 | 91.91881774 |
| 191015A00013 | 10/15/2019 | 1.72 | 10/15/2024 | 10/15/2019 | 106.82007 | 106.8200658 | 106.8200658 | 106.8200658 | 105.4067197 | 101.2243022 | 97.23049007 | 93.41574571 | 89.77107048 |
| 191017A00022 | 10/17/2019 | 2.25 | 7/17/2028 | 10/17/2019 | 115.51198 | 115.5119788 | 115.5119788 | 115.5119788 | 109.5111741 | 101.7822243 | 94.66017611 | 88.09415874 | 82.03781006 |
| 200430A00007 | 4/30/2020 | 0.72 | 4/28/2023 | 4/30/2020 | 101.17352 | 101.1735185 | 101.1735185 | 101.1735185 | 100.5634009 | 97.88282255 | 95.28634444 | 92.77078091 | 90.33309164 |
| 200430A00009 | 4/30/2020 | 1.16 | 4/30/2026 | 4/30/2020 | 104.93592 | 104.9359176 | 104.9359176 | 104.9359176 | 102.1896427 | 96.6786134 | 91.49511967 | 86.61802532 | 82.02767014 |
| 200505A00004 | 5/5/2020 | 0.77 | 5/5/2025 | 5/5/2020 | 103.13772 | 103.1377205 | 103.1377205 | 103.1377205 | 101.347283 | 96.72944383 | 92.34512926 | 88.18132285 | 84.22580592 |
| 200505A00005 | 5/5/2020 | 0.77 | 5/5/2025 | 5/5/2020 | 103.13772 | 103.1377205 | 103.1377205 | 103.1377205 | 101.347283 | 96.72944383 | 92.34512926 | 88.18132285 | 84.22580592 |
| 200511A00014 | 5/11/2020 | 0.52 | 2/1/2022 | 5/11/2020 | 100.35764 | 100.3576434 | 100.3576434 | 100.3576434 | 100.0972551 | 98.61860519 | 97.16913549 | 95.74805909 | 94.3546168 |
| 200511A00015 | 5/11/2020 | 0.6 | 2/1/2023 | 5/11/2020 | 100.77095 | 100.7709505 | 100.7709505 | 100.7709505 | 100.2441737 | 97.79910507 | 95.42571779 | 93.12150093 | 90.88404737 |
| 200511A00021 | 5/11/2020 | 1.53 | 2/1/2029 | 5/11/2020 | 110.42889 | 110.4288901 | 110.4288901 | 110.4288901 | 103.6784159 | 95.71630496 | 88.42274752 | 81.73823442 | 75.60883198 |
| 200513A00001 | 5/13/2020 | 0.44 | 5/12/2023 | 5/13/2020 | 100.90452 | 100.9045156 | 100.9045156 | 100.9045156 | 100.2773726 | 97.55340475 | 94.91617521 | 92.36240649 | 89.88896745 |
| 200709A00002 | 7/10/2020 | 1.66 | 7/10/2025 | 7/10/2020 | 106.73768 | 106.7376769 | 106.7376769 | 106.7376769 | 104.7936156 | 99.95456797 | 95.36660726 | 91.01544793 | 86.88768839 |
| 200709A00014 | 7/13/2020 | 0.57 | 1/20/2023 | 7/13/2020 | 100.68583 | 100.6858301 | 100.6858301 | 100.6858301 | 100.1697422 | 97.7567031 | 95.41354691 | 93.13785702 | 90.92731536 |
| 200716A00015 | 7/20/2020 | 1.54 | 7/19/2024 | 7/20/2020 | 104.97761 | 104.9776067 | 104.9776067 | 104.9776067 | 103.7352545 | 99.83683097 | 96.10581115 | 92.5341486 | 89.11422599 |
| 200731A00004 | 7/31/2020 | 0.38 | 7/31/2023 | 7/31/2020 | 100.7937 | 100.7937027 | 100.7937027 | 100.7937027 | 100.0747778 | 97.1457356 | 94.31673351 | 91.58381434 | 88.94320055 |
| 200305A00008 | 3/10/2020 | 1.01 | 6/19/2023 | 3/10/2020 | 102.07897 | 102.0789681 | 102.0789681 | 102.0789681 | 101.4097368 | 98.58170663 | 95.84634338 | 93.20012992 | 90.63970192 |
| 200305A00012 | 3/5/2020 | 1.14 | 3/5/2025 | 3/5/2020 | 103.90687 | 103.9068669 | 103.9068669 | 103.9068669 | 102.2500584 | 97.79260336 | 93.55284882 | 89.51904634 | 85.6801444 |
| 200306A00001 | 3/6/2020 | 1.11 | 3/6/2026 | 3/6/2020 | 104.52626 | 104.5262562 | 104.5262562 | 104.5262562 | 101.9588703 | 96.5904305 | 91.53396105 | 86.76977933 | 82.2795442 |
| 200306A00039 | 3/6/2020 | 0.88 | 3/6/2023 | 3/6/2020 | 101.53117 | 101.5311728 | 101.5311728 | 101.5311728 | 100.9722914 | 98.42506427 | 95.95438232 | 93.55748184 | 91.23171789 |
| 090429A00044 | 4/29/2009 | 4.1 | 4/29/2024 | 4/29/2014 | 100.32797 | 100.3279684 | 100.3279684 | 100.3279684 | 100.3215588 | 100.2355074 | 100.149601 | 100.0004819 | 99.08995 |
| 100517A00013 | 5/17/2010 | 3.71 | 5/19/2025 | 5/18/2015 | 100.30942 | 100.3094229 | 100.3094229 | 100.3094229 | 100.303003 | 100.2168136 | 100.1307713 | 99.77289475 | 98.29016475 |
| 100707A00014 | 7/7/2010 | 3.19 | 7/7/2025 | 7/7/2015 | 100.26465 | 100.2646496 | 100.2646496 | 100.2646496 | 100.2582326 | 100.1720817 | 100.0439466 | 99.0313522 | 97.11997793 |
| 111005A00009 | 10/5/2011 | 2.72 | 10/5/2026 | 10/5/2016 | 100.22418 | 100.2241815 | 100.2241815 | 100.2241815 | 100.217767 | 100.1316508 | 99.51777963 | 97.50372126 | 94.93759202 |
| 111215A00019 | 12/15/2011 | 2.53 | 12/15/2026 | 12/15/2021 | 103.13104 | 103.1310396 | 103.1310396 | 103.1310396 | 102.9031213 | 101.3780931 | 99.38540674 | 96.93105313 | 94.2334091 |
| 120702A00016 | 7/2/2012 | 2.42 | 7/6/2027 | 7/3/2013 | 100.19835 | 100.1983507 | 100.1983507 | 100.1983507 | 100.1919379 | 100.0726197 | 98.7594565 | 96.19807014 | 93.28041179 |
| 200612A00001 | 6/12/2020 | 0.75 | 6/12/2030 | 6/12/2025 | 102.39405 | 102.3940514 | 102.3940514 | 102.3940514 | 99.9388265 | 95.30990291 | 90.92227461 | 86.79490324 | 82.92474087 |
| 200423A00009 | 4/23/2020 | 1.59 | 4/23/2030 | 4/23/2025 | 106.56582 | 106.5658177 | 106.5658177 | 106.5658177 | 102.9230666 | 96.24704151 | 89.69243908 | 83.45674433 | 77.63421706 |
| 200423A00010 | 4/23/2020 | 1.59 | 4/23/2030 | 4/23/2025 | 106.56581 | 106.5658136 | 106.5658136 | 106.5658136 | 102.9230659 | 96.24704593 | 89.69244855 | 83.45675854 | 77.63423563 |
| 200430A00021 | 4/30/2020 | 1.2 | 4/30/2030 | 4/30/2025 | 103.37337 | 103.3733714 | 103.3733714 | 103.3733714 | 101.1527468 | 96.63353291 | 92.31293743 | 88.22367754 | 84.37482252 |
| 200505A00010 | 5/5/2020 | 0.89 | 5/6/2030 | 5/5/2025 | 102.92114 | 102.9211365 | 102.9211365 | 102.9211365 | 100.5851659 | 96.00142 | 91.63609274 | 87.51721316 | 83.64796976 |
| 200512A00023 | 5/12/2020 | 1.78 | 5/11/2035 | 5/12/2025 | 109.21733 | 109.2173286 | 109.2173286 | 109.1509992 | 102.8945269 | 95.00467151 | 87.59022802 | 80.77414833 | 74.58725124 |

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 200609A00003 | 6/9/2020 | 1.66 | 6/8/2035 | 6/9/2025 | 107.04691 | 107.0469094 | 107.0469094 | 107.0089207 | 100.8002417 | 92.49371561 | 84.60244705 | 77.35017237 | 70.80524496 |
| 200309A00013 | 3/9/2020 | 1.1 | 3/8/2030 | 3/9/2025 | 102.88143 | 102.8814329 | 102.8814329 | 102.8814329 | 100.7105201 | 96.23817423 | 91.96158319 | 87.9148204 | 84.10643713 |
| 200316A00030 | 3/16/2020 | 1.35 | 3/15/2030 | 3/16/2025 | 104.49648 | 104.496475 | 104.496475 | 104.496475 | 102.5405831 | 98.10924755 | 93.81032201 | 89.70309494 | 85.81590856 |
| 200316A00032 | 3/16/2020 | 1.35 | 3/15/2030 | 3/16/2025 | 104.49648 | 104.4964753 | 104.4964753 | 104.4964753 | 102.5405825 | 98.1092458 | 93.81031913 | 89.703091 | 85.81590365 |
| 200318A00015 | 3/18/2020 | 1.69 | 3/18/2030 | 3/18/2023 | 103.68341 | 103.6834132 | 103.6834132 | 103.6834132 | 102.7339193 | 99.03568739 | 95.00650318 | 90.93798207 | 87.00009705 |
| 200326A00035 | 3/26/2020 | 1.68 | 3/26/2030 | 3/26/2025 | 105.01399 | 105.0139867 | 105.0139867 | 105.0139867 | 103.1339294 | 98.74761884 | 94.47094743 | 90.37080923 | 86.48082796 |
| 200423A00008 | 4/23/2020 | 1.59 | 4/23/2030 | 4/23/2025 | 106.56582 | 106.5658177 | 106.5658177 | 106.5658177 | 102.9230666 | 96.24704151 | 89.69243908 | 83.45674433 | 77.63421706 |
| 200108A00009 | 1/8/2020 | 2.4 | 1/8/2035 | 1/8/2025 | 109.06381 | 109.0638123 | 109.0638123 | 109.0638111 | 106.4815409 | 100.6594802 | 94.69020724 | 88.85358156 | 83.32899718 |
| 200108A00040 | 1/8/2020 | 2.52 | 1/8/2030 | 1/8/2025 | 109.13386 | 109.1338588 | 109.1338588 | 109.1338588 | 106.7928233 | 101.226411 | 95.52672184 | 89.89506724 | 84.48003455 |
| 200110A00012 | 1/10/2020 | 2.57 | 1/10/2035 | 1/10/2025 | 108.93419 | 108.9341872 | 108.9341872 | 108.9341859 | 106.432068 | 100.8225936 | 95.10955347 | 89.52087195 | 84.2089678 |
| 200115A00023 | 1/15/2020 | 2.16 | 1/15/2030 | 1/15/2025 | 106.59653 | 106.5965258 | 106.5965258 | 106.5965258 | 105.0023211 | 100.8044434 | 96.63619494 | 92.5793227 | 88.68964832 |
| 200115A00025 | 1/15/2020 | 2.1 | 1/15/2025 | 1/15/2023 | 104.03388 | 104.0338839 | 104.0338839 | 104.0338839 | 103.4975403 | 100.8374636 | 97.94251208 | 94.92041742 | 91.88934803 |
| 200306A00021 | 3/6/2020 | 1.16 | 3/6/2030 | 3/6/2025 | 103.10093 | 103.1009294 | 103.1009294 | 103.1009294 | 100.9649431 | 96.49982017 | 92.22162765 | 88.16822204 | 84.3508079 |
| 191007A00013 | 10/7/2019 | 2 | 10/5/2029 | 10/7/2024 | 105.7317 | 105.7316985 | 105.7316985 | 105.7316985 | 104.2423417 | 100.172797 | 96.11730502 | 92.16664443 | 88.3772466 |
| 191028A00015 | 10/28/2019 | 2.49 | 10/27/2034 | 10/28/2024 | 108.91658 | 108.9165834 | 108.9165834 | 108.916583 | 106.725592 | 101.3541822 | 95.78714881 | 90.27476066 | 84.99230731 |
| 191031A00036 | 10/31/2019 | 2.9 | 10/31/2039 | 10/31/2024 | 110.5394 | 110.5394006 | 110.5394006 | 110.5393529 | 107.3953085 | 100.7664678 | 93.88664829 | 87.13887335 | 80.78286995 |
| 191031A00037 | 10/31/2019 | 2.59 | 10/30/2034 | 10/31/2024 | 108.84469 | 108.844688 | 108.844688 | 108.8446873 | 106.4807793 | 101.0009766 | 95.39098091 | 89.8834625 | 84.63233043 |
| 191220A00029 | 12/20/2019 | 2.57 | 12/19/2031 | 12/20/2024 | 108.37464 | 108.3746418 | 108.3746418 | 108.3746418 | 106.5961858 | 101.9468026 | 97.22171331 | 92.55677108 | 88.06004711 |
| 200102A00020 | 1/2/2020 | 2.78 | 1/3/2040 | 1/2/2025 | 111.04923 | 111.049228 | 111.049228 | 111.0491666 | 107.8212325 | 101.0852922 | 94.09647845 | 87.23993769 | 80.78048249 |
| 190807A00041 | 8/7/2019 | 2.27 | 8/7/2034 | 7/7/2024 | 107.6511 | 107.6510994 | 107.6510994 | 107.651099 | 105.4958274 | 100.1593359 | 94.62985063 | 89.17498972 | 83.97050482 |
| 190807A00044 | 8/7/2019 | 2.27 | 8/7/2034 | 8/7/2024 | 107.92137 | 107.9213654 | 107.9213654 | 107.9213648 | 105.6457364 | 100.2247246 | 94.65407263 | 89.18214289 | 83.97218944 |
| 190827A00044 | 8/27/2019 | 1.9 | 8/27/2029 | 8/27/2024 | 105.92492 | 105.9249183 | 105.9249183 | 105.9249183 | 104.5230771 | 100.5369993 | 96.54607133 | 92.6402922 | 88.88251876 |
| 190930A00079 | 9/30/2019 | 2.04 | 10/1/2029 | 9/30/2024 | 106.50905 | 106.5090511 | 106.5090511 | 106.5090511 | 105.0990062 | 101.0881703 | 97.06889533 | 93.12759498 | 89.3289386 |
| 190930A00083 | 9/30/2019 | 2.04 | 10/1/2029 | 9/30/2024 | 106.50905 | 106.5090511 | 106.5090511 | 106.5090511 | 105.099006 | 101.0881698 | 97.06889444 | 93.12759376 | 89.32893708 |
| 191007A00012 | 10/7/2019 | 2 | 10/5/2029 | 10/7/2024 | 105.7317 | 105.7316999 | 105.7316999 | 105.7316999 | 104.2423412 | 100.1727937 | 96.11729854 | 92.16663489 | 88.37723422 |
| 190409A00016 | 4/9/2019 | 2.91 | 4/9/2029 | 4/9/2024 | 109.40084 | 109.4008407 | 109.4008407 | 109.4008407 | 108.152066 | 103.9725438 | 99.48633435 | 94.82606719 | 90.15617669 |
| 190409A00017 | 4/9/2019 | 3.01 | 4/9/2029 | 4/9/2024 | 110.14189 | 110.1418934 | 110.1418934 | 110.1418934 | 108.7987744 | 104.3445245 | 99.5005335 | 94.41613727 | 89.28954264 |
| 190430A00020 | 4/30/2019 | 3.41 | 4/28/2034 | 4/28/2026 | 120.80734 | 120.807339 | 120.807339 | 120.8068213 | 115.3551991 | 106.9913463 | 98.73490194 | 90.79953628 | 83.34732991 |
| 190520A00018 | 5/20/2019 | 3.7 | 5/20/2044 | 5/20/2024 | 112.46027 | 112.460269 | 112.460269 | 112.4602603 | 110.2376652 | 103.9424178 | 96.726387 | 89.1891609 | 81.86742874 |
| 190530A00037 | 5/30/2019 | 2.85 | 5/30/2034 | 5/30/2024 | 109.38266 | 109.3826636 | 109.3826636 | 109.3826635 | 107.8012967 | 103.0494599 | 97.92037962 | 92.65756083 | 87.48431916 |
| 190530A00044 | 5/30/2019 | 2.85 | 5/30/2034 | 5/30/2024 | 109.38267 | 109.3826719 | 109.3826719 | 109.3826719 | 107.801302 | 103.0494579 | 97.92036878 | 92.65754043 | 87.48428918 |
| 190204A00054 | 2/4/2019 | 3.98 | 2/6/2034 | 2/2/2024 | 112.65203 | 112.6520316 | 112.6520316 | 112.6520315 | 111.2683417 | 106.4604683 | 100.8540973 | 94.65537504 | 88.24022038 |
| 190222A00023 | 2/22/2019 | 3.66 | 2/22/2034 | 2/22/2026 | 121.20694 | 121.2069379 | 121.2069379 | 121.2068901 | 116.7881048 | 108.8334229 | 100.771097 | 92.88367777 | 85.39312661 |

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 190301A00015 | 3/1/2019 | 3.86 | 3/1/2034 | 3/2/2026 | 119.08868 | 119.0886759 | 119.0886759 | 119.0886622 | 115.4017178 | 108.2252994 | 100.8397939 | 93.47155636 | 86.34759143 |
| 190329A00023 | 3/29/2019 | 3 | 3/29/2034 | 3/29/2024 | 109.70154 | 109.7015425 | 109.7015425 | 109.7015424 | 108.2735195 | 103.7237652 | 98.76423635 | 93.60848249 | 88.48857747 |
| 190329A00025 | 3/29/2019 | 3 | 3/29/2034 | 3/29/2024 | 109.70153 | 109.701526 | 109.701526 | 109.701526 | 108.2735091 | 103.7237692 | 98.76425763 | 93.60852232 | 88.48863555 |
| 190329A00026 | 3/29/2019 | 3 | 3/29/2034 | 3/29/2024 | 109.70154 | 109.7015425 | 109.7015425 | 109.7015424 | 108.2735208 | 103.7237689 | 98.7642431 | 93.60849257 | 88.48859069 |
| 180627A00005 | 6/27/2018 | 3.63 | 6/30/2033 | 6/30/2023 | 109.68322 | 109.683219 | 109.683219 | 109.683219 | 108.9132844 | 105.5418443 | 101.6358149 | 97.22100826 | 92.51501305 |
| 180703A00033 | 7/3/2018 | 3.4 | 7/3/2028 | 7/3/2023 | 107.83248 | 107.8324782 | 107.8324782 | 107.8324782 | 107.2042282 | 104.4280123 | 101.4588139 | 98.29640293 | 95.01465497 |
| 180712A00016 | 7/12/2018 | 3.66 | 7/12/2033 | 7/12/2028 | 123.67097 | 123.6709697 | 123.6709697 | 123.670548 | 118.1131996 | 110.4751376 | 103.2035704 | 96.34553203 | 89.940899 |
| 181212A00026 | 12/12/2018 | 3.22 | 12/12/2028 | 12/12/2023 | 108.97755 | 108.9775457 | 108.9775457 | 108.9775457 | 108.1460789 | 104.9560591 | 101.6263752 | 98.17527413 | 94.67272188 |
| 190111A00040 | 1/11/2019 | 3.74 | 1/11/2034 | 1/11/2024 | 111.99683 | 111.9968345 | 111.9968345 | 111.9968345 | 110.7412759 | 106.1818114 | 100.8490029 | 94.93539757 | 88.80765151 |
| 190116A00015 | 1/16/2019 | 3.61 | 1/17/2034 | 1/16/2024 | 110.48017 | 110.4801742 | 110.4801742 | 110.4801742 | 109.3785279 | 105.3563409 | 100.8558039 | 96.00593436 | 91.0306174 |
| 180105A00006 | 1/5/2018 | 3.07 | 1/5/2028 | 1/5/2023 | 106.38173 | 106.3817326 | 106.3817326 | 106.3817326 | 105.9087268 | 103.5231621 | 100.881495 | 97.97468153 | 94.89283384 |
| 180130A00087 | 1/30/2018 | 2.92 | 1/31/2028 | 1/30/2023 | 106.05262 | 106.0526161 | 106.0526161 | 106.0526161 | 105.5737464 | 103.1512637 | 100.458693 | 97.50293905 | 94.39586787 |
| 180212A00090 | 2/12/2018 | 2.92 | 2/13/2023 | 2/12/2021 | 103.88842 | 103.88842 | 103.88842 | 103.88842 | 103.6266734 | 102.091314 | 100.4553243 | 98.64565558 | 96.69440293 |
| 180302A00003 | 3/2/2018 | 3.89 | 3/2/2033 | 3/2/2023 | 109.80268 | 109.8026775 | 109.8026775 | 109.8026775 | 109.0833873 | 105.5820376 | 101.0958037 | 95.66894124 | 89.69347207 |
| 180315A00030 | 3/15/2018 | 3.76 | 3/15/2033 | 3/17/2025 | 116.10281 | 116.1028127 | 116.1028127 | 116.1028126 | 113.8136341 | 107.8669895 | 101.4665319 | 94.81619913 | 88.18550249 |
| 180504A00024 | 5/4/2018 | 3.62 | 5/4/2028 | 5/4/2023 | 109.72583 | 109.7258342 | 109.7258342 | 109.7258342 | 109.0137114 | 105.7334007 | 101.916265 | 97.48368873 | 92.60380494 |
| 171004A00022 | 10/4/2017 | 2.74 | 10/4/2027 | 10/4/2022 | 105.52334 | 105.5233371 | 105.5233371 | 105.5233371 | 105.0267005 | 102.3227316 | 99.01826386 | 95.23025669 | 91.21329097 |
| 171005A00047 | 10/5/2017 | 3.29 | 10/5/2032 | 10/5/2022 | 106.88561 | 106.8856088 | 106.8856088 | 106.8856088 | 106.2909905 | 103.0487152 | 98.72706841 | 93.55772091 | 88.03690592 |
| 171012A00039 | 10/12/2017 | 3.73 | 10/12/2032 | 10/13/2020 | 101.22273 | 101.2227283 | 101.2227283 | 101.2227283 | 101.1861666 | 100.783271 | 98.87135773 | 93.86007546 | 87.61969442 |
| 171016A00037 | 10/16/2017 | 3.39 | 10/18/2032 | 10/16/2022 | 107.2099 | 107.2098987 | 107.2098987 | 107.2098987 | 106.5804007 | 103.1545051 | 98.4921172 | 92.8613865 | 86.82893527 |
| 171214A00010 | 12/14/2017 | 2.57 | 12/14/2022 | 12/14/2020 | 100.96405 | 100.9640536 | 100.9640536 | 100.9640536 | 100.9175953 | 100.4652462 | 99.66435544 | 98.13027546 | 96.29776238 |
| 180105A00005 | 1/5/2018 | 3.07 | 1/5/2028 | 1/5/2023 | 106.38173 | 106.3817334 | 106.3817334 | 106.3817334 | 105.9087274 | 103.523162 | 100.8814938 | 97.97467863 | 94.8928289 |
| 170515A00052 | 5/15/2017 | 3.78 | 5/15/2042 | 5/15/2024 | 114.4534 | 114.4534048 | 114.4534048 | 114.4534018 | 112.3227868 | 106.3974546 | 99.74914167 | 92.74993508 | 85.80810789 |
| 170519A00006 | 5/19/2017 | 3 | 5/19/2032 | 5/19/2022 | 105.01336 | 105.013358 | 105.013358 | 105.013358 | 104.6353375 | 102.2230538 | 98.90915662 | 94.83372152 | 90.40630071 |
| 170705A00037 | 7/5/2017 | 2.85 | 7/6/2032 | 7/6/2027 | 114.11258 | 114.1125755 | 114.1125755 | 114.1125752 | 110.7576618 | 105.1223624 | 99.75198808 | 94.6704969 | 89.89241856 |
| 170721A00021 | 7/21/2017 | 2.95 | 7/21/2032 | 7/21/2022 | 105.55399 | 105.5539928 | 105.5539928 | 105.5539928 | 105.0783399 | 102.3267481 | 98.7398807 | 94.49969222 | 89.9913214 |
| 170802A00074 | 8/2/2017 | 2.92 | 8/2/2027 | 8/2/2022 | 105.05579 | 105.0557926 | 105.0557926 | 105.0557926 | 104.6260334 | 102.1412395 | 99.00896755 | 95.33738175 | 91.40723056 |
| 170809A00042 | 8/9/2017 | 2.35 | 8/9/2027 | 8/9/2022 | 104.08981 | 104.089813 | 104.089813 | 104.089813 | 103.6975375 | 101.4666086 | 98.85768594 | 95.96722536 | 92.97021619 |
| 161006A00023 | 10/6/2016 | 2.49 | 10/6/2031 | 10/6/2021 | 103.04947 | 103.0494711 | 103.0494711 | 103.0494711 | 102.7639844 | 100.5337044 | 97.12873212 | 92.98819155 | 88.64857527 |
| 161012A00009 | 10/12/2016 | 2.56 | 10/14/2031 | 10/12/2021 | 103.14009 | 103.1400903 | 103.1400903 | 103.1400903 | 102.8642883 | 100.7152406 | 97.3947197 | 93.30261896 | 88.97404318 |
| 161012A00020 | 10/11/2016 | 2.96 | 10/14/2031 | 10/11/2023 | 108.96515 | 108.9651495 | 108.9651495 | 108.9651495 | 107.5200514 | 102.5271134 | 96.73396242 | 90.51918976 | 84.28539737 |
| 161118A00013 | 11/18/2016 | 2.96 | 11/18/2026 | 11/18/2021 | 103.77968 | 103.7796792 | 103.7796792 | 103.7796792 | 103.5419823 | 101.864767 | 99.31148147 | 95.74090001 | 91.55700384 |
| 170113A00025 | 1/13/2017 | 3.59 | 1/13/2032 | 1/13/2022 | 105.02106 | 105.0210556 | 105.0210556 | 105.0210556 | 104.763352 | 103.0995094 | 100.7650179 | 97.47774048 | 93.4611515 |

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 170411A00031 | 4/11/2017 | 3.39 | 4/12/2032 | 4/11/2022 | 105.36138 | 105.3613842 | 105.3613842 | 105.3613842 | 105.0065698 | 102.766091 | 99.70472435 | 95.84379722 | 91.53570456 |
| 160311A00019 | 3/11/2016 | 3.02 | 3/11/2031 | 3/11/2021 | 101.78727 | 101.7872707 | 101.7872707 | 101.7872707 | 101.7024229 | 100.7356553 | 98.50894873 | 94.98839474 | 90.93916372 |
| 160506A00054 | 5/10/2016 | 3.31 | 5/12/2036 | 5/10/2021 | 102.52844 | 102.5284448 | 102.5284448 | 102.5284448 | 102.3978948 | 100.8138743 | 97.08823945 | 91.68264166 | 85.86046487 |
| 160506A00056 | 5/10/2016 | 3.77 | 5/10/2041 | 5/10/2021 | 102.91569 | 102.915686 | 102.915686 | 102.915686 | 102.7869315 | 101.2290414 | 97.20725219 | 90.99672663 | 84.18722521 |
| 160627A00034 | 6/27/2016 | 1.7 | 6/26/2026 | 6/28/2021 | 101.36784 | 101.3678445 | 101.3678445 | 101.3678445 | 101.2210394 | 99.76394529 | 97.59792962 | 95.07118769 | 92.48258636 |
| 160711A00011 | 7/11/2016 | 1.66 | 7/13/2026 | 7/11/2021 | 101.5594 | 101.5594002 | 101.5594002 | 101.5594002 | 101.3680437 | 99.7252105 | 97.45858351 | 94.88321054 | 92.26263018 |
| 160825A00032 | 8/25/2016 | 3.14 | 8/25/2036 | 8/25/2021 | 103.03723 | 103.0372297 | 103.0372297 | 103.0372297 | 102.812103 | 100.5948912 | 96.52794916 | 91.25788991 | 85.69271887 |
| 151209A00031 | 12/9/2015 | 3.18 | 12/9/2030 | 12/9/2020 | 101.20482 | 101.204816 | 101.204816 | 101.204816 | 101.1598389 | 100.632916 | 99.00708342 | 95.7953998 | 91.89083061 |
| 151223A00007 | 12/23/2015 | 3.76 | 12/23/2030 | 12/23/2022 | 108.40483 | 108.4048255 | 108.4048255 | 108.4048255 | 107.7786643 | 104.5273096 | 100.3108016 | 95.2000169 | 89.56969055 |
| 151224A00017 | 12/24/2015 | 3.06 | 12/24/2030 | 12/24/2020 | 101.23298 | 101.2329832 | 101.2329832 | 101.2329832 | 101.187912 | 100.6786282 | 99.1532358 | 96.00643206 | 92.11068918 |
| 160105A00024 | 1/5/2016 | 3.78 | 1/4/2036 | 1/5/2021 | 102.13901 | 102.1390108 | 102.1390108 | 102.1390108 | 102.0812553 | 101.3368342 | 99.24488146 | 95.17120202 | 90.05044813 |
| 160128A00029 | 1/29/2016 | 3.45 | 1/29/2036 | 1/29/2021 | 102.07943 | 102.0794283 | 102.0794283 | 102.0794283 | 102.0195003 | 101.1667563 | 98.72250185 | 94.35644534 | 89.10441131 |
| 160209A00028 | 2/9/2016 | 2.04 | 2/9/2026 | 2/9/2021 | 101.11143 | 101.11143 | 101.11143 | 101.11143 | 101.0245222 | 99.98057524 | 98.1280631 | 95.79847227 | 93.35304246 |
| 150721A00044 | 7/23/2015 | 2.68 | 7/23/2025 | 7/23/2020 | 100.20489 | 100.2048874 | 100.2048874 | 100.2048874 | 100.1984863 | 100.112549 | 99.4759832 | 97.7092973 | 95.56181932 |
| 150817A00038 | 8/17/2015 | 4.01 | 8/31/2040 | 8/17/2020 | 100.33525 | 100.3352537 | 100.3352537 | 100.3352537 | 100.3288321 | 100.2426205 | 98.84374114 | 93.8126815 | 87.39800965 |
| 150901A00019 | 9/1/2015 | 3.26 | 9/3/2030 | 9/1/2020 | 100.49882 | 100.49882 | 100.49882 | 100.49882 | 100.4833751 | 100.305043 | 99.24378801 | 96.25932963 | 92.4729273 |
| 151005A00020 | 10/5/2015 | 2.27 | 10/6/2025 | 10/5/2020 | 100.65064 | 100.6506438 | 100.6506438 | 100.6506438 | 100.615898 | 100.1192138 | 98.73444447 | 96.62866599 | 94.32708998 |
| 151027A00015 | 10/27/2015 | 2.89 | 10/28/2030 | 10/27/2020 | 100.92927 | 100.9292692 | 100.9292692 | 100.9292692 | 100.8940123 | 100.4477219 | 98.75850808 | 95.46464482 | 91.5518696 |
| 151124A00024 | 11/24/2015 | 2.6 | 11/24/2025 | 11/24/2020 | 100.7751 | 100.775098 | 100.775098 | 100.775098 | 100.7387854 | 100.3480773 | 99.23233623 | 97.0798829 | 94.6310032 |
| 150501A00019 | 5/1/2015 | 3.69 | 5/1/2035 | 5/1/2020 | 102.84834 | 102.8483397 | 102.8483397 | 102.8483397 | 102.7274134 | 101.5986603 | 99.03229613 | 94.5288666 | 89.11624898 |
| 150526A00018 | 5/28/2015 | 2.27 | 5/28/2025 | 5/28/2020 | 100.18544 | 100.1854353 | 100.1854353 | 100.1854353 | 100.1790233 | 100.0872666 | 99.17942187 | 97.31743177 | 95.19183503 |
| 150526A00019 | 5/28/2015 | 2.27 | 5/28/2025 | 5/28/2020 | 100.18544 | 100.1854353 | 100.1854353 | 100.1854353 | 100.1790233 | 100.0872667 | 99.17942224 | 97.31743254 | 95.19183621 |
| 150709A00018 | 7/9/2015 | 2.36 | 7/9/2025 | 7/6/2020 | 100.19318 | 100.1931846 | 100.1931846 | 100.1931846 | 100.1867721 | 100.1006826 | 99.27650944 | 97.40578632 | 95.22933752 |
| 150709A00019 | 7/9/2015 | 2.36 | 7/9/2025 | 7/9/2020 | 100.19318 | 100.1931846 | 100.1931846 | 100.1931846 | 100.1867721 | 100.1006826 | 99.27650883 | 97.40578415 | 95.22933348 |
| 150715A00020 | 7/15/2015 | 3.45 | 7/15/2030 | 7/15/2020 | 100.27118 | 100.2711758 | 100.2711758 | 100.2711758 | 100.2647705 | 100.1787763 | 99.6303633 | 97.03313561 | 93.40901029 |
| 150223A00011 | 2/23/2015 | 3.54 | 2/22/2030 | 2/23/2022 | 104.8248 | 104.8248028 | 104.8248028 | 104.8248028 | 104.5573312 | 102.8670676 | 100.6321511 | 97.66062293 | 94.133345 |
| 150319A00020 | 3/19/2015 | 2.98 | 3/19/2030 | 3/19/2020 | 100.23071 | 100.2307141 | 100.2307141 | 100.2307141 | 100.2243113 | 100.1383518 | 98.72389833 | 95.55137869 | 91.81664636 |
| 150325A00018 | 3/25/2015 | 2.02 | 3/25/2025 | 3/25/2020 | 100.16391 | 100.1639097 | 100.1639097 | 100.1639097 | 100.1574991 | 99.99442439 | 98.82447463 | 96.90305015 | 94.81491522 |
| 150327A00011 | 3/27/2015 | 2.88 | 3/27/2030 | 3/27/2020 | 101.86155 | 101.8615504 | 101.8615504 | 101.8615504 | 101.7742159 | 100.8910914 | 98.84188611 | 95.35596605 | 91.30731914 |
| 150417A00033 | 4/17/2015 | 1.78 | 4/18/2022 | 4/17/2020 | 100.14325 | 100.1432451 | 100.1432451 | 100.1432451 | 100.1368358 | 99.99506874 | 99.19099034 | 97.93497743 | 96.60691005 |
| 150421A00009 | 4/21/2015 | 2.17 | 4/21/2025 | 4/21/2020 | 100.16098 | 100.1609821 | 100.1609821 | 100.1609821 | 100.1545838 | 99.97451571 | 98.73988764 | 96.7780667 | 94.6613271 |
| 141119A00005 | 11/19/2014 | 2.53 | 11/19/2024 | 11/19/2019 | 100.19197 | 100.1919741 | 100.1919741 | 100.1919741 | 100.1855738 | 100.0996475 | 99.42835569 | 97.79529612 | 95.87978234 |
| 141224A00038 | 12/24/2014 | 2.93 | 12/24/2024 | 12/24/2019 | 100.22641 | 100.2264096 | 100.2264096 | 100.2264096 | 100.2200072 | 100.1340514 | 99.53568998 | 97.46352112 | 94.75246073 |

Classification | Public

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 150108A00029 | 1/8/2015 | 3.16 | 1/9/2035 | 1/10/2022 | 104.46758 | 104.467575 | 104.467575 | 104.467575 | 104.1553235 | 101.8099615 | 97.99928918 | 93.01509725 | 87.61504695 |
| 150115A00030 | 1/15/2015 | 1.98 | 1/15/2025 | 1/15/2020 | 100.16047 | 100.1604656 | 100.1604656 | 100.1604656 | 100.1540552 | 99.98457056 | 98.81878734 | 96.94517437 | 94.92040003 |
| 150116A00005 | 1/16/2015 | 1.92 | 1/16/2025 | 1/16/2020 | 100.1553 | 100.1552995 | 100.1552995 | 100.1552995 | 100.1488894 | 99.95571326 | 98.71726003 | 96.8202676 | 94.79186385 |
| 150202A00006 | 2/2/2015 | 1.92 | 2/3/2025 | 2/3/2020 | 100.1553 | 100.1552995 | 100.1552995 | 100.1552995 | 100.1488894 | 99.95080681 | 98.6849359 | 96.75608734 | 94.69519355 |
| 140617A00012 | 6/17/2014 | 3.14 | 6/18/2029 | 6/17/2019 | 100.26034 | 100.2603445 | 100.2603445 | 100.2603445 | 100.2539277 | 100.1677805 | 99.6194385 | 97.18651555 | 93.84106534 |
| 140714A00012 | 7/14/2014 | 3.04 | 7/16/2029 | 7/15/2019 | 100.25173 | 100.2517343 | 100.2517343 | 100.2517343 | 100.245318 | 100.1591782 | 99.43727984 | 96.81686518 | 93.388904 |
| 140723A00038 | 7/23/2014 | 2.3 | 7/23/2024 | 7/23/2019 | 100.18802 | 100.1880184 | 100.1880184 | 100.1880184 | 100.1816062 | 100.0955212 | 99.44520444 | 97.90144642 | 96.10572016 |
| 140822A00012 | 8/22/2014 | 3.7 | 8/22/2034 | 8/23/2021 | 103.62515 | 103.6251452 | 103.6251452 | 103.6251452 | 103.4538348 | 102.0758792 | 99.59953378 | 95.67169924 | 90.88677711 |
| 141010A00012 | 10/10/2014 | 2.44 | 10/10/2024 | 10/10/2019 | 100.18506 | 100.1850597 | 100.1850597 | 100.1850597 | 100.1786592 | 100.0927304 | 99.34023987 | 97.692491 | 95.80023468 |
| 141110A00008 | 11/10/2014 | 2.31 | 11/12/2024 | 11/12/2019 | 100.18888 | 100.1888794 | 100.1888794 | 100.1888794 | 100.1824672 | 100.0963814 | 99.37716447 | 97.71766579 | 95.79214725 |
| 130521A00009 | 5/21/2013 | 2.55 | 5/22/2028 | 5/21/2018 | 100.20954 | 100.209544 | 100.209544 | 100.209544 | 100.2031305 | 100.0981072 | 98.7509199 | 95.98568289 | 92.79537938 |
| 130614A00011 | 6/14/2013 | 2.95 | 6/14/2028 | 6/14/2018 | 100.24399 | 100.243985 | 100.243985 | 100.243985 | 100.2375693 | 100.1514361 | 99.51676187 | 97.16903987 | 94.08073376 |
| 130823A00025 | 8/23/2013 | 3.43 | 8/23/2023 | 8/24/2020 | 100.28531 | 100.2853142 | 100.2853142 | 100.2853142 | 100.2788958 | 100.1927272 | 100.1067055 | 99.41087011 | 97.56094386 |
| 140328A00011 | 3/28/2014 | 3.32 | 3/30/2026 | 3/29/2021 | 102.1234 | 102.1233983 | 102.1233983 | 102.1233983 | 102.0398422 | 101.3379621 | 100.2145197 | 97.99530544 | 94.79493843 |
| 140416A00025 | 4/14/2014 | 3.56 | 4/16/2029 | 4/14/2021 | 102.55904 | 102.5590443 | 102.5590443 | 102.5590443 | 102.460135 | 101.6367043 | 100.1428489 | 97.21853061 | 93.17336196 |
| 140508A00011 | 5/8/2014 | 2.32 | 5/8/2024 | 5/8/2019 | 100.18974 | 100.1897405 | 100.1897405 | 100.1897405 | 100.1833282 | 100.0972417 | 99.5076745 | 98.03698333 | 96.3106577 |
| 120924A00030 | 9/24/2012 | 2.2 | 9/24/2027 | 9/25/2017 | 100.17941 | 100.1794082 | 100.1794082 | 100.1794082 | 100.1729966 | 99.94319802 | 98.18449412 | 95.40252924 | 92.3898052 |
| 121121A00026 | 11/21/2012 | 1.63 | 11/21/2022 | 11/21/2017 | 100.11533 | 100.1153271 | 100.1153271 | 100.1153271 | 100.1089311 | 99.8822655 | 98.98067851 | 97.86960569 | 96.74119028 |
| 130104A00013 | 1/4/2013 | 1.79 | 1/4/2023 | 1/4/2018 | 100.1291 | 100.1291014 | 100.1291014 | 100.1291014 | 100.1227046 | 99.94213142 | 99.0864471 | 97.92266961 | 96.72301963 |
| 130322A00001 | 3/22/2013 | 2.06 | 3/22/2023 | 3/22/2018 | 100.16735 | 100.1673538 | 100.1673538 | 100.1673538 | 100.160943 | 100.037844 | 99.06793889 | 97.3012862 | 95.33134449 |
| 130409A00013 | 4/9/2013 | 1.76 | 4/11/2023 | 4/9/2018 | 100.12652 | 100.1265188 | 100.1265188 | 100.1265188 | 100.120122 | 99.91063288 | 98.94494009 | 97.67299256 | 96.36403239 |
| 130416A00025 | 4/16/2013 | 2.27 | 4/18/2028 | 4/16/2018 | 100.18544 | 100.1854353 | 100.1854353 | 100.1854353 | 100.1790233 | 99.94748534 | 98.0990585 | 95.14064022 | 91.92827104 |
| 000929A00001 | 9/29/2000 | 6.82 | 9/29/2020 | 9/29/2000 | 101.11372 | 101.1137225 | 101.1137225 | 101.1137225 | 101.0984726 | 100.9314114 | 100.7649034 | 100.5989459 | 100.4335361 |
| 001127A00007 | 11/27/2000 | 6.74 | 11/27/2020 | 11/27/2000 | 101.39694 | 101.3969358 | 101.3969358 | 101.3969358 | 101.3760566 | 101.1636406 | 100.9522798 | 100.7419655 | 100.5326893 |
| 020129A00031 | 12/31/2001 | 6.03 | 6/30/2021 | 12/31/2001 | 103.02266 | 103.0226575 | 103.0226575 | 103.0226575 | 102.9585774 | 102.4409377 | 101.9298744 | 101.4252481 | 100.9269235 |
| 110304A00006 | 3/4/2011 | 3.6 | 3/4/2021 | 3/4/2011 | 102.00302 | 102.0030217 | 102.0030217 | 102.0030217 | 101.9346883 | 101.3573751 | 100.7867652 | 100.2227413 | 99.66518879 |
| 110504A00014 | 5/4/2011 | 3.46 | 5/4/2021 | 5/4/2011 | 102.50299 | 102.5029887 | 102.5029887 | 102.5029887 | 102.4031584 | 101.6514929 | 100.911039 | 100.1815458 | 99.46277011 |
| 110504A00017 | 5/4/2011 | 3.46 | 5/4/2021 | 5/4/2011 | 102.50299 | 102.5029887 | 102.5029887 | 102.5029887 | 102.4031584 | 101.6514929 | 100.911039 | 100.1815458 | 99.46277011 |
| 200724A00011 | 7/24/2020 | 1.41 | 7/26/2038 | 7/24/2020 | 118.03974 | 118.0397387 | 118.0397387 | 111.7311581 | 98.96645954 | 87.44639348 | 77.58639038 | 69.12507601 | 61.84441583 |
| 200709A00019 | 7/9/2020 | 0.77 | 7/9/2025 | 7/9/2020 | 101.19778 | 101.1977756 | 101.1977756 | 101.1977756 | 100.493581 | 98.00870456 | 95.61684927 | 93.31372803 | 91.09528311 |
| 200716A00004 | 7/16/2020 | 0.97 | 7/16/2027 | 7/16/2020 | 104.17141 | 104.1714147 | 104.1714147 | 104.1714147 | 100.4224533 | 94.54273905 | 89.06357023 | 83.95529444 | 79.19060755 |
| 200709A00018 | 7/9/2020 | 0.59 | 7/7/2023 | 7/9/2020 | 100.45913 | 100.4591307 | 100.4591307 | 100.4591307 | 100.1637149 | 98.6465697 | 97.16758519 | 95.7254913 | 94.31907021 |
| 200608A00001 | 6/8/2020 | 1.34 | 6/7/2030 | 6/8/2020 | 107.91508 | 107.9150818 | 107.9150818 | 107.9150818 | 101.6408775 | 94.59677318 | 88.16416387 | 82.28466583 | 76.90583723 |

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 200610A00006 | 6/10/2020 | 1.11 | 6/10/2027 | 6/10/2020 | 104.99635 | 104.9963491 | 104.9963491 | 104.9963491 | 101.338215 | 95.48681295 | 90.02871206 | 84.93518118 | 80.17973416 |
| 200612A00004 | 6/12/2020 | 1.42 | 6/12/2040 | 6/12/2020 | 112.01543 | 112.01543 | 112.01543 | 108.4021977 | 98.9785497 | 89.80417196 | 81.78232256 | 74.74672197 | 68.55716905 |
| 200616A00005 | 6/16/2020 | 0.74 | 6/17/2030 | 6/16/2020 | 103.17747 | 103.1774679 | 103.1774679 | 103.1774679 | 100.1333615 | 95.36348 | 90.91583943 | 86.76490082 | 82.88737289 |
| 200618A00004 | 6/18/2020 | 0.7 | 6/18/2030 | 6/18/2020 | 102.97107 | 102.9710666 | 102.9710666 | 102.9710666 | 99.93294806 | 95.1725365 | 90.73373047 | 86.59104097 | 82.72122237 |
| 200623A00028 | 6/23/2020 | 1.23 | 6/23/2038 | 6/23/2020 | 110.91206 | 110.9120555 | 110.9120555 | 108.5033402 | 100.0968538 | 91.54512315 | 83.95996661 | 77.21599984 | 71.20555726 |
| 200512A00020 | 5/12/2020 | 0.86 | 5/12/2025 | 5/12/2020 | 102.48176 | 102.4817572 | 102.4817572 | 102.4817572 | 100.8564386 | 96.57787591 | 92.51090007 | 88.64386763 | 84.96584054 |
| 200512A00021 | 5/12/2020 | 0.86 | 5/12/2025 | 5/12/2020 | 102.48176 | 102.4817572 | 102.4817572 | 102.4817572 | 100.8564386 | 96.57787591 | 92.51090007 | 88.64386763 | 84.96584054 |
| 200514A00008 | 5/14/2020 | 1.23 | 5/14/2030 | 5/14/2020 | 107.01569 | 107.0156895 | 107.0156895 | 107.0156895 | 100.860841 | 93.901697 | 87.54356558 | 81.72934135 | 76.40770799 |
| 200520A00009 | 5/20/2020 | 1.63 | 5/20/2038 | 5/20/2020 | 120.15782 | 120.1578208 | 120.1578208 | 114.2493048 | 101.9001398 | 90.65633904 | 81.00218646 | 72.69101193 | 65.51653505 |
| 200522A00009 | 5/22/2020 | 0.96 | 5/22/2030 | 5/22/2020 | 103.38689 | 103.386893 | 103.386893 | 103.386893 | 100.2626557 | 95.42619084 | 90.91838683 | 86.7130674 | 82.78636783 |
| 200605A00018 | 6/5/2020 | 0.91 | 6/5/2025 | 6/5/2020 | 102.74194 | 102.7419445 | 102.7419445 | 102.7419445 | 101.069477 | 96.73155085 | 92.61067391 | 88.69482953 | 84.97272691 |
| 200512A00010 | 5/12/2020 | 1.48 | 5/10/2030 | 5/12/2020 | 109.92147 | 109.9214747 | 109.9214747 | 109.9214747 | 102.6451472 | 94.84958354 | 87.75668953 | 81.29805503 | 75.41231543 |
| 200512A00011 | 5/12/2020 | 1.48 | 5/10/2030 | 5/12/2020 | 109.92148 | 109.9214837 | 109.9214837 | 109.9214837 | 102.6451489 | 94.84957834 | 87.75667803 | 81.29803786 | 75.41229316 |
| 200512A00013 | 5/12/2020 | 1.17 | 5/12/2027 | 5/12/2020 | 105.31702 | 105.3170248 | 105.3170248 | 105.3170248 | 101.741744 | 95.92958233 | 90.50402761 | 85.4370696 | 80.70287639 |
| 200512A00014 | 5/12/2020 | 1.17 | 5/12/2027 | 5/12/2020 | 105.31702 | 105.3170248 | 105.3170248 | 105.3170248 | 101.741744 | 95.92958233 | 90.50402761 | 85.4370696 | 80.70287639 |
| 200512A00017 | 5/12/2020 | 0.85 | 5/12/2025 | 5/12/2020 | 102.33195 | 102.3319505 | 102.3319505 | 102.3319505 | 100.8006675 | 96.70505758 | 92.80893576 | 89.10140982 | 85.57224422 |
| 200512A00018 | 5/12/2020 | 0.85 | 5/12/2025 | 5/12/2020 | 102.33195 | 102.3319505 | 102.3319505 | 102.3319505 | 100.8006675 | 96.70505758 | 92.80893576 | 89.10140982 | 85.57224422 |
| 200428A00009 | 4/28/2020 | 1.08 | 4/29/2030 | 4/28/2020 | 103.88921 | 103.8892072 | 103.8892072 | 103.8892072 | 100.9497948 | 96.23989849 | 91.84247527 | 87.73317129 | 83.88974285 |
| 200429A00030 | 4/29/2020 | 1.41 | 4/29/2030 | 4/29/2020 | 108.9255 | 108.9254974 | 108.9254974 | 108.9254974 | 102.1367415 | 94.68600753 | 87.89427732 | 81.69812243 | 76.04059794 |
| 200430A00027 | 4/30/2020 | 1.31 | 4/30/2035 | 4/30/2020 | 107.6781 | 107.678103 | 107.678103 | 106.7602057 | 100.6153339 | 93.7470757 | 87.5328174 | 81.90050338 | 76.78677441 |
| 200501A00002 | 5/1/2020 | 1.3 | 5/1/2035 | 5/1/2020 | 107.64273 | 107.6427285 | 107.6427285 | 106.6949525 | 100.5071024 | 93.61171449 | 87.3760672 | 81.727137 | 76.60075255 |
| 200501A00009 | 5/4/2020 | 0.67 | 5/1/2025 | 5/4/2020 | 100.9081 | 100.9081007 | 100.9081007 | 100.9081007 | 100.2487363 | 97.8495626 | 95.53770142 | 93.30922441 | 91.16040938 |
| 200512A00001 | 5/12/2020 | 1.17 | 5/12/2027 | 5/12/2020 | 105.31702 | 105.3170248 | 105.3170248 | 105.3170248 | 101.741744 | 95.92958233 | 90.50402761 | 85.4370696 | 80.70287639 |
| 200413A00009 | 4/13/2020 | 0.77 | 4/13/2027 | 4/13/2020 | 102.27055 | 102.2705464 | 102.2705464 | 102.2705464 | 100.9515632 | 97.61190917 | 94.43377733 | 91.40779453 | 88.52520454 |
| 200413A00013 | 4/13/2020 | 1.19 | 4/12/2030 | 4/13/2020 | 104.44899 | 104.4489901 | 104.4489901 | 104.4489901 | 101.4946064 | 96.75974053 | 92.33895897 | 88.20778714 | 84.34387045 |
| 200414A00009 | 4/14/2020 | 0.82 | 4/14/2025 | 4/14/2020 | 101.2864 | 101.286398 | 101.286398 | 101.286398 | 100.6446295 | 98.2749028 | 95.99024506 | 93.78687453 | 91.66120576 |
| 200414A00024 | 4/14/2020 | 1.37 | 4/14/2027 | 4/14/2020 | 106.49819 | 106.4981863 | 106.4981863 | 106.4981863 | 102.9832824 | 97.17202083 | 91.74319144 | 86.66933318 | 81.92510621 |
| 200421A00026 | 4/21/2020 | 1.34 | 4/19/2030 | 4/21/2020 | 107.81947 | 107.8194679 | 107.8194679 | 107.8194679 | 101.7062778 | 94.73489489 | 88.36180206 | 82.5304753 | 77.1900933 |
| 200424A00022 | 4/24/2020 | 1.39 | 4/24/2030 | 4/24/2020 | 108.21356 | 108.2135615 | 108.2135615 | 108.2135615 | 102.0688124 | 95.06946773 | 88.67131784 | 82.81750843 | 77.45692741 |
| 200406A00030 | 4/6/2020 | 1.61 | 4/5/2030 | 4/6/2020 | 110.95293 | 110.9529291 | 110.9529291 | 110.9529291 | 103.7570909 | 95.95341955 | 88.84679563 | 82.36992609 | 76.46239479 |
| 200406A00032 | 4/6/2020 | 1.09 | 4/4/2025 | 4/6/2020 | 103.49292 | 103.4929216 | 103.4929216 | 103.4929216 | 101.924742 | 97.69449774 | 93.66942793 | 89.83841738 | 86.19101676 |
| 200406A00033 | 4/6/2020 | 1.09 | 4/4/2025 | 4/6/2020 | 103.49292 | 103.4929192 | 103.4929192 | 103.4929192 | 101.9247414 | 97.69449987 | 93.66943261 | 89.83842443 | 86.19102598 |
| 200406A00035 | 4/6/2020 | 1.05 | 4/4/2025 | 4/6/2020 | 103.03395 | 103.033955 | 103.033955 | 103.033955 | 101.6451896 | 97.77555362 | 94.08783203 | 90.57232966 | 87.21992616 |

Classification | Public

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 200406A00036 | 4/6/2020 | 1.09 | 4/4/2025 | 4/6/2020 | 103.49292 | 103.4929192 | 103.4929192 | 103.4929192 | 101.9247414 | 97.69449987 | 93.66943261 | 89.83842443 | 86.19102598 |
| 200406A00037 | 4/6/2020 | 0.9 | 4/6/2023 | 4/6/2020 | 101.57287 | 101.5728724 | 101.5728724 | 101.5728724 | 101.0105051 | 98.48189653 | 96.03031713 | 93.65292252 | 91.34699449 |
| 200330A00047 | 3/30/2020 | 1.5 | 3/30/2035 | 3/30/2020 | 109.11866 | 109.1186636 | 109.1186636 | 108.2195734 | 102.0391248 | 95.10946542 | 88.83639524 | 83.14791877 | 77.98068942 |
| 200330A00058 | 3/30/2020 | 1.49 | 3/29/2030 | 3/30/2020 | 108.93141 | 108.9314112 | 108.9314112 | 108.9314112 | 102.8357513 | 95.83138383 | 89.42473964 | 83.55965186 | 78.18559003 |
| 200330A00079 | 3/30/2020 | 1.51 | 3/30/2035 | 3/30/2020 | 109.19716 | 109.1971569 | 109.1971569 | 108.2974226 | 102.1125358 | 95.17789982 | 88.90032454 | 83.20776271 | 78.03682229 |
| 200406A00014 | 4/6/2020 | 1.33 | 4/6/2035 | 4/6/2020 | 109.35407 | 109.3540747 | 109.3540747 | 108.4100544 | 102.1184551 | 95.10310181 | 88.75844913 | 83.01036954 | 77.79370603 |
| 200406A00027 | 4/6/2020 | 1.31 | 4/5/2030 | 4/6/2020 | 109.05287 | 109.0528709 | 109.0528709 | 109.0528709 | 102.8717789 | 95.80491895 | 89.34451627 | 83.4333132 | 78.01982327 |
| 200406A00029 | 4/6/2020 | 1.61 | 4/5/2030 | 4/6/2020 | 110.95292 | 110.9529189 | 110.9529189 | 110.9529189 | 103.7570878 | 95.95342372 | 88.84680635 | 82.36994273 | 76.46241679 |
| 200318A00012 | 3/18/2020 | 1.68 | 3/18/2033 | 3/18/2020 | 112.18978 | 112.1897792 | 112.1897792 | 111.4044052 | 104.8387787 | 97.53288358 | 90.91280123 | 84.90489914 | 79.44413273 |
| 200319A00035 | 3/19/2020 | 1.72 | 3/18/2033 | 3/19/2020 | 112.51291 | 112.5129133 | 112.5129133 | 111.7254146 | 105.1408135 | 97.81351239 | 91.17400264 | 85.14844172 | 79.67159935 |
| 200323A00090 | 3/23/2020 | 1.55 | 3/23/2027 | 3/23/2020 | 104.59898 | 104.598978 | 104.598978 | 104.598978 | 103.1148834 | 99.53473138 | 96.13330846 | 92.89996316 | 89.82476101 |
| 200326A00032 | 3/26/2020 | 1.49 | 3/26/2030 | 3/26/2020 | 105.93525 | 105.9352457 | 105.9352457 | 105.9352457 | 102.9916282 | 98.22541165 | 93.77302219 | 89.61017516 | 85.71467564 |
| 200327A00084 | 3/27/2020 | 1.1 | 3/27/2025 | 3/27/2020 | 103.37216 | 103.3721561 | 103.3721561 | 103.3721561 | 101.905963 | 97.86928816 | 94.02476463 | 90.36210305 | 86.87162477 |
| 200327A00094 | 3/27/2020 | 1.6 | 3/27/2030 | 3/27/2020 | 109.7782 | 109.7781951 | 109.7781951 | 109.7781951 | 103.6494157 | 96.59880488 | 90.14934326 | 84.24458122 | 78.83373049 |
| 200309A00083 | 3/9/2020 | 0.82 | 3/9/2023 | 3/9/2020 | 101.32619 | 101.3261946 | 101.3261946 | 101.3261946 | 100.7897968 | 98.33266197 | 95.94879413 | 93.63555261 | 91.3904104 |
| 200309A00084 | 3/9/2020 | 1.06 | 3/9/2027 | 3/9/2020 | 104.5242 | 104.5241982 | 104.5241982 | 104.5241982 | 101.1662781 | 95.50795792 | 90.21797579 | 85.27018492 | 80.64043343 |
| 200311A00015 | 3/11/2020 | 1.26 | 3/11/2027 | 3/11/2020 | 105.74411 | 105.7441134 | 105.7441134 | 105.7441134 | 102.352727 | 96.63805451 | 91.29529896 | 86.29805476 | 81.62193168 |
| 200311A00026 | 3/11/2020 | 1.34 | 3/11/2030 | 3/11/2020 | 108.25261 | 108.2526098 | 108.2526098 | 108.2526098 | 101.6591545 | 94.31442911 | 87.61234304 | 81.49172535 | 75.89758685 |
| 200317A00009 | 3/17/2020 | 1.61 | 3/16/2035 | 3/17/2020 | 109.98358 | 109.9835817 | 109.9835817 | 109.0777704 | 102.848767 | 95.8644771 | 89.54191308 | 83.80852153 | 78.60046425 |
| 200317A00043 | 3/17/2020 | 1.29 | 3/15/2030 | 3/17/2020 | 105.88896 | 105.8889582 | 105.8889582 | 105.8889582 | 102.9276155 | 98.14139539 | 93.67135344 | 89.49295613 | 85.58378639 |
| 200306A00050 | 3/6/2020 | 0.87 | 3/6/2030 | 3/6/2020 | 103.75276 | 103.7527603 | 103.7527603 | 103.7527603 | 100.8511578 | 96.16125892 | 91.78116731 | 87.68684539 | 83.85632906 |
| 200306A00057 | 3/6/2020 | 0.92 | 3/8/2027 | 3/6/2020 | 104.52227 | 104.5222715 | 104.5222715 | 104.5222715 | 101.4468909 | 96.09957579 | 91.09273536 | 86.4024677 | 82.00668325 |
| 200306A00058 | 3/6/2020 | 1.06 | 3/6/2030 | 3/6/2020 | 103.75483 | 103.7548266 | 103.7548266 | 103.7548266 | 100.8722801 | 96.20412058 | 91.84329819 | 87.76603482 | 83.95059803 |
| 200309A00034 | 3/9/2020 | 0.96 | 3/9/2035 | 3/9/2020 | 106.40394 | 106.4039357 | 106.4039357 | 105.5156825 | 99.43829225 | 92.64114392 | 86.49068167 | 80.91576874 | 75.85383768 |
| 200309A00081 | 3/9/2020 | 1.18 | 3/8/2030 | 3/9/2020 | 107.22875 | 107.2287503 | 107.2287503 | 107.2287503 | 100.3145638 | 92.77183818 | 85.90019012 | 79.63515925 | 73.91883574 |
| 200309A00082 | 3/9/2020 | 1.18 | 3/8/2030 | 3/9/2020 | 107.22875 | 107.2287454 | 107.2287454 | 107.2287454 | 100.3145672 | 92.77184624 | 85.90020219 | 79.63517471 | 73.91885403 |
| 200212A00013 | 2/12/2020 | 1.98 | 2/12/2027 | 2/12/2020 | 110.07134 | 110.0713419 | 110.0713419 | 110.0713419 | 106.6715221 | 100.8274553 | 95.35888724 | 90.23945026 | 85.44476778 |
| 200220A00026 | 2/20/2020 | 2.22 | 2/21/2040 | 2/20/2020 | 120.50758 | 120.507581 | 120.507581 | 116.8543583 | 106.9831743 | 97.31660764 | 88.84675379 | 81.40323463 | 74.84205254 |
| 200221A00012 | 2/21/2020 | 2.14 | 2/21/2040 | 2/21/2020 | 119.60397 | 119.6039715 | 119.6039715 | 115.9787609 | 106.1835032 | 96.59137575 | 88.18676166 | 80.80059104 | 74.28997214 |
| 200227A00046 | 2/27/2020 | 1.52 | 3/1/2027 | 2/27/2020 | 104.14454 | 104.1445391 | 104.1445391 | 104.1445391 | 102.8784718 | 99.56805796 | 96.41394269 | 93.40725275 | 90.5396871 |
| 200303A00028 | 3/3/2020 | 1.54 | 3/4/2030 | 3/3/2020 | 109.27163 | 109.2716332 | 109.2716332 | 109.2716332 | 103.22762 | 96.23011993 | 89.82661348 | 83.96158399 | 78.58505547 |
| 200306A00048 | 3/6/2020 | 1.04 | 3/6/2035 | 3/6/2020 | 107.02596 | 107.0259567 | 107.0259567 | 106.1326393 | 100.0199723 | 93.18326691 | 86.99699661 | 81.38961378 | 76.2981894 |
| 200206A00031 | 2/6/2020 | 2.15 | 2/6/2030 | 2/6/2020 | 115.41585 | 115.4158471 | 115.4158471 | 115.4158471 | 108.2315691 | 100.2630549 | 92.99425815 | 86.35866273 | 80.29644982 |

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 200206A00032 | 2/6/2020 | 2.15 | 2/6/2030 | 2/6/2020 | 115.41585 | 115.4158514 | 115.4158514 | 115.4158514 | 108.2315697 | 100.2630533 | 92.9942548 | 86.35865787 | 80.29644371 |
| 200206A00033 | 2/6/2020 | 2.15 | 2/6/2030 | 2/6/2020 | 115.41585 | 115.4158471 | 115.4158471 | 115.4158471 | 108.2315691 | 100.2630549 | 92.99425815 | 86.35866273 | 80.29644982 |
| 200206A00034 | 2/6/2020 | 1.84 | 2/6/2025 | 2/6/2020 | 106.62679 | 106.6267886 | 106.6267886 | 106.6267886 | 105.127864 | 100.9296438 | 96.92902887 | 93.11561981 | 89.47962093 |
| 200206A00035 | 2/6/2020 | 1.78 | 2/6/2023 | 2/6/2020 | 103.65875 | 103.6587538 | 103.6587538 | 103.6587538 | 103.1405893 | 100.7216787 | 98.37309798 | 96.0923838 | 93.87717526 |
| 200206A00038 | 2/6/2020 | 1.78 | 2/6/2023 | 2/6/2020 | 103.65875 | 103.6587538 | 103.6587538 | 103.6587538 | 103.1405893 | 100.7216787 | 98.37309798 | 96.0923838 | 93.87717526 |
| 200110A00053 | 1/10/2020 | 1.99 | 1/10/2025 | 1/10/2020 | 107.12455 | 107.1245494 | 107.1245494 | 107.1245494 | 105.6681916 | 101.517076 | 97.55837311 | 93.78211277 | 90.17889408 |
| 200115A00013 | 1/15/2020 | 2.18 | 1/15/2030 | 1/15/2020 | 112.52709 | 112.5270922 | 112.5270922 | 112.5270922 | 107.4615019 | 101.0336303 | 95.11381518 | 89.65683506 | 84.62181727 |
| 200116A00012 | 1/16/2020 | 2.16 | 1/19/2027 | 1/16/2020 | 111.07538 | 111.075379 | 111.075379 | 111.075379 | 107.7319711 | 101.895673 | 96.43074406 | 91.31134867 | 86.51358373 |
| 200130A00046 | 1/30/2020 | 1.81 | 1/29/2027 | 1/30/2020 | 105.08487 | 105.0848669 | 105.0848669 | 105.0848669 | 103.8423666 | 100.5414681 | 97.39472364 | 94.3934689 | 91.52959323 |
| 200206A00008 | 2/6/2020 | 1.64 | 2/6/2025 | 2/6/2020 | 106.274 | 106.2740046 | 106.2740046 | 106.2740046 | 104.8511442 | 100.8116683 | 96.96016913 | 93.28680111 | 89.78228912 |
| 200206A00027 | 2/6/2020 | 2.15 | 2/6/2030 | 2/6/2020 | 115.41585 | 115.4158471 | 115.4158471 | 115.4158471 | 108.2315691 | 100.2630549 | 92.99425815 | 86.35866273 | 80.29644982 |
| 200109A00006 | 1/9/2020 | 1.95 | 1/9/2030 | 1/9/2020 | 109.13798 | 109.1379829 | 109.1379829 | 109.1379829 | 106.1956853 | 101.3383204 | 96.79695218 | 92.54741436 | 88.5675968 |
| 200109A00008 | 1/9/2020 | 1.95 | 1/9/2030 | 1/9/2020 | 109.13798 | 109.1379781 | 109.1379781 | 109.1379781 | 106.1956838 | 101.3383213 | 96.79695522 | 92.54741925 | 88.56760331 |
| 200110A00037 | 1/10/2020 | 2.32 | 1/10/2030 | 1/10/2020 | 116.76922 | 116.7692191 | 116.7692191 | 116.7692191 | 109.6276642 | 101.6263429 | 94.32219731 | 87.64944272 | 81.5488697 |
| 200110A00038 | 1/10/2020 | 2.32 | 1/10/2030 | 1/10/2020 | 116.76922 | 116.7692191 | 116.7692191 | 116.7692191 | 109.6276642 | 101.6263429 | 94.32219731 | 87.64944272 | 81.54886971 |
| 200110A00039 | 1/10/2020 | 2.32 | 1/10/2030 | 1/10/2020 | 116.76922 | 116.7692191 | 116.7692191 | 116.7692191 | 109.6276642 | 101.6263429 | 94.32219731 | 87.64944272 | 81.54886971 |
| 200110A00043 | 1/10/2020 | 2.32 | 1/10/2030 | 1/10/2020 | 116.76922 | 116.7692191 | 116.7692191 | 116.7692191 | 109.6276642 | 101.6263429 | 94.32219731 | 87.64944272 | 81.5488697 |
| 191203A00011 | 12/3/2019 | 2.21 | 12/3/2029 | 12/3/2019 | 115.66755 | 115.6675515 | 115.6675515 | 115.6675515 | 108.7171668 | 100.8381953 | 93.63979523 | 87.05833538 | 81.03648484 |
| 191203A00013 | 12/3/2019 | 1.93 | 12/3/2024 | 12/3/2019 | 106.71545 | 106.7154543 | 106.7154543 | 106.7154543 | 105.3271015 | 101.2720607 | 97.40110614 | 93.70489927 | 90.17462292 |
| 191206A00005 | 12/6/2019 | 2.18 | 12/7/2026 | 12/6/2019 | 111.01023 | 111.0102311 | 111.0102311 | 111.0102311 | 107.8049033 | 102.0549271 | 96.66494697 | 91.61032692 | 86.86824282 |
| 191209A00005 | 12/9/2019 | 2.22 | 12/10/2029 | 12/9/2019 | 114.26238 | 114.2623844 | 114.2623844 | 114.2623844 | 108.2648437 | 101.1081801 | 94.54513839 | 88.52145384 | 82.98816016 |
| 191224A00002 | 12/24/2019 | 2.17 | 12/24/2029 | 12/24/2019 | 109.19347 | 109.1934716 | 109.1934716 | 109.1934716 | 106.3216294 | 101.5213374 | 97.02994048 | 92.824049 | 88.88224503 |
| 200103A00002 | 1/3/2020 | 2.07 | 1/3/2030 | 1/3/2020 | 114.71011 | 114.7101122 | 114.7101122 | 114.7101122 | 108.5672739 | 101.3096138 | 94.65954307 | 88.56103607 | 82.96358433 |
| 191112A00023 | 11/12/2019 | 2.36 | 11/13/2029 | 11/12/2019 | 116.85375 | 116.8537475 | 116.8537475 | 116.8537475 | 109.9288272 | 102.0177848 | 94.78598611 | 88.17023582 | 82.11357431 |
| 191112A00024 | 11/12/2019 | 2.09 | 11/12/2024 | 11/12/2019 | 107.29403 | 107.2940342 | 107.2940342 | 107.2940342 | 105.9354547 | 101.912327 | 98.06961171 | 94.39819739 | 90.88948493 |
| 191113A00013 | 11/13/2019 | 2.17 | 11/13/2026 | 11/13/2019 | 110.84474 | 110.8447356 | 110.8447356 | 110.8447356 | 107.7188377 | 102.024557 | 96.6835503 | 91.67180439 | 86.96706753 |
| 191122A00003 | 11/22/2019 | 2.32 | 11/22/2039 | 11/22/2019 | 128.20532 | 128.2053236 | 128.2053236 | 122.348641 | 109.9767781 | 98.50870912 | 88.64048775 | 80.12102298 | 72.74138628 |
| 191203A00009 | 12/3/2019 | 2.21 | 12/3/2029 | 12/3/2019 | 115.66755 | 115.6675515 | 115.6675515 | 115.6675515 | 108.7171668 | 100.8381953 | 93.63979523 | 87.05833538 | 81.03648484 |
| 191203A00010 | 12/3/2019 | 2.21 | 12/3/2029 | 12/3/2019 | 115.66755 | 115.6675515 | 115.6675515 | 115.6675515 | 108.7171668 | 100.8381953 | 93.63979523 | 87.05833538 | 81.03648484 |
| 191015A00025 | 10/15/2019 | 2.01 | 10/15/2029 | 10/15/2019 | 108.23382 | 108.2338241 | 108.2338241 | 108.2338241 | 105.492166 | 100.8085743 | 96.42168952 | 92.30937416 | 88.45133122 |
| 191031A00025 | 10/31/2019 | 1.91 | 10/31/2024 | 10/31/2019 | 103.55612 | 103.5561192 | 103.5561192 | 103.5561192 | 103.0177368 | 100.8374975 | 98.72881324 | 96.68873669 | 94.71446411 |
| 191101A00004 | 11/1/2019 | 1.91 | 11/1/2029 | 11/1/2019 | 113.25142 | 113.251421 | 113.251421 | 113.251421 | 107.3690517 | 100.2830957 | 93.78175647 | 87.81187809 | 82.32547572 |
| 191101A00005 | 11/1/2019 | 1.83 | 11/2/2026 | 11/1/2019 | 109.92907 | 109.929066 | 109.929066 | 109.929066 | 106.8352421 | 101.1723745 | 95.86066467 | 90.87623543 | 86.19696569 |

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 191105A00012 | 11/5/2019 | 2.07 | 11/3/2034 | 11/5/2019 | 114.88124 | 114.8812392 | 114.8812392 | 114.051757 | 107.6913859 | 100.4840546 | 93.94871281 | 88.01286761 | 82.61259617 |
| 191112A00022 | 11/12/2019 | 2.36 | 11/13/2029 | 11/12/2019 | 116.85375 | 116.8537452 | 116.8537452 | 116.8537452 | 109.9288269 | 102.0177854 | 94.78598755 | 88.17023796 | 82.11357702 |
| 191004A00025 | 10/4/2019 | 1.74 | 10/4/2024 | 10/4/2019 | 105.74914 | 105.7491447 | 105.7491447 | 105.7491447 | 104.4662632 | 100.5740485 | 96.85294042 | 93.29443253 | 89.8904919 |
| 191004A00026 | 10/4/2019 | 1.74 | 10/4/2024 | 10/4/2019 | 105.74914 | 105.7491447 | 105.7491447 | 105.7491447 | 104.4662632 | 100.5740485 | 96.85294042 | 93.29443253 | 89.8904919 |
| 191008A00007 | 10/8/2019 | 1.67 | 10/9/2029 | 10/8/2019 | 107.50256 | 107.5025579 | 107.5025579 | 107.5025579 | 104.7620666 | 100.0888447 | 95.71264042 | 91.61123192 | 87.76424959 |
| 191008A00014 | 10/8/2019 | 1.85 | 10/8/2026 | 10/8/2019 | 108.81925 | 108.8192464 | 108.8192464 | 108.8192464 | 105.8435616 | 100.3024982 | 95.10110833 | 90.21655264 | 85.62765281 |
| 191009A00009 | 10/9/2019 | 1.8 | 10/9/2026 | 10/9/2019 | 104.85514 | 104.8551446 | 104.8551446 | 104.8551446 | 103.7169311 | 100.541816 | 97.51004977 | 94.6138202 | 91.8458003 |
| 191011A00027 | 10/11/2019 | 1.84 | 10/11/2029 | 10/11/2019 | 108.34568 | 108.345676 | 108.345676 | 108.345676 | 105.5837473 | 100.8739912 | 96.46357493 | 92.33010263 | 88.45304521 |
| 190930A00026 | 9/30/2019 | 1.95 | 9/30/2024 | 9/30/2019 | 106.32322 | 106.3232212 | 106.3232212 | 106.3232212 | 105.1055886 | 101.3511053 | 97.75909052 | 94.32154112 | 91.03089659 |
| 190930A00028 | 9/30/2019 | 1.95 | 9/30/2024 | 9/30/2019 | 106.32322 | 106.3232183 | 106.3232183 | 106.3232183 | 105.1055865 | 101.351105 | 97.75909176 | 94.32154384 | 91.0309007 |
| 191004A00017 | 10/4/2019 | 2.02 | 10/4/2029 | 10/4/2019 | 113.83472 | 113.8347179 | 113.8347179 | 113.8347179 | 107.1855365 | 99.50752927 | 92.48359711 | 86.05338701 | 80.16245487 |
| 191004A00019 | 10/4/2019 | 2.02 | 10/4/2029 | 10/4/2019 | 113.83471 | 113.8347136 | 113.8347136 | 113.8347136 | 107.1855363 | 99.50753129 | 92.48360097 | 86.0533924 | 80.16246152 |
| 191004A00022 | 10/4/2019 | 2.02 | 10/4/2029 | 10/4/2019 | 113.83472 | 113.834716 | 113.834716 | 113.834716 | 107.1855364 | 99.50753016 | 92.4835988 | 86.05338935 | 80.16245776 |
| 191004A00023 | 10/4/2019 | 2.02 | 10/4/2029 | 10/4/2019 | 113.83471 | 113.8347078 | 113.8347078 | 113.8347078 | 107.1855354 | 99.5075334 | 92.48360573 | 86.05339943 | 80.1624705 |
| 190911A00016 | 9/11/2019 | 1.9 | 9/11/2029 | 9/11/2019 | 108.56513 | 108.5651322 | 108.5651322 | 108.5651322 | 105.8498783 | 101.1683912 | 96.78210541 | 92.66909855 | 88.80926281 |
| 190913A00006 | 9/13/2019 | 2.33 | 9/13/2034 | 9/13/2019 | 115.19813 | 115.1981293 | 115.1981293 | 114.4383472 | 108.2119145 | 101.0909534 | 94.62456438 | 88.74304658 | 83.38483861 |
| 190913A00018 | 9/13/2019 | 2.11 | 9/11/2026 | 9/13/2019 | 105.80217 | 105.8021738 | 105.8021738 | 105.8021738 | 104.686011 | 101.5221086 | 98.49943494 | 95.61037251 | 92.84777259 |
| 190920A00014 | 9/20/2019 | 2.28 | 9/20/2034 | 9/20/2019 | 114.80668 | 114.8066831 | 114.8066831 | 114.0492757 | 107.8438136 | 100.7469246 | 94.30241464 | 88.44081376 | 83.10076476 |
| 190925A00009 | 9/25/2019 | 2 | 9/25/2026 | 9/25/2019 | 109.06045 | 109.060452 | 109.060452 | 109.060452 | 106.364012 | 101.1476821 | 96.2422524 | 91.62717822 | 87.28338958 |
| 190926A00002 | 9/30/2019 | 2.01 | 9/29/2034 | 9/30/2019 | 114.23206 | 114.2320596 | 114.2320596 | 113.4681677 | 107.2429252 | 100.1409061 | 93.69440824 | 87.83339864 | 82.4960466 |
| 190905A00021 | 9/5/2019 | 2.08 | 9/5/2029 | 9/5/2019 | 114.22261 | 114.2226082 | 114.2226082 | 114.2226082 | 107.6629998 | 100.0118171 | 93.00749851 | 86.59079488 | 80.70821499 |
| 190905A00023 | 9/5/2019 | 2.08 | 9/5/2029 | 9/5/2019 | 114.22261 | 114.2226082 | 114.2226082 | 114.2226082 | 107.6629998 | 100.0118171 | 93.00749851 | 86.59079488 | 80.70821499 |
| 190905A00024 | 9/5/2019 | 2.08 | 9/5/2029 | 9/5/2019 | 114.22261 | 114.2226082 | 114.2226082 | 114.2226082 | 107.6629998 | 100.0118171 | 93.00749851 | 86.59079488 | 80.70821499 |
| 190905A00025 | 9/5/2019 | 2.08 | 9/5/2029 | 9/5/2019 | 114.22261 | 114.2226082 | 114.2226082 | 114.2226082 | 107.6629998 | 100.011817 | 93.00749849 | 86.59079486 | 80.70821496 |
| 190906A00009 | 9/6/2019 | 2.08 | 9/6/2034 | 9/6/2019 | 113.24792 | 113.2479179 | 113.2479179 | 112.5010572 | 106.3796084 | 99.37889171 | 93.02169857 | 87.23950565 | 81.97179129 |
| 190910A00044 | 9/10/2019 | 2.02 | 9/10/2026 | 9/10/2019 | 109.69779 | 109.6977883 | 109.6977883 | 109.6977883 | 106.7917824 | 101.2726152 | 96.08803227 | 91.215777 | 86.63519337 |
| 190826A00032 | 8/26/2019 | 1.72 | 8/24/2029 | 8/26/2019 | 107.60922 | 107.6092158 | 107.6092158 | 107.6092158 | 104.9685109 | 100.3653776 | 96.05023673 | 92.0018578 | 88.20075554 |
| 190829A00032 | 8/29/2019 | 1.69 | 8/28/2026 | 8/29/2019 | 104.98536 | 104.9853636 | 104.9853636 | 104.9853636 | 103.903312 | 100.7913044 | 97.8170562 | 94.97319202 | 92.25278758 |
| 190829A00039 | 8/29/2019 | 1.85 | 8/29/2034 | 8/29/2019 | 112.90318 | 112.9031754 | 112.9031754 | 112.1779288 | 106.0743351 | 99.08696244 | 92.74123244 | 86.96893378 | 81.70980589 |
| 190830A00013 | 8/30/2019 | 2.06 | 8/30/2034 | 8/30/2019 | 113.01455 | 113.0145526 | 113.0145526 | 112.2980556 | 106.2379491 | 99.28341248 | 92.96493724 | 87.2151216 | 81.9743981 |
| 190905A00018 | 9/5/2019 | 1.85 | 9/5/2029 | 9/5/2019 | 112.60455 | 112.6045498 | 112.6045498 | 112.6045498 | 106.926535 | 99.96005352 | 93.5606158 | 87.67736036 | 82.26430557 |
| 190905A00019 | 9/5/2019 | 2.08 | 9/5/2029 | 9/5/2019 | 114.22261 | 114.2226082 | 114.2226082 | 114.2226082 | 107.6629998 | 100.011817 | 93.00749849 | 86.59079486 | 80.70821496 |
| 190813A00052 | 8/13/2019 | 2.24 | 8/13/2029 | 8/13/2019 | 115.44914 | 115.4491399 | 115.4491399 | 115.4491399 | 108.9238089 | 101.2440045 | 94.20925672 | 87.76083299 | 81.84567587 |

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 190813A00057 | 8/13/2019 | 1.9 | 8/13/2024 | 8/13/2019 | 106.1879 | 106.187896 | 106.187896 | 106.187896 | 104.9824768 | 101.1975765 | 97.57453692 | 94.10553371 | 90.78316447 |
| 190813A00064 | 8/13/2019 | 1.9 | 8/13/2024 | 8/13/2019 | 106.1879 | 106.187896 | 106.187896 | 106.187896 | 104.9824768 | 101.1975765 | 97.57453692 | 94.10553371 | 90.78316447 |
| 190813A00067 | 8/13/2019 | 1.9 | 8/13/2024 | 8/13/2019 | 106.1879 | 106.187896 | 106.187896 | 106.187896 | 104.9824768 | 101.1975765 | 97.57453692 | 94.10553371 | 90.78316447 |
| 190816A00023 | 8/16/2019 | 2.14 | 8/16/2034 | 8/16/2019 | 113.6315 | 113.6314989 | 113.6314989 | 112.9115052 | 106.8186798 | 99.8264312 | 93.47365585 | 87.69259551 | 82.42336697 |
| 190823A00018 | 8/23/2019 | 2.12 | 8/23/2034 | 8/23/2019 | 113.47721 | 113.4772134 | 113.4772134 | 112.7579974 | 106.6732906 | 99.69042512 | 93.34619194 | 87.57291949 | 82.3108015 |
| 190726A00012 | 7/26/2019 | 2.58 | 7/26/2034 | 7/26/2019 | 116.95989 | 116.9598903 | 116.9598903 | 116.2487809 | 110.0292951 | 102.8660421 | 96.3545138 | 90.42599673 | 85.0197254 |
| 190731A00013 | 7/31/2019 | 2.23 | 7/22/2022 | 7/31/2019 | 102.0514 | 102.0513975 | 102.0513975 | 102.0513975 | 101.8785556 | 100.828544 | 99.79907767 | 98.78957187 | 97.79946381 |
| 190802A00011 | 8/2/2019 | 2.01 | 8/2/2029 | 8/2/2019 | 109.02389 | 109.023885 | 109.023885 | 109.023885 | 106.3497457 | 101.6868015 | 97.31552803 | 93.21442966 | 89.36377706 |
| 190802A00020 | 8/2/2019 | 2.42 | 8/2/2034 | 8/2/2019 | 115.80802 | 115.8080195 | 115.8080195 | 115.0747673 | 108.8660738 | 101.740485 | 95.26650802 | 89.3751047 | 84.00525997 |
| 190809A00017 | 8/9/2019 | 2.27 | 8/9/2034 | 8/9/2019 | 114.63889 | 114.638886 | 114.638886 | 113.9127694 | 107.7663184 | 100.7123527 | 94.30347746 | 88.47134224 | 83.15554025 |
| 190813A00051 | 8/13/2019 | 2.19 | 8/13/2029 | 8/13/2019 | 115.03685 | 115.0368512 | 115.0368512 | 115.0368512 | 108.5284031 | 100.8712504 | 93.85743633 | 87.42837534 | 81.53114343 |
| 190708A00030 | 7/8/2019 | 2.57 | 7/2/2029 | 7/8/2019 | 117.97874 | 117.9787438 | 117.9787438 | 117.9787438 | 111.5041009 | 103.7555266 | 96.64965864 | 90.12867122 | 84.14026088 |
| 190708A00032 | 7/8/2019 | 2.58 | 7/2/2029 | 7/8/2019 | 118.06107 | 118.0610691 | 118.0610691 | 118.0610691 | 111.5831979 | 103.8301953 | 96.72022925 | 90.19544624 | 84.20351743 |
| 190712A00003 | 7/12/2019 | 2.61 | 7/12/2034 | 7/12/2019 | 117.19407 | 117.194071 | 117.194071 | 116.4819556 | 110.2503094 | 103.0729173 | 96.5484997 | 90.60821689 | 85.19119077 |
| 190712A00016 | 7/12/2019 | 2.39 | 7/12/2029 | 7/12/2019 | 109.84743 | 109.8474329 | 109.8474329 | 109.8474329 | 107.2212853 | 102.5823549 | 98.23034568 | 94.14432869 | 90.30507819 |
| 190718A00012 | 7/18/2019 | 2.55 | 7/18/2029 | 7/18/2019 | 116.19568 | 116.1956811 | 116.1956811 | 116.1956811 | 110.5733294 | 103.5265871 | 97.04345417 | 91.07417376 | 85.57369024 |
| 190719A00017 | 7/19/2019 | 2.55 | 7/19/2034 | 7/19/2019 | 116.72507 | 116.7250696 | 116.7250696 | 116.0155731 | 109.8086211 | 102.6597809 | 96.16133987 | 90.24472665 | 84.84930111 |
| 190702A00071 | 7/2/2019 | 2.69 | 7/1/2039 | 7/2/2019 | 137.07056 | 137.0705557 | 137.0705557 | 129.7038835 | 115.3279641 | 102.328804 | 91.2300177 | 81.72492583 | 73.55920367 |
| 190705A00007 | 7/5/2019 | 2.56 | 7/5/2034 | 7/5/2019 | 116.80262 | 116.8026211 | 116.8026211 | 116.0930603 | 109.8822309 | 102.7288041 | 96.2261586 | 90.30568816 | 84.90672084 |
| 190708A00025 | 7/8/2019 | 2.21 | 7/1/2024 | 7/8/2019 | 107.19649 | 107.1964911 | 107.1964911 | 107.1964911 | 106.0484335 | 102.3339841 | 98.77425253 | 95.36195736 | 92.09019865 |
| 190708A00026 | 7/8/2019 | 2.21 | 7/1/2024 | 7/8/2019 | 107.19649 | 107.1964911 | 107.1964911 | 107.1964911 | 106.0484335 | 102.3339841 | 98.77425253 | 95.36195736 | 92.09019865 |
| 190708A00028 | 7/8/2019 | 2.57 | 7/2/2029 | 7/8/2019 | 117.97871 | 117.9787141 | 117.9787141 | 117.9787141 | 111.5040837 | 103.7555222 | 96.64966572 | 90.12868869 | 84.14028773 |
| 190708A00029 | 7/8/2019 | 2.57 | 7/2/2029 | 7/8/2019 | 117.97874 | 117.9787438 | 117.9787438 | 117.9787438 | 111.5041009 | 103.7555266 | 96.64965864 | 90.12867122 | 84.14026088 |
| 190614A00022 | 6/14/2019 | 2.62 | 6/14/2034 | 6/14/2019 | 117.16604 | 117.1660386 | 117.1660386 | 116.4836228 | 110.3047596 | 103.1624869 | 96.66663025 | 90.74938189 | 85.35073872 |
| 190619A00010 | 6/19/2019 | 2.04 | 6/17/2022 | 6/19/2019 | 101.95627 | 101.9562694 | 101.9562694 | 101.9562694 | 101.7924248 | 100.7827332 | 99.79240031 | 98.82087886 | 97.86764241 |
| 190620A00033 | 6/20/2019 | 2.1 | 6/20/2029 | 6/20/2019 | 109.28983 | 109.2898345 | 109.2898345 | 109.2898345 | 106.7112736 | 102.1131448 | 97.79805916 | 93.74546799 | 89.93648756 |
| 190621A00020 | 6/21/2019 | 2.58 | 6/21/2034 | 6/21/2019 | 116.85523 | 116.8552254 | 116.8552254 | 116.1743999 | 110.0117234 | 102.8882557 | 96.4095231 | 90.5078913 | 85.12351107 |
| 190628A00026 | 6/28/2019 | 2.54 | 6/28/2034 | 6/28/2019 | 116.54491 | 116.5449061 | 116.5449061 | 115.865671 | 109.7191596 | 102.6144667 | 96.15283002 | 90.26678866 | 84.89664709 |
| 190702A00068 | 7/2/2019 | 2.69 | 7/1/2039 | 7/2/2019 | 137.07063 | 137.070633 | 137.070633 | 129.7039368 | 115.3279816 | 102.328796 | 91.22998934 | 81.72488124 | 73.55914624 |
| 190605A00007 | 6/5/2019 | 2.47 | 6/5/2026 | 6/5/2019 | 111.80958 | 111.809579 | 111.809579 | 111.809579 | 109.1581644 | 103.7562181 | 98.66896895 | 93.87628399 | 89.35942105 |
| 190605A00023 | 6/5/2019 | 2.64 | 6/5/2029 | 6/5/2019 | 118.41529 | 118.4152906 | 118.4152906 | 118.4152906 | 112.0231772 | 104.2988518 | 97.21031772 | 90.70080481 | 84.71892318 |
| 190605A00024 | 6/5/2019 | 2.64 | 6/5/2029 | 6/5/2019 | 118.41528 | 118.4152818 | 118.4152818 | 118.4152818 | 112.0231735 | 104.2988516 | 97.21032071 | 90.70081056 | 84.71893132 |
| 190605A00025 | 6/5/2019 | 2.64 | 6/5/2029 | 6/5/2019 | 118.41528 | 118.4152818 | 118.4152818 | 118.4152818 | 112.0231735 | 104.2988516 | 97.21032071 | 90.70081056 | 84.71893132 |

Classification | Public

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 190605A00027 | 6/5/2019 | 2.64 | 6/5/2029 | 6/5/2019 | 118.41528 | 118.4152818 | 118.4152818 | 118.4152818 | 112.0231735 | 104.2988516 | 97.21032071 | 90.70081056 | 84.71893132 |
| 190607A00013 | 6/7/2019 | 2.59 | 6/7/2034 | 6/7/2019 | 116.93238 | 116.9323831 | 116.9323831 | 116.2515104 | 110.0850088 | 102.9570017 | 96.47410485 | 90.56865002 | 85.18075705 |
| 190510A00049 | 5/10/2019 | 2.58 | 5/8/2026 | 5/10/2019 | 106.85031 | 106.8503084 | 106.8503084 | 106.8503084 | 105.8748409 | 102.8814717 | 100.014083 | 97.26622913 | 94.631843 |
| 190515A00035 | 5/15/2019 | 2.82 | 2/15/2029 | 5/15/2019 | 119.29966 | 119.2996639 | 119.2996639 | 119.2996639 | 113.2635952 | 105.6805653 | 98.70355189 | 92.27992137 | 86.36190409 |
| 190517A00012 | 5/17/2019 | 2.88 | 5/17/2034 | 5/17/2019 | 119.08114 | 119.081143 | 119.081143 | 118.4172243 | 112.1901949 | 104.9656106 | 98.39146958 | 92.39988532 | 86.9307471 |
| 190524A00041 | 5/24/2019 | 2.83 | 5/24/2034 | 5/24/2019 | 118.69106 | 118.691058 | 118.691058 | 118.0290927 | 111.8222739 | 104.6212227 | 98.06851587 | 92.09648323 | 86.64520613 |
| 190529A00061 | 5/29/2019 | 2.46 | 5/29/2026 | 5/29/2019 | 106.57573 | 106.5757337 | 106.5757337 | 106.5757337 | 105.5738595 | 102.5476792 | 99.65040771 | 96.87537854 | 94.21632031 |
| 190531A00036 | 5/31/2019 | 2.71 | 5/31/2034 | 5/31/2019 | 117.75768 | 117.7576795 | 117.7576795 | 117.1006589 | 110.9422852 | 103.7976064 | 97.29622347 | 91.37099009 | 85.96245177 |
| 190501A00015 | 5/1/2019 | 2.78 | 5/1/2029 | 5/1/2019 | 111.5318 | 111.5318045 | 111.5318045 | 111.5318045 | 108.9694298 | 104.3376619 | 99.98770078 | 95.89930557 | 92.05385892 |
| 190502A00016 | 5/2/2019 | 2.87 | 5/1/2026 | 5/2/2019 | 113.83667 | 113.836672 | 113.836672 | 113.836672 | 111.2555561 | 105.8515517 | 100.7574085 | 95.95349749 | 91.4215447 |
| 190503A00015 | 5/3/2019 | 3.03 | 5/3/2034 | 5/3/2019 | 120.25609 | 120.2560939 | 120.2560939 | 119.5861173 | 113.2982139 | 106.0027406 | 99.36404487 | 93.31358472 | 87.79066859 |
| 190506A00025 | 5/6/2019 | 3.03 | 5/4/2029 | 5/6/2019 | 121.42943 | 121.4294301 | 121.4294301 | 121.4294301 | 115.0406861 | 107.2123014 | 100.0214818 | 93.41177322 | 87.33204243 |
| 190506A00026 | 5/6/2019 | 3.03 | 5/4/2029 | 5/6/2019 | 121.42943 | 121.4294301 | 121.4294301 | 121.4294301 | 115.0406861 | 107.2123014 | 100.0214818 | 93.41177322 | 87.33204243 |
| 190510A00022 | 5/10/2019 | 2.95 | 5/10/2034 | 5/10/2019 | 119.62854 | 119.6285444 | 119.6285444 | 118.9618205 | 112.7064468 | 105.4488493 | 98.84464346 | 92.82563793 | 87.33145176 |
| 190404A00015 | 4/4/2019 | 2.88 | 4/3/2026 | 4/4/2019 | 113.7185 | 113.7185046 | 113.7185046 | 113.7185046 | 111.2192931 | 105.8809282 | 100.8451654 | 96.09305392 | 91.60693539 |
| 190405A00004 | 4/5/2019 | 3.02 | 4/5/2034 | 4/5/2019 | 120.05093 | 120.0509275 | 120.0509275 | 119.4113482 | 113.1870942 | 105.9385048 | 99.33905655 | 93.32134688 | 87.82565529 |
| 190411A00022 | 4/11/2019 | 2.68 | 4/11/2022 | 4/11/2019 | 102.79575 | 102.7957485 | 102.7957485 | 102.7957485 | 102.6005451 | 101.436594 | 100.2954866 | 99.17656122 | 98.07918195 |
| 190412A00011 | 4/12/2019 | 3.07 | 4/12/2034 | 4/12/2019 | 120.44629 | 120.4462894 | 120.4462894 | 119.8040987 | 113.5576479 | 106.2839461 | 99.66170964 | 93.62328836 | 88.10874299 |
| 190422A00037 | 4/22/2019 | 3.07 | 4/21/2034 | 4/22/2019 | 120.44245 | 120.4424501 | 120.4424501 | 119.8003278 | 113.5556009 | 106.2832598 | 99.66222386 | 93.62486009 | 88.11124462 |
| 190430A00026 | 4/30/2019 | 3.03 | 4/28/2034 | 4/30/2019 | 120.13017 | 120.1301682 | 120.1301682 | 119.4894817 | 113.2607492 | 106.007126 | 99.40315258 | 93.38136499 | 87.88198946 |
| 190401A00017 | 4/1/2019 | 2.55 | 4/1/2022 | 4/1/2019 | 103.67589 | 103.675893 | 103.675893 | 103.675893 | 103.3876743 | 101.7731964 | 100.1923241 | 98.64406603 | 97.12747031 |
| 190402A00005 | 4/2/2019 | 2.77 | 4/2/2032 | 4/2/2019 | 119.83533 | 119.8353301 | 119.8353301 | 119.4106678 | 112.9752273 | 105.5286965 | 98.73856832 | 92.53859064 | 86.86978841 |
| 190403A00010 | 4/3/2019 | 3.08 | 4/3/2029 | 4/3/2019 | 121.64628 | 121.6462791 | 121.6462791 | 121.6462791 | 115.3641793 | 107.5809757 | 100.4262966 | 93.84494442 | 87.78688253 |
| 190403A00013 | 4/3/2019 | 3.05 | 4/3/2029 | 4/3/2019 | 120.62847 | 120.6284658 | 120.6284658 | 120.6284658 | 114.6880368 | 107.1963245 | 100.3012541 | 93.95083639 | 88.09791841 |
| 190403A00014 | 4/3/2019 | 3.05 | 4/3/2029 | 4/3/2019 | 120.62847 | 120.6284706 | 120.6284706 | 120.6284706 | 114.6880398 | 107.1963257 | 100.3012538 | 93.95083461 | 88.09791537 |
| 190403A00015 | 4/3/2019 | 3.05 | 4/3/2029 | 4/3/2019 | 120.62848 | 120.6284754 | 120.6284754 | 120.6284754 | 114.6880419 | 107.1963261 | 100.3012526 | 93.95083222 | 88.0979119 |
| 190315A00029 | 3/15/2019 | 2.88 | 3/15/2034 | 3/15/2019 | 120.39392 | 120.3939213 | 120.3939213 | 119.7731725 | 113.5345948 | 106.2593534 | 99.63479339 | 93.59347983 | 88.07564763 |
| 190322A00008 | 3/22/2019 | 2.64 | 3/20/2026 | 3/22/2019 | 106.9315 | 106.9314956 | 106.9314956 | 106.9314956 | 105.9842008 | 103.0297637 | 100.1981232 | 97.48306792 | 94.87874731 |
| 190322A00011 | 3/22/2019 | 2.99 | 3/22/2034 | 3/22/2019 | 119.69254 | 119.6925357 | 119.6925357 | 119.0831293 | 112.9301836 | 105.7375189 | 99.185631 | 93.20831851 | 87.74688914 |
| 190327A00035 | 3/27/2019 | 2.68 | 3/27/2034 | 3/27/2019 | 118.83802 | 118.8380204 | 118.8380204 | 118.2248475 | 112.0663037 | 104.8846696 | 98.34538964 | 92.3818864 | 86.93515568 |
| 190329A00021 | 3/29/2019 | 2.96 | 3/29/2034 | 3/29/2019 | 119.46064 | 119.4606403 | 119.4606403 | 118.8521875 | 112.7109803 | 105.5321299 | 98.99284573 | 93.02704876 | 87.57615552 |
| 190329A00067 | 3/29/2019 | 2.61 | 3/29/2024 | 3/29/2019 | 107.58688 | 107.5868835 | 107.5868835 | 107.5868835 | 106.6626734 | 103.4005618 | 100.2634348 | 97.24572205 | 94.34213698 |
| 190313A00039 | 3/13/2019 | 2.7 | 6/13/2022 | 3/13/2019 | 104.43501 | 104.4350146 | 104.4350146 | 104.4350146 | 104.0981587 | 102.2751645 | 100.4937089 | 98.75259757 | 97.05067844 |

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 190313A00044 | 3/13/2019 | 2.7 | 6/13/2022 | 3/13/2019 | 104.43501 | 104.4350146 | 104.4350146 | 104.4350146 | 104.0981587 | 102.2751645 | 100.4937089 | 98.75259757 | 97.05067844 |
| 190315A00017 | 3/15/2019 | 2.88 | 3/15/2034 | 3/15/2019 | 120.39394 | 120.3939378 | 120.3939378 | 119.7731886 | 113.5346032 | 106.2593559 | 99.63479074 | 93.59347268 | 88.07563656 |
| 190315A00019 | 3/15/2019 | 2.88 | 3/15/2034 | 3/15/2019 | 120.39389 | 120.3938912 | 120.3938912 | 119.7731429 | 113.5345752 | 106.2593446 | 99.63479446 | 93.59348981 | 88.07566567 |
| 190315A00021 | 3/15/2019 | 3.11 | 3/15/2034 | 3/15/2019 | 120.62391 | 120.6239147 | 120.6239147 | 120.0100258 | 113.8095399 | 106.5611435 | 99.95846302 | 93.93478993 | 88.43098185 |
| 190315A00023 | 3/15/2019 | 2.88 | 3/15/2034 | 3/15/2019 | 120.39391 | 120.3939123 | 120.3939123 | 119.7731627 | 113.5345892 | 106.2593511 | 99.63479408 | 93.59348321 | 88.07565343 |
| 190227A00033 | 2/27/2019 | 2.65 | 2/27/2026 | 2/27/2019 | 107.43498 | 107.4349789 | 107.4349789 | 107.4349789 | 106.5064507 | 103.5683844 | 100.751291 | 98.04910197 | 95.45609898 |
| 190305A00015 | 3/5/2019 | 3.32 | 3/5/2029 | 3/5/2019 | 122.56574 | 122.5657426 | 122.5657426 | 122.5657426 | 116.6557166 | 109.1133521 | 102.1664602 | 95.76357132 | 89.85796602 |
| 190305A00017 | 3/5/2019 | 3.12 | 3/5/2026 | 3/5/2019 | 114.00993 | 114.0099349 | 114.0099349 | 114.0099349 | 111.7647447 | 106.7461173 | 102.0029379 | 97.51834022 | 93.27658647 |
| 190308A00008 | 3/8/2019 | 3.19 | 3/8/2034 | 3/8/2019 | 121.24698 | 121.2469755 | 121.2469755 | 120.6301703 | 114.397963 | 107.1123483 | 100.475741 | 94.42109536 | 88.88896987 |
| 190308A00016 | 3/8/2019 | 3.18 | 3/8/2034 | 3/8/2019 | 132.9294 | 132.9294008 | 132.9294008 | 130.2027109 | 119.3373866 | 108.6712775 | 99.20387883 | 90.78675494 | 83.29097603 |
| 190308A00026 | 3/8/2019 | 3.18 | 3/8/2034 | 3/8/2019 | 132.9294 | 132.9294008 | 132.9294008 | 130.2027109 | 119.3373866 | 108.6712775 | 99.20387883 | 90.78675494 | 83.29097603 |
| 190205A00022 | 2/5/2019 | 3.32 | 2/5/2029 | 2/5/2019 | 122.38424 | 122.3842423 | 122.3842423 | 122.3842423 | 116.5778018 | 109.0976192 | 102.2035331 | 95.84525936 | 89.97711978 |
| 190205A00023 | 2/5/2019 | 3.32 | 2/5/2029 | 2/5/2019 | 122.38426 | 122.3842642 | 122.3842642 | 122.3842642 | 116.5778179 | 109.097628 | 102.2035352 | 95.84525521 | 89.97710991 |
| 190205A00025 | 2/5/2019 | 2.88 | 2/7/2022 | 2/5/2019 | 103.91113 | 103.9111337 | 103.9111337 | 103.9111337 | 103.649546 | 102.1572125 | 100.6943544 | 99.26016766 | 97.85387729 |
| 190205A00027 | 2/5/2019 | 2.87 | 2/7/2022 | 2/5/2019 | 103.89594 | 103.8959428 | 103.8959428 | 103.8959428 | 103.6343821 | 102.1422119 | 100.679514 | 99.24548446 | 97.83934839 |
| 190207A00003 | 2/7/2019 | 2.68 | 2/7/2024 | 2/7/2019 | 108.14232 | 108.1423182 | 108.1423182 | 108.1423182 | 107.2714246 | 104.0921841 | 101.0315442 | 98.08436561 | 95.24576252 |
| 190212A00029 | 2/12/2019 | 2.6 | 2/12/2024 | 2/12/2019 | 104.67392 | 104.6739162 | 104.6739162 | 104.6739162 | 104.2655536 | 102.3876317 | 100.5637443 | 98.79189528 | 97.07017753 |
| 190131A00013 | 1/31/2019 | 3.48 | 1/31/2034 | 1/31/2019 | 135.7912 | 135.7911954 | 135.7911954 | 132.7612723 | 121.1085782 | 109.8751357 | 99.92695698 | 91.10358723 | 83.26572027 |
| 190131A00023 | 1/31/2019 | 3.02 | 1/30/2034 | 1/31/2019 | 121.21623 | 121.2162318 | 121.2162318 | 120.6482434 | 114.4763203 | 107.2223365 | 100.6102485 | 94.57421038 | 89.0557919 |
| 190205A00017 | 2/5/2019 | 3.36 | 2/5/2029 | 2/5/2019 | 122.69521 | 122.6952088 | 122.6952088 | 122.6952088 | 116.8778487 | 109.3817194 | 102.4728216 | 96.1007792 | 90.21983043 |
| 190205A00019 | 2/5/2019 | 2.94 | 2/5/2024 | 2/5/2019 | 108.89153 | 108.8915333 | 108.8915333 | 108.8915333 | 107.9564376 | 104.5936123 | 101.3581362 | 98.24445997 | 95.24730837 |
| 190205A00020 | 2/5/2019 | 3.32 | 2/5/2029 | 2/5/2019 | 122.38424 | 122.3842423 | 122.3842423 | 122.3842423 | 116.5778018 | 109.0976192 | 102.2035331 | 95.84525936 | 89.97711978 |
| 190205A00021 | 2/5/2019 | 3.32 | 2/5/2029 | 2/5/2019 | 122.38424 | 122.3842423 | 122.3842423 | 122.3842423 | 116.5778018 | 109.0976192 | 102.2035331 | 95.84525936 | 89.97711978 |
| 190104A00034 | 1/4/2019 | 3.18 | 1/4/2029 | 1/4/2019 | 117.71389 | 117.7138945 | 117.7138945 | 117.7138945 | 113.4167261 | 107.2328385 | 101.4939974 | 96.16406173 | 91.21007172 |
| 190104A00035 | 1/4/2019 | 3.1 | 1/5/2026 | 1/4/2019 | 114.0231 | 114.0230953 | 114.0230953 | 114.0230953 | 111.8214925 | 106.7678197 | 101.9880408 | 97.46569323 | 93.18539171 |
| 190104A00038 | 1/4/2019 | 3.25 | 1/4/2029 | 1/4/2019 | 121.63963 | 121.6396315 | 121.6396315 | 121.6396315 | 115.9683096 | 108.5819259 | 101.7694173 | 95.48198162 | 89.67524602 |
| 190111A00038 | 1/11/2019 | 2.63 | 1/11/2022 | 1/11/2019 | 103.41975 | 103.419752 | 103.419752 | 103.419752 | 103.1877395 | 101.8391895 | 100.5161147 | 99.21784758 | 97.94374392 |
| 190118A00006 | 1/18/2019 | 3.14 | 1/18/2034 | 1/18/2019 | 122.14763 | 122.1476279 | 122.1476279 | 121.5757117 | 115.3568535 | 108.0474764 | 101.3848548 | 95.30264969 | 89.74199251 |
| 190129A00073 | 1/29/2019 | 3.11 | 1/29/2029 | 1/29/2019 | 112.62478 | 112.6247753 | 112.6247753 | 112.6247753 | 110.2390669 | 105.7197076 | 101.466334 | 97.46042648 | 93.684908 |
| 181218A00040 | 12/18/2018 | 3.23 | 6/18/2030 | 12/18/2018 | 115.44954 | 115.4495399 | 115.4495399 | 115.4495399 | 112.0685385 | 106.758709 | 101.8063059 | 97.18308633 | 92.8632863 |
| 181218A00086 | 12/18/2018 | 3.06 | 10/18/2023 | 12/18/2018 | 108.09601 | 108.096006 | 108.096006 | 108.096006 | 107.3545031 | 104.4217516 | 101.5900857 | 98.8553646 | 96.21364629 |
| 181218A00089 | 12/18/2018 | 3.05 | 6/19/2023 | 12/18/2018 | 107.32282 | 107.3228238 | 107.3228238 | 107.3228238 | 106.7090935 | 104.0488139 | 101.4728376 | 98.97800969 | 96.56131137 |
| 181226A00030 | 12/26/2018 | 2.91 | 12/26/2028 | 12/26/2018 | 112.47624 | 112.4762388 | 112.4762388 | 112.4762388 | 110.1294651 | 105.6364544 | 101.4064461 | 97.42122565 | 93.66399043 |

Classification | Public

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 190103A00020 | 1/3/2019 | 3.12 | 1/5/2026 | 1/3/2019 | 114.4334 | 114.4334004 | 114.4334004 | 114.4334004 | 112.1636434 | 106.9958743 | 102.1102004 | 97.48960254 | 93.11817753 |
| 190104A00006 | 1/4/2019 | 2.83 | 1/5/2026 | 1/4/2019 | 107.28501 | 107.2850068 | 107.2850068 | 107.2850068 | 106.3900814 | 103.5085678 | 100.7438088 | 98.09003313 | 95.54179801 |
| 181128A00011 | 11/28/2018 | 3.27 | 11/28/2023 | 11/28/2018 | 109.50722 | 109.5072178 | 109.5072178 | 109.5072178 | 108.6579569 | 105.4434835 | 102.3448647 | 99.35729173 | 96.47618206 |
| 181129A00005 | 11/29/2018 | 3.21 | 11/29/2023 | 11/29/2018 | 109.31927 | 109.3192668 | 109.3192668 | 109.3192668 | 108.4697585 | 105.2570301 | 102.1601917 | 99.17443362 | 96.29517165 |
| 181207A00026 | 12/7/2018 | 2.94 | 12/6/2023 | 12/7/2018 | 108.58438 | 108.5843823 | 108.5843823 | 108.5843823 | 107.7839592 | 104.7279749 | 101.7811393 | 98.93892905 | 96.19703322 |
| 181214A00009 | 12/14/2018 | 3.22 | 12/14/2028 | 12/14/2018 | 113.00572 | 113.0057245 | 113.0057245 | 113.0057245 | 110.6626441 | 106.1683871 | 101.9363335 | 97.94837738 | 94.18781253 |
| 181214A00010 | 12/14/2018 | 3.41 | 12/14/2028 | 12/14/2018 | 121.40854 | 121.408536 | 121.408536 | 121.408536 | 116.2610221 | 109.2857404 | 102.8361115 | 96.86832502 | 91.34248707 |
| 181214A00030 | 12/14/2018 | 3.47 | 12/14/2033 | 12/14/2018 | 137.88302 | 137.8830222 | 137.8830222 | 134.92593 | 123.1147679 | 111.7240037 | 101.6304598 | 92.67311009 | 84.71202212 |
| 181010A00025 | 10/10/2018 | 3.48 | 10/10/2030 | 10/10/2018 | 118.57244 | 118.5724396 | 118.5724396 | 118.5724396 | 114.8284706 | 109.1896198 | 103.9427797 | 99.05602436 | 94.50031154 |
| 181105A00015 | 11/5/2018 | 3.57 | 11/5/2025 | 11/5/2018 | 116.3219 | 116.3218974 | 116.3218974 | 116.3218974 | 114.1822117 | 109.086411 | 104.2607927 | 99.68942167 | 95.3573936 |
| 181115A00044 | 11/15/2018 | 3.26 | 11/15/2023 | 11/15/2018 | 109.21451 | 109.2145086 | 109.2145086 | 109.2145086 | 108.3944804 | 105.2472097 | 102.2115547 | 99.28289651 | 96.45683596 |
| 181116A00006 | 11/16/2018 | 3.18 | 11/17/2025 | 11/16/2018 | 108.06777 | 108.0677741 | 108.0677741 | 108.0677741 | 107.218266 | 104.3982652 | 101.6896523 | 99.08704258 | 96.58535174 |
| 181119A00008 | 11/19/2018 | 3.23 | 11/17/2023 | 11/19/2018 | 108.78928 | 108.7892755 | 108.7892755 | 108.7892755 | 108.012422 | 105.0039137 | 102.1011558 | 99.29978883 | 96.59566032 |
| 181128A00004 | 11/28/2018 | 3.08 | 11/28/2023 | 11/28/2018 | 109.48425 | 109.4842502 | 109.4842502 | 109.4842502 | 108.6317903 | 105.4068445 | 102.298423 | 99.30167782 | 96.41198931 |
| 180914A00049 | 9/14/2018 | 3.37 | 9/14/2033 | 9/14/2018 | 123.32141 | 123.3214117 | 123.3214117 | 122.8544602 | 116.8014954 | 109.5681596 | 102.9609968 | 96.91711809 | 91.3805743 |
| 180924A00033 | 9/24/2018 | 3.08 | 9/22/2023 | 9/24/2018 | 108.50824 | 108.5082413 | 108.5082413 | 108.5082413 | 107.7919893 | 104.9023509 | 102.1107681 | 99.4132909 | 96.80615499 |
| 180925A00013 | 9/25/2018 | 3.41 | 9/25/2028 | 9/25/2018 | 113.46594 | 113.465944 | 113.465944 | 113.465944 | 111.2601647 | 106.8683426 | 102.7261557 | 98.81677938 | 95.12466057 |
| 180925A00116 | 9/25/2018 | 3.28 | 9/25/2028 | 9/25/2018 | 113.76479 | 113.7647918 | 113.7647918 | 113.7647918 | 111.5402333 | 107.1180324 | 102.9479846 | 99.01304904 | 95.29747602 |
| 181003A00019 | 10/3/2018 | 3.44 | 10/3/2025 | 10/3/2018 | 115.40018 | 115.4001778 | 115.4001778 | 115.4001778 | 113.3499753 | 108.3587069 | 103.6284472 | 99.14400294 | 94.89115176 |
| 181003A00032 | 10/3/2018 | 3.23 | 10/3/2025 | 10/3/2018 | 108.0803 | 108.0803021 | 108.0803021 | 108.0803021 | 107.2566319 | 104.4785309 | 101.8086936 | 99.24194911 | 96.77341229 |
| 180905A00017 | 9/5/2018 | 3.43 | 9/6/2033 | 9/5/2018 | 136.6901 | 136.690097 | 136.690097 | 134.0981514 | 122.7528313 | 111.7370104 | 101.9527042 | 93.24975227 | 85.49733737 |
| 180906A00032 | 9/6/2018 | 3.24 | 9/5/2025 | 9/6/2018 | 114.19076 | 114.1907575 | 114.1907575 | 114.1907575 | 112.2177445 | 107.3305321 | 102.6959764 | 98.29954446 | 94.12761955 |
| 180907A00013 | 9/7/2018 | 3.27 | 9/8/2025 | 9/7/2018 | 114.06903 | 114.0690255 | 114.0690255 | 114.0690255 | 112.1422399 | 107.342992 | 102.7904623 | 98.47049237 | 94.3698155 |
| 180913A00012 | 9/13/2018 | 3.31 | 9/13/2033 | 9/13/2018 | 122.86344 | 122.8634373 | 122.8634373 | 122.3982382 | 116.3676843 | 109.1611639 | 102.578496 | 96.5570247 | 91.04100846 |
| 180913A00033 | 9/13/2018 | 3.31 | 9/13/2033 | 9/13/2018 | 122.86344 | 122.8634396 | 122.8634396 | 122.3982399 | 116.367685 | 109.1611638 | 102.5784954 | 96.55702373 | 91.04100716 |
| 180913A00062 | 9/13/2018 | 3.05 | 9/13/2023 | 9/13/2018 | 108.11291 | 108.1129136 | 108.1129136 | 108.1129136 | 107.3804472 | 104.4319333 | 101.5837574 | 98.83189059 | 96.17249211 |
| 180717A00026 | 7/17/2018 | 3.24 | 7/16/2025 | 7/17/2018 | 113.09849 | 113.098489 | 113.098489 | 113.098489 | 111.3688372 | 106.8592667 | 102.5735607 | 98.49924727 | 94.62461784 |
| 180718A00008 | 7/18/2018 | 3.37 | 7/18/2028 | 7/18/2018 | 122.4207 | 122.4206999 | 122.4206999 | 122.4206999 | 116.9022617 | 109.391203 | 102.4455297 | 96.01891801 | 90.06909313 |
| 180809A00031 | 8/9/2018 | 2.98 | 8/9/2021 | 8/9/2018 | 102.76451 | 102.7645051 | 102.7645051 | 102.7645051 | 102.6112782 | 101.5897134 | 100.5886555 | 99.60748985 | 98.64562586 |
| 180809A00032 | 8/9/2018 | 3.08 | 8/9/2023 | 8/9/2018 | 108.11544 | 108.1154382 | 108.1154382 | 108.1154382 | 107.4070734 | 104.4887033 | 101.6680181 | 98.94117903 | 96.3045218 |
| 180809A00034 | 8/9/2018 | 3.08 | 8/9/2023 | 8/9/2018 | 108.11544 | 108.1154382 | 108.1154382 | 108.1154382 | 107.4070734 | 104.4887033 | 101.6680181 | 98.94117903 | 96.3045218 |
| 180813A00045 | 8/13/2018 | 2.89 | 8/13/2025 | 8/13/2018 | 107.41894 | 107.4189373 | 107.4189373 | 107.4189373 | 106.6450175 | 103.9572042 | 101.3716832 | 98.88366959 | 96.48863824 |
| 180702A00022 | 7/2/2018 | 2.84 | 6/30/2023 | 7/2/2018 | 107.28048 | 107.2804821 | 107.2804821 | 107.2804821 | 106.6578089 | 103.9775734 | 101.383137 | 98.87125359 | 96.43881896 |

Classification | Public

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 180702A00040 | 7/2/2018 | 2.9 | 7/2/2021 | 7/2/2018 | 102.42264 | 102.4226429 | 102.4226429 | 102.4226429 | 102.2914269 | 101.372321 | 100.4698397 | 99.58353396 | 98.71297078 |
| 180712A00044 | 7/12/2018 | 3.44 | 7/12/2033 | 7/12/2018 | 122.02142 | 122.0214223 | 122.0214223 | 121.6156087 | 115.7850774 | 108.739399 | 102.2945733 | 96.39108349 | 90.97589524 |
| 180713A00031 | 7/13/2018 | 3.06 | 7/14/2025 | 7/13/2018 | 107.23737 | 107.23737 | 107.23737 | 107.23737 | 106.4912211 | 103.8584955 | 101.3243296 | 98.88418052 | 96.53374841 |
| 180716A00062 | 7/16/2018 | 2.91 | 7/16/2025 | 7/16/2018 | 107.35074 | 107.3507389 | 107.3507389 | 107.3507389 | 106.6006717 | 103.9561526 | 101.4109116 | 98.96036078 | 96.60015807 |
| 180717A00021 | 7/17/2018 | 3.34 | 7/17/2028 | 7/17/2018 | 119.96937 | 119.9693654 | 119.9693654 | 119.9693654 | 115.3277285 | 108.6796089 | 102.5124054 | 96.78758279 | 91.46992546 |
| 180601A00037 | 6/1/2018 | 2.86 | 6/1/2021 | 6/1/2018 | 102.16872 | 102.1687228 | 102.1687228 | 102.1687228 | 102.0535634 | 101.2182951 | 100.3967749 | 99.58866476 | 98.79363779 |
| 180601A00038 | 6/1/2018 | 2.86 | 6/1/2021 | 6/1/2018 | 102.15881 | 102.1588053 | 102.1588053 | 102.1588053 | 102.0442589 | 101.2128106 | 100.3950242 | 99.59056397 | 98.7991053 |
| 180605A00031 | 6/5/2018 | 3.37 | 6/5/2030 | 6/5/2018 | 116.22291 | 116.2229079 | 116.2229079 | 116.2229079 | 112.8200825 | 107.4750858 | 102.4898402 | 97.83592374 | 93.48740833 |
| 180615A00021 | 6/15/2018 | 3.02 | 6/15/2023 | 6/15/2018 | 107.18493 | 107.184926 | 107.184926 | 107.184926 | 106.5787684 | 103.9412458 | 101.3869204 | 98.91269077 | 96.5155888 |
| 180628A00068 | 6/28/2018 | 3.12 | 6/28/2028 | 6/28/2018 | 117.56922 | 117.5692168 | 117.5692168 | 117.5692168 | 113.7306924 | 107.8129235 | 102.3008489 | 97.1630557 | 92.37077242 |
| 180628A00078 | 6/28/2018 | 2.73 | 6/28/2023 | 6/28/2018 | 104.01821 | 104.0182131 | 104.0182131 | 104.0182131 | 103.7232589 | 102.1885705 | 100.6918654 | 99.231892 | 97.80745016 |
| 180402A00013 | 4/2/2018 | 2.99 | 4/3/2028 | 4/2/2018 | 116.38062 | 116.3806232 | 116.3806232 | 116.3806232 | 112.768535 | 107.022768 | 101.6619641 | 96.65696602 | 91.98102093 |
| 180403A00014 | 4/3/2018 | 3.11 | 4/3/2025 | 4/3/2018 | 112.52567 | 112.5256721 | 112.5256721 | 112.5256721 | 110.8797552 | 106.3961018 | 102.1278926 | 98.06351511 | 94.19204995 |
| 180410A00002 | 4/10/2018 | 3.14 | 4/11/2033 | 4/10/2018 | 120.85463 | 120.8546262 | 120.8546262 | 120.5183291 | 114.8673771 | 107.9602297 | 101.6344435 | 95.83318764 | 90.50574196 |
| 180420A00011 | 4/20/2018 | 2.74 | 4/20/2023 | 4/20/2018 | 103.8055 | 103.8055043 | 103.8055043 | 103.8055043 | 103.5352487 | 102.0877649 | 100.6746595 | 99.29482961 | 97.94721719 |
| 180517A00018 | 5/17/2018 | 3.46 | 5/17/2033 | 5/17/2018 | 123.36804 | 123.3680362 | 123.3680362 | 123.0012069 | 117.175223 | 110.0873662 | 103.5994844 | 97.65260461 | 92.19412834 |
| 180517A00024 | 5/17/2018 | 3.46 | 5/17/2033 | 5/17/2018 | 123.36803 | 123.3680322 | 123.3680322 | 123.0012033 | 117.1752215 | 110.0873658 | 103.599485 | 97.65260598 | 92.19413034 |
| 180228A00055 | 2/28/2018 | 3.33 | 2/28/2028 | 2/28/2018 | 119.28423 | 119.2842277 | 119.2842277 | 119.2842277 | 114.9348351 | 108.3867586 | 102.2952374 | 96.62497607 | 91.34361872 |
| 180305A00030 | 3/5/2018 | 3.12 | 3/5/2025 | 3/5/2018 | 112.36653 | 112.3665346 | 112.3665346 | 112.3665346 | 110.7761571 | 106.3639949 | 102.1609675 | 98.15595734 | 94.33850021 |
| 180309A00011 | 3/9/2018 | 3.19 | 3/10/2025 | 3/9/2018 | 112.71756 | 112.717564 | 112.717564 | 112.717564 | 111.1143926 | 106.6799317 | 102.4561096 | 98.43170319 | 94.59615095 |
| 180309A00015 | 3/9/2018 | 3.37 | 3/10/2031 | 3/9/2018 | 117.49524 | 117.4952429 | 117.4952429 | 117.4912553 | 113.4932982 | 107.7380467 | 102.3956748 | 97.43152416 | 92.81415831 |
| 180322A00040 | 3/22/2018 | 3.16 | 3/21/2031 | 3/22/2018 | 120.24613 | 120.2461286 | 120.2461286 | 120.1996495 | 114.8324155 | 108.1398804 | 101.9851919 | 96.31862841 | 91.0954934 |
| 180322A00044 | 3/22/2018 | 3.18 | 3/22/2033 | 3/22/2018 | 121.00267 | 121.0026745 | 121.0026745 | 120.6879546 | 115.0870174 | 108.208109 | 101.9049 | 96.12141854 | 90.8076797 |
| 180206A00045 | 2/6/2018 | 2.71 | 2/6/2023 | 2/6/2018 | 105.80639 | 105.8063932 | 105.8063932 | 105.8063932 | 105.2981293 | 102.9096964 | 100.5900519 | 98.33679614 | 96.14762866 |
| 180206A00046 | 2/6/2018 | 2.72 | 2/6/2023 | 2/6/2018 | 105.92512 | 105.9251249 | 105.9251249 | 105.9251249 | 105.4069669 | 102.9794409 | 100.6221355 | 98.33259627 | 96.10847095 |
| 180206A00048 | 2/6/2018 | 2.72 | 2/6/2023 | 2/6/2018 | 105.92513 | 105.9251253 | 105.9251253 | 105.9251253 | 105.4069673 | 102.9794411 | 100.6221355 | 98.33259615 | 96.10847068 |
| 180215A00034 | 2/15/2018 | 2.9 | 2/15/2023 | 2/15/2018 | 106.42928 | 106.4292789 | 106.4292789 | 106.4292789 | 105.9017777 | 103.4416981 | 101.0532446 | 98.73389372 | 96.48122737 |
| 180220A00107 | 2/20/2018 | 3.13 | 2/20/2025 | 2/20/2018 | 111.71656 | 111.7165607 | 111.7165607 | 111.7165607 | 110.2528064 | 106.0895602 | 102.1191562 | 98.33149515 | 94.71706472 |
| 180223A00012 | 2/23/2018 | 3.33 | 2/24/2031 | 2/23/2018 | 117.11718 | 117.1171765 | 117.1171765 | 117.115055 | 113.1913539 | 107.4927484 | 102.2002123 | 97.27987529 | 92.70099695 |
| 180104A00041 | 1/4/2018 | 3.08 | 1/4/2033 | 1/4/2018 | 131.12998 | 131.1299831 | 131.1299831 | 129.2499632 | 118.581333 | 108.1386699 | 98.81979256 | 90.49302843 | 83.04299752 |
| 180117A00004 | 1/17/2018 | 2.44 | 1/17/2025 | 1/17/2018 | 105.38156 | 105.3815619 | 105.3815619 | 105.3815619 | 104.7931066 | 102.4846488 | 100.2545354 | 98.09944761 | 96.01623194 |
| 180125A00027 | 1/25/2018 | 2.69 | 1/24/2025 | 1/25/2018 | 106.02684 | 106.0268446 | 106.0268446 | 106.0268446 | 105.345427 | 102.8393308 | 100.4236383 | 98.09432717 | 95.84758343 |
| 180126A00011 | 1/26/2018 | 2.72 | 1/26/2028 | 1/26/2018 | 110.30918 | 110.3091761 | 110.3091761 | 110.3091761 | 108.5161468 | 104.5477235 | 100.7894836 | 97.22816506 | 93.85144842 |

Classification | Public

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 180202A00027 | 2/2/2018 | 3.02 | 2/3/2025 | 2/2/2018 | 111.72062 | 111.7206152 | 111.7206152 | 111.7206152 | 110.1901954 | 105.8706019 | 101.7528445 | 97.82634854 | 94.08115078 |
| 180206A00040 | 2/6/2018 | 2.47 | 2/8/2021 | 2/6/2018 | 101.1715 | 101.1715048 | 101.1715048 | 101.1715048 | 101.1116071 | 100.5837065 | 100.061337 | 99.54441184 | 99.03284607 |
| 171207A00025 | 12/7/2017 | 2.91 | 12/7/2027 | 12/7/2017 | 116.83779 | 116.8377851 | 116.8377851 | 116.8377851 | 112.588407 | 106.1405619 | 100.1403753 | 94.55374711 | 89.34936189 |
| 171207A00026 | 12/7/2017 | 2.93 | 12/7/2027 | 12/7/2017 | 117.55843 | 117.558427 | 117.558427 | 117.558427 | 113.0858615 | 106.4096572 | 100.2027789 | 94.42923096 | 89.0559696 |
| 171219A00009 | 12/19/2017 | 2.3 | 12/19/2024 | 12/19/2017 | 105.05058 | 105.0505838 | 105.0505838 | 105.0505838 | 104.464426 | 102.1637966 | 99.94121049 | 97.7933637 | 95.71711661 |
| 171219A00067 | 12/19/2017 | 2.72 | 12/20/2027 | 12/19/2017 | 116.00892 | 116.0089218 | 116.0089218 | 116.0089218 | 112.0478887 | 105.9012988 | 100.1749346 | 94.83697661 | 89.85819991 |
| 180104A00023 | 1/4/2018 | 2.91 | 1/4/2028 | 1/4/2018 | 114.74807 | 114.7480691 | 114.7480691 | 114.7480691 | 111.2651913 | 105.6162387 | 100.3400904 | 95.40906949 | 90.79772861 |
| 180104A00024 | 1/4/2018 | 2.98 | 1/4/2028 | 1/4/2018 | 117.45833 | 117.4583343 | 117.4583343 | 117.4583343 | 113.1089927 | 106.586102 | 100.5198289 | 94.87508952 | 89.61969049 |
| 171204A00009 | 12/4/2017 | 2.23 | 12/4/2024 | 12/4/2017 | 104.79552 | 104.7955244 | 104.7955244 | 104.7955244 | 104.2297421 | 101.9752754 | 99.79615547 | 97.68923136 | 95.65150731 |
| 171204A00024 | 12/4/2017 | 2.71 | 12/4/2024 | 12/4/2017 | 109.95453 | 109.9545288 | 109.9545288 | 109.9545288 | 108.546015 | 104.4170001 | 100.4747305 | 96.70974736 | 93.11311979 |
| 171207A00020 | 12/7/2017 | 2.25 | 12/7/2020 | 12/7/2017 | 100.71444 | 100.7144372 | 100.7144372 | 100.7144372 | 100.6768152 | 100.3211403 | 99.96798736 | 99.61732969 | 99.26914079 |
| 171207A00021 | 12/7/2017 | 2.25 | 12/7/2020 | 12/7/2017 | 100.71321 | 100.7132082 | 100.7132082 | 100.7132082 | 100.6756575 | 100.3205944 | 99.96804716 | 99.61798898 | 99.27039352 |
| 171207A00022 | 12/7/2017 | 2.45 | 12/7/2022 | 12/7/2017 | 104.92334 | 104.9233421 | 104.9233421 | 104.9233421 | 104.4575881 | 102.1949515 | 99.99396024 | 97.85259088 | 95.76889816 |
| 171207A00024 | 12/7/2017 | 2.93 | 12/7/2027 | 12/7/2017 | 117.55843 | 117.558427 | 117.558427 | 117.558427 | 113.0858615 | 106.4096572 | 100.2027789 | 94.42923096 | 89.0559696 |
| 170921A00055 | 9/21/2017 | 2.82 | 9/21/2027 | 9/21/2017 | 115.81113 | 115.8111289 | 115.8111289 | 115.8111289 | 111.8277579 | 105.5695497 | 99.73550569 | 94.29401055 | 89.21598486 |
| 170921A00057 | 9/21/2017 | 2.79 | 9/21/2027 | 9/21/2017 | 114.75824 | 114.7582387 | 114.7582387 | 114.7582387 | 111.1059979 | 105.1982138 | 99.68212118 | 94.52888559 | 89.71196719 |
| 171013A00024 | 10/13/2017 | 2.47 | 10/15/2024 | 10/13/2017 | 108.3094 | 108.309404 | 108.309404 | 108.309404 | 107.0745976 | 103.2816839 | 99.65321087 | 96.18103695 | 92.85747396 |
| 171030A00039 | 10/30/2017 | 2.86 | 10/30/2030 | 10/30/2017 | 113.8821 | 113.8821005 | 113.8821005 | 113.8821005 | 110.3090219 | 104.9181027 | 99.9007514 | 95.22662456 | 90.8681127 |
| 171109A00016 | 11/9/2017 | 2.94 | 11/9/2032 | 11/9/2017 | 129.12046 | 129.120459 | 129.120459 | 127.4212586 | 117.0350575 | 106.8452364 | 97.74150929 | 89.59786183 | 82.30372663 |
| 171201A00016 | 12/1/2017 | 2.91 | 12/2/2030 | 12/1/2017 | 114.40026 | 114.4002589 | 114.4002589 | 114.4002589 | 110.6904024 | 105.1995535 | 100.0945211 | 95.34355397 | 90.91779695 |
| 170829A00066 | 8/29/2017 | 2.11 | 8/29/2024 | 8/29/2017 | 107.75954 | 107.7595445 | 107.7595445 | 107.7595445 | 106.5203074 | 102.6617889 | 98.96953579 | 95.43543856 | 92.05182956 |
| 170901A00030 | 9/1/2017 | 1.82 | 9/1/2022 | 9/1/2017 | 103.32902 | 103.3290231 | 103.3290231 | 103.3290231 | 102.9563149 | 101.0271277 | 99.14555606 | 97.31009312 | 95.51929161 |
| 170921A00048 | 9/21/2017 | 1.95 | 9/21/2020 | 9/21/2017 | 100.24445 | 100.244454 | 100.244454 | 100.244454 | 100.2317106 | 100.0878122 | 99.94433774 | 99.80128549 | 99.65865353 |
| 170921A00052 | 9/21/2017 | 2.21 | 9/21/2022 | 9/21/2017 | 103.93678 | 103.9367758 | 103.9367758 | 103.9367758 | 103.5382707 | 101.5083104 | 99.5295441 | 97.6003156 | 95.71903598 |
| 170921A00053 | 9/21/2017 | 2.22 | 9/21/2022 | 9/21/2017 | 104.0138 | 104.0138023 | 104.0138023 | 104.0138023 | 103.6086076 | 101.549546 | 99.5425863 | 97.58604063 | 95.67828966 |
| 170921A00054 | 9/21/2017 | 2.22 | 9/21/2022 | 9/21/2017 | 104.0138 | 104.0138023 | 104.0138023 | 104.0138023 | 103.6086076 | 101.549546 | 99.5425863 | 97.58604063 | 95.67828966 |
| 170713A00021 | 7/13/2017 | 3.25 | 7/13/2037 | 7/13/2017 | 141.47374 | 141.4737441 | 141.4737441 | 135.6098178 | 121.9863035 | 109.3348844 | 98.37862809 | 88.86705574 | 80.58886972 |
| 170727A00003 | 7/27/2017 | 1.97 | 7/29/2024 | 7/27/2017 | 103.87637 | 103.8763735 | 103.8763735 | 103.8763735 | 103.3884718 | 101.3177284 | 99.31192398 | 97.36848463 | 95.48495785 |
| 170731A00041 | 7/31/2017 | 2.74 | 7/31/2030 | 7/31/2017 | 112.87454 | 112.8745443 | 112.8745443 | 112.8745443 | 109.5098903 | 104.2798502 | 99.40450141 | 94.85561722 | 90.60746529 |
| 170801A00022 | 8/1/2017 | 1.87 | 8/3/2020 | 8/1/2017 | 100.01332 | 100.0133212 | 100.0133212 | 100.0133212 | 100.0127019 | 100.004383 | 99.99607172 | 99.98776806 | 99.97947198 |
| 170802A00013 | 8/2/2017 | 2.5 | 8/2/2024 | 8/2/2017 | 108.43757 | 108.437572 | 108.437572 | 108.437572 | 107.239708 | 103.4379654 | 99.79736842 | 96.31018356 | 92.9690915 |
| 170804A00005 | 8/4/2017 | 1.94 | 8/5/2024 | 8/4/2017 | 103.88911 | 103.8891066 | 103.8891066 | 103.8891066 | 103.3844053 | 101.2736573 | 99.23013055 | 97.25112722 | 95.33407798 |
| 170619A00097 | 6/16/2017 | 2.74 | 6/16/2027 | 6/16/2017 | 113.98257 | 113.982572 | 113.982572 | 113.982572 | 110.613706 | 104.9035166 | 99.5604995 | 94.55844896 | 89.87317915 |

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 170619A00101 | 6/16/2017 | 2.74 | 6/16/2027 | 6/16/2017 | 113.98257 | 113.982572 | 113.982572 | 113.982572 | 110.613706 | 104.9035166 | 99.5604995 | 94.55844896 | 89.87317915 |
| 170707A00007 | 7/7/2017 | 2.65 | 7/8/2024 | 7/7/2017 | 108.87487 | 108.8748743 | 108.8748743 | 108.8748743 | 107.711586 | 103.9555414 | 100.3561908 | 96.90613565 | 93.59836702 |
| 170707A00013 | 7/7/2017 | 2.88 | 7/8/2030 | 7/7/2017 | 113.64327 | 113.6432692 | 113.6432692 | 113.6432692 | 110.2569999 | 104.9918965 | 100.0837947 | 95.50429139 | 91.22749245 |
| 170710A00079 | 7/10/2017 | 2.76 | 7/12/2032 | 7/10/2017 | 116.98847 | 116.988473 | 116.988473 | 116.8330996 | 111.8681277 | 105.5062235 | 99.65213516 | 94.2586837 | 89.28352132 |
| 170711A00010 | 7/11/2017 | 2.38 | 7/12/2027 | 7/11/2017 | 108.32143 | 108.3214251 | 108.3214251 | 108.3214251 | 106.8088544 | 103.151545 | 99.67671343 | 96.37346462 | 93.23163917 |
| 170602A00030 | 6/2/2017 | 1.88 | 6/2/2022 | 6/2/2017 | 103.13323 | 103.1332312 | 103.1332312 | 103.1332312 | 102.8111645 | 101.0549224 | 99.33811476 | 97.65962183 | 96.01836282 |
| 170615A00006 | 6/15/2017 | 2.15 | 6/17/2024 | 6/15/2017 | 103.71709 | 103.7170939 | 103.7170939 | 103.7170939 | 103.265301 | 101.2854387 | 99.3654775 | 97.50311217 | 95.69614357 |
| 170619A00089 | 6/16/2017 | 2.79 | 6/16/2027 | 6/16/2017 | 115.0941 | 115.0941016 | 115.0941016 | 115.0941016 | 111.4235298 | 105.375183 | 99.72415895 | 94.44175994 | 89.50151673 |
| 170619A00092 | 6/16/2017 | 2.79 | 6/16/2027 | 6/16/2017 | 115.09409 | 115.0940891 | 115.0940891 | 115.0940891 | 111.4235208 | 105.375179 | 99.72415961 | 94.44176486 | 89.5015256 |
| 170619A00095 | 6/16/2017 | 2.79 | 6/16/2027 | 6/16/2017 | 115.0941 | 115.0941016 | 115.0941016 | 115.0941016 | 111.4235298 | 105.375183 | 99.72415895 | 94.44175994 | 89.50151673 |
| 170619A00096 | 6/16/2017 | 2.79 | 6/16/2027 | 6/16/2017 | 115.0941 | 115.0941016 | 115.0941016 | 115.0941016 | 111.4235298 | 105.375183 | 99.72415895 | 94.44175994 | 89.50151673 |
| 170512A00024 | 5/12/2017 | 2.88 | 5/13/2030 | 5/12/2017 | 113.41031 | 113.4103071 | 113.4103071 | 113.4103071 | 110.1467702 | 104.9688256 | 100.1368647 | 95.62373934 | 91.40466875 |
| 170518A00027 | 5/18/2017 | 2.11 | 5/18/2022 | 5/18/2017 | 103.21059 | 103.2105945 | 103.2105945 | 103.2105945 | 102.8938484 | 101.1570446 | 99.45853993 | 97.79721508 | 96.17199263 |
| 170524A00027 | 5/24/2017 | 2.32 | 5/24/2027 | 5/24/2017 | 107.9013 | 107.9012959 | 107.9012959 | 107.9012959 | 106.4716796 | 102.9083639 | 99.51922145 | 96.29404569 | 93.22330795 |
| 170524A00037 | 5/24/2017 | 2.46 | 5/24/2024 | 5/24/2017 | 107.55819 | 107.5581869 | 107.5581869 | 107.5581869 | 106.5299774 | 103.0637297 | 99.73609361 | 96.54072868 | 93.4716201 |
| 170526A00017 | 5/26/2017 | 2.16 | 5/28/2024 | 5/26/2017 | 103.65703 | 103.6570269 | 103.6570269 | 103.6570269 | 103.2218121 | 101.284051 | 99.40392876 | 97.57925622 | 95.80794425 |
| 170602A00019 | 6/2/2017 | 2.42 | 6/3/2024 | 6/2/2017 | 107.81014 | 107.8101378 | 107.8101378 | 107.8101378 | 106.7060796 | 103.0595821 | 99.56194768 | 96.20630285 | 92.98612739 |
| 170406A00037 | 4/6/2017 | 3.07 | 4/6/2032 | 4/6/2017 | 117.35728 | 117.3572786 | 117.3572786 | 117.2469202 | 112.4763845 | 106.2379201 | 100.4865093 | 95.17782929 | 90.27200734 |
| 170407A00001 | 4/6/2017 | 2.97 | 4/6/2027 | 4/6/2017 | 114.97538 | 114.9753756 | 114.9753756 | 114.9753756 | 111.7782726 | 106.1474706 | 100.8699861 | 95.92113652 | 91.27811082 |
| 170421A00011 | 4/21/2017 | 2.83 | 4/22/2030 | 4/21/2017 | 113.02625 | 113.0262548 | 113.0262548 | 113.0262548 | 109.830363 | 104.7079985 | 99.92539677 | 95.45608188 | 91.27587148 |
| 170504A00012 | 5/4/2017 | 2.28 | 5/4/2026 | 5/4/2017 | 106.60946 | 106.6094553 | 106.6094553 | 106.6094553 | 105.6040122 | 102.5668208 | 99.65930342 | 96.87474001 | 94.20680976 |
| 170504A00049 | 5/4/2017 | 2.63 | 5/6/2024 | 5/4/2017 | 108.43175 | 108.4317504 | 108.4317504 | 108.4317504 | 107.3637774 | 103.7662987 | 100.3131007 | 96.99754247 | 93.81333076 |
| 170511A00011 | 5/11/2017 | 2.41 | 5/11/2027 | 5/11/2017 | 108.23132 | 108.231319 | 108.231319 | 108.231319 | 106.798043 | 103.2242741 | 99.82515148 | 96.59044332 | 93.51059709 |
| 170406A00027 | 4/6/2017 | 2.61 | 4/8/2024 | 4/6/2017 | 108.06342 | 108.0634213 | 108.0634213 | 108.0634213 | 107.0580306 | 103.5902904 | 100.2585765 | 97.05673299 | 93.97892144 |
| 170406A00029 | 4/6/2017 | 3.01 | 4/6/2027 | 4/6/2017 | 116.06011 | 116.0601125 | 116.0601125 | 116.0601125 | 112.5844904 | 106.6278022 | 101.0527148 | 95.83225799 | 90.94152195 |
| 170406A00032 | 4/6/2017 | 3.01 | 4/6/2027 | 4/6/2017 | 116.06011 | 116.0601125 | 116.0601125 | 116.0601125 | 112.5844904 | 106.6278022 | 101.0527148 | 95.83225799 | 90.94152195 |
| 170406A00033 | 4/6/2017 | 3.01 | 4/6/2027 | 4/6/2017 | 116.06011 | 116.06011 | 116.06011 | 116.06011 | 112.5844891 | 106.6278019 | 101.0527153 | 95.83225919 | 90.94152378 |
| 170406A00034 | 4/6/2017 | 3.01 | 4/6/2027 | 4/6/2017 | 116.06011 | 116.06011 | 116.06011 | 116.06011 | 112.5844891 | 106.6278019 | 101.0527153 | 95.83225919 | 90.94152378 |
| 170406A00036 | 4/6/2017 | 3.07 | 4/6/2032 | 4/6/2017 | 117.35728 | 117.3572822 | 117.3572822 | 117.2469236 | 112.4763857 | 106.23792 | 100.4865083 | 95.17782739 | 90.27200475 |
| 170317A00044 | 3/17/2017 | 3.11 | 3/17/2027 | 3/17/2017 | 115.6703 | 115.6703015 | 115.6703015 | 115.6703015 | 112.5158056 | 106.893328 | 101.6211174 | 96.67487349 | 92.0321251 |
| 170322A00033 | 3/22/2017 | 3.61 | 3/24/2042 | 3/22/2017 | 142.82936 | 142.8293638 | 142.8293638 | 136.9904169 | 123.7489121 | 111.2118732 | 100.3534349 | 90.91639664 | 82.6863441 |
| 170330A00060 | 3/30/2017 | 2.06 | 3/30/2022 | 3/30/2017 | 103.13839 | 103.138386 | 103.138386 | 103.138386 | 102.8533863 | 101.2547969 | 99.68946214 | 98.15640231 | 96.65467622 |
| 170406A00023 | 4/6/2017 | 2.24 | 4/6/2022 | 4/6/2017 | 103.21121 | 103.211213 | 103.211213 | 103.211213 | 102.9191091 | 101.2880034 | 99.69109221 | 98.1273593 | 96.59582877 |

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 170406A00024 | 4/6/2017 | 2.61 | 4/8/2024 | 4/6/2017 | 108.06342 | 108.0634213 | 108.0634213 | 108.0634213 | 107.0580306 | 103.5902904 | 100.2585765 | 97.05673299 | 93.97892144 |
| 170406A00026 | 4/6/2017 | 2.61 | 4/8/2024 | 4/6/2017 | 108.06341 | 108.0634149 | 108.0634149 | 108.0634149 | 107.0580251 | 103.5902876 | 100.2585764 | 97.05673536 | 93.97892619 |
| 170309A00042 | 3/9/2017 | 2.18 | 3/11/2024 | 3/9/2017 | 103.96231 | 103.9623125 | 103.9623125 | 103.9623125 | 103.5411583 | 101.6346885 | 99.78404007 | 97.9871213 | 96.24193479 |
| 170310A00008 | 3/10/2017 | 3.17 | 3/11/2030 | 3/10/2017 | 114.7257 | 114.7257041 | 114.7257041 | 114.7257041 | 111.5401412 | 106.3802302 | 101.5599771 | 97.05310492 | 92.8355977 |
| 170313A00045 | 3/13/2017 | 3.22 | 3/15/2032 | 3/13/2017 | 118.2141 | 118.2141036 | 118.2141036 | 118.1157532 | 113.3687968 | 107.1219839 | 101.3598688 | 96.03860218 | 91.11871289 |
| 170317A00039 | 3/17/2017 | 2.73 | 3/18/2024 | 3/17/2017 | 108.36349 | 108.3634947 | 108.3634947 | 108.3634947 | 107.3845082 | 103.9577497 | 100.6637187 | 97.496487 | 94.45042773 |
| 170317A00040 | 3/17/2017 | 2.74 | 3/18/2024 | 3/17/2017 | 108.53528 | 108.5352793 | 108.5352793 | 108.5352793 | 107.5354756 | 104.0518496 | 100.7038251 | 97.48533046 | 94.39060332 |
| 170317A00041 | 3/17/2017 | 2.73 | 3/18/2024 | 3/17/2017 | 108.36349 | 108.3634947 | 108.3634947 | 108.3634947 | 107.3845082 | 103.9577497 | 100.6637187 | 97.496487 | 94.45042773 |
| 170301A00031 | 3/1/2017 | 2.11 | 3/1/2024 | 3/1/2017 | 103.74273 | 103.7427278 | 103.7427278 | 103.7427278 | 103.337362 | 101.4749255 | 99.66612479 | 97.90897645 | 96.20158537 |
| 170303A00004 | 3/3/2017 | 2.8 | 3/4/2024 | 3/3/2017 | 108.66095 | 108.6609537 | 108.6609537 | 108.6609537 | 107.6795285 | 104.2252865 | 100.9044028 | 97.71095711 | 94.6393278 |
| 170303A00011 | 3/3/2017 | 3.09 | 3/4/2030 | 3/3/2017 | 114.29665 | 114.2966452 | 114.2966452 | 114.2966452 | 111.1233027 | 105.9827888 | 101.1806389 | 96.69067833 | 92.48898386 |
| 170307A00013 | 3/7/2017 | 2.33 | 3/7/2024 | 3/7/2017 | 103.90369 | 103.9036904 | 103.9036904 | 103.9036904 | 103.4842614 | 101.5844795 | 99.74017722 | 97.94928093 | 96.20981028 |
| 170309A00014 | 3/9/2017 | 2.58 | 3/9/2027 | 3/9/2017 | 108.63936 | 108.6393562 | 108.6393562 | 108.6393562 | 107.2766413 | 103.7706626 | 100.4324242 | 97.25228875 | 94.22124717 |
| 170309A00016 | 3/9/2017 | 2.39 | 3/8/2024 | 3/9/2017 | 104.37089 | 104.3708876 | 104.3708876 | 104.3708876 | 103.9481978 | 102.0344557 | 100.1767395 | 98.37295035 | 96.62108377 |
| 170221A00028 | 2/21/2017 | 2.31 | 2/18/2022 | 2/21/2017 | 103.09564 | 103.0956406 | 103.0956406 | 103.0956406 | 102.8301795 | 101.3202873 | 99.84052934 | 98.39006845 | 96.9680983 |
| 170221A00033 | 2/21/2017 | 2.31 | 2/18/2022 | 2/21/2017 | 103.09564 | 103.0956406 | 103.0956406 | 103.0956406 | 102.8301795 | 101.3202873 | 99.84052934 | 98.39006845 | 96.9680983 |
| 170224A00007 | 2/24/2017 | 2.02 | 2/24/2021 | 2/24/2017 | 101.00848 | 101.0084841 | 101.0084841 | 101.0084841 | 100.9418188 | 100.3718029 | 99.80824332 | 99.25103073 | 98.7000582 |
| 170224A00008 | 2/24/2017 | 2.18 | 2/24/2022 | 2/24/2017 | 102.92493 | 102.9249313 | 102.9249313 | 102.9249313 | 102.6564314 | 101.1318848 | 99.63794304 | 98.17374786 | 96.73847278 |
| 170224A00009 | 2/24/2017 | 2.39 | 2/24/2023 | 2/24/2017 | 105.19036 | 105.1903623 | 105.1903623 | 105.1903623 | 104.6612481 | 102.2053346 | 99.8214234 | 97.50695676 | 95.25948531 |
| 170224A00012 | 2/24/2017 | 2.92 | 2/25/2030 | 2/24/2017 | 113.27278 | 113.2727756 | 113.2727756 | 113.2727756 | 110.18279 | 105.1262541 | 100.4001164 | 95.97899379 | 91.83967233 |
| 170127A00008 | 1/27/2017 | 3.05 | 1/28/2030 | 1/27/2017 | 113.83527 | 113.8352747 | 113.8352747 | 113.8352747 | 110.786132 | 105.7434495 | 101.0277545 | 96.61410635 | 92.47968162 |
| 170201A00016 | 2/1/2017 | 2.49 | 2/1/2024 | 2/1/2017 | 108.02094 | 108.0209397 | 108.0209397 | 108.0209397 | 107.0827174 | 103.7113158 | 100.4680334 | 97.3472791 | 94.34373788 |
| 170203A00022 | 2/3/2017 | 2.99 | 2/4/2030 | 2/3/2017 | 113.6409 | 113.6409019 | 113.6409019 | 113.6409019 | 110.542007 | 105.4695949 | 100.7285555 | 96.29343721 | 92.14096281 |
| 170207A00055 | 2/7/2017 | 2.36 | 2/8/2027 | 2/7/2017 | 107.7499 | 107.7499047 | 107.7499047 | 107.7499047 | 106.4348122 | 102.9978011 | 99.72347406 | 96.60257556 | 93.62644824 |
| 170210A00007 | 2/10/2017 | 2.96 | 2/11/2030 | 2/10/2017 | 113.48295 | 113.4829494 | 113.4829494 | 113.4829494 | 110.3879658 | 105.3223998 | 100.5877809 | 96.1586877 | 92.01187143 |
| 170217A00012 | 2/17/2017 | 2.97 | 2/19/2030 | 2/17/2017 | 113.47152 | 113.4715202 | 113.4715202 | 113.4715202 | 110.3978327 | 105.35385 | 100.6387246 | 96.22722607 | 92.09627853 |
| 170113A00028 | 1/13/2017 | 2.92 | 1/14/2030 | 1/13/2017 | 113.15353 | 113.1535294 | 113.1535294 | 113.1535294 | 110.1232584 | 105.1109701 | 100.4236623 | 96.03655156 | 91.92695766 |
| 170120A00027 | 1/20/2017 | 2.35 | 1/20/2022 | 1/20/2017 | 103.00112 | 103.0011205 | 103.0011205 | 103.0011205 | 102.7516714 | 101.3200241 | 99.91594333 | 98.53869986 | 97.1875895 |
| 170120A00028 | 1/20/2017 | 2.34 | 1/20/2022 | 1/20/2017 | 102.95664 | 102.956644 | 102.956644 | 102.956644 | 102.7101215 | 101.29279 | 99.9027177 | 98.5391831 | 97.20148962 |
| 170124A00017 | 1/24/2017 | 2.82 | 1/23/2032 | 1/24/2017 | 116.64124 | 116.6412438 | 116.6412438 | 116.5665035 | 111.9644123 | 105.8428917 | 100.1921446 | 94.96996216 | 90.138313 |
| 170126A00003 | 1/26/2017 | 2.86 | 1/26/2027 | 1/26/2017 | 115.07354 | 115.0735433 | 115.0735433 | 115.0735433 | 112.0522506 | 106.5230912 | 101.3335942 | 96.46052926 | 91.88238866 |
| 170126A00004 | 1/26/2017 | 2.13 | 1/26/2022 | 1/26/2017 | 102.92796 | 102.9279606 | 102.9279606 | 102.9279606 | 102.6778074 | 101.2428415 | 99.83581666 | 98.45598437 | 97.10262256 |
| 170103A00025 | 1/3/2017 | 3.09 | 1/3/2030 | 1/3/2017 | 114.04332 | 114.0433228 | 114.0433228 | 114.0433228 | 110.9899285 | 105.9386019 | 101.2147511 | 96.79340588 | 92.65171488 |

Classification | Public

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 170105A00010 | 1/5/2017 | 2.61 | 1/5/2027 | 1/5/2017 | 107.85179 | 107.8517917 | 107.8517917 | 107.8517917 | 106.5780727 | 103.1913994 | 99.96280803 | 96.88341932 | 93.94492085 |
| 170105A00012 | 1/5/2017 | 2.68 | 1/5/2024 | 1/5/2017 | 107.88628 | 107.8862824 | 107.8862824 | 107.8862824 | 106.9881199 | 103.6949048 | 100.5241195 | 97.47054081 | 94.52919704 |
| 170106A00021 | 1/6/2017 | 2.99 | 1/7/2030 | 1/6/2017 | 113.51921 | 113.5192096 | 113.5192096 | 113.5192096 | 110.479563 | 105.4512891 | 100.7490106 | 96.34786885 | 92.22511463 |
| 170106A00030 | 1/6/2017 | 2.39 | 1/6/2027 | 1/6/2017 | 107.75526 | 107.7552571 | 107.7552571 | 107.7552571 | 106.4763274 | 103.0797096 | 99.84210531 | 96.75455892 | 93.80868835 |
| 170112A00015 | 1/12/2017 | 2.32 | 1/12/2027 | 1/12/2017 | 107.51131 | 107.5113053 | 107.5113053 | 107.5113053 | 106.2349292 | 102.8457734 | 99.61529981 | 96.53457034 | 93.59521909 |
| 161214A00034 | 12/14/2016 | 2.65 | 12/14/2026 | 12/14/2016 | 107.88875 | 107.8887465 | 107.8887465 | 107.8887465 | 106.6493147 | 103.3015486 | 100.1083575 | 97.06114415 | 94.15185542 |
| 161216A00008 | 12/16/2016 | 3.16 | 12/17/2029 | 12/16/2016 | 114.28225 | 114.2822509 | 114.2822509 | 114.2822509 | 111.2777555 | 106.254729 | 101.5548832 | 97.15374987 | 93.02892351 |
| 161222A00013 | 12/22/2016 | 2.93 | 12/22/2026 | 12/22/2016 | 115.27246 | 115.2724639 | 115.2724639 | 115.2724639 | 112.3429233 | 106.8667483 | 101.722689 | 96.88832823 | 92.34288859 |
| 161227A00073 | 12/27/2016 | 2.83 | 12/28/2026 | 12/27/2016 | 113.18674 | 113.1867369 | 113.1867369 | 113.1867369 | 110.7198332 | 105.8322898 | 101.2281135 | 96.88865592 | 92.79661173 |
| 161229A00018 | 12/29/2016 | 2.46 | 12/29/2026 | 12/29/2016 | 107.89836 | 107.8983601 | 107.8983601 | 107.8983601 | 106.6519368 | 103.2906487 | 100.085056 | 97.02647311 | 94.10676568 |
| 161229A00019 | 12/29/2016 | 2.46 | 12/29/2026 | 12/29/2016 | 107.89836 | 107.8983575 | 107.8983575 | 107.8983575 | 106.6519348 | 103.2906479 | 100.0850562 | 97.02647428 | 94.10676773 |
| 161125A00010 | 11/25/2016 | 2.86 | 11/26/2029 | 11/25/2016 | 112.61031 | 112.6103101 | 112.6103101 | 112.6103101 | 109.7036849 | 104.79236 | 100.1946216 | 95.88689771 | 91.84758994 |
| 161128A00006 | 11/28/2016 | 1.93 | 11/29/2021 | 11/28/2016 | 102.3222 | 102.3222009 | 102.3222009 | 102.3222009 | 102.1064103 | 100.8416991 | 99.59958237 | 98.3794954 | 97.18089192 |
| 161202A00001 | 12/2/2016 | 2.65 | 12/1/2023 | 12/2/2016 | 107.57768 | 107.5776753 | 107.5776753 | 107.5776753 | 106.7262965 | 103.5220771 | 100.4340517 | 97.45738646 | 94.5874746 |
| 161202A00003 | 12/2/2016 | 2.94 | 12/3/2029 | 12/2/2016 | 113.13797 | 113.1379657 | 113.1379657 | 113.1379657 | 110.164079 | 105.1914644 | 100.5387542 | 96.18173219 | 92.09822291 |
| 161207A00014 | 12/7/2016 | 2.75 | 12/8/2031 | 12/7/2016 | 116.06703 | 116.0670269 | 116.0670269 | 116.0038515 | 111.4834159 | 105.429388 | 99.83794666 | 94.66787386 | 89.88200692 |
| 161212A00010 | 12/12/2016 | 3 | 12/12/2029 | 12/12/2016 | 113.44971 | 113.4497093 | 113.4497093 | 113.4497093 | 110.4672233 | 105.4807637 | 100.8151224 | 96.44601131 | 92.3511898 |
| 161103A00013 | 11/3/2016 | 1.69 | 11/3/2021 | 11/3/2016 | 101.76204 | 101.7620368 | 101.7620368 | 101.7620368 | 101.5544426 | 100.3215869 | 99.1178888 | 97.94231504 | 96.79388096 |
| 161104A00002 | 11/4/2016 | 2.26 | 11/5/2029 | 11/4/2016 | 109.5625 | 109.5625039 | 109.5625039 | 109.5625039 | 106.7350961 | 101.9566734 | 97.48330959 | 93.29207816 | 89.36197187 |
| 161110A00010 | 11/10/2016 | 2.53 | 11/9/2029 | 11/10/2016 | 110.92719 | 110.9271852 | 110.9271852 | 110.9271852 | 108.0645826 | 103.2267777 | 98.69782651 | 94.45451672 | 90.47557917 |
| 161116A00005 | 11/16/2016 | 2.01 | 11/16/2021 | 11/16/2016 | 102.05631 | 102.0563132 | 102.0563132 | 102.0563132 | 101.8589518 | 100.6803435 | 99.52573756 | 98.39439663 | 97.28561388 |
| 161116A00006 | 11/16/2016 | 2.39 | 11/16/2026 | 11/16/2016 | 106.90408 | 106.9040849 | 106.9040849 | 106.9040849 | 105.7099068 | 102.4325791 | 99.30490619 | 96.31864665 | 93.46607624 |
| 161118A00012 | 11/18/2016 | 2.72 | 11/19/2029 | 11/18/2016 | 111.89432 | 111.8943164 | 111.8943164 | 111.8943164 | 109.0064134 | 104.1263622 | 99.55788456 | 95.27756142 | 91.26393442 |
| 161014A00019 | 10/14/2016 | 2.39 | 10/15/2031 | 10/14/2016 | 112.36372 | 112.3637227 | 112.3637227 | 112.3212152 | 108.0897921 | 102.329789 | 97.00275714 | 92.07069768 | 87.49929723 |
| 161014A00026 | 10/14/2016 | 2.16 | 10/14/2031 | 10/14/2016 | 112.14906 | 112.1490569 | 112.1490569 | 112.1061394 | 107.8517705 | 102.0736034 | 96.73133501 | 91.78659586 | 87.20474811 |
| 161014A00029 | 10/14/2016 | 2.51 | 10/15/2031 | 10/14/2016 | 114.3204 | 114.3204029 | 114.3204029 | 114.2766346 | 109.9403773 | 104.050725 | 98.60536737 | 93.56519656 | 88.89490813 |
| 161021A00004 | 10/21/2016 | 2.23 | 10/22/2029 | 10/21/2016 | 109.32706 | 109.3270606 | 109.3270606 | 109.3270606 | 106.5575521 | 101.8266909 | 97.3955434 | 93.24174625 | 89.34479544 |
| 161028A00011 | 10/28/2016 | 2.32 | 10/29/2029 | 10/28/2016 | 109.77656 | 109.7765559 | 109.7765559 | 109.7765559 | 106.9953828 | 102.2449825 | 97.79555002 | 93.62462648 | 89.71162069 |
| 161102A00014 | 11/2/2016 | 1.99 | 11/2/2023 | 11/2/2016 | 105.30732 | 105.3073173 | 105.3073173 | 105.3073173 | 104.5042498 | 101.4206222 | 98.44667444 | 95.57782423 | 92.80971266 |
| 161004A00070 | 10/4/2016 | 1.92 | 10/4/2023 | 10/4/2016 | 104.96721 | 104.9672079 | 104.9672079 | 104.9672079 | 104.2010571 | 101.1925653 | 98.28900326 | 95.48607121 | 92.77967435 |
| 161005A00016 | 10/5/2016 | 2.32 | 10/6/2031 | 10/5/2016 | 111.93337 | 111.9333724 | 111.9333724 | 111.8912937 | 107.6761623 | 101.9382765 | 96.63168071 | 91.71852598 | 87.16463425 |
| 161005A00031 | 10/5/2016 | 1.43 | 10/5/2021 | 10/5/2016 | 100.88281 | 100.8828093 | 100.8828093 | 100.8828093 | 100.7896583 | 100.1205241 | 99.46265599 | 98.8157393 | 98.17947181 |
| 161007A00012 | 10/7/2016 | 2.27 | 10/9/2029 | 10/7/2016 | 109.52582 | 109.5258231 | 109.5258231 | 109.5258231 | 106.7519323 | 102.0127704 | 97.57381352 | 93.41266497 | 89.50879009 |

Classification | Public

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 161012A00011 | 10/12/2016 | 1.53 | 10/12/2023 | 10/12/2016 | 102.51131 | 102.5113082 | 102.5113082 | 102.5113082 | 102.1405815 | 100.3818808 | 98.67253851 | 97.01072757 | 95.39470481 |
| 161014A00008 | 10/14/2016 | 2.28 | 10/15/2029 | 10/14/2016 | 109.57603 | 109.5760306 | 109.5760306 | 109.5760306 | 106.8005915 | 102.0591438 | 97.61806099 | 93.45493299 | 89.54921285 |
| 160909A00018 | 9/9/2016 | 2.22 | 9/10/2029 | 9/9/2016 | 109.19184 | 109.1918418 | 109.1918418 | 109.1918418 | 106.4784028 | 101.7913442 | 97.39886187 | 93.27914179 | 89.41217065 |
| 160916A00015 | 9/16/2016 | 2.2 | 9/17/2029 | 9/16/2016 | 109.09354 | 109.0935409 | 109.0935409 | 109.0935409 | 106.3821915 | 101.6991797 | 97.31050886 | 93.19438056 | 89.33079587 |
| 160923A00009 | 9/23/2016 | 2.24 | 9/23/2031 | 9/23/2016 | 111.35751 | 111.3575104 | 111.3575104 | 111.3229593 | 107.1857355 | 101.5127696 | 96.26349913 | 91.40096641 | 86.89177734 |
| 160923A00020 | 9/23/2016 | 2.15 | 9/24/2029 | 9/23/2016 | 108.84745 | 108.8474534 | 108.8474534 | 108.8474534 | 106.1418421 | 101.4691993 | 97.09026603 | 92.98328844 | 89.12830902 |
| 160930A00025 | 9/30/2016 | 1.66 | 9/30/2027 | 9/30/2016 | 105.76212 | 105.7621154 | 105.7621154 | 105.7621154 | 104.2056124 | 100.5555333 | 97.09136254 | 93.80178568 | 90.67626614 |
| 160930A00047 | 9/30/2016 | 2.08 | 10/1/2029 | 9/30/2016 | 108.50328 | 108.5032802 | 108.5032802 | 108.5032802 | 105.8058909 | 101.1478423 | 96.78260326 | 92.6884849 | 88.84558948 |
| 160908A00032 | 9/8/2016 | 2.17 | 9/8/2026 | 9/8/2016 | 109.58493 | 109.5849318 | 109.5849318 | 109.5849318 | 107.0526247 | 102.0107692 | 97.26339254 | 92.79130456 | 88.57667696 |
| 160908A00033 | 9/8/2016 | 2.17 | 9/8/2026 | 9/8/2016 | 109.58493 | 109.5849318 | 109.5849318 | 109.5849318 | 107.0526247 | 102.0107692 | 97.26339254 | 92.79130456 | 88.57667696 |
| 160908A00034 | 9/8/2016 | 2.17 | 9/8/2026 | 9/8/2016 | 109.58493 | 109.5849318 | 109.5849318 | 109.5849318 | 107.0526247 | 102.0107692 | 97.26339254 | 92.79130456 | 88.57667696 |
| 160908A00035 | 9/8/2016 | 2.3 | 9/8/2031 | 9/8/2016 | 111.72142 | 111.7214211 | 111.7214211 | 111.6871922 | 107.53687 | 101.8456814 | 96.57950793 | 91.70128143 | 87.17750761 |
| 160908A00036 | 9/8/2016 | 2.3 | 9/8/2031 | 9/8/2016 | 111.72143 | 111.7214272 | 111.7214272 | 111.6871983 | 107.5368727 | 101.8456812 | 96.57950515 | 91.70127633 | 87.17750045 |
| 160908A00037 | 9/8/2016 | 1.4 | 9/8/2023 | 9/8/2016 | 102.38784 | 102.3878389 | 102.3878389 | 102.3878389 | 101.997874 | 100.1673344 | 98.38851073 | 96.65953231 | 94.9786101 |
| 160908A00025 | 9/8/2016 | 2.21 | 9/8/2026 | 9/8/2016 | 110.32426 | 110.3242649 | 110.3242649 | 110.3242649 | 107.5839035 | 102.2631552 | 97.25943644 | 92.55185966 | 88.12102979 |
| 160908A00026 | 9/8/2016 | 2.21 | 9/8/2026 | 9/8/2016 | 110.32426 | 110.3242649 | 110.3242649 | 110.3242649 | 107.5839035 | 102.2631552 | 97.25943644 | 92.55185966 | 88.12102979 |
| 160908A00027 | 9/8/2016 | 2.21 | 9/8/2026 | 9/8/2016 | 110.32427 | 110.3242673 | 110.3242673 | 110.3242673 | 107.5839046 | 102.2631551 | 97.25943522 | 92.55185745 | 88.12102671 |
| 160908A00028 | 9/8/2016 | 2.21 | 9/8/2026 | 9/8/2016 | 110.32427 | 110.3242673 | 110.3242673 | 110.3242673 | 107.5839046 | 102.2631551 | 97.25943522 | 92.55185745 | 88.12102671 |
| 160908A00030 | 9/8/2016 | 2.21 | 9/8/2026 | 9/8/2016 | 110.32426 | 110.3242649 | 110.3242649 | 110.3242649 | 107.5839035 | 102.2631552 | 97.25943644 | 92.55185966 | 88.12102979 |
| 160908A00031 | 9/8/2016 | 2.21 | 9/8/2026 | 9/8/2016 | 110.32426 | 110.3242649 | 110.3242649 | 110.3242649 | 107.5839035 | 102.2631552 | 97.25943644 | 92.55185966 | 88.12102979 |
| 160908A00016 | 9/8/2016 | 1.87 | 9/8/2023 | 9/8/2016 | 104.64257 | 104.642573 | 104.642573 | 104.642573 | 103.9215968 | 101.0230687 | 98.2234599 | 95.51880107 | 92.90530771 |
| 160908A00017 | 9/8/2016 | 1.87 | 9/8/2023 | 9/8/2016 | 104.64257 | 104.642573 | 104.642573 | 104.642573 | 103.9215968 | 101.0230687 | 98.2234599 | 95.51880107 | 92.90530771 |
| 160908A00019 | 9/8/2016 | 1.87 | 9/8/2023 | 9/8/2016 | 104.64257 | 104.642573 | 104.642573 | 104.642573 | 103.9215968 | 101.0230687 | 98.2234599 | 95.51880107 | 92.90530771 |
| 160908A00022 | 9/8/2016 | 2.21 | 9/8/2026 | 9/8/2016 | 110.32427 | 110.3242673 | 110.3242673 | 110.3242673 | 107.5839046 | 102.2631551 | 97.25943522 | 92.55185745 | 88.12102671 |
| 160908A00023 | 9/8/2016 | 2.21 | 9/8/2026 | 9/8/2016 | 110.32426 | 110.3242649 | 110.3242649 | 110.3242649 | 107.5839035 | 102.2631552 | 97.25943644 | 92.55185966 | 88.12102979 |
| 160908A00024 | 9/8/2016 | 2.21 | 9/8/2026 | 9/8/2016 | 110.32426 | 110.3242649 | 110.3242649 | 110.3242649 | 107.5839035 | 102.2631552 | 97.25943644 | 92.55185966 | 88.12102979 |
| 160826A00005 | 8/26/2016 | 2.12 | 8/27/2029 | 8/26/2016 | 108.61976 | 108.6197633 | 108.6197633 | 108.6197633 | 105.9710799 | 101.3457506 | 97.00885834 | 92.93919888 | 89.11730658 |
| 160902A00004 | 9/2/2016 | 2.15 | 9/4/2029 | 9/2/2016 | 108.76627 | 108.7662738 | 108.7662738 | 108.7662738 | 106.1138508 | 101.4822243 | 97.13943696 | 93.06425405 | 89.23718201 |
| 160906A00027 | 9/6/2016 | 2.03 | 9/8/2031 | 9/6/2016 | 111.26279 | 111.2627929 | 111.2627929 | 111.2282854 | 107.0646759 | 101.3681314 | 96.09853087 | 91.21852721 | 86.69438388 |
| 160907A00041 | 9/7/2016 | 1.83 | 9/7/2023 | 9/7/2016 | 104.58537 | 104.5853718 | 104.5853718 | 104.5853718 | 103.8531402 | 100.9176637 | 98.08273808 | 95.3443232 | 92.69856701 |
| 160907A00049 | 9/7/2016 | 1.41 | 9/9/2024 | 9/7/2016 | 102.80381 | 102.8038061 | 102.8038061 | 102.8038061 | 102.2863444 | 100.1566953 | 98.09597493 | 96.1013786 | 94.17023673 |
| 160908A00015 | 9/8/2016 | 1.87 | 9/8/2023 | 9/8/2016 | 104.64257 | 104.642573 | 104.642573 | 104.642573 | 103.9215968 | 101.0230687 | 98.2234599 | 95.51880107 | 92.90530771 |
| 160810A00030 | 8/10/2016 | 2.24 | 8/11/2031 | 8/10/2016 | 111.27045 | 111.2704543 | 111.2704543 | 111.2433566 | 107.1665913 | 101.5341104 | 96.31952467 | 91.486613 | 87.0026258 |

Classification | Public

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 160810A00035 | 8/10/2016 | 2.1 | 8/10/2026 | 8/10/2016 | 109.11161 | 109.1116071 | 109.1116071 | 109.1116071 | 106.660654 | 101.688127 | 97.00317431 | 92.5872385 | 88.42306557 |
| 160812A00006 | 8/12/2016 | 2.16 | 8/12/2026 | 8/12/2016 | 110.438 | 110.4379956 | 110.4379956 | 110.4379956 | 107.9451632 | 102.8958009 | 98.13928448 | 93.65666343 | 89.43032208 |
| 160812A00016 | 8/12/2016 | 2.06 | 8/13/2029 | 8/12/2016 | 108.32682 | 108.3268223 | 108.3268223 | 108.3268223 | 105.6859023 | 101.0733003 | 96.74830785 | 92.68978521 | 88.8783253 |
| 160819A00012 | 8/19/2016 | 2.14 | 8/20/2029 | 8/19/2016 | 108.71695 | 108.7169482 | 108.7169482 | 108.7169482 | 106.0662381 | 101.4369311 | 97.09629117 | 93.023099 | 89.19787487 |
| 160824A00019 | 8/24/2016 | 1.98 | 8/25/2031 | 8/24/2016 | 110.87547 | 110.8754691 | 110.8754691 | 110.8477248 | 106.7554856 | 101.1144797 | 95.89353394 | 91.05612759 | 86.56925 |
| 160810A00022 | 8/10/2016 | 1.53 | 8/10/2021 | 8/10/2016 | 101.27923 | 101.2792328 | 101.2792328 | 101.2792328 | 101.1272705 | 100.1160842 | 99.12526343 | 98.15419575 | 97.20229312 |
| 160810A00024 | 8/10/2016 | 1.52 | 8/10/2021 | 8/10/2016 | 101.26001 | 101.2600102 | 101.2600102 | 101.2600102 | 101.1093239 | 100.1053608 | 99.12156437 | 98.15732893 | 97.21207296 |
| 160810A00025 | 8/10/2016 | 2.17 | 8/10/2026 | 8/10/2016 | 109.98378 | 109.9837777 | 109.9837777 | 109.9837777 | 107.3305547 | 102.0782696 | 97.13579154 | 92.48291108 | 88.10084775 |
| 160810A00027 | 8/10/2016 | 2.13 | 8/10/2026 | 8/10/2016 | 109.2674 | 109.267401 | 109.267401 | 109.267401 | 106.813769 | 101.8352229 | 97.1445721 | 92.72323946 | 88.55395257 |
| 160810A00028 | 8/10/2016 | 2.19 | 8/10/2026 | 8/10/2016 | 110.40766 | 110.4076577 | 110.4076577 | 110.4076577 | 107.632575 | 102.2133808 | 97.11736926 | 92.32333405 | 87.81157387 |
| 160810A00029 | 8/10/2016 | 2.17 | 8/10/2026 | 8/10/2016 | 109.98378 | 109.9837777 | 109.9837777 | 109.9837777 | 107.3305547 | 102.0782696 | 97.13579155 | 92.48291108 | 88.10084775 |
| 160719A00026 | 7/19/2016 | 1.87 | 7/20/2026 | 7/19/2016 | 104.88343 | 104.8834336 | 104.8834336 | 104.8834336 | 103.8386174 | 100.7810395 | 97.85683122 | 95.05894775 | 92.38076959 |
| 160722A00011 | 7/22/2016 | 2.17 | 7/23/2029 | 7/22/2016 | 108.78107 | 108.7810735 | 108.7810735 | 108.7810735 | 106.1797309 | 101.5854239 | 97.27531343 | 93.22866599 | 89.42643565 |
| 160729A00015 | 7/29/2016 | 2.06 | 7/30/2029 | 7/29/2016 | 108.25033 | 108.2503327 | 108.2503327 | 108.2503327 | 105.661275 | 101.0891548 | 96.79988029 | 92.77281427 | 88.98899972 |
| 160801A00002 | 8/1/2016 | 1.58 | 8/3/2026 | 8/1/2016 | 104.62994 | 104.629937 | 104.629937 | 104.629937 | 103.5528266 | 100.4521785 | 97.4887236 | 94.6551215 | 91.94448017 |
| 160802A00026 | 8/2/2016 | 1.84 | 8/2/2023 | 8/2/2016 | 104.47552 | 104.4755155 | 104.4755155 | 104.4755155 | 103.7855142 | 100.93711 | 98.18410442 | 95.52275823 | 92.94950115 |
| 160805A00014 | 8/5/2016 | 2.11 | 8/6/2029 | 8/5/2016 | 108.56998 | 108.5699766 | 108.5699766 | 108.5699766 | 105.9234969 | 101.300727 | 96.96618187 | 92.89867828 | 89.0787691 |
| 160629A00066 | 6/29/2016 | 2.61 | 6/30/2036 | 6/29/2016 | 130.55306 | 130.5530559 | 130.5530559 | 125.8808229 | 113.825409 | 102.4829494 | 92.59163176 | 83.94711815 | 76.37552144 |
| 160705A00008 | 7/5/2016 | 1.7 | 7/6/2026 | 7/5/2016 | 107.2817 | 107.2816976 | 107.2816976 | 107.2816976 | 105.215505 | 100.7024961 | 96.43739296 | 92.40475079 | 88.59018 |
| 160705A00010 | 7/5/2016 | 1.68 | 7/5/2023 | 7/5/2016 | 103.90981 | 103.9098095 | 103.9098095 | 103.9098095 | 103.2534375 | 100.4820476 | 97.80135713 | 95.20789668 | 92.69834952 |
| 160711A00004 | 7/11/2016 | 1.51 | 7/13/2026 | 7/11/2016 | 104.34536 | 104.3453564 | 104.3453564 | 104.3453564 | 103.301399 | 100.2484923 | 97.3291138 | 94.53619326 | 91.86308844 |
| 160713A00015 | 7/13/2016 | 1.57 | 7/13/2026 | 7/13/2016 | 104.53537 | 104.5353686 | 104.5353686 | 104.5353686 | 103.48952 | 100.431072 | 97.50639421 | 94.70840355 | 92.03044575 |
| 160719A00012 | 7/19/2016 | 1.32 | 7/19/2021 | 7/19/2016 | 100.57669 | 100.5766903 | 100.5766903 | 100.5766903 | 100.5075927 | 99.96418976 | 99.42820171 | 98.89946026 | 98.37780255 |
| 160608A00030 | 6/8/2016 | 2.36 | 6/8/2026 | 6/8/2016 | 110.74169 | 110.7416851 | 110.7416851 | 110.7416851 | 108.2476147 | 103.0863589 | 98.22179203 | 93.63505508 | 89.30858743 |
| 160608A00033 | 6/8/2016 | 2.44 | 6/9/2031 | 6/8/2016 | 112.28697 | 112.2869737 | 112.2869737 | 112.2715021 | 108.2736395 | 102.6626497 | 97.46246156 | 92.63791819 | 88.15719139 |
| 160608A00034 | 6/8/2016 | 2.44 | 6/9/2031 | 6/8/2016 | 112.28698 | 112.2869752 | 112.2869752 | 112.2715037 | 108.2736418 | 102.6626513 | 97.46246234 | 92.63791809 | 88.15719037 |
| 160616A00029 | 6/16/2016 | 1.58 | 6/16/2026 | 6/16/2016 | 104.50389 | 104.503886 | 104.503886 | 104.503886 | 103.4882026 | 100.4703775 | 97.58299624 | 94.81922484 | 92.17263918 |
| 160617A00012 | 6/17/2016 | 2.13 | 6/18/2029 | 6/17/2016 | 108.50708 | 108.507078 | 108.507078 | 108.507078 | 105.9629001 | 101.4180006 | 97.15195777 | 93.14458386 | 89.37732224 |
| 160624A00051 | 6/24/2016 | 2.11 | 6/26/2029 | 6/24/2016 | 108.41183 | 108.4118286 | 108.4118286 | 108.4118286 | 105.869497 | 101.328397 | 97.06594286 | 93.06195964 | 89.29790302 |
| 160608A00023 | 6/8/2016 | 2.36 | 6/8/2026 | 6/8/2016 | 110.74169 | 110.7416895 | 110.7416895 | 110.7416895 | 108.2476175 | 103.0863595 | 98.2217907 | 93.635052 | 89.30858276 |
| 160608A00024 | 6/8/2016 | 2.36 | 6/8/2026 | 6/8/2016 | 110.74169 | 110.7416851 | 110.7416851 | 110.7416851 | 108.2476147 | 103.0863589 | 98.22179203 | 93.63505508 | 89.30858743 |
| 160608A00025 | 6/8/2016 | 2.36 | 6/8/2026 | 6/8/2016 | 110.74169 | 110.7416851 | 110.7416851 | 110.7416851 | 108.2476147 | 103.0863589 | 98.22179203 | 93.63505508 | 89.30858743 |
| 160608A00027 | 6/8/2016 | 2.36 | 6/8/2026 | 6/8/2016 | 110.74169 | 110.7416851 | 110.7416851 | 110.7416851 | 108.2476147 | 103.0863589 | 98.22179203 | 93.63505508 | 89.30858743 |

Classification | Public

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 160608A00028 | 6/8/2016 | 2.36 | 6/8/2026 | 6/8/2016 | 110.74169 | 110.7416851 | 110.7416851 | 110.7416851 | 108.2476147 | 103.0863589 | 98.22179203 | 93.63505508 | 89.30858743 |
| 160608A00029 | 6/8/2016 | 2.36 | 6/8/2026 | 6/8/2016 | 110.74169 | 110.7416851 | 110.7416851 | 110.7416851 | 108.2476147 | 103.0863589 | 98.22179203 | 93.63505508 | 89.30858743 |
| 160608A00015 | 6/8/2016 | 1.63 | 6/8/2021 | 6/8/2016 | 101.16592 | 101.1659186 | 101.1659186 | 101.1659186 | 101.0477555 | 100.1985261 | 99.36362164 | 98.5426814 | 97.73535649 |
| 160608A00016 | 6/8/2016 | 1.63 | 6/8/2021 | 6/8/2016 | 101.16175 | 101.1617525 | 101.1617525 | 101.1617525 | 101.0440806 | 100.1978807 | 99.36593555 | 98.5478863 | 97.74338605 |
| 160608A00019 | 6/8/2016 | 2.36 | 6/8/2026 | 6/8/2016 | 110.74169 | 110.7416851 | 110.7416851 | 110.7416851 | 108.2476147 | 103.0863589 | 98.22179203 | 93.63505508 | 89.30858743 |
| 160608A00020 | 6/8/2016 | 2.36 | 6/8/2026 | 6/8/2016 | 110.74169 | 110.7416851 | 110.7416851 | 110.7416851 | 108.2476147 | 103.0863589 | 98.22179203 | 93.63505508 | 89.30858743 |
| 160608A00021 | 6/8/2016 | 1.91 | 6/8/2023 | 6/8/2016 | 104.3962 | 104.3962004 | 104.3962004 | 104.3962004 | 103.776136 | 101.0951941 | 98.49960847 | 95.98619569 | 93.551909 |
| 160608A00022 | 6/8/2016 | 1.91 | 6/8/2023 | 6/8/2016 | 104.3962 | 104.3962004 | 104.3962004 | 104.3962004 | 103.776136 | 101.0951941 | 98.49960847 | 95.98619569 | 93.551909 |
| 160524A00101 | 5/24/2016 | 2.98 | 5/23/2031 | 5/24/2016 | 124.42604 | 124.4260426 | 124.4260426 | 124.1345556 | 115.3249937 | 106.3738821 | 98.27806932 | 90.94845173 | 84.30576219 |
| 160526A00018 | 5/26/2016 | 1.68 | 5/26/2021 | 5/26/2016 | 101.10183 | 101.101831 | 101.101831 | 101.101831 | 100.9966037 | 100.222023 | 99.45972924 | 98.7094285 | 97.97083628 |
| 160601A00023 | 6/1/2016 | 2.37 | 6/1/2029 | 6/1/2016 | 109.65794 | 109.6579426 | 109.6579426 | 109.6579426 | 107.0877599 | 102.4952147 | 98.18439668 | 94.13491523 | 90.32802685 |
| 160603A00014 | 6/3/2016 | 1.74 | 6/3/2026 | 6/3/2016 | 105.00374 | 105.0037367 | 105.0037367 | 105.0037367 | 103.9838946 | 100.9521704 | 98.05145181 | 95.2748781 | 92.61599984 |
| 160603A00029 | 6/3/2016 | 2.18 | 6/3/2031 | 6/3/2016 | 111.89879 | 111.8987892 | 111.8987892 | 111.8833545 | 107.8706302 | 102.2511694 | 97.04457731 | 92.21541764 | 87.73161823 |
| 160606A00018 | 6/6/2016 | 1.74 | 6/5/2026 | 6/6/2016 | 105.00387 | 105.0038676 | 105.0038676 | 105.0038676 | 103.9839218 | 100.9521212 | 98.05133523 | 95.27470235 | 92.61577229 |
| 160428A00028 | 4/28/2016 | 2 | 4/28/2026 | 4/28/2016 | 105.65801 | 105.6580133 | 105.6580133 | 105.6580133 | 104.6891276 | 101.718426 | 98.87310151 | 96.14672299 | 93.53323798 |
| 160504A00022 | 5/4/2016 | 2 | 5/4/2023 | 5/4/2016 | 104.55494 | 104.554941 | 104.554941 | 104.554941 | 103.9592629 | 101.3236928 | 98.76994303 | 96.29493864 | 93.89574349 |
| 160511A00015 | 5/11/2016 | 2.42 | 5/11/2026 | 5/11/2016 | 110.93141 | 110.9314071 | 110.9314071 | 110.9314071 | 108.5090405 | 103.395128 | 98.57182777 | 94.02081595 | 89.72502708 |
| 160511A00016 | 5/11/2016 | 2.48 | 5/12/2031 | 5/11/2016 | 112.42807 | 112.4280703 | 112.4280703 | 112.4172272 | 108.4727778 | 102.8913162 | 97.71576996 | 92.91162006 | 88.44759631 |
| 160523A00086 | 5/23/2016 | 2.2 | 5/26/2026 | 5/23/2016 | 110.31023 | 110.3102316 | 110.3102316 | 110.3102316 | 108.0150406 | 103.1126222 | 98.48589162 | 94.11754341 | 89.99145503 |
| 160524A00028 | 5/24/2016 | 2.06 | 5/24/2023 | 5/24/2016 | 104.80628 | 104.8062846 | 104.8062846 | 104.8062846 | 104.1899048 | 101.502294 | 98.89947841 | 96.37830357 | 93.93575116 |
| 160413A00033 | 4/13/2016 | 2.32 | 4/13/2026 | 4/13/2016 | 108.77725 | 108.7772465 | 108.7772465 | 108.7772465 | 106.9250656 | 102.6233246 | 98.54848517 | 94.68687542 | 91.02573452 |
| 160414A00042 | 4/13/2016 | 2.48 | 4/13/2026 | 4/13/2016 | 111.11367 | 111.1136729 | 111.1136729 | 111.1136729 | 108.7618511 | 103.6966305 | 98.91597549 | 94.4021147 | 90.13848891 |
| 160421A00016 | 4/21/2016 | 2.26 | 4/21/2026 | 4/21/2016 | 110.46261 | 110.4626142 | 110.4626142 | 110.4626142 | 108.2483854 | 103.4028898 | 98.82613777 | 94.50142284 | 90.41317731 |
| 160427A00004 | 4/27/2016 | 2.09 | 4/27/2026 | 4/27/2016 | 105.35007 | 105.3500721 | 105.3500721 | 105.3500721 | 104.3883718 | 101.4369812 | 98.60979889 | 95.90047055 | 93.30301475 |
| 160428A00020 | 4/28/2016 | 1.69 | 4/28/2021 | 4/28/2016 | 101.04725 | 101.0472526 | 101.0472526 | 101.0472526 | 100.9515178 | 100.2248323 | 99.50874906 | 98.80303617 | 98.10746859 |
| 160428A00025 | 4/28/2016 | 1.25 | 4/28/2021 | 4/28/2016 | 100.47863 | 100.4786287 | 100.4786287 | 100.4786287 | 100.429827 | 100.0086351 | 99.59186657 | 99.17944398 | 98.77129184 |
| 160412A00029 | 4/12/2016 | 2.48 | 4/14/2031 | 4/12/2016 | 112.33042 | 112.3304203 | 112.3304203 | 112.3233913 | 108.4410204 | 102.9010326 | 97.76123998 | 92.9878272 | 88.55014237 |
| 160413A00014 | 4/13/2016 | 2.55 | 4/14/2031 | 4/13/2016 | 112.74237 | 112.7423743 | 112.7423743 | 112.7353199 | 108.8387957 | 103.2785622 | 98.11998359 | 93.3291214 | 88.87521202 |
| 160413A00016 | 4/13/2016 | 2.55 | 4/14/2031 | 4/13/2016 | 112.74237 | 112.7423744 | 112.7423744 | 112.73532 | 108.8387957 | 103.2785622 | 98.11998352 | 93.3291213 | 88.8752119 |
| 160413A00018 | 4/13/2016 | 1.78 | 4/13/2026 | 4/13/2016 | 104.98522 | 104.9852248 | 104.9852248 | 104.9852248 | 104.0232283 | 101.0719404 | 98.24516948 | 95.53653131 | 92.94001751 |
| 160413A00020 | 4/13/2016 | 2.48 | 4/13/2026 | 4/13/2016 | 111.11367 | 111.1136729 | 111.1136729 | 111.1136729 | 108.7618511 | 103.6966305 | 98.91597549 | 94.4021147 | 90.13848891 |
| 160413A00021 | 4/13/2016 | 2.48 | 4/13/2026 | 4/13/2016 | 111.11367 | 111.1136729 | 111.1136729 | 111.1136729 | 108.7618511 | 103.6966305 | 98.91597549 | 94.4021147 | 90.13848891 |
| 160328A00038 | 3/28/2016 | 2.54 | 3/30/2026 | 3/28/2016 | 110.79137 | 110.7913732 | 110.7913732 | 110.7913732 | 108.6369085 | 103.8425489 | 99.31091963 | 95.02587766 | 90.9723668 |

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 160329A00017 | 3/29/2016 | 2.48 | 3/30/2026 | 3/29/2016 | 110.49434 | 110.4943445 | 110.4943445 | 110.4943445 | 108.3442826 | 103.5607435 | 99.03938909 | 94.76410819 | 90.71987449 |
| 160330A00003 | 3/30/2016 | 1.68 | 3/30/2021 | 3/30/2016 | 100.9445 | 100.9445023 | 100.9445023 | 100.9445023 | 100.8616257 | 100.2014646 | 99.54997321 | 98.90698125 | 98.27232304 |
| 160401A00005 | 4/1/2016 | 2.02 | 4/3/2023 | 4/1/2016 | 104.4731 | 104.473099 | 104.473099 | 104.473099 | 103.9069457 | 101.3488822 | 98.86825159 | 96.46220766 | 94.12802992 |
| 160404A00019 | 4/4/2016 | 2.48 | 4/4/2031 | 4/4/2016 | 112.3299 | 112.3299041 | 112.3299041 | 112.3231533 | 108.4410362 | 102.9012482 | 97.76161458 | 92.98832655 | 88.55073778 |
| 160405A00011 | 4/5/2016 | 1.31 | 4/5/2021 | 4/5/2016 | 100.43812 | 100.4381158 | 100.4381158 | 100.4381158 | 100.3907284 | 99.97734638 | 99.56817316 | 99.16313796 | 98.76217168 |
| 160212A00047 | 2/12/2016 | 1.94 | 2/12/2026 | 2/12/2016 | 104.75124 | 104.7512417 | 104.7512417 | 104.7512417 | 103.8504745 | 100.9963081 | 98.25929342 | 95.63357135 | 93.11361978 |
| 160225A00011 | 2/25/2016 | 1.5 | 2/27/2023 | 2/25/2016 | 102.12234 | 102.1223367 | 102.1223367 | 102.1223367 | 101.8341361 | 100.3209562 | 98.84486296 | 97.40464922 | 95.99915703 |
| 160301A00012 | 3/1/2016 | 2.02 | 3/1/2023 | 3/1/2016 | 104.32757 | 104.3275747 | 104.3275747 | 104.3275747 | 103.7914306 | 101.3152407 | 98.91215671 | 96.5795667 | 94.31496987 |
| 160303A00035 | 3/3/2016 | 2.14 | 3/3/2026 | 3/3/2016 | 105.49379 | 105.4937869 | 105.4937869 | 105.4937869 | 104.5336494 | 101.5761424 | 98.74279673 | 96.02727947 | 93.42362809 |
| 160307A00024 | 3/7/2016 | 2.17 | 3/6/2026 | 3/7/2016 | 105.51132 | 105.511318 | 105.511318 | 105.511318 | 104.5772211 | 101.6623856 | 98.86866651 | 96.18993997 | 93.62043763 |
| 160328A00030 | 3/28/2016 | 1.79 | 3/29/2021 | 3/28/2016 | 101.01349 | 101.0134858 | 101.0134858 | 101.0134858 | 100.9310538 | 100.2732154 | 99.62398244 | 98.98318663 | 98.35066409 |
| 160209A00008 | 2/9/2016 | 2.45 | 2/10/2031 | 2/9/2016 | 111.96145 | 111.961449 | 111.961449 | 111.9597758 | 108.2082061 | 102.7599144 | 97.69984825 | 92.99562834 | 88.6178671 |
| 160210A00049 | 2/10/2016 | 1.78 | 2/10/2026 | 2/10/2016 | 104.84072 | 104.8407237 | 104.8407237 | 104.8407237 | 103.9353185 | 101.0686413 | 98.31995394 | 95.68334063 | 93.15322657 |
| 160210A00051 | 2/10/2016 | 2.28 | 2/10/2031 | 2/10/2016 | 112.10628 | 112.1062796 | 112.1062796 | 112.1045841 | 108.3216331 | 102.8395415 | 97.74944958 | 93.01856789 | 88.61714463 |
| 160210A00054 | 2/10/2016 | 1.78 | 2/10/2026 | 2/10/2016 | 104.84073 | 104.840726 | 104.840726 | 104.840726 | 103.9353199 | 101.0686414 | 98.31995282 | 95.68333836 | 93.15322325 |
| 160211A00038 | 2/11/2016 | 1.83 | 2/11/2026 | 2/11/2016 | 104.42704 | 104.4270427 | 104.4270427 | 104.4270427 | 103.5290905 | 100.6837548 | 97.95520634 | 95.3376045 | 92.82544445 |
| 160212A00006 | 2/12/2016 | 1.57 | 2/13/2023 | 2/12/2016 | 101.72801 | 101.7280054 | 101.7280054 | 101.7280054 | 101.4860122 | 100.1531668 | 98.85061499 | 97.5774169 | 96.33266952 |
| 160115A00011 | 1/15/2016 | 2.18 | 1/15/2026 | 1/15/2016 | 105.37928 | 105.3792766 | 105.3792766 | 105.3792766 | 104.4996644 | 101.6687213 | 98.95251692 | 96.34537769 | 93.84195291 |
| 160119A00072 | 1/19/2016 | 2.77 | 1/21/2031 | 1/19/2016 | 114.24309 | 114.2430936 | 114.2430936 | 114.2373562 | 110.1028854 | 104.3284478 | 98.97723624 | 94.01297997 | 89.4028439 |
| 160126A00004 | 1/26/2016 | 2.52 | 1/26/2026 | 1/26/2016 | 112.31262 | 112.3126241 | 112.3126241 | 112.3126241 | 110.0313429 | 104.913057 | 100.0772263 | 95.50661182 | 91.18511882 |
| 160201A00016 | 2/1/2016 | 2.1 | 2/2/2026 | 2/1/2016 | 105.22309 | 105.2230905 | 105.2230905 | 105.2230905 | 104.3187773 | 101.4522327 | 98.70331864 | 96.06615408 | 93.53519594 |
| 160203A00017 | 2/3/2016 | 2.07 | 2/3/2023 | 2/3/2016 | 104.33767 | 104.3376692 | 104.3376692 | 104.3376692 | 103.8236418 | 101.4163392 | 99.07871133 | 96.80832692 | 94.60285533 |
| 160209A00006 | 2/9/2016 | 1.91 | 2/9/2026 | 2/9/2016 | 104.66258 | 104.6625797 | 104.6625797 | 104.6625797 | 103.7627135 | 100.9110747 | 98.17647562 | 95.55306337 | 93.03532157 |
| 151223A00078 | 12/23/2015 | 2.28 | 12/23/2025 | 12/23/2015 | 106.13713 | 106.13713 | 106.13713 | 106.13713 | 105.2732985 | 102.4526037 | 99.74511136 | 97.14527172 | 94.64784864 |
| 151228A00013 | 12/28/2015 | 2.27 | 12/29/2025 | 12/28/2015 | 106.10878 | 106.1087836 | 106.1087836 | 106.1087836 | 105.2448956 | 102.4247094 | 99.71772295 | 97.11838544 | 94.62145983 |
| 151229A00026 | 12/29/2015 | 2.28 | 12/29/2025 | 12/29/2015 | 106.13771 | 106.1377099 | 106.1377099 | 106.1377099 | 105.2735877 | 102.4526357 | 99.74491408 | 97.14487059 | 94.64726676 |
| 160104A00020 | 1/4/2016 | 2.47 | 1/4/2023 | 1/4/2016 | 105.15766 | 105.1576553 | 105.1576553 | 105.1576553 | 104.6655627 | 102.3175408 | 100.0354198 | 97.81697275 | 95.66006158 |
| 160106A00042 | 1/6/2016 | 2.43 | 1/6/2026 | 1/6/2016 | 106.10931 | 106.1093064 | 106.1093064 | 106.1093064 | 105.2240782 | 102.3739696 | 99.63934847 | 97.01450598 | 94.49405812 |
| 160113A00002 | 1/13/2016 | 2.12 | 1/13/2026 | 1/13/2016 | 105.76168 | 105.761678 | 105.761678 | 105.761678 | 104.8751466 | 102.0240157 | 99.28875842 | 96.66363065 | 94.14321609 |
| 151209A00024 | 12/9/2015 | 2.22 | 12/9/2025 | 12/9/2015 | 105.96234 | 105.9623375 | 105.9623375 | 105.9623375 | 105.1005876 | 102.2850874 | 99.58254072 | 96.98741271 | 94.49448102 |
| 151210A00011 | 12/10/2015 | 2.16 | 12/12/2022 | 12/10/2015 | 102.60361 | 102.6036094 | 102.6036094 | 102.6036094 | 102.3802667 | 101.1156386 | 99.87858549 | 98.66827333 | 97.48390057 |
| 151215A00039 | 12/15/2015 | 2.46 | 12/15/2025 | 12/15/2015 | 106.10387 | 106.103865 | 106.103865 | 106.103865 | 105.2443884 | 102.4347595 | 99.7375523 | 97.14727101 | 94.65872941 |
| 151216A00005 | 12/16/2015 | 2.15 | 12/16/2020 | 12/16/2015 | 100.72538 | 100.7253834 | 100.7253834 | 100.7253834 | 100.6849358 | 100.3050117 | 99.92797086 | 99.55378026 | 99.18240755 |

Classification | Public

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 151216A00006 | 12/16/2015 | 2.3 | 12/16/2021 | 12/16/2015 | 102.75152 | 102.7515222 | 102.7515222 | 102.7515222 | 102.5206851 | 101.1808373 | 99.86528224 | 98.57341344 | 97.30464413 |
| 151223A00036 | 12/23/2015 | 2.64 | 12/23/2025 | 12/23/2015 | 107.89394 | 107.8939386 | 107.8939386 | 107.8939386 | 106.6687076 | 103.2579283 | 100.0027002 | 96.89459404 | 93.92569455 |
| 151120A00019 | 11/20/2015 | 2.72 | 11/20/2030 | 11/20/2015 | 114.32023 | 114.3202346 | 114.3202346 | 114.3202346 | 110.6478665 | 105.1720109 | 100.0795989 | 95.33918676 | 90.92218979 |
| 151124A00006 | 11/24/2015 | 1.66 | 11/24/2020 | 11/24/2015 | 100.29484 | 100.2948423 | 100.2948423 | 100.2948423 | 100.2744535 | 100.0666719 | 99.8599039 | 99.65414144 | 99.44937645 |
| 151124A00007 | 11/24/2015 | 1.98 | 11/23/2022 | 11/24/2015 | 102.07302 | 102.073016 | 102.073016 | 102.073016 | 101.8612739 | 100.6462361 | 99.4571001 | 98.29309049 | 97.15346219 |
| 151125A00037 | 11/25/2015 | 2.41 | 11/25/2025 | 11/25/2015 | 105.86885 | 105.868846 | 105.868846 | 105.868846 | 105.0361488 | 102.272948 | 99.61891929 | 97.06878389 | 94.61755772 |
| 151201A00004 | 12/1/2015 | 2.44 | 12/1/2022 | 12/1/2015 | 104.89726 | 104.8972606 | 104.8972606 | 104.8972606 | 104.4330371 | 102.1719354 | 99.97215943 | 97.83170746 | 95.74865485 |
| 151204A00011 | 12/4/2015 | 2.28 | 12/4/2025 | 12/4/2015 | 106.13527 | 106.135272 | 106.135272 | 106.135272 | 105.2723636 | 102.4524928 | 99.74573611 | 97.14655164 | 94.64971052 |
| 151030A00004 | 10/30/2015 | 2.48 | 10/30/2025 | 10/30/2015 | 109.63995 | 109.6399481 | 109.6399481 | 109.6399481 | 108.06324 | 103.9903577 | 100.1187807 | 96.4370822 | 92.93455786 |
| 151030A00026 | 10/30/2015 | 3.29 | 10/30/2030 | 10/30/2015 | 124.51862 | 124.5186169 | 124.5186169 | 124.5186169 | 116.9605869 | 108.7542509 | 101.2768925 | 94.45701568 | 88.23061564 |
| 151102A00024 | 11/2/2015 | 2.37 | 11/2/2022 | 11/2/2015 | 104.58063 | 104.5806285 | 104.5806285 | 104.5806285 | 104.1396766 | 101.95671 | 99.83125196 | 97.76136214 | 95.74518257 |
| 151113A00035 | 11/13/2015 | 1.8 | 11/14/2022 | 11/13/2015 | 102.0699 | 102.0699003 | 102.0699003 | 102.0699003 | 101.8578798 | 100.6408006 | 99.44970018 | 98.28379853 | 97.14234629 |
| 151118A00025 | 11/18/2015 | 2.4 | 11/18/2022 | 11/18/2015 | 104.59457 | 104.5945726 | 104.5945726 | 104.5945726 | 104.1566109 | 101.9964843 | 99.89375582 | 97.84653287 | 95.85299888 |
| 151118A00037 | 11/18/2015 | 2.75 | 11/18/2025 | 11/18/2015 | 110.056 | 110.055995 | 110.055995 | 110.055995 | 108.4485414 | 104.3426515 | 100.440817 | 96.73142885 | 93.20360959 |
| 151007A00010 | 10/7/2015 | 1.7 | 10/7/2020 | 10/7/2015 | 100.27216 | 100.2721648 | 100.2721648 | 100.2721648 | 100.2543557 | 100.0664681 | 99.87929323 | 99.6928269 | 99.50706507 |
| 151013A00033 | 10/13/2015 | 2.23 | 10/14/2025 | 10/13/2015 | 105.27389 | 105.2738947 | 105.2738947 | 105.2738947 | 104.4709945 | 101.7642784 | 99.16307933 | 96.66235573 | 94.25734438 |
| 151022A00020 | 10/22/2015 | 1.71 | 10/22/2020 | 10/22/2015 | 100.33681 | 100.3368118 | 100.3368118 | 100.3368118 | 100.3135295 | 100.0803334 | 99.84821539 | 99.6171681 | 99.38718404 |
| 151023A00018 | 10/23/2015 | 1.74 | 10/23/2020 | 10/23/2015 | 100.34721 | 100.3472095 | 100.3472095 | 100.3472095 | 100.3240476 | 100.0924571 | 99.86194588 | 99.63250629 | 99.40413088 |
| 151023A00019 | 10/23/2015 | 1.74 | 10/23/2020 | 10/23/2015 | 100.34721 | 100.3472095 | 100.3472095 | 100.3472095 | 100.3240476 | 100.0924571 | 99.86194588 | 99.63250629 | 99.40413088 |
| 151029A00008 | 10/29/2015 | 2.28 | 10/29/2025 | 10/29/2015 | 105.41457 | 105.4145661 | 105.4145661 | 105.4145661 | 104.6099325 | 101.8989898 | 99.2937703 | 96.7892196 | 94.38056295 |
| 150929A00087 | 9/29/2015 | 2.09 | 9/29/2025 | 9/29/2015 | 105.3308 | 105.3307982 | 105.3307982 | 105.3307982 | 104.5475411 | 101.8701319 | 99.29604951 | 96.82039989 | 94.43855735 |
| 151001A00023 | 10/1/2015 | 2.02 | 10/1/2025 | 10/1/2015 | 105.21887 | 105.2188732 | 105.2188732 | 105.2188732 | 104.4135847 | 101.6994563 | 99.0913913 | 96.58431106 | 94.17341826 |
| 151002A00003 | 10/2/2015 | 1.94 | 10/2/2025 | 10/2/2015 | 104.99602 | 104.9960244 | 104.9960244 | 104.9960244 | 104.1923845 | 101.4839328 | 98.88132577 | 96.37949517 | 93.97365338 |
| 151002A00042 | 10/2/2015 | 1.26 | 10/2/2020 | 10/2/2015 | 100.14423 | 100.1442284 | 100.1442284 | 100.1442284 | 100.1315472 | 99.98847143 | 99.84583487 | 99.70363544 | 99.56187105 |
| 151005A00084 | 10/5/2015 | 2.25 | 10/5/2022 | 10/5/2015 | 104.17135 | 104.1713456 | 104.1713456 | 104.1713456 | 103.7526383 | 101.6446577 | 99.59077725 | 97.58921652 | 95.63826884 |
| 151006A00050 | 10/6/2015 | 2.21 | 10/6/2022 | 10/6/2015 | 102.27259 | 102.2725905 | 102.2725905 | 102.2725905 | 102.0710059 | 100.8965641 | 99.74658331 | 98.62034106 | 97.51714277 |
| 150915A00072 | 9/15/2015 | 1.91 | 9/15/2020 | 9/15/2015 | 100.21116 | 100.2111635 | 100.2111635 | 100.2111635 | 100.2002418 | 100.0729903 | 99.94607605 | 99.8194976 | 99.69325361 |
| 150922A00014 | 9/22/2015 | 1.84 | 9/22/2020 | 9/22/2015 | 100.23292 | 100.2329225 | 100.2329225 | 100.2329225 | 100.219881 | 100.0732631 | 99.92708398 | 99.78134178 | 99.63603447 |
| 150925A00034 | 9/25/2015 | 2.36 | 9/25/2025 | 9/25/2015 | 105.548 | 105.5479999 | 105.5479999 | 105.5479999 | 104.766572 | 102.0930303 | 99.52237089 | 97.04973394 | 94.67052534 |
| 150928A00016 | 9/28/2015 | 1.73 | 9/28/2020 | 9/28/2015 | 100.23978 | 100.2397826 | 100.2397826 | 100.2397826 | 100.2250314 | 100.0628008 | 99.90109719 | 99.73991803 | 99.57926081 |
| 150929A00076 | 9/29/2015 | 2.28 | 9/29/2025 | 9/29/2015 | 105.32878 | 105.3287781 | 105.3287781 | 105.3287781 | 104.5487953 | 101.8806166 | 99.31512529 | 96.8474699 | 94.47306446 |
| 150929A00083 | 9/29/2015 | 2.09 | 9/29/2025 | 9/29/2015 | 105.3308 | 105.3307982 | 105.3307982 | 105.3307982 | 104.5475411 | 101.8701319 | 99.29604951 | 96.82039989 | 94.43855735 |
| 150824A00050 | 8/24/2015 | 2.03 | 8/25/2025 | 8/24/2015 | 105.08226 | 105.0822577 | 105.0822577 | 105.0822577 | 104.324574 | 101.6944622 | 99.164482 | 96.72994786 | 94.38642825 |

Classification | Public

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 150825A00008 | 8/25/2015 | 2.82 | 8/25/2025 | 8/25/2015 | 111.04602 | 111.0460233 | 111.0460233 | 111.0460233 | 109.3384636 | 104.9452592 | 100.7717121 | 96.80543655 | 93.03481641 |
| 150828A00018 | 8/28/2015 | 1.7 | 8/29/2022 | 8/28/2015 | 101.67838 | 101.6783836 | 101.6783836 | 101.6783836 | 101.5054517 | 100.4557989 | 99.42675954 | 98.41774493 | 97.42818851 |
| 150902A00008 | 9/2/2015 | 1.37 | 9/2/2020 | 9/2/2015 | 100.11142 | 100.1114163 | 100.1114163 | 100.1114163 | 100.1047061 | 100.015918 | 99.92728861 | 99.83881746 | 99.75050414 |
| 150902A00009 | 9/2/2015 | 1.68 | 9/2/2020 | 9/2/2015 | 100.14317 | 100.1431656 | 100.1431656 | 100.1431656 | 100.1361599 | 100.0446643 | 99.95333901 | 99.86218346 | 99.7711972 |
| 150911A00007 | 9/10/2015 | 2.51 | 9/9/2022 | 9/10/2015 | 104.58187 | 104.5818727 | 104.5818727 | 104.5818727 | 104.1813728 | 102.1329935 | 100.1359357 | 98.18855786 | 96.28928409 |
| 150803A00042 | 8/3/2015 | 3.01 | 8/2/2030 | 8/3/2015 | 114.48399 | 114.4839891 | 114.4839891 | 114.4839891 | 111.0137867 | 105.6715645 | 100.6941937 | 96.05244726 | 91.71969693 |
| 150804A00022 | 8/4/2015 | 2.37 | 8/4/2022 | 8/4/2015 | 104.09523 | 104.0952331 | 104.0952331 | 104.0952331 | 103.7225724 | 101.770802 | 99.8665357 | 98.008312 | 96.19472474 |
| 150805A00015 | 8/5/2015 | 2.29 | 8/5/2022 | 8/5/2015 | 104.29979 | 104.2997851 | 104.2997851 | 104.2997851 | 103.9247716 | 101.9622832 | 100.0477027 | 98.17955121 | 96.35640613 |
| 150812A00052 | 8/14/2015 | 2.13 | 8/14/2025 | 8/14/2015 | 105.35146 | 105.3514605 | 105.3514605 | 105.3514605 | 104.5923016 | 101.9559546 | 99.4199475 | 96.97958662 | 94.63043282 |
| 150814A00029 | 8/14/2015 | 2.39 | 8/14/2025 | 8/14/2015 | 105.53848 | 105.5384846 | 105.5384846 | 105.5384846 | 104.7811131 | 102.1490872 | 99.61696205 | 97.18007638 | 94.83402105 |
| 150824A00033 | 8/24/2015 | 2.22 | 8/25/2025 | 8/24/2015 | 105.08073 | 105.0807287 | 105.0807287 | 105.0807287 | 104.3261721 | 101.7050432 | 99.18343062 | 96.75668935 | 94.42042566 |
| 150803A00036 | 8/3/2015 | 3.41 | 8/2/2030 | 8/3/2015 | 125.05685 | 125.0568541 | 125.0568541 | 125.0568541 | 117.7834874 | 109.6687878 | 102.2614092 | 95.49327964 | 89.30332431 |
| 150803A00037 | 8/3/2015 | 3.41 | 8/2/2030 | 8/3/2015 | 125.05684 | 125.0568374 | 125.0568374 | 125.0568374 | 117.7834799 | 109.6687855 | 102.2614114 | 95.49328568 | 89.30333358 |
| 150803A00038 | 8/3/2015 | 3.41 | 8/2/2030 | 8/3/2015 | 125.05685 | 125.0568541 | 125.0568541 | 125.0568541 | 117.7834874 | 109.6687878 | 102.2614092 | 95.49327964 | 89.30332431 |
| 150803A00039 | 8/3/2015 | 3.01 | 8/2/2030 | 8/3/2015 | 114.48398 | 114.4839849 | 114.4839849 | 114.4839849 | 111.0137848 | 105.6715642 | 100.6941947 | 96.05244942 | 91.71970008 |
| 150803A00040 | 8/3/2015 | 3.01 | 8/2/2030 | 8/3/2015 | 114.484 | 114.4840016 | 114.4840016 | 114.4840016 | 111.0137949 | 105.6715682 | 100.6941932 | 96.052443 | 91.71968925 |
| 150803A00041 | 8/3/2015 | 3.01 | 8/2/2030 | 8/3/2015 | 114.48398 | 114.4839782 | 114.4839782 | 114.4839782 | 111.0137807 | 105.6715625 | 100.6941952 | 96.05245193 | 91.71970435 |
| 150714A00003 | 7/14/2015 | 3.76 | 7/12/2030 | 7/14/2015 | 119.74738 | 119.7473821 | 119.7473821 | 119.7473821 | 116.1419502 | 110.5555374 | 105.3496373 | 100.4938673 | 95.96053745 |
| 150722A00033 | 7/22/2015 | 2.47 | 7/22/2025 | 7/22/2015 | 105.66126 | 105.66126 | 105.66126 | 105.66126 | 104.9256881 | 102.3311413 | 99.83375162 | 97.42903923 | 95.11276405 |
| 150722A00035 | 7/22/2015 | 2.92 | 7/22/2025 | 7/22/2015 | 111.31016 | 111.3101605 | 111.3101605 | 111.3101605 | 109.6588425 | 105.3216179 | 101.1981152 | 97.27645735 | 93.54549371 |
| 150729A00028 | 7/29/2015 | 2.25 | 7/29/2025 | 7/29/2015 | 105.5846 | 105.5846021 | 105.5846021 | 105.5846021 | 104.846274 | 102.2445067 | 99.74045488 | 97.32960014 | 95.00766663 |
| 150729A00041 | 7/29/2015 | 2.44 | 7/29/2025 | 7/29/2015 | 105.58217 | 105.5821672 | 105.5821672 | 105.5821672 | 104.8468615 | 102.2539436 | 99.75814301 | 97.35498039 | 95.04021623 |
| 150803A00033 | 8/3/2015 | 3.41 | 8/2/2030 | 8/3/2015 | 125.05685 | 125.0568541 | 125.0568541 | 125.0568541 | 117.7834874 | 109.6687878 | 102.2614092 | 95.49327964 | 89.30332431 |
| 150617A00017 | 6/17/2015 | 2.27 | 6/17/2025 | 6/17/2015 | 105.54275 | 105.5427543 | 105.5427543 | 105.5427543 | 104.8277656 | 102.2686305 | 99.80424587 | 97.4302857 | 95.14265346 |
| 150617A00018 | 6/17/2015 | 2.45 | 6/17/2025 | 6/17/2015 | 105.51429 | 105.5142933 | 105.5142933 | 105.5142933 | 104.8023713 | 102.2524953 | 99.79677035 | 97.43090864 | 95.15084933 |
| 150617A00030 | 6/17/2015 | 2.91 | 6/16/2025 | 6/17/2015 | 111.06906 | 111.0690589 | 111.0690589 | 111.0690589 | 109.4808393 | 105.2205279 | 101.1665398 | 97.30761233 | 93.63315904 |
| 150617A00036 | 6/17/2015 | 2.44 | 6/15/2022 | 6/17/2015 | 103.8565 | 103.8565018 | 103.8565018 | 103.8565018 | 103.5283329 | 101.7482037 | 100.0085559 | 98.30822329 | 96.64608102 |
| 150624A00077 | 6/24/2015 | 2.54 | 6/24/2022 | 6/24/2015 | 104.08785 | 104.08785 | 104.08785 | 104.08785 | 103.7535996 | 101.9485934 | 100.1851021 | 98.46191598 | 96.77786892 |
| 150701A00056 | 7/1/2015 | 2.34 | 7/1/2025 | 7/1/2015 | 105.82158 | 105.8215806 | 105.8215806 | 105.8215806 | 105.0827432 | 102.4764058 | 99.96787078 | 97.55262094 | 95.22638131 |
| 150427A00014 | 4/27/2015 | 2.98 | 4/27/2035 | 4/27/2015 | 121.24126 | 121.2412557 | 121.2412557 | 120.2089785 | 113.2942658 | 105.5638349 | 98.56932806 | 92.22967629 | 86.47359361 |
| 150529A00055 | 5/29/2015 | 1.78 | 5/31/2022 | 5/29/2015 | 101.45704 | 101.4570426 | 101.4570426 | 101.4570426 | 101.3028334 | 100.3396583 | 99.39457105 | 98.46706266 | 97.5566437 |
| 150603A00012 | 6/3/2015 | 2.77 | 6/3/2030 | 6/3/2015 | 113.99844 | 113.9984441 | 113.9984441 | 113.9984441 | 110.6379488 | 105.3701033 | 100.4580288 | 95.87353699 | 91.59091957 |
| 150603A00032 | 6/3/2015 | 2.21 | 6/3/2025 | 6/3/2015 | 105.3842 | 105.3841975 | 105.3841975 | 105.3841975 | 104.670837 | 102.1161792 | 99.65606426 | 97.28617813 | 95.00243548 |

Classification | Public

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 150604A00039 | 6/4/2015 | 2.82 | 6/4/2030 | 6/4/2015 | 114.27358 | 114.2735792 | 114.2735792 | 114.2735792 | 110.9049659 | 105.6244296 | 100.7005229 | 96.10498914 | 91.81205792 |
| 150615A00024 | 6/15/2015 | 2.26 | 6/16/2025 | 6/15/2015 | 105.51646 | 105.516456 | 105.516456 | 105.516456 | 104.8016839 | 102.2432285 | 99.77949552 | 97.40616026 | 95.11912765 |
| 150318A00003 | 3/18/2015 | 2.04 | 3/18/2022 | 3/18/2015 | 101.77806 | 101.7780633 | 101.7780633 | 101.7780633 | 101.6301989 | 100.7064832 | 99.80057576 | 98.91194851 | 98.04009453 |
| 150320A00019 | 3/20/2015 | 2.25 | 3/20/2025 | 3/20/2015 | 107.81559 | 107.8155882 | 107.8155882 | 107.8155882 | 106.5752445 | 102.932579 | 99.45326838 | 96.12884974 | 92.9513519 |
| 150409A00009 | 4/9/2015 | 1.89 | 4/9/2025 | 4/9/2015 | 104.39572 | 104.3957191 | 104.3957191 | 104.3957191 | 103.7320948 | 101.2825223 | 98.92109138 | 96.64387522 | 94.44715138 |
| 150410A00021 | 4/10/2015 | 2.27 | 4/10/2025 | 4/10/2015 | 104.89846 | 104.8984599 | 104.8984599 | 104.8984599 | 104.2341081 | 101.7804477 | 99.41485214 | 97.13340738 | 94.93240243 |
| 150414A00037 | 4/14/2015 | 2.34 | 4/14/2025 | 4/14/2015 | 105.07528 | 105.0752766 | 105.0752766 | 105.0752766 | 104.4096528 | 101.9516743 | 99.58192684 | 97.29648827 | 95.09164003 |
| 150420A00012 | 4/20/2015 | 2.07 | 4/20/2022 | 4/20/2015 | 103.00691 | 103.0069102 | 103.0069102 | 103.0069102 | 102.7056308 | 101.0338159 | 99.39766853 | 97.79610712 | 96.22809416 |
| 150213A00014 | 2/13/2015 | 2.41 | 2/13/2025 | 2/13/2015 | 105.50918 | 105.5091773 | 105.5091773 | 105.5091773 | 104.8802727 | 102.4870481 | 100.177483 | 97.94794334 | 95.7949797 |
| 150219A00016 | 2/19/2015 | 2.68 | 2/19/2025 | 2/19/2015 | 109.58644 | 109.5864365 | 109.5864365 | 109.5864365 | 108.1669535 | 104.1002181 | 100.2203248 | 96.51751855 | 92.98260993 |
| 150223A00017 | 2/23/2015 | 1.77 | 2/23/2022 | 2/23/2015 | 101.8024 | 101.8024021 | 101.8024021 | 101.8024021 | 101.6266791 | 100.5352715 | 99.463351 | 98.41040798 | 97.37595082 |
| 150224A00010 | 2/24/2015 | 2.34 | 2/24/2025 | 2/24/2015 | 105.40406 | 105.4040603 | 105.4040603 | 105.4040603 | 104.6548261 | 102.0012938 | 99.44645857 | 96.98577662 | 94.61494728 |
| 150227A00011 | 2/27/2015 | 2.33 | 2/27/2025 | 2/27/2015 | 108.02264 | 108.0226443 | 108.0226443 | 108.0226443 | 106.808787 | 103.1984262 | 99.74839435 | 96.4504656 | 93.29688689 |
| 150311A00003 | 3/11/2015 | 2.72 | 3/31/2025 | 3/11/2015 | 109.88521 | 109.88521 | 109.88521 | 109.88521 | 108.43484 | 104.3642455 | 100.4837606 | 96.78329886 | 93.25336939 |
| 141203A00039 | 12/3/2014 | 3.6 | 12/4/2034 | 12/3/2014 | 126.03215 | 126.0321453 | 126.0321453 | 125.0661907 | 118.024222 | 110.0754758 | 102.871941 | 96.33274124 | 90.38661899 |
| 150114A00029 | 1/14/2015 | 1.99 | 1/14/2022 | 1/14/2015 | 101.37708 | 101.3770843 | 101.3770843 | 101.3770843 | 101.2577129 | 100.4615443 | 99.67927269 | 98.9105171 | 98.15491097 |
| 150115A00031 | 1/15/2015 | 1.42 | 1/18/2022 | 1/15/2015 | 101.04603 | 101.0460308 | 101.0460308 | 101.0460308 | 100.9266757 | 100.1309458 | 99.34914424 | 98.58088833 | 97.82580982 |
| 150203A00012 | 2/3/2015 | 1.61 | 2/3/2022 | 2/3/2015 | 101.11752 | 101.1175216 | 101.1175216 | 101.1175216 | 100.9903296 | 100.1568046 | 99.33806033 | 98.53369113 | 97.74330656 |
| 150203A00027 | 2/3/2015 | 2.26 | 2/4/2030 | 2/3/2015 | 110.83093 | 110.8309279 | 110.8309279 | 110.8309279 | 107.7882681 | 102.8177941 | 98.17313806 | 93.82920286 | 89.76304146 |
| 150205A00031 | 2/5/2015 | 1.96 | 10/6/2025 | 2/5/2015 | 105.05207 | 105.0520748 | 105.0520748 | 105.0520748 | 104.2478306 | 101.5377723 | 98.93363223 | 96.430338 | 94.02309802 |
| 140925A00039 | 9/25/2014 | 2.02 | 9/27/2021 | 9/25/2014 | 101.10748 | 101.1074783 | 101.1074783 | 101.1074783 | 101.0217451 | 100.3899406 | 99.76818842 | 99.15622209 | 98.55378509 |
| 140929A00028 | 9/29/2014 | 2.62 | 3/29/2023 | 9/29/2014 | 106.25914 | 106.2591425 | 106.2591425 | 106.2591425 | 105.7128358 | 103.2162136 | 100.7941772 | 98.44400557 | 96.16309755 |
| 141015A00027 | 10/15/2014 | 2.01 | 10/15/2021 | 10/15/2014 | 102.23578 | 102.2357776 | 102.2357776 | 102.2357776 | 102.0419412 | 100.8656489 | 99.71695077 | 98.59487871 | 97.49850954 |
| 141015A00029 | 10/15/2014 | 2.32 | 10/15/2024 | 10/15/2014 | 107.43994 | 107.4399403 | 107.4399403 | 107.4399403 | 106.3943458 | 103.0335304 | 99.81218698 | 96.72356589 | 93.76128823 |
| 141017A00022 | 10/17/2014 | 2.78 | 10/17/2024 | 10/17/2014 | 109.21982 | 109.219819 | 109.219819 | 109.219819 | 108.0202124 | 104.3004237 | 100.7403257 | 97.33204919 | 94.06816213 |
| 141107A00027 | 11/7/2014 | 1.98 | 11/8/2021 | 11/7/2014 | 101.2215 | 101.2215002 | 101.2215002 | 101.2215002 | 101.119383 | 100.4069241 | 99.7070439 | 99.01937553 | 98.34356696 |
| 140730A00037 | 7/30/2014 | 2.83 | 1/30/2024 | 7/30/2014 | 104.99877 | 104.9987676 | 104.9987676 | 104.9987676 | 104.6039649 | 102.7609371 | 100.9700408 | 99.22937573 | 97.53712536 |
| 140821A00030 | 8/21/2014 | 2.27 | 8/21/2024 | 8/21/2014 | 104.60568 | 104.6056797 | 104.6056797 | 104.6056797 | 104.0969231 | 101.9707973 | 99.91242274 | 97.91907823 | 95.9881723 |
| 140821A00040 | 8/21/2014 | 3.41 | 8/21/2031 | 8/21/2014 | 130.55322 | 130.5532211 | 130.5532211 | 130.0632024 | 120.9033523 | 111.5393846 | 103.0790012 | 95.42672202 | 88.49777949 |
| 140908A00080 | 9/8/2014 | 2.51 | 3/8/2024 | 9/8/2014 | 106.86117 | 106.8611692 | 106.8611692 | 106.8611692 | 106.0931017 | 103.2306776 | 100.4721851 | 97.81314456 | 95.24929873 |
| 140917A00030 | 9/17/2014 | 3.23 | 9/17/2029 | 9/17/2014 | 122.42655 | 122.4265533 | 122.4265533 | 122.4265533 | 116.6292669 | 109.3414772 | 102.6356886 | 96.46023454 | 90.7683763 |
| 140924A00057 | 9/24/2014 | 3.25 | 9/25/2028 | 9/24/2014 | 122.48787 | 122.4878724 | 122.4878724 | 122.4878724 | 117.0921352 | 109.8055817 | 103.070882 | 96.84223069 | 91.07789135 |
| 140428A00015 | 4/28/2014 | 2.35 | 4/29/2024 | 4/28/2014 | 104.39285 | 104.3928488 | 104.3928488 | 104.3928488 | 103.9531724 | 101.996203 | 100.097583 | 98.2550915 | 96.46660895 |

Classification | Public

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 140508A00008 | 5/8/2014 | 1.66 | 5/10/2021 | 5/8/2014 | 100.7094 | 100.7094005 | 100.7094005 | 100.7094005 | 100.654735 | 100.1960035 | 99.74248742 | 99.29408858 | 98.85071135 |
| 140618A00019 | 6/18/2014 | 3.08 | 6/18/2024 | 6/18/2014 | 105.73264 | 105.7326364 | 105.7326364 | 105.7326364 | 105.2555424 | 103.1963731 | 101.2005218 | 99.26552057 | 97.38901615 |
| 140703A00026 | 7/3/2014 | 3.11 | 7/3/2024 | 7/3/2014 | 109.86729 | 109.8672905 | 109.8672905 | 109.8672905 | 108.8055507 | 105.282418 | 101.9021809 | 98.65819776 | 95.54417261 |
| 140717A00027 | 7/17/2014 | 3.14 | 7/17/2026 | 7/17/2014 | 113.96627 | 113.9662718 | 113.9662718 | 113.9662718 | 111.6055913 | 106.6393495 | 101.9531578 | 97.52927111 | 93.35117147 |
| 140730A00035 | 7/30/2014 | 2.67 | 1/30/2023 | 7/30/2014 | 103.37519 | 103.3751883 | 103.3751883 | 103.3751883 | 103.1389935 | 101.8215358 | 100.5334968 | 99.27397311 | 98.04209667 |
| 131018A00006 | 10/18/2013 | 3.28 | 10/20/2025 | 10/18/2013 | 113.95866 | 113.9586587 | 113.9586587 | 113.9586587 | 112.1752448 | 107.6844054 | 103.4210333 | 99.37205706 | 95.52523723 |
| 140219A00005 | 2/19/2014 | 3.13 | 2/20/2029 | 2/19/2014 | 113.77381 | 113.7738108 | 113.7738108 | 113.7738108 | 111.2986539 | 106.6731617 | 102.3230802 | 98.22902845 | 94.37315054 |
| 140313A00025 | 3/13/2014 | 2.43 | 3/15/2021 | 3/13/2014 | 101.43997 | 101.4399701 | 101.4399701 | 101.4399701 | 101.3641031 | 100.7414787 | 100.1265542 | 99.51918679 | 98.91923731 |
| 140313A00028 | 3/13/2014 | 2.86 | 3/13/2024 | 3/13/2014 | 108.17143 | 108.1714304 | 108.1714304 | 108.1714304 | 107.3572067 | 104.365661 | 101.4843477 | 98.7084708 | 96.03347436 |
| 140317A00056 | 3/17/2014 | 1.82 | 3/17/2021 | 3/17/2014 | 100.5893 | 100.5893021 | 100.5893021 | 100.5893021 | 100.5476849 | 100.1723401 | 99.80045633 | 99.43198073 | 99.06686155 |
| 140318A00003 | 3/17/2014 | 3.08 | 3/18/2024 | 3/17/2014 | 110.30843 | 110.3084322 | 110.3084322 | 110.3084322 | 109.3042548 | 105.7942529 | 102.4206701 | 99.17739633 | 96.05863265 |
| 130206A00009 | 2/6/2013 | 2.83 | 2/7/2028 | 2/6/2013 | 114.02353 | 114.0235348 | 114.0235348 | 114.0235348 | 110.6293547 | 105.1027692 | 99.93972593 | 95.11317846 | 90.5982704 |
| 130312A00007 | 3/12/2013 | 1.76 | 3/12/2021 | 3/12/2013 | 101.00155 | 101.0015482 | 101.0015482 | 101.0015482 | 100.9279436 | 100.3194849 | 99.71843596 | 99.12466141 | 98.53802914 |
| 130321A00009 | 3/21/2013 | 2.17 | 3/23/2026 | 3/21/2013 | 107.6447 | 107.6446954 | 107.6446954 | 107.6446954 | 106.2118896 | 102.5212941 | 99.01025175 | 95.66850512 | 92.48645411 |
| 130422A00020 | 4/22/2013 | 1.98 | 4/22/2025 | 4/22/2013 | 104.14564 | 104.1456387 | 104.1456387 | 104.1456387 | 103.4856976 | 101.0494228 | 98.70061135 | 96.43537448 | 94.25002517 |
| 130522A00027 | 5/22/2013 | 2.08 | 5/22/2023 | 5/22/2013 | 102.92361 | 102.9236085 | 102.9236085 | 102.9236085 | 102.6439587 | 101.16722 | 99.72627887 | 98.319971 | 96.9471797 |
| 130614A00018 | 6/14/2013 | 2.83 | 6/14/2023 | 6/14/2013 | 103.89088 | 103.8908836 | 103.8908836 | 103.8908836 | 103.5976114 | 102.0699193 | 100.5799047 | 99.12633037 | 97.70800996 |
| 120807A00026 | 8/7/2012 | 2.42 | 8/9/2027 | 8/7/2012 | 107.84073 | 107.8407279 | 107.8407279 | 107.8407279 | 106.3033521 | 102.6369593 | 99.15481731 | 95.84585066 | 92.69973658 |
| 120808A00006 | 8/8/2012 | 2.06 | 8/9/2027 | 8/8/2012 | 107.20376 | 107.2037598 | 107.2037598 | 107.2037598 | 105.667327 | 102.0079766 | 98.5330777 | 95.23151314 | 92.09292311 |
| 120820A00009 | 8/20/2012 | 2.4 | 8/22/2022 | 8/20/2012 | 104.06764 | 104.0676389 | 104.0676389 | 104.0676389 | 103.7009474 | 101.7896597 | 99.92504935 | 98.10565766 | 96.33008261 |
| 120820A00011 | 8/20/2012 | 2.4 | 8/22/2022 | 8/20/2012 | 104.06764 | 104.0676354 | 104.0676354 | 104.0676354 | 103.7009442 | 101.7896582 | 99.92504944 | 98.10565929 | 96.33008574 |
| 121016A00013 | 10/16/2012 | 1.64 | 10/14/2022 | 10/16/2012 | 101.59375 | 101.5937457 | 101.5937457 | 101.5937457 | 101.393247 | 100.2257632 | 99.0826163 | 97.96308669 | 96.86648264 |
| 121114A00020 | 11/14/2012 | 1.74 | 11/14/2022 | 11/14/2012 | 103.45466 | 103.4546584 | 103.4546584 | 103.4546584 | 103.0311807 | 100.9318749 | 98.88802022 | 96.89777852 | 94.95938682 |
| 111220A00025 | 12/20/2011 | 2.17 | 12/20/2021 | 12/20/2011 | 101.44289 | 101.4428922 | 101.4428922 | 101.4428922 | 101.331694 | 100.5752006 | 99.83173765 | 99.1009464 | 98.38248185 |
| 120330A00013 | 3/30/2012 | 2.98 | 4/2/2024 | 3/30/2012 | 108.61828 | 108.6182777 | 108.6182777 | 108.6182777 | 107.713129 | 104.4978242 | 101.4047997 | 98.42861988 | 95.56412614 |
| 120517A00021 | 5/17/2012 | 1.85 | 5/17/2024 | 5/17/2012 | 103.47161 | 103.4716054 | 103.4716054 | 103.4716054 | 103.0198982 | 101.0398243 | 99.11976558 | 97.25740746 | 95.45054246 |
| 120806A00014 | 8/6/2012 | 1.77 | 8/8/2022 | 8/6/2012 | 101.62182 | 101.6218176 | 101.6218176 | 101.6218176 | 101.440796 | 100.3556619 | 99.29219961 | 98.2497864 | 97.22782307 |
| 120806A00015 | 8/6/2012 | 2.38 | 8/6/2027 | 8/6/2012 | 107.68873 | 107.6887349 | 107.6887349 | 107.6887349 | 106.1536565 | 102.4924894 | 99.01530328 | 95.71103976 | 92.56939158 |
| 120807A00025 | 8/7/2012 | 1.82 | 8/8/2022 | 8/7/2012 | 101.6771 | 101.6771006 | 101.6771006 | 101.6771006 | 101.4959814 | 100.4102618 | 99.34622573 | 98.30325001 | 97.28073517 |
| 110505A00036 | 5/5/2011 | 3.23 | 5/5/2021 | 5/5/2011 | 102.27349 | 102.273492 | 102.273492 | 102.273492 | 102.1765297 | 101.4440336 | 100.7223845 | 100.0113402 | 99.31066548 |
| 110701A00011 | 7/1/2011 | 3.87 | 7/1/2026 | 7/1/2011 | 111.33787 | 111.3378695 | 111.3378695 | 111.3378695 | 110.2302259 | 106.9859935 | 103.8831977 | 100.9143722 | 98.07250151 |
| 110719A00017 | 7/19/2011 | 3.68 | 7/20/2026 | 7/19/2011 | 110.71701 | 110.7170135 | 110.7170135 | 110.7170135 | 109.6144504 | 106.3875069 | 103.3013064 | 100.3484149 | 97.52184753 |
| 110810A00009 | 8/10/2011 | 2.36 | 8/10/2021 | 8/10/2011 | 101.22739 | 101.2273857 | 101.2273857 | 101.2273857 | 101.1506425 | 100.5636356 | 99.9852323 | 99.41522346 | 98.85340686 |

Classification | Public

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 110909A00006 | 9/9/2011 | 2.26 | 9/9/2026 | 9/9/2011 | 106.29365 | 106.2936521 | 106.2936521 | 106.2936521 | 105.1724476 | 101.9939875 | 98.95739905 | 96.05503041 | 93.27970077 |
| 111115A00005 | 11/15/2011 | 2.26 | 11/15/2021 | 11/15/2011 | 101.41829 | 101.4182904 | 101.4182904 | 101.4182904 | 101.3157444 | 100.6009799 | 99.89870487 | 99.20856007 | 98.53020059 |
| 011115A00014 | 11/15/2001 | 5.19 | 11/16/2021 | 11/15/2001 | 104.18813 | 104.188131 | 104.188131 | 104.188131 | 104.0571689 | 103.222394 | 102.4025266 | 101.5971291 | 100.8057822 |
| 020918A00047 | 9/18/2002 | 4.72 | 9/19/2022 | 9/18/2002 | 105.39239 | 105.3923899 | 105.3923899 | 105.3923899 | 105.17763 | 103.9877254 | 102.8257676 | 101.6908407 | 100.5820675 |
| 030605A00010 | 6/5/2003 | 3.97 | 6/5/2023 | 6/5/2003 | 107.37866 | 107.3786581 | 107.3786581 | 107.3786581 | 106.9854313 | 105.0448665 | 103.1565589 | 101.3187338 | 99.52968857 |
| 050812A00050 | 8/12/2005 | 4.97 | 8/12/2025 | 8/12/2005 | 112.11705 | 112.1170514 | 112.1170514 | 112.1170514 | 111.2980136 | 108.6022401 | 106.0142709 | 103.5288436 | 101.1409916 |
| 050823A00085 | 8/23/2005 | 4.78 | 8/25/2025 | 8/23/2005 | 119.50138 | 119.5013833 | 119.5013833 | 119.5013833 | 117.8215589 | 113.4206048 | 109.236531 | 105.2571873 | 101.4711765 |
| 050823A00088 | 8/23/2005 | 4.78 | 8/25/2025 | 8/23/2005 | 119.50145 | 119.5014522 | 119.5014522 | 119.5014522 | 117.8216197 | 113.4206497 | 109.236561 | 105.2572034 | 101.4711797 |
| 200428A00018 | 4/28/2020 | 1.33 | 4/27/2035 | 4/28/2020 | 107.59004 | 107.5900448 | 107.5900448 | 106.739615 | 100.853111 | 94.17421772 | 88.12171141 | 82.62721746 | 77.63056153 |
| 200521A00005 | 5/21/2020 | 0.75 | 5/21/2030 | 5/21/2020 | 103.16357 | 103.1635695 | 103.1635695 | 103.1635695 | 100.2273254 | 95.54605354 | 91.17695797 | 87.09555122 | 83.27948218 |
| 970806A00017 | 8/1/1997 | 7.02 | 7/23/2026 | 8/1/1997 | 120.8562 | 120.8562023 | 120.8562023 | 120.8562023 | 119.7540304 | 116.4245939 | 113.2365325 | 110.182496 | 107.2555741 |
| 970806A00018 | 8/1/1997 | 6.7 | 10/23/2026 | 8/1/1997 | 120.72492 | 120.724924 | 120.724924 | 120.724924 | 119.523054 | 116.06363 | 112.7563948 | 109.593178 | 106.5663122 |
| 970806A00059 | 8/1/1997 | 8.25 | 9/22/2025 | 8/1/1997 | 137.51954 | 137.519537 | 137.519537 | 137.519537 | 135.3861832 | 129.963817 | 124.8144264 | 119.9224718 | 115.2733906 |
| 200326A00037 | 3/26/2020 | 1.78 | 3/26/2035 | 3/26/2020 | 110.86382 | 110.8638165 | 110.8638165 | 110.0366331 | 104.0934486 | 97.29713056 | 91.13211815 | 85.53002723 | 80.43062113 |
| 200327A00004 | 3/27/2020 | 0.63 | 3/28/2022 | 3/27/2020 | 100.29606 | 100.2960609 | 100.2960609 | 100.2960609 | 100.1610795 | 99.29182666 | 98.43828184 | 97.60000883 | 96.77658802 |
| 200330A00010 | 3/30/2020 | 0.61 | 3/30/2022 | 3/30/2020 | 100.27844 | 100.2784353 | 100.2784353 | 100.2784353 | 100.1434104 | 99.2740065 | 98.42031806 | 97.58190847 | 96.75835777 |
| 200331A00056 | 3/31/2020 | 0.96 | 3/29/2030 | 3/31/2020 | 104.14521 | 104.1452051 | 104.1452051 | 104.1452051 | 101.2978924 | 96.65561385 | 92.31790442 | 88.26122688 | 84.46406919 |
| 200401A00011 | 4/1/2020 | 0.68 | 4/3/2023 | 4/1/2020 | 100.54946 | 100.5494627 | 100.5494627 | 100.5494627 | 100.2898401 | 98.89660965 | 97.53631415 | 96.20790175 | 94.91036295 |
| 200402A00050 | 4/6/2020 | 0.73 | 4/5/2024 | 4/6/2020 | 100.83997 | 100.8399664 | 100.8399664 | 100.8399664 | 100.4198002 | 98.54409102 | 96.72401271 | 94.95745787 | 93.24241491 |
| 200310A00067 | 3/10/2020 | 0.94 | 3/10/2025 | 3/10/2020 | 101.54378 | 101.5437824 | 101.5437824 | 101.5437824 | 100.9268876 | 98.60704778 | 96.36903906 | 94.20927617 | 92.12435758 |
| 200311A00027 | 3/11/2020 | 1.52 | 3/9/2035 | 3/11/2020 | 108.94772 | 108.9477192 | 108.9477192 | 108.1239501 | 102.2398571 | 95.52930506 | 89.44376802 | 83.91543279 | 78.88457427 |
| 200311A00028 | 3/11/2020 | 1.04 | 3/12/2024 | 3/11/2020 | 101.43754 | 101.4375375 | 101.4375375 | 101.4375375 | 101.0169232 | 99.13361543 | 97.30595579 | 95.53184444 | 93.80927659 |
| 200316A00008 | 3/16/2020 | 1.31 | 3/15/2030 | 3/16/2020 | 104.91661 | 104.9166136 | 104.9166136 | 104.9166136 | 102.0908095 | 97.45910809 | 93.12947133 | 89.07866068 | 85.28542948 |
| 200317A00022 | 3/17/2020 | 0.97 | 3/17/2022 | 3/17/2020 | 100.59617 | 100.5961748 | 100.5961748 | 100.5961748 | 100.4612616 | 99.59160944 | 98.7376443 | 97.89893147 | 97.07505267 |
| 200317A00024 | 3/17/2020 | 1.09 | 3/17/2025 | 3/17/2020 | 101.90353 | 101.9035284 | 101.9035284 | 101.9035284 | 101.285144 | 98.95933232 | 96.71554095 | 94.55017629 | 92.45982894 |
| 191231A00021 | 12/31/2019 | 1.9 | 2/28/2023 | 12/31/2019 | 102.02871 | 102.0287106 | 102.0287106 | 102.0287106 | 101.8085845 | 100.5613038 | 99.34115006 | 98.14730359 | 96.97897646 |
| 191231A00027 | 12/31/2019 | 1.9 | 4/28/2023 | 12/31/2019 | 102.02871 | 102.0287064 | 102.0287064 | 102.0287064 | 101.8085781 | 100.5612855 | 99.34111978 | 98.14726121 | 96.97892187 |
| 200130A00027 | 1/31/2020 | 1.79 | 1/31/2025 | 1/31/2020 | 103.4573 | 103.4573013 | 103.4573013 | 103.4573013 | 102.8723465 | 100.6009921 | 98.40729173 | 96.28793063 | 94.23976024 |
| 200203A00046 | 2/3/2020 | 1.98 | 2/3/2040 | 2/3/2020 | 118.42368 | 118.4236837 | 118.4236837 | 115.4332171 | 106.584779 | 97.68639954 | 89.84309849 | 82.90957757 | 76.76242574 |
| 200210A00007 | 2/10/2020 | 1.78 | 2/10/2025 | 2/10/2023 | 105.85073 | 105.8507277 | 105.8507277 | 105.8507277 | 104.7019814 | 101.2388723 | 97.92765606 | 94.76061844 | 91.73048409 |
| 200225A00049 | 2/25/2020 | 1.79 | 2/24/2040 | 2/25/2020 | 116.54363 | 116.5436254 | 116.5436254 | 113.5698054 | 104.8112608 | 96.01955999 | 88.27298258 | 81.42736033 | 75.36026784 |
| 190823A00009 | 8/23/2019 | 1.8 | 8/23/2029 | 8/23/2019 | 107.78892 | 107.7889171 | 107.7889171 | 107.7889171 | 105.2462061 | 100.7454688 | 96.52295216 | 92.55829434 | 88.83279911 |
| 191114A00012 | 11/14/2019 | 1.89 | 11/15/2021 | 11/14/2019 | 101.14714 | 101.1471401 | 101.1471401 | 101.1471401 | 101.0453465 | 100.3351554 | 99.6373497 | 98.9515736 | 98.27748541 |

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 191114A00013 | 11/14/2019 | 1.9 | 11/14/2022 | 11/14/2019 | 101.95862 | 101.9586187 | 101.9586187 | 101.9586187 | 101.7491598 | 100.5446489 | 99.36573312 | 98.21164642 | 97.08165258 |
| 191114A00014 | 11/14/2019 | 1.9 | 11/14/2023 | 11/14/2019 | 102.76767 | 102.7676733 | 102.7676733 | 102.7676733 | 102.4164436 | 100.7169371 | 99.06343493 | 97.45431357 | 95.88801961 |
| 191115A00029 | 11/15/2019 | 2.07 | 11/15/2029 | 11/15/2019 | 108.3445 | 108.3445045 | 108.3445045 | 108.3445045 | 105.6743465 | 101.0801907 | 96.77523761 | 92.73793508 | 88.94852493 |
| 191216A00013 | 12/16/2019 | 1.95 | 12/16/2024 | 12/16/2019 | 103.73384 | 103.7338405 | 103.7338405 | 103.7338405 | 103.1678106 | 100.9333746 | 98.77410027 | 96.68682396 | 94.6685387 |
| 190604A00010 | 6/4/2019 | 2.45 | 6/4/2021 | 6/4/2019 | 101.09254 | 101.0925366 | 101.0925366 | 101.0925366 | 101.0312422 | 100.5322084 | 100.0393488 | 99.55253676 | 99.07164947 |
| 190618A00009 | 6/18/2019 | 2.34 | 6/18/2021 | 6/18/2019 | 101.0448 | 101.0447999 | 101.0447999 | 101.0447999 | 100.9828558 | 100.4804935 | 99.98442317 | 99.49451367 | 99.01063778 |
| 190627A00020 | 6/27/2019 | 2.28 | 6/25/2021 | 6/27/2019 | 101.01812 | 101.0181188 | 101.0181188 | 101.0181188 | 100.955855 | 100.4518655 | 99.95422723 | 99.46280683 | 98.97747482 |
| 190628A00007 | 6/28/2019 | 2.28 | 6/28/2034 | 6/28/2019 | 115.2633 | 115.2633037 | 115.2633037 | 114.6606425 | 108.9272674 | 102.1520472 | 95.97828861 | 90.34359672 | 85.19270912 |
| 190701A00022 | 7/1/2019 | 2.28 | 7/1/2021 | 7/1/2019 | 101.0915 | 101.0915033 | 101.0915033 | 101.0915033 | 101.0231879 | 100.4829465 | 99.94996554 | 99.42408349 | 98.90514374 |
| 190813A00019 | 8/13/2019 | 2.13 | 8/13/2021 | 8/13/2019 | 101.08891 | 101.0889081 | 101.0889081 | 101.0889081 | 101.0124294 | 100.4275603 | 99.85126392 | 99.28333133 | 98.72356083 |
| 190118A00031 | 1/18/2019 | 2.81 | 1/19/2021 | 1/18/2019 | 100.74886 | 100.7488609 | 100.7488609 | 100.7488609 | 100.7185695 | 100.4268265 | 100.1371369 | 99.84947678 | 99.56382266 |
| 190220A00012 | 2/20/2019 | 2.76 | 2/19/2021 | 2/20/2019 | 100.77381 | 100.7738148 | 100.7738148 | 100.7738148 | 100.7409959 | 100.4335505 | 100.1285531 | 99.82597087 | 99.52577188 |
| 190327A00030 | 3/27/2019 | 2.9 | 3/27/2036 | 3/27/2019 | 120.39165 | 120.3916538 | 120.3916538 | 119.1770872 | 112.3793491 | 104.7852094 | 97.92818697 | 91.72458589 | 86.10117136 |
| 190513A00026 | 5/13/2019 | 2.55 | 5/13/2021 | 5/13/2019 | 101.05028 | 101.0502835 | 101.0502835 | 101.0502835 | 100.9955711 | 100.5366121 | 100.0828671 | 99.63423792 | 99.19062881 |
| 190520A00020 | 5/20/2019 | 2.39 | 5/20/2026 | 5/20/2019 | 106.79917 | 106.7991707 | 106.7991707 | 106.7991707 | 105.8221837 | 102.8426719 | 99.98919345 | 97.25525159 | 94.63473424 |
| 190523A00038 | 5/23/2019 | 2.54 | 5/24/2021 | 5/23/2019 | 101.05263 | 101.0526346 | 101.0526346 | 101.0526346 | 100.9973649 | 100.5353973 | 100.0787382 | 99.62728605 | 99.18094197 |
| 181226A00040 | 12/26/2018 | 2.84 | 12/28/2020 | 12/26/2018 | 100.65702 | 100.6570201 | 100.6570201 | 100.6570201 | 100.6313769 | 100.3783763 | 100.1269127 | 99.87697076 | 99.62853511 |
| 190102A00015 | 1/2/2019 | 2.97 | 1/3/2034 | 1/2/2019 | 119.53871 | 119.5387124 | 119.5387124 | 119.0589025 | 113.4570543 | 106.6648752 | 100.4566287 | 94.77347788 | 89.56313163 |
| 190102A00020 | 1/2/2019 | 2.97 | 1/3/2034 | 1/2/2019 | 119.53856 | 119.5385582 | 119.5385582 | 119.0587749 | 113.4569935 | 106.664865 | 100.4566613 | 94.77354674 | 89.56323101 |
| 190102A00022 | 1/2/2019 | 2.97 | 1/3/2034 | 1/2/2019 | 119.53846 | 119.5384641 | 119.5384641 | 119.0587055 | 113.4569657 | 106.6648671 | 100.4566881 | 94.77359374 | 89.56329444 |
| 190102A00024 | 1/2/2019 | 2.97 | 1/3/2034 | 1/2/2019 | 119.53851 | 119.5385147 | 119.5385147 | 119.0587448 | 113.4569831 | 106.6648681 | 100.4566755 | 94.77356977 | 89.56326108 |
| 190111A00047 | 1/11/2019 | 2.8 | 1/11/2021 | 1/11/2019 | 100.73648 | 100.7364796 | 100.7364796 | 100.7364796 | 100.7066757 | 100.4186369 | 100.1325838 | 99.8484938 | 99.5663448 |
| 181015A00043 | 10/15/2018 | 2.91 | 10/15/2020 | 10/15/2018 | 100.4129 | 100.4128977 | 100.4128977 | 100.4128977 | 100.39872 | 100.2433291 | 100.0884745 | 99.93415327 | 99.78036243 |
| 181029A00097 | 10/29/2018 | 3.53 | 10/27/2028 | 10/29/2018 | 120.69117 | 120.6911671 | 120.6911671 | 120.6911671 | 116.0909962 | 109.5710099 | 103.5255061 | 97.91585547 | 92.70682696 |
| 181120A00026 | 11/20/2018 | 2.92 | 11/20/2020 | 11/20/2018 | 100.54962 | 100.5496209 | 100.5496209 | 100.5496209 | 100.5295214 | 100.3241728 | 100.1198051 | 99.91641076 | 99.71398219 |
| 181211A00042 | 12/11/2018 | 3.7 | 12/11/2028 | 12/11/2023 | 122.05939 | 122.0593889 | 122.0593889 | 122.0593889 | 117.1996897 | 110.4454444 | 104.1896732 | 98.39127968 | 93.01281566 |
| 181214A00026 | 12/14/2018 | 2.92 | 12/14/2020 | 12/14/2018 | 100.65646 | 100.6564632 | 100.6564632 | 100.6564632 | 100.6317175 | 100.3864152 | 100.1425316 | 99.90005307 | 99.65896645 |
| 181220A00006 | 12/20/2018 | 2.93 | 12/20/2022 | 12/20/2018 | 103.32852 | 103.3285162 | 103.3285162 | 103.3285162 | 103.1069502 | 101.8495438 | 100.6194178 | 99.41574914 | 98.23774691 |
| 180814A00020 | 8/14/2018 | 2.7 | 8/14/2020 | 8/14/2018 | 100.09481 | 100.0948131 | 100.0948131 | 100.0948131 | 100.0919205 | 100.0530775 | 100.0142818 | 99.97553336 | 99.93683215 |
| 180830A00066 | 8/30/2018 | 3.02 | 8/30/2023 | 8/30/2018 | 108.02124 | 108.0212403 | 108.0212403 | 108.0212403 | 107.2952859 | 104.3500987 | 101.5045741 | 98.75474333 | 96.09682123 |
| 180914A00035 | 9/14/2018 | 2.82 | 9/15/2020 | 9/14/2018 | 100.27441 | 100.2744101 | 100.2744101 | 100.2744101 | 100.2657256 | 100.1588948 | 100.0523061 | 99.94595856 | 99.83985136 |
| 180928A00077 | 9/28/2018 | 2.85 | 9/28/2021 | 9/28/2018 | 101.73012 | 101.7301175 | 101.7301175 | 101.7301175 | 101.6441719 | 101.010284 | 100.3864785 | 99.7724877 | 99.16805426 |
| 181003A00044 | 10/3/2018 | 2.78 | 10/2/2020 | 10/3/2018 | 100.38201 | 100.3820139 | 100.3820139 | 100.3820139 | 100.3692923 | 100.2257457 | 100.082642 | 99.93997897 | 99.7977545 |

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 181003A00072 | 10/3/2018 | 2.78 | 10/2/2020 | 10/3/2018 | 100.38201 | 100.3820139 | 100.3820139 | 100.3820139 | 100.3692923 | 100.2257457 | 100.082642 | 99.93997897 | 99.7977545 |
| 180529A00057 | 5/29/2018 | 3.09 | 5/30/2028 | 5/29/2018 | 114.16486 | 114.1648618 | 114.1648618 | 114.1648618 | 111.4669274 | 106.6511708 | 102.131394 | 97.88632915 | 93.89640072 |
| 180716A00046 | 7/16/2018 | 2.9 | 7/16/2025 | 7/16/2018 | 107.03913 | 107.0391338 | 107.0391338 | 107.0391338 | 106.3354203 | 103.7950305 | 101.3478442 | 98.9896264 | 96.71636669 |
| 180719A00077 | 7/19/2018 | 3.06 | 7/19/2023 | 7/19/2018 | 107.85024 | 107.8502392 | 107.8502392 | 107.8502392 | 107.1728218 | 104.3299576 | 101.5805995 | 98.92113657 | 96.34811875 |
| 180725A00034 | 7/25/2018 | 2.79 | 7/25/2022 | 7/25/2018 | 102.81806 | 102.818057 | 102.818057 | 102.818057 | 102.6452155 | 101.5935512 | 100.5624663 | 99.55137421 | 98.55971023 |
| 180725A00035 | 7/25/2018 | 2.85 | 7/25/2023 | 7/25/2018 | 104.26375 | 104.263749 | 104.263749 | 104.263749 | 103.9607712 | 102.4016109 | 100.8816247 | 99.39950672 | 97.95400471 |
| 180727A00030 | 7/27/2018 | 2.89 | 7/27/2021 | 7/27/2018 | 101.43247 | 101.4324696 | 101.4324696 | 101.4324696 | 101.3627778 | 100.8153546 | 100.2754264 | 99.74282212 | 99.21737607 |
| 170705A00028 | 7/5/2017 | 1.86 | 7/6/2021 | 7/5/2017 | 100.86569 | 100.8656893 | 100.8656893 | 100.8656893 | 100.7972358 | 100.2567088 | 99.72347559 | 99.19737286 | 98.67824259 |
| 170705A00029 | 7/5/2017 | 1.98 | 7/5/2022 | 7/5/2017 | 101.77036 | 101.7703621 | 101.7703621 | 101.7703621 | 101.5998109 | 100.5609025 | 99.54223236 | 98.54322632 | 97.56333176 |
| 170929A00046 | 9/29/2017 | 2.49 | 9/30/2027 | 9/29/2017 | 107.97158 | 107.9715781 | 107.9715781 | 107.9715781 | 106.4561075 | 102.8423249 | 99.40972877 | 96.14740473 | 93.04518304 |
| 171206A00020 | 12/6/2017 | 2.62 | 12/6/2027 | 12/6/2017 | 108.73331 | 108.733307 | 108.733307 | 108.733307 | 107.0954271 | 103.3487442 | 99.79525651 | 96.42301877 | 93.22092043 |
| 180123A00010 | 1/23/2018 | 2.68 | 1/24/2028 | 1/23/2018 | 109.82138 | 109.821382 | 109.821382 | 109.821382 | 108.1185143 | 104.2826736 | 100.6471163 | 97.19931265 | 93.92761852 |
| 180126A00018 | 1/26/2018 | 2.34 | 1/26/2023 | 1/26/2018 | 102.90663 | 102.9066275 | 102.9066275 | 102.9066275 | 102.6742381 | 101.3748931 | 100.1044622 | 98.86205897 | 97.64683159 |
| 170130A00046 | 1/30/2017 | 2.52 | 1/30/2026 | 1/30/2017 | 106.69671 | 106.6967128 | 106.6967128 | 106.6967128 | 105.7314649 | 102.713981 | 99.82174845 | 97.04844311 | 94.38810718 |
| 170313A00041 | 3/13/2017 | 3.21 | 3/15/2032 | 3/13/2017 | 117.09888 | 117.0988825 | 117.0988825 | 117.0157963 | 112.6871681 | 106.8013594 | 101.3601813 | 96.32406539 | 91.65735022 |
| 170315A00005 | 3/15/2017 | 2.1 | 3/15/2022 | 3/15/2017 | 101.60363 | 101.6036343 | 101.6036343 | 101.6036343 | 101.4679028 | 100.5922462 | 99.73236796 | 98.88783096 | 98.05821477 |
| 170530A00019 | 5/30/2017 | 1.58 | 6/1/2021 | 5/30/2017 | 100.73046 | 100.7304616 | 100.7304616 | 100.7304616 | 100.6693362 | 100.1714093 | 99.67964355 | 99.19391285 | 98.71409467 |
| 170612A00024 | 6/12/2017 | 1.72 | 6/13/2022 | 6/12/2017 | 101.61966 | 101.6196564 | 101.6196564 | 101.6196564 | 101.4574829 | 100.4566605 | 99.47498546 | 98.51191722 | 97.56693558 |
| 170616A00003 | 6/16/2017 | 1.91 | 6/17/2024 | 6/16/2017 | 103.62655 | 103.6265455 | 103.6265455 | 103.6265455 | 103.1646373 | 101.1638998 | 99.22454242 | 97.34417333 | 95.52051201 |
| 160928A00044 | 9/28/2016 | 2.89 | 9/29/2036 | 9/28/2023 | 121.01086 | 121.0108617 | 121.0108617 | 119.4210748 | 112.1420345 | 104.2370118 | 97.13847488 | 90.75031485 | 84.98901576 |
| 160930A00032 | 9/30/2016 | 2.15 | 9/30/2031 | 9/30/2016 | 110.40125 | 110.4012509 | 110.4012509 | 110.3704225 | 106.4931154 | 101.0567758 | 96.01930978 | 91.34629931 | 87.00662117 |
| 160930A00033 | 9/30/2016 | 1.8 | 9/30/2026 | 9/30/2016 | 104.70648 | 104.7064795 | 104.7064795 | 104.7064795 | 103.6287187 | 100.549588 | 97.60688735 | 94.79328796 | 92.10191092 |
| 170130A00036 | 1/30/2017 | 3.11 | 1/31/2033 | 1/30/2017 | 118.24008 | 118.2400754 | 118.2400754 | 117.9667037 | 112.8464592 | 106.356467 | 100.394496 | 94.91010411 | 89.8581803 |
| 170130A00039 | 1/30/2017 | 2.74 | 1/31/2028 | 1/30/2017 | 109.79547 | 109.7954728 | 109.7954728 | 109.7954728 | 107.9477382 | 103.9203126 | 100.1077813 | 96.49644853 | 93.07360226 |
| 170130A00043 | 1/30/2017 | 2.64 | 1/29/2027 | 1/30/2017 | 108.22687 | 108.2268724 | 108.2268724 | 108.2268724 | 106.8672337 | 103.343811 | 99.98763262 | 96.78914501 | 93.73941417 |
| 160928A00029 | 9/28/2016 | 2.52 | 9/29/2036 | 9/28/2016 | 118.00227 | 118.0022715 | 118.0022715 | 116.4268298 | 109.2719755 | 101.5278626 | 94.5768756 | 88.32426413 | 82.68771385 |
| 160928A00030 | 9/28/2016 | 2.52 | 9/29/2036 | 9/28/2016 | 118.00227 | 118.0022715 | 118.0022715 | 116.4268298 | 109.2719755 | 101.5278626 | 94.5768756 | 88.32426413 | 82.68771385 |
| 160928A00032 | 9/28/2016 | 2.52 | 9/29/2036 | 9/28/2016 | 118.00227 | 118.0022715 | 118.0022715 | 116.4268298 | 109.2719755 | 101.5278626 | 94.5768756 | 88.32426413 | 82.68771385 |
| 160928A00033 | 9/28/2016 | 2.46 | 9/29/2036 | 9/28/2016 | 117.51439 | 117.514392 | 117.514392 | 115.9412765 | 108.8065606 | 101.0885411 | 94.16148112 | 87.9308505 | 82.31452975 |
| 160928A00041 | 9/28/2016 | 3.26 | 9/29/2036 | 9/30/2019 | 124.01945 | 124.0194519 | 124.0194519 | 122.4153199 | 115.0120934 | 106.9461611 | 99.70007416 | 93.17636557 | 87.29031767 |
| 160928A00042 | 9/28/2016 | 3.05 | 9/29/2036 | 9/28/2021 | 122.31187 | 122.3118737 | 122.3118737 | 120.7158835 | 113.383141 | 105.4085358 | 98.24619349 | 91.79941786 | 85.98417334 |
| 151119A00027 | 11/19/2015 | 1.64 | 11/19/2020 | 11/19/2015 | 100.28565 | 100.2856547 | 100.2856547 | 100.2856547 | 100.2656765 | 100.0614636 | 99.85822156 | 99.65594292 | 99.45462019 |
| 151123A00067 | 11/23/2015 | 1.68 | 11/23/2020 | 11/23/2015 | 100.29782 | 100.2978156 | 100.2978156 | 100.2978156 | 100.2775188 | 100.0705342 | 99.86455382 | 99.65956975 | 99.45557404 |

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 160210A00062 | 2/10/2016 | 1.36 | 2/10/2021 | 2/10/2016 | 100.36677 | 100.3667662 | 100.3667662 | 100.3667662 | 100.3315401 | 100.0011074 | 99.6733319 | 99.34817832 | 99.02561209 |
| 160210A00068 | 2/10/2016 | 2.76 | 2/10/2031 | 2/10/2021 | 113.03152 | 113.0315158 | 113.0315158 | 113.0308842 | 109.5453618 | 104.2985368 | 99.41534622 | 94.86603862 | 90.62357122 |
| 160331A00096 | 3/31/2016 | 1.32 | 11/30/2020 | 3/31/2016 | 100.22827 | 100.2282727 | 100.2282727 | 100.2282727 | 100.2074368 | 99.99579054 | 99.78520746 | 99.57567871 | 99.36719556 |
| 160506A00016 | 5/6/2016 | 1.28 | 5/6/2021 | 5/6/2016 | 100.4688 | 100.4687997 | 100.4687997 | 100.4687997 | 100.4146489 | 99.95948281 | 99.50945568 | 99.06447154 | 98.62443691 |
| 150601A01051 | 6/1/2015 | 4.91 | 2/7/2025 | 6/1/2015 | 119.68496 | 119.6849588 | 119.6849588 | 119.6849588 | 118.1655604 | 113.7908527 | 109.6169216 | 105.633325 | 101.830223 |
| 150601A01055 | 6/1/2015 | 5.29 | 3/16/2022 | 6/1/2015 | 108.12719 | 108.1271913 | 108.1271913 | 108.1271913 | 107.8404856 | 106.2203135 | 104.6333077 | 103.0785093 | 101.5549969 |
| 150601A01056 | 6/1/2015 | 4.7 | 3/16/2022 | 6/1/2015 | 107.19967 | 107.1996653 | 107.1996653 | 107.1996653 | 106.9141602 | 105.301795 | 103.7224562 | 102.1751891 | 100.6590756 |
| 150819A00027 | 8/19/2015 | 3.05 | 8/19/2030 | 8/19/2020 | 115.05441 | 115.0544059 | 115.0544059 | 115.0544059 | 111.7818303 | 106.6122118 | 101.7892169 | 97.28536436 | 93.07560155 |
| 151026A00034 | 10/26/2015 | 2.88 | 10/28/2030 | 10/26/2020 | 114.41373 | 114.4137346 | 114.4137346 | 114.4137346 | 111.0372123 | 105.8140004 | 100.9463699 | 96.40572645 | 92.16603693 |
| 151110A00011 | 11/10/2015 | 3.23 | 11/12/2030 | 11/10/2020 | 115.28382 | 115.283819 | 115.283819 | 115.283819 | 111.8764722 | 106.6276484 | 101.7364674 | 97.1741108 | 92.91434725 |
| 150601A01021 | 6/1/2015 | 5.28 | 10/3/2025 | 6/1/2015 | 112.76651 | 112.7665133 | 112.7665133 | 112.7665133 | 111.9884622 | 109.2799718 | 106.6738654 | 104.1653562 | 101.7499176 |
| 150601A01030 | 6/1/2015 | 5.43 | 9/30/2020 | 6/1/2015 | 100.88069 | 100.8806863 | 100.8806863 | 100.8806863 | 100.8651835 | 100.6959634 | 100.5273113 | 100.3592242 | 100.1916995 |
| 150601A01040 | 6/1/2015 | 5.4 | 10/2/2026 | 6/1/2015 | 128.27413 | 128.2741307 | 128.2741307 | 128.2741307 | 125.3186276 | 119.4666793 | 113.9575205 | 108.7686732 | 103.8792678 |
| 150601A01041 | 6/1/2015 | 5.99 | 10/2/2036 | 6/1/2015 | 154.70621 | 154.7062127 | 154.7062127 | 152.5512145 | 142.5663914 | 131.941275 | 122.4170916 | 113.8622989 | 106.1625204 |
| 150601A01047 | 6/1/2015 | 5.35 | 12/30/2024 | 6/1/2015 | 121.01788 | 121.0178849 | 121.0178849 | 121.0178849 | 119.559281 | 115.2484753 | 111.1310263 | 107.1971016 | 103.4374231 |
| 150601A01048 | 6/1/2015 | 5.27 | 1/3/2025 | 6/1/2015 | 120.74438 | 120.7443832 | 120.7443832 | 120.7443832 | 119.2803808 | 114.9660188 | 110.8456636 | 106.9094262 | 103.1479765 |
| 150601A01012 | 6/1/2015 | 5.43 | 9/15/2023 | 6/1/2015 | 115.4207 | 115.4207038 | 115.4207038 | 115.4207038 | 114.6634978 | 111.597526 | 108.6353039 | 105.772669 | 103.0056534 |
| 150601A01013 | 6/1/2015 | 5.21 | 9/29/2023 | 6/1/2015 | 114.95321 | 114.9532051 | 114.9532051 | 114.9532051 | 114.1807772 | 111.0870929 | 108.0991452 | 105.2126483 | 102.423519 |
| 150601A01014 | 6/1/2015 | 4.96 | 9/30/2020 | 6/1/2015 | 100.80256 | 100.8025582 | 100.8025582 | 100.8025582 | 100.7870675 | 100.6179827 | 100.4494654 | 100.2815128 | 100.1141221 |
| 150601A01015 | 6/1/2015 | 5.61 | 10/28/2025 | 6/1/2015 | 125.30431 | 125.3043078 | 125.3043078 | 125.3043078 | 123.2867845 | 118.268358 | 113.5066208 | 108.9867188 | 104.6947491 |
| 150601A01016 | 6/1/2015 | 5.73 | 10/28/2025 | 6/1/2015 | 125.85734 | 125.8573449 | 125.8573449 | 125.8573449 | 123.8358722 | 118.8038387 | 114.0290144 | 109.4965207 | 105.1924314 |
| 150601A01020 | 6/1/2015 | 5.22 | 10/19/2020 | 6/1/2015 | 100.58544 | 100.5854437 | 100.5854437 | 100.5854437 | 100.5744004 | 100.4542557 | 100.3345376 | 100.2152437 | 100.0963717 |
| 150601A00993 | 6/1/2015 | 5.37 | 6/9/2034 | 6/1/2015 | 141.18995 | 141.1899488 | 141.1899488 | 140.3558173 | 132.7911205 | 124.0992361 | 116.199101 | 109.0073533 | 102.4502488 |
| 150601A00994 | 6/1/2015 | 5.86 | 6/24/2022 | 6/1/2015 | 110.36701 | 110.3670119 | 110.3670119 | 110.3670119 | 110.0199888 | 108.1408618 | 106.3048825 | 104.5107916 | 102.7573753 |
| 150601A00997 | 6/1/2015 | 5.46 | 9/30/2022 | 6/1/2015 | 110.94775 | 110.947748 | 110.947748 | 110.947748 | 110.5288055 | 108.3959495 | 106.3170826 | 104.2904427 | 102.3143403 |
| 150601A01005 | 6/1/2015 | 5.82 | 3/10/2025 | 6/1/2015 | 123.32328 | 123.3232839 | 123.3232839 | 123.3232839 | 121.7713486 | 117.328805 | 113.090743 | 109.0464366 | 105.1857866 |
| 150601A01008 | 6/1/2015 | 5.08 | 4/15/2025 | 6/1/2015 | 111.18972 | 111.1897189 | 111.1897189 | 111.1897189 | 110.5385433 | 108.0832641 | 105.7142253 | 103.4276476 | 101.2199454 |
| 150601A01011 | 6/1/2015 | 5.05 | 9/8/2025 | 6/1/2015 | 112.0439 | 112.0439048 | 112.0439048 | 112.0439048 | 111.2846463 | 108.6166974 | 106.0487751 | 103.5762383 | 101.1946964 |
| 150601A00964 | 6/1/2015 | 5.25 | 1/6/2033 | 6/1/2015 | 131.7394 | 131.7394011 | 131.7394011 | 131.5220844 | 126.3343413 | 119.5410713 | 113.2836923 | 107.5122598 | 102.1819972 |
| 150601A00966 | 6/1/2015 | 4.84 | 2/3/2023 | 6/1/2015 | 105.93837 | 105.9383693 | 105.9383693 | 105.9383693 | 105.7064791 | 104.4110417 | 103.1444808 | 101.9059094 | 100.6944752 |
| 150601A00971 | 6/1/2015 | 6.42 | 6/20/2033 | 6/1/2015 | 145.43536 | 145.4353621 | 145.4353621 | 144.958445 | 137.8738038 | 129.3765552 | 121.6073692 | 114.4940839 | 107.972386 |
| 150601A00976 | 6/1/2015 | 6.8 | 9/22/2033 | 6/1/2015 | 149.40382 | 149.4038239 | 149.4038239 | 148.8635264 | 141.6800004 | 133.0342838 | 125.1319098 | 117.8985727 | 111.2681371 |
| 150601A00978 | 6/1/2015 | 6.32 | 11/24/2033 | 6/1/2015 | 141.07116 | 141.0711556 | 141.0711556 | 140.6310676 | 134.6057201 | 127.030363 | 120.0830435 | 113.7021716 | 107.8328611 |

Classification | Public

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 150601A00988 | 6/1/2015 | 4.57 | 3/22/2024 | 6/1/2015 | 107.76077 | 107.7607651 | 107.7607651 | 107.7607651 | 107.3509996 | 105.4753986 | 103.6538648 | 101.8843921 | 100.1650643 |
| 150601A00950 | 6/1/2015 | 6.76 | 12/18/2031 | 6/1/2015 | 142.7783 | 142.7783001 | 142.7783001 | 142.7087218 | 137.1426297 | 129.6896393 | 122.8058339 | 116.4406043 | 110.5483065 |
| 150601A00952 | 6/1/2015 | 6.34 | 2/13/2032 | 6/1/2015 | 141.46463 | 141.4646276 | 141.4646276 | 141.3637332 | 135.5239485 | 127.9066267 | 120.8845278 | 114.403738 | 108.4157182 |
| 150601A00953 | 6/1/2015 | 6.6 | 6/10/2032 | 6/1/2015 | 144.76108 | 144.7610806 | 144.7610806 | 144.5893342 | 138.3180311 | 130.3382532 | 122.997657 | 116.2369551 | 110.0029065 |
| 150601A00955 | 6/1/2015 | 5.84 | 7/15/2032 | 6/1/2015 | 134.04199 | 134.041986 | 134.041986 | 133.9126387 | 129.0044366 | 122.3432202 | 116.1886559 | 110.4951124 | 105.2215295 |
| 150601A00960 | 6/1/2015 | 6.49 | 12/16/2032 | 6/1/2015 | 139.23373 | 139.2337338 | 139.2337338 | 139.0263504 | 133.7060948 | 126.6473601 | 120.1388284 | 114.1296818 | 108.574322 |
| 150601A00963 | 6/1/2015 | 4.76 | 12/27/2022 | 6/1/2015 | 105.58523 | 105.5852299 | 105.5852299 | 105.5852299 | 105.3675799 | 104.1298425 | 102.918934 | 101.7340442 | 100.5743944 |
| 150601A00939 | 6/1/2015 | 5.79 | 1/17/2031 | 6/1/2015 | 132.77191 | 132.7719128 | 132.7719128 | 132.7718402 | 128.3767327 | 121.9348113 | 115.949769 | 110.3837429 | 105.2023444 |
| 150601A00941 | 6/1/2015 | 6.23 | 3/8/2021 | 6/1/2015 | 103.59814 | 103.5981422 | 103.5981422 | 103.5981422 | 103.5256084 | 102.9200147 | 102.3216411 | 101.7303585 | 101.1460405 |
| 150601A00943 | 6/1/2015 | 6.44 | 5/9/2031 | 6/1/2015 | 138.93612 | 138.9361231 | 138.9361231 | 138.9256862 | 133.9038968 | 126.873122 | 120.3588231 | 114.3168582 | 108.7072506 |
| 150601A00946 | 6/1/2015 | 6.28 | 8/22/2031 | 6/1/2015 | 138.98702 | 138.9870197 | 138.9870197 | 138.9566629 | 133.6767204 | 126.4798782 | 119.8234934 | 113.6604209 | 107.9480505 |
| 150601A00947 | 6/1/2015 | 6.19 | 8/20/2021 | 6/1/2015 | 106.18774 | 106.1877354 | 106.1877354 | 106.1877354 | 106.0276112 | 104.9730027 | 103.939983 | 102.9278891 | 101.9360847 |
| 150601A00948 | 6/1/2015 | 6.04 | 10/22/2031 | 6/1/2015 | 131.79793 | 131.7979296 | 131.7979296 | 131.7617819 | 127.4713479 | 121.2868129 | 115.5463389 | 110.2120692 | 105.2497456 |
| 150601A00928 | 6/1/2015 | 5.94 | 8/21/2030 | 6/1/2015 | 129.1555 | 129.1554953 | 129.1554953 | 129.1554953 | 125.7117148 | 120.1347456 | 114.9245967 | 110.0525532 | 105.4924146 |
| 150601A00929 | 6/1/2015 | 5.91 | 8/30/2030 | 6/1/2015 | 132.87266 | 132.8726608 | 132.8726608 | 132.8726608 | 128.6795194 | 122.3356863 | 116.4317928 | 110.9322259 | 105.8045645 |
| 150601A00931 | 6/1/2015 | 7.13 | 9/20/2030 | 6/1/2015 | 140.3242 | 140.3241982 | 140.3241982 | 140.3241982 | 135.9254277 | 129.2530339 | 123.0423984 | 117.2561839 | 111.8603979 |
| 150601A00932 | 6/1/2015 | 5.84 | 10/20/2020 | 6/1/2015 | 101.25331 | 101.253315 | 101.253315 | 101.253315 | 101.23112 | 101.0072336 | 100.7843589 | 100.562489 | 100.3416171 |
| 150601A00935 | 6/1/2015 | 6.46 | 11/21/2030 | 6/1/2015 | 136.81057 | 136.81057 | 136.81057 | 136.81057 | 132.3642908 | 125.7582364 | 119.6162774 | 113.900356 | 108.5758694 |
| 150601A00938 | 6/1/2015 | 6.35 | 12/21/2020 | 6/1/2015 | 102.39748 | 102.3974774 | 102.3974774 | 102.3974774 | 102.3553546 | 101.9606342 | 101.5690075 | 101.1804381 | 100.79489 |
| 150601A00906 | 6/1/2015 | 6.2 | 11/1/2029 | 6/1/2015 | 131.49507 | 131.4950741 | 131.4950741 | 131.4950741 | 128.0426993 | 122.236313 | 116.8029281 | 111.7144464 | 106.9451234 |
| 150601A00909 | 6/1/2015 | 6.14 | 11/30/2020 | 6/1/2015 | 100.83302 | 100.833018 | 100.833018 | 100.833018 | 100.8195247 | 100.6781138 | 100.5373077 | 100.3971021 | 100.2574928 |
| 150601A00912 | 6/1/2015 | 5.96 | 11/30/2029 | 6/1/2015 | 130.27761 | 130.2776122 | 130.2776122 | 130.2776122 | 126.8359715 | 121.0636397 | 115.6629007 | 110.6057201 | 105.8664144 |
| 150601A00918 | 6/1/2015 | 5.62 | 4/28/2025 | 6/1/2015 | 113.6269 | 113.6268995 | 113.6268995 | 113.6268995 | 112.9188622 | 110.2880591 | 107.751383 | 105.3046669 | 102.9439596 |
| 150601A00919 | 6/1/2015 | 7.41 | 6/7/2030 | 6/1/2015 | 140.96511 | 140.965113 | 140.965113 | 140.965113 | 136.7718088 | 130.2141948 | 124.1004902 | 118.3955454 | 113.0672972 |
| 150601A00927 | 6/1/2015 | 6.08 | 8/7/2030 | 6/1/2015 | 129.74581 | 129.7458091 | 129.7458091 | 129.7458091 | 126.3200506 | 120.7425287 | 115.5304326 | 110.6552567 | 106.0909831 |
| 150601A00897 | 6/1/2015 | 6.15 | 5/28/2029 | 6/1/2015 | 129.40856 | 129.408561 | 129.408561 | 129.408561 | 126.3851632 | 120.9463837 | 115.8405985 | 111.0438302 | 106.5340263 |
| 150601A00898 | 6/1/2015 | 6.66 | 6/8/2029 | 6/1/2015 | 128.87489 | 128.8748859 | 128.8748859 | 128.8748859 | 126.2400541 | 121.2690323 | 116.5909454 | 112.1851256 | 108.0325452 |
| 150601A00899 | 6/1/2015 | 7.07 | 6/14/2029 | 6/1/2015 | 129.72334 | 129.7233394 | 129.7233394 | 129.7233394 | 127.0961414 | 122.1266588 | 117.4488396 | 113.042165 | 108.8877406 |
| 150601A00900 | 6/1/2015 | 6.06 | 6/28/2024 | 6/1/2015 | 112.0531 | 112.0531033 | 112.0531033 | 112.0531033 | 111.5593527 | 109.4118863 | 107.3300857 | 105.3114048 | 103.3534155 |
| 150601A00901 | 6/1/2015 | 7.16 | 7/26/2029 | 6/1/2015 | 130.50342 | 130.5034166 | 130.5034166 | 130.5034166 | 127.7951703 | 122.7455955 | 117.9954337 | 113.523411 | 109.309954 |
| 150601A00905 | 6/1/2015 | 6.14 | 10/29/2029 | 6/1/2015 | 130.90023 | 130.9002271 | 130.9002271 | 130.9002271 | 127.5201004 | 121.7794797 | 116.4050733 | 111.3694777 | 106.6475699 |
| 150601A00872 | 6/1/2015 | 7.42 | 7/31/2028 | 6/1/2015 | 132.28649 | 132.2864865 | 132.2864865 | 132.2864865 | 129.8138288 | 124.759519 | 119.9881566 | 115.48099 | 111.2206614 |
| 150601A00875 | 6/1/2015 | 7.14 | 9/29/2028 | 6/1/2015 | 131.95172 | 131.9517168 | 131.9517168 | 131.9517168 | 129.3389025 | 124.1611551 | 119.2796726 | 114.674441 | 110.3269593 |

Classification | Public

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 150601A00883 | 6/1/2015 | 6.21 | 11/30/2028 | 6/1/2015 | 127.85285 | 127.85285 | 127.85285 | 127.85285 | 125.2255755 | 120.137927 | 115.3460166 | 110.8295547 | 106.569809 |
| 150601A00888 | 6/1/2015 | 5.92 | 3/1/2029 | 6/1/2015 | 127.49912 | 127.4991212 | 127.4991212 | 127.4991212 | 124.6587173 | 119.4119016 | 114.4803187 | 109.8416585 | 105.4753737 |
| 150601A00889 | 6/1/2015 | 6.55 | 3/2/2029 | 6/1/2015 | 131.45157 | 131.4515654 | 131.4515654 | 131.4515654 | 128.4330653 | 122.9224756 | 117.7460042 | 112.8798709 | 108.3021812 |
| 150601A00893 | 6/1/2015 | 6.49 | 4/6/2029 | 6/1/2015 | 131.11167 | 131.1116687 | 131.1116687 | 131.1116687 | 128.0828497 | 122.5878429 | 117.4273444 | 112.5774217 | 108.0160514 |
| 150601A00848 | 6/1/2015 | 6.36 | 2/18/2022 | 6/1/2015 | 104.8647 | 104.8647041 | 104.8647041 | 104.8647041 | 104.7426895 | 103.9373298 | 103.1461799 | 102.368849 | 101.6049609 |
| 150601A00851 | 6/1/2015 | 7.12 | 4/30/2027 | 6/1/2015 | 125.96526 | 125.9652552 | 125.9652552 | 125.9652552 | 124.3104918 | 120.160804 | 116.2134151 | 112.4565254 | 108.8791146 |
| 150601A00864 | 6/1/2015 | 7.37 | 3/31/2028 | 6/1/2015 | 131.10643 | 131.1064341 | 131.1064341 | 131.1064341 | 128.807933 | 123.9244629 | 119.3073137 | 114.939272 | 110.8043738 |
| 150601A00865 | 6/1/2015 | 6 | 4/3/2028 | 6/1/2015 | 122.50536 | 122.5053581 | 122.5053581 | 122.5053581 | 120.62252 | 116.4222738 | 112.4422871 | 108.6686552 | 105.0884668 |
| 150601A00868 | 6/1/2015 | 7.08 | 6/5/2028 | 6/1/2015 | 130.58199 | 130.5819929 | 130.5819929 | 130.5819929 | 128.1695216 | 123.1925501 | 118.4925671 | 114.0513382 | 109.8519748 |
| 150601A00871 | 6/1/2015 | 6.74 | 7/31/2028 | 6/1/2015 | 129.61253 | 129.6125311 | 129.6125311 | 129.6125311 | 127.126754 | 122.0955249 | 117.348152 | 112.8657348 | 108.6307819 |
| 150601A00736 | 6/1/2015 | 2.87 | 5/1/2030 | 6/1/2015 | 112.37487 | 112.3748654 | 112.3748654 | 112.3748654 | 109.4065366 | 104.5367597 | 99.98410719 | 95.72412944 | 91.73448035 |
| 150601A00739 | 6/1/2015 | 2.35 | 5/6/2025 | 6/1/2015 | 104.84641 | 104.8464144 | 104.8464144 | 104.8464144 | 104.2031534 | 101.8207894 | 99.52361456 | 97.30784516 | 95.16989414 |
| 150601A00745 | 6/1/2015 | 1.76 | 5/7/2021 | 6/1/2015 | 100.57775 | 100.5777524 | 100.5777524 | 100.5777524 | 100.5321423 | 100.1418844 | 99.75581723 | 99.37386571 | 98.99595676 |
| 150601A00772 | 6/1/2015 | 1.84 | 5/13/2022 | 6/1/2015 | 101.38185 | 101.3818526 | 101.3818526 | 101.3818526 | 101.2393677 | 100.3418038 | 99.46089417 | 98.59616962 | 97.7471789 |
| 150601A00832 | 6/1/2015 | 7.17 | 8/28/2025 | 6/1/2015 | 117.32737 | 117.3273742 | 117.3273742 | 117.3273742 | 116.5557031 | 113.8129667 | 111.1719247 | 108.6278961 | 106.176451 |
| 150601A00847 | 6/1/2015 | 6.59 | 1/31/2022 | 6/1/2015 | 108.80728 | 108.8072789 | 108.8072789 | 108.8072789 | 108.5647112 | 107.1560438 | 105.7747479 | 104.4200831 | 103.0913355 |
| 150601A00685 | 6/1/2015 | 1.91 | 2/10/2022 | 6/1/2015 | 101.23985 | 101.2398489 | 101.2398489 | 101.2398489 | 101.1236489 | 100.3541795 | 99.59824101 | 98.85546162 | 98.12548369 |
| 150601A00690 | 6/1/2015 | 2.34 | 2/28/2025 | 6/1/2015 | 104.62859 | 104.6285878 | 104.6285878 | 104.6285878 | 104.0334327 | 101.7492358 | 99.54399834 | 97.41431589 | 95.35695628 |
| 150601A00693 | 6/1/2015 | 2.31 | 2/27/2025 | 6/1/2015 | 104.57183 | 104.5718282 | 104.5718282 | 104.5718282 | 103.9741685 | 101.6852443 | 99.47560702 | 97.34183227 | 95.28066906 |
| 150601A00714 | 6/1/2015 | 1.67 | 4/1/2022 | 6/1/2015 | 101.15891 | 101.1589063 | 101.1589063 | 101.1589063 | 101.0274413 | 100.1833942 | 99.3546472 | 98.54077456 | 97.74136675 |
| 150601A00732 | 6/1/2015 | 1.91 | 4/29/2022 | 6/1/2015 | 101.42355 | 101.4235504 | 101.4235504 | 101.4235504 | 101.2837826 | 100.3991086 | 99.53074792 | 98.67824136 | 97.84114746 |
| 150601A00735 | 6/1/2015 | 2.35 | 5/1/2025 | 6/1/2015 | 104.84416 | 104.8441574 | 104.8441574 | 104.8441574 | 104.2015842 | 101.8205745 | 99.52466637 | 97.31008157 | 95.17323805 |
| 150601A00585 | 6/1/2015 | 2.45 | 10/8/2024 | 6/1/2015 | 104.48281 | 104.4828104 | 104.4828104 | 104.4828104 | 103.9733171 | 101.8747677 | 99.84388274 | 97.87791203 | 95.97423788 |
| 150601A00624 | 6/1/2015 | 2.48 | 12/8/2021 | 6/1/2015 | 103.14573 | 103.1457252 | 103.1457252 | 103.1457252 | 102.9151624 | 101.5768381 | 100.2625138 | 98.97159765 | 97.70351693 |
| 150601A00660 | 6/1/2015 | 2.26 | 1/5/2022 | 6/1/2015 | 103.01167 | 103.0116742 | 103.0116742 | 103.0116742 | 102.7669208 | 101.3573337 | 99.97426612 | 98.61703342 | 97.28497405 |
| 150601A00678 | 6/1/2015 | 2.12 | 1/30/2025 | 6/1/2015 | 104.0814 | 104.0814044 | 104.0814044 | 104.0814044 | 103.5007196 | 101.2509376 | 99.07822458 | 96.97928469 | 94.95098736 |
| 150601A00679 | 6/1/2015 | 1.86 | 2/4/2022 | 6/1/2015 | 101.19263 | 101.1926349 | 101.1926349 | 101.1926349 | 101.0776362 | 100.3141825 | 99.56412616 | 98.82709927 | 98.10274771 |
| 150601A00680 | 6/1/2015 | 2.23 | 2/6/2025 | 6/1/2015 | 104.3314 | 104.3313998 | 104.3313998 | 104.3313998 | 103.7491097 | 101.493941 | 99.31604957 | 97.2121293 | 95.17903998 |
| 150601A00543 | 6/1/2015 | 2.23 | 8/8/2024 | 6/1/2015 | 104.23933 | 104.2393311 | 104.2393311 | 104.2393311 | 103.7628711 | 101.7401984 | 99.78089778 | 97.8824555 | 96.04247625 |
| 150601A00544 | 6/1/2015 | 1.95 | 8/13/2021 | 6/1/2015 | 100.86485 | 100.8648534 | 100.8648534 | 100.8648534 | 100.7972342 | 100.2735286 | 99.75725638 | 99.24824163 | 98.74631426 |
| 150601A00555 | 6/1/2015 | 2.13 | 9/2/2021 | 6/1/2015 | 101.03857 | 101.0385684 | 101.0385684 | 101.0385684 | 100.9628504 | 100.3947093 | 99.83526271 | 99.28428903 | 98.74157471 |
| 150601A00557 | 6/1/2015 | 2.03 | 9/2/2021 | 6/1/2015 | 100.95406 | 100.9540631 | 100.9540631 | 100.9540631 | 100.8813162 | 100.3296974 | 99.78631284 | 99.25095753 | 98.72343347 |
| 150601A00558 | 6/1/2015 | 2.51 | 8/30/2024 | 6/1/2015 | 104.50142 | 104.5014172 | 104.5014172 | 104.5014172 | 104.0127218 | 101.9619797 | 99.97612085 | 98.05255042 | 96.18879667 |

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 150601A00563 | 6/1/2015 | 2.14 | 9/10/2021 | 6/1/2015 | 101.0383 | 101.0383022 | 101.0383022 | 101.0383022 | 100.9630809 | 100.3979589 | 99.84145516 | 99.29335065 | 98.75343406 |
| 150601A00505 | 6/1/2015 | 2.07 | 7/8/2021 | 6/1/2015 | 100.86087 | 100.8608719 | 100.8608719 | 100.8608719 | 100.8000782 | 100.3154832 | 99.83726078 | 99.36527145 | 98.89937994 |
| 150601A00508 | 6/1/2015 | 1.97 | 7/8/2021 | 6/1/2015 | 100.79772 | 100.797717 | 100.797717 | 100.797717 | 100.7384301 | 100.2630674 | 99.79385628 | 99.33066411 | 98.87336211 |
| 150601A00509 | 6/1/2015 | 2.52 | 7/8/2024 | 6/1/2015 | 104.3576 | 104.3576 | 104.3576 | 104.3576 | 103.899904 | 101.9241881 | 100.0091695 | 98.15247954 | 96.35185995 |
| 150601A00526 | 6/1/2015 | 2 | 7/28/2021 | 6/1/2015 | 100.85483 | 100.854834 | 100.854834 | 100.854834 | 100.7909162 | 100.2883516 | 99.79264795 | 99.30364896 | 98.82120337 |
| 150601A00527 | 6/1/2015 | 2.5 | 7/26/2024 | 6/1/2015 | 104.37693 | 104.3769291 | 104.3769291 | 104.3769291 | 103.9084396 | 101.9064199 | 99.96656348 | 98.08642325 | 96.26366664 |
| 150601A00529 | 6/1/2015 | 2.08 | 7/28/2021 | 6/1/2015 | 100.82796 | 100.827961 | 100.827961 | 100.827961 | 100.770313 | 100.3048908 | 99.84537712 | 99.39164683 | 98.94357841 |
| 150601A00475 | 6/1/2015 | 3.04 | 6/1/2029 | 6/1/2015 | 111.95903 | 111.9590286 | 111.9590286 | 111.9590286 | 109.5545673 | 105.1092827 | 100.9296834 | 96.99688321 | 93.29350047 |
| 150601A00477 | 6/1/2015 | 3.21 | 6/1/2029 | 6/1/2015 | 116.09916 | 116.0991578 | 116.0991578 | 116.0991578 | 112.9452517 | 107.5933215 | 102.5842543 | 97.89264156 | 93.49515736 |
| 150601A00478 | 6/1/2015 | 2 | 6/16/2021 | 6/1/2015 | 100.76066 | 100.760659 | 100.760659 | 100.760659 | 100.7063925 | 100.26147 | 99.82195108 | 99.38772635 | 98.95868949 |
| 150601A00492 | 6/1/2015 | 1.92 | 6/25/2021 | 6/1/2015 | 100.75062 | 100.7506239 | 100.7506239 | 100.7506239 | 100.6938624 | 100.2337204 | 99.77935101 | 99.33063359 | 98.8874509 |
| 150601A00496 | 6/1/2015 | 2.27 | 6/27/2024 | 6/1/2015 | 104.19853 | 104.1985299 | 104.1985299 | 104.1985299 | 103.7449641 | 101.7780192 | 99.87133227 | 98.02255702 | 96.22945605 |
| 150601A00497 | 6/1/2015 | 1.95 | 7/1/2021 | 6/1/2015 | 100.77469 | 100.7746914 | 100.7746914 | 100.7746914 | 100.7168611 | 100.2503668 | 99.78980959 | 99.33506326 | 98.88600549 |
| 150601A00449 | 6/1/2015 | 2.12 | 4/28/2021 | 6/1/2015 | 100.69552 | 100.6955208 | 100.6955208 | 100.6955208 | 100.6516957 | 100.2729338 | 99.89812382 | 99.52719691 | 99.16008602 |
| 150601A00451 | 6/1/2015 | 1.91 | 4/30/2021 | 6/1/2015 | 100.63688 | 100.636882 | 100.636882 | 100.636882 | 100.5909413 | 100.2002777 | 99.813872 | 99.43164624 | 99.05352451 |
| 150601A00458 | 6/1/2015 | 1.86 | 5/14/2021 | 6/1/2015 | 100.63363 | 100.6336307 | 100.6336307 | 100.6336307 | 100.586233 | 100.1843577 | 99.78691229 | 99.39381558 | 99.00498831 |
| 150601A00459 | 6/1/2015 | 2.42 | 5/16/2024 | 6/1/2015 | 104.0085 | 104.0085028 | 104.0085028 | 104.0085028 | 103.5799919 | 101.6794258 | 99.83558759 | 98.04631378 | 96.30953975 |
| 150601A00461 | 6/1/2015 | 1.94 | 5/14/2021 | 6/1/2015 | 100.63794 | 100.6379422 | 100.6379422 | 100.6379422 | 100.5929576 | 100.207551 | 99.82627525 | 99.44905583 | 99.07582018 |
| 150601A00473 | 6/1/2015 | 2.22 | 5/31/2024 | 6/1/2015 | 104.02825 | 104.0282462 | 104.0282462 | 104.0282462 | 103.5887506 | 101.6579853 | 99.78556144 | 97.96923226 | 96.20685457 |
| 150601A00425 | 6/1/2015 | 2.64 | 2/21/2024 | 6/1/2015 | 104.15691 | 104.1569089 | 104.1569089 | 104.1569089 | 103.7705403 | 101.9802903 | 100.240973 | 98.55072087 | 96.90774934 |
| 150601A00426 | 6/1/2015 | 3.37 | 2/21/2029 | 6/1/2015 | 112.98946 | 112.9894647 | 112.9894647 | 112.9894647 | 110.7306924 | 106.3822012 | 102.2862128 | 98.42525057 | 94.78319639 |
| 150601A00436 | 6/1/2015 | 1.99 | 3/18/2021 | 6/1/2015 | 100.51237 | 100.5123749 | 100.5123749 | 100.5123749 | 100.4798964 | 100.1798567 | 99.88235147 | 99.58734475 | 99.29480143 |
| 150601A00438 | 6/1/2015 | 1.91 | 3/18/2021 | 6/1/2015 | 100.52342 | 100.5234193 | 100.5234193 | 100.5234193 | 100.4881164 | 100.166837 | 99.84842635 | 99.5328418 | 99.22004163 |
| 150601A00447 | 6/1/2015 | 2.02 | 4/28/2021 | 6/1/2015 | 100.65812 | 100.6581231 | 100.6581231 | 100.6581231 | 100.6143104 | 100.2356632 | 99.86096693 | 99.49015283 | 99.12315381 |
| 150601A00448 | 6/1/2015 | 2.61 | 4/26/2024 | 6/1/2015 | 104.3122 | 104.3122017 | 104.3122017 | 104.3122017 | 103.8921226 | 102.0112434 | 100.1859322 | 98.4140871 | 96.69370152 |
| 150601A00407 | 6/1/2015 | 2.06 | 1/22/2021 | 6/1/2015 | 100.4006 | 100.4005988 | 100.4005988 | 100.4005988 | 100.3775177 | 100.1531911 | 99.93036684 | 99.70902754 | 99.48915627 |
| 150601A00409 | 6/1/2015 | 1.98 | 1/22/2021 | 6/1/2015 | 100.41899 | 100.4189937 | 100.4189937 | 100.4189937 | 100.3935638 | 100.1481281 | 99.90439868 | 99.66235588 | 99.42198026 |
| 150601A00410 | 6/1/2015 | 2.68 | 1/24/2024 | 6/1/2015 | 104.13193 | 104.1319332 | 104.1319332 | 104.1319332 | 103.7599385 | 102.0096379 | 100.3082705 | 98.65406712 | 97.04533607 |
| 150601A00411 | 6/1/2015 | 3.38 | 1/24/2029 | 6/1/2015 | 112.90929 | 112.9092907 | 112.9092907 | 112.9092907 | 110.6967984 | 106.3878654 | 102.3271051 | 98.49747249 | 94.88323764 |
| 150601A00422 | 6/1/2015 | 2.03 | 2/19/2021 | 6/1/2015 | 100.46221 | 100.4622095 | 100.4622095 | 100.4622095 | 100.4342123 | 100.1700353 | 99.907886 | 99.64773802 | 99.38956533 |
| 150601A00424 | 6/1/2015 | 1.95 | 2/19/2021 | 6/1/2015 | 100.47886 | 100.4788556 | 100.4788556 | 100.4788556 | 100.448289 | 100.1618035 | 99.87761604 | 99.59569608 | 99.31601349 |
| 150601A00387 | 6/1/2015 | 2.81 | 12/19/2023 | 6/1/2015 | 104.23666 | 104.2366594 | 104.2366594 | 104.2366594 | 103.881102 | 102.1769089 | 100.5193494 | 98.90676501 | 97.33756907 |
| 150601A00390 | 6/1/2015 | 2.39 | 5/20/2022 | 6/1/2015 | 102.50899 | 102.5089928 | 102.5089928 | 102.5089928 | 102.3239265 | 101.2101878 | 100.1173352 | 99.04481378 | 97.9920877 |

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 150601A00394 | 6/1/2015 | 2.1 | 12/31/2020 | 6/1/2015 | 100.39692 | 100.3969192 | 100.3969192 | 100.3969192 | 100.3747955 | 100.1572798 | 99.94111801 | 99.72629618 | 99.51280053 |
| 150601A00395 | 6/1/2015 | 2.86 | 1/3/2024 | 6/1/2015 | 104.37288 | 104.372885 | 104.372885 | 104.372885 | 104.0100755 | 102.2844052 | 100.6063784 | 98.97428887 | 97.38650491 |
| 150601A00396 | 6/1/2015 | 3.61 | 1/3/2029 | 6/1/2015 | 113.78507 | 113.7850666 | 113.7850666 | 113.7850666 | 111.5948094 | 107.2878832 | 103.2273092 | 99.39627029 | 95.7792398 |
| 150601A00397 | 6/1/2015 | 2.2 | 12/31/2020 | 6/1/2015 | 100.41168 | 100.4116817 | 100.4116817 | 100.4116817 | 100.3899484 | 100.1758639 | 99.96309661 | 99.75163295 | 99.5414597 |
| 150601A00270 | 6/1/2015 | 3.12 | 3/21/2031 | 6/1/2015 | 126.20818 | 126.208177 | 126.208177 | 126.0612462 | 117.5141839 | 108.6838481 | 100.6791158 | 93.41545028 | 86.81751537 |
| 150601A00299 | 6/1/2015 | 1.8 | 4/11/2023 | 6/1/2015 | 102.06416 | 102.0641621 | 102.0641621 | 102.0641621 | 101.8087962 | 100.4339466 | 99.09142533 | 97.78020488 | 96.49929892 |
| 150601A00330 | 6/1/2015 | 2.6 | 8/2/2023 | 6/1/2015 | 103.44937 | 103.4493698 | 103.4493698 | 103.4493698 | 103.1553558 | 101.6451814 | 100.1729662 | 98.73744502 | 97.33740452 |
| 150601A00348 | 6/1/2015 | 2.11 | 9/16/2020 | 6/1/2015 | 100.1157 | 100.1156983 | 100.1156983 | 100.1156983 | 100.110599 | 100.0470342 | 99.98360647 | 99.9203155 | 99.85716075 |
| 150601A00370 | 6/1/2015 | 2.58 | 10/31/2023 | 6/1/2015 | 103.69664 | 103.6966409 | 103.6966409 | 103.6966409 | 103.3643078 | 101.7318486 | 100.1427814 | 98.59559514 | 97.08884348 |
| 150601A00371 | 6/1/2015 | 1.88 | 10/30/2020 | 6/1/2015 | 100.20714 | 100.2071352 | 100.2071352 | 100.2071352 | 100.1950349 | 100.0662134 | 99.93789359 | 99.81007238 | 99.68274657 |
| 150601A00061 | 6/1/2015 | 4.25 | 9/30/2024 | 6/1/2015 | 108.19844 | 108.1984376 | 108.1984376 | 108.1984376 | 107.6827514 | 105.5418823 | 103.4694571 | 101.4627101 | 99.51900864 |
| 150601A00089 | 6/1/2015 | 2.56 | 10/27/2020 | 6/1/2015 | 100.27975 | 100.2797529 | 100.2797529 | 100.2797529 | 100.2683219 | 100.1453476 | 100.0228331 | 99.9007757 | 99.77917249 |
| 150601A00096 | 6/1/2015 | 2.32 | 11/23/2020 | 6/1/2015 | 100.34822 | 100.3482241 | 100.3482241 | 100.3482241 | 100.3325365 | 100.1716758 | 100.0115772 | 99.85223464 | 99.6936423 |
| 150601A00100 | 6/1/2015 | 3.26 | 1/7/2021 | 6/1/2015 | 100.66179 | 100.6617924 | 100.6617924 | 100.6617924 | 100.6389784 | 100.4154961 | 100.1934364 | 99.97278424 | 99.75352477 |
| 150601A00165 | 6/1/2015 | 2.66 | 6/4/2032 | 6/1/2015 | 114.98124 | 114.9812393 | 114.9812393 | 114.8705558 | 110.4377648 | 104.5397017 | 99.09702814 | 94.06844086 | 89.41678591 |
| 150601A00261 | 6/1/2015 | 3.19 | 2/11/2033 | 6/1/2015 | 128.12309 | 128.1230945 | 128.1230945 | 126.8046873 | 117.9558347 | 108.7628678 | 100.4979845 | 93.05670519 | 86.34714268 |
| 150601A00030 | 6/1/2015 | 5.28 | 11/26/2027 | 6/1/2015 | 132.33565 | 132.3356525 | 132.3356525 | 132.3356525 | 127.9842257 | 121.1073853 | 114.6945504 | 108.710958 | 103.1246546 |
| 150601A00033 | 6/1/2015 | 5.96 | 12/24/2025 | 6/1/2015 | 128.30992 | 128.3099187 | 128.3099187 | 128.3099187 | 126.0677769 | 120.7341356 | 115.6817677 | 110.8940384 | 106.3553889 |
| 150601A00035 | 6/1/2015 | 5.73 | 4/1/2038 | 6/1/2015 | 149.22079 | 149.2207889 | 149.2207889 | 146.9653202 | 137.8198847 | 127.959403 | 119.1333677 | 111.2139696 | 104.0908255 |
| 150601A00038 | 6/1/2015 | 5.77 | 6/2/2023 | 6/1/2015 | 115.23199 | 115.2319877 | 115.2319877 | 115.2319877 | 114.5809336 | 111.7320747 | 108.9727351 | 106.2995998 | 103.7094955 |
| 150601A00040 | 6/1/2015 | 5.45 | 7/14/2023 | 6/1/2015 | 107.84676 | 107.8467623 | 107.8467623 | 107.8467623 | 107.5403838 | 105.9608596 | 104.4208379 | 102.9190081 | 101.4541133 |
| 150601A00058 | 6/1/2015 | 4.46 | 8/16/2024 | 6/1/2015 | 108.3866 | 108.3865961 | 108.3865961 | 108.3865961 | 107.8961678 | 105.812848 | 103.7945832 | 101.8387967 | 99.94303309 |
| 150601A00011 | 6/1/2015 | 5.17 | 8/3/2022 | 6/1/2015 | 109.75279 | 109.7527905 | 109.7527905 | 109.7527905 | 109.3732759 | 107.3749758 | 105.4250541 | 103.5220238 | 101.6644542 |
| 150601A00018 | 6/1/2015 | 4.91 | 9/5/2025 | 6/1/2015 | 122.01189 | 122.0118895 | 122.0118895 | 122.0118895 | 120.0745029 | 115.1537319 | 110.4820127 | 106.0451663 | 101.829903 |
| 150601A00019 | 6/1/2015 | 5.64 | 10/3/2022 | 6/1/2015 | 111.51778 | 111.5177806 | 111.5177806 | 111.5177806 | 111.0888643 | 108.9135282 | 106.7935584 | 104.72714 | 102.712533 |
| 150601A00022 | 6/1/2015 | 5.43 | 10/26/2037 | 6/1/2015 | 145.45492 | 145.4549197 | 145.4549197 | 143.4310001 | 134.7063619 | 125.2186371 | 116.7089905 | 109.0587586 | 102.1651632 |
| 150601A00023 | 6/1/2015 | 5.46 | 10/30/2037 | 6/1/2015 | 153.53417 | 153.5341674 | 153.5341674 | 150.6608377 | 139.8360874 | 128.6893223 | 118.7702986 | 109.9236058 | 102.0152636 |
| 150601A00024 | 6/1/2015 | 5.58 | 11/8/2022 | 6/1/2015 | 111.89117 | 111.8911724 | 111.8911724 | 111.8911724 | 111.4335424 | 109.1615487 | 106.9493664 | 104.7949966 | 102.6965238 |
| 140414A00009 | 4/14/2014 | 2.32 | 4/30/2024 | 4/14/2014 | 105.00689 | 105.0068921 | 105.0068921 | 105.0068921 | 104.455368 | 102.1660107 | 99.94991199 | 97.80407166 | 95.72563777 |
| 140911A00033 | 9/11/2014 | 3.02 | 9/13/2027 | 9/11/2014 | 111.8576 | 111.8576037 | 111.8576037 | 111.8576037 | 109.5401223 | 105.0962533 | 100.9123924 | 96.97082962 | 93.25519224 |
| 141124A00024 | 11/24/2014 | 2.27 | 11/30/2021 | 11/24/2014 | 102.76085 | 102.7608544 | 102.7608544 | 102.7608544 | 102.5407926 | 101.2560116 | 99.99364185 | 98.75314384 | 97.53399484 |
| 141126A00006 | 11/26/2014 | 2.41 | 11/30/2021 | 11/26/2014 | 102.75519 | 102.7551884 | 102.7551884 | 102.7551884 | 102.5323675 | 101.2336282 | 99.95755522 | 98.70360345 | 97.47124485 |
| 150601A00001 | 6/1/2015 | 5.43 | 6/15/2037 | 6/1/2015 | 151.91748 | 151.9174794 | 151.9174794 | 149.312149 | 138.8647468 | 128.0067331 | 118.3222507 | 109.6654744 | 101.910328 |

Classification | Public

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 150601A00005 | 6/1/2015 | 4.84 | 6/9/2025 | 6/1/2015 | 120.73058 | 120.7305845 | 120.7305845 | 120.7305845 | 118.9795576 | 114.2926205 | 109.8336808 | 105.5902717 | 101.5506751 |
| 130918A00010 | 9/18/2013 | 2.43 | 9/18/2020 | 9/18/2013 | 100.31282 | 100.3128151 | 100.3128151 | 100.3128151 | 100.3010212 | 100.1657382 | 100.0308352 | 99.89631064 | 99.76216291 |
| 130925A00035 | 9/25/2013 | 1.53 | 6/25/2025 | 9/25/2013 | 104.15741 | 104.1574107 | 104.1574107 | 104.1574107 | 103.2851512 | 100.3742527 | 97.57871981 | 94.89302182 | 92.31193202 |
| 140311A00037 | 3/11/2014 | 2.59 | 3/11/2021 | 3/11/2014 | 101.4409 | 101.4409013 | 101.4409013 | 101.4409013 | 101.3648321 | 100.7366075 | 100.1160557 | 99.50303656 | 98.89741371 |
| 140311A00039 | 3/11/2014 | 3.06 | 3/11/2024 | 3/11/2014 | 108.25138 | 108.251378 | 108.251378 | 108.251378 | 107.4255926 | 104.3836723 | 101.4530301 | 98.62883206 | 95.90648593 |
| 140314A00026 | 3/14/2014 | 2.99 | 3/14/2024 | 3/14/2019 | 109.29866 | 109.2986562 | 109.2986562 | 109.2986562 | 108.3749087 | 105.0673179 | 101.8848214 | 98.82188607 | 95.873259 |
| 140325A00012 | 3/25/2014 | 3.61 | 3/26/2029 | 3/25/2019 | 115.46017 | 115.4601711 | 115.4601711 | 115.4601711 | 112.7599133 | 107.9139947 | 103.3634495 | 99.08681378 | 95.06437201 |
| 130206A00004 | 2/6/2013 | 2.14 | 2/7/2028 | 2/6/2013 | 107.82442 | 107.8244204 | 107.8244204 | 107.8244204 | 106.0379794 | 102.2022181 | 98.57365007 | 95.13891727 | 91.88563173 |
| 130207A00012 | 2/7/2013 | 2.9 | 2/7/2033 | 2/7/2013 | 117.04635 | 117.0463515 | 117.0463515 | 116.7081999 | 111.4459455 | 104.901642 | 98.90080938 | 93.39045489 | 88.32329437 |
| 130425A00032 | 4/25/2013 | 2.59 | 4/25/2028 | 4/25/2018 | 109.73778 | 109.737779 | 109.737779 | 109.737779 | 107.6240103 | 103.3427423 | 99.30128699 | 95.48356948 | 91.87472939 |
| 130624A00017 | 6/24/2013 | 3.4 | 6/26/2023 | 6/24/2013 | 108.36891 | 108.3689071 | 108.3689071 | 108.3689071 | 107.7308253 | 104.9727731 | 102.3025406 | 99.71683186 | 97.21249347 |
| 130624A00019 | 6/24/2013 | 3.4 | 6/26/2023 | 6/24/2013 | 108.36891 | 108.3689071 | 108.3689071 | 108.3689071 | 107.7308253 | 104.9727731 | 102.3025406 | 99.71683186 | 97.21249347 |
| 130913A00018 | 9/13/2013 | 3.72 | 9/13/2028 | 9/13/2013 | 114.26166 | 114.2616571 | 114.2616571 | 114.2616571 | 112.0036804 | 107.6639084 | 103.5768758 | 99.72507165 | 96.09234746 |
| 121217A00009 | 12/17/2012 | 2.02 | 12/17/2027 | 12/17/2012 | 107.52085 | 107.5208495 | 107.5208495 | 107.5208495 | 105.6714819 | 101.7457531 | 98.03294517 | 94.51927538 | 91.19196282 |
| 121219A00029 | 12/19/2012 | 1.75 | 12/19/2022 | 12/21/2017 | 101.77648 | 101.77648 | 101.77648 | 101.77648 | 101.5639353 | 100.3582932 | 99.1784594 | 98.02367676 | 96.89321637 |
| 121219A00036 | 12/19/2012 | 2.2 | 12/19/2022 | 12/19/2017 | 103.87871 | 103.8787144 | 103.8787144 | 103.8787144 | 103.4648885 | 101.4288189 | 99.44675175 | 97.51692289 | 95.63763684 |
| 121219A00045 | 12/19/2012 | 1.75 | 12/19/2022 | 12/19/2017 | 101.8944 | 101.8944024 | 101.8944024 | 101.8944024 | 101.6650885 | 100.3795747 | 99.12244126 | 97.89282585 | 96.68989967 |
| 121220A00023 | 12/20/2012 | 1.82 | 12/20/2022 | 12/20/2012 | 103.48038 | 103.480378 | 103.480378 | 103.480378 | 103.0658462 | 101.0288657 | 99.04614189 | 97.11589566 | 95.2364174 |
| 130128A00009 | 1/28/2013 | 2.82 | 1/28/2028 | 1/28/2013 | 113.47507 | 113.4750678 | 113.4750678 | 113.4750678 | 110.2031413 | 104.799693 | 99.74740408 | 95.02030575 | 90.59452333 |
| 120907A00026 | 9/7/2012 | 1.71 | 9/7/2022 | 9/7/2012 | 102.81202 | 102.8120194 | 102.8120194 | 102.8120194 | 102.4769522 | 100.7355813 | 99.03742331 | 97.3810869 | 95.76523675 |
| 120907A00032 | 9/7/2012 | 1.86 | 9/9/2024 | 9/7/2012 | 105.09106 | 105.0910576 | 105.0910576 | 105.0910576 | 104.2342961 | 101.351325 | 98.58327727 | 95.92474739 | 93.37061972 |
| 121120A00010 | 11/20/2012 | 1.93 | 11/22/2027 | 11/20/2012 | 107.01331 | 107.013312 | 107.013312 | 107.013312 | 105.2278265 | 101.3936293 | 97.76563882 | 94.33061781 | 91.07628344 |
| 121120A00011 | 11/20/2012 | 2.22 | 11/22/2027 | 11/20/2012 | 110.97112 | 110.9711162 | 110.9711162 | 110.9711162 | 107.8911419 | 102.698161 | 97.83828006 | 93.28725056 | 89.0227474 |
| 121126A00009 | 11/26/2012 | 1.07 | 11/30/2020 | 11/26/2012 | 100.32233 | 100.32233 | 100.32233 | 100.32233 | 100.2866703 | 99.9478693 | 99.61134302 | 99.2770686 | 98.94502356 |
| 121214A00014 | 12/14/2012 | 2.16 | 12/14/2027 | 12/14/2017 | 108.07718 | 108.0771839 | 108.0771839 | 108.0771839 | 106.2427312 | 102.3408766 | 98.65042787 | 95.15771603 | 91.85006464 |
| 120614A00015 | 6/14/2012 | 1.89 | 6/14/2022 | 6/14/2012 | 103.10984 | 103.1098415 | 103.1098415 | 103.1098415 | 102.7898617 | 101.0379665 | 99.32579293 | 97.65219912 | 96.01608342 |
| 120621A00009 | 6/21/2012 | 3.18 | 6/21/2032 | 6/21/2012 | 123.04178 | 123.0417751 | 123.0417751 | 122.3573864 | 115.2283939 | 107.3128631 | 100.129952 | 93.60260216 | 87.66251705 |
| 120716A00025 | 7/16/2012 | 1.83 | 7/18/2022 | 7/17/2017 | 102.29928 | 102.2992834 | 102.2992834 | 102.2992834 | 102.0395489 | 100.5609122 | 99.11565085 | 97.70276621 | 96.32129699 |
| 120827A00048 | 8/27/2012 | 2.01 | 8/27/2027 | 8/27/2012 | 106.85401 | 106.8540129 | 106.8540129 | 106.8540129 | 105.258694 | 101.6939821 | 98.3170294 | 95.11604994 | 92.08009205 |
| 120827A00052 | 8/27/2012 | 2.01 | 8/27/2027 | 8/27/2012 | 106.85401 | 106.8540144 | 106.8540144 | 106.8540144 | 105.2586945 | 101.6939818 | 98.31702843 | 95.11604837 | 92.08008997 |
| 120907A00005 | 9/7/2012 | 1.76 | 9/7/2022 | 9/7/2012 | 101.69698 | 101.6969776 | 101.6969776 | 101.6969776 | 101.4914265 | 100.3491203 | 99.23349943 | 98.14369628 | 97.07887926 |
| 120217A00007 | 2/17/2012 | 2.25 | 2/20/2024 | 2/17/2012 | 105.84374 | 105.8437436 | 105.8437436 | 105.8437436 | 105.1205287 | 102.3649193 | 99.70675451 | 97.14189638 | 94.66641008 |
| 120315A00002 | 3/14/2012 | 2.56 | 3/15/2027 | 3/14/2022 | 109.03051 | 109.0305116 | 109.0305116 | 109.0305116 | 107.4871524 | 103.7474845 | 100.1933748 | 96.8137188 | 93.59816627 |

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 120410A00005 | 4/10/2012 | 2.35 | 4/12/2027 | 4/10/2012 | 108.43688 | 108.436876 | 108.436876 | 108.436876 | 106.843692 | 103.0433384 | 99.43376991 | 96.00344248 | 92.74160532 |
| 120423A00011 | 4/23/2012 | 2.07 | 4/25/2022 | 4/24/2017 | 102.22667 | 102.2266739 | 102.2266739 | 102.2266739 | 102.0199087 | 100.7783129 | 99.56094821 | 98.36712063 | 97.19616336 |
| 120523A00024 | 5/23/2012 | 2.6 | 5/24/2027 | 5/23/2012 | 108.8301 | 108.8300979 | 108.8300979 | 108.8300979 | 107.1801027 | 103.3067774 | 99.62975564 | 96.13716239 | 92.81793296 |
| 120614A00013 | 6/14/2012 | 1.89 | 6/14/2022 | 6/14/2012 | 103.10986 | 103.1098552 | 103.1098552 | 103.1098552 | 102.7898736 | 101.0379708 | 99.32578982 | 97.65218879 | 96.01606607 |
| 110824A00006 | 8/24/2011 | 2.69 | 8/24/2026 | 8/24/2011 | 108.01286 | 108.0128619 | 108.0128619 | 108.0128619 | 106.8362539 | 103.6767087 | 100.664368 | 97.79098816 | 95.04885062 |
| 111007A00007 | 10/7/2011 | 3.92 | 10/7/2031 | 10/7/2011 | 129.62655 | 129.6265483 | 129.6265483 | 129.167122 | 121.2551403 | 112.7312975 | 104.9969345 | 97.97028145 | 91.57865298 |
| 111128A00006 | 11/28/2011 | 3.03 | 11/28/2031 | 11/28/2011 | 116.8973 | 116.8972971 | 116.8972971 | 116.8124653 | 112.4460511 | 106.5550138 | 101.1125182 | 96.07838571 | 91.41643026 |
| 120119A00015 | 1/19/2012 | 2.27 | 1/19/2024 | 1/19/2012 | 105.71871 | 105.7187116 | 105.7187116 | 105.7187116 | 105.0310664 | 102.3619711 | 99.7854924 | 97.29778146 | 94.89517333 |
| 120210A00004 | 2/10/2012 | 1.98 | 2/10/2022 | 2/10/2012 | 102.62988 | 102.6298846 | 102.6298846 | 102.6298846 | 102.3863537 | 100.9763811 | 99.59375519 | 98.23773591 | 96.90760987 |
| 120210A00005 | 2/10/2012 | 1.64 | 2/10/2022 | 2/10/2012 | 101.62659 | 101.6265876 | 101.6265876 | 101.6265876 | 101.4559208 | 100.3897622 | 99.34236572 | 98.31325171 | 97.30195684 |
| 070518A00023 | 5/18/2007 | 5.46 | 5/18/2027 | 5/18/2007 | 119.85904 | 119.8590357 | 119.8590357 | 119.8590357 | 118.1495189 | 114.0614659 | 110.1775621 | 106.4855684 | 102.9740762 |
| 080220A00035 | 2/20/2008 | 4.65 | 2/22/2022 | 2/20/2008 | 104.9238 | 104.9237956 | 104.9237956 | 104.9237956 | 104.74783 | 103.6514337 | 102.574549 | 101.5166661 | 100.4772932 |
| 080423A00066 | 4/23/2008 | 4.41 | 4/24/2023 | 4/23/2008 | 107.57147 | 107.5714679 | 107.5714679 | 107.5714679 | 107.2175139 | 105.423361 | 103.6750939 | 101.9711336 | 100.3099697 |
| 081226A00013 | 12/26/2008 | 3.99 | 12/26/2023 | 12/26/2008 | 107.14751 | 107.1475078 | 107.1475078 | 107.1475078 | 106.7065262 | 104.7517547 | 102.8543429 | 101.0121454 | 99.22311162 |
| 110223A00003 | 2/23/2011 | 3.41 | 2/23/2021 | 2/23/2011 | 101.80789 | 101.8078942 | 101.8078942 | 101.8078942 | 101.739093 | 101.1507427 | 100.5690623 | 99.99393887 | 99.42526216 |
| 110414A00007 | 4/14/2011 | 3.95 | 1/21/2025 | 4/14/2011 | 109.91524 | 109.9152362 | 109.9152362 | 109.9152362 | 109.1287486 | 106.3088195 | 103.5928164 | 100.9759913 | 98.45384943 |
| 061013A00024 | 10/13/2006 | 5.53 | 10/15/2021 | 10/13/2006 | 106.42456 | 106.4245556 | 106.4245556 | 106.4245556 | 106.2192811 | 104.9776065 | 103.7651897 | 102.5810026 | 101.4240646 |
| 081219A00006 | 12/19/2008 | 3.88 | 12/22/2023 | 12/19/2008 | 112.9188 | 112.9188014 | 112.9188014 | 112.9188014 | 111.965539 | 108.4591244 | 105.0830586 | 101.8318047 | 98.7000911 |
| 110609A00010 | 6/9/2011 | 3.83 | 6/9/2021 | 6/9/2011 | 103.0942 | 103.0942022 | 103.0942022 | 103.0942022 | 102.9727449 | 102.1014168 | 101.2448543 | 100.4026839 | 99.57454481 |
| 110706A00009 | 7/6/2011 | 3.93 | 7/6/2021 | 7/6/2011 | 103.45498 | 103.4549822 | 103.4549822 | 103.4549822 | 103.3188614 | 102.3717138 | 101.4419594 | 100.5291217 | 99.63274156 |
| 110706A00010 | 7/6/2011 | 3.93 | 7/6/2021 | 7/6/2011 | 103.45498 | 103.4549822 | 103.4549822 | 103.4549822 | 103.3188614 | 102.3717138 | 101.4419594 | 100.5291217 | 99.63274156 |
| 110805A00021 | 8/5/2011 | 3.36 | 8/5/2021 | 8/5/2011 | 103.16462 | 103.1646171 | 103.1646171 | 103.1646171 | 103.0111646 | 101.9836264 | 100.976591 | 99.98944881 | 99.0216142 |
| 191002A00045 | 2/14/2020 | 1.75 | 2/14/2023 | 2/14/2020 | 103.73373 | 103.7337273 | 103.7337273 | 103.7337273 | 103.1882151 | 100.667886 | 98.22192535 | 95.84769951 | 93.54268554 |
| 191002A00046 | 2/14/2020 | 1.75 | 2/14/2023 | 2/14/2020 | 103.73373 | 103.7337273 | 103.7337273 | 103.7337273 | 103.1882151 | 100.667886 | 98.22192535 | 95.84769951 | 93.54268554 |
| 200131A00029 | 1/31/2020 | 1.78 | 10/31/2024 | 1/31/2020 | 106.31844 | 106.3184389 | 106.3184389 | 106.3184389 | 104.8884181 | 100.6995224 | 96.70070523 | 92.88229103 | 89.23515493 |
| 200131A00031 | 1/31/2020 | 1.74 | 1/31/2024 | 1/31/2020 | 105.1041 | 105.104101 | 105.104101 | 105.104101 | 104.1266422 | 100.6670675 | 97.34096218 | 94.14246901 | 91.06602025 |
| 190917A00030 | 1/10/2020 | 2.03 | 1/10/2023 | 1/10/2020 | 104.28602 | 104.2860237 | 104.2860237 | 104.2860237 | 103.7706829 | 101.3383621 | 98.97543626 | 96.67953586 | 94.44838688 |
| 190917A00033 | 1/10/2020 | 2.03 | 1/10/2023 | 1/10/2020 | 104.28602 | 104.2860237 | 104.2860237 | 104.2860237 | 103.7706829 | 101.3383621 | 98.97543626 | 96.67953586 | 94.44838688 |
| 191002A00038 | 1/13/2020 | 1.76 | 1/13/2023 | 1/13/2020 | 103.63096 | 103.630964 | 103.630964 | 103.630964 | 103.114428 | 100.6824784 | 98.32018921 | 96.02517348 | 93.79514049 |
| 191002A00042 | 1/13/2020 | 1.76 | 1/13/2023 | 1/13/2020 | 103.63096 | 103.630964 | 103.630964 | 103.630964 | 103.114428 | 100.6824784 | 98.32018921 | 96.02517348 | 93.79514049 |
| 191002A00043 | 2/3/2020 | 1.75 | 2/3/2023 | 2/3/2020 | 103.69042 | 103.6904179 | 103.6904179 | 103.6904179 | 103.1551244 | 100.6670792 | 98.25182785 | 95.90681907 | 93.62960741 |
| 191002A00044 | 2/3/2020 | 1.75 | 2/3/2023 | 2/3/2020 | 103.69042 | 103.6904179 | 103.6904179 | 103.6904179 | 103.1551244 | 100.6670792 | 98.25182785 | 95.90681907 | 93.62960741 |
| 190904A00034 | 9/4/2019 | 1.74 | 6/1/2022 | 9/4/2019 | 102.69821 | 102.6982128 | 102.6982128 | 102.6982128 | 102.3615908 | 100.5378217 | 98.75523312 | 97.01265956 | 95.30897568 |

Classification | Public

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 190904A00036 | 9/4/2019 | 1.74 | 6/8/2022 | 9/4/2019 | 102.72625 | 102.7262485 | 102.7262485 | 102.7262485 | 102.3847688 | 100.5417716 | 98.74078543 | 96.98060985 | 95.2600861 |
| 190904A00037 | 9/4/2019 | 1.73 | 6/15/2022 | 9/4/2019 | 102.7164 | 102.7163992 | 102.7163992 | 102.7163992 | 102.3701912 | 100.5086863 | 98.69000913 | 96.91292444 | 95.17624037 |
| 190904A00040 | 9/4/2019 | 1.73 | 6/22/2022 | 9/4/2019 | 102.74404 | 102.7440438 | 102.7440438 | 102.7440438 | 102.3929823 | 100.5122775 | 98.6752444 | 96.8806116 | 95.12715293 |
| 190904A00043 | 9/4/2019 | 1.72 | 12/15/2022 | 9/4/2019 | 103.41747 | 103.4174676 | 103.4174676 | 103.4174676 | 102.9264161 | 100.5724549 | 98.28392432 | 96.05865037 | 93.89454406 |
| 190904A00044 | 9/4/2019 | 1.72 | 12/30/2022 | 9/4/2019 | 103.47661 | 103.4766054 | 103.4766054 | 103.4766054 | 102.9727182 | 100.5790371 | 98.25291293 | 95.9920664 | 93.79430884 |
| 190829A00072 | 8/29/2019 | 1.81 | 12/15/2022 | 8/29/2019 | 103.63342 | 103.6334201 | 103.6334201 | 103.6334201 | 103.1419092 | 100.785332 | 98.49424177 | 96.2664629 | 94.09990476 |
| 190829A00073 | 8/29/2019 | 1.81 | 3/15/2023 | 8/29/2019 | 104.00804 | 104.0080402 | 104.0080402 | 104.0080402 | 103.4345218 | 100.8312162 | 98.30644642 | 95.85735803 | 93.48122059 |
| 190829A00075 | 8/29/2019 | 1.8 | 6/15/2023 | 8/29/2019 | 104.36294 | 104.3629385 | 104.3629385 | 104.3629385 | 103.6919229 | 100.8412876 | 98.08345737 | 95.41492663 | 92.83234131 |
| 190829A00076 | 8/29/2019 | 1.81 | 6/30/2023 | 8/29/2019 | 104.45432 | 104.4543166 | 104.4543166 | 104.4543166 | 103.7658872 | 100.8739382 | 98.0773779 | 95.37255549 | 92.75598021 |
| 190829A00078 | 8/29/2019 | 1.8 | 12/15/2023 | 8/29/2019 | 105.12108 | 105.1210764 | 105.1210764 | 105.1210764 | 104.2105796 | 100.8705888 | 97.65502227 | 94.5586112 | 91.57633769 |
| 190829A00080 | 8/29/2019 | 1.8 | 12/29/2023 | 8/29/2019 | 105.17919 | 105.1791855 | 105.1791855 | 105.1791855 | 104.2488149 | 100.8720414 | 97.62234494 | 94.49428944 | 91.48270049 |
| 190815A00041 | 8/15/2019 | 1.86 | 8/15/2024 | 8/15/2019 | 106.37411 | 106.3741091 | 106.3741091 | 106.3741091 | 105.0794623 | 101.0850662 | 97.26453263 | 93.60937942 | 90.11158466 |
| 190826A00046 | 8/26/2019 | 1.77 | 8/26/2024 | 8/26/2019 | 106.05204 | 106.0520436 | 106.0520436 | 106.0520436 | 104.7400739 | 100.7242829 | 96.88434619 | 93.21163409 | 89.69798814 |
| 190829A00013 | 8/29/2019 | 1.78 | 8/29/2024 | 8/29/2019 | 106.10536 | 106.1053557 | 106.1053557 | 106.1053557 | 104.7879863 | 100.763524 | 96.9155517 | 93.2353955 | 89.71485606 |
| 190829A00016 | 8/29/2019 | 1.82 | 8/29/2022 | 8/29/2019 | 103.20325 | 103.2032472 | 103.2032472 | 103.2032472 | 102.8000589 | 100.7358832 | 98.72333886 | 96.76078982 | 94.84666435 |
| 190829A00017 | 8/29/2019 | 1.8 | 8/29/2023 | 8/29/2019 | 104.67421 | 104.6742108 | 104.6742108 | 104.6742108 | 103.9104823 | 100.8604093 | 97.91559036 | 95.07179762 | 92.32499932 |
| 190829A00028 | 8/29/2019 | 1.78 | 8/29/2024 | 8/29/2019 | 106.10536 | 106.1053557 | 106.1053557 | 106.1053557 | 104.7879863 | 100.763524 | 96.9155517 | 93.2353955 | 89.71485606 |
| 190722A00051 | 11/22/2019 | 2.03 | 11/22/2021 | 11/22/2019 | 102.31602 | 102.3160153 | 102.3160153 | 102.3160153 | 102.0914887 | 100.7822191 | 99.49836172 | 98.23919688 | 97.00403213 |
| 190722A00054 | 12/19/2019 | 2.02 | 12/20/2021 | 12/19/2019 | 102.45127 | 102.4512677 | 102.4512677 | 102.4512677 | 102.2117469 | 100.8298763 | 99.47327694 | 98.14131567 | 96.83338016 |
| 190722A00056 | 12/19/2019 | 2.02 | 12/20/2021 | 12/19/2019 | 102.45127 | 102.4512677 | 102.4512677 | 102.4512677 | 102.2117469 | 100.8298763 | 99.47327694 | 98.14131567 | 96.83338016 |
| 190726A00014 | 7/26/2019 | 2.23 | 7/24/2024 | 7/26/2019 | 107.76466 | 107.7646584 | 107.7646584 | 107.7646584 | 106.5010214 | 102.5348757 | 98.73894146 | 95.10502476 | 91.62537001 |
| 190807A00043 | 8/7/2019 | 1.8 | 8/7/2023 | 8/7/2019 | 104.58281 | 104.5828061 | 104.5828061 | 104.5828061 | 103.847347 | 100.8555589 | 97.96561275 | 95.173479 | 92.47531163 |
| 190815A00040 | 8/15/2019 | 1.86 | 8/15/2023 | 8/15/2019 | 104.80018 | 104.8001791 | 104.8001791 | 104.8001791 | 104.0538838 | 101.0380701 | 98.12540344 | 95.31178056 | 92.59328614 |
| 190614A00007 | 6/14/2019 | 2.22 | 6/15/2021 | 6/14/2019 | 101.72859 | 101.7285926 | 101.7285926 | 101.7285926 | 101.6047863 | 100.7235676 | 99.85759899 | 99.0064869 | 98.16985136 |
| 190621A00034 | 6/21/2019 | 2.17 | 6/15/2023 | 6/21/2019 | 105.43631 | 105.4363083 | 105.4363083 | 105.4363083 | 104.7623198 | 101.8961045 | 99.1230752 | 96.43971367 | 93.84265397 |
| 190621A00035 | 6/21/2019 | 2.19 | 12/15/2023 | 6/21/2019 | 106.44884 | 106.4488423 | 106.4488423 | 106.4488423 | 105.5336484 | 102.1712003 | 98.93379296 | 95.81613564 | 92.8131894 |
| 190621A00037 | 6/21/2019 | 2.21 | 5/15/2024 | 6/21/2019 | 107.31628 | 107.3162811 | 107.3162811 | 107.3162811 | 106.1697012 | 102.3933822 | 98.77198878 | 95.29832868 | 91.96558506 |
| 190621A00039 | 6/21/2019 | 2.21 | 6/17/2024 | 6/21/2019 | 107.48976 | 107.4897587 | 107.4897587 | 107.4897587 | 106.289012 | 102.4235721 | 98.7200986 | 95.17098352 | 91.76901534 |
| 190722A00047 | 11/22/2019 | 2.03 | 11/22/2021 | 11/22/2019 | 102.31602 | 102.3160153 | 102.3160153 | 102.3160153 | 102.0914887 | 100.7822191 | 99.49836172 | 98.23919688 | 97.00403213 |
| 190530A00049 | 5/30/2019 | 2.44 | 5/30/2023 | 5/30/2019 | 106.12527 | 106.1252723 | 106.1252723 | 106.1252723 | 105.4677338 | 102.6345264 | 99.89205484 | 97.23693903 | 94.66594314 |
| 190530A00066 | 5/30/2019 | 2.44 | 5/30/2023 | 5/30/2019 | 106.12527 | 106.1252723 | 106.1252723 | 106.1252723 | 105.4677338 | 102.6345264 | 99.89205484 | 97.23693903 | 94.66594314 |
| 190531A00051 | 6/3/2019 | 2.27 | 6/3/2021 | 6/3/2019 | 101.70634 | 101.7063435 | 101.7063435 | 101.7063435 | 101.5888154 | 100.7404064 | 99.90612832 | 99.08563038 | 98.27857335 |
| 190604A00019 | 6/4/2019 | 2.27 | 6/4/2024 | 6/4/2019 | 107.65422 | 107.6542228 | 107.6542228 | 107.6542228 | 106.474061 | 102.639762 | 98.96470785 | 95.44148344 | 92.06305634 |

Classification | Public

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 190607A00040 | 6/7/2019 | 2.12 | 6/7/2022 | 6/7/2019 | 103.4338 | 103.4338 | 103.4338 | 103.4338 | 103.0919184 | 101.2448477 | 99.43979772 | 97.67556928 | 95.95100503 |
| 190607A00041 | 6/7/2019 | 2.12 | 6/7/2022 | 6/7/2019 | 103.4338 | 103.4338 | 103.4338 | 103.4338 | 103.0919184 | 101.2448477 | 99.43979772 | 97.67556928 | 95.95100503 |
| 190523A00035 | 5/23/2019 | 2.34 | 11/23/2021 | 5/23/2019 | 102.73333 | 102.7333258 | 102.7333258 | 102.7333258 | 102.507824 | 101.1933165 | 99.90402452 | 98.63924574 | 97.39830415 |
| 190529A00078 | 5/29/2019 | 2.39 | 11/30/2020 | 5/29/2019 | 100.72619 | 100.7261943 | 100.7261943 | 100.7261943 | 100.690621 | 100.3525273 | 100.0166948 | 99.68310094 | 99.35172356 |
| 190530A00018 | 5/30/2019 | 2.36 | 5/28/2021 | 5/30/2019 | 101.74818 | 101.7481755 | 101.7481755 | 101.7481755 | 101.6337095 | 100.8014716 | 99.98282836 | 99.17744877 | 98.3850125 |
| 190530A00028 | 5/30/2019 | 2.35 | 5/28/2021 | 5/30/2019 | 101.73982 | 101.7398247 | 101.7398247 | 101.7398247 | 101.6253632 | 100.7931634 | 99.97455776 | 99.16921539 | 98.37681591 |
| 190530A00040 | 5/30/2019 | 2.32 | 11/30/2021 | 5/30/2019 | 102.74603 | 102.7460339 | 102.7460339 | 102.7460339 | 102.5166045 | 101.1857137 | 99.87831985 | 98.59385403 | 97.33176519 |
| 190530A00048 | 5/30/2019 | 2.41 | 5/31/2022 | 5/30/2019 | 103.93584 | 103.935839 | 103.935839 | 103.935839 | 103.598025 | 101.765223 | 99.97370487 | 98.22230376 | 96.50989309 |
| 190514A00006 | 5/14/2019 | 2.43 | 5/17/2021 | 5/14/2019 | 101.74853 | 101.7485326 | 101.7485326 | 101.7485326 | 101.6396185 | 100.837291 | 100.0476113 | 99.27028191 | 98.50501457 |
| 190514A00017 | 5/14/2019 | 2.43 | 5/17/2021 | 5/14/2019 | 101.74853 | 101.7485326 | 101.7485326 | 101.7485326 | 101.6396185 | 100.837291 | 100.0476113 | 99.27028191 | 98.50501457 |
| 190515A00030 | 5/15/2019 | 2.49 | 5/15/2024 | 5/15/2019 | 108.38649 | 108.3864929 | 108.3864929 | 108.3864929 | 107.2353353 | 103.4387972 | 99.79779103 | 96.30510154 | 92.95388969 |
| 190515A00032 | 5/15/2019 | 2.49 | 5/15/2024 | 5/15/2019 | 108.38649 | 108.3864929 | 108.3864929 | 108.3864929 | 107.2353353 | 103.4387972 | 99.79779103 | 96.30510154 | 92.95388969 |
| 190517A00023 | 5/17/2019 | 2.51 | 5/17/2024 | 5/17/2019 | 108.47513 | 108.4751267 | 108.4751267 | 108.4751267 | 107.3203834 | 103.517016 | 99.86963832 | 96.37101382 | 93.01428271 |
| 190520A00048 | 5/20/2019 | 2.53 | 5/20/2024 | 5/20/2019 | 108.57013 | 108.5701301 | 108.5701301 | 108.5701301 | 107.4101691 | 103.5972712 | 99.94102945 | 96.43417602 | 93.06982067 |
| 190405A00040 | 4/3/2020 | 3.12 | 4/5/2030 | 4/3/2020 | 127.22119 | 127.2211874 | 127.2211874 | 127.2211874 | 118.0189019 | 108.4205265 | 99.70661029 | 91.79031158 | 84.59375824 |
| 190422A00030 | 4/22/2019 | 2.93 | 12/22/2025 | 4/22/2019 | 114.2404 | 114.2404005 | 114.2404005 | 114.2404005 | 111.8155708 | 106.3725739 | 101.2312565 | 96.37333358 | 91.7817189 |
| 190425A00041 | 4/25/2019 | 2.56 | 6/15/2021 | 4/25/2019 | 102.02948 | 102.0294808 | 102.0294808 | 102.0294808 | 101.9054977 | 101.0228312 | 100.1554323 | 99.30290712 | 98.46487541 |
| 190426A00023 | 4/26/2019 | 2.91 | 6/24/2026 | 4/26/2019 | 115.43861 | 115.4386068 | 115.4386068 | 115.4386068 | 112.4071552 | 106.4649915 | 100.8790883 | 95.62622281 | 90.6848006 |
| 190501A00014 | 5/1/2019 | 2.62 | 5/1/2024 | 5/1/2019 | 108.79382 | 108.7938188 | 108.7938188 | 108.7938188 | 107.6634006 | 103.8953497 | 100.2802191 | 96.81091813 | 93.48073032 |
| 190501A00024 | 5/1/2019 | 2.62 | 5/1/2024 | 5/1/2019 | 108.79382 | 108.7938188 | 108.7938188 | 108.7938188 | 107.6634006 | 103.8953497 | 100.2802191 | 96.81091813 | 93.48073032 |
| 190318A00017 | 3/19/2019 | 2.7 | 3/18/2022 | 3/19/2019 | 103.96269 | 103.9626901 | 103.9626901 | 103.9626901 | 103.6711733 | 102.0369762 | 100.4364592 | 98.86864605 | 97.33259814 |
| 190322A00024 | 3/22/2019 | 2.55 | 3/22/2021 | 3/22/2019 | 101.48898 | 101.488984 | 101.488984 | 101.488984 | 101.4087431 | 100.7606614 | 100.1208549 | 99.48916579 | 98.86544017 |
| 190325A00022 | 3/25/2019 | 2.55 | 11/25/2022 | 3/25/2019 | 105.28453 | 105.2845264 | 105.2845264 | 105.2845264 | 104.8064465 | 102.4828762 | 100.2224359 | 98.0230504 | 95.88272549 |
| 190327A00027 | 3/27/2019 | 2.66 | 1/15/2025 | 3/27/2019 | 110.57989 | 110.5798943 | 110.5798943 | 110.5798943 | 108.9823477 | 104.5070298 | 100.2426373 | 96.17813356 | 92.30311619 |
| 190328A00077 | 3/28/2019 | 2.46 | 9/28/2021 | 3/28/2019 | 102.56764 | 102.5676428 | 102.5676428 | 102.5676428 | 102.3772574 | 101.2064984 | 100.0624416 | 98.94418147 | 97.85085294 |
| 190329A00012 | 3/29/2019 | 2.61 | 3/29/2024 | 3/29/2019 | 108.54652 | 108.546523 | 108.546523 | 108.546523 | 107.46872 | 103.7930745 | 100.2635683 | 96.87356627 | 93.6167749 |
| 190311A00069 | 3/25/2019 | 2.78 | 3/27/2023 | 3/25/2019 | 106.65851 | 106.6585137 | 106.6585137 | 106.6585137 | 106.0668562 | 103.3966738 | 100.8075294 | 98.29645155 | 95.8605992 |
| 190311A00072 | 3/25/2019 | 2.79 | 9/25/2023 | 3/25/2019 | 107.93563 | 107.9356268 | 107.9356268 | 107.9356268 | 107.1263842 | 103.9528899 | 100.8904996 | 97.93466886 | 95.08106885 |
| 190311A00073 | 3/14/2019 | 2.81 | 3/14/2024 | 3/14/2019 | 109.18131 | 109.1813071 | 109.1813071 | 109.1813071 | 108.1238638 | 104.4756018 | 100.9709848 | 97.60355331 | 94.36717689 |
| 190311A00076 | 3/14/2019 | 2.88 | 9/16/2024 | 3/14/2019 | 110.75726 | 110.7572588 | 110.7572588 | 110.7572588 | 109.385291 | 105.2186772 | 101.2354369 | 97.42649527 | 93.78327837 |
| 190315A00039 | 3/15/2019 | 2.64 | 9/15/2021 | 3/15/2019 | 102.69433 | 102.694333 | 102.694333 | 102.694333 | 102.5131819 | 101.376846 | 100.2656588 | 99.17879195 | 98.1154532 |
| 190318A00016 | 3/19/2019 | 2.7 | 3/18/2022 | 3/19/2019 | 103.96269 | 103.9626901 | 103.9626901 | 103.9626901 | 103.6711733 | 102.0369762 | 100.4364592 | 98.86864605 | 97.33259814 |
| 190221A00011 | 2/21/2019 | 2.81 | 8/23/2021 | 2/21/2019 | 102.72677 | 102.7267693 | 102.7267693 | 102.7267693 | 102.561685 | 101.4875872 | 100.4359587 | 99.40609966 | 98.39733894 |

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 190221A00012 | 2/21/2019 | 2.83 | 8/23/2022 | 2/21/2019 | 105.28371 | 105.2837071 | 105.2837071 | 105.2837071 | 104.8815399 | 102.8110477 | 100.7919889 | 98.82274531 | 96.90176168 |
| 190311A00030 | 3/11/2019 | 2.68 | 3/11/2021 | 3/11/2019 | 101.49934 | 101.4993356 | 101.4993356 | 101.4993356 | 101.424578 | 100.806617 | 100.1961828 | 99.59313847 | 98.99735014 |
| 190311A00031 | 3/11/2019 | 2.71 | 9/8/2021 | 3/11/2019 | 102.72702 | 102.7270209 | 102.7270209 | 102.7270209 | 102.5508774 | 101.4333304 | 100.340101 | 99.2704016 | 98.22347846 |
| 190311A00061 | 3/25/2019 | 2.75 | 3/25/2022 | 3/25/2019 | 104.0927 | 104.0927042 | 104.0927042 | 104.0927042 | 103.7968229 | 102.1429332 | 100.5233817 | 98.93716329 | 97.38331229 |
| 190311A00068 | 3/25/2019 | 2.76 | 9/26/2022 | 3/25/2019 | 105.36881 | 105.3688088 | 105.3688088 | 105.3688088 | 104.9394887 | 102.7757752 | 100.6674671 | 98.61275438 | 96.6099008 |
| 190122A00017 | 1/22/2019 | 2.94 | 5/2/2022 | 1/22/2019 | 104.68703 | 104.687026 | 104.687026 | 104.687026 | 104.366932 | 102.6043035 | 100.8799487 | 99.19269609 | 97.54142246 |
| 190122A00018 | 1/22/2019 | 2.98 | 12/1/2022 | 1/22/2019 | 106.33696 | 106.3369639 | 106.3369639 | 106.3369639 | 105.8517078 | 103.4993774 | 101.2112771 | 98.98530641 | 96.81944515 |
| 190123A00059 | 1/23/2019 | 2.95 | 1/24/2022 | 1/23/2019 | 104.00263 | 104.0026263 | 104.0026263 | 104.0026263 | 103.7423945 | 102.2564248 | 100.799338 | 99.3703656 | 97.96876543 |
| 190206A00009 | 2/12/2019 | 2.84 | 2/11/2022 | 2/12/2019 | 103.96386 | 103.9638641 | 103.9638641 | 103.9638641 | 103.6932188 | 102.1565857 | 100.6505074 | 99.17414499 | 97.72668976 |
| 190206A00010 | 2/12/2019 | 2.84 | 2/11/2022 | 2/12/2019 | 103.96386 | 103.9638641 | 103.9638641 | 103.9638641 | 103.6932188 | 102.1565857 | 100.6505074 | 99.17414499 | 97.72668976 |
| 190221A00009 | 2/21/2019 | 2.81 | 2/22/2021 | 2/21/2019 | 101.45963 | 101.4596282 | 101.4596282 | 101.4596282 | 101.3930041 | 100.8218282 | 100.2570811 | 99.69865444 | 99.14644266 |
| 181220A00076 | 12/20/2018 | 3.02 | 1/20/2023 | 12/20/2018 | 106.80773 | 106.8077336 | 106.8077336 | 106.8077336 | 106.2778892 | 103.7877846 | 101.3692677 | 99.0198699 | 96.73722317 |
| 181220A00077 | 12/20/2018 | 3.06 | 12/20/2023 | 12/20/2018 | 109.44886 | 109.4488559 | 109.4488559 | 109.4488559 | 108.5159257 | 105.0896655 | 101.7907877 | 98.61389225 | 95.55383691 |
| 181220A00078 | 12/20/2018 | 3.17 | 12/20/2024 | 12/20/2018 | 112.66704 | 112.6670366 | 112.6670366 | 112.6670366 | 111.1087264 | 106.6542445 | 102.4060114 | 98.3534114 | 94.48642908 |
| 181220A00079 | 12/20/2018 | 3.23 | 6/20/2025 | 12/20/2018 | 114.38844 | 114.388442 | 114.388442 | 114.388442 | 112.4377395 | 107.464554 | 102.7440351 | 98.26203248 | 94.00525903 |
| 181227A00001 | 12/27/2018 | 2.92 | 12/27/2021 | 12/27/2018 | 103.76746 | 103.7674612 | 103.7674612 | 103.7674612 | 103.522885 | 102.1127608 | 100.7287199 | 99.37010114 | 98.03626528 |
| 190110A00036 | 1/10/2019 | 2.88 | 10/9/2020 | 1/10/2019 | 100.51017 | 100.5101687 | 100.5101687 | 100.5101687 | 100.4916025 | 100.2974123 | 100.1039827 | 99.91130903 | 99.71938694 |
| 181203A00039 | 12/3/2018 | 3.27 | 12/1/2023 | 12/3/2018 | 110.01104 | 110.0110425 | 110.0110425 | 110.0110425 | 109.1032438 | 105.7173022 | 102.4554101 | 99.31238314 | 96.28328096 |
| 181206A00018 | 12/6/2018 | 3.13 | 12/6/2023 | 12/6/2018 | 109.57883 | 109.5788334 | 109.5788334 | 109.5788334 | 108.6654013 | 105.2735822 | 102.0065563 | 98.8590877 | 95.82618768 |
| 181206A00021 | 12/6/2018 | 3.15 | 12/6/2023 | 12/6/2018 | 109.64643 | 109.6464291 | 109.6464291 | 109.6464291 | 108.7327607 | 105.3398063 | 102.0716761 | 98.92313315 | 95.88918761 |
| 181210A00066 | 12/10/2018 | 3.13 | 12/11/2023 | 12/10/2018 | 109.61787 | 109.6178696 | 109.6178696 | 109.6178696 | 108.6971686 | 105.2915938 | 102.0117739 | 98.85241324 | 95.80846734 |
| 181210A00068 | 12/10/2018 | 3.34 | 12/10/2025 | 12/10/2018 | 116.36542 | 116.3654239 | 116.3654239 | 116.3654239 | 113.9586098 | 108.4897791 | 103.3215149 | 98.43572569 | 93.81549821 |
| 181220A00041 | 12/20/2018 | 3.36 | 12/18/2026 | 12/20/2018 | 119.58041 | 119.5804118 | 119.5804118 | 119.5804118 | 115.8485057 | 109.3454283 | 103.2582522 | 97.55814122 | 92.21840041 |
| 181015A00034 | 4/15/2019 | 3.25 | 4/15/2021 | 4/15/2019 | 102.14272 | 102.1427179 | 102.1427179 | 102.1427179 | 102.0499657 | 101.3335771 | 100.6272494 | 99.93077143 | 99.243938 |
| 181016A00019 | 10/18/2018 | 3.32 | 10/16/2023 | 10/18/2018 | 109.79685 | 109.7968459 | 109.7968459 | 109.7968459 | 108.9533248 | 105.6944973 | 102.5511739 | 99.51856057 | 96.59209505 |
| 181029A00051 | 2/5/2019 | 3.69 | 2/5/2029 | 2/5/2019 | 128.86115 | 128.8611488 | 128.8611488 | 128.8611488 | 121.7005718 | 112.9876458 | 104.9885902 | 97.64063643 | 90.88685557 |
| 181031A00070 | 3/1/2019 | 3.77 | 3/1/2029 | 3/1/2019 | 129.7666 | 129.7666016 | 129.7666016 | 129.7666016 | 122.4751499 | 113.6650023 | 105.5809904 | 98.15887616 | 91.34043559 |
| 181113A00073 | 11/13/2018 | 3.17 | 11/13/2020 | 11/13/2018 | 100.85262 | 100.8526207 | 100.8526207 | 100.8526207 | 100.822419 | 100.5309517 | 100.2411791 | 99.95308641 | 99.66665898 |
| 181119A00020 | 11/19/2018 | 3.06 | 11/19/2020 | 11/19/2018 | 100.86734 | 100.8673444 | 100.8673444 | 100.8673444 | 100.8352336 | 100.5271739 | 100.2210046 | 99.91670825 | 99.6142677 |
| 180919A00012 | 9/19/2018 | 3 | 9/18/2020 | 9/19/2018 | 100.37354 | 100.3735399 | 100.3735399 | 100.3735399 | 100.3616691 | 100.2257038 | 100.09012 | 99.95491586 | 99.82008985 |
| 180919A00013 | 9/19/2018 | 3.14 | 9/19/2022 | 9/19/2018 | 106.14188 | 106.1418837 | 106.1418837 | 106.1418837 | 105.7166998 | 103.5636299 | 101.4652947 | 99.41992027 | 97.42580439 |
| 180919A00091 | 5/19/2020 | 3.3 | 5/19/2025 | 5/19/2020 | 114.47076 | 114.4707587 | 114.4707587 | 114.4707587 | 112.5909052 | 107.6993436 | 103.0521808 | 98.63590419 | 94.4378196 |
| 180925A00033 | 9/25/2018 | 3.26 | 9/25/2023 | 9/25/2018 | 109.43105 | 109.4310485 | 109.4310485 | 109.4310485 | 108.6170497 | 105.4198478 | 102.334369 | 99.35604763 | 96.48053461 |

Classification | Public

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 181001A00031 | 10/1/2018 | 3.23 | 9/29/2023 | 10/1/2018 | 109.36784 | 109.3678439 | 109.3678439 | 109.3678439 | 108.5487577 | 105.3416884 | 102.2470051 | 99.26010158 | 96.37659054 |
| 181003A00023 | 10/3/2018 | 3.17 | 4/4/2022 | 10/3/2018 | 104.87269 | 104.8726921 | 104.8726921 | 104.8726921 | 104.5696918 | 102.8821087 | 101.2299424 | 99.61214181 | 98.02769759 |
| 180821A00041 | 8/21/2018 | 3 | 9/21/2023 | 8/21/2018 | 108.57408 | 108.5740787 | 108.5740787 | 108.5740787 | 107.7680826 | 104.5953044 | 101.5332095 | 98.57728554 | 95.72323373 |
| 180823A00043 | 8/23/2018 | 2.83 | 9/23/2020 | 8/23/2018 | 100.38609 | 100.3860852 | 100.3860852 | 100.3860852 | 100.3726994 | 100.2228959 | 100.0735479 | 99.92465334 | 99.77621024 |
| 180910A00037 | 9/10/2018 | 3.03 | 9/9/2022 | 9/10/2018 | 105.829 | 105.8290037 | 105.8290037 | 105.8290037 | 105.4123696 | 103.2901347 | 101.2213712 | 99.2043649 | 97.23747046 |
| 180910A00039 | 9/10/2018 | 3.03 | 9/9/2022 | 9/10/2018 | 105.829 | 105.8290037 | 105.8290037 | 105.8290037 | 105.4123696 | 103.2901347 | 101.2213712 | 99.2043649 | 97.23747046 |
| 180911A00007 | 9/11/2018 | 3.12 | 9/8/2023 | 9/11/2018 | 108.8537 | 108.8537018 | 108.8537018 | 108.8537018 | 108.0639981 | 104.9221157 | 101.8888177 | 98.95972064 | 96.13064623 |
| 180912A00017 | 9/12/2018 | 3.13 | 9/12/2023 | 9/12/2018 | 108.9162 | 108.9161972 | 108.9161972 | 108.9161972 | 108.1210109 | 104.9672752 | 101.922828 | 98.9832445 | 96.14430751 |
| 180726A00045 | 7/26/2018 | 3.1 | 7/26/2022 | 7/26/2018 | 105.62947 | 105.6294686 | 105.6294686 | 105.6294686 | 105.24865 | 103.2489162 | 101.2976297 | 99.39331431 | 97.53454884 |
| 180726A00046 | 7/26/2018 | 3.2 | 12/26/2023 | 7/26/2018 | 109.97541 | 109.9754132 | 109.9754132 | 109.9754132 | 109.0320497 | 105.5811361 | 102.2589955 | 99.06014689 | 95.97937203 |
| 180727A00017 | 7/27/2018 | 3.16 | 7/27/2023 | 7/27/2018 | 108.63972 | 108.6397171 | 108.6397171 | 108.6397171 | 107.9061406 | 104.8816385 | 101.9587563 | 99.13351641 | 96.40212042 |
| 180821A00029 | 8/21/2018 | 3.01 | 8/21/2023 | 8/21/2018 | 108.37435 | 108.3743533 | 108.3743533 | 108.3743533 | 107.6095725 | 104.5232072 | 101.5423159 | 98.66269411 | 95.88033073 |
| 180821A00039 | 8/21/2018 | 2.99 | 7/21/2023 | 8/21/2018 | 108.0823 | 108.0822995 | 108.0822995 | 108.0822995 | 107.3577428 | 104.3573462 | 101.4573057 | 98.65371308 | 95.94283517 |
| 180821A00040 | 8/21/2018 | 2.99 | 8/21/2023 | 8/21/2018 | 108.31264 | 108.3126445 | 108.3126445 | 108.3126445 | 107.5480509 | 104.4626357 | 101.4826702 | 98.60395065 | 95.8224669 |
| 180621A00068 | 6/21/2018 | 3.32 | 6/23/2025 | 6/21/2018 | 114.85597 | 114.8559732 | 114.8559732 | 114.8559732 | 112.8953887 | 107.9030389 | 103.1645711 | 98.66574896 | 94.39320624 |
| 180625A00012 | 6/25/2018 | 3.07 | 6/23/2023 | 6/25/2018 | 108.10822 | 108.1082248 | 108.1082248 | 108.1082248 | 107.4175701 | 104.4908506 | 101.6596379 | 98.92030582 | 96.26938602 |
| 180626A00026 | 6/26/2018 | 2.92 | 6/25/2021 | 6/26/2018 | 102.42149 | 102.421494 | 102.421494 | 102.421494 | 102.2920479 | 101.3801804 | 100.4845524 | 99.60473283 | 98.74030577 |
| 180627A00065 | 6/27/2018 | 2.9 | 6/25/2021 | 6/27/2018 | 102.40324 | 102.4032405 | 102.4032405 | 102.4032405 | 102.2738056 | 101.3620283 | 100.4664894 | 99.58675787 | 98.72241774 |
| 180709A00081 | 7/9/2018 | 3.05 | 7/7/2023 | 7/9/2018 | 108.15595 | 108.1559509 | 108.1559509 | 108.1559509 | 107.4484288 | 104.4836458 | 101.6168069 | 98.84414635 | 96.16206459 |
| 180713A00024 | 7/13/2018 | 2.96 | 7/13/2021 | 7/13/2018 | 102.58283 | 102.5828317 | 102.5828317 | 102.5828317 | 102.4433122 | 101.4816339 | 100.5380004 | 99.61190721 | 98.70286809 |
| 180612A00031 | 6/12/2018 | 3.04 | 6/13/2022 | 6/12/2018 | 105.20209 | 105.202093 | 105.202093 | 105.202093 | 104.8533191 | 102.9728551 | 101.1354493 | 99.33986307 | 97.58490152 |
| 180613A00046 | 6/13/2018 | 3 | 1/13/2022 | 6/13/2018 | 104.00978 | 104.0097792 | 104.0097792 | 104.0097792 | 103.755613 | 102.2985203 | 100.8692086 | 99.46695212 | 98.09105011 |
| 180613A00047 | 6/13/2018 | 3.17 | 1/12/2024 | 6/13/2018 | 110.00694 | 110.0069425 | 110.0069425 | 110.0069425 | 109.0388002 | 105.5428823 | 102.1790771 | 98.94168811 | 95.82529564 |
| 180615A00039 | 6/15/2018 | 3.49 | 6/15/2028 | 6/15/2018 | 125.12828 | 125.1282837 | 125.1282837 | 125.1282837 | 119.0885921 | 111.070905 | 103.6681481 | 96.82965436 | 90.50918262 |
| 180618A00036 | 6/18/2018 | 3.89 | 6/18/2048 | 6/18/2018 | 197.52794 | 197.5279369 | 197.5279369 | 167.0804804 | 137.5896525 | 114.1261931 | 95.69737236 | 81.13736722 | 69.56114842 |
| 180621A00031 | 6/21/2018 | 3.07 | 6/21/2023 | 6/21/2018 | 108.09297 | 108.0929706 | 108.0929706 | 108.0929706 | 107.4046743 | 104.4836055 | 101.6576939 | 98.92333297 | 96.27707279 |
| 180518A00042 | 5/25/2018 | 3.42 | 5/19/2025 | 5/25/2018 | 115.05069 | 115.0506901 | 115.0506901 | 115.0506901 | 113.1670869 | 108.2618161 | 103.6014406 | 99.17242562 | 94.96205588 |
| 180518A00046 | 5/25/2018 | 3.62 | 5/18/2027 | 5/25/2018 | 122.60808 | 122.6080797 | 122.6080797 | 122.6080797 | 118.2398608 | 111.2638067 | 104.7579242 | 98.68790152 | 93.02210591 |
| 180518A00048 | 5/25/2018 | 3.65 | 5/18/2028 | 5/25/2018 | 126.13701 | 126.1370062 | 126.1370062 | 126.1370062 | 120.1997841 | 112.211122 | 104.8288693 | 98.00348821 | 91.68973938 |
| 180518A00071 | 5/25/2018 | 3.56 | 5/18/2026 | 5/25/2018 | 118.9636 | 118.9635974 | 118.9635974 | 118.9635974 | 116.0273728 | 110.0782079 | 104.4783954 | 99.20552217 | 94.23872869 |
| 180524A00003 | 5/24/2018 | 2.91 | 5/24/2021 | 5/24/2018 | 102.17811 | 102.1781104 | 102.1781104 | 102.1781104 | 102.0654373 | 101.2421727 | 100.4321774 | 99.63513217 | 98.85072822 |
| 180529A00072 | 5/29/2018 | 3 | 5/30/2023 | 5/29/2018 | 107.72516 | 107.7251599 | 107.7251599 | 107.7251599 | 107.0632893 | 104.2072017 | 101.4424033 | 98.76549587 | 96.17322648 |
| 180404A00018 | 4/4/2018 | 2.89 | 4/4/2022 | 4/4/2018 | 104.39795 | 104.3979462 | 104.3979462 | 104.3979462 | 104.0955912 | 102.4121529 | 100.7640563 | 99.15025224 | 97.56973355 |

Classification | Public

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 180417A00028 | 4/17/2018 | 2.88 | 4/16/2021 | 4/17/2018 | 101.88509 | 101.885087 | 101.885087 | 101.885087 | 101.7919362 | 101.0738336 | 100.3658586 | 99.66779766 | 98.97944353 |
| 180424A00028 | 4/24/2018 | 2.98 | 4/23/2021 | 4/24/2018 | 102.00974 | 102.0097406 | 102.0097406 | 102.0097406 | 101.9129222 | 101.175139 | 100.4480304 | 99.73136589 | 99.02492147 |
| 180515A00022 | 5/15/2018 | 3.19 | 5/15/2023 | 5/15/2018 | 108.14818 | 108.1481831 | 108.1481831 | 108.1481831 | 107.5015449 | 104.679012 | 101.9455349 | 99.2977756 | 96.73254303 |
| 180518A00025 | 5/18/2018 | 2.96 | 5/18/2021 | 5/18/2018 | 102.1825 | 102.1824962 | 102.1824962 | 102.1824962 | 102.0728479 | 101.2658665 | 100.4716401 | 99.68986765 | 98.92025773 |
| 180518A00041 | 5/25/2018 | 3.32 | 5/20/2024 | 5/25/2018 | 111.6005 | 111.6005029 | 111.6005029 | 111.6005029 | 110.4275017 | 106.5571556 | 102.8451935 | 99.28428149 | 95.86746615 |
| 180302A00011 | 3/2/2018 | 2.68 | 3/2/2021 | 3/2/2018 | 101.43873 | 101.4387343 | 101.4387343 | 101.4387343 | 101.3684917 | 100.7754401 | 100.1893137 | 99.609992 | 99.03735689 |
| 180312A00014 | 3/12/2018 | 3 | 3/13/2023 | 3/12/2018 | 107.14372 | 107.1437215 | 107.1437215 | 107.1437215 | 106.5645278 | 103.9248011 | 101.3642876 | 98.88011797 | 96.46954734 |
| 180316A00031 | 3/16/2018 | 2.96 | 12/16/2022 | 3/16/2018 | 106.40018 | 106.4001754 | 106.4001754 | 106.4001754 | 105.9019215 | 103.5091871 | 101.1828036 | 98.92056665 | 96.72035823 |
| 180328A00015 | 3/28/2018 | 2.93 | 3/28/2023 | 3/28/2018 | 107.06788 | 107.0678839 | 107.0678839 | 107.0678839 | 106.4742383 | 103.7959083 | 101.198886 | 98.68018818 | 96.23696266 |
| 180328A00042 | 3/28/2018 | 2.95 | 3/28/2023 | 3/28/2018 | 107.12155 | 107.1215519 | 107.1215519 | 107.1215519 | 106.5277733 | 103.8487203 | 101.2509918 | 98.73160398 | 96.2877042 |
| 180403A00024 | 4/3/2018 | 2.96 | 4/3/2023 | 4/3/2018 | 107.19244 | 107.1924413 | 107.1924413 | 107.1924413 | 106.5924685 | 103.8963691 | 101.2825003 | 98.74782913 | 96.28945643 |
| 180130A00062 | 1/30/2018 | 2.51 | 2/1/2021 | 1/30/2018 | 101.1632 | 101.1632021 | 101.1632021 | 101.1632021 | 101.1058785 | 100.593268 | 100.0858416 | 99.5835209 | 99.08622928 |
| 180130A00063 | 1/30/2018 | 2.63 | 1/31/2022 | 1/30/2018 | 103.56743 | 103.5674257 | 103.5674257 | 103.5674257 | 103.3038189 | 101.80274 | 100.3312003 | 98.88840441 | 97.47358487 |
| 180130A00064 | 1/30/2018 | 2.75 | 1/30/2023 | 1/30/2018 | 106.20089 | 106.2008882 | 106.2008882 | 106.2008882 | 105.6635126 | 103.1547917 | 100.7190019 | 98.35360045 | 96.05614921 |
| 180131A00022 | 1/31/2018 | 2.96 | 1/30/2025 | 1/31/2018 | 112.08453 | 112.0845312 | 112.0845312 | 112.0845312 | 110.448119 | 105.8999082 | 101.5675173 | 97.43956297 | 93.50532214 |
| 180201A00022 | 2/1/2018 | 2.99 | 2/3/2025 | 2/1/2018 | 112.24993 | 112.2499256 | 112.2499256 | 112.2499256 | 110.6044739 | 106.0415016 | 101.6954623 | 97.55489086 | 93.60898882 |
| 180205A00047 | 2/5/2018 | 2.56 | 2/5/2021 | 2/5/2018 | 101.21431 | 101.2143065 | 101.2143065 | 101.2143065 | 101.1552122 | 100.631452 | 100.1131081 | 99.60009662 | 99.09233566 |
| 180110A00011 | 1/10/2018 | 2.38 | 1/11/2021 | 1/10/2018 | 100.97196 | 100.9719606 | 100.9719606 | 100.9719606 | 100.9223848 | 100.4680484 | 100.017805 | 99.57159929 | 99.12937703 |
| 180110A00012 | 1/10/2018 | 2.38 | 1/11/2021 | 1/10/2018 | 100.97196 | 100.9719606 | 100.9719606 | 100.9719606 | 100.9223848 | 100.4680484 | 100.017805 | 99.57159929 | 99.12937703 |
| 180118A00008 | 1/18/2018 | 2.44 | 1/19/2021 | 1/18/2018 | 101.04806 | 101.048058 | 101.048058 | 101.048058 | 100.9955589 | 100.5190116 | 100.0469636 | 99.57935123 | 99.1161121 |
| 180123A00067 | 1/23/2018 | 2.67 | 1/23/2023 | 1/23/2018 | 105.95286 | 105.9528579 | 105.9528579 | 105.9528579 | 105.4222678 | 102.9350536 | 100.519641 | 98.17354514 | 95.89438253 |
| 180124A00073 | 1/24/2018 | 2.46 | 1/25/2021 | 1/24/2018 | 101.09453 | 101.0945267 | 101.0945267 | 101.0945267 | 101.0398381 | 100.5466651 | 100.0583022 | 99.57467905 | 99.09572705 |
| 180125A00038 | 2/1/2018 | 2.91 | 2/3/2025 | 2/1/2018 | 111.88622 | 111.8862171 | 111.8862171 | 111.8862171 | 110.2428691 | 105.6880066 | 101.3497975 | 97.21678897 | 93.27819376 |
| 171222A00037 | 12/22/2017 | 2.71 | 12/29/2023 | 12/22/2017 | 108.31233 | 108.3123339 | 108.3123339 | 108.3123339 | 107.3706812 | 103.9403487 | 100.638576 | 97.45987381 | 94.39901704 |
| 171228A00023 | 12/28/2017 | 2.69 | 3/29/2024 | 12/28/2017 | 108.84197 | 108.8419709 | 108.8419709 | 108.8419709 | 107.762975 | 104.0819287 | 100.5471796 | 97.15208635 | 93.89035005 |
| 171228A00024 | 12/28/2017 | 2.71 | 6/28/2024 | 12/28/2017 | 109.51893 | 109.5189301 | 109.5189301 | 109.5189301 | 108.2910229 | 104.3571213 | 100.5888 | 96.97823512 | 93.51801348 |
| 171229A00031 | 12/29/2017 | 2.36 | 12/29/2020 | 12/29/2017 | 100.88647 | 100.8864675 | 100.8864675 | 100.8864675 | 100.8415473 | 100.4232072 | 100.0083298 | 99.59687251 | 99.18879309 |
| 180104A00016 | 1/4/2018 | 2.56 | 1/4/2023 | 1/4/2018 | 105.5582 | 105.5581982 | 105.5581982 | 105.5581982 | 105.0453724 | 102.612945 | 100.2493686 | 97.95230944 | 95.71952685 |
| 180105A00021 | 1/5/2018 | 2.33 | 1/5/2021 | 1/5/2018 | 100.91444 | 100.9144426 | 100.9144426 | 100.9144426 | 100.8670591 | 100.4293834 | 99.99550212 | 99.5653661 | 99.13892697 |
| 171110A00008 | 11/10/2017 | 2.65 | 11/12/2024 | 11/10/2017 | 110.12336 | 110.1233614 | 110.1233614 | 110.1233614 | 108.6510686 | 104.3502669 | 100.2449701 | 96.32523729 | 92.58168895 |
| 171110A00019 | 5/4/2018 | 2.46 | 5/4/2023 | 5/4/2018 | 106.02704 | 106.0270431 | 106.0270431 | 106.0270431 | 105.3979676 | 102.6341466 | 99.95695072 | 97.36310981 | 94.8495016 |
| 171219A00022 | 12/19/2017 | 2.26 | 12/18/2020 | 12/19/2017 | 100.78295 | 100.7829534 | 100.7829534 | 100.7829534 | 100.7415881 | 100.3537738 | 99.9689512 | 99.58708578 | 99.20814341 |
| 171219A00024 | 12/19/2017 | 2.26 | 12/18/2020 | 12/19/2017 | 100.78295 | 100.7829534 | 100.7829534 | 100.7829534 | 100.7415881 | 100.3537738 | 99.9689512 | 99.58708578 | 99.20814341 |

Classification | Public

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 171219A00031 | 12/19/2017 | 2.42 | 12/20/2021 | 12/19/2017 | 103.01344 | 103.013441 | 103.013441 | 103.013441 | 102.7733173 | 101.3873196 | 100.026664 | 98.69071543 | 97.37885977 |
| 171219A00032 | 12/19/2017 | 2.42 | 12/20/2021 | 12/19/2017 | 103.01344 | 103.013441 | 103.013441 | 103.013441 | 102.7733173 | 101.3873196 | 100.026664 | 98.69071543 | 97.37885977 |
| 170822A00023 | 8/23/2017 | 3.95 | 8/23/2028 | 8/23/2017 | 129.44021 | 129.4402137 | 129.4402137 | 129.4402137 | 123.0193224 | 114.6753786 | 106.9815618 | 99.88333139 | 93.33100325 |
| 170908A00021 | 9/8/2017 | 1.96 | 9/8/2022 | 9/8/2017 | 103.54332 | 103.5433244 | 103.5433244 | 103.5433244 | 103.1316377 | 101.0368699 | 98.9949569 | 97.00420475 | 95.0629873 |
| 170918A00051 | 12/18/2017 | 2.24 | 12/19/2022 | 12/18/2017 | 104.6867 | 104.686699 | 104.686699 | 104.686699 | 104.1895413 | 101.8097339 | 99.49625091 | 97.24688078 | 95.05949858 |
| 171016A00016 | 10/16/2017 | 2.23 | 10/17/2022 | 10/16/2017 | 104.32634 | 104.3263366 | 104.3263366 | 104.3263366 | 103.8821086 | 101.674367 | 99.5243661 | 97.43017391 | 95.38994001 |
| 171110A00006 | 11/10/2017 | 2.11 | 11/10/2020 | 11/10/2017 | 100.52811 | 100.5281131 | 100.5281131 | 100.5281131 | 100.498923 | 100.2163463 | 99.93536603 | 99.65596851 | 99.37814036 |
| 171110A00007 | 11/10/2017 | 2.38 | 11/10/2022 | 11/10/2017 | 104.79993 | 104.7999348 | 104.7999348 | 104.7999348 | 104.3352394 | 102.0581224 | 99.84195941 | 97.68470844 | 95.58441203 |
| 170703A00024 | 7/3/2017 | 2.95 | 7/6/2027 | 7/3/2017 | 118.38996 | 118.3899557 | 118.3899557 | 118.3899557 | 113.8812276 | 106.9251785 | 100.4492524 | 94.41772527 | 88.79770649 |
| 170726A00025 | 7/26/2017 | 2.14 | 7/26/2022 | 7/26/2017 | 103.70213 | 103.7021254 | 103.7021254 | 103.7021254 | 103.3245489 | 101.3445381 | 99.4125897 | 97.52723832 | 95.68707339 |
| 170727A00020 | 7/27/2017 | 1.94 | 7/27/2021 | 7/27/2017 | 101.66581 | 101.6658109 | 101.6658109 | 101.6658109 | 101.5189809 | 100.5240744 | 99.54859271 | 98.5919713 | 97.65366741 |
| 170814A00034 | 8/14/2017 | 2.1 | 8/15/2022 | 8/14/2017 | 103.72173 | 103.7217337 | 103.7217337 | 103.7217337 | 103.3286027 | 101.2957431 | 99.31314334 | 97.37923464 | 95.49250888 |
| 170816A00029 | 8/16/2017 | 1.79 | 8/17/2020 | 8/16/2017 | 100.07217 | 100.0721677 | 100.0721677 | 100.0721677 | 100.0686582 | 100.0215318 | 99.97446673 | 99.92746294 | 99.8805203 |
| 170816A00030 | 8/16/2017 | 1.95 | 8/16/2021 | 8/16/2017 | 101.76882 | 101.7688202 | 101.7688202 | 101.7688202 | 101.6090809 | 100.5594274 | 99.53138237 | 98.52428383 | 97.53749644 |
| 170609A00052 | 6/11/2018 | 2.9 | 6/9/2027 | 6/11/2018 | 117.85194 | 117.8519434 | 117.8519434 | 117.8519434 | 113.4581342 | 106.5851272 | 100.182095 | 94.21440306 | 88.65013704 |
| 170614A00019 | 6/14/2017 | 2.48 | 6/13/2025 | 6/14/2017 | 110.65665 | 110.6566521 | 110.6566521 | 110.6566521 | 108.7464648 | 103.8811445 | 99.26335021 | 94.87923521 | 90.7157959 |
| 170622A00044 | 6/22/2017 | 2.38 | 6/21/2024 | 6/22/2017 | 108.17777 | 108.1777733 | 108.1777733 | 108.1777733 | 106.9673984 | 103.0780908 | 99.35202857 | 95.78152702 | 92.3593027 |
| 170622A00045 | 6/22/2017 | 2.76 | 6/22/2027 | 6/22/2017 | 116.97516 | 116.9751577 | 116.9751577 | 116.9751577 | 112.5413298 | 105.6657891 | 99.26326619 | 93.29871263 | 87.73984696 |
| 170628A00044 | 10/9/2018 | 2.12 | 10/8/2021 | 10/9/2018 | 102.21903 | 102.2190296 | 102.2190296 | 102.2190296 | 102.0221719 | 100.8265767 | 99.65890106 | 98.51817573 | 97.40347588 |
| 170703A00022 | 7/3/2017 | 2.86 | 7/3/2026 | 7/3/2017 | 115.20487 | 115.2048691 | 115.2048691 | 115.2048691 | 112.1440977 | 106.1862707 | 100.5871639 | 95.32329914 | 90.37285085 |
| 170404A00003 | 4/4/2017 | 2.74 | 4/4/2025 | 4/4/2017 | 111.51373 | 111.5137279 | 111.5137279 | 111.5137279 | 109.7489788 | 105.0421511 | 100.5661225 | 96.30832005 | 92.25692665 |
| 170405A00031 | 4/5/2017 | 2.22 | 4/4/2022 | 4/5/2017 | 103.26195 | 103.2619471 | 103.2619471 | 103.2619471 | 102.9611362 | 101.2876158 | 99.64925725 | 98.0450165 | 96.47389105 |
| 170412A00019 | 4/12/2017 | 2.56 | 4/12/2024 | 4/12/2017 | 108.44883 | 108.4488268 | 108.4488268 | 108.4488268 | 107.3495942 | 103.638526 | 100.0763344 | 96.65619634 | 93.37164413 |
| 170518A00008 | 5/18/2018 | 3.06 | 5/18/2028 | 5/18/2018 | 121.52602 | 121.5260206 | 121.5260206 | 121.5260206 | 115.6700273 | 107.852647 | 100.6323191 | 93.96011366 | 87.7913546 |
| 170519A00019 | 5/19/2017 | 2 | 11/19/2021 | 5/19/2017 | 102.26199 | 102.261985 | 102.261985 | 102.261985 | 102.0391872 | 100.7372655 | 99.46148995 | 98.21108461 | 96.98530435 |
| 170531A00055 | 5/31/2017 | 2.13 | 5/31/2022 | 5/31/2017 | 103.41695 | 103.4169483 | 103.4169483 | 103.4169483 | 103.0799225 | 101.2520437 | 99.46535615 | 97.71869575 | 96.01093838 |
| 170327A00078 | 3/27/2019 | 3.04 | 3/27/2026 | 3/27/2019 | 115.54548 | 115.5454818 | 115.5454818 | 115.5454818 | 112.8149428 | 107.0931785 | 101.7015778 | 96.61929957 | 91.82692937 |
| 170327A00079 | 3/27/2019 | 3.19 | 3/29/2027 | 3/27/2019 | 119.28264 | 119.2826425 | 119.2826425 | 119.2826425 | 115.1571925 | 108.4121251 | 102.115416 | 96.23478726 | 90.74045207 |
| 170327A00080 | 3/27/2019 | 3.43 | 3/27/2029 | 3/27/2019 | 127.06525 | 127.0652475 | 127.0652475 | 127.0652475 | 119.7113335 | 110.9516919 | 102.9217496 | 95.55638729 | 88.79663169 |
| 170331A00031 | 3/31/2017 | 2.03 | 3/31/2021 | 3/31/2017 | 101.19568 | 101.1956831 | 101.1956831 | 101.1956831 | 101.1110787 | 100.439455 | 99.77672154 | 99.12270292 | 98.47722825 |
| 170331A00032 | 3/31/2017 | 2.03 | 3/31/2021 | 3/31/2017 | 101.19568 | 101.1956831 | 101.1956831 | 101.1956831 | 101.1110787 | 100.439455 | 99.77672154 | 99.12270292 | 98.47722825 |
| 170404A00002 | 4/4/2017 | 2.42 | 4/4/2023 | 4/4/2017 | 105.74032 | 105.7403189 | 105.7403189 | 105.7403189 | 105.1429506 | 102.4638216 | 99.86661676 | 97.34830894 | 94.90600509 |
| 161118A00026 | 12/20/2016 | 3.03 | 12/21/2026 | 12/20/2016 | 117.48724 | 117.4872398 | 117.4872398 | 117.4872398 | 113.767578 | 107.3219527 | 101.2902042 | 95.64356183 | 90.35539568 |

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 161123A00035 | 11/23/2016 | 2.16 | 11/23/2021 | 11/23/2016 | 102.49381 | 102.4938119 | 102.4938119 | 102.4938119 | 102.2685494 | 100.9557143 | 99.6680662 | 98.40490359 | 97.16555119 |
| 161123A00037 | 11/23/2016 | 2.16 | 11/23/2021 | 11/23/2016 | 102.49381 | 102.4938119 | 102.4938119 | 102.4938119 | 102.2685494 | 100.9557143 | 99.6680662 | 98.40490359 | 97.16555119 |
| 161125A00002 | 11/25/2016 | 2.62 | 11/27/2023 | 11/25/2016 | 107.79757 | 107.7975694 | 107.7975694 | 107.7975694 | 106.9030193 | 103.5647435 | 100.3487567 | 97.24994354 | 94.26343034 |
| 161221A00053 | 12/23/2016 | 3.05 | 12/23/2021 | 12/23/2016 | 103.92193 | 103.9219303 | 103.9219303 | 103.9219303 | 103.6792691 | 102.2786262 | 100.9037163 | 99.55389111 | 98.22852382 |
| 170327A00077 | 3/27/2019 | 2.74 | 3/27/2024 | 3/27/2019 | 109.01316 | 109.0131648 | 109.0131648 | 109.0131648 | 107.9365309 | 104.257542 | 100.7245627 | 97.33097352 | 94.07049567 |
| 161005A00008 | 10/5/2016 | 1.51 | 10/5/2020 | 10/5/2016 | 100.22991 | 100.2299055 | 100.2299055 | 100.2299055 | 100.2127277 | 100.0299788 | 99.84790139 | 99.6664918 | 99.48574631 |
| 161017A00007 | 10/17/2016 | 1.99 | 10/18/2023 | 10/17/2016 | 105.49764 | 105.4976351 | 105.4976351 | 105.4976351 | 104.6654974 | 101.4708546 | 98.39022371 | 95.41885304 | 92.55222121 |
| 161017A00015 | 10/17/2016 | 1.68 | 10/18/2021 | 10/17/2016 | 101.72853 | 101.7285297 | 101.7285297 | 101.7285297 | 101.5254505 | 100.3060565 | 99.11580271 | 97.95365444 | 96.81862548 |
| 161031A00027 | 10/31/2016 | 1.51 | 10/30/2020 | 10/31/2016 | 100.3197 | 100.3197043 | 100.3197043 | 100.3197043 | 100.29406 | 100.0421865 | 99.79157339 | 99.54221117 | 99.29409057 |
| 161031A00028 | 10/31/2016 | 1.51 | 10/30/2020 | 10/31/2016 | 100.3197 | 100.3197043 | 100.3197043 | 100.3197043 | 100.29406 | 100.0421865 | 99.79157339 | 99.54221117 | 99.29409057 |
| 161115A00021 | 11/15/2016 | 2.02 | 11/15/2021 | 11/15/2016 | 102.26923 | 102.2692293 | 102.2692293 | 102.2692293 | 102.0486582 | 100.7559852 | 99.49044833 | 98.25119696 | 97.03741606 |
| 160714A00024 | 9/20/2016 | 2.5 | 9/20/2028 | 9/20/2016 | 117.89327 | 117.893273 | 117.893273 | 117.893273 | 111.5709446 | 103.6053295 | 96.27526899 | 89.52658235 | 83.3099768 |
| 160729A00017 | 7/31/2017 | 2.47 | 7/31/2029 | 7/31/2017 | 119.48635 | 119.486349 | 119.486349 | 119.486349 | 111.7155399 | 102.9912595 | 95.02804745 | 87.75527775 | 81.10922227 |
| 160801A00007 | 8/1/2016 | 1.47 | 8/2/2021 | 8/1/2016 | 101.21514 | 101.2151382 | 101.2151382 | 101.2151382 | 101.0650416 | 100.0563308 | 99.06764572 | 98.09839501 | 97.1480104 |
| 160819A00015 | 10/12/2016 | 2.3 | 10/13/2026 | 10/12/2016 | 112.42654 | 112.4265446 | 112.4265446 | 112.4265446 | 109.0241476 | 102.9001908 | 97.16157642 | 91.78201619 | 86.73715235 |
| 160830A00068 | 11/30/2016 | 1.95 | 11/30/2023 | 11/30/2016 | 105.56331 | 105.5633119 | 105.5633119 | 105.5633119 | 104.6723681 | 101.3633976 | 98.17626571 | 95.10587146 | 92.14735383 |
| 161005A00007 | 10/5/2016 | 1.51 | 10/5/2020 | 10/5/2016 | 100.22991 | 100.2299055 | 100.2299055 | 100.2299055 | 100.2127277 | 100.0299788 | 99.84790139 | 99.6664918 | 99.48574631 |
| 160627A00068 | 6/27/2016 | 1.4 | 6/28/2021 | 6/27/2016 | 101.04362 | 101.0436224 | 101.0436224 | 101.0436224 | 100.9134555 | 100.0002652 | 99.10351538 | 98.22276538 | 97.35759031 |
| 160711A00016 | 7/11/2016 | 1.42 | 7/12/2021 | 7/11/2016 | 101.09741 | 101.0974098 | 101.0974098 | 101.0974098 | 100.959422 | 100.0081617 | 99.0747431 | 98.15866807 | 97.25945669 |
| 160711A00020 | 8/24/2017 | 1.59 | 8/24/2022 | 8/24/2017 | 102.70196 | 102.7019619 | 102.7019619 | 102.7019619 | 102.3035743 | 100.2578434 | 98.26310647 | 96.31775591 | 94.42024681 |
| 160711A00022 | 1/10/2018 | 1.91 | 1/10/2025 | 1/10/2018 | 107.18789 | 107.187891 | 107.187891 | 107.187891 | 105.6193274 | 101.2312931 | 97.05043744 | 93.06592738 | 89.26755129 |
| 160712A00019 | 7/12/2017 | 2.32 | 7/12/2027 | 7/12/2017 | 114.04146 | 114.0414601 | 114.0414601 | 114.0414601 | 109.5682539 | 102.7434059 | 96.39353524 | 90.48311139 | 84.97943381 |
| 160714A00018 | 9/6/2016 | 2.28 | 9/4/2026 | 9/6/2016 | 112.09222 | 112.0922246 | 112.0922246 | 112.0922246 | 108.8367197 | 102.8175526 | 97.17161535 | 91.87381536 | 86.90087428 |
| 160422A00019 | 4/22/2016 | 1.69 | 4/22/2021 | 4/22/2016 | 101.05362 | 101.0536164 | 101.0536164 | 101.0536164 | 100.9577617 | 100.226615 | 99.50602534 | 98.79576524 | 98.09561379 |
| 160520A00017 | 9/20/2017 | 2.34 | 9/20/2024 | 9/20/2017 | 108.53188 | 108.5318822 | 108.5318822 | 108.5318822 | 107.1638427 | 103.0322982 | 99.08353145 | 95.30846326 | 91.69851752 |
| 160520A00018 | 9/20/2017 | 2.34 | 9/20/2024 | 9/20/2017 | 108.53188 | 108.5318822 | 108.5318822 | 108.5318822 | 107.1638427 | 103.0322982 | 99.08353145 | 95.30846326 | 91.69851752 |
| 160524A00015 | 11/25/2016 | 2.71 | 11/25/2026 | 11/25/2016 | 115.26276 | 115.2627597 | 115.2627597 | 115.2627597 | 111.6679212 | 105.3534917 | 99.44159805 | 93.90447633 | 88.71641347 |
| 160527A00021 | 5/27/2016 | 1.68 | 5/27/2021 | 5/27/2016 | 101.17638 | 101.1763846 | 101.1763846 | 101.1763846 | 101.0627353 | 100.235825 | 99.42239259 | 98.62211064 | 97.83466236 |
| 160601A00021 | 6/1/2016 | 1.71 | 6/1/2021 | 6/1/2016 | 101.2214 | 101.221404 | 101.221404 | 101.221404 | 101.1051893 | 100.2644715 | 99.43767423 | 98.62445416 | 97.8244792 |
| 160331A00056 | 3/31/2016 | 2.09 | 3/30/2023 | 3/31/2016 | 104.82375 | 104.8237489 | 104.8237489 | 104.8237489 | 104.2337289 | 101.5804156 | 99.00799151 | 96.51348018 | 94.09403612 |
| 160331A00088 | 3/31/2016 | 1.69 | 3/30/2021 | 3/31/2016 | 100.96242 | 100.9624174 | 100.9624174 | 100.9624174 | 100.8784087 | 100.2103943 | 99.55119201 | 98.90062842 | 98.25853474 |
| 160404A00040 | 4/4/2016 | 1.65 | 4/5/2021 | 4/4/2016 | 100.9587 | 100.958698 | 100.958698 | 100.958698 | 100.8716227 | 100.1872376 | 99.51210818 | 98.84604774 | 98.18887446 |
| 160405A00018 | 4/5/2016 | 1.61 | 4/5/2021 | 4/5/2016 | 100.93117 | 100.9311697 | 100.9311697 | 100.9311697 | 100.8441063 | 100.1598269 | 99.48480224 | 98.8188455 | 98.16177494 |

Classification | Public

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 160406A00009 | 4/6/2016 | 1.62 | 4/6/2021 | 4/6/2016 | 100.94182 | 100.9418218 | 100.9418218 | 100.9418218 | 100.8542398 | 100.1671898 | 99.48947014 | 98.82089166 | 98.16127036 |
| 160406A00012 | 4/6/2016 | 1.62 | 4/6/2021 | 4/6/2016 | 100.94182 | 100.9418218 | 100.9418218 | 100.9418218 | 100.8542398 | 100.1671898 | 99.48947014 | 98.82089166 | 98.16127036 |
| 160309A00014 | 3/9/2016 | 1.84 | 3/9/2021 | 3/9/2016 | 100.97066 | 100.9706635 | 100.9706635 | 100.9706635 | 100.8971042 | 100.2864679 | 99.68320844 | 99.08719252 | 98.4982902 |
| 160309A00015 | 3/9/2016 | 1.84 | 3/9/2021 | 3/9/2016 | 100.97066 | 100.9706635 | 100.9706635 | 100.9706635 | 100.8971042 | 100.2864679 | 99.68320844 | 99.08719252 | 98.4982902 |
| 160311A00005 | 3/11/2016 | 1.91 | 3/11/2021 | 3/11/2016 | 101.02279 | 101.0227939 | 101.0227939 | 101.0227939 | 100.9482186 | 100.3319273 | 99.72314832 | 99.12174483 | 98.52758327 |
| 160315A00003 | 3/15/2016 | 1.88 | 3/15/2021 | 3/15/2016 | 101.02229 | 101.0222879 | 101.0222879 | 101.0222879 | 100.9457208 | 100.3184866 | 99.6990346 | 99.08722042 | 98.48290332 |
| 160316A00009 | 3/16/2016 | 1.95 | 3/16/2021 | 3/16/2016 | 101.0711 | 101.0710956 | 101.0710956 | 101.0710956 | 100.9940113 | 100.3638673 | 99.74157474 | 99.12698748 | 98.51996291 |
| 160323A00030 | 3/23/2016 | 2.22 | 3/22/2023 | 3/23/2016 | 105.13077 | 105.1307671 | 105.1307671 | 105.1307671 | 104.5477337 | 101.9111826 | 99.3544899 | 96.87473734 | 94.4691342 |
| 160303A00020 | 3/3/2016 | 2.97 | 3/3/2031 | 3/3/2016 | 130.43382 | 130.4338173 | 130.4338173 | 130.2611164 | 119.1267104 | 108.5766642 | 99.08255881 | 90.53220385 | 82.8258965 |
| 160304A00015 | 3/4/2016 | 1.82 | 3/4/2021 | 3/4/2016 | 100.93665 | 100.936653 | 100.936653 | 100.936653 | 100.8655967 | 100.268762 | 99.67897045 | 99.09609803 | 98.52002349 |
| 160304A00016 | 3/4/2016 | 1.82 | 3/4/2021 | 3/4/2016 | 100.93665 | 100.936653 | 100.936653 | 100.936653 | 100.8655967 | 100.268762 | 99.67897045 | 99.09609803 | 98.52002349 |
| 160307A00029 | 3/7/2016 | 3.21 | 3/7/2031 | 3/7/2016 | 130.71775 | 130.7177533 | 130.7177533 | 130.5360248 | 119.540458 | 109.0732151 | 99.6485747 | 91.15610366 | 83.49763181 |
| 160308A00011 | 3/8/2016 | 1.81 | 2/16/2021 | 3/8/2016 | 100.8679 | 100.8678988 | 100.8678988 | 100.8678988 | 100.8040995 | 100.2512304 | 99.70441611 | 99.16355748 | 98.62855751 |
| 160309A00008 | 3/9/2016 | 1.83 | 3/3/2021 | 3/9/2016 | 100.93827 | 100.9382713 | 100.9382713 | 100.9382713 | 100.8677125 | 100.2736098 | 99.68648423 | 99.10621353 | 98.5326782 |
| 160223A00012 | 2/23/2016 | 1.89 | 2/23/2023 | 2/23/2016 | 104.60314 | 104.6031352 | 104.6031352 | 104.6031352 | 104.0448554 | 101.477186 | 98.9859335 | 96.56836389 | 94.22185944 |
| 160225A00024 | 2/25/2016 | 2.22 | 2/26/2024 | 2/25/2016 | 106.93673 | 106.9367272 | 106.9367272 | 106.9367272 | 105.9138789 | 102.3505078 | 98.92643347 | 95.63544905 | 92.4716605 |
| 160229A00027 | 2/29/2016 | 1.74 | 3/1/2021 | 2/29/2016 | 100.87631 | 100.8763144 | 100.8763144 | 100.8763144 | 100.8067743 | 100.2183553 | 99.63677993 | 99.06192958 | 98.49368816 |
| 160229A00028 | 2/29/2016 | 1.74 | 3/1/2021 | 2/29/2016 | 100.87631 | 100.8763144 | 100.8763144 | 100.8763144 | 100.8067743 | 100.2183553 | 99.63677993 | 99.06192958 | 98.49368816 |
| 160301A00006 | 3/1/2016 | 1.69 | 3/1/2021 | 3/1/2016 | 100.84676 | 100.8467566 | 100.8467566 | 100.8467566 | 100.7772272 | 100.1889073 | 99.60743032 | 99.03267748 | 98.46453279 |
| 160302A00013 | 3/2/2016 | 1.63 | 3/2/2021 | 3/2/2016 | 100.89781 | 100.8978099 | 100.8978099 | 100.8978099 | 100.8276384 | 100.2353829 | 99.65006323 | 99.07155827 | 98.49974952 |
| 160216A00051 | 2/16/2016 | 1.49 | 2/16/2021 | 2/16/2016 | 100.76165 | 100.7616536 | 100.7616536 | 100.7616536 | 100.6977866 | 100.1443816 | 99.59704984 | 99.05569181 | 98.52020994 |
| 160217A00004 | 2/17/2016 | 1.54 | 2/17/2021 | 2/17/2016 | 100.79334 | 100.793338 | 100.793338 | 100.793338 | 100.7290219 | 100.1727706 | 99.6226533 | 99.07856882 | 98.5404182 |
| 160218A00014 | 2/18/2016 | 1.57 | 2/18/2021 | 2/18/2016 | 100.81408 | 100.8140821 | 100.8140821 | 100.8140821 | 100.7493204 | 100.1902577 | 99.63738935 | 99.09061285 | 98.54982778 |
| 160222A00005 | 2/22/2016 | 2.79 | 2/22/2028 | 2/22/2016 | 118.83636 | 118.8363635 | 118.8363635 | 118.8363635 | 113.3855344 | 105.867894 | 98.91108205 | 92.4701872 | 86.50411826 |
| 160222A00018 | 2/22/2016 | 2.59 | 2/23/2026 | 2/22/2016 | 112.78748 | 112.7874768 | 112.7874768 | 112.7874768 | 110.1833936 | 104.6175489 | 99.36985643 | 94.42045245 | 89.75081581 |
| 160222A00019 | 2/22/2016 | 3.09 | 2/21/2031 | 2/22/2016 | 129.34417 | 129.344167 | 129.344167 | 129.204676 | 118.2950802 | 107.9242644 | 98.5849354 | 90.16807317 | 82.57673376 |
| 160212A00014 | 2/12/2016 | 1.61 | 2/12/2021 | 2/12/2016 | 100.73662 | 100.7366162 | 100.7366162 | 100.7366162 | 100.6746191 | 100.1331922 | 99.59757813 | 99.06768374 | 98.54341764 |
| 160212A00017 | 2/12/2016 | 1.57 | 2/12/2021 | 2/12/2016 | 100.71486 | 100.714856 | 100.714856 | 100.714856 | 100.6528662 | 100.1115076 | 99.57596135 | 99.04613425 | 98.52193494 |
| 160212A00027 | 2/12/2016 | 2.53 | 2/12/2026 | 2/12/2016 | 112.38559 | 112.3855945 | 112.3855945 | 112.3855945 | 109.8191172 | 104.2941063 | 99.08357479 | 94.16797343 | 89.5290678 |
| 160212A00037 | 2/12/2016 | 3.03 | 2/12/2031 | 2/12/2016 | 128.64656 | 128.6465613 | 128.6465613 | 128.5327397 | 117.6731248 | 107.3561538 | 98.06401612 | 89.68856651 | 82.1336183 |
| 160216A00007 | 2/16/2016 | 1.68 | 2/16/2021 | 2/16/2016 | 100.79573 | 100.7957337 | 100.7957337 | 100.7957337 | 100.7319589 | 100.1793205 | 99.6327351 | 99.09210354 | 98.55732888 |
| 160216A00040 | 2/16/2016 | 1.49 | 2/16/2021 | 2/16/2016 | 100.76165 | 100.7616536 | 100.7616536 | 100.7616536 | 100.6977866 | 100.1443816 | 99.59704984 | 99.05569181 | 98.52020994 |
| 160211A00086 | 2/16/2016 | 2.8 | 2/16/2022 | 2/16/2016 | 103.9362 | 103.9362003 | 103.9362003 | 103.9362003 | 103.6626054 | 102.1114723 | 100.5913335 | 99.10133068 | 97.64063685 |

Classification | Public

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 160211A00089 | 2/16/2016 | 3.91 | 2/16/2024 | 2/16/2016 | 112.93056 | 112.9305631 | 112.9305631 | 112.9305631 | 111.8995409 | 108.2574099 | 104.7557023 | 101.3882233 | 98.14908698 |
| 160211A00091 | 2/16/2016 | 3.55 | 2/16/2023 | 2/16/2016 | 108.3733 | 108.3732963 | 108.3732963 | 108.3732963 | 107.815092 | 105.2289355 | 102.7187878 | 100.2819585 | 97.91587019 |
| 160211A00093 | 2/16/2016 | 2.62 | 2/16/2021 | 2/16/2016 | 101.31754 | 101.3175432 | 101.3175432 | 101.3175432 | 101.2535908 | 100.6992843 | 100.151044 | 99.60877048 | 99.07236666 |
| 160212A00002 | 2/12/2016 | 1.58 | 11/17/2020 | 2/12/2016 | 100.40385 | 100.4038523 | 100.4038523 | 100.4038523 | 100.372465 | 100.070834 | 99.77102348 | 99.47301693 | 99.17679802 |
| 160212A00005 | 2/12/2016 | 1.42 | 2/16/2021 | 2/12/2016 | 100.72278 | 100.7227795 | 100.7227795 | 100.7227795 | 100.6589258 | 100.1056451 | 99.55843688 | 99.01720134 | 98.481841 |
| 160210A00052 | 2/10/2016 | 1.64 | 2/10/2021 | 2/10/2016 | 100.74539 | 100.7453852 | 100.7453852 | 100.7453852 | 100.6842602 | 100.148285 | 99.61800534 | 99.09333077 | 98.57417269 |
| 160210A00053 | 2/10/2016 | 1.99 | 2/10/2023 | 2/10/2016 | 104.33157 | 104.3315686 | 104.3315686 | 104.3315686 | 103.7883493 | 101.2718629 | 98.8293473 | 96.4581936 | 94.15590194 |
| 160211A00005 | 2/11/2016 | 1.3 | 2/11/2021 | 2/11/2016 | 100.63988 | 100.6398832 | 100.6398832 | 100.6398832 | 100.5782485 | 100.0389498 | 99.50542466 | 98.97758072 | 98.45532747 |
| 160211A00034 | 2/11/2016 | 1.82 | 2/10/2023 | 2/11/2016 | 103.89694 | 103.8969422 | 103.8969422 | 103.8969422 | 103.3547306 | 100.8438359 | 98.40678645 | 96.04097722 | 93.74391204 |
| 160211A00036 | 2/11/2016 | 2.41 | 2/11/2026 | 2/11/2016 | 111.71176 | 111.7117605 | 111.7117605 | 111.7117605 | 109.1540918 | 103.6500203 | 98.45939331 | 93.56272481 | 88.94183926 |
| 160211A00056 | 2/11/2016 | 1.82 | 2/10/2023 | 2/11/2016 | 103.89694 | 103.8969422 | 103.8969422 | 103.8969422 | 103.3547306 | 100.8438359 | 98.40678645 | 96.04097722 | 93.74391204 |
| 160209A00049 | 2/9/2016 | 1.92 | 2/9/2023 | 2/9/2016 | 104.1482 | 104.148199 | 104.148199 | 104.148199 | 103.6063262 | 101.0950888 | 98.65762689 | 96.29134062 | 93.99373871 |
| 160210A00021 | 2/10/2016 | 1.97 | 2/10/2023 | 2/10/2016 | 104.28044 | 104.2804361 | 104.2804361 | 104.2804361 | 103.7373354 | 101.2215068 | 98.77963426 | 96.40910932 | 94.10743254 |
| 160210A00036 | 2/10/2016 | 1.77 | 2/10/2023 | 2/10/2016 | 104.23222 | 104.2322181 | 104.2322181 | 104.2322181 | 103.68687 | 101.1618422 | 98.71123928 | 96.33243003 | 94.02289328 |
| 160210A00041 | 2/10/2016 | 1.97 | 2/10/2023 | 2/10/2016 | 104.28044 | 104.2804361 | 104.2804361 | 104.2804361 | 103.7373354 | 101.2215068 | 98.77963426 | 96.40910932 | 94.10743254 |
| 160210A00042 | 2/10/2016 | 2.57 | 2/10/2026 | 2/10/2016 | 112.5961 | 112.5960969 | 112.5960969 | 112.5960969 | 110.0340556 | 104.5088001 | 99.29767113 | 94.3811606 | 89.74107133 |
| 160210A00050 | 2/10/2016 | 1.64 | 2/10/2021 | 2/10/2016 | 100.74539 | 100.7453852 | 100.7453852 | 100.7453852 | 100.6842602 | 100.148285 | 99.61800534 | 99.09333077 | 98.57417269 |
| 160208A00004 | 2/8/2016 | 1.46 | 2/8/2021 | 2/8/2016 | 100.71543 | 100.7154323 | 100.7154323 | 100.7154323 | 100.6550876 | 100.1237881 | 99.59808772 | 99.07789821 | 98.56313319 |
| 160208A00024 | 2/8/2016 | 1.64 | 2/8/2021 | 2/8/2016 | 100.73783 | 100.7378341 | 100.7378341 | 100.7378341 | 100.6775866 | 100.147115 | 99.62222175 | 99.10281918 | 98.58882142 |
| 160209A00007 | 2/9/2016 | 1.53 | 2/9/2021 | 2/9/2016 | 100.68268 | 100.6826844 | 100.6826844 | 100.6826844 | 100.6220174 | 100.0889765 | 99.56157101 | 99.039712 | 98.52331223 |
| 160209A00010 | 2/9/2016 | 1.57 | 2/9/2021 | 2/9/2016 | 100.70411 | 100.7041118 | 100.7041118 | 100.7041118 | 100.6434377 | 100.1103304 | 99.58285912 | 99.06093474 | 98.54447009 |
| 160209A00019 | 2/9/2016 | 2.52 | 2/9/2026 | 2/9/2016 | 112.312 | 112.3119966 | 112.3119966 | 112.3119966 | 109.755464 | 104.2406075 | 99.03927274 | 94.1319934 | 89.500611 |
| 160209A00026 | 2/9/2016 | 1.57 | 2/8/2021 | 2/9/2016 | 100.70053 | 100.7005304 | 100.7005304 | 100.7005304 | 100.640295 | 100.1099384 | 99.58515927 | 99.06586998 | 98.55198466 |
| 151214A00051 | 12/14/2015 | 2.92 | 12/15/2025 | 12/14/2015 | 114.13605 | 114.136046 | 114.136046 | 114.136046 | 111.7324131 | 106.3096133 | 101.1864417 | 96.34479431 | 91.76775039 |
| 151215A00010 | 12/15/2015 | 2.16 | 12/15/2020 | 12/15/2015 | 100.72812 | 100.728121 | 100.728121 | 100.728121 | 100.6877314 | 100.3083052 | 99.93174515 | 99.55801869 | 99.18709382 |
| 151215A00027 | 12/15/2015 | 2.09 | 12/15/2020 | 12/15/2015 | 100.7015 | 100.7014975 | 100.7014975 | 100.7014975 | 100.6611141 | 100.2817502 | 99.90525197 | 99.53158705 | 99.16072338 |
| 160201A00024 | 2/1/2016 | 2.16 | 2/1/2023 | 2/1/2016 | 104.72059 | 104.7205898 | 104.7205898 | 104.7205898 | 104.1847807 | 101.6893794 | 99.26678299 | 96.91444606 | 94.62992837 |
| 160203A00012 | 2/3/2016 | 1.54 | 2/3/2021 | 2/3/2016 | 100.7385 | 100.7384975 | 100.7384975 | 100.7384975 | 100.6803378 | 100.1626996 | 99.6503702 | 99.14326812 | 98.64131369 |
| 160205A00004 | 2/5/2016 | 1.7 | 2/5/2021 | 2/5/2016 | 100.76315 | 100.7631452 | 100.7631452 | 100.7631452 | 100.704195 | 100.1818057 | 99.66482241 | 99.15316148 | 98.64674106 |
| 151027A00021 | 10/27/2015 | 2.02 | 10/27/2021 | 10/27/2015 | 102.19067 | 102.1906715 | 102.1906715 | 102.1906715 | 101.9811835 | 100.7345213 | 99.51820636 | 98.33114138 | 97.17228119 |
| 151030A00001 | 10/30/2015 | 1.9 | 10/30/2020 | 10/30/2015 | 100.41825 | 100.4182468 | 100.4182468 | 100.4182468 | 100.3925869 | 100.1405473 | 99.8897686 | 99.64024151 | 99.39195667 |
| 151030A00022 | 10/30/2015 | 1.8 | 10/30/2020 | 10/30/2015 | 100.39298 | 100.3929795 | 100.3929795 | 100.3929795 | 100.3673236 | 100.1153266 | 99.86459034 | 99.61510553 | 99.3668628 |
| 151211A00037 | 12/11/2017 | 2.69 | 1/11/2023 | 12/11/2017 | 105.92361 | 105.9236091 | 105.9236091 | 105.9236091 | 105.403754 | 102.9484076 | 100.5630535 | 98.24530094 | 95.99285542 |

Classification | Public

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 151211A00040 | 12/11/2017 | 2.7 | 2/13/2023 | 12/11/2017 | 106.16644 | 106.1664402 | 106.1664402 | 106.1664402 | 105.6161822 | 103.0673402 | 100.5934303 | 98.19180458 | 95.85992628 |
| 151211A00041 | 12/11/2017 | 2.71 | 3/13/2023 | 12/11/2017 | 106.37752 | 106.377523 | 106.377523 | 106.377523 | 105.8001877 | 103.1706323 | 100.6200567 | 98.14559895 | 95.74452113 |
| 151002A00053 | 10/2/2017 | 2.17 | 10/4/2021 | 10/2/2017 | 102.25817 | 102.2581747 | 102.2581747 | 102.2581747 | 102.0639497 | 100.8789114 | 99.7212908 | 98.59014499 | 97.48457377 |
| 151002A00091 | 10/2/2015 | 1.65 | 10/2/2020 | 10/2/2015 | 100.24392 | 100.2439186 | 100.2439186 | 100.2439186 | 100.2277539 | 100.0532698 | 99.87939309 | 99.70612052 | 99.53344899 |
| 151008A00025 | 10/8/2015 | 2.91 | 10/8/2025 | 10/8/2015 | 113.59788 | 113.5978764 | 113.5978764 | 113.5978764 | 111.3870203 | 106.1509357 | 101.1953644 | 96.50375415 | 92.0606204 |
| 151013A00007 | 10/13/2015 | 1.75 | 10/13/2020 | 10/13/2015 | 100.30716 | 100.3071634 | 100.3071634 | 100.3071634 | 100.2872703 | 100.0823289 | 99.87823739 | 99.67499029 | 99.47258234 |
| 151013A00012 | 10/13/2015 | 1.58 | 10/13/2020 | 10/13/2015 | 100.30049 | 100.3004869 | 100.3004869 | 100.3004869 | 100.2805651 | 100.0753332 | 99.87095589 | 99.66742762 | 99.46474304 |
| 151027A00020 | 10/27/2015 | 1.75 | 10/27/2020 | 10/27/2015 | 100.36779 | 100.3677873 | 100.3677873 | 100.3677873 | 100.3431494 | 100.0994668 | 99.85696929 | 99.61564824 | 99.37549514 |
| 150929A00085 | 9/29/2015 | 1.81 | 9/29/2020 | 9/29/2015 | 100.25895 | 100.2589534 | 100.2589534 | 100.2589534 | 100.2437657 | 100.0775441 | 99.91187159 | 99.74674554 | 99.58216326 |
| 150930A00059 | 9/30/2015 | 1.78 | 9/30/2020 | 9/30/2015 | 100.25818 | 100.2581763 | 100.2581763 | 100.2581763 | 100.2426866 | 100.0737085 | 99.90529574 | 99.73744547 | 99.57015493 |
| 151002A00007 | 10/2/2015 | 1.65 | 10/2/2020 | 10/2/2015 | 100.24392 | 100.2439186 | 100.2439186 | 100.2439186 | 100.2277539 | 100.0532698 | 99.87939309 | 99.70612052 | 99.53344899 |
| 151002A00011 | 10/2/2015 | 1.65 | 10/2/2020 | 10/2/2015 | 100.24392 | 100.2439186 | 100.2439186 | 100.2439186 | 100.2277539 | 100.0532698 | 99.87939309 | 99.70612052 | 99.53344899 |
| 151002A00014 | 10/2/2015 | 1.65 | 10/2/2020 | 10/2/2015 | 100.24392 | 100.2439186 | 100.2439186 | 100.2439186 | 100.2277539 | 100.0532698 | 99.87939309 | 99.70612052 | 99.53344899 |
| 151002A00038 | 10/2/2015 | 2.81 | 10/2/2025 | 10/2/2015 | 113.03461 | 113.0346108 | 113.0346108 | 113.0346108 | 110.8439366 | 105.6372471 | 100.7089514 | 96.04266125 | 91.62304213 |
| 150824A00046 | 8/24/2015 | 1.82 | 8/24/2020 | 8/24/2015 | 100.10388 | 100.1038839 | 100.1038839 | 100.1038839 | 100.0989294 | 100.032407 | 99.96598419 | 99.89966064 | 99.83343618 |
| 150824A00118 | 8/24/2015 | 1.65 | 8/24/2020 | 8/24/2015 | 100.10223 | 100.1022336 | 100.1022336 | 100.1022336 | 100.0972719 | 100.0306537 | 99.96413626 | 99.89771931 | 99.83140264 |
| 150909A00003 | 9/9/2015 | 3.11 | 9/9/2025 | 9/9/2015 | 114.41992 | 114.4199244 | 114.4199244 | 114.4199244 | 112.2776343 | 107.0957717 | 102.1875704 | 97.5371019 | 93.12945031 |
| 150909A00017 | 9/9/2015 | 2.02 | 9/9/2020 | 9/9/2015 | 100.19513 | 100.1951292 | 100.1951292 | 100.1951292 | 100.1860007 | 100.0751357 | 99.96452745 | 99.85417515 | 99.74407784 |
| 150929A00024 | 9/29/2015 | 1.81 | 9/29/2020 | 9/29/2015 | 100.25895 | 100.2589534 | 100.2589534 | 100.2589534 | 100.2437657 | 100.0775441 | 99.91187159 | 99.74674554 | 99.58216326 |
| 150929A00031 | 9/29/2015 | 1.81 | 9/29/2020 | 9/29/2015 | 100.25895 | 100.2589534 | 100.2589534 | 100.2589534 | 100.2437657 | 100.0775441 | 99.91187159 | 99.74674554 | 99.58216326 |
| 150812A00026 | 8/12/2015 | 1.86 | 8/12/2020 | 8/12/2015 | 100.05327 | 100.0532746 | 100.0532746 | 100.0532746 | 100.050797 | 100.0175255 | 99.98429261 | 99.95109844 | 99.91794288 |
| 150812A00040 | 8/12/2015 | 2.94 | 8/12/2025 | 8/12/2015 | 113.34396 | 113.3439576 | 113.3439576 | 113.3439576 | 111.2778072 | 106.1946039 | 101.3769671 | 96.80961201 | 92.4782135 |
| 150814A00024 | 8/14/2015 | 2.04 | 8/14/2020 | 8/14/2015 | 100.06915 | 100.0691522 | 100.0691522 | 100.0691522 | 100.0662613 | 100.0274403 | 99.98866655 | 99.94994011 | 99.91126083 |
| 150821A00008 | 8/21/2015 | 1.83 | 8/21/2020 | 8/21/2015 | 100.09148 | 100.0914814 | 100.0914814 | 100.0914814 | 100.0871461 | 100.0289345 | 99.97080515 | 99.91275787 | 99.85479252 |
| 150824A00031 | 8/24/2015 | 1.93 | 2/25/2021 | 8/24/2015 | 100.97024 | 100.9702368 | 100.9702368 | 100.9702368 | 100.9024717 | 100.3246804 | 99.75348665 | 99.18877812 | 98.63044487 |
| 150824A00043 | 8/24/2015 | 1.82 | 8/24/2020 | 8/24/2015 | 100.10388 | 100.1038839 | 100.1038839 | 100.1038839 | 100.0989294 | 100.032407 | 99.96598419 | 99.89966064 | 99.83343618 |
| 150601A00998 | 6/1/2015 | 5.37 | 10/25/2034 | 6/1/2015 | 170.45054 | 170.4505424 | 170.4505424 | 164.9013014 | 148.4171027 | 133.1398587 | 119.7560983 | 108.0136614 | 97.69555822 |
| 150619A00028 | 6/19/2015 | 2.54 | 6/20/2022 | 6/19/2015 | 104.28182 | 104.2818198 | 104.2818198 | 104.2818198 | 103.929707 | 102.0394053 | 100.1928204 | 98.38868329 | 96.62576977 |
| 150630A00091 | 6/30/2015 | 2.31 | 6/30/2021 | 6/30/2015 | 101.89303 | 101.8930269 | 101.8930269 | 101.8930269 | 101.7612942 | 100.8384335 | 99.9322584 | 99.04231971 | 98.16818421 |
| 150630A00097 | 6/30/2015 | 3.05 | 7/1/2024 | 6/30/2015 | 110.88222 | 110.8822246 | 110.8822246 | 110.8822246 | 109.6431647 | 105.6748022 | 101.8734984 | 98.23135068 | 94.74087198 |
| 150731A00016 | 7/31/2015 | 3.04 | 7/31/2025 | 7/31/2015 | 113.76058 | 113.7605837 | 113.7605837 | 113.7605837 | 111.7203146 | 106.6574037 | 101.8574917 | 97.30552165 | 92.98737647 |
| 150731A00020 | 7/31/2015 | 2.47 | 7/29/2022 | 7/31/2015 | 104.38271 | 104.3827051 | 104.3827051 | 104.3827051 | 104.0017321 | 102.0068731 | 100.0605929 | 98.16140468 | 96.30787763 |
| 150601A00656 | 6/1/2015 | 2.59 | 12/17/2021 | 6/1/2015 | 103.18056 | 103.1805636 | 103.1805636 | 103.1805636 | 102.9418159 | 101.5625267 | 100.2083266 | 98.87858988 | 97.57271137 |

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 150601A00672 | 6/1/2015 | 1.96 | 1/28/2022 | 6/1/2015 | 102.4912 | 102.4912017 | 102.4912017 | 102.4912017 | 102.2305245 | 100.7458144 | 99.29018804 | 97.86286628 | 96.46309726 |
| 150601A00677 | 6/1/2015 | 2.39 | 1/30/2025 | 6/1/2015 | 110.18676 | 110.1867554 | 110.1867554 | 110.1867554 | 108.5502315 | 104.0195231 | 99.70503253 | 95.59531102 | 91.67957589 |
| 150601A00682 | 6/1/2015 | 2.3 | 2/9/2022 | 6/1/2015 | 103.06346 | 103.0634602 | 103.0634602 | 103.0634602 | 102.7950968 | 101.2715591 | 99.77827337 | 98.31441177 | 96.87917626 |
| 150601A00713 | 6/1/2015 | 2.2 | 4/1/2022 | 6/1/2015 | 103.15891 | 103.1589051 | 103.1589051 | 103.1589051 | 102.8600725 | 101.1956214 | 99.56601541 | 97.97022453 | 96.40725948 |
| 150601A00775 | 6/1/2015 | 2.28 | 11/12/2021 | 6/1/2015 | 102.56265 | 102.5626525 | 102.5626525 | 102.5626525 | 102.3434339 | 101.0555178 | 99.79552338 | 98.56254296 | 97.35570836 |
| 150601A00334 | 6/1/2015 | 3.33 | 8/9/2022 | 6/1/2015 | 106.11153 | 106.1115293 | 106.1115293 | 106.1115293 | 105.7189815 | 103.677003 | 101.6851488 | 99.74186585 | 97.84566065 |
| 150601A00341 | 6/1/2015 | 3.09 | 8/21/2020 | 6/1/2015 | 100.16201 | 100.1620106 | 100.1620106 | 100.1620106 | 100.1576708 | 100.0993987 | 100.0412089 | 99.98310125 | 99.92507563 |
| 150601A00355 | 6/1/2015 | 2.86 | 9/24/2020 | 6/1/2015 | 100.39064 | 100.3906418 | 100.3906418 | 100.3906418 | 100.3769529 | 100.2243798 | 100.0722776 | 99.92064402 | 99.76947703 |
| 150601A00356 | 6/1/2015 | 3.66 | 9/22/2023 | 6/1/2015 | 110.51269 | 110.5126881 | 110.5126881 | 110.5126881 | 109.6992187 | 106.4930163 | 103.3984689 | 100.4110268 | 97.52635502 |
| 150601A00406 | 6/1/2015 | 3.71 | 1/17/2024 | 6/1/2015 | 111.7516 | 111.7516043 | 111.7516043 | 111.7516043 | 110.7697104 | 107.2304163 | 103.8250752 | 100.5478948 | 97.39336554 |
| 150601A00625 | 6/1/2015 | 3.96 | 12/9/2044 | 6/1/2015 | 185.62033 | 185.6203255 | 185.6203255 | 162.9444521 | 136.7649391 | 115.2826946 | 97.97107274 | 83.96058578 | 72.57010153 |
| 150115A00022 | 1/17/2017 | 2.56 | 1/16/2024 | 1/17/2017 | 107.90818 | 107.9081789 | 107.9081789 | 107.9081789 | 106.9419316 | 103.4719379 | 100.1338316 | 96.92190113 | 93.83071341 |
| 150120A00025 | 1/20/2015 | 2.54 | 1/21/2025 | 1/20/2015 | 110.12418 | 110.1241772 | 110.1241772 | 110.1241772 | 108.5167874 | 104.0349633 | 99.7652739 | 95.69657482 | 91.81836479 |
| 150211A00005 | 2/11/2015 | 2.35 | 2/15/2022 | 2/11/2015 | 103.22598 | 103.2259802 | 103.2259802 | 103.2259802 | 102.9538539 | 101.4114153 | 99.89978041 | 98.41809768 | 96.9655465 |
| 150601A00188 | 6/1/2015 | 2.06 | 8/24/2021 | 6/1/2015 | 101.89187 | 101.8918708 | 101.8918708 | 101.8918708 | 101.7267516 | 100.6547369 | 99.6052336 | 98.57753844 | 97.57097707 |
| 150601A00332 | 6/1/2015 | 2.72 | 8/7/2020 | 6/1/2015 | 100.04674 | 100.04674 | 100.04674 | 100.04674 | 100.0452939 | 100.0258716 | 100.0064692 | 99.98708663 | 99.96772395 |
| 150601A00333 | 6/1/2015 | 3.06 | 8/9/2021 | 6/1/2015 | 102.84065 | 102.8406458 | 102.8406458 | 102.8406458 | 102.6847642 | 101.6480992 | 100.6323531 | 99.63689717 | 98.66112748 |
| 140923A00070 | 9/23/2014 | 2.88 | 9/23/2022 | 9/23/2014 | 105.6089 | 105.6089027 | 105.6089027 | 105.6089027 | 105.1815208 | 103.0233543 | 100.9202852 | 98.87051924 | 96.87233561 |
| 140930A00104 | 9/30/2016 | 3.23 | 9/30/2021 | 9/30/2016 | 103.48929 | 103.4892904 | 103.4892904 | 103.4892904 | 103.2966871 | 102.1147611 | 100.9598719 | 99.83109946 | 98.72756492 |
| 141117A00011 | 11/17/2014 | 3.81 | 11/17/2034 | 11/17/2014 | 149.71671 | 149.7167107 | 149.7167107 | 144.2149387 | 128.8013252 | 114.7720021 | 102.5293898 | 91.83150956 | 82.4705307 |
| 141215A00062 | 12/15/2014 | 2.65 | 12/16/2024 | 12/15/2014 | 111.21418 | 111.214184 | 111.214184 | 111.214184 | 109.66075 | 105.2229646 | 100.9912599 | 96.95501305 | 93.10420271 |
| 141218A00039 | 12/18/2014 | 2.29 | 12/18/2020 | 12/18/2014 | 100.79461 | 100.7946132 | 100.7946132 | 100.7946132 | 100.7532451 | 100.3654031 | 99.98055294 | 99.59866012 | 99.2196905 |
| 150115A00021 | 1/17/2017 | 2.26 | 1/18/2022 | 1/17/2017 | 102.93331 | 102.9333064 | 102.9333064 | 102.9333064 | 102.6776426 | 101.2158395 | 99.78216764 | 98.37588596 | 96.99627903 |
| 140314A00003 | 3/14/2014 | 3.32 | 3/14/2024 | 3/14/2014 | 111.04377 | 111.0437702 | 111.0437702 | 111.0437702 | 109.978943 | 106.2969957 | 102.7596689 | 99.36046684 | 96.0932245 |
| 140605A00058 | 6/6/2016 | 3.29 | 6/7/2021 | 6/6/2016 | 102.60856 | 102.6085632 | 102.6085632 | 102.6085632 | 102.488433 | 101.624878 | 100.7758745 | 99.94105687 | 99.12007138 |
| 140625A00021 | 6/27/2016 | 3.2 | 6/25/2021 | 6/27/2016 | 102.67704 | 102.6770427 | 102.6770427 | 102.6770427 | 102.5474409 | 101.6343099 | 100.7374342 | 99.85638237 | 98.99073821 |
| 140811A00047 | 8/11/2016 | 3.13 | 8/11/2021 | 8/11/2016 | 102.9761 | 102.9760954 | 102.9760954 | 102.9760954 | 102.81879 | 101.7759323 | 100.7542253 | 99.75303001 | 98.77173269 |
| 140814A00004 | 8/14/2014 | 2.25 | 8/14/2020 | 8/14/2014 | 100.07732 | 100.077317 | 100.077317 | 100.077317 | 100.0744256 | 100.0355976 | 99.99681685 | 99.95808342 | 99.91939716 |
| 140923A00069 | 9/23/2014 | 2.63 | 9/23/2021 | 9/23/2014 | 102.73499 | 102.7349852 | 102.7349852 | 102.7349852 | 102.5480508 | 101.3897886 | 100.2576401 | 99.15072938 | 98.06821943 |
| 130211A00016 | 2/11/2013 | 2.27 | 2/15/2023 | 2/11/2013 | 105.07428 | 105.0742764 | 105.0742764 | 105.0742764 | 104.5247134 | 101.984165 | 99.51851864 | 97.12512117 | 94.80143093 |
| 130211A00026 | 2/11/2013 | 2.27 | 2/15/2023 | 2/11/2013 | 105.07428 | 105.0742764 | 105.0742764 | 105.0742764 | 104.5247134 | 101.984165 | 99.51851864 | 97.12512117 | 94.80143093 |
| 130211A00035 | 2/11/2013 | 2.27 | 2/15/2023 | 2/11/2013 | 105.07428 | 105.0742764 | 105.0742764 | 105.0742764 | 104.5247134 | 101.984165 | 99.51851864 | 97.12512117 | 94.80143093 |
| 130501A00021 | 5/1/2013 | 2.27 | 5/1/2023 | 5/1/2013 | 105.48147 | 105.4814734 | 105.4814734 | 105.4814734 | 104.8570732 | 102.1087048 | 99.44631634 | 96.86665557 | 94.36661812 |

Classification | Public

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 130827A00012 | 8/27/2013 | 3.66 | 7/31/2023 | 8/27/2013 | 110.18514 | 110.1851408 | 110.1851408 | 110.1851408 | 109.4420761 | 106.3837253 | 103.4282898 | 100.5717304 | 97.81019059 |
| 130827A00014 | 8/27/2013 | 2.73 | 8/31/2020 | 8/27/2013 | 100.22504 | 100.2250425 | 100.2250425 | 100.2250425 | 100.2186279 | 100.1325111 | 100.0465411 | 99.96071769 | 99.87504045 |
| 110927A00009 | 9/27/2011 | 3.07 | 9/27/2021 | 9/27/2011 | 103.27711 | 103.2771117 | 103.2771117 | 103.2771117 | 103.0868465 | 101.9143818 | 100.7685679 | 99.64850349 | 98.55332757 |
| 111024A00013 | 10/24/2011 | 3.24 | 10/25/2021 | 10/24/2011 | 103.70656 | 103.7065582 | 103.7065582 | 103.7065582 | 103.4970086 | 102.2457368 | 101.0247226 | 99.83287757 | 98.66916501 |
| 111213A00004 | 12/13/2011 | 2.96 | 12/13/2021 | 12/13/2011 | 103.70639 | 103.7063895 | 103.7063895 | 103.7063895 | 103.469209 | 102.096946 | 100.7494659 | 99.42615471 | 98.12641824 |
| 120419A00009 | 4/19/2012 | 2.76 | 4/19/2022 | 4/19/2012 | 104.27949 | 104.2794871 | 104.2794871 | 104.2794871 | 103.9680465 | 102.2445289 | 100.5578628 | 98.90693064 | 97.29066016 |
| 120531A00008 | 5/31/2012 | 2.27 | 5/31/2022 | 5/31/2012 | 103.67639 | 103.6763936 | 103.6763936 | 103.6763936 | 103.3389737 | 101.5086333 | 99.71953051 | 97.97049976 | 96.26041573 |
| 120614A00005 | 6/14/2012 | 2.22 | 6/15/2022 | 6/14/2012 | 103.98789 | 103.9878939 | 103.9878939 | 103.9878939 | 103.6384411 | 101.7583552 | 99.92158103 | 98.12686656 | 96.37300394 |
| 070906A00048 | 9/10/2007 | 3.79 | 9/12/2022 | 9/10/2020 | 107.47812 | 107.4781168 | 107.4781168 | 107.4781168 | 107.0561113 | 104.9135667 | 102.8731012 | 101.0982168 | 100.0297821 |
| 081028A00036 | 10/30/2008 | 4.22 | 10/30/2023 | | 112.86375 | 112.8637507 | 112.8637507 | 112.8637507 | 111.9909754 | 108.6451713 | 105.4187212 | 102.3065938 | 99.30401805 |
| 180404A00037 | 4/6/2018 | 2.51 | 4/6/2028 | 4/6/2022 | 118.55361 | 118.5536098 | 118.5536098 | 118.5536098 | 113.7183752 | 107.6235849 | 102.9898647 | 99.70881295 | 97.43494889 |
| 180406A00015 | 4/10/2018 | 2.61 | 4/10/2028 | 4/10/2023 | 119.35683 | 119.3568337 | 119.3568337 | 119.3568337 | 114.4216498 | 108.1335352 | 103.1202139 | 99.20021816 | 96.08639197 |
| 180925A00059 | 9/25/2018 | 3.01 | 9/25/2028 | 9/25/2023 | 123.80121 | 123.8012076 | 123.8012076 | 123.8012076 | 117.9397803 | 110.878804 | 105.1028381 | 100.4694412 | 96.7347628 |
| 181004A00034 | 10/4/2018 | 2.58 | 10/5/2020 | | 100.426 | 100.4260039 | 100.4260039 | 100.4260039 | 100.4088023 | 100.2257858 | 100.043442 | 99.86176691 | 99.68075667 |
| 181004A00037 | 10/4/2018 | 2.48 | 10/5/2020 | | 100.40768 | 100.4076769 | 100.4076769 | 100.4076769 | 100.3904775 | 100.207486 | 100.0251672 | 99.84351683 | 99.66253133 |
| 181031A00046 | 11/2/2018 | 3.05 | 10/29/2021 | 11/2/2020 | 103.49974 | 103.4997394 | 103.4997394 | 103.4997394 | 103.2877027 | 102.0300225 | 100.8600551 | 100.0241937 | 99.64555382 |
| 181203A00046 | 12/4/2018 | 2.8 | 12/4/2023 | 12/4/2020 | 108.44971 | 108.4497052 | 108.4497052 | 108.4497052 | 107.5574354 | 104.3802269 | 101.76207 | 100.1109445 | 99.45304538 |
| 181210A00035 | 12/12/2018 | 2.65 | 1/16/2024 | 1/15/2021 | 108.2225 | 108.2225039 | 108.2225039 | 108.2225039 | 107.2771116 | 104.0537418 | 101.4770116 | 99.91168391 | 99.21331091 |
| 190104A00032 | 1/4/2019 | 2.33 | 1/4/2024 | 9/4/2020 | 107.03763 | 107.0376284 | 107.0376284 | 107.0376284 | 106.1289012 | 103.0818844 | 100.8414502 | 99.85588485 | 99.62300506 |
| 190426A00017 | 4/26/2019 | 2.31 | 4/26/2022 | 10/26/2020 | 103.53673 | 103.5367282 | 103.5367282 | 103.5367282 | 103.2234786 | 101.5680241 | 100.2981375 | 99.75019482 | 99.50185435 |
| 190426A00018 | 4/26/2019 | 2.14 | 4/26/2024 | 10/26/2020 | 106.95233 | 106.9523255 | 106.9523255 | 106.9523255 | 105.9090634 | 102.7501602 | 100.5771511 | 99.72631743 | 99.46106614 |
| 190426A00024 | 4/26/2019 | 2.24 | 4/26/2022 | 10/26/2020 | 103.41379 | 103.4137865 | 103.4137865 | 103.4137865 | 103.1010472 | 101.4584866 | 100.233634 | 99.73038064 | 99.48505921 |
| 190509A00033 | 5/9/2019 | 2.41 | 5/9/2022 | 5/10/2021 | 103.78838 | 103.788382 | 103.788382 | 103.788382 | 103.4662385 | 101.7608326 | 100.3308492 | 99.29242435 | 98.49724057 |
| 190509A00063 | 5/9/2019 | 2.11 | 5/9/2024 | 8/10/2020 | 106.90408 | 106.9040832 | 106.9040832 | 106.9040832 | 105.847554 | 102.6935792 | 100.5513615 | 99.95704334 | 99.9378913 |
| 190510A00019 | 5/10/2019 | 2.39 | 5/10/2022 | 5/10/2021 | 103.75834 | 103.7583377 | 103.7583377 | 103.7583377 | 103.4356718 | 101.7305413 | 100.3046567 | 99.26801927 | 98.46824714 |
| 190513A00033 | 5/13/2019 | 2.35 | 5/15/2023 | 5/13/2022 | 105.78306 | 105.7830555 | 105.7830555 | 105.7830555 | 105.1544504 | 102.5312363 | 100.2334277 | 98.25023862 | 96.48788646 |
| 190513A00065 | 5/13/2019 | 2.01 | 5/13/2022 | 8/13/2020 | 103.41633 | 103.4163292 | 103.4163292 | 103.4163292 | 103.0923453 | 101.4197678 | 100.2004206 | 99.95188952 | 99.91597597 |
| 190516A00018 | 5/16/2019 | 2.03 | 5/16/2024 | 8/17/2020 | 106.63306 | 106.6330649 | 106.6330649 | 106.6330649 | 105.5776693 | 102.4702525 | 100.4229348 | 99.93521898 | 99.89669669 |
| 190516A00028 | 5/16/2019 | 2.03 | 5/16/2024 | 8/17/2020 | 106.63306 | 106.6330649 | 106.6330649 | 106.6330649 | 105.5776693 | 102.4702525 | 100.4229348 | 99.93521898 | 99.89669669 |
| 190522A00029 | 5/22/2019 | 2.41 | 5/22/2024 | 5/22/2023 | 108.12146 | 108.1214612 | 108.1214612 | 108.1214612 | 106.9929011 | 103.4132426 | 100.2008655 | 97.31079298 | 94.65680363 |
| 190523A00048 | 5/23/2019 | 2.32 | 5/23/2024 | 5/23/2023 | 107.78131 | 107.7813079 | 107.7813079 | 107.7813079 | 106.6576413 | 103.1031389 | 99.91816141 | 97.04896063 | 94.40664875 |
| 190523A00050 | 5/23/2019 | 2.3 | 5/23/2023 | 5/23/2022 | 105.68655 | 105.6865538 | 105.6865538 | 105.6865538 | 105.0456021 | 102.3947064 | 100.092573 | 98.11533002 | 96.34880921 |
| 190529A00115 | 5/29/2019 | 1.92 | 5/29/2024 | 8/31/2020 | 106.2705 | 106.2704974 | 106.2704974 | 106.2704974 | 105.2143535 | 102.1720323 | 100.2587164 | 99.88623483 | 99.8090529 |

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 190530A00057 | 5/30/2019 | 1.71 | 5/30/2024 | 8/31/2020 | 106.1702 | 106.1701991 | 106.1701991 | 106.1701991 | 105.1127267 | 102.0856694 | 100.2290421 | 99.88445793 | 99.80713376 |
| 190530A00092 | 5/30/2019 | 1.69 | 5/30/2024 | 8/31/2020 | 106.09266 | 106.0926595 | 106.0926595 | 106.0926595 | 105.0388803 | 102.0303769 | 100.2115373 | 99.88290636 | 99.80558344 |
| 190530A00108 | 5/30/2019 | 1.88 | 5/30/2024 | 8/31/2020 | 106.12044 | 106.1204379 | 106.1204379 | 106.1204379 | 105.0700099 | 102.0616096 | 100.2223879 | 99.88314487 | 99.80596956 |
| 190603A00067 | 6/3/2019 | 1.72 | 6/3/2024 | 9/3/2020 | 105.51792 | 105.5179187 | 105.5179187 | 105.5179187 | 104.4973145 | 101.6586691 | 100.1045954 | 99.82387043 | 99.73046187 |
| 190605A00032 | 6/5/2019 | 1.92 | 6/3/2022 | 9/3/2020 | 103.04129 | 103.0412872 | 103.0412872 | 103.0412872 | 102.7081193 | 101.0670847 | 100.0523178 | 99.84430917 | 99.75086546 |
| 190606A00030 | 6/6/2019 | 1.48 | 6/6/2024 | 9/8/2020 | 105.30482 | 105.3048211 | 105.3048211 | 105.3048211 | 104.2916999 | 101.5125617 | 100.0664036 | 99.82576303 | 99.72931877 |
| 190606A00032 | 6/6/2019 | 1.75 | 6/6/2024 | 9/8/2020 | 105.64609 | 105.6460905 | 105.6460905 | 105.6460905 | 104.6146845 | 101.7375706 | 100.1289473 | 99.82295678 | 99.72680612 |
| 190606A00054 | 6/6/2019 | 1.8 | 6/6/2024 | 9/8/2020 | 105.84022 | 105.8402201 | 105.8402201 | 105.8402201 | 104.7982505 | 101.8691262 | 100.1756425 | 99.82780235 | 99.7316471 |
| 190607A00016 | 6/7/2019 | 1.75 | 6/7/2024 | 9/8/2020 | 105.65007 | 105.6500709 | 105.6500709 | 105.6500709 | 104.6172684 | 101.7376775 | 100.1259648 | 99.81173407 | 99.70736411 |
| 190607A00022 | 6/7/2019 | 1.5 | 6/7/2024 | 9/8/2020 | 105.38656 | 105.3865624 | 105.3865624 | 105.3865624 | 104.3670868 | 101.5618617 | 100.0762488 | 99.81440422 | 99.70974018 |
| 190607A00025 | 6/7/2019 | 1.48 | 6/7/2024 | 9/8/2020 | 105.30858 | 105.3085805 | 105.3085805 | 105.3085805 | 104.2939711 | 101.5119925 | 100.0616867 | 99.81229996 | 99.70763806 |
| 190610A00069 | 6/10/2019 | 2.04 | 6/10/2022 | 9/10/2020 | 103.2985 | 103.2985001 | 103.2985001 | 103.2985001 | 102.9587644 | 101.2605303 | 100.1225908 | 99.83503934 | 99.72240312 |
| 190613A00024 | 6/13/2019 | 2.18 | 6/13/2024 | 6/13/2023 | 107.35173 | 107.3517313 | 107.3517313 | 107.3517313 | 106.2080547 | 102.6461605 | 99.45503977 | 96.56863968 | 93.89715698 |
| 190702A00051 | 7/2/2019 | 1.46 | 7/2/2024 | 10/2/2020 | 105.32322 | 105.3232228 | 105.3232228 | 105.3232228 | 104.2817503 | 101.4867783 | 100.0370856 | 99.68831656 | 99.51446909 |
| 190702A00079 | 7/2/2019 | 1.69 | 7/2/2024 | 7/5/2022 | 106.23591 | 106.2359122 | 106.2359122 | 106.2359122 | 105.1368854 | 101.9217146 | 99.3257479 | 97.18809783 | 95.31191689 |
| 190702A00082 | 7/2/2019 | 1.63 | 6/30/2022 | 9/30/2020 | 102.93098 | 102.9309752 | 102.9309752 | 102.9309752 | 102.5812136 | 100.9187331 | 99.97445236 | 99.73465065 | 99.56712862 |
| 190703A00023 | 7/3/2019 | 1.9 | 6/30/2022 | 9/30/2020 | 103.10474 | 103.1047364 | 103.1047364 | 103.1047364 | 102.7540787 | 101.0584462 | 100.0227798 | 99.75126166 | 99.58402077 |
| 190712A00038 | 7/12/2019 | 1.87 | 7/12/2021 | 10/13/2020 | 101.68215 | 101.6821543 | 101.6821543 | 101.6821543 | 101.5436995 | 100.6259011 | 99.9879395 | 99.72490247 | 99.52459347 |
| 190712A00044 | 7/12/2019 | 1.73 | 7/12/2022 | 10/13/2020 | 103.17857 | 103.178568 | 103.178568 | 103.178568 | 102.8184578 | 101.097396 | 100.0343603 | 99.69740048 | 99.49638023 |
| 190712A00047 | 7/12/2019 | 1.54 | 7/12/2024 | 10/13/2020 | 105.68004 | 105.680036 | 105.680036 | 105.680036 | 104.6055479 | 101.6969482 | 100.0887381 | 99.66041745 | 99.45809084 |
| 190725A00018 | 7/25/2019 | 1.78 | 7/25/2024 | 10/26/2020 | 105.96229 | 105.9622888 | 105.9622888 | 105.9622888 | 104.8587666 | 101.8623061 | 100.1298048 | 99.62713643 | 99.39375118 |
| 190725A00022 | 7/25/2019 | 1.7 | 7/25/2022 | 10/26/2020 | 103.17644 | 103.1764405 | 103.1764405 | 103.1764405 | 102.8073556 | 101.0652847 | 100.0022797 | 99.64856874 | 99.41801274 |
| 190731A00008 | 7/31/2019 | 1.53 | 7/31/2024 | 11/2/2020 | 105.71433 | 105.7143296 | 105.7143296 | 105.7143296 | 104.6137902 | 101.6736057 | 100.0462535 | 99.5802375 | 99.32937906 |
| 190801A00025 | 8/1/2019 | 1.68 | 8/1/2024 | 8/3/2020 | 105.58728 | 105.5872783 | 105.5872783 | 105.5872783 | 104.5012703 | 101.6116993 | 100.0283245 | 99.57433117 | 99.32425189 |
| 190805A00014 | 8/5/2019 | 1.49 | 8/5/2024 | 8/5/2022 | 105.57138 | 105.5713794 | 105.5713794 | 105.5713794 | 104.4713031 | 101.32515 | 98.77228864 | 96.62259861 | 94.69310087 |
| 190807A00035 | 8/7/2019 | 1.45 | 8/7/2024 | 8/7/2020 | 104.67802 | 104.6780187 | 104.6780187 | 104.6780187 | 103.6543059 | 101.06287 | 99.96843338 | 99.94424004 | 99.92509671 |
| 190807A00056 | 8/7/2019 | 1.49 | 8/7/2024 | 8/7/2020 | 104.84013 | 104.8401295 | 104.8401295 | 104.8401295 | 103.8027932 | 101.155627 | 99.98910656 | 99.94501557 | 99.92587158 |
| 190808A00013 | 8/8/2019 | 1.23 | 8/8/2024 | 8/10/2020 | 104.52444 | 104.5244417 | 104.5244417 | 104.5244417 | 103.5121066 | 100.9750598 | 99.97379567 | 99.95448623 | 99.93519606 |
| 190809A00026 | 8/9/2019 | 1.52 | 8/9/2024 | 8/10/2020 | 104.96846 | 104.9684603 | 104.9684603 | 104.9684603 | 103.9184213 | 101.2257244 | 100.0033214 | 99.94560226 | 99.9264594 |
| 190812A00020 | 8/12/2019 | 1.47 | 8/12/2024 | 8/12/2020 | 104.77526 | 104.7752577 | 104.7752577 | 104.7752577 | 103.7378149 | 101.107329 | 99.96995013 | 99.92238327 | 99.88940517 |
| 190812A00026 | 8/12/2019 | 1.48 | 8/12/2024 | 8/12/2020 | 104.81592 | 104.8159226 | 104.8159226 | 104.8159226 | 103.7750768 | 101.1306941 | 99.97529219 | 99.92271565 | 99.88973726 |
| 190812A00027 | 8/12/2019 | 1.71 | 8/12/2024 | 8/12/2022 | 105.75122 | 105.7512152 | 105.7512152 | 105.7512152 | 104.6340945 | 101.450587 | 98.86415154 | 96.69070442 | 94.74538572 |
| 190814A00019 | 8/14/2019 | 1.46 | 8/14/2024 | 8/14/2020 | 104.74101 | 104.7410114 | 104.7410114 | 104.7410114 | 103.7043046 | 101.0843433 | 99.96235464 | 99.91310279 | 99.87459509 |

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 190816A00028 | 8/16/2019 | 1.33 | 8/16/2022 | 8/17/2020 | 102.50724 | 102.5072378 | 102.5072378 | 102.5072378 | 102.1368632 | 100.5601744 | 99.96127716 | 99.92257559 | 99.88392117 |
| 190816A00029 | 8/16/2019 | 1.11 | 8/16/2024 | 8/17/2020 | 104.05796 | 104.0579555 | 104.0579555 | 104.0579555 | 103.0814501 | 100.7137699 | 99.95273672 | 99.91404201 | 99.87539444 |
| 190820A00068 | 8/20/2019 | 1.39 | 8/20/2024 | 8/20/2020 | 104.47408 | 104.4740767 | 104.4740767 | 104.4740767 | 103.4547338 | 100.9230011 | 99.9375543 | 99.88239823 | 99.82731735 |
| 190821A00024 | 8/21/2019 | 1.65 | 8/21/2024 | 8/22/2022 | 105.5408 | 105.5408018 | 105.5408018 | 105.5408018 | 104.4256455 | 101.267221 | 98.70129381 | 96.53320708 | 94.58059304 |
| 190821A00046 | 8/21/2019 | 1.44 | 8/21/2024 | 8/21/2020 | 104.68165 | 104.6816531 | 104.6816531 | 104.6816531 | 103.6425493 | 101.0364361 | 99.95128594 | 99.880644 | 99.82279996 |
| 190823A00023 | 8/23/2019 | 1.37 | 8/23/2024 | 8/24/2020 | 104.4012 | 104.4011951 | 104.4011951 | 104.4011951 | 103.3853823 | 100.8774657 | 99.93450288 | 99.87658606 | 99.81874993 |
| 190828A00011 | 8/28/2019 | 1.1 | 8/28/2024 | 8/28/2020 | 104.04966 | 104.0496573 | 104.0496573 | 104.0496573 | 103.0605114 | 100.684041 | 99.91453698 | 99.8371207 | 99.75982976 |
| 190828A00021 | 8/28/2019 | 1.36 | 8/28/2024 | 8/28/2020 | 104.3749 | 104.3749034 | 104.3749034 | 104.3749034 | 103.356559 | 100.8544317 | 99.92006443 | 99.84279209 | 99.76564321 |
| 190830A00028 | 8/30/2019 | 1.39 | 8/30/2024 | 8/31/2020 | 104.50425 | 104.5042507 | 104.5042507 | 104.5042507 | 103.471649 | 100.9204095 | 99.92240547 | 99.84513712 | 99.76799222 |
| 190909A00021 | 9/9/2019 | 1.2 | 9/9/2024 | 9/9/2020 | 104.49808 | 104.4980812 | 104.4980812 | 104.4980812 | 103.4602192 | 100.9270602 | 99.92171084 | 99.77232352 | 99.66221904 |
| 190911A00012 | 9/11/2019 | 1.27 | 9/11/2024 | 9/11/2020 | 104.79556 | 104.7955629 | 104.7955629 | 104.7955629 | 103.7276686 | 101.0858037 | 99.94569943 | 99.76994806 | 99.65436453 |
| 190917A00040 | 9/17/2019 | 1.63 | 9/17/2024 | 9/17/2020 | 105.55776 | 105.5577586 | 105.5577586 | 105.5577586 | 104.4235973 | 101.5268607 | 100.0343036 | 99.75844659 | 99.62673647 |
| 190924A00014 | 9/24/2019 | 1.54 | 9/24/2024 | 9/24/2020 | 105.2067 | 105.2066953 | 105.2066953 | 105.2066953 | 104.0913788 | 101.2984152 | 99.96383101 | 99.71633287 | 99.56552502 |
| 191008A00020 | 10/8/2019 | 1.58 | 10/8/2024 | 10/11/2022 | 105.42344 | 105.4234379 | 105.4234379 | 105.4234379 | 104.26391 | 101.0512199 | 98.40663526 | 96.13597938 | 94.07146258 |
| 191008A00028 | 10/11/2019 | 1.08 | 10/8/2024 | 10/8/2020 | 104.07602 | 104.0760214 | 104.0760214 | 104.0760214 | 103.0593578 | 100.6953571 | 99.81310854 | 99.58749949 | 99.39855188 |
| 191011A00020 | 10/11/2019 | 1.53 | 10/11/2024 | 10/13/2020 | 105.22249 | 105.2224937 | 105.2224937 | 105.2224937 | 104.0913607 | 101.3010146 | 99.94844991 | 99.62628654 | 99.43441296 |
| 191017A00012 | 10/17/2019 | 1.43 | 10/17/2022 | 10/19/2020 | 102.93952 | 102.9395248 | 102.9395248 | 102.9395248 | 102.5206211 | 100.7638773 | 99.88756525 | 99.61741421 | 99.40663649 |
| 191029A00020 | 10/29/2019 | 1.51 | 10/31/2022 | 11/2/2020 | 103.17288 | 103.1728844 | 103.1728844 | 103.1728844 | 102.7385752 | 100.8956209 | 99.90186588 | 99.57323938 | 99.32435906 |
| 191121A00031 | 11/21/2019 | 1.54 | 11/21/2024 | 11/21/2022 | 106.19889 | 106.1988874 | 106.1988874 | 106.1988874 | 104.9306114 | 101.5061435 | 98.66960429 | 96.23912009 | 94.04270937 |
| 191209A00045 | 12/9/2019 | 1.56 | 12/9/2024 | 12/9/2022 | 106.35781 | 106.3578097 | 106.3578097 | 106.3578097 | 105.0595473 | 101.5825499 | 98.69022564 | 96.2062698 | 93.96242529 |
| 191211A00013 | 12/11/2019 | 1.57 | 12/11/2024 | 12/12/2022 | 106.40995 | 106.409947 | 106.409947 | 106.409947 | 105.1056405 | 101.6185554 | 98.71907166 | 96.23115398 | 93.98560603 |
| 200128A00045 | 1/28/2020 | 1.45 | 1/28/2025 | 1/28/2021 | 105.22973 | 105.2297279 | 105.2297279 | 105.2297279 | 103.9895707 | 101.1624964 | 99.69625825 | 99.04542095 | 98.55403251 |
| 200130A00029 | 1/30/2020 | 1.3 | 1/30/2023 | 2/1/2021 | 102.99207 | 102.9920689 | 102.9920689 | 102.9920689 | 102.5046375 | 100.6444175 | 99.61520507 | 99.0475724 | 98.55681048 |
| 200131A00023 | 1/31/2020 | 1.56 | 1/31/2025 | 1/31/2023 | 105.73846 | 105.7384582 | 105.7384582 | 105.7384582 | 104.4206984 | 100.9710711 | 98.07413362 | 95.53942827 | 93.21308981 |
| 200207A00008 | 2/7/2020 | 1.35 | 2/7/2025 | 2/7/2023 | 105.63588 | 105.6358842 | 105.6358842 | 105.6358842 | 104.3166154 | 100.8610861 | 97.94765208 | 95.38949067 | 93.03795907 |
| 200221A00040 | 2/21/2020 | 1.28 | 2/21/2025 | 2/22/2021 | 104.52293 | 104.5229273 | 104.5229273 | 104.5229273 | 103.342072 | 100.7645117 | 99.48101494 | 98.82522447 | 98.27974822 |
| 200221A00041 | 2/21/2020 | 1.53 | 2/21/2025 | 2/21/2023 | 105.67184 | 105.6718435 | 105.6718435 | 105.6718435 | 104.3351649 | 100.8569248 | 97.91955518 | 95.33617266 | 92.95887126 |
| 200221A00045 | 2/21/2020 | 1.03 | 2/21/2025 | 2/22/2021 | 104.20635 | 104.2063547 | 104.2063547 | 104.2063547 | 103.06271 | 100.6080102 | 99.41777241 | 98.7845785 | 98.23934511 |
| 200227A00018 | 2/27/2020 | 0.99 | 2/27/2025 | 2/28/2022 | 104.03603 | 104.0360341 | 104.0360341 | 104.0360341 | 102.8984982 | 100.1736982 | 98.17891524 | 96.5465054 | 95.0539813 |
| 200227A00024 | 2/27/2020 | 0.85 | 2/27/2025 | 3/1/2021 | 103.38763 | 103.3876331 | 103.3876331 | 103.3876331 | 102.3574553 | 100.2352226 | 99.24704043 | 98.63916001 | 98.07813138 |
| 200227A00025 | 2/27/2020 | 1.09 | 2/27/2025 | 2/27/2023 | 104.49918 | 104.4991783 | 104.4991783 | 104.4991783 | 103.2551162 | 99.95150433 | 97.12734641 | 94.59350722 | 92.224916 |
| 200228A00090 | 2/28/2020 | 1 | 2/28/2025 | 3/1/2021 | 103.24916 | 103.2491593 | 103.2491593 | 103.2491593 | 102.2437196 | 100.1826159 | 99.22715197 | 98.62549989 | 98.06592079 |
| 200228A00095 | 2/28/2020 | 1.15 | 2/28/2023 | 3/1/2021 | 102.22511 | 102.2251111 | 102.2251111 | 102.2251111 | 101.7624868 | 100.1654726 | 99.30660742 | 98.71189356 | 98.15216117 |

Classification | Public

| | Parallel-Shift Sensitivity Analysis | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/31/2020 | | | | | Price | | | | | | | | |
| REFERENCE | DATE | Rate | DATE | Call/Put | -400 | -300 | -200 | -100 | Base | 100 | 200 | 300 | 400 |
| 200228A00096 | 2/28/2020 | 1.28 | 2/28/2022 | 3/1/2021 | 101.58844 | 101.5884409 | 101.5884409 | 101.5884409 | 101.3290032 | 100.1369618 | 99.37733719 | 98.79220011 | 98.23237634 |
| 200303A00035 | 3/3/2020 | 0.81 | 3/3/2025 | 3/3/2023 | 103.21001 | 103.2100074 | 103.2100074 | 103.2100074 | 102.112367 | 99.02562708 | 96.32101756 | 93.83823288 | 91.4856538 |
| 200306A00069 | 3/6/2020 | 0.58 | 3/6/2025 | 3/7/2022 | 102.14608 | 102.1460826 | 102.1460826 | 102.1460826 | 101.3171902 | 99.12863301 | 97.39116002 | 95.83312864 | 94.34514291 |
| 061128A00049 | 11/30/2006 | 3.84 | 11/30/2021 | 2/28/2007 | 105.03009 | 105.0300897 | 105.0300897 | 105.0300897 | 104.7976573 | 103.3614365 | 102.0419133 | 100.8614544 | 99.82223773 |
| 070727A00036 | 7/31/2007 | 4.23 | 8/1/2022 | 10/31/2007 | 107.96338 | 107.9633793 | 107.9633793 | 107.9633793 | 107.5740222 | 105.2834975 | 103.3253676 | 101.5778057 | 100.1930338 |