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												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
191223A00049	12/23/2019	1.85	10/23/2020	12/23/2019	100.80976	100.6611457	100.5129834	100.3652675	100.2179959	100.0711667	99.92477776	99.77882719	99.63331298
200121A00001	1/21/2020	1.88	1/15/2021	1/21/2020	102.1154	101.7245235	101.3366433	100.9517273	100.5697414	100.1906522	99.81442667	99.44103241	99.07043741
200219A00005	2/19/2020	1.81	1/20/2021	2/19/2020	102.16502	101.7595422	101.3572819	100.9582056	100.5622753	100.169454	99.77970507	99.39299244	99.00928067
200220A00022	2/20/2020	1.75	2/16/2021	2/20/2020	102.55074	102.0655856	101.585015	101.1089662	100.6373757	100.1701808	99.70732021	99.24873384	98.79436257
200316A00058	3/16/2020	0.81	11/16/2020	3/16/2020	100.95759	100.7409209	100.5251895	100.3103933	100.0965264	99.88358265	99.67155599	99.46044049	99.25023023
200318A00033	3/18/2020	0.58	2/18/2021	3/18/2020	102.01966	101.5301605	101.04535	100.5651584	100.0895197	99.61836948	99.15164433	98.68928211	98.23122183
200326A00008	3/26/2020	0.56	11/25/2020	3/26/2020	101.00952	100.7672407	100.5261246	100.2861649	100.0473534	99.8096817	99.5731418	99.3377256	99.10342509
200327A00082	3/27/2020	0.36	10/8/2020	3/27/2020	100.42245	100.3163758	100.2105333	100.1049256	99.99955194	99.8944114	99.78950325	99.68482667	99.58038088
200402A00051	4/2/2020	0.56	12/15/2020	4/2/2020	101.2443	100.9445304	100.6465421	100.3503219	100.055854	99.7631229	99.47211312	99.18280943	98.89519678
200413A00025	4/13/2020	0.63	1/13/2021	4/13/2020	101.61168	101.2277725	100.8467691	100.4686369	100.0933433	99.72085633	99.35114453	98.98417686	98.61992277
200203A00020	2/3/2020	1.83	9/3/2020	2/3/2020	100.04542	100.0370759	100.0287359	100.0204034	100.0120783	100.0037605	99.99545014	99.98714712	99.97885146
200218A00016	2/18/2020	1.83	9/18/2020	2/18/2020	100.27268	100.2225266	100.1724429	100.1224244	100.0724711	100.0225829	99.97275953	99.92300098	99.8733071
200316A00014	3/16/2020	1.04	3/16/2021	3/16/2020	102.58174	102.0142835	101.4530896	100.8980576	100.3490863	99.80607661	99.26893181	98.73755712	98.21185986
200318A00045	3/18/2020	0.62	1/15/2021	3/18/2020	101.63177	101.2420398	100.8552988	100.4715156	100.090656	99.71268686	99.33757512	98.96528842	98.59579483
200325A00002	3/25/2020	0.87	3/25/2021	3/25/2020	102.60416	102.0100829	101.4228556	100.8423643	100.2684935	99.70113059	99.14016532	98.58548996	98.0369992
200406A00045	4/6/2020	0.53	12/4/2020	4/6/2020	101.10723	100.8391607	100.5725169	100.3072832	100.0434486	99.78100192	99.51993234	99.26022898	99.00188114
200413A00014	4/13/2020	0.56	4/13/2021	4/13/2020	102.74743	102.0952964	101.4514071	100.8156108	100.1877555	99.56769315	98.9552792	98.35037271	97.7528362
200414A00005	4/14/2020	0.63	10/15/2020	4/14/2020	100.53424	100.408409	100.2829125	100.157745	100.032905	99.90839135	99.78420263	99.66033756	99.53679484
200428A00008	4/28/2020	0.45	4/28/2021	4/28/2020	102.86189	102.1645576	101.4766282	100.7979103	100.12822	99.4673783	98.8152109	98.17154806	97.53622443
200605A00001	6/5/2020	0.52	6/4/2021	6/5/2020	103.25776	102.4489161	101.6526666	100.8687157	100.0967804	99.33658645	98.58786772	97.85036616	97.1238314
200720A00022	7/22/2020	1.94	7/22/2021	7/22/2020	105.1322	104.1680842	103.2215908	102.2922389	101.3795659	100.4831259	99.60248867	98.73723909	97.88697648
200729A00012	7/30/2020	0.42	4/30/2021	7/30/2020	102.7664	102.0647736	101.3726657	100.689882	100.0162354	99.35154367	98.69562961	98.04832049	97.40944812
191223A00045	12/23/2019	1.84	9/23/2020	12/23/2019	100.34912	100.2850103	100.2209951	100.1570721	100.0932413	100.0295024	99.9658553	99.90229973	99.83883552
200218A00022	2/18/2020	1.82	12/18/2020	2/18/2020	101.66378	101.3545972	101.047301	100.7418774	100.4383093	100.1365796	99.83667167	99.53856893	99.24225504
200302A00055	3/2/2020	1.24	2/2/2021	3/2/2020	102.11637	101.6732944	101.2340522	100.7985913	100.366863	99.93881947	99.51441387	99.0936	98.67633246
200311A00011	3/11/2020	0.71	12/11/2020	3/11/2020	101.24013	100.9518095	100.6651386	100.3801039	100.0966912	99.8148867	99.53467658	99.2560473	98.97898543
200318A00046	3/18/2020	0.63	2/18/2021	3/18/2020	102.04365	101.5540875	101.0692092	100.5889502	100.1132446	99.6420279	99.17523675	98.71280898	98.25468358
200319A00010	3/19/2020	0.65	3/19/2021	3/19/2020	102.48481	101.9077878	101.337252	100.7730898	100.2151949	99.66346319	99.11779276	98.57808405	98.04423965
200323A00004	3/23/2020	0.67	12/23/2020	3/23/2020	101.37337	101.0504391	100.7295686	100.410739	100.093931	99.77912516	99.46630266	99.15544472	98.84653286
200403A00004	4/3/2020	0.47	10/5/2020	4/3/2020	100.39881	100.3011714	100.2037316	100.1064885	100.0094414	99.91258993	99.81593332	99.71947101	99.62320241
200403A00027	4/3/2020	0.62	3/3/2021	4/3/2020	102.19569	101.6676515	101.1450501	100.6277983	100.1158144	99.60901812	99.10733113	98.61067649	98.11897881
200709A00013	7/13/2020	0.45	3/19/2021	7/13/2020	102.29039	101.7150336	101.1461264	100.5835632	100.0272383	99.4770483	98.93289212	98.39467083	97.86228768
191219A00046	12/19/2019	1.77	12/18/2020	12/19/2019	101.68945	101.3797515	101.0719542	100.7660379	100.4619854	100.1597794	99.85940314	99.56083991	99.2640732

Classification | Public

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
200129A00006	1/29/2020	1.84	1/25/2021	1/29/2020	102.2539	101.8337092	101.4169665	101.003632	100.5936642	100.187022	99.78366495	99.38355342	98.98664831
200220A00023	2/20/2020	1.81	11/20/2020	2/20/2020	101.23367	101.0052202	100.7778067	100.5514267	100.3260731	100.1017389	99.87841707	99.65610083	99.43478334
200312A00035	3/12/2020	0.72	12/11/2020	3/12/2020	101.24298	100.9546568	100.6679807	100.3829406	100.0995227	99.81771287	99.5374975	99.258863	98.98179593
200319A00033	3/19/2020	0.63	2/19/2021	3/19/2020	102.05569	101.5631686	101.0753923	100.5922893	100.1137927	99.63983683	99.17035719	98.70529061	98.24457505
200326A00044	3/26/2020	0.38	10/9/2020	3/26/2020	100.43575	100.3268587	100.2182127	100.1098144	100.001663	99.89375765	99.78609741	99.67868145	99.57150891
200327A00011	3/27/2020	0.46	12/24/2020	3/27/2020	101.31785	100.9921648	100.6685785	100.3470672	100.0276111	99.71019037	99.39478572	99.08137792	98.76994802
200403A00033	4/3/2020	0.73	3/29/2021	4/3/2020	102.57332	101.9675361	101.3688736	100.7772053	100.1924094	99.61436671	99.04296106	98.47807873	97.91960864
200406A00043	4/6/2020	0.5	11/6/2020	4/6/2020	100.77333	100.5852771	100.397932	100.2112908	100.0253494	99.84010382	99.65555024	99.47168472	99.2885034
200413A00001	4/13/2020	0.56	4/13/2021	4/13/2020	102.74743	102.0952964	101.4514071	100.8156108	100.1877555	99.56769315	98.9552792	98.35037271	97.7528362
200417A00003	4/17/2020	0.65	4/16/2021	4/17/2020	102.74924	102.0893653	101.4379294	100.7947751	100.159745	99.53268591	98.91344848	98.30188699	97.69785933
200417A00022	4/17/2020	0.52	12/30/2020	4/17/2020	101.40701	101.063954	100.7232064	100.3847461	100.0485503	99.71459629	99.38286188	99.05332502	98.72596401
200424A00019	4/24/2020	0.53	3/24/2021	4/24/2020	102.39528	101.8048417	101.2211866	100.6441975	100.0737607	99.50976505	98.95210197	98.40066526	97.8553511
200511A00013	5/11/2020	0.44	2/1/2021	5/11/2020	101.75718	101.3179596	100.8825073	100.4507792	100.0227279	99.59830672	99.17746969	98.76017165	98.3463682
191216A00011	12/16/2019	1.84	10/16/2020	12/16/2019	100.70137	100.5725491	100.4440722	100.3159387	100.1881471	100.0606961	99.93358422	99.80681018	99.68037256
200117A00005	1/17/2020	1.84	10/19/2020	1/17/2020	100.74718	100.6098829	100.4729722	100.336448	100.2003087	100.0645527	99.92917826	99.79418385	99.65956779
200214A00008	2/18/2020	1.81	1/12/2021	2/18/2020	102.04265	101.6606312	101.2814763	100.9051551	100.5316358	100.1608871	99.79287819	99.42757859	99.0649584
200214A00011	2/18/2020	1.81	1/21/2021	2/18/2020	102.18033	101.7719085	101.3667585	100.964837	100.5661053	100.1705256	99.77806043	99.38867312	99.00232748
200214A00023	2/19/2020	1.81	12/15/2020	2/19/2020	101.61495	101.3144645	101.0157618	100.7188303	100.4236544	100.1302184	99.83850683	99.54850451	99.26019633
200306A00026	3/6/2020	0.72	2/5/2021	3/6/2020	101.92718	101.4758557	101.0285158	100.5851082	100.1455812	99.70988411	99.27796694	98.84978073	98.42527728
200309A00025	3/9/2020	0.57	2/9/2021	3/9/2020	101.90812	101.4451889	100.9864512	100.5318532	100.081339	99.63485383	99.19234369	98.75375567	98.31903774
200309A00053	3/9/2020	0.68	12/9/2020	3/9/2020	101.20742	100.9248822	100.6439264	100.3645415	100.0867141	99.81043117	99.53567989	99.26244743	98.99072117
200313A00012	3/16/2020	0.77	1/5/2021	3/16/2020	101.56578	101.2050839	100.8469444	100.4913363	100.138233	99.78760806	99.43943539	99.09368933	98.75034456
200316A00039	3/16/2020	0.83	2/16/2021	3/16/2020	102.11444	101.6305087	101.1511598	100.6763244	100.2059389	99.7399409	99.27826916	98.8208636	98.36766523
200318A00003	3/18/2020	0.71	2/18/2021	3/18/2020	102.08204	101.5923707	101.1073838	100.627017	100.1512044	99.67988136	99.21298461	98.75045196	98.29222239
200318A00021	3/18/2020	0.71	2/18/2021	3/18/2020	102.08204	101.5923707	101.1073838	100.627017	100.1512044	99.67988136	99.21298461	98.75045196	98.29222239
200318A00042	3/18/2020	0.6	12/18/2020	3/18/2020	101.29173	100.9832837	100.6767198	100.372025	100.0691824	99.76817488	99.46898582	99.17159868	98.87599714
200319A00032	3/19/2020	0.6	12/18/2020	3/19/2020	101.29173	100.9832837	100.6767198	100.372025	100.0691824	99.76817488	99.46898582	99.17159868	98.87599714
200324A00015	3/24/2020	0.58	9/25/2020	3/24/2020	100.29245	100.2228254	100.1533032	100.0838852	100.0145712	99.94536085	99.87625406	99.80725057	99.73835016
200324A00048	3/24/2020	0.64	11/2/2020	3/24/2020	100.75183	100.5751238	100.3990401	100.2235725	100.0487176	99.87447243	99.70083371	99.5277983	99.35536311
200325A00022	3/25/2020	0.62	10/26/2020	3/25/2020	100.66508	100.5082028	100.3518178	100.1959253	100.040523	99.8856086	99.73117974	99.57723418	99.42376966
200325A00056	3/25/2020	0.63	11/25/2020	3/25/2020	101.02634	100.7840359	100.5428921	100.3029049	100.0640658	99.82636683	99.58979968	99.35435632	99.12002877
200330A00063	3/30/2020	0.64	3/30/2021	3/30/2020	102.53248	101.9238866	101.3224771	100.7281259	100.1407095	99.56010715	98.98620111	98.41887619	97.85801986
200401A00018	4/1/2020	0.7	3/30/2021	4/1/2020	102.56808	101.9593638	101.3578345	100.7633645	100.1758302	99.59511098	99.02108903	98.45364915	97.89267879

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
200403A00020	4/3/2020	0.63	3/5/2021	4/3/2020	102.22541	101.6913997	101.1629493	100.6399712	100.1223806	99.61009467	99.10303215	98.60111348	98.10426069
200406A00003	4/6/2020	0.47	10/7/2020	4/6/2020	100.42161	100.3183476	100.2153064	100.1124871	100.009889	99.90751117	99.80535303	99.70341381	99.60169281
200406A00023	4/6/2020	0.53	12/4/2020	4/6/2020	101.10723	100.8391607	100.5725169	100.3072832	100.0434486	99.78100192	99.51993234	99.26022898	99.00188114
191112A00020	11/12/2019	1.85	10/13/2020	11/12/2019	100.65677	100.5364181	100.4163707	100.2966249	100.1771795	100.0580334	99.93918544	99.82063442	99.70237921
191210A00005	12/10/2019	1.85	11/10/2020	12/10/2019	101.08713	100.8872958	100.6882634	100.4900265	100.2925803	100.09592	99.90004083	99.70493816	99.51060729
191220A00012	12/20/2019	1.85	11/20/2020	12/20/2019	101.24273	101.0142581	100.7868303	100.5604359	100.335068	100.1107196	99.88738363	99.66505327	99.44372171
200108A00011	1/8/2020	1.88	1/4/2021	1/8/2020	101.94504	101.5863957	101.2302709	100.8766403	100.5254778	100.1767575	99.83045419	99.48654267	99.14499824
200304A00003	3/4/2020	0.98	12/4/2020	3/4/2020	101.22674	100.958464	100.69161	100.4261671	100.1621242	99.89947003	99.63819378	99.3782846	99.11973176
200309A00051	3/9/2020	0.72	9/10/2020	3/9/2020	100.12081	100.0929879	100.0652003	100.0374428	100.0097153	99.98201784	99.95435031	99.92671267	99.89910487
200311A00018	3/11/2020	0.71	12/11/2020	3/11/2020	101.24013	100.9518095	100.6651386	100.3801039	100.0966912	99.8148867	99.53467658	99.2560473	98.97898543
200316A00047	3/16/2020	1.04	3/16/2021	3/16/2020	102.58174	102.0142835	101.4530896	100.8980576	100.3490863	99.80607661	99.26893181	98.73755712	98.21185986
200320A00030	3/20/2020	0.64	1/20/2021	3/20/2020	101.69944	101.2950894	100.8939572	100.4960023	100.101187	99.70947417	99.32082729	98.9352104	98.5525881
200325A00027	3/25/2020	0.71	3/25/2021	3/25/2020	102.59598	102.0008596	101.4126196	100.8311415	100.256309	99.68800881	99.12612996	98.57056408	98.02120521
200327A00052	3/27/2020	0.73	3/26/2021	3/27/2020	102.53564	101.9388413	101.3489566	100.7658705	100.1894661	99.61962911	99.05624778	98.49921295	97.94841788
200403A00019	4/3/2020	0.47	10/5/2020	4/3/2020	100.39881	100.3011714	100.2037316	100.1064885	100.0094414	99.91258993	99.81593332	99.71947101	99.62320241
200408A00016	4/8/2020	0.71	4/5/2021	4/8/2020	102.64937	102.0225652	101.4033803	100.7916776	100.1873222	99.59018231	99.00012947	98.41703809	97.84078557
200720A00010	7/20/2020	0.28	7/20/2021	7/20/2020	103.72683	102.7738674	101.8382814	100.9196042	100.0173812	99.13117353	98.26055819	97.40512674	96.56448496
200729A00013	7/30/2020	0.43	6/15/2021	7/30/2020	103.30852	102.4662517	101.6376309	100.8223304	100.0200312	99.23042442	98.45321074	97.68810031	96.93481222
200824A00005	8/24/2020	0.25	8/24/2021	8/24/2020	104.11161	103.0484911	102.0068974	100.9861778	99.98571044	99.00489814	98.04316683	97.09996461	96.1747607
200309A00024	3/11/2020	0.57	1/7/2021	3/11/2020	101.51823	101.1518682	100.7881455	100.4270375	100.0685162	99.71255362	99.35912253	99.0081959	98.65974714
200320A00017	3/20/2020	0.62	12/18/2020	3/20/2020	101.29783	100.9893708	100.6827949	100.3780882	100.0752336	99.7742143	99.47501346	99.17761458	98.88200137
200325A00012	3/25/2020	0.71	2/25/2021	3/25/2020	102.16789	101.6575262	101.1522382	100.6519522	100.1565942	99.66609171	99.18037379	98.69937071	98.22301417
200325A00057	3/25/2020	0.71	2/25/2021	3/25/2020	102.16789	101.6575262	101.1522382	100.6519522	100.1565942	99.66609171	99.18037379	98.69937071	98.22301417
200326A00041	3/26/2020	0.36	10/2/2020	3/26/2020	100.3548	100.2656105	100.1765789	100.0877074	99.99899569	99.91044327	99.82204974	99.73381468	99.64573767
200327A00015	3/27/2020	0.73	3/26/2021	3/27/2020	102.53564	101.9388413	101.3489566	100.7658705	100.1894661	99.61962911	99.05624778	98.49921295	97.94841788
200330A00025	3/30/2020	0.5	2/26/2021	3/30/2020	102.07463	101.5616133	101.0537331	100.5509078	100.0530625	99.56012336	99.0720184	98.58867683	98.11002929
200330A00035	3/30/2020	0.39	10/30/2020	3/30/2020	100.67417	100.5060376	100.3384639	100.1714466	100.0049831	99.83907063	99.67370647	99.50888796	99.34461244
200406A00010	4/6/2020	0.74	4/1/2021	4/6/2020	102.61705	102.0022499	101.3947717	100.7944902	100.2012784	99.61501206	99.03556995	98.46283362	97.89668733
200414A00018	4/16/2020	0.61	12/21/2020	4/16/2020	101.33045	101.0133315	100.6982055	100.3850513	100.0738501	99.76458383	99.45723437	99.15178388	98.84821476
200422A00025	4/22/2020	0.47	4/22/2021	4/22/2020	102.80138	102.1221972	101.451945	100.7904517	100.1375467	99.49306346	98.85683983	98.22871782	97.60854345
200527A00020	5/27/2020	0.49	5/27/2021	5/27/2020	103.13842	102.3542312	101.5818953	100.8211426	100.0717145	99.33335965	98.60583439	97.88890201	97.18233269
200622A00009	6/22/2020	0.33	6/22/2021	6/22/2020	103.4381	102.572188	101.7206779	100.883212	100.0594453	99.24904404	98.45168528	97.66705631	96.89485438
191219A00050	12/19/2019	1.84	11/19/2020	12/19/2019	101.22513	100.9995295	100.7749438	100.5513671	100.3287926	100.1072135	99.8866231	99.66701475	99.44838186

Classification | Public

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
200122A00009	1/22/2020	1.86	12/22/2020	1/22/2020	101.7376	101.4167914	101.0980149	100.7812483	100.4664725	100.153669	99.84281895	99.53390424	99.22690674
200309A00017	3/9/2020	0.55	3/9/2021	3/9/2020	102.30415	101.7572348	101.2161492	100.6808045	100.1511094	99.62697484	99.10831348	98.59503981	98.08707011
200313A00021	3/13/2020	0.74	3/12/2021	3/13/2020	102.44454	101.8883215	101.3381364	100.7938822	100.2554634	99.72278627	99.19575923	98.67429259	98.15829858
200318A00001	3/18/2020	0.68	11/18/2020	3/18/2020	100.95379	100.7314494	100.5101021	100.2897381	100.0703508	99.8519337	99.63448025	99.41798409	99.20243884
200319A00017	3/19/2020	0.6	12/15/2020	3/19/2020	101.25616	100.9563683	100.6583571	100.3621141	100.0676236	99.77486995	99.48383771	99.19451167	98.90687677
200319A00021	3/19/2020	0.6	12/18/2020	3/19/2020	101.29173	100.9832837	100.6767198	100.372025	100.0691824	99.76817488	99.46898582	99.17159868	98.87599714
200320A00028	3/20/2020	0.62	12/18/2020	3/20/2020	101.29783	100.9893708	100.6827949	100.3780882	100.0752336	99.7742143	99.47501346	99.17761458	98.88200137
200320A00032	3/20/2020	0.67	2/19/2021	3/20/2020	102.075	101.5824228	101.0945917	100.6114342	100.1328835	99.65887389	99.18934089	98.72422132	98.26345313
200320A00040	3/20/2020	0.57	9/25/2020	3/20/2020	100.29176	100.2221294	100.1526078	100.0831904	100.0138769	99.94466722	99.87556103	99.80655813	99.73765831
200323A00006	3/23/2020	0.85	3/23/2021	3/23/2020	102.56679	101.9787361	101.3974006	100.8226715	100.2544367	99.69258641	99.13701357	98.58761339	98.0442834
200323A00012	3/23/2020	0.69	2/23/2021	3/23/2020	102.13348	101.6290554	101.129598	100.6350324	100.145287	99.66029165	99.17997756	98.70427721	98.2331244
200323A00019	3/23/2020	0.69	3/23/2021	3/23/2020	102.55869	101.9696074	101.3872716	100.8115676	100.2423824	99.67960589	99.12313009	98.57284961	98.02866137
200331A00025	3/31/2020	0.56	12/31/2020	3/31/2020	101.43232	101.0863405	100.7427091	100.4014011	100.0623932	99.72566208	99.39118511	99.05893978	98.72890389
200406A00047	4/6/2020	0.63	3/5/2021	4/6/2020	102.22541	101.6913997	101.1629493	100.6399712	100.1223806	99.61009467	99.10303215	98.60111348	98.10426069
200408A00023	4/8/2020	0.71	4/8/2021	4/8/2020	102.6871	102.0512387	101.4232242	100.8029083	100.19015	99.58481183	98.9867596	98.39586237	97.81199232
200413A00020	4/13/2020	0.65	3/12/2021	4/13/2020	102.32223	101.7673166	101.2184041	100.6753981	100.1382037	99.60672765	99.0808791	98.56056887	98.04570974
200422A00029	4/22/2020	0.47	4/22/2021	4/22/2020	102.80138	102.1221972	101.451945	100.7904517	100.1375467	99.49306346	98.85683983	98.22871782	97.60854345
200520A00003	5/20/2020	0.33	5/20/2021	5/20/2020	103.04392	102.2797189	101.5267911	100.7848901	100.053775	99.33321179	98.62297348	97.92283934	97.23259496
200630A00001	6/30/2020	0.47	6/25/2021	6/30/2020	103.4598	102.5865164	101.7278705	100.8835002	100.0530522	99.23618472	98.43256707	97.64187924	96.86381142
200406A00058	4/6/2020	0.53	12/4/2020	4/6/2020	101.10723	100.8391607	100.5725169	100.3072832	100.0434486	99.78100192	99.51993234	99.26022898	99.00188114
200825A00005	8/25/2020	0.43	8/25/2021	8/25/2020	104.13643	103.0726258	102.030376	101.0090306	100.0079663	99.0265844	98.0643096	97.12058878	96.19488999
150601A00320	6/1/2015	2.63	6/28/2023	6/1/2015	109.08033	107.5103182	105.9794405	104.4863868	103.0299009	101.6087792	100.2218675	98.86805919	97.5462923
150601A00342	6/1/2015	3.97	8/26/2033	6/1/2015	150.20273	140.7781909	132.1775836	124.3174975	117.1237977	110.5305163	104.478887	98.91649972	93.7965612
150601A00433	6/1/2015	1.91	3/17/2021	6/1/2015	101.541	101.2559078	100.9730784	100.6924787	100.4140796	100.1378523	99.86376866	99.59180104	99.32192228
150601A00434	6/1/2015	1.91	3/17/2021	6/1/2015	101.54099	101.2559061	100.9730771	100.6924778	100.4140791	100.1378521	99.86376884	99.59180158	99.32192318
150601A00435	6/1/2015	1.91	3/17/2021	6/1/2015	101.54099	101.2559048	100.9730761	100.6924771	100.4140786	100.137852	99.86376899	99.59180201	99.32192389
150601A00439	6/1/2015	2.57	3/18/2024	6/1/2015	111.30174	109.2982271	107.3535276	105.4654194	103.6317828	101.8505939	100.1199197	98.43791331	96.8028094
180402A00025	4/2/2018	3.27	4/2/2031	4/2/2018	139.96348	132.2273297	125.075184	118.4560993	112.3240261	106.6373001	101.3581922	96.45250738	91.88922789
180508A00038	5/8/2018	3.57	5/9/2033	5/8/2018	150.51854	140.5883123	131.5394406	123.2823672	115.737476	108.8339099	102.5085396	96.70506089	91.37320302
180607A00028	6/7/2018	2.76	6/7/2021	6/7/2018	102.72358	102.2847904	101.8507248	101.4212991	100.9964306	100.5760385	100.1600439	99.74837004	99.34094206
180612A00012	6/12/2018	2.94	6/12/2023	6/12/2018	110.0047	108.3620388	106.760459	105.1985844	103.6750926	102.1887165	100.7382416	99.32250344	97.94038488
180302A00014	3/2/2018	2.69	3/2/2023	3/2/2018	108.49323	107.0556818	105.6512916	104.2790059	102.9378145	101.6267482	100.3448762	99.09130422	97.86517326
180316A00003	3/16/2018	2.43	3/16/2021	3/16/2018	102.07691	101.7340897	101.3940979	101.0568964	100.7224472	100.3907132	100.0616581	99.73524591	99.4114417

Classification | Public

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
180321A00015	3/21/2018	3.02	3/21/2025	3/21/2018	118.00626	114.9235954	111.959919	109.1096299	106.3674286	103.7283022	101.1875068	98.7405513	96.38318228
180322A00030	3/22/2018	2.79	3/24/2025	3/22/2018	116.35258	113.5607147	110.8699967	108.2758865	105.7740866	103.3605233	101.0313331	98.78285086	96.61159756
180323A00008	3/23/2018	3.35	3/24/2031	3/23/2018	140.22129	132.5301957	125.4156955	118.8278192	112.7213643	107.0554067	101.7928647	96.90010927	92.34661726
180329A00011	3/29/2018	2.77	3/29/2023	3/29/2018	108.88832	107.3995401	105.9458209	104.5260355	103.1391018	101.7839817	100.4596785	99.16523525	97.89973283
180112A00013	1/12/2018	3.05	1/14/2031	1/12/2018	137.50128	130.0774145	123.2021428	116.828561	110.914185	105.4205003	100.3125626	95.55864022	91.12989512
180119A00025	1/19/2018	3.08	1/21/2031	1/19/2018	137.70959	130.274237	123.3883607	117.0049756	111.0815263	105.5794345	100.4636981	95.70253314	91.26705457
180126A00015	1/26/2018	3.08	1/27/2031	1/26/2018	137.71049	130.2748749	123.3887836	117.0052244	111.0816356	105.5794336	100.4636116	95.70238194	91.26685607
180202A00020	2/2/2018	3.41	2/3/2031	2/2/2018	140.32115	132.6857101	125.6185147	119.0706538	112.9978581	107.3600205	102.1207746	97.24711838	92.70907766
180209A00010	2/9/2018	3.25	2/10/2031	2/9/2018	139.19775	131.6229143	124.6118582	118.1160508	112.0915666	106.4986111	101.3011012	96.46629249	91.96444519
180302A00012	3/2/2018	3.3	3/4/2031	3/2/2018	139.55174	131.9569535	124.9275235	118.4147734	112.3746462	106.7672291	101.5563332	96.70911861	92.19575971
171117A00017	11/17/2017	2.9	11/18/2030	11/17/2017	135.89138	128.6707029	121.9759236	115.7626832	109.99075	104.6236048	99.62807075	94.97398303	90.63389321
171127A00023	11/27/2017	2.85	11/27/2030	11/27/2017	135.55597	128.3527358	121.6741713	115.4760181	109.7181348	104.3640843	99.38076468	94.73807994	90.40864437
171130A00037	11/10/2017	2.85	11/12/2030	11/10/2017	135.55369	128.3511514	121.6731624	115.4754819	109.7179838	104.3642441	99.38117235	94.73868217	90.40939612
171208A00017	12/8/2017	2.9	12/9/2030	12/8/2017	136.17866	128.8846642	122.1257572	115.8565023	110.035714	104.6260314	99.59353461	94.90740292	90.53960848
171215A00022	12/15/2017	2.91	12/16/2030	12/15/2017	136.24778	128.9498229	122.1872738	115.9146664	110.0907885	104.6782548	99.64312377	94.95455508	90.58450318
171222A00017	12/22/2017	3.04	12/23/2030	12/22/2017	137.13569	129.7900339	122.983311	116.6697529	110.8078739	105.3600408	100.2920872	95.57296867	91.17445418
170925A00048	9/25/2017	2.75	9/25/2030	9/25/2017	134.32594	127.3033113	120.7846825	114.7281254	109.095561	103.8523789	98.9670954	94.41104861	90.15812468
170929A00028	9/29/2017	2.8	9/30/2030	9/29/2017	134.65576	127.6157894	121.081081	115.0096012	109.3631739	104.1071002	99.2098164	94.64258792	90.3792348
171006A00020	10/6/2017	2.88	10/7/2030	10/6/2017	135.46747	128.3278756	121.7044072	115.5538353	109.8369264	104.5180431	99.56478784	94.94768507	90.63989599
171013A00004	10/13/2017	2.77	10/15/2030	10/13/2017	134.73628	127.6347884	121.0467074	114.9290309	109.2427284	103.9523475	99.02565911	94.4333412	90.14869512
171020A00012	10/20/2017	2.85	10/21/2030	10/20/2017	135.26947	128.1397627	121.5255238	115.3835769	109.6747325	104.3633939	99.41720149	94.80671433	90.50512585
171103A00011	11/3/2017	2.83	11/4/2030	11/3/2017	135.41792	128.222905	121.5518573	115.3605876	109.6090178	104.2607669	99.28278339	94.6450157	90.32011795
170825A00015	8/25/2017	2.68	8/26/2030	8/25/2017	133.59145	126.6644912	120.2309612	114.2500974	108.6848556	103.5015435	98.66949257	94.16076527	89.94989137
170830A00040	8/30/2017	1.84	8/30/2022	8/30/2017	105.83715	104.7098721	103.6054692	102.5232615	101.4625984	100.4228546	99.40342891	98.40374302	97.42324054
170901A00005	9/1/2017	2.58	9/3/2030	9/1/2017	133.20718	126.2437374	119.779954	113.7742762	108.1889609	102.9897016	98.14529051	93.62731599	89.40989153
170908A00007	9/8/2017	2.52	9/9/2030	9/8/2017	132.81581	125.8725059	119.4274476	113.439193	107.8701037	102.6859686	97.85566682	93.35086619	89.14575278
170915A00019	9/15/2017	2.67	9/16/2030	9/15/2017	133.79906	126.8042176	120.3113413	114.2786794	108.6683096	103.4457634	98.57968588	94.04153219	89.80529467
170921A00056	9/21/2017	2.82	9/21/2027	9/21/2017	140.5896	132.4121706	124.7997939	117.709713	111.1026469	104.9424898	99.19603706	93.83273714	88.82446539
170705A00021	7/5/2017	2.59	7/6/2027	7/5/2017	133.47458	126.8647513	120.6735848	114.8712743	109.430324	104.3253539	99.53292533	95.03138151	90.80070218
170714A00014	7/14/2017	2.78	7/15/2030	7/14/2017	133.93375	127.0516896	120.6559643	114.7066903	109.1676006	104.0056869	99.1908831	94.69578182	90.49537974
170720A00017	7/20/2017	2.74	7/19/2030	7/20/2017	133.70218	126.8272337	120.4382916	114.4954907	108.9625799	103.8065663	98.99739862	94.50768309	90.31242952
170804A00009	8/4/2017	2.71	8/5/2030	8/4/2017	133.78333	126.8472868	120.4052222	114.4163384	108.8435584	103.6531592	98.81444336	94.29944611	90.08267175
170811A00006	8/11/2017	2.67	8/12/2030	8/11/2017	133.52444	126.6014729	120.1715847	114.1940504	108.6318577	103.4513422	98.62186062	94.1154976	89.90680277

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
170817A00008	8/17/2017	2.71	8/16/2030	8/17/2017	133.78506	126.8484692	120.4059478	114.4166833	108.8435876	103.652928	98.81399885	94.29882836	90.08191471
170602A00010	6/2/2017	2.7	6/3/2030	6/2/2017	133.16606	126.3764575	120.0631274	114.1872887	108.7136478	103.6100623	98.84723609	94.39844694	90.23930147
170609A00011	6/9/2017	2.74	6/10/2030	6/9/2017	133.42237	126.6194303	120.2937288	114.4064012	108.9220804	103.8085571	99.03647444	94.57905496	90.41185497
170616A00012	6/16/2017	2.69	6/17/2030	6/16/2017	133.10452	126.3174608	120.0065604	114.133037	108.6616011	103.5601147	98.79928582	94.3523965	90.19505751
170623A00020	6/23/2017	2.67	6/24/2030	6/23/2017	132.97834	126.1973983	119.8922143	114.0240396	108.5576122	103.4608187	98.70439025	94.26162978	90.10816745
170630A00023	6/30/2017	2.77	7/1/2030	6/30/2017	133.61698	126.8033857	120.4678656	114.571476	109.0787818	103.9575121	99.17825464	94.71418181	90.54080461
170630A00051	6/30/2017	1.75	6/30/2021	6/30/2017	102.52132	102.0383236	101.561086	101.0894945	100.6234376	100.1628068	99.7074966	99.25740438	98.81243033
170428A00034	4/28/2017	2.92	4/29/2030	4/28/2017	133.99694	127.2792212	121.025642	115.1989375	109.7651514	104.6933189	99.95518182	95.52493172	91.37898029
170505A00007	5/5/2017	2.92	5/6/2030	5/5/2017	134.28327	127.494474	121.1782586	115.2964183	109.8141604	104.6997772	99.92435043	95.46148516	91.28707156
170512A00030	5/12/2017	2.94	5/12/2027	5/12/2017	137.61711	130.3084862	123.473544	117.0782518	111.0912311	105.4835319	100.2284311	95.3012481	90.67917711
170518A00028	5/18/2017	2.45	5/20/2024	5/18/2017	121.89052	117.79149	113.8586855	110.0843163	106.4610068	102.9817743	99.64000519	96.42943296	93.34411717
170519A00021	5/19/2017	2.79	5/20/2030	5/19/2017	133.43135	126.6902485	120.4182962	114.5775683	109.1335264	104.0546948	99.31236676	94.88034088	90.73468392
170526A00022	5/26/2017	2.77	5/28/2030	5/26/2017	133.33615	126.5942145	120.3217035	114.4806537	109.0364964	103.957729	99.21562103	94.78395013	90.63876456
170324A00011	3/24/2017	3	3/25/2030	3/24/2017	134.20448	127.5342282	121.3212385	115.5290649	110.1244772	105.0771523	100.3593991	95.94591131	91.81354415
170331A00016	3/31/2017	3.02	4/1/2030	3/31/2017	134.33009	127.653421	121.4344763	115.6367731	110.227045	105.1749366	100.4527273	96.03508387	91.89883738
170406A00031	4/6/2017	3.01	4/6/2027	4/6/2017	139.71328	132.0559153	124.8979623	118.2036195	111.9398526	106.0761685	100.5844053	95.43854171	90.61452302
170407A00012	4/7/2017	2.88	4/8/2030	4/7/2017	133.74226	127.0380871	120.7970293	114.9819099	109.5588558	104.4969772	99.76808313	95.34642623	91.20847313
170417A00018	4/17/2017	2.82	4/17/2030	4/17/2017	133.36735	126.6815337	120.4576019	114.6584773	109.2503727	104.2024772	99.48667234	95.0772772	90.95081946
170417A00059	4/17/2017	2.14	4/18/2022	4/17/2017	109.28284	107.5791463	105.911647	104.2792551	102.6809229	101.1156441	99.58245257	98.08041947	96.60865198
160628A00006	6/28/2016	1.44	6/28/2023	6/28/2016	107.63264	106.0237617	104.455168	102.925509	101.4334887	99.9778655	98.557449	97.17109758	95.81771601
160707A00017	7/7/2016	1.22	7/7/2021	7/7/2016	104.29984	103.4041304	102.5239338	101.658853	100.8084999	99.97249934	99.15048901	98.34211867	97.54704971
161222A00035	12/22/2016	2.29	12/22/2023	12/22/2016	110.41799	108.5081112	106.6517095	104.8468386	103.0916354	101.3843196	99.72318848	98.1066137	96.5330369
161222A00036	12/22/2016	2.69	12/22/2026	12/22/2016	120.90813	117.0239859	113.3222751	109.7926834	106.4255639	103.211886	100.1431911	97.21155275	94.40953944
161222A00037	12/22/2016	3.08	12/22/2031	12/22/2016	138.83395	131.0575642	123.8874039	117.26855	111.1515711	105.4919316	100.2494684	95.38792817	90.87455613
170317A00022	3/17/2017	3.11	3/18/2030	3/17/2017	134.89038	128.1864196	121.941998	116.1204906	110.6885042	105.6155672	100.8738523	96.43792827	92.28453636
160603A00015	6/3/2016	1.95	6/5/2023	6/3/2016	115.25892	112.2612696	109.3593673	106.5495005	103.8281309	101.1918833	98.63753707	96.16201794	93.76238967
160608A00026	6/8/2016	2.36	6/8/2026	6/8/2016	131.47233	125.0253845	118.9544291	113.2351774	107.8450528	102.7630581	97.96965635	93.4466606	89.1771332
160608A00031	6/8/2016	2.36	6/8/2026	6/8/2016	131.47233	125.0253845	118.9544291	113.2351774	107.8450528	102.7630581	97.96965635	93.4466606	89.1771332
160608A00032	6/8/2016	2.36	6/8/2026	6/8/2016	131.47233	125.0253845	118.9544291	113.2351774	107.8450528	102.7630581	97.96965635	93.4466606	89.1771332
160609A00075	6/9/2016	1.94	6/9/2026	6/9/2016	117.20499	113.6476016	110.2475766	106.9965123	103.8865218	100.9101959	98.06057094	95.33109906	92.71562026
160620A00018	6/20/2016	1.25	6/21/2021	6/20/2016	102.2777	101.7975289	101.3230318	100.8541004	100.3906259	99.93250266	99.47962793	99.03190164	98.58922645
150601A00542	6/1/2015	1.97	8/4/2021	6/1/2015	102.6592	102.1652424	101.6778372	101.1968365	100.7221	100.2534912	99.79087813	99.33413278	98.88313092
150601A00549	6/1/2015	1.94	8/13/2021	6/1/2015	102.71807	102.2098866	101.708615	101.2141001	100.72619	100.2447375	99.76959987	99.30063907	98.83772117

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
150601A00559	6/1/2015	3.06	8/31/2029	6/1/2015	130.62507	124.7870551	119.3208646	114.1986611	109.3949311	104.8862717	100.6512012	96.66998711	92.92449096
150601A00589	6/1/2015	2.52	7/14/2025	6/1/2015	115.39139	112.5508445	109.8174804	107.1863089	104.6526131	102.2119295	99.86003311	97.59292221	95.40680553
150601A00684	6/1/2015	2.25	2/7/2025	6/1/2015	113.40766	110.8546397	108.3910412	106.0129613	103.7166977	101.4987365	99.35574138	97.28454302	95.28212974
160531A00012	5/31/2016	1.43	6/1/2021	5/31/2016	102.16026	101.7225622	101.2895889	100.8612521	100.4374689	100.0181585	99.60324203	99.19264277	98.78628575
150601A00440	6/1/2015	3.27	3/16/2029	6/1/2015	130.11957	124.6028952	119.4215009	114.5513553	109.9703495	105.6581316	101.5959542	97.76653633	94.15393817
150601A00443	6/1/2015	1.91	4/9/2021	6/1/2015	101.73303	101.4114574	101.0927336	100.7768165	100.4636649	100.1532385	99.84549789	99.54040441	99.23792019
150601A00450	6/1/2015	3.28	4/27/2029	6/1/2015	130.55116	124.9460291	119.6854759	114.744535	110.1002599	105.731546	101.6189694	97.7446407	94.09207303
150601A00460	6/1/2015	3.05	5/16/2029	6/1/2015	129.60934	124.0007388	118.7390417	113.7989781	109.1573338	104.7927663	100.6856414	96.81788331	93.17284021
150601A00506	6/1/2015	3.14	7/6/2029	6/1/2015	130.5244	124.7905484	119.4163425	114.3752408	109.6428828	105.1968971	101.0167248	97.08345915	93.37970115
150601A00528	6/1/2015	3.08	7/27/2029	6/1/2015	130.40685	124.6406845	119.2382437	114.1725417	109.4188251	104.9543713	100.7583075	96.81144625	93.09613738
150601A00571	6/1/2015	2.5	9/23/2022	6/1/2015	105.21515	104.3010648	103.4083367	102.5362719	101.684203	100.85149	100.0375188	99.24170034	98.46346879
200207A00007	2/7/2020	1.74	2/7/2023	2/7/2020	113.48624	110.7670844	108.1272152	105.563862	103.074368	100.6561854	98.30686975	96.02407562	93.80555155
200207A00013	2/12/2020	1.73	2/10/2023	2/12/2020	113.50911	110.779313	108.1293976	105.5565613	103.0581178	100.6314913	98.27421118	95.98390712	93.75830423
200211A00014	2/11/2020	1.75	8/11/2023	2/11/2020	116.32898	112.9805831	109.7462767	106.6215385	103.6020551	100.6837084	97.86256513	95.13486743	92.49702424
200211A00017	2/11/2020	1.77	8/12/2024	2/11/2020	121.94691	117.2972413	112.8504463	108.5966062	104.5263407	100.6307761	96.90151441	93.33060583	89.91052211
200214A00018	2/18/2020	1.77	1/12/2022	2/18/2020	107.52544	106.0632205	104.6281027	103.2193968	101.8364356	100.4785738	99.14518707	97.83567126	96.54944162
200218A00025	2/21/2020	1.71	2/24/2023	2/21/2020	113.68393	110.9035418	108.2058517	105.5879125	103.046897	100.5800968	98.184916	95.85886606	93.59956044
200826A00040	8/28/2020	0.92	10/27/2023	8/28/2020	114.67135	111.1049814	107.6676853	104.3540059	101.1587573	98.07700661	95.10405925	92.23544585	89.46690982
200824A00020	8/26/2020	1.57	8/26/2025	8/26/2020	126.44332	120.3991111	114.6782376	109.2617341	104.1318485	99.271955	94.66647737	90.30081683	86.16128578
200826A00019	8/26/2020	0.98	8/26/2026	8/26/2020	127.25219	119.9108949	113.0329975	106.5869566	100.5435353	94.87561967	89.55805349	84.56748764	79.8822413
200826A00028	8/28/2020	1.08	8/28/2024	8/28/2020	119.18333	114.5381406	110.0984959	105.8542183	101.7956912	97.91382377	94.20001869	90.64614303	87.2445004
200826A00039	8/28/2020	1.03	7/29/2024	8/28/2020	118.58642	114.0522002	109.7147374	105.5644871	101.5924176	97.7899802	94.14908082	90.66205317	87.32163405
200826A00029	8/28/2020	1.16	11/27/2024	8/28/2020	120.7259	115.7451154	110.9962258	106.4671099	102.1463606	98.02323336	94.08760374	90.32992704	86.74120143
200826A00021	8/26/2020	0.83	8/26/2025	8/26/2020	122.35526	116.4174201	110.798788	105.4805986	100.4452849	95.6763961	91.15852144	86.87721875	82.81894865
200826A00036	8/28/2020	0.88	7/28/2023	8/28/2020	113.41364	110.1545991	107.0055725	103.9622541	101.0205303	98.17647116	95.42632069	92.76648841	90.19354099
200806A00006	8/6/2020	0.76	8/6/2025	8/6/2020	121.74334	115.889045	110.346323	105.0970487	100.124242	95.41198991	90.94537422	86.71040443	82.69395526
200826A00038	8/28/2020	1.11	8/28/2024	8/28/2020	119.31392	114.6660009	110.2237139	105.9768787	101.9158755	98.03160985	94.31548154	90.75935463	87.35552991
200826A00035	8/28/2020	0.78	8/28/2023	8/28/2020	113.47465	110.1170235	106.8759319	103.7466782	100.7247843	97.80597816	94.98618297	92.26150705	89.62823428
200701A00007	7/1/2020	0.47	7/1/2021	7/1/2020	103.53111	102.6392571	101.7626554	100.9009154	100.0536619	99.22053281	98.40117762	97.59525747	96.80244451
200708A00011	7/10/2020	2.87	7/10/2031	7/10/2020	169.6472	153.5491988	139.1410714	126.2356411	114.6673791	104.2897993	94.97318137	86.6025757	79.0760545
200729A00015	7/30/2020	0.47	9/21/2021	7/30/2020	104.50161	103.3516655	102.226812	101.1262326	100.049149	98.99481609	97.96251975	96.95157555	95.96132712
200729A00016	7/30/2020	0.5	4/1/2022	7/30/2020	106.66048	104.9646534	103.3043782	101.6786145	100.0863585	98.52664517	96.99854617	95.50116825	94.03365152
200730A00011	7/30/2020	1.15	7/28/2028	7/30/2020	136.03237	125.8461726	116.4827826	107.8717833	99.94911172	92.65645488	85.94070751	79.75348333	74.05067439

Classification | Public

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
200730A00013	7/30/2020	0.74	1/30/2025	7/30/2020	119.51152	114.3480799	109.4339002	104.7557058	100.3009928	96.05798305	92.01557872	88.16331913	84.4913411
200611A00020	6/11/2020	0.81	6/11/2025	6/11/2020	121.4287	115.76951	110.4031482	105.312931	100.4832148	95.89932849	91.54750705	87.41483041	83.48916677
200611A00021	6/11/2020	0.72	6/11/2024	6/11/2020	116.70202	112.3625586	108.2062626	104.2243802	100.4086316	96.75118012	93.24460569	89.88188	86.65634326
200611A00023	6/11/2020	0.64	6/12/2023	6/11/2020	112.13002	109.034535	106.0398656	103.1421061	100.337526	97.62256459	94.99382221	92.44805138	89.98214901
200629A00020	6/29/2020	1.4	6/28/2030	6/29/2020	146.38211	133.0626856	121.0463188	110.1991646	100.4017324	91.54728319	83.54041224	76.29579644	69.73708475
200629A00021	6/29/2020	1.21	6/29/2028	6/29/2020	136.2634	126.1739766	116.8914708	108.3474781	100.4797112	93.23142185	86.55088302	80.39092207	74.70849934
200629A00023	6/29/2020	0.95	6/29/2026	6/29/2020	126.45438	119.3395039	112.6626209	106.3946616	100.5086241	94.97941742	89.78371731	84.89983366	80.3075882
200527A00015	5/27/2020	0.99	11/26/2025	5/27/2020	124.32815	118.0230968	112.0714182	106.4514249	101.1428798	96.12689446	91.38583086	86.90321126	82.66363508
200527A00016	5/27/2020	0.92	5/27/2025	5/27/2020	121.82817	116.2097047	110.8797577	105.8219322	101.0208629	96.46214216	92.13225412	88.01851419	84.10901263
200528A00021	5/28/2020	0.63	5/26/2023	5/28/2020	111.90099	108.8618918	105.9206019	103.0733017	100.3163523	97.64628493	95.05979147	92.55371549	90.12504402
200529A00022	6/1/2020	0.98	6/1/2026	6/1/2020	126.34987	119.3361816	112.7495654	106.5617866	100.7466328	95.27975641	90.13853132	85.30192135	80.75035967
200605A00005	6/5/2020	0.99	6/5/2025	6/5/2020	122.30446	116.643846	111.2750186	106.1813643	101.3473111	96.75825728	92.40050502	88.26119899	84.3282694
200611A00019	6/11/2020	0.88	12/11/2025	6/11/2020	123.85189	117.5091772	111.5244735	105.8757275	100.5423657	95.50518403	90.7462493	86.24880777	81.99720122
200521A00015	5/21/2020	2.14	5/21/2036	5/21/2020	183.75197	158.9572665	137.8018702	119.729797	104.2726624	91.03549805	79.68492168	69.93926275	61.56031319
200521A00016	5/21/2020	2.18	5/21/2037	5/21/2020	189.20927	162.3181229	139.5889729	120.3519692	104.0482964	90.21128681	78.45082174	68.44043917	59.90666585
200521A00017	5/21/2020	2.22	5/21/2038	5/21/2020	194.68527	165.6438278	141.3261074	120.9337103	103.8070615	89.40066689	77.26288347	67.01936115	58.35947353
200527A00012	5/27/2020	1.2	5/27/2027	5/27/2020	131.75496	123.2887092	115.415002	108.089334	101.2707786	94.92167675	89.00735834	83.49588943	78.35784179
200527A00013	5/27/2020	1.13	11/25/2026	5/27/2020	129.24843	121.523098	114.3025853	107.5513	101.2363473	95.32731224	89.79605853	84.61654587	79.76466227
200527A00014	5/27/2020	1.06	5/27/2026	5/27/2020	126.81143	119.8011715	113.2166247	107.0297113	101.214355	95.74633095	90.60312429	85.76379913	81.20887922
200511A00006	5/11/2020	1.65	5/13/2030	5/11/2020	148.73301	135.4731058	123.4920834	112.6600224	102.8608281	93.99069131	85.95673052	78.67579031	72.07337759
200515A00019	5/15/2020	0.59	5/15/2023	5/15/2020	111.65859	108.6567911	105.7507221	102.9366848	100.2111521	97.57076012	95.01229853	92.53270264	90.1290454
200515A00020	5/15/2020	0.82	5/15/2025	5/15/2020	121.10849	115.5495092	110.2744014	105.267139	100.5126892	95.99694964	91.70668513	87.62946891	83.75362836
200515A00021	5/15/2020	1.12	5/17/2027	5/15/2020	131.03728	122.631454	114.8122388	107.5357219	100.7615058	94.45240718	88.57418322	83.09528426	77.98662777
200518A00019	5/19/2020	0.9	5/19/2025	5/19/2020	121.62899	116.0420822	110.7409425	105.7094029	100.9323027	96.39542171	92.08541601	87.98975866	84.09668462
200521A00013	5/21/2020	2.09	5/21/2035	5/21/2020	178.10243	155.3655343	135.7821288	118.8964884	104.3209167	91.72529277	80.82826646	71.38983748	63.20509526
200430A00030	4/30/2020	0.96	4/30/2025	4/30/2020	121.6553	116.1327652	110.8898438	105.91088	101.1811824	96.686961	92.41526575	88.35393068	84.49152175
200504A00005	5/4/2020	0.6	5/4/2022	5/4/2020	107.22993	105.4298071	103.6689752	101.9462154	100.2603605	98.61029099	96.99493302	95.41325586	93.86426973
200504A00006	5/4/2020	0.94	5/5/2025	5/4/2020	121.61202	116.0739165	110.8169696	105.825393	101.0843769	96.58002214	92.29927941	88.2298915	84.36034079
200504A00007	5/4/2020	1.47	5/4/2028	5/4/2020	137.94234	127.9913998	118.8207915	110.3653638	102.56573	95.36772806	88.72193448	82.58322656	76.91038694
200508A00016	5/12/2020	1.2	5/8/2024	5/12/2020	118.22235	113.9631153	109.8796116	105.9635666	102.207148	98.60294019	95.14391885	91.82342786	88.63515733
200508A00017	5/12/2020	1.18	5/8/2024	5/12/2020	118.14239	113.8847003	109.8026957	105.8881047	102.1330967	98.53025769	95.07256494	91.75336386	88.56634601
200429A00057	4/29/2020	1.4	4/29/2027	4/29/2020	132.96691	124.5577934	116.7302436	109.4410675	102.6505031	96.32192709	90.42159063	84.91837887	79.783592
200429A00061	4/29/2020	1.66	10/29/2029	4/29/2020	146.42746	134.0487305	122.8042263	112.5842179	103.2901175	94.83329745	87.13403645	80.12058261	73.72831951

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
200429A00062	4/29/2020	0.65	10/29/2021	4/29/2020	105.17914	103.9054483	102.6623128	101.4486472	100.2634148	99.10562723	97.97434123	96.86865642	95.78771271
200429A00064	4/29/2020	0.69	4/29/2022	4/29/2020	107.32612	105.539922	103.7924643	102.0825531	100.4090459	98.77084681	97.16690409	95.59620789	94.05778809
200429A00065	4/29/2020	0.74	10/28/2022	4/29/2020	109.65006	107.293455	104.9993609	102.7656539	100.5903024	98.47136088	96.40696506	94.39532799	92.43473603
200429A00066	4/29/2020	0.8	4/28/2023	4/29/2020	112.05816	109.103101	106.2408676	103.4679347	100.7809363	98.17665868	95.65203222	93.2041237	90.83012918
200428A00002	4/28/2020	1.47	4/26/2030	4/28/2020	149.11884	135.7688291	123.7064659	112.8010725	102.9358511	94.00634664	85.91908444	78.59036523	71.94519775
200428A00003	4/29/2020	1.01	4/29/2025	4/29/2020	121.89976	116.3746818	111.1291183	106.1474277	101.4149334	96.91785841	92.6432646	88.57899654	84.71362962
200429A00004	5/1/2020	0.74	5/1/2023	5/1/2020	111.9247	108.96213	106.092879	103.3133875	100.620262	98.01026356	95.48029859	93.02741166	90.64877795
200429A00021	5/4/2020	0.97	4/29/2025	5/4/2020	121.6943	116.174227	110.9334809	105.9564326	101.2284136	96.7356542	92.46522336	88.40497233	84.54348287
200429A00049	4/29/2020	1.25	4/29/2026	4/29/2020	127.71265	120.7721402	114.2475345	108.1117445	102.3395953	96.90767553	91.79420404	86.9789076	82.44290824
200429A00054	4/29/2020	1.04	4/29/2025	4/29/2020	122.05385	116.5250229	111.2758464	106.290674	101.5548232	97.05451156	92.77679553	88.7095147	84.84123968
200423A00022	4/28/2020	0.76	2/15/2023	4/28/2020	111.05707	108.3420673	105.7071944	103.1496236	100.6666413	98.25564676	95.91414582	93.6397464	91.43015342
200423A00026	4/28/2020	0.85	12/15/2023	4/28/2020	115.03711	111.3078917	107.7183158	104.2623526	100.9342737	97.72863229	94.64024738	91.66418886	88.79576379
200423A00027	4/28/2020	0.88	4/15/2024	4/28/2020	116.65832	112.504228	108.5192992	104.6956843	101.0259493	97.5030488	94.12030265	90.87137479	87.75025324
200424A00014	4/28/2020	1.01	4/23/2025	4/28/2020	121.82452	116.3217713	111.0965573	106.1333939	101.4177515	96.93598769	92.67528798	88.62361048	84.76963489
200427A00017	4/27/2020	1.02	4/25/2025	4/27/2020	121.90083	116.3893981	111.1562028	106.1857082	101.4633339	96.97539099	92.70902195	88.65214552	84.79340509
200427A00018	4/27/2020	1.51	4/27/2028	4/27/2020	138.21128	128.2754945	119.1168133	110.6705125	102.8775804	95.68418424	89.04118986	82.90372861	77.23080609
200421A00031	4/21/2020	0.84	4/19/2024	4/21/2020	116.5508	112.3856152	108.3905098	104.5575708	100.8793042	97.34860838	93.95875159	90.70334971	87.5763462
200421A00032	4/21/2020	1.31	4/21/2027	4/21/2020	132.19422	123.840984	116.0642095	108.8211955	102.0726181	95.78224896	89.91669508	84.4451629	79.3392426
200422A00015	4/27/2020	0.73	12/22/2022	4/27/2020	110.29922	107.7668939	105.3051447	102.9115743	100.583881	98.31985664	96.11738209	93.97442296	91.88902557
200423A00006	4/23/2020	0.82	4/23/2025	4/23/2020	121.94427	116.4044802	111.1450092	106.1501796	101.4052767	96.89648698	92.61083718	88.53613851	84.6609345
200423A00017	4/23/2020	1.82	4/23/2035	4/23/2020	177.37211	154.4956312	134.7993216	117.8235582	103.1772692	90.52741512	79.59012574	70.12322824	61.91994177
200423A00020	4/28/2020	0.68	4/15/2022	4/28/2020	107.13348	105.3913113	103.6862935	102.0173098	100.3832873	98.78319573	97.21604544	95.68088503	94.17679968
200421A00020	4/24/2020	0.83	3/15/2024	4/24/2020	116.08586	112.0422134	108.160146	104.4323205	100.8517715	97.41188833	94.10639555	90.92933327	87.87503963
200421A00021	4/21/2020	0.56	4/21/2023	4/21/2020	111.84368	108.9015536	106.0515727	103.2902529	100.614266	98.02043327	95.50571797	93.06721752	90.70215666
200421A00022	4/21/2020	0.74	4/21/2023	4/21/2020	111.80251	108.8731267	106.0352486	103.2854192	100.6203413	98.03686575	95.53198348	93.10281803	90.74661874
200421A00024	4/24/2020	0.8	10/16/2023	4/24/2020	114.1332	110.6100501	107.2134926	103.9382187	100.7791822	97.73158017	94.79083972	91.95260507	89.21272586
200421A00028	4/21/2020	0.56	4/21/2023	4/21/2020	111.84368	108.9015536	106.0515727	103.2902529	100.614266	98.02043327	95.50571797	93.06721752	90.70215666
200421A00029	4/24/2020	0.72	12/15/2022	4/24/2020	110.19129	107.6811694	105.2406671	102.867389	100.5590403	98.31342244	96.12842777	94.0020353	91.93230633
200417A00011	4/22/2020	0.68	7/15/2022	4/22/2020	108.23862	106.2142348	104.2376137	102.3073442	100.4220635	98.58045782	96.78126002	95.02324806	93.30524284
200417A00012	4/22/2020	0.71	12/15/2022	4/22/2020	110.16705	107.6572244	105.2170114	102.8440163	100.5359446	98.29059774	96.10586841	93.97973572	91.91026115
200417A00013	4/17/2020	0.74	4/17/2023	4/17/2020	111.7535	108.8374131	106.012113	103.2741818	100.6203605	98.04753542	95.55273086	93.13310165	90.78592647
200417A00014	4/17/2020	0.96	4/17/2025	4/17/2020	121.49442	116.0201553	110.8212197	105.8823047	101.1890362	96.72791489	92.48625776	88.452144	84.61436478
200417A00018	4/21/2020	0.67	7/25/2022	4/21/2020	108.34094	106.2855119	104.2792358	102.3206386	100.4082989	98.54084758	96.71696481	94.93537836	93.19486142

Classification | Public

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
200417A00019	4/17/2020	0.77	4/17/2025	4/17/2020	121.61216	116.1011446	110.8682243	105.8978897	101.1755838	96.68763803	92.42121277	88.36424197	84.5053822
200415A00037	4/15/2020	0.97	4/15/2025	4/15/2020	121.52059	116.0525134	110.8591579	105.9252628	101.2365005	96.77941416	92.54135996	88.51045289	84.67551701
200415A00038	4/15/2020	1.37	4/15/2027	4/15/2020	132.57652	124.2319354	116.4616491	109.2232202	102.4775613	96.18865375	90.32329169	84.85084748	79.74305886
200417A00002	4/17/2020	0.96	4/17/2025	4/17/2020	121.49442	116.0201553	110.8212197	105.8823047	101.1890362	96.72791489	92.48625776	88.452144	84.61436478
200417A00004	4/17/2020	0.86	4/17/2024	4/17/2020	116.60468	112.4450422	108.4550213	104.6267403	100.9527353	97.42593278	94.03962689	90.78745752	87.66339044
200417A00006	4/17/2020	0.74	4/17/2023	4/17/2020	111.7535	108.8374131	106.012113	103.2741818	100.6203605	98.04753542	95.55273086	93.13310165	90.78592647
200417A00008	4/17/2020	0.96	4/17/2025	4/17/2020	121.49442	116.0201553	110.8212197	105.8823047	101.1890362	96.72791489	92.48625776	88.452144	84.61436478
200415A00024	4/15/2020	2.2	4/16/2035	4/15/2020	179.65605	156.9539797	137.3770529	120.4766247	105.870604	93.23328907	82.28679628	72.79382846	64.5515674
200415A00026	4/15/2020	0.77	4/14/2023	4/15/2020	111.80039	108.8931145	106.0761119	103.3459969	100.6995381	98.13364754	95.64537358	93.23189362	90.89050755
200415A00027	4/15/2020	0.86	4/15/2024	4/15/2020	116.57981	112.4272092	108.4437285	104.6215186	100.9531472	97.43157038	94.0501096	90.80243017	87.68252149
200415A00031	4/15/2020	0.97	4/15/2025	4/15/2020	121.52059	116.0525134	110.8591579	105.9252628	101.2365005	96.77941416	92.54135996	88.51045289	84.67551701
200415A00033	4/15/2020	0.82	10/13/2023	4/15/2020	114.16438	110.6500673	107.2617506	103.9941614	100.8422884	97.80136141	94.8668378	92.03439024	89.29989483
200415A00036	4/15/2020	0.91	10/15/2024	4/15/2020	119.03476	114.2344293	109.6524674	105.2777512	101.0997881	97.1086775	93.2950742	89.6501533	86.1655783
200414A00015	4/14/2020	0.64	4/14/2023	4/14/2020	111.98099	109.0591728	106.2283116	103.4849854	100.8259305	98.24802889	95.74830055	93.323896	90.97208977
200414A00019	4/16/2020	0.69	4/20/2021	4/16/2020	102.82503	102.1529702	101.4896542	100.8349166	100.188592	99.55051892	98.92054013	98.29850235	97.68425616
200415A00003	4/15/2020	0.77	4/14/2023	4/15/2020	111.80039	108.8931145	106.0761119	103.3459969	100.6995381	98.13364754	95.64537358	93.23189362	90.89050755
200415A00020	4/15/2020	0.86	4/15/2024	4/15/2020	116.57981	112.4272092	108.4437285	104.6215186	100.9531472	97.43157038	94.0501096	90.80243017	87.68252149
200415A00021	4/15/2020	1.37	4/15/2027	4/15/2020	132.57652	124.2319354	116.4616491	109.2232202	102.4775613	96.18865375	90.32329169	84.85084748	79.74305886
200415A00023	4/15/2020	1.71	4/15/2030	4/15/2020	149.07531	135.9077154	124.0002495	113.2258426	103.4708425	94.63353663	86.62284238	79.3571467	72.76327814
200413A00011	4/13/2020	0.94	4/12/2024	4/13/2020	116.85579	112.7078095	108.7283714	104.9096727	101.2443223	97.72531408	94.34600448	91.10009118	87.9815935
200413A00012	4/13/2020	0.64	4/13/2023	4/13/2020	111.96841	109.0499518	106.2222607	103.4819341	100.8257177	98.2505024	95.75331656	93.33131855	90.98179025
200413A00026	4/13/2020	0.82	4/13/2023	4/13/2020	111.9273	109.0214212	106.2056795	103.476701	100.8312619	98.26628192	95.77881626	93.36604889	91.02528573
200413A00027	4/13/2020	0.94	4/12/2024	4/13/2020	116.85579	112.7078095	108.7283714	104.9096727	101.2443223	97.72531408	94.34600448	91.10009118	87.9815935
200414A00013	4/14/2020	0.55	4/14/2022	4/14/2020	107.20611	105.4610006	103.7531423	102.0814169	100.4447482	98.84210267	97.27248735	95.73494794	94.22856684
200414A00014	4/14/2020	0.76	4/12/2024	4/14/2020	116.92792	112.7578414	108.7576883	104.9195794	101.2360445	97.70000308	94.30474238	91.04389519	87.9114201
200408A00011	4/8/2020	0.82	9/26/2022	4/8/2020	109.43606	107.1778106	104.9776478	102.8336705	100.7440591	98.70706716	96.72101804	94.7843013	92.89536968
200408A00013	4/13/2020	0.87	4/14/2023	4/13/2020	112.0792	109.168055	106.3472761	103.6134739	100.9634141	98.39400583	95.90229496	93.48545634	91.1407874
200409A00011	4/9/2020	0.7	4/7/2023	4/9/2020	112.05943	109.1587651	106.3478442	103.6233204	100.981995	98.42081022	95.93684284	93.52729655	91.1894957
200409A00019	4/9/2020	0.58	4/8/2022	4/9/2020	107.18039	105.4537014	103.7636048	102.1090091	100.4888671	98.90217272	97.34795913	95.8252965	94.33329039
200413A00003	4/13/2020	0.64	4/13/2023	4/13/2020	111.96841	109.0499518	106.2222607	103.4819341	100.8257177	98.2505024	95.75331656	93.33131855	90.98179025
200413A00004	4/13/2020	0.89	4/11/2025	4/13/2020	122.14941	116.6461047	111.41944	106.4540458	101.7354892	97.25021473	92.98548584	88.92933069	85.07049182
200406A00059	4/6/2020	0.92	4/6/2023	4/6/2020	112.11625	109.2298532	106.4324341	103.7206861	101.0914482	98.54169887	96.0685484	93.66923229	91.34110482
200406A00060	4/6/2020	1.03	4/5/2024	4/6/2020	117.11747	112.9875687	109.0246516	105.2210286	101.5694116	98.06288998	94.69490859	91.45924719	88.35000119

Classification | Public

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
200407A00004	4/7/2020	0.99	4/7/2025	4/7/2020	122.60676	117.1062501	111.8815008	106.9172284	102.1990787	97.71356787	93.44802469	89.39053673	85.52990069
200407A00016	4/7/2020	0.8	4/7/2022	4/7/2020	107.23418	105.5152799	103.8326796	102.1852973	100.5720981	98.99208763	97.44431	95.92784573	94.44181013
200407A00019	4/7/2020	1.06	4/8/2024	4/7/2020	117.27347	113.1307457	109.1558211	105.3409551	101.6788099	98.16242885	94.78521394	91.54090502	88.42356034
200408A00004	4/8/2020	0.76	4/8/2022	4/8/2020	107.18	105.4585551	103.7735076	102.1237729	100.5083117	98.92612543	97.37625404	95.85777429	94.36979794
200403A00017	4/3/2020	0.81	4/3/2023	4/3/2020	111.77489	108.9026419	106.118744	103.4199189	100.8030365	98.26510442	95.80326018	93.41476498	91.09699728
200403A00018	4/3/2020	0.91	4/3/2024	4/3/2020	116.62501	112.5109696	108.5631528	104.773912	101.136	97.64254426	94.28702546	91.06325675	87.96536482
200403A00025	4/3/2020	0.91	4/3/2024	4/3/2020	116.62501	112.5109696	108.5631528	104.773912	101.136	97.64254426	94.28702546	91.06325675	87.96536482
200406A00018	4/6/2020	0.65	4/18/2022	4/6/2020	107.42765	105.668433	103.9469488	102.2620554	100.6126559	98.99769731	97.41616839	95.86709747	94.34955055
200406A00049	4/6/2020	0.92	4/6/2023	4/6/2020	112.11625	109.2298532	106.4324341	103.7206861	101.0914482	98.54169887	96.0685484	93.66923229	91.34110482
200406A00053	4/6/2020	1.13	4/7/2025	4/6/2020	122.2318	116.7739212	111.5888576	106.661524	101.9777554	97.52424327	93.28847909	89.25870142	85.42384713
200402A00041	4/2/2020	1.03	4/2/2025	4/2/2020	121.66235	116.235217	111.0788299	106.1782522	101.5194573	97.08926447	92.8752829	88.8658599	85.05003281
200402A00044	4/2/2020	1.65	4/2/2030	4/2/2020	148.23385	135.1596121	123.3333377	112.6295473	102.9359686	94.1520882	86.18786576	78.96259464	72.40389176
200402A00048	4/2/2020	0.71	4/2/2024	4/2/2020	116.60515	112.4743176	108.5107773	104.7068185	101.0551337	97.54879423	94.18122789	90.94619841	87.8377861
200403A00010	4/6/2020	0.8	4/6/2023	4/6/2020	111.78461	108.9027753	106.1098119	103.402415	100.7774272	98.23183014	95.7627371	93.36738658	91.04313567
200403A00012	4/3/2020	0.55	4/15/2022	4/3/2020	107.2188	105.4705379	103.7596459	102.0849943	100.4455016	98.84012975	97.26788146	95.72779824	94.21895857
200403A00015	4/3/2020	0.73	4/4/2022	4/3/2020	107.07912	105.3706318	103.6980847	102.0604219	100.4566236	98.88570943	97.34673691	95.83879915	94.3610234
200402A00026	4/2/2020	1.28	4/2/2026	4/2/2020	127.57857	120.7376192	114.3017823	108.2449927	102.5429935	97.17320591	92.1146036	87.3475983	82.85393366
200402A00028	4/2/2020	0.71	4/4/2022	4/2/2020	107.04584	105.3376388	103.6653748	102.02799	100.4244646	98.85381845	97.31510917	95.80743	94.32990833
200402A00030	4/2/2020	0.8	4/3/2023	4/2/2020	111.74734	108.8754745	106.0919456	103.3934807	100.7769503	98.23936207	95.77785385	93.38968709	91.07224047
200402A00035	4/2/2020	0.62	4/3/2023	4/2/2020	111.78752	108.9032985	106.1080324	103.3984171	100.7712933	98.22364109	95.75257201	93.35532278	91.02924876
200402A00036	4/2/2020	0.71	4/2/2024	4/2/2020	116.60515	112.4743176	108.5107773	104.7068185	101.0551337	97.54879423	94.18122789	90.94619841	87.8377861
200402A00038	4/2/2020	0.84	4/2/2025	4/2/2020	121.77979	116.3164619	111.1265794	106.1950164	101.5075685	97.05089066	92.81243945	88.7804209	84.94374125
200402A00013	4/2/2020	0.89	4/2/2024	4/2/2020	116.53473	112.4256765	108.482551	104.6977272	101.0639751	97.57443832	94.2226124	91.00232438	87.90771391
200402A00014	4/2/2020	0.84	4/2/2025	4/2/2020	121.77979	116.3164619	111.1265794	106.1950164	101.5075685	97.05089066	92.81243945	88.7804209	84.94374125
200402A00017	4/2/2020	0.76	4/1/2022	4/2/2020	107.09085	105.3913017	103.727383	102.0980427	100.5022749	98.93911291	97.40762656	95.90692092	94.43613447
200402A00018	4/2/2020	0.85	4/3/2023	4/2/2020	111.88507	109.0113115	106.225938	103.5256716	100.9073814	98.36807385	95.90488549	93.51507654	91.19602452
200402A00022	4/2/2020	0.96	4/2/2024	4/2/2020	116.80666	112.6924813	108.7443881	104.9547431	101.3163109	97.82222983	94.46599027	91.24141449	88.14263751
200402A00023	4/2/2020	1.11	4/2/2025	4/2/2020	122.06625	116.6294465	111.4637327	106.5541627	101.8866949	97.44813466	93.22607772	89.20885875	85.38550306
200401A00023	4/1/2020	0.82	4/1/2025	4/1/2020	121.66568	116.2085439	111.0244342	106.0982566	101.4158347	96.96384907	92.72978024	88.70185614	84.86900329
200402A00001	4/2/2020	0.72	4/2/2021	4/2/2020	102.61767	101.9998944	101.3895153	100.7864038	100.1904309	99.60147063	99.01939982	98.4440983	97.87544864
200402A00002	4/2/2020	0.71	4/4/2022	4/2/2020	107.04584	105.3376388	103.6653748	102.02799	100.4244646	98.85381845	97.31510917	95.80743	94.32990833
200402A00003	4/2/2020	0.8	4/3/2023	4/2/2020	111.74734	108.8754745	106.0919456	103.3934807	100.7769503	98.23936207	95.77785385	93.38968709	91.07224047
200402A00009	4/2/2020	1.03	4/2/2025	4/2/2020	121.66235	116.235217	111.0788299	106.1782522	101.5194573	97.08926447	92.8752829	88.8658599	85.05003281

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
200402A00010	4/2/2020	0.89	4/2/2024	4/2/2020	116.53473	112.4256765	108.482551	104.6977272	101.0639751	97.57443832	94.2226124	91.00232438	87.90771391
200331A00018	3/31/2020	0.82	3/31/2023	3/31/2020	111.76499	108.9023342	106.127504	103.437254	100.8284818	98.29822068	95.84363231	93.46200053	91.15072504
200331A00022	4/1/2020	1.07	4/1/2025	4/1/2020	121.85158	116.4233348	111.2656787	106.3636996	101.7033874	97.27157624	93.05588879	89.04468453	85.22701181
200331A00024	3/31/2020	0.64	3/31/2023	3/31/2020	111.80507	108.9301245	106.1436153	103.4422688	100.8229534	98.28267476	95.81856859	93.42789425	91.10802829
200401A00001	4/1/2020	1.01	4/1/2025	4/1/2020	121.54885	116.1278482	110.9771786	106.0819356	101.4281203	97.00257743	92.79293952	88.78757561	84.97554303
200401A00012	4/2/2020	1	4/2/2025	4/2/2020	121.51088	116.0873809	110.9344914	106.0372858	101.3817432	96.95468815	92.74373484	88.73723533	84.92423147
200401A00013	4/1/2020	1.01	4/1/2025	4/1/2020	121.54885	116.1278482	110.9771786	106.0819356	101.4281203	97.00257743	92.79293952	88.78757561	84.97554303
200331A00008	3/31/2020	0.64	3/31/2023	3/31/2020	111.80507	108.9301245	106.1436153	103.4422688	100.8229534	98.28267476	95.81856859	93.42789425	91.10802829
200331A00011	3/31/2020	1.09	3/31/2025	3/31/2020	121.93971	116.5127718	111.3561838	106.4550567	101.7954007	97.36406826	93.14869879	89.13766717	85.32003572
200331A00014	3/31/2020	0.72	3/29/2024	3/31/2020	116.59433	112.4766845	108.5253797	104.7327675	101.0916006	97.59500571	94.23646252	91.00978276	87.90909142
200331A00015	3/31/2020	0.64	3/31/2023	3/31/2020	111.80507	108.9301245	106.1436153	103.4422688	100.8229534	98.28267476	95.81856859	93.42789425	91.10802829
200331A00016	3/31/2020	1.11	3/31/2026	3/31/2020	127.85322	120.9634463	114.4826988	108.3846068	102.6446342	97.23994531	92.14927758	87.35282505	82.83213094
200331A00017	3/31/2020	0.9	3/31/2025	3/31/2020	122.05832	116.595206	111.4051403	106.4730407	101.7847401	97.32692693	93.0870887	89.05345929	85.21497033
200330A00043	3/30/2020	0.86	3/30/2023	3/30/2020	111.86256	109.0015946	106.2283306	103.5395256	100.9320844	98.40304707	95.94958187	93.56897863	91.25864268
200330A00044	3/30/2020	1.09	3/28/2025	3/30/2020	121.90248	116.4862851	111.3395178	106.4473614	101.7958927	97.37202556	93.16345583	89.15861026	85.34659898
200330A00046	3/30/2020	0.86	3/30/2023	3/30/2020	111.86256	109.0015946	106.2283306	103.5395256	100.9320844	98.40304707	95.94958187	93.56897863	91.25864268
200330A00064	3/30/2020	0.83	3/30/2023	3/30/2020	111.78028	108.9204484	106.1482819	103.4605487	100.8541545	98.32614029	95.8736749	93.49404892	91.1846684
200330A00066	3/30/2020	1.08	3/31/2025	3/30/2020	121.88929	116.463555	111.3081299	106.4081242	101.7495498	97.31926076	93.10489839	89.09483905	85.27814657
200331A00007	3/31/2020	0.72	3/29/2024	3/31/2020	116.59433	112.4766845	108.5253797	104.7327675	101.0916006	97.59500571	94.23646252	91.00978276	87.90909142
200330A00020	3/30/2020	0.68	3/30/2021	3/30/2020	102.55621	101.9475381	101.3460487	100.7516183	100.1641233	99.58344304	99.00945973	98.44205817	97.88112581
200330A00021	3/30/2020	0.8	3/30/2022	3/30/2020	107.13181	105.437827	103.779273	102.1551082	100.5643356	99.00599651	97.47916873	95.98296467	94.51652978
200330A00028	3/30/2020	1.09	3/28/2025	3/30/2020	121.90248	116.4862851	111.3395178	106.4473614	101.7958927	97.37202556	93.16345583	89.15861026	85.34659898
200330A00036	3/30/2020	0.86	3/30/2023	3/30/2020	111.86256	109.0015946	106.2283306	103.5395256	100.9320844	98.40304707	95.94958187	93.56897863	91.25864268
200330A00037	3/30/2020	1.09	3/28/2025	3/30/2020	121.90248	116.4862851	111.3395178	106.4473614	101.7958927	97.37202556	93.16345583	89.15861026	85.34659898
200330A00038	3/30/2020	1.79	3/29/2030	3/30/2020	149.76707	136.6321154	124.7475721	113.9879423	104.2409233	95.40595633	87.39294414	80.12111448	73.51801229
200330A00006	3/30/2020	0.9	3/28/2025	3/30/2020	122.02076	116.5685023	111.3883635	106.4653298	101.7853017	97.33503002	93.10205943	89.07467649	85.24186127
200330A00007	3/30/2020	0.93	4/1/2024	3/30/2020	116.67747	112.569013	108.6263226	104.8417854	101.2081838	97.71867301	94.36675906	91.14627876	88.05138075
200330A00008	3/30/2020	1.09	3/28/2025	3/30/2020	121.90248	116.4862851	111.3395178	106.4473614	101.7958927	97.37202556	93.16345583	89.15861026	85.34659898
200330A00011	3/30/2020	0.93	4/1/2024	3/30/2020	116.67747	112.569013	108.6263226	104.8417854	101.2081838	97.71867301	94.36675906	91.14627876	88.05138075
200330A00013	3/30/2020	0.68	3/30/2021	3/30/2020	102.55621	101.9475381	101.3460487	100.7516183	100.1641233	99.58344304	99.00945973	98.44205817	97.88112581
200330A00017	3/30/2020	0.86	3/30/2023	3/30/2020	111.86256	109.0015946	106.2283306	103.5395256	100.9320844	98.40304707	95.94958187	93.56897863	91.25864268
200327A00068	6/25/2020	0.93	6/26/2023	6/25/2020	113.16909	110.0141343	106.962772	104.0110356	101.1551343	98.39144349	95.71649662	93.12697712	90.61971114
200327A00073	3/27/2020	0.99	3/27/2025	3/27/2020	122.46301	117.0034864	111.8161576	106.8860235	102.1989903	97.74181369	93.50204238	89.46796619	85.62856782

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
200327A00076	3/27/2020	1.18	3/27/2026	3/27/2020	128.24408	121.3567169	114.877369	108.779776	103.0395051	97.63381325	92.54152142	87.74289885	83.21955638
200327A00077	3/27/2020	0.83	3/27/2024	3/27/2020	116.99655	112.8777112	108.9249766	105.1307234	101.4877247	97.98912619	94.62842469	91.39944783	88.2963352
200327A00079	3/27/2020	0.99	3/27/2025	3/27/2020	122.46301	117.0034864	111.8161576	106.8860235	102.1989903	97.74181369	93.50204238	89.46796619	85.62856782
200327A00088	3/27/2020	1.22	3/27/2025	3/27/2020	122.54389	117.1156666	111.9571276	107.0534543	102.3907216	97.95584132	93.73650656	89.72114107	85.89885159
200327A00056	3/27/2020	1.18	3/27/2025	3/27/2020	122.34272	116.9192928	111.7653836	106.8661745	102.207748	97.77702252	93.56169804	89.55020446	85.73165447
200327A00058	3/27/2020	0.9	3/27/2023	3/27/2020	111.93513	109.08227	106.3166508	103.6350578	101.0344202	98.51180078	96.06438905	93.68949484	91.38454232
200327A00059	3/27/2020	1.01	3/27/2024	3/27/2020	116.92504	112.82786	108.8954325	105.1202185	101.4950675	98.01319643	94.66816911	91.45387572	88.3645145
200327A00060	3/27/2020	1.18	3/27/2025	3/27/2020	122.34272	116.9192928	111.7653836	106.8661745	102.207748	97.77702252	93.56169804	89.55020446	85.73165447
200327A00061	3/31/2020	1.18	3/31/2025	3/31/2020	122.39352	116.9557233	111.7886684	106.8774494	102.2080596	97.76733574	93.54290241	89.52312022	85.69703803
200327A00066	6/25/2020	0.93	6/26/2023	6/25/2020	113.16909	110.0141343	106.962772	104.0110356	101.1551343	98.39144349	95.71649662	93.12697712	90.61971114
200327A00047	3/27/2020	0.99	3/27/2025	3/27/2020	122.46301	117.0034864	111.8161576	106.8860235	102.1989903	97.74181369	93.50204238	89.46796619	85.62856782
200327A00048	3/27/2020	1.18	3/24/2025	3/27/2020	122.3046	116.8919607	111.7479132	106.8577153	102.207516	97.7842949	93.57580835	89.5705381	85.75764458
200327A00051	3/27/2020	0.99	3/27/2025	3/27/2020	122.46301	117.0034864	111.8161576	106.8860235	102.1989903	97.74181369	93.50204238	89.46796619	85.62856782
200327A00053	3/27/2020	0.84	3/25/2022	3/27/2020	107.13521	105.4556955	103.8111251	102.2004788	100.622781	99.0770928	97.56251089	96.07816553	94.62321905
200327A00054	3/27/2020	0.9	3/27/2023	3/27/2020	111.93513	109.08227	106.3166508	103.6350578	101.0344202	98.51180078	96.06438905	93.68949484	91.38454232
200327A00055	3/27/2020	1.01	3/27/2024	3/27/2020	116.92504	112.82786	108.8954325	105.1202185	101.4950675	98.01319643	94.66816911	91.45387572	88.3645145
200327A00040	3/27/2020	0.72	3/27/2023	3/27/2020	111.97552	109.1104424	106.3332091	103.6405797	101.0294543	98.49686853	96.03998621	93.65609293	91.34258997
200327A00041	3/27/2020	0.9	3/27/2023	3/27/2020	111.93513	109.08227	106.3166508	103.6350578	101.0344202	98.51180078	96.06438905	93.68949484	91.38454232
200327A00042	3/27/2020	0.83	3/27/2024	3/27/2020	116.99655	112.8777112	108.9249766	105.1307234	101.4877247	97.98912619	94.62842469	91.39944783	88.2963352
200327A00043	3/27/2020	1.48	3/27/2028	3/27/2020	139.53531	129.5779021	120.393496	111.918186	104.0936657	96.86670588	90.18868845	84.01518412	78.30557171
200327A00045	3/27/2020	2.24	3/27/2034	3/27/2020	179.38177	158.1190444	139.6021852	123.4607132	109.3759111	97.07335986	86.31658444	76.90163864	68.65248555
200327A00046	3/27/2020	1.23	3/27/2025	3/27/2020	122.59419	117.16476	112.0050637	107.1002743	102.4364651	98.00054602	93.7802087	89.76387523	85.94065087
200327A00030	3/27/2020	1.01	3/27/2024	3/27/2020	116.92504	112.82786	108.8954325	105.1202185	101.4950675	98.01319643	94.66816911	91.45387572	88.3645145
200327A00031	3/27/2020	1.18	3/27/2025	3/27/2020	122.34272	116.9192928	111.7653836	106.8661745	102.207748	97.77702252	93.56169804	89.55020446	85.73165447
200327A00032	3/27/2020	0.66	3/28/2022	3/27/2020	107.17312	105.4794864	103.8212807	102.1974647	100.6070423	99.04905568	97.52258342	96.0267387	94.56066772
200327A00035	3/27/2020	0.83	3/27/2024	3/27/2020	116.99655	112.8777112	108.9249766	105.1307234	101.4877247	97.98912619	94.62842469	91.39944783	88.2963352
200327A00037	3/27/2020	1.18	3/27/2026	3/27/2020	128.24408	121.3567169	114.877369	108.779776	103.0395051	97.63381325	92.54152142	87.74289885	83.21955638
200327A00039	3/27/2020	0.84	3/28/2022	3/27/2020	107.17275	105.4842179	103.8309237	102.2118384	100.6259733	99.07237753	97.55013633	96.05836907	94.59622784
200326A00025	3/26/2020	0.99	3/28/2022	3/26/2020	107.41927	105.7286251	104.0732566	102.4521349	100.8642703	99.308711	97.78454109	96.29087906	94.82687604
200327A00013	3/27/2020	0.72	3/27/2023	3/27/2020	111.97552	109.1104424	106.3332091	103.6405797	101.0294543	98.49686853	96.03998621	93.65609293	91.34258997
200327A00019	3/30/2020	0.85	3/15/2022	3/30/2020	107.02617	105.3765705	103.7609264	102.1782705	100.627669	99.10822298	97.61906678	96.15936631	94.72831771
200327A00022	3/27/2020	0.9	3/27/2023	3/27/2020	111.93513	109.08227	106.3166508	103.6350578	101.0344202	98.51180078	96.06438905	93.68949484	91.38454232
200327A00025	3/30/2020	0.86	3/30/2022	3/30/2020	107.23077	105.5359369	103.8765478	102.2515631	100.6599854	99.10085578	97.5732515	96.07628461	94.6091002

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
200327A00027	3/27/2020	0.9	3/27/2023	3/27/2020	111.93513	109.08227	106.3166508	103.6350578	101.0344202	98.51180078	96.06438905	93.68949484	91.38454232
200325A00047	3/25/2020	1.68	9/25/2024	3/25/2020	122.21186	117.409107	112.8215456	108.4383651	104.249357	100.2448807	96.4158282	92.75359198	89.25003418
200325A00048	3/25/2020	1.34	12/27/2022	3/25/2020	111.8598	109.2932486	106.7983716	104.3727522	102.0140717	99.72010319	97.48870783	95.31783062	93.20549655
200326A00009	3/27/2020	1.54	3/27/2025	3/27/2020	124.15331	118.6866569	113.49108	108.5516926	103.8545111	99.38639171	95.13497479	91.088634	87.23642857
200326A00011	3/30/2020	1.54	3/31/2025	3/30/2020	124.20877	118.7275294	113.5186071	108.5670199	103.8586949	99.38040568	95.11971689	91.06493243	87.20504728
200326A00012	3/26/2020	0.99	3/25/2022	3/26/2020	107.3804	105.698801	104.0521768	102.4395144	100.8598369	99.31220456	97.79571293	96.30949136	94.85270129
200326A00016	3/26/2020	1.54	3/25/2025	3/26/2020	124.12556	118.6662118	113.4773104	108.5440262	103.8524204	99.38939005	95.14261348	91.10049914	87.25213832
200325A00032	3/25/2020	1.29	9/26/2022	3/25/2020	110.46236	108.1927344	105.9814254	103.8265307	101.7262238	99.67875187	97.68243193	95.73564755	93.83684568
200325A00038	3/25/2020	1.48	9/25/2023	3/25/2020	116.11972	112.630264	109.2640292	106.0159417	102.8811714	99.85511614	96.93338956	94.11180962	91.38638761
200325A00042	3/25/2020	1.58	3/25/2024	3/25/2020	119.09993	114.9683663	111.0023049	107.1941943	103.5368682	100.0235285	96.64772321	93.40332734	90.28452381
200325A00043	3/25/2020	1.62	6/25/2024	3/25/2020	120.6037	116.1403864	111.8660277	107.7716354	103.8487004	100.0891614	96.48537895	93.03011124	89.71649097
200325A00044	3/25/2020	1.7	12/23/2024	3/25/2020	123.61243	118.4816395	113.5919929	108.9308995	104.486494	100.24759	96.20363778	92.34468435	88.66133642
200325A00046	3/25/2020	1.76	3/25/2025	3/25/2020	125.23061	119.7449089	114.5306055	109.5728264	104.8575926	100.3717632	96.10298024	92.03961805	88.17073534
200324A00031	3/24/2020	1.64	3/22/2024	3/24/2020	119.28803	115.1625275	111.2019495	107.398784	103.7459036	100.2365458	96.86429219	93.62304851	90.5070264
200324A00051	3/24/2020	1.73	11/1/2024	3/24/2020	122.9803	118.0386014	113.3228088	108.8213251	104.5232188	100.4181814	96.49648799	92.74896046	89.16693328
200324A00066	3/26/2020	1.81	3/26/2025	3/26/2020	125.4965	120.0011235	114.7776715	109.8112379	105.0878121	100.594224	96.31808853	92.24775458	88.37225741
200325A00009	3/27/2020	1.67	3/27/2025	3/27/2020	124.80713	119.3248718	114.1142481	109.1603519	104.4491756	99.96755281	95.7031025	91.644178	87.77981921
200325A00013	3/25/2020	1.03	8/16/2021	3/25/2020	104.62451	103.5858851	102.5677583	101.5695252	100.5906073	99.6304484	98.68851358	97.76428796	96.85727593
200325A00016	3/30/2020	1.67	3/31/2025	3/30/2020	124.86427	119.3673483	114.1433071	109.1771426	104.4547577	99.96290315	95.68912212	91.62169795	87.74960617
200320A00052	3/25/2020	1.47	3/25/2025	3/25/2020	123.77396	118.32299	113.1421711	108.2166807	103.5325929	99.0768168	94.83704224	90.80168857	86.95985744
200323A00011	3/23/2020	1.37	3/23/2023	3/23/2020	113.16453	110.3071199	107.5367	104.8500794	102.2442084	99.71616914	97.26316939	94.88253573	92.57170785
200323A00018	3/23/2020	1.37	3/23/2023	3/23/2020	113.16453	110.3071199	107.5367	104.8500794	102.2442084	99.71616914	97.26316939	94.88253573	92.57170785
200324A00012	3/25/2020	1.78	3/25/2025	3/25/2020	125.33107	119.8429723	114.6263596	109.6663537	104.9489719	100.4610698	96.19028631	92.1249925	88.25424416
200324A00013	3/25/2020	1.78	3/25/2025	3/25/2020	125.33107	119.8429723	114.6263596	109.6663537	104.9489719	100.4610698	96.19028631	92.1249925	88.25424416
200324A00029	3/24/2020	1.86	3/24/2025	3/24/2020	125.718	120.2240155	115.0015479	110.0357289	105.3125834	100.818974	96.54254542	92.47167371	88.59541896
200319A00038	3/19/2020	1.18	9/17/2021	3/19/2020	105.22272	104.0810287	102.9639534	101.8707062	100.8005315	99.7527052	98.72653323	97.72135004	96.73651709
200319A00039	3/19/2020	1.12	3/18/2022	3/19/2020	107.49958	105.8372873	104.2093176	102.6146818	101.0524317	99.52165459	98.02147184	96.55103707	95.10953471
200320A00013	3/20/2020	1.25	3/20/2024	3/20/2020	118.52839	114.4032217	110.443403	106.6413885	102.9900201	99.48250708	96.11240422	92.87359263	89.7602609
200320A00025	3/20/2020	0.78	3/19/2021	3/20/2020	102.47588	101.8999185	101.3304129	100.7672561	100.2103424	99.65956825	99.11483248	98.57603613	98.04308238
200320A00026	3/20/2020	2.11	3/20/2029	3/20/2020	148.14861	136.5507174	125.9477893	116.2492334	107.3731479	99.24544562	91.79907089	84.97329937	78.71311041
200320A00049	3/25/2020	1.47	3/25/2025	3/25/2020	123.77396	118.32299	113.1421711	108.2166807	103.5325929	99.0768168	94.83704224	90.80168857	86.95985744
200318A00049	3/18/2020	0.84	3/18/2021	3/18/2020	102.49675	101.9236636	101.3569739	100.7965702	100.2423483	99.69420615	99.15204407	98.6157645	98.08527202
200318A00054	3/18/2020	1.56	3/18/2025	3/18/2020	124.1285	118.6922943	113.5244602	108.6103274	103.9361089	99.48884189	95.25633305	91.22710918	87.3903704

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
200319A00005	3/19/2020	0.81	3/19/2021	3/19/2020	102.49274	101.9167262	101.3471662	100.7839555	100.2269882	99.67616097	99.13137251	98.59252388	98.05951826
200319A00009	3/19/2020	0.94	3/18/2022	3/19/2020	107.50053	105.8332596	104.200488	102.6012256	101.0345168	99.49944253	97.99511764	96.5206898	95.07533781
200319A00025	3/19/2020	1.39	3/21/2024	3/19/2020	118.31181	114.2077156	110.2677851	106.4845364	102.8508757	99.3600724	96.00573798	92.78180651	89.68251644
200319A00037	3/19/2020	0.99	6/18/2021	3/19/2020	103.80389	102.9502718	102.1106212	101.2845988	100.471875	99.67213058	98.88505668	98.11035402	97.34773275
200318A00026	3/20/2020	1.08	3/16/2022	3/20/2020	107.40859	105.752875	104.131272	102.542806	100.9865373	99.46156158	97.96700794	96.50203736	95.06584125
200318A00037	3/18/2020	1.35	3/18/2024	3/18/2020	118.1172	114.0262743	110.0987232	106.3271164	102.7044062	99.22390481	95.87926368	92.66445424	89.57374973
200318A00038	3/18/2020	1.48	3/18/2025	3/18/2020	123.72847	118.3017701	113.1430947	108.2377947	103.5720975	99.13305384	94.90848344	90.88692533	87.05759131
200318A00039	3/18/2020	1.08	3/18/2022	3/18/2020	107.43501	105.7732692	104.1458343	102.5517236	100.989989	99.45971828	97.96003298	96.49008696	95.0490649
200318A00044	3/18/2020	1.17	3/18/2024	3/18/2020	118.19249	114.0800079	110.1322369	106.3416641	102.7011667	99.20398661	95.84370955	92.61424529	89.50980934
200318A00047	3/18/2020	1.29	3/18/2025	3/18/2020	123.8548	118.3920511	113.1999979	108.2637952	103.5694969	99.10399234	94.85495213	90.81077675	86.96054945
200317A00027	3/17/2020	1.29	3/17/2025	3/17/2020	122.76536	117.3648271	112.2312044	107.3499002	102.7071981	98.29020146	94.08677948	90.08551753	86.27567095
200317A00033	3/19/2020	1.1	2/15/2022	3/19/2020	107.04039	105.4767235	103.9439544	102.4412481	100.9677957	99.52281642	98.10555696	96.71528993	95.3513129
200317A00039	3/19/2020	1.11	4/15/2022	3/19/2020	107.86298	106.1143748	104.4030397	102.7278554	101.0877456	99.48167702	97.90865679	96.36773058	94.85798071
200317A00045	3/19/2020	1.43	3/19/2025	3/19/2020	123.49197	118.0675731	112.9113013	108.0084852	103.3453392	98.90890204	94.68698289	90.66811118	86.84149011
200317A00064	3/19/2020	1.12	5/16/2022	3/19/2020	108.3036	106.4582138	104.6536897	102.8887404	101.1621309	99.47267799	97.81924774	96.20075261	94.61614921
200318A00013	3/18/2020	1.5	3/18/2025	3/18/2020	123.82848	118.3994012	113.2384361	108.3309279	103.6631004	99.22200085	94.99544584	90.97197129	87.14078609
200316A00070	3/16/2020	1.05	3/16/2022	3/16/2020	107.36035	105.705035	104.0838304	102.4957554	100.9398707	99.41527224	97.92108916	96.45648266	95.02064434
200316A00071	3/16/2020	1.18	3/16/2023	3/16/2020	112.55499	109.7271313	106.9849482	104.3253216	101.7452652	99.24192113	96.81255317	94.45454091	92.16537394
200316A00072	3/16/2020	1.18	3/16/2023	3/16/2020	112.55499	109.7271313	106.9849482	104.3253216	101.7452652	99.24192113	96.81255317	94.45454091	92.16537394
200317A00011	3/17/2020	1.04	3/17/2022	3/17/2020	107.35736	105.6991694	104.0751836	102.4844186	100.9259308	99.39881215	97.9021883	96.43521689	94.99708622
200317A00023	3/17/2020	1.1	3/17/2025	3/17/2020	122.88711	117.4507554	112.2839627	107.3719517	102.7008332	98.25755013	94.02982308	90.00609951	86.17550679
200317A00025	3/17/2020	1.66	3/15/2030	3/17/2020	150.75516	137.4908505	125.4896522	114.624838	104.7829965	95.86256901	87.77255605	80.43137127	73.76582491
200316A00048	3/16/2020	1.11	3/16/2023	3/16/2020	112.36601	109.5406944	106.8009972	104.1437991	101.5661157	99.06509069	96.63798962	94.28219367	91.99519398
200316A00049	3/16/2020	1.25	3/14/2025	3/16/2020	122.58289	117.1948496	112.0728141	107.2022563	102.5695226	98.16177344	93.96693117	89.97363	86.17117037
200316A00050	3/16/2020	1.54	3/16/2027	3/16/2020	133.49395	125.225409	117.519018	110.3337102	103.6316204	97.37782266	91.54008699	86.08865815	80.99605344
200316A00055	3/16/2020	1.06	3/14/2025	3/16/2020	122.64717	117.2265199	112.0743259	107.1758917	102.5174023	98.0858692	93.86907609	89.85552884	86.03440875
200316A00067	3/18/2020	1.1	9/15/2022	3/18/2020	109.89853	107.6689141	105.4960344	103.3780641	101.3132486	99.29990264	97.33640725	95.42120634	93.55280389
200316A00068	3/16/2020	1.05	3/16/2022	3/16/2020	107.36035	105.705035	104.0838304	102.4957554	100.9398707	99.41527224	97.92108916	96.45648266	95.02064434
200316A00037	3/16/2020	1.06	3/14/2025	3/16/2020	122.64717	117.2265199	112.0743259	107.1758917	102.5174023	98.0858692	93.86907609	89.85552884	86.03440875
200316A00040	3/16/2020	1.04	3/16/2022	3/16/2020	107.34426	105.6890883	104.0680165	102.4800719	100.9243152	99.39984247	97.9057829	96.44129776	95.0055787
200316A00041	3/16/2020	1.16	3/16/2023	3/16/2020	112.501	109.6738636	106.9323908	104.273458	101.6940796	99.19139815	96.76267787	94.40529885	92.11675109
200316A00042	3/16/2020	1.23	3/15/2024	3/16/2020	117.6171	113.5450047	109.635327	105.8806974	102.27412	98.80895569	95.4789012	92.27797035	89.20047612
200316A00043	3/16/2020	1.3	3/14/2025	3/16/2020	122.83232	117.4383683	112.3106343	107.4345804	102.7965439	98.38367714	94.18389423	90.18582181	86.37875307

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
200316A00046	3/16/2020	1.18	3/18/2024	3/16/2020	117.46482	113.3860433	109.4702816	105.7101193	102.0985217	98.62881342	95.29465767	92.09003717	89.00923596
200312A00036	3/12/2020	1.04	3/11/2022	3/12/2020	107.27881	105.6386899	104.0321832	102.4583386	100.9162378	99.40499638	97.92376234	96.4717146	95.04806159
200312A00037	3/12/2020	1.3	3/12/2025	3/12/2020	122.80607	117.4193434	112.298218	107.428208	102.7956945	98.38787031	94.19268676	90.19880475	86.39554908
200313A00019	3/13/2020	1.55	3/13/2026	3/13/2020	129.01276	122.1988677	115.7844281	109.7439679	104.0537702	98.69174335	93.63730131	88.87125314	84.37570132
200316A00009	3/16/2020	1.25	3/14/2025	3/16/2020	122.58289	117.1948496	112.0728141	107.2022563	102.5695226	98.16177344	93.96693117	89.97363	86.17117037
200316A00015	3/16/2020	0.99	3/14/2022	3/16/2020	107.23796	105.5894834	103.9748979	102.3932411	100.8435824	99.32502616	97.83670935	96.37780062	94.94749866
200316A00019	3/16/2020	1.11	3/16/2023	3/16/2020	112.36601	109.5406944	106.8009972	104.1437991	101.5661157	99.06509069	96.63798962	94.28219367	91.99519398
200311A00055	3/11/2020	1.66	12/17/2027	3/11/2020	137.8505	128.420616	119.6957725	111.6196907	104.1408572	97.21209995	90.79020158	84.83554826	79.311812
200312A00006	3/12/2020	1.23	3/12/2025	3/12/2020	122.45732	117.0788496	111.9656826	107.1033486	102.4782412	98.07756491	93.88928226	89.9020648	86.10524739
200312A00009	3/12/2020	1.46	3/12/2027	3/12/2020	132.85453	124.6217906	116.9483761	109.7934635	103.1194125	96.89150108	91.07768445	85.64837541	80.57624394
200312A00014	3/12/2020	1.04	3/12/2025	3/12/2020	122.52102	117.1100159	111.9667705	107.0766327	102.4258356	98.00143494	93.79125546	89.78384076	85.968407
200312A00015	3/12/2020	1.23	3/10/2025	3/12/2020	122.43153	117.0602583	111.9536795	107.0973705	102.4777688	98.08211918	93.8984213	89.91538084	86.12236416
200312A00019	3/17/2020	1.06	5/16/2022	3/17/2020	108.19632	106.3519235	104.5483731	102.7843793	101.0587074	99.37017483	97.71764813	96.10004025	94.51630822
200311A00023	3/11/2020	1.41	3/10/2028	3/11/2020	138.71042	128.8481722	119.748105	111.3475067	103.589128	96.42068111	89.79438534	83.66655743	77.9972407
200311A00024	3/11/2020	1.54	3/11/2030	3/11/2020	149.34261	136.1641361	124.2411847	113.4478148	103.6713105	94.81073046	86.77562397	79.48489296	72.86578255
200311A00031	3/11/2020	1.41	12/24/2027	3/11/2020	135.84123	126.4625745	117.7882859	109.7619998	102.332129	95.45143765	89.07665344	83.16811675	77.68946199
200311A00032	3/11/2020	1.11	3/11/2025	3/11/2020	122.85811	117.4424379	112.2945098	107.3996892	102.7442187	98.3151627	94.10035332	90.08834078	86.26834702
200311A00043	3/11/2020	1.3	3/11/2025	3/11/2020	122.79295	117.4098313	112.2920099	107.4250218	102.79527	98.38996739	94.19708404	90.20529792	86.40394958
200311A00044	3/11/2020	1.73	3/11/2030	3/11/2020	148.86997	135.8482851	124.0617231	113.3867983	103.7129552	94.94115355	86.98261656	79.75772017	73.19500805
200310A00040	3/10/2020	1.36	3/10/2028	3/10/2020	136.33121	126.6463235	117.7087204	109.4570254	101.835203	94.79206371	88.28082199	82.25869628	76.68654757
200310A00041	3/10/2020	1.39	3/12/2029	3/10/2020	140.88524	129.6394411	119.3638773	109.9700323	101.3778828	93.51504406	86.3160061	79.72144841	73.67762696
200310A00051	3/10/2020	1.41	3/8/2030	3/10/2020	145.24262	132.4116032	120.8014585	110.2899647	100.7677025	92.1366564	84.30897472	77.20586964	70.75664138
200310A00054	3/10/2020	1.1	3/10/2025	3/10/2020	121.7847	116.4287159	111.3368806	106.4947925	101.8889121	97.50650589	93.33559426	89.36490256	85.58381576
200310A00062	3/10/2020	1.05	3/8/2024	3/10/2020	116.83965	112.804113	108.9290017	105.207064	101.6314168	98.19552563	94.89318543	91.71850157	88.66587258
200311A00012	3/11/2020	0.87	3/11/2022	3/11/2020	107.00792	105.3700554	103.7657669	102.1941003	100.6541384	99.14499778	97.66582765	96.21580788	94.79414789
200310A00023	3/10/2020	1.02	3/10/2026	3/10/2020	127.04497	120.2510159	113.8572552	107.8380887	102.1696889	96.82986526	91.7979427	87.05465061	82.58202013
200310A00024	3/10/2020	0.91	3/10/2025	3/10/2020	121.84538	116.4570578	111.3353175	106.4655871	101.8341675	97.42817728	93.23549974	89.24473296	85.4451439
200310A00028	3/10/2020	1.1	3/10/2025	3/10/2020	121.7847	116.4287159	111.3368806	106.4947925	101.8889121	97.50650589	93.33559426	89.36490256	85.58381576
200310A00033	3/10/2020	0.91	3/10/2025	3/10/2020	121.84538	116.4570578	111.3353175	106.4655871	101.8341675	97.42817728	93.23549974	89.24473296	85.4451439
200310A00034	3/10/2020	1.41	3/11/2030	3/10/2020	145.2757	132.4317554	120.8108039	110.2903279	100.7606491	92.12352821	84.29092002	77.18386939	70.731532
200310A00038	3/10/2020	1.41	3/11/2030	3/10/2020	145.2757	132.4317554	120.8108039	110.2903279	100.7606491	92.12352821	84.29092002	77.18386939	70.731532
200310A00005	3/10/2020	1.41	3/8/2030	3/10/2020	145.24262	132.4116032	120.8014585	110.2899647	100.7677025	92.1366564	84.30897472	77.20586964	70.75664138
200310A00014	3/10/2020	0.91	3/10/2025	3/10/2020	121.84538	116.4570578	111.3353175	106.4655871	101.8341675	97.42817728	93.23549974	89.24473296	85.4451439

Classification | Public

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
200310A00015	3/10/2020	1.37	3/11/2030	3/10/2020	144.82642	132.0046892	120.404439	109.9032691	100.3916108	91.77132504	83.95445795	76.86213804	70.42359749
200310A00016	3/10/2020	1.02	3/10/2026	3/10/2020	127.04497	120.2510159	113.8572552	107.8380887	102.1696889	96.82986526	91.7979427	87.05465061	82.58202013
200310A00020	3/10/2020	1.1	3/10/2025	3/10/2020	121.7847	116.4287159	111.3368806	106.4947925	101.8889121	97.50650589	93.33559426	89.36490256	85.58381576
200310A00021	3/10/2020	1.1	3/10/2025	3/10/2020	121.7847	116.4287159	111.3368806	106.4947925	101.8889121	97.50650589	93.33559426	89.36490256	85.58381576
200309A00043	3/9/2020	0.92	6/7/2024	3/9/2020	117.47294	113.1313186	108.9723855	104.9874069	101.1681238	97.50672096	93.9958006	90.62835668	87.39775176
200309A00044	3/9/2020	0.94	9/9/2024	3/9/2020	118.72382	114.0485047	109.581661	105.3128867	101.2323587	97.33079512	93.5994225	90.02994488	86.6145152
200309A00045	3/9/2020	0.97	3/7/2025	3/9/2020	121.10171	115.7716983	110.704378	105.8854442	101.3014457	96.93973097	92.78839621	88.8362373	85.07270478
200309A00048	3/9/2020	1.11	3/9/2027	3/9/2020	130.23253	122.0992845	114.5197085	107.4533673	100.8629817	94.71416194	88.97516992	83.61670153	78.61168827
200309A00054	3/9/2020	0.98	3/9/2028	3/9/2020	134.95083	125.2399023	116.2824408	108.0163359	100.3848902	93.33632476	86.82332935	80.80265536	75.23474815
200310A00003	3/10/2020	1.1	3/10/2025	3/10/2020	121.7847	116.4287159	111.3368806	106.4947925	101.8889121	97.50650589	93.33559426	89.36490256	85.58381576
200309A00007	3/9/2020	1.11	3/9/2027	3/9/2020	130.23253	122.0992845	114.5197085	107.4533673	100.8629817	94.71416194	88.97516992	83.61670153	78.61168827
200309A00009	3/9/2020	0.92	3/9/2027	3/9/2020	130.44658	122.2422493	114.5985136	107.4743164	100.8318065	94.63607534	88.85491294	83.4585866	78.41963807
200309A00029	3/9/2020	1.02	3/7/2025	3/9/2020	121.35001	116.0141359	110.9411659	106.1167825	101.5275256	97.16073522	93.00449981	89.0476077	85.27950228
200309A00030	3/9/2020	1.11	3/9/2027	3/9/2020	130.23253	122.0992845	114.5197085	107.4533673	100.8629817	94.71416194	88.97516992	83.61670153	78.61168827
200309A00038	3/9/2020	1.26	3/11/2030	3/9/2020	143.59089	130.8302571	119.2869355	108.8388574	99.37675559	90.80276633	83.02918726	75.97737683	69.5767776
200309A00040	3/9/2020	0.91	3/8/2024	3/9/2020	116.3068	112.2811041	108.4155508	104.7028933	101.1362587	97.70912263	94.41528933	91.24887329	88.20428171
200306A00049	3/6/2020	1.01	3/6/2025	3/6/2020	121.28817	115.9570337	110.8884559	106.0681454	101.4826657	97.11937836	92.96639187	89.012513	85.24720216
200306A00054	3/6/2020	1.01	3/6/2025	3/6/2020	121.28817	115.9570337	110.8884559	106.0681454	101.4826657	97.11937836	92.96639187	89.012513	85.24720216
200306A00055	3/6/2020	0.82	3/6/2025	3/6/2020	121.3466	115.9833403	110.885058	106.037289	101.4264386	97.03972167	92.86511074	88.89128639	85.10759199
200306A00064	3/6/2020	1.2	3/8/2027	3/6/2020	130.88722	122.7352498	115.1375894	108.0537917	101.4465597	95.28148587	89.52681404	84.15322188	79.13362272
200306A00066	3/6/2020	1.2	3/8/2027	3/6/2020	130.88722	122.7352498	115.1375894	108.0537917	101.4465597	95.28148587	89.52681404	84.15322188	79.13362272
200306A00077	3/6/2020	1.06	3/6/2025	3/6/2020	121.5363	116.1993168	111.1250963	106.2993429	101.708611	97.34025412	93.1823727	89.22376606	85.4538875
200306A00022	3/6/2020	1.2	3/8/2027	3/6/2020	130.88722	122.7352498	115.1375894	108.0537917	101.4465597	95.28148587	89.52681404	84.15322188	79.13362272
200306A00028	3/6/2020	1.01	3/6/2025	3/6/2020	121.28817	115.9570337	110.8884559	106.0681454	101.4826657	97.11937836	92.96639187	89.012513	85.24720216
200306A00031	3/6/2020	1.01	3/6/2025	3/6/2020	121.28817	115.9570337	110.8884559	106.0681454	101.4826657	97.11937836	92.96639187	89.012513	85.24720216
200306A00036	3/6/2020	1.01	3/6/2025	3/6/2020	121.28817	115.9570337	110.8884559	106.0681454	101.4826657	97.11937836	92.96639187	89.012513	85.24720216
200306A00038	3/6/2020	1.2	3/8/2027	3/6/2020	130.88722	122.7352498	115.1375894	108.0537917	101.4465597	95.28148587	89.52681404	84.15322188	79.13362272
200306A00040	3/6/2020	1.01	3/6/2025	3/6/2020	121.28817	115.9570337	110.8884559	106.0681454	101.4826657	97.11937836	92.96639187	89.012513	85.24720216
200305A00045	3/5/2020	0.99	3/6/2023	3/5/2020	111.9157	109.1267487	106.4216976	103.7975173	101.2513089	98.78029631	96.3818206	94.05333397	91.79239442
200306A00003	3/6/2020	0.7	3/6/2023	3/6/2020	111.66109	108.8642708	106.1518395	103.5207416	100.9680535	98.49097635	96.08682956	93.75304498	91.48716139
200306A00006	3/6/2020	0.88	3/6/2023	3/6/2020	111.62207	108.8370363	106.1358077	103.5153623	100.9728039	98.50535904	96.11037133	93.78529543	91.52769168
200306A00007	3/6/2020	1.01	3/6/2025	3/6/2020	121.28817	115.9570337	110.8884559	106.0681454	101.4826657	97.11937836	92.96639187	89.012513	85.24720216
200306A00010	3/6/2020	0.88	3/6/2023	3/6/2020	111.62207	108.8370363	106.1358077	103.5153623	100.9728039	98.50535904	96.11037133	93.78529543	91.52769168

Classification | Public

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
200306A00013	3/6/2020	1.01	3/6/2025	3/6/2020	121.28817	115.9570337	110.8884559	106.0681454	101.4826657	97.11937836	92.96639187	89.012513	85.24720216
200305A00019	3/5/2020	0.81	3/6/2023	3/5/2020	111.95544	109.1546878	106.4384149	103.8035636	101.2472077	98.76654557	96.35889413	94.0216827	91.75244772
200305A00030	3/5/2020	1.58	3/5/2030	3/5/2020	147.11532	134.2031553	122.516147	111.9318663	102.3406893	93.6444013	85.75495772	78.59338459	72.08880332
200305A00032	3/5/2020	1.58	3/5/2030	3/5/2020	147.11532	134.2031553	122.516147	111.9318663	102.3406893	93.6444013	85.75495772	78.59338459	72.08880332
200305A00037	3/5/2020	1.43	3/6/2028	3/5/2020	136.8903	127.1979442	118.252014	109.9913037	102.3599208	95.30679958	88.78526119	82.75261609	77.16980425
200305A00038	3/5/2020	1.51	3/5/2029	3/5/2020	141.99535	130.7262472	120.4262651	111.0072085	102.3893293	94.50047481	87.27532898	80.65473306	74.58507688
200305A00039	3/5/2020	1.58	3/5/2030	3/5/2020	147.11532	134.2031553	122.516147	111.9318663	102.3406893	93.6444013	85.75495772	78.59338459	72.08880332
200305A00001	3/5/2020	1.14	3/5/2025	3/5/2020	121.92072	116.5779537	111.4979853	106.6665233	102.07013	97.69616558	93.53273628	89.56864639	85.79335348
200305A00006	3/5/2020	0.99	3/6/2023	3/5/2020	111.9157	109.1267487	106.4216976	103.7975173	101.2513089	98.78029631	96.3818206	94.05333397	91.79239442
200305A00014	3/10/2020	1	2/15/2023	3/10/2020	111.68387	108.9606739	106.3177996	103.7524084	101.2617812	98.84331172	96.49450068	94.21295095	91.99636261
200305A00015	3/5/2020	0.99	3/6/2023	3/5/2020	111.9157	109.1267487	106.4216976	103.7975173	101.2513089	98.78029631	96.3818206	94.05333397	91.79239442
200305A00016	3/5/2020	0.99	3/6/2023	3/5/2020	111.9157	109.1267487	106.4216976	103.7975173	101.2513089	98.78029631	96.3818206	94.05333397	91.79239442
200305A00017	3/5/2020	1.19	3/5/2025	3/5/2020	122.16869	116.8200824	111.7344783	106.89758	102.2959409	97.91691285	93.74859433	89.77978212	85.99992667
200304A00025	3/4/2020	1.04	3/6/2023	3/4/2020	112.04917	109.2584362	106.5516475	103.9257696	101.3779021	98.90526779	96.50520664	94.17516968	91.91271385
200304A00029	3/4/2020	1.17	3/4/2025	3/4/2020	122.05681	116.7141225	111.6340569	106.8023373	102.2055424	97.83104742	93.66697238	89.70213399	85.92600119
200304A00030	3/4/2020	1.6	12/22/2028	3/4/2020	141.96104	130.9780899	120.9177839	111.6979989	103.2443139	95.48924767	88.37157973	81.83574032	75.83126293
200304A00032	3/4/2020	1.6	12/15/2028	3/4/2020	141.87633	130.9228139	120.8877415	111.6894663	103.2539958	95.51423447	88.4093081	81.8839577	75.88799495
200304A00033	3/4/2020	1.17	3/4/2025	3/4/2020	122.05681	116.7141225	111.6340569	106.8023373	102.2055424	97.83104742	93.66697238	89.70213399	85.92600119
200304A00035	3/4/2020	1.17	3/4/2025	3/4/2020	122.05681	116.7141225	111.6340569	106.8023373	102.2055424	97.83104742	93.66697238	89.70213399	85.92600119
200304A00013	3/4/2020	1.01	3/4/2022	3/4/2020	107.14004	105.5213542	103.9356073	102.3818711	100.8592564	99.36690636	97.90399494	96.46972576	95.06333063
200304A00015	3/4/2020	0.83	3/4/2022	3/4/2020	107.14063	105.5171503	103.9267748	102.3685771	100.841661	99.34516337	97.87825236	96.44012592	95.03001054
200304A00018	3/4/2020	0.98	3/4/2025	3/4/2020	122.11859	116.7437153	111.6338723	106.7746212	102.1523828	97.75438575	93.5686143	89.58375917	85.78917235
200304A00019	3/4/2020	1.04	3/6/2023	3/4/2020	112.04917	109.2584362	106.5516475	103.9257696	101.3779021	98.90526779	96.50520664	94.17516968	91.91271385
200304A00020	3/4/2020	0.98	3/4/2025	3/4/2020	122.11859	116.7437153	111.6338723	106.7746212	102.1523828	97.75438575	93.5686143	89.58375917	85.78917235
200304A00022	3/4/2020	0.86	3/6/2023	3/4/2020	112.08924	109.2866955	106.5686764	103.932119	101.3740959	98.89180431	96.48255984	94.14379076	91.87303241
200302A00056	3/2/2020	1.2	3/2/2023	3/2/2020	112.42319	109.6396224	106.9394835	104.3197736	101.7776211	99.31027551	96.91510188	94.5895748	92.33127329
200303A00009	3/3/2020	1.3	3/3/2025	3/3/2020	122.688	117.3337457	112.2423477	107.3995323	102.7918771	98.40675598	94.23228685	90.25728405	86.47121376
200304A00002	3/4/2020	0.98	3/4/2025	3/4/2020	122.11859	116.7437153	111.6338723	106.7746212	102.1523828	97.75438575	93.5686143	89.58375917	85.78917235
200304A00005	3/4/2020	0.98	3/4/2025	3/4/2020	122.11859	116.7437153	111.6338723	106.7746212	102.1523828	97.75438575	93.5686143	89.58375917	85.78917235
200304A00011	3/4/2020	0.83	3/4/2022	3/4/2020	107.14063	105.5171503	103.9267748	102.3685771	100.841661	99.34516337	97.87825236	96.44012592	95.03001054
200304A00012	3/4/2020	0.98	3/4/2025	3/4/2020	122.11859	116.7437153	111.6338723	106.7746212	102.1523828	97.75438575	93.5686143	89.58375917	85.78917235
200302A00013	3/2/2020	1.25	3/4/2024	3/2/2020	117.54787	113.5119189	109.635886	105.9125602	102.3350999	98.89700891	95.59211728	92.41456286	89.35877415
200302A00014	3/2/2020	1.2	3/2/2022	3/2/2020	107.41179	105.7966706	104.2143396	102.6638802	101.1444098	99.65507834	98.19506591	96.76358197	95.35986389

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
200302A00016	3/2/2020	1.36	3/3/2025	3/2/2020	122.98518	117.6239294	112.5257854	107.6764623	103.0625273	98.67134433	94.49102186	90.51036533	86.71883243
200302A00017	3/2/2020	1.3	3/4/2024	3/2/2020	117.73755	113.6981021	109.8186771	106.0920577	102.5113984	99.07019967	95.76228818	92.58179857	89.52315628
200302A00018	3/2/2020	1.25	3/2/2023	3/2/2020	112.55605	109.7707172	107.068856	104.4474632	101.9036659	99.43471261	97.03796704	94.71090275	92.4510977
200302A00025	3/2/2020	1.02	3/2/2022	3/2/2020	107.4128	105.7928912	104.2059468	102.6510399	101.1272815	99.63381494	98.16981468	96.73448452	95.32705655
200228A00071	2/28/2020	1.74	12/14/2029	2/28/2020	147.8694	135.2428879	123.7862231	113.3850277	103.9366489	95.34890521	87.53896983	80.4323777	73.9621429
200228A00091	2/28/2020	1.72	12/7/2029	2/28/2020	147.56538	134.9800255	123.5590092	113.1886139	103.7667771	95.20184181	87.41144681	80.32153946	73.86549875
200302A00002	3/2/2020	1.12	3/3/2025	3/2/2020	122.8023	117.4145951	112.2922089	107.4206932	102.786466	98.37675287	94.17953447	90.18349758	86.37798999
200302A00003	3/2/2020	1.2	3/2/2023	3/2/2020	112.42319	109.6396224	106.9394835	104.3197736	101.7776211	99.31027551	96.91510188	94.5895748	92.33127329
200302A00005	3/2/2020	1.31	3/3/2025	3/2/2020	122.73753	117.3821097	112.2895874	107.4456873	102.8369855	98.45085404	94.27540935	90.29946426	86.51248354
200302A00006	3/2/2020	1.2	3/2/2023	3/2/2020	112.42319	109.6396224	106.9394835	104.3197736	101.7776211	99.31027551	96.91510188	94.5895748	92.33127329
200225A00029	2/25/2020	1.89	12/28/2029	2/25/2020	149.68721	136.919626	125.3368891	114.822975	105.2737625	96.59575866	88.70496638	81.52587694	74.9905745
200226A00004	2/26/2020	1.58	2/26/2025	2/26/2020	124.00185	118.6340874	113.5286895	108.6714628	104.0490556	99.64890489	95.45918593	91.46876442	87.66715275
200227A00055	2/27/2020	1.41	2/27/2023	2/27/2020	112.93813	110.1572499	107.4594401	104.8417278	102.3012625	99.83531366	97.44126499	95.11660858	92.85893982
200228A00045	2/28/2020	1.45	2/28/2025	2/28/2020	123.39015	118.0292876	112.9309925	108.0810314	103.4660215	99.07337166	94.89123177	90.90844483	87.1145028
200228A00047	5/18/2020	1.35	5/18/2023	5/18/2020	113.89075	110.8477081	107.9017152	105.0490172	102.2860329	99.60934701	97.01570077	94.50198354	92.06522472
200228A00070	5/18/2020	1.35	5/18/2023	5/18/2020	113.89075	110.8477081	107.9017152	105.0490172	102.2860329	99.60934701	97.01570077	94.50198354	92.06522472
200221A00023	2/21/2020	2.05	12/7/2029	2/21/2020	151.16062	138.402253	126.8197429	116.2984753	106.7355718	98.03862905	90.12460249	82.91881359	76.35406754
200221A00024	2/21/2020	2.05	12/28/2029	2/21/2020	151.4424	138.5898295	126.9277967	116.3398309	106.7214061	97.97865898	90.02725366	82.79137125	76.20281162
200224A00006	2/24/2020	1.58	11/15/2024	2/24/2020	122.50082	117.5217028	112.7722582	108.2405855	103.9154763	99.78636774	95.84330082	92.076882	88.47824742
200225A00008	2/25/2020	1.52	6/3/2024	2/25/2020	119.87087	115.4951227	111.3025729	107.2844662	103.4325274	99.73892785	96.19625787	92.79750168	89.5360135
200225A00023	2/25/2020	1.62	2/25/2025	2/25/2020	124.18371	118.815421	113.7092969	108.8511627	104.2276864	99.82632343	95.63526555	91.6433936	87.84023372
200225A00028	2/25/2020	1.89	12/21/2029	2/25/2020	149.59728	136.8607432	125.3041854	114.8121978	105.2812076	96.61820766	88.73963026	81.57034591	75.04277287
200218A00026	2/21/2020	1.73	3/25/2024	2/21/2020	119.67886	115.5364562	111.5598793	107.7415619	104.0743264	100.5513634	97.16621031	93.91273202	90.78510178
200218A00030	2/21/2020	1.71	2/24/2023	2/21/2020	113.68393	110.9035418	108.2058517	105.5879125	103.046897	100.5800968	98.184916	95.85886606	93.59956044
200220A00013	2/20/2020	2.09	12/14/2029	2/20/2020	151.69131	138.880501	127.251829	116.6899603	107.0913699	98.36307854	90.42152933	83.19158851	76.60565714
200220A00014	2/20/2020	2.09	12/21/2029	2/20/2020	151.78624	138.9439383	127.2886757	116.7044992	107.0873336	98.34371254	90.38964789	83.14962524	76.55571007
200220A00034	2/25/2020	1.71	3/27/2023	2/25/2020	114.14903	111.2660189	108.4709527	105.7605983	103.1318632	100.5817891	98.10754537	95.70642266	93.37582653
200221A00011	2/21/2020	1.69	8/21/2024	2/21/2020	121.73543	117.0601787	112.5902079	108.3154164	104.2262566	100.3136994	96.56920337	92.98468576	89.55249509
200605A00014	6/5/2020	1.02	6/5/2025	6/5/2020	120.94062	115.6808148	110.686564	105.942904	101.4358067	97.1521121	93.07946965	89.20628307	85.52165984
200605A00016	6/5/2020	1.02	6/5/2025	6/5/2020	120.94062	115.6808148	110.686564	105.942904	101.4358067	97.1521121	93.07946965	89.20628307	85.52165984
200605A00017	6/5/2020	1.02	6/5/2025	6/5/2020	120.94062	115.6808148	110.686564	105.942904	101.4358067	97.1521121	93.07946965	89.20628307	85.52165984
200709A00021	7/9/2020	0.83	7/9/2025	7/9/2020	111.41962	108.5637941	105.817277	103.174929	100.6318949	98.18358222	95.82564524	93.55396993	91.36466
200709A00024	7/9/2020	0.83	7/9/2025	7/9/2020	111.41962	108.5637941	105.817277	103.174929	100.6318949	98.18358222	95.82564524	93.55396993	91.36466

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
200709A00025	7/9/2020	1.37	7/9/2030	7/9/2020	125.04987	118.6187215	112.6422167	107.0830687	101.9073669	97.08424784	92.58559969	88.38579658	84.46146076
200813A00019	8/13/2020	1.44	8/13/2030	8/13/2020	141.14406	129.6120076	119.1690879	109.7049913	101.1211823	93.32958481	86.25142072	79.8161819	73.96072121
200813A00021	8/13/2020	0.84	8/13/2025	8/13/2020	120.66604	115.2212134	110.0607389	105.168201	100.5282167	96.12636738	91.94913295	87.98383143	84.21856251
200813A00023	8/13/2020	0.86	10/14/2025	8/13/2020	121.38028	115.736312	110.3956284	105.3401972	100.5531608	96.01875245	91.72221878	87.64974932	83.78841075
200813A00020	8/13/2020	1.44	8/13/2030	8/13/2020	141.14406	129.6120076	119.1690879	109.7049913	101.1211823	93.32958481	86.25142072	79.8161819	73.96072121
190507A00023	5/7/2019	2.52	5/7/2021	5/7/2019	104.32222	103.5934664	102.8748825	102.1662523	101.4673701	100.7780356	100.098054	99.42723586	98.76539671
190508A00008	5/8/2019	2.36	5/9/2022	5/8/2019	110.72454	108.8719778	107.0601043	105.2876496	103.5533944	101.8561702	100.1948566	98.56837863	96.97570463
190509A00029	5/9/2019	2.34	6/9/2022	5/9/2019	111.24068	109.2893772	107.3824271	105.5184395	103.6960853	101.9140898	100.1712299	98.46633143	96.79826665
190510A00018	5/10/2019	2.54	5/10/2023	5/10/2019	117.19304	114.1278058	111.1593081	108.2838402	105.497864	102.798004	100.1810376	97.64388734	95.18361287
190514A00020	5/14/2019	2.66	5/14/2025	5/14/2019	130.63758	124.8479578	119.3505314	114.1289021	109.1676888	104.4524586	99.9696622	95.7065743	91.6512387
190514A00021	5/14/2019	2.72	11/14/2025	5/14/2019	134.19817	127.6671274	121.4958168	115.6624161	110.1465528	104.9291983	99.99257095	95.32004711	90.896079
190514A00025	5/14/2019	2.43	5/14/2021	5/14/2019	104.38192	103.631771	102.8923934	102.1635532	101.4450262	100.7365942	100.0380456	99.34917431	98.66978012
180627A00057	6/27/2018	2.98	6/27/2022	6/27/2018	112.41621	110.4047943	108.4396011	106.5192806	104.6425284	102.808087	101.0147441	99.26133012	97.54671663
180706A00013	7/6/2018	3.01	7/6/2023	7/6/2018	119.62247	116.3390857	113.1636215	110.0919448	107.1201075	104.2443339	101.4610117	98.76668436	96.15804345
180716A00034	7/16/2018	2.89	7/14/2023	7/16/2018	120.02458	116.6950674	113.4760378	110.3632265	107.3525536	104.4401191	101.6221937	98.89521066	96.25575756
180717A00076	7/17/2018	3.03	7/17/2023	7/17/2018	119.89148	116.5685574	113.3559063	110.2492669	107.2445667	104.3379126	101.525582	98.80401452	96.16980372
180723A00027	1/23/2019	3.13	1/24/2022	1/23/2019	109.6917	108.1773498	106.6916634	105.2338987	103.8033344	102.3992735	101.0210423	99.66798926	98.33948448
180724A00025	7/24/2018	2.93	7/25/2022	7/24/2018	113.2426	111.1297954	109.0674377	107.0540126	105.0880586	103.1681677	101.2929832	99.46119744	97.67154965
180725A00027	7/25/2018	2.95	12/17/2020	7/25/2018	101.98992	101.6829601	101.3778594	101.0746004	100.7731664	100.473541	100.1757076	99.87965033	99.58535313
180730A00033	7/30/2018	3.11	7/29/2022	7/30/2018	113.2879	111.1696531	109.1021232	107.0837806	105.113152	103.1888185	101.3094128	99.47361697	97.68016073
180730A00041	7/30/2018	3.14	7/31/2023	7/30/2018	120.49965	117.1222043	113.8581754	110.7031215	107.6528049	104.7031772	101.8503696	99.09068395	96.42058412
180730A00078	7/30/2018	3.14	7/28/2023	7/30/2018	120.44185	117.0749843	113.8208877	110.6751562	107.6335869	104.692164	101.8470495	99.09457395	96.43122859
180801A00009	8/1/2018	2.98	3/15/2021	8/1/2018	103.64252	103.0745462	102.5128036	101.9571879	101.4075992	100.8639396	100.3261133	99.79402657	99.26758782
180801A00012	8/1/2018	3.03	8/16/2021	8/1/2018	106.60673	105.5573792	104.528673	103.5200048	102.5307927	101.5604773	100.6085207	99.67440488	98.75763145
180803A00009	8/3/2018	2.93	10/30/2020	8/3/2018	101.09946	100.9307868	100.762676	100.5951232	100.4281257	100.2616806	100.0957853	99.93043712	99.76563336
180809A00030	8/9/2018	2.94	2/9/2021	8/9/2018	102.98514	102.5192805	102.0576358	101.60015	101.1467669	100.6974316	100.2520899	99.81068859	99.37317553
180813A00016	8/13/2018	2.92	8/13/2021	8/13/2018	106.45106	105.4117752	104.39276	103.3934282	102.4132132	101.4515697	100.5079735	99.5819195	98.67292157
180815A00021	8/15/2018	3.01	8/15/2023	8/15/2018	120.3772	116.9529123	113.6451869	110.4493993	107.3611356	104.3761817	101.4905136	98.70028749	96.00183033
180817A00013	8/17/2018	2.94	2/15/2022	8/17/2018	109.84285	108.2567188	106.701899	105.1775378	103.682815	102.216939	100.7791462	99.3686991	97.98488569
180827A00010	8/27/2018	2.99	8/25/2023	8/27/2018	120.50208	117.0433452	113.7033796	110.4774274	107.3609521	104.3496246	101.4393131	98.62607238	95.90613442
180906A00013	9/6/2018	2.81	9/7/2021	9/6/2018	106.97978	105.8566174	104.7569996	103.6801895	102.6254827	101.5922037	100.5797041	99.58736167	98.61457856
180910A00013	9/10/2018	3.08	9/11/2023	9/10/2018	121.11654	117.5923817	114.1907515	110.906672	107.7354012	104.6724181	101.7134104	98.85426399	96.09105243
180911A00080	9/11/2018	2.94	9/9/2022	9/11/2018	114.16167	111.8961156	109.6878135	107.5349307	105.4357072	103.388452	101.3915402	99.44340984	97.54255865

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
180917A00054	9/17/2018	3.17	9/15/2023	9/17/2018	121.48723	117.9439632	114.5241857	111.2228676	108.0352164	104.9566635	101.9828524	99.10962734	96.33302251
180918A00011	9/18/2018	3.17	9/18/2023	9/18/2018	121.54597	117.9918732	114.5618923	111.2509657	108.0542656	104.9671907	101.9853539	99.10457053	96.32084803
180821A00002	8/22/2018	2.89	8/23/2021	8/22/2018	106.6005	105.5293009	104.4796007	103.4507572	102.442153	101.453195	100.4833131	99.53195891	98.59860505
180821A00016	8/21/2018	2.76	8/20/2021	8/21/2018	106.58322	105.5189679	104.4759349	103.4534925	102.451035	101.4679805	100.5037694	99.55786334	98.62974451
180827A00031	8/27/2018	2.9	8/27/2021	8/27/2018	106.68648	105.6022994	104.5401155	103.4992666	102.4791147	101.4790469	100.4984743	99.53683077	98.59357199
180827A00032	8/27/2018	2.96	8/29/2022	8/27/2018	113.57456	111.3576958	109.1961244	107.0881088	105.0319753	103.026115	101.0689803	99.15908235	97.29498821
180829A00044	8/29/2018	2.98	8/26/2022	8/29/2018	113.55948	111.3520294	109.1994302	107.0999592	105.0519626	103.0538505	101.1040931	99.20121863	97.34381022
180830A00039	8/30/2018	3.03	8/30/2023	8/30/2018	120.72465	117.2461569	113.8876073	110.6441787	107.5112705	104.4844935	101.5596593	98.73276963	96.0000066
180910A00007	9/10/2018	2.96	9/8/2023	9/10/2018	121.32698	117.7937847	114.3834847	111.0910925	107.9118511	104.841225	101.8748881	99.00871329	96.2387614
180911A00011	9/11/2018	3	9/10/2021	9/11/2018	107.05923	105.92885	104.822316	103.7388781	102.6778184	101.6384484	100.6201077	99.62216243	98.64400398
180912A00028	9/12/2018	2.93	9/14/2020	9/12/2018	100.25537	100.2163368	100.177351	100.1384117	100.0995188	100.0606723	100.0218722	99.98311819	99.94441035
180914A00029	9/14/2018	3.48	9/14/2028	9/14/2018	158.2323	146.9415369	136.5555331	126.9966304	118.1942361	110.0841417	102.6079139	95.71234741	89.34897154
180920A00014	9/20/2018	3.59	9/20/2028	9/20/2018	159.37294	148.0102419	137.5587295	127.9401023	119.0831938	110.9232821	103.4014749	96.46415569	90.0624852
180921A00039	9/21/2018	3.15	9/21/2022	9/21/2018	114.42553	112.1276044	109.8882361	107.7055261	105.5776535	103.5028698	101.4794958	99.5059182	97.58058648
180924A00047	9/24/2018	3.14	9/23/2022	9/24/2018	114.44313	112.1387515	109.893199	107.7045641	105.5710128	103.490785	101.46219	99.48360406	97.55346656
180925A00045	9/25/2018	3.31	9/25/2025	9/25/2018	137.92712	131.4337015	125.2893652	119.4734212	113.9665162	108.7505429	103.8085527	99.12467493	94.68404257
180928A00050	9/28/2018	2.98	9/28/2020	9/28/2018	100.51484	100.4366759	100.3586364	100.2807203	100.2029273	100.1252573	100.0477099	99.97028477	99.89298174
181001A00059	10/1/2018	3.02	11/2/2020	10/1/2018	101.17032	100.9930691	100.8164369	100.6404223	100.4650221	100.2902332	100.1160522	99.9424762	99.76950191
181003A00021	10/3/2018	3.1	4/5/2021	10/3/2018	104.10817	103.4762719	102.8520427	102.2353391	101.6260258	101.0239702	100.4290433	99.84111895	99.26007392
181005A00005	10/5/2018	3.31	10/5/2023	10/5/2018	122.34248	118.7197364	115.2249288	111.852769	108.5982205	105.4564861	102.4229957	99.49339331	96.66352577
181009A00036	10/9/2018	3.07	10/8/2021	10/9/2018	107.87735	106.6502252	105.4509857	104.2786906	103.1324392	102.01137	100.9146597	99.84152015	98.79119713
181010A00023	10/10/2018	3.41	4/1/2024	10/10/2018	126.30357	122.0140012	117.8955853	113.9405048	110.1413464	106.4910781	102.9830276	99.610861	96.36856415
181012A00012	10/12/2018	3.05	10/9/2020	10/12/2018	100.72609	100.6168956	100.5079505	100.3992537	100.2908045	100.1826018	100.0746449	99.96693287	99.85946486
181023A00021	10/23/2018	3.28	10/23/2023	10/23/2018	122.5958	118.9107019	115.357395	111.9303531	108.6243188	105.434289	102.3555011	99.38341961	96.51372355
181026A00019	10/29/2018	3.09	10/16/2020	10/29/2018	100.86175	100.7327483	100.6040899	100.4757754	100.3478032	100.2201721	100.0928805	99.96592713	99.83931059
181217A00010	12/17/2018	3.11	12/15/2023	12/17/2018	123.04529	119.1775131	115.4532377	111.866298	108.4108318	105.0812643	101.8722917	98.77886677	95.79618443
181219A00005	12/19/2018	3.06	12/19/2023	12/19/2018	122.94378	119.0648724	115.3302269	111.7336584	108.2692806	104.931494	101.7149701	98.61463604	95.62566144
181226A00024	12/26/2018	2.9	12/27/2021	12/26/2018	108.85797	107.4259394	106.0212344	104.6431089	103.2908457	101.9637534	100.6611651	99.38243741	98.1269494
181228A00008	12/28/2018	2.9	12/28/2021	12/28/2018	108.8715	107.4382208	106.0319449	104.6519524	103.2975483	101.9680618	100.6628457	99.38127485	98.12274543
190102A00004	1/2/2019	2.8	2/24/2021	1/2/2019	103.19412	102.6836684	102.1782638	101.6778276	101.1822869	100.69157	100.2056068	99.72432854	99.2476676
190102A00037	1/2/2019	2.8	7/2/2021	1/2/2019	105.55079	104.6462933	103.757266	102.8833154	102.0240603	101.1791324	100.3481756	99.53084565	98.72680927
190104A00027	1/4/2019	2.76	1/4/2021	1/4/2019	102.25551	101.8961782	101.5393738	101.1850672	100.8332323	100.4838431	100.1368743	99.79230069	99.45009762
190109A00010	1/9/2019	2.98	1/9/2023	1/9/2019	116.13931	113.4793077	110.8942169	108.3815078	105.93875	103.5636092	101.2538428	99.00729563	96.82189597

Classification | Public

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
190110A00001	1/10/2019	2.88	1/10/2022	1/10/2019	109.06872	107.6007948	106.1599745	104.7455673	103.3569075	101.9933516	100.6542766	99.33907975	98.04717768
190110A00003	1/10/2019	2.97	1/10/2024	1/10/2019	123.03521	119.0830224	115.2799884	111.6196914	108.096023	104.7031688	101.4355929	98.28802315	95.25543677
190110A00005	1/10/2019	3.2	1/9/2026	1/10/2019	138.02017	131.1841617	124.7325873	118.6418094	112.889761	107.4558346	102.3207793	97.46660426	92.87649012
190110A00009	1/10/2019	2.97	1/16/2024	1/10/2019	123.14793	119.1739246	115.3505788	111.6713753	108.1301173	104.7209078	101.4381336	98.27645004	95.23076668
190110A00071	1/10/2019	2.67	2/8/2021	1/10/2019	102.90558	102.4421349	101.9828667	101.5277193	101.0766373	100.6295663	100.1864528	99.74724426	99.31188924
190110A00079	1/10/2019	2.68	10/7/2021	1/10/2019	107.41159	106.1905474	104.9972031	103.830621	102.6899083	101.5742115	100.4827142	99.41463521	98.36922671
190130A00007	1/30/2019	2.89	5/14/2021	1/30/2019	104.71382	103.9623255	103.2216165	102.4914584	101.7716266	101.061903	100.3620754	99.67193769	98.99128945
190131A00011	1/31/2019	3.13	1/30/2026	1/31/2019	137.98498	131.0740671	124.555819	118.4058424	112.6013852	107.1212161	101.9455154	97.05577375	92.43469951
190131A00018	1/31/2019	2.83	3/25/2022	1/31/2019	110.38816	108.6808945	107.0090783	105.3716846	103.7677234	102.1962422	100.6563246	99.14708828	97.66768338
190131A00049	1/31/2019	2.79	1/29/2021	1/31/2019	102.71763	102.2846613	101.8553311	101.4295978	101.0074164	100.5887426	100.173533	99.76174469	99.35333554
190201A00009	2/1/2019	2.8	2/4/2022	2/1/2019	109.41569	107.8693899	106.3529603	104.8656119	103.4065784	101.97512	100.570522	99.19209393	97.83916839
190206A00013	2/6/2019	2.68	2/6/2023	2/6/2019	116.41262	113.6482289	110.9643192	108.3580769	105.8268045	103.3679154	100.9789284	98.65746239	96.40123231
190208A00010	2/8/2019	2.77	2/8/2021	2/8/2019	102.88981	102.4271356	101.968625	101.5142193	101.0638633	100.6175032	100.1750857	99.7365588	99.30187123
190211A00016	2/11/2019	3.01	2/11/2025	2/11/2019	130.76004	125.2912245	120.085017	115.1274098	110.4052121	105.9060029	101.6180815	97.53042221	93.6326315
190228A00037	2/28/2019	2.85	2/28/2023	2/28/2019	116.77093	113.9358661	111.1852466	108.516045	105.9253654	103.4104334	100.9685911	98.59729046	96.2940887
190107A00010	1/7/2019	2.66	1/9/2023	1/7/2019	115.83471	113.1682626	110.5771358	108.0587747	105.6107296	103.2306479	100.9162695	98.66542291	96.47602099
190107A00019	1/7/2019	2.92	1/5/2024	1/7/2019	122.76086	118.8300107	115.0469804	111.4054349	107.8993418	104.5229582	101.270815	98.13770263	95.11865701
190107A00024	1/7/2019	2.91	1/5/2024	1/7/2019	122.72477	118.7945565	115.0121433	111.3711976	107.8656876	104.4898711	101.2382796	98.10570388	95.08718056
190110A00004	1/10/2019	3.09	1/10/2025	1/10/2019	130.52624	125.1777735	120.0811706	115.2232532	110.5916022	106.1745081	101.9609273	97.94044018	94.10321324
190110A00073	1/10/2019	2.68	8/6/2021	1/10/2019	106.23954	105.2210037	104.2219556	103.2418441	102.2801346	101.3363122	100.4098812	99.50036391	98.60730028
190110A00075	1/10/2019	2.67	4/7/2021	1/10/2019	103.97253	103.3339629	102.7032347	102.0802014	101.4647227	100.8566618	100.2558849	99.66226165	99.07566464
190110A00080	1/10/2019	2.68	6/7/2021	1/10/2019	105.1171	104.2894061	103.4747245	102.6727546	101.8832003	101.1057747	100.3401999	99.58620626	98.84353221
190111A00026	1/11/2019	3.48	1/11/2034	1/11/2019	198.91257	176.6356003	157.1464209	140.0776573	125.1122441	111.9763023	100.4330573	90.27763957	81.33263641
190115A00034	1/15/2019	2.91	1/17/2023	1/15/2019	116.11352	113.4287048	110.8201621	108.2852906	105.8215948	103.4266788	101.0982417	98.83407331	96.63204963
190117A00004	1/17/2019	2.9	1/18/2022	1/17/2019	109.24513	107.7520742	106.2869856	104.8491439	103.4378527	102.0524386	100.6922507	99.35665904	98.04505453
190122A00041	1/22/2019	2.71	1/22/2021	1/22/2019	102.61303	102.2000111	101.7903238	101.3839286	100.9807859	100.5808565	100.1841021	99.79048477	99.3999674
190131A00017	1/31/2019	2.83	3/25/2022	1/31/2019	110.38816	108.6808945	107.0090783	105.3716846	103.7677234	102.1962422	100.6563246	99.14708828	97.66768338
190131A00027	1/31/2019	2.86	1/31/2023	1/31/2019	116.2464	113.5159016	110.8641322	108.2883634	105.7859821	103.354481	100.9914542	98.69459152	96.46167497
190131A00036	1/31/2019	2.69	7/31/2023	1/31/2019	119.72471	116.3445684	113.0783447	109.9215691	106.8699729	103.9194785	101.0661899	98.30638353	95.63649942
190131A00053	1/31/2019	2.67	1/31/2023	1/31/2019	116.26798	113.5265152	110.8643045	108.2785957	105.7667516	103.3262425	100.9546408	98.64961624	96.40893152
190201A00013	2/1/2019	2.89	2/1/2024	2/1/2019	123.15394	119.1267566	115.2541343	111.529305	107.9458366	104.4976121	101.1788131	97.98390277	94.90761107
190208A00005	2/8/2019	2.63	2/8/2023	2/8/2019	116.32244	113.5521985	110.8628096	108.2514385	105.715369	103.2519965	100.8588227	98.53345091	96.2735808
190212A00017	2/12/2019	2.86	6/30/2023	2/12/2019	119.05578	115.80021	112.6511272	109.6044763	106.6563813	103.8031345	101.0411876	98.3671445	95.77775377

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
190213A00023	2/13/2019	2.93	2/13/2024	2/13/2019	123.53529	119.4587319	115.5401148	111.7724551	108.1491173	104.6637952	101.3104931	98.08350896	94.97741822
190222A00029	2/22/2019	2.62	2/22/2021	2/22/2019	103.13613	102.630913	102.1306403	101.6352435	101.1446514	100.6587943	100.1776038	99.70101282	99.2289556
190225A00039	2/25/2019	2.62	2/25/2022	2/25/2019	109.8285	108.2045771	106.6134028	105.054068	103.5256967	102.0274446	100.5584979	99.11807119	97.705407
190226A00006	2/26/2019	2.64	2/26/2024	2/26/2019	123.46588	119.3246312	115.3460333	111.5227935	107.8479906	104.3150516	100.9177321	97.65009768	94.50650669
190228A00036	2/28/2019	2.81	2/28/2022	2/28/2019	109.89816	108.2684939	106.6718001	105.10716	103.5736891	102.0705348	100.596875	99.15191696	97.73489575
181010A00019	10/10/2018	3.21	9/15/2021	10/10/2018	107.3823	106.2342407	105.1107178	104.0109533	102.9341989	101.8797373	100.8468811	99.83497064	98.84337291
181015A00008	10/15/2018	3.15	9/15/2021	10/15/2018	107.31764	106.1699559	105.0468056	103.9474083	102.8710156	101.8169107	100.7844059	99.7728418	98.78158564
181015A00024	10/15/2018	3.29	10/16/2023	10/15/2018	122.49206	118.8313042	115.3008359	111.8952169	108.6092764	105.4380922	102.376977	99.42146583	96.56730339
181023A00036	10/23/2018	2.98	10/23/2020	10/23/2018	100.99969	100.8506085	100.7019837	100.5538093	100.406083	100.2588029	100.1119669	99.96557293	99.81961903
181023A00052	10/23/2018	3.15	10/23/2023	10/23/2018	122.84614	119.1402108	115.5671645	112.1214124	108.7976413	105.5907956	102.4960634	99.50886297	96.62482961
181026A00021	10/29/2018	3.11	1/15/2021	10/29/2018	102.58752	102.1955195	101.8065272	101.4205054	101.03742	100.6572374	100.2799246	99.90544916	99.53377898
181108A00025	11/8/2018	3.44	7/31/2023	11/8/2018	121.43536	118.0435244	114.765471	111.5967479	108.5331055	105.5704837	102.7050028	99.93295413	97.25079145
181114A00010	11/14/2018	3.08	11/15/2021	11/14/2018	108.65824	107.3035746	105.9826502	104.6942165	103.4370851	102.2101249	101.0122587	99.84246014	98.6997507
181115A00061	11/15/2018	2.95	11/16/2020	11/15/2018	101.44678	101.2290381	101.0122499	100.7964045	100.5814957	100.3675174	100.1544633	99.94232743	99.73110382
181123A00016	11/23/2018	3.19	11/23/2022	11/23/2018	115.74942	113.2397337	110.7980471	108.4219785	106.1092567	103.8577099	101.6652608	99.52992105	97.44978688
181130A00025	11/30/2018	3	6/1/2022	11/30/2018	112.30997	110.3731273	108.4799954	106.629164	104.8192884	103.049082	101.3173126	99.62279949	97.96441089
181220A00009	12/20/2018	2.95	12/21/2020	12/20/2018	102.06379	101.7451976	101.4286003	101.1139815	100.8013228	100.4906058	100.1818124	99.8749247	99.56992503
181227A00028	12/27/2018	3.46	12/27/2028	12/27/2018	160.00748	148.2256771	137.4165388	127.4942741	118.381084	110.0063813	102.3060879	95.22200368	88.70123958
190107A00022	1/7/2019	2.83	1/7/2022	1/7/2019	108.94294	107.4848778	106.0535892	104.648396	103.2686443	101.9137014	100.5829553	99.27581323	97.99170159
190107A00028	1/7/2019	2.62	1/7/2022	1/7/2019	108.90261	107.4407563	106.0058033	104.5970718	103.213903	101.85566	100.5217264	99.2115056	97.92442017
190110A00028	1/10/2019	2.78	1/10/2024	1/10/2019	123.08615	119.1144428	115.2930588	111.6155111	108.075628	104.6675359	101.3856433	98.22462564	95.17941116
190110A00078	1/10/2019	2.69	12/7/2021	1/10/2019	108.54989	107.1392092	105.7624123	104.418276	103.105638	101.8233912	100.5704803	99.34589857	98.14868531
190129A00061	1/30/2019	2.92	2/1/2022	1/30/2019	109.53522	107.9979089	106.4901186	105.0110707	103.5600124	102.1362168	100.7389815	99.36762771	98.0214993
190131A00014	1/31/2019	2.79	1/29/2021	1/31/2019	102.71763	102.2846613	101.8553311	101.4295978	101.0074164	100.5887426	100.173533	99.76174469	99.35333554
190131A00019	1/31/2019	3.44	1/30/2034	1/31/2019	198.61151	176.2658455	156.7276394	139.6255447	124.6392493	111.4922282	99.94555427	89.79261149	80.85457408
190205A00013	2/5/2019	2.85	2/5/2021	2/5/2019	102.87102	102.4171931	101.9673639	101.5214831	101.0794987	100.6413598	100.2070164	99.77641931	99.34952017
190211A00010	2/11/2019	2.79	2/11/2021	2/11/2019	102.95325	102.4816149	102.0143013	101.5512514	101.0924067	100.6377102	100.1871057	99.74053802	99.29795304
190214A00012	2/14/2019	2.6	2/14/2022	2/14/2019	109.58314	107.997817	106.4437983	104.9202366	103.4263114	101.961231	100.5242315	99.11457566	97.73155137
190516A00010	5/16/2019	2.43	5/17/2021	5/16/2019	104.43458	103.6751481	102.9267478	102.1891387	101.4620883	100.7453711	100.0387676	99.34206474	98.65505528
190516A00027	5/16/2019	2.43	5/17/2021	5/16/2019	104.43458	103.6751481	102.9267478	102.1891387	101.4620883	100.7453711	100.0387676	99.34206474	98.65505528
190520A00007	5/20/2019	2.52	5/20/2024	5/20/2019	123.70763	119.3027044	115.0797783	111.0302329	107.1459186	103.4191229	99.84254336	96.40926291	93.1127269
190520A00024	5/20/2019	2.32	5/20/2021	5/20/2019	104.51471	103.7444124	102.9854525	102.2375817	101.500558	100.7741466	100.0581191	99.35225405	98.65633591
190521A00068	5/21/2019	2.47	9/15/2021	5/21/2019	106.58479	105.4413953	104.3224682	103.2272317	102.1549391	101.1048748	100.0763528	99.06871496	98.0813299

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
190522A00019	5/23/2019	2.55	5/15/2024	5/23/2019	123.74162	119.3525416	115.1442141	111.1081072	107.2361538	103.520717	99.95456473	96.53084517	93.24306403
190523A00006	5/23/2019	2.31	5/24/2021	5/23/2019	104.57788	103.7951849	103.0241847	102.2646175	101.5162301	100.7787771	100.0520199	99.33572701	98.62967355
190523A00016	5/23/2019	2.48	2/15/2023	5/23/2019	115.54911	112.7754152	110.0831982	107.4695812	104.9318104	102.4672457	100.0733557	97.7477123	95.48798592
190523A00018	5/23/2019	2.51	3/15/2024	5/23/2019	122.51707	118.353937	114.3559063	110.5155032	106.8256354	103.2795713	99.87091927	96.59360901	93.44187287
190523A00034	5/23/2019	2.31	5/21/2021	5/23/2019	104.52496	103.7515843	102.9896377	102.2388656	101.4990234	100.7698734	100.0511849	99.34273389	98.64430253
190528A00009	5/28/2019	2.45	5/15/2024	5/28/2019	123.3396	118.9583394	114.7575867	110.7288255	106.8639975	103.1554743	99.5960318	96.17882589	92.89736961
190529A00020	5/29/2019	2.38	5/29/2024	5/29/2019	123.29457	118.8680441	114.6255618	110.558353	106.6581272	102.9170416	99.32767353	95.88299468	92.57634747
190530A00026	5/30/2019	2.36	5/26/2021	5/30/2019	104.53972	103.7526281	102.9773612	102.2136539	101.461249	100.7198971	99.98935589	99.26939018	98.55977156
190530A00029	5/30/2019	2.25	5/30/2024	5/30/2019	123.61361	119.1551219	114.8826141	110.7872008	106.8604793	103.0945021	99.48174874	96.01509978	92.68781235
190603A00040	6/3/2019	2.11	6/3/2022	6/3/2019	110.37102	108.4525272	106.5773521	104.7441155	102.9514956	101.1982264	99.48309487	97.80493818	96.16264082
190603A00050	6/3/2019	2.19	6/3/2021	6/3/2019	104.54609	103.7347002	102.9358623	102.1492909	101.374705	100.6118325	99.86040916	99.12017879	98.39089276
190604A00007	6/4/2019	2.23	7/8/2021	6/4/2019	105.16131	104.2401816	103.3351444	102.4457815	101.5716883	100.712474	99.86776101	99.03718446	98.2203916
190604A00033	6/4/2019	2.23	6/4/2021	6/4/2019	104.59417	103.7795204	102.9775233	102.1878873	101.4103283	100.6445708	99.89034781	99.14740012	98.41547633
190605A00005	6/5/2019	2.01	6/5/2024	6/5/2019	122.73369	118.272315	113.9978646	109.9014019	105.9744779	102.2090993	98.59770056	95.13311802	91.80856575
190610A00017	6/10/2019	2.29	6/10/2024	6/10/2019	123.13073	118.6672515	114.3906388	110.2919981	106.3629111	102.5954099	98.98194939	95.51538259	92.18893651
190617A00027	6/17/2019	2.21	6/16/2023	6/17/2019	116.85719	113.6793842	110.6048085	107.6294814	104.7496035	101.9615467	99.26184476	96.6471851	94.11440085
190619A00009	6/19/2019	2.26	6/19/2024	6/19/2019	123.15878	118.6645013	114.3593015	110.2341925	106.2806655	102.4906625	98.85654921	95.37109052	92.0274272
190620A00025	6/20/2019	2.04	6/20/2022	6/20/2019	110.503	108.5317424	106.6056001	104.7232159	102.8832881	101.0845645	99.32583974	97.60595329	95.92378743
180918A00037	9/18/2018	3.06	9/17/2021	9/18/2018	107.2597	106.1060334	104.9771618	103.8722935	102.7906683	101.7315581	100.6942647	99.67811869	98.68247769
180919A00018	9/19/2018	3.12	6/20/2022	9/19/2018	112.54586	110.5547186	108.6090763	106.7075666	104.848877	103.0317449	101.2549548	99.51733657	97.81776324
180926A00031	9/26/2018	3.24	9/26/2023	9/26/2018	121.93332	118.3465716	114.8857348	111.5456421	108.3213683	105.208221	102.2017273	99.29762256	96.49183927
180928A00033	9/28/2018	2.87	9/28/2020	9/28/2018	100.51925	100.4409584	100.3627884	100.2847434	100.2068232	100.1290274	100.0513557	99.9738078	99.8963835
181001A00019	10/1/2018	3.02	10/1/2020	10/1/2018	100.57348	100.4869055	100.4004751	100.3141933	100.2280598	100.1420742	100.0562361	99.97054514	99.885001
181002A00019	10/2/2018	2.98	10/4/2021	10/2/2018	107.69459	106.4814169	105.2955293	104.1360183	103.0020111	101.8926728	100.8072047	99.74484243	98.70485369
181002A00055	10/2/2018	3.14	10/3/2022	10/2/2018	114.6385	112.3008561	110.0234441	107.8042821	105.6414712	103.5331896	101.477689	99.47329083	97.51838302
181005A00010	10/5/2018	2.95	10/5/2020	10/5/2018	100.65695	100.5589015	100.4610552	100.3634081	100.2659596	100.1687092	100.0716561	99.9747997	99.87813943
181005A00012	10/5/2018	3.33	10/4/2024	10/5/2018	130.66174	125.6214012	120.806566	116.2058672	111.8085769	107.6045675	103.5842741	99.73866022	96.05918504
181010A00021	10/10/2018	3.29	3/15/2023	10/10/2018	118.23182	115.3306223	112.5167202	109.7869465	107.1382685	104.5677838	102.072713	99.65039437	97.2982774
181022A00029	10/22/2018	3.22	10/24/2022	10/22/2018	115.22521	112.8165815	110.4712528	108.1870932	105.9620588	103.7941918	101.6816156	99.62253075	97.61521134
181113A00066	11/13/2018	3.25	11/15/2021	11/13/2018	108.64351	107.2926408	105.9753514	104.6904017	103.436611	102.2128549	101.018063	99.85121516	98.71133853
181114A00024	11/14/2018	3.27	12/14/2021	11/14/2018	109.1775	107.7581752	106.3703999	105.0131197	103.6853297	102.3860693	101.11442	99.86950282	98.65047622
181115A00028	11/15/2018	2.95	11/16/2020	11/15/2018	101.44678	101.2290381	101.0122499	100.7964045	100.5814957	100.3675174	100.1544633	99.94232743	99.73110382
181123A00021	11/23/2018	3.25	11/22/2023	11/23/2018	123.08931	119.2960552	115.6414726	112.1195997	108.7247772	105.4516276	102.2950397	99.25015251	96.31234134

Classification | Public

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
181206A00010	12/6/2018	3.09	12/6/2021	12/6/2018	108.82383	107.4162872	106.0428163	104.7021848	103.3932155	102.1147871	100.865831	99.64532847	98.45230739
181206A00012	12/6/2018	3.14	12/6/2023	12/6/2018	122.97915	119.1415328	115.4455621	111.8851315	108.4544366	105.1479616	101.960463	98.88695391	95.9226897
181207A00004	12/7/2018	3.05	12/7/2020	12/7/2018	101.83271	101.5547562	101.2783241	101.0034032	100.729981	100.4580452	100.1875837	99.91858449	99.65103562
181210A00015	12/10/2018	3.12	12/11/2023	12/10/2018	123.00433	119.1501518	115.4386498	111.8636785	108.4194017	105.1002711	101.9010101	98.81659868	95.84225879
181211A00043	12/11/2018	3.14	12/11/2023	12/11/2018	123.07495	119.2195534	115.5068674	111.9307447	108.485348	105.1651278	101.9648065	98.87936303	95.90401837
181212A00027	12/12/2018	2.99	12/12/2023	12/12/2018	123.28632	119.4061381	115.6700428	112.0718234	108.6055738	105.2656796	102.0468016	98.94386051	95.95202229
181214A00023	12/14/2018	3.07	12/14/2021	12/14/2018	108.9097	107.4922953	106.106402	104.7509706	103.4249971	102.127522	100.8576276	99.61443563	98.39710557
181218A00072	12/18/2018	3.04	12/19/2022	12/18/2018	115.89085	113.2989367	110.7787095	108.3277203	105.9436255	103.6241779	101.3672217	99.17068855	97.0325928
170602A00015	6/2/2017	1.76	6/2/2021	6/2/2017	104.30964	103.5007546	102.7043668	101.9201876	101.1479383	100.3873481	99.63815482	98.90010374	98.17294783
170602A00023	6/2/2017	2.09	6/2/2023	6/2/2017	116.8565	113.7103879	110.6658135	107.7187989	104.8655567	102.102477	99.4261172	96.83319308	94.32056971
170602A00033	6/2/2017	2.09	6/2/2022	6/2/2017	110.31751	108.4025761	106.5308446	104.7009372	102.911531	101.1613594	99.44920926	97.77391748	96.13436893
170602A00034	6/2/2017	1.76	6/2/2021	6/2/2017	104.30964	103.5007546	102.7043668	101.9201876	101.1479383	100.3873481	99.63815482	98.90010374	98.17294783
170609A00009	6/9/2017	1.82	6/9/2021	6/9/2017	104.46957	103.6386079	102.8208296	102.0159188	101.2235734	100.4435009	99.67541774	98.91904895	98.174128
170613A00033	6/13/2017	2.3	6/13/2024	6/13/2017	124.06412	119.5492169	115.224015	111.0794697	107.107021	103.2985663	99.64643275	96.14335204	92.78243616
170619A00084	6/19/2017	1.95	6/20/2022	6/19/2017	110.69984	108.7199744	106.7855286	104.8951333	103.0474752	101.2412907	99.47536371	97.74852377	96.05964349
170719A00006	7/19/2017	1.93	1/19/2021	7/19/2017	102.19714	101.7944756	101.3949904	100.9986454	100.6054037	100.2152287	99.82808454	99.44393602	99.06274833
170731A00006	7/31/2017	2.16	8/1/2022	7/31/2017	111.43066	109.3223483	107.2647945	105.2564622	103.295871	101.3815948	99.51226013	97.68654312	95.90316785
170809A00005	8/9/2017	2.61	8/11/2025	8/9/2017	131.92892	125.7948643	119.9842484	114.4783169	109.2594992	104.311328	99.61836501	95.16613085	90.94104076
170814A00084	8/14/2017	1.91	8/15/2022	8/14/2017	111.5485	109.3885591	107.2817398	105.2263998	103.2209558	101.2638846	99.35372006	97.48905081	95.66851764
170815A00006	8/15/2017	2.5	8/15/2024	8/15/2017	125.13942	120.4135794	115.8935896	111.5693794	107.4314291	103.4707336	99.67877122	96.04747548	92.56920813
170818A00003	8/18/2017	2.23	8/20/2024	8/18/2017	124.94571	120.1822117	115.6275873	111.2715577	107.1044063	103.1169451	99.30048278	95.64679498	92.1480967
170831A00006	8/31/2017	1.87	8/31/2022	8/31/2017	111.72702	109.5159474	107.3604018	105.2586278	103.2089357	101.2097012	99.25936268	97.35641801	95.49942186
170907A00050	9/7/2017	1.69	9/7/2021	9/7/2017	105.79755	104.6811752	103.5882453	102.5180262	101.4698159	100.442941	99.43675551	98.45063909	97.48399606
170920A00028	9/21/2017	2.16	9/21/2022	9/21/2017	112.27855	110.0042857	107.7880929	105.6280847	103.522454	101.4694657	99.46745371	97.51481713	95.61001739
171003A00005	10/3/2017	1.92	10/5/2020	10/3/2017	100.54027	100.4424977	100.3449229	100.247545	100.1503635	100.0533777	99.95658707	99.85999101	99.7635889
171010A00004	10/10/2017	1.92	10/12/2021	10/10/2017	106.62748	105.3953451	104.1915556	103.0151424	101.8651799	100.7407837	99.6411085	98.56534603	97.51272279
171010A00038	10/10/2017	2.23	10/11/2022	10/10/2017	112.76484	110.42389	108.1438323	105.9226465	103.7583935	101.6492139	99.59332437	97.58901353	95.63463858
171012A00020	10/12/2017	1.93	10/13/2020	10/12/2017	100.66636	100.5460012	100.4259433	100.3061871	100.1867313	100.0675748	99.9487164	99.83015501	99.71188947
171012A00026	10/12/2017	2.09	10/12/2021	10/12/2017	106.62819	105.399127	104.1982853	103.0247027	101.877459	100.755675	99.65851034	98.5851612	97.53485846
171017A00023	10/17/2017	1.97	10/19/2020	10/17/2017	100.76495	100.6276318	100.4907003	100.3541555	100.2179956	100.082219	99.94682409	99.8118092	99.67717274
171018A00003	10/18/2017	2.23	10/18/2023	10/18/2017	119.64309	116.0064316	112.5001707	109.1188365	105.8572256	102.7103859	99.67360358	96.74238891	93.91246459
190301A00012	3/1/2019	3.41	3/1/2029	3/1/2019	160.7497	148.6673993	137.6028332	127.464445	118.1693762	109.6425989	101.8161386	94.62837662	88.0234261
190308A00014	3/8/2019	2.69	3/8/2021	3/8/2019	103.35587	102.809541	102.2689818	101.7341053	101.204822	100.6810444	100.1626869	99.64966556	99.14189815

Classification | Public

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
190311A00003	3/11/2019	2.68	9/10/2021	3/11/2019	106.71899	105.5905719	104.4859741	103.4044442	102.3452649	101.3077485	100.2912351	99.29509157	98.31870984
190313A00011	3/13/2019	2.53	3/11/2022	3/13/2019	109.94449	108.2771977	106.6441092	105.0442515	103.476688	101.9405169	100.4348696	98.95890909	97.51182877
190313A00019	3/13/2019	2.73	7/15/2022	3/13/2019	112.2685	110.2034937	108.1870527	106.2177402	104.2941708	102.4150091	100.5789671	98.78480261	97.03131736
190315A00014	3/15/2019	2.74	3/15/2024	3/15/2019	123.39753	119.2180421	115.2041353	111.3483199	107.6434859	104.082885	100.66011	97.36907533	94.20399885
190315A00026	3/15/2019	2.66	1/19/2021	3/15/2019	102.48557	102.0822119	101.6820316	101.2849956	100.8910668	100.5002087	100.1123855	99.72756166	99.34570254
190326A00024	3/26/2019	2.59	3/26/2024	3/26/2019	123.01552	118.807408	114.7672091	110.8872657	107.1603187	103.5794815	100.138218	96.83032301	93.64990328
190327A00013	3/27/2019	2.53	3/27/2024	3/27/2019	122.80105	118.5937121	114.5543991	110.675443	106.9495745	103.3698978	99.92986827	96.62327307	93.44421173
190327A00024	3/27/2019	2.48	3/25/2022	3/27/2019	109.81603	108.1136484	106.4466242	104.8139349	103.2145928	101.6476481	100.1121865	98.607328	97.13222483
190327A00032	3/27/2019	2.53	1/26/2024	3/27/2019	121.71906	117.7375897	113.908465	110.225043	106.681007	103.2703487	99.98735126	96.82657378	93.78283614
190328A00031	4/25/2019	2.56	4/25/2024	4/25/2019	123.43125	119.1145668	114.9734106	110.9996158	107.1854477	103.5235778	100.0070599	96.62930753	93.38407271
190329A00033	3/29/2019	2.52	3/29/2021	3/29/2019	103.63025	103.0208904	102.4186826	101.8234986	101.2352161	100.6537157	100.0788807	99.51059689	98.94875296
190401A00007	4/1/2019	2.6	4/3/2023	4/1/2019	116.70549	113.7656088	110.9156717	108.1523518	105.47247	102.8729862	100.3509928	97.9037073	95.52846626
190416A00019	4/16/2019	2.7	4/14/2023	4/16/2019	117.18139	114.1994645	111.3095814	108.5083035	105.7923442	103.1585626	100.6039563	98.12565397	95.7209087
190424A00023	4/24/2019	2.43	4/24/2023	4/24/2019	117.16515	114.1387302	111.2067838	108.3657385	105.6121814	102.9428533	100.3546405	97.8445676	95.40978956
190430A00021	4/30/2019	2.52	10/29/2021	4/30/2019	107.43286	106.1445388	104.8870219	103.6592109	102.4600628	101.288583	100.1438222	99.02487423	97.93087355
190509A00019	5/9/2019	2.5	10/12/2021	5/9/2019	107.1021	105.870081	104.6663272	103.4898783	102.3398132	101.2152513	100.1153512	99.03930803	97.98635158
190515A00013	5/15/2019	2.45	11/16/2020	5/15/2019	101.31035	101.0931299	100.8768561	100.6615196	100.447114	100.2336335	100.0210719	99.8094233	99.59868175
190521A00043	5/21/2019	2.54	5/22/2023	5/21/2019	117.40175	114.2957196	111.2887019	108.376859	105.5565309	102.8242274	100.176619	97.61052784	95.12291984
190528A00005	5/28/2019	2.42	6/15/2023	5/28/2019	117.46586	114.2822882	111.2019979	108.2210018	105.335497	102.5418521	99.8365984	97.21642135	94.67815239
190528A00007	5/28/2019	2.44	11/15/2023	5/28/2019	120.15511	116.4349573	112.8505284	109.3960121	106.0658904	102.8549191	99.75811173	96.77072474	93.88824404
190528A00015	5/28/2019	2.42	5/27/2022	5/28/2019	110.8193	108.9176852	107.058688	105.2409382	103.4631292	101.7240107	100.0223851	98.35710455	96.7270689
190318A00008	3/18/2019	2.76	3/18/2024	3/18/2019	123.5281	119.3364252	115.3110919	111.4445631	107.7296835	104.1596629	100.7280547	97.42873695	94.25589333
190318A00015	3/18/2019	2.66	3/18/2021	3/18/2019	103.51458	102.9381973	102.3682384	101.8045913	101.2471517	100.6958171	100.1504876	99.61106516	99.07745417
190321A00003	3/21/2019	2.67	3/21/2024	3/21/2019	123.2359	119.0399086	115.0107974	111.1409811	107.4232679	103.8508332	100.4171989	97.11621344	93.9420335
190321A00038	3/21/2019	2.64	9/21/2020	3/21/2019	100.36555	100.3069875	100.2485055	100.1901046	100.1317845	100.0735453	100.0153867	99.9573085	99.89931062
190326A00007	3/26/2019	2.5	3/26/2021	3/26/2019	103.5657	102.9654474	102.3721459	101.7856711	101.2059058	100.6327351	100.0660472	99.50573239	98.95168363
190326A00032	3/26/2019	2.4	3/26/2024	3/26/2019	123.06948	118.8397446	114.7792713	110.8803273	107.1355765	103.5380605	100.081176	96.75865478	93.56454474
190327A00062	3/27/2019	2.44	3/26/2021	3/27/2019	103.53078	102.9306472	102.3374615	101.7511016	101.1714502	100.5983926	100.0318167	99.47161309	98.91767462
190328A00011	3/28/2019	2.37	3/28/2024	3/28/2019	122.98814	118.7533816	114.6883146	110.7851695	107.0365829	103.4355709	99.97550648	96.65009973	93.453378
190328A00030	4/25/2019	2.48	4/26/2021	4/25/2019	104.09984	103.4050753	102.7195653	102.0431255	101.3755769	100.7167449	100.0664597	99.42455572	98.79087181
190328A00033	4/25/2019	2.56	4/25/2024	4/25/2019	123.43125	119.1145668	114.9734106	110.9996158	107.1854477	103.5235778	100.0070599	96.62930753	93.38407271
190401A00005	4/1/2019	2.54	4/1/2021	4/1/2019	103.69523	103.0767348	102.4655961	101.8616851	101.2648743	100.6750391	100.0920579	99.51581166	98.9461844
190402A00004	4/2/2019	2.9	4/2/2029	4/2/2019	158.65197	146.4244587	135.243343	125.0132292	115.6479034	107.0694009	99.20717653	91.99736295	85.38210611

	Parallel-Shift Sensitivity Analysis												
8/31/2020					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	110.19878	108.4518477	106.7417762	105.0674732	103.4278875	101.8220093	100.2488675	98.70752838	97.19709354
190403A00024	4/3/2019	2.61	7/29/2022	4/3/2019	112.28418	110.1762446	108.1188183	106.1103802	104.1494629	102.234653	100.3645884	98.53795658	96.75349208
190408A00004	4/8/2019	2.6	10/8/2021	4/8/2019	107.14443	105.9248822	104.7330304	103.5679382	102.4287116	101.3144962	100.224475	99.15786603	98.11392082
190409A00041	4/9/2019	2.57	4/5/2021	4/9/2019	103.78467	103.1539018	102.5307912	101.9151966	101.3069827	100.7060173	100.1121712	99.52531859	98.94533634
190411A00019	5/1/2019	2.63	5/2/2022	5/1/2019	110.75165	108.9255324	107.139073	105.3910516	103.6802943	102.0056751	100.3661138	98.76057344	97.18805798
190422A00084	4/22/2019	2.6	4/22/2021	4/22/2019	104.10836	103.4255436	102.7516749	102.0865769	101.4300792	100.7820155	100.1422242	99.51054728	98.88683115
190424A00015	4/24/2019	2.55	4/26/2021	4/24/2019	104.14675	103.4518088	102.7661227	102.0895085	101.421787	100.7627839	100.1123291	99.47025707	98.83640664
190426A00008	4/26/2019	2.57	4/26/2022	4/26/2019	110.53889	108.7329301	106.9659172	105.2366569	103.5440066	101.88687	100.2641945	98.6749694	97.11822353
190426A00016	5/1/2019	2.58	4/14/2023	5/1/2019	116.84682	113.869536	110.9841843	108.1873311	105.475693	102.8461326	100.2956506	97.82137871	95.42057288
190429A00004	4/29/2019	2.65	4/15/2024	4/29/2019	123.60659	119.3203898	115.2073087	111.2593516	107.4689397	103.8288892	100.3323878	96.97297333	93.74451338
190507A00014	5/7/2019	2.6	5/7/2024	5/7/2019	123.80206	119.4382398	115.2531761	111.2384885	107.3862398	103.6889137	100.1393898	96.73091961	93.45710474
181030A00012	10/30/2018	3.32	10/30/2023	10/30/2018	122.86916	119.1568732	115.5779771	112.1268438	108.7981256	105.5867357	102.4878329	99.49680849	96.60927285
181101A00020	11/1/2018	3.26	11/1/2021	11/1/2018	108.38549	107.08135	105.8085709	104.566028	103.3526531	102.1674278	101.0093805	99.87758402	98.77115288
181114A00012	11/14/2018	3.13	11/14/2022	11/14/2018	115.89352	113.4016574	110.9768403	108.6167468	106.3191548	104.0819391	101.9030654	99.78058626	97.71263595
181114A00021	11/14/2018	3.17	11/14/2023	11/14/2018	123.35895	119.5708414	115.9207319	112.4027144	109.0111788	105.740793	102.5864875	99.54343954	96.6070601
181116A00015	11/19/2018	3.29	2/15/2024	11/19/2018	124.91961	120.8108125	116.8612146	113.0637735	109.4117948	105.8989167	102.5190911	99.26656657	96.13587193
181119A00018	11/19/2018	3.28	11/17/2023	11/19/2018	123.09326	119.316771	115.6778169	112.1705092	108.7892566	105.5287452	102.3839223	99.34998198	96.4223507
181120A00024	11/20/2018	3.25	11/20/2023	11/20/2018	123.04941	119.2635659	115.6159178	112.100535	108.711786	105.4443196	102.2930485	99.25313438	96.31997366
181121A00014	11/21/2018	3.18	11/19/2021	11/21/2018	108.63581	107.2720616	105.9425315	104.645942	103.3810794	102.1467889	100.9419712	99.76557928	98.61661501
181126A00048	11/26/2018	3.24	11/25/2022	11/26/2018	115.90728	113.3893277	110.9397219	108.5560717	106.2360892	103.9775866	101.7784719	99.63674259	97.55048185
181204A00023	12/4/2018	3.16	12/3/2021	12/4/2018	108.87308	107.4686611	106.0992884	104.7636572	103.4605254	102.1887116	100.947091	99.73459235	98.55019477
181218A00077	12/18/2018	3.09	12/18/2023	12/18/2018	123.03145	119.1542405	115.4211359	111.8259519	108.3628072	105.0261075	101.8105294	98.71100576	95.72271152
181220A00027	12/20/2018	2.97	2/28/2022	12/20/2018	110.14795	108.5162351	106.9175343	105.3509235	103.8155169	102.3104612	100.8349333	99.38813951	97.96931399
181221A00024	12/21/2018	2.96	12/28/2020	12/21/2018	102.19644	101.8574577	101.5207214	101.1862095	100.8539001	100.5237715	100.1958022	99.86997128	99.54625777
181226A00036	12/26/2018	3.02	12/26/2023	12/26/2018	122.93312	119.0318422	115.2762508	111.6601171	108.1775095	104.8227821	101.5905593	98.47572126	95.47338998
181226A00045	12/26/2018	2.87	12/28/2020	12/26/2018	102.16646	101.8275433	101.4908696	101.15642	100.8241726	100.4941056	100.1661978	99.84042792	99.51677519
181226A00059	12/26/2018	2.87	12/28/2020	12/26/2018	102.16646	101.8275433	101.4908696	101.15642	100.8241726	100.4941056	100.1661978	99.84042792	99.51677519
190104A00033	1/4/2019	3.37	1/31/2029	1/4/2019	159.7814	147.8694319	136.9518341	126.9399801	117.7535863	109.3198847	101.5728832	94.45270318	87.90498427
190108A00002	1/8/2019	2.89	1/8/2021	1/8/2019	102.3747	102.0035104	101.6350145	101.2691858	100.9059955	100.5454149	100.187416	99.83197103	99.47905262
190111A00010	1/11/2019	2.87	1/7/2022	1/11/2019	108.9993	107.5408149	106.1091123	104.7035125	103.3233613	101.9680259	100.6368939	99.32937251	98.0448879
190111A00037	1/11/2019	2.68	1/11/2022	1/11/2019	109.06087	107.5858852	106.1382466	104.7172544	103.3222345	101.9525347	100.6075245	99.28659367	97.98915168
190114A00040	1/14/2019	2.89	1/14/2025	1/14/2019	130.64996	125.2551428	120.1157617	115.2183824	110.5503495	106.0997348	101.8552917	97.80641225	93.94308826
190114A00043	1/14/2019	2.88	1/14/2022	1/14/2019	109.1425	107.6621294	106.2092855	104.7832684	103.3833971	102.0090133	100.6594802	99.33418163	98.03252135

Classification | Public

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
190114A00061	1/14/2019	2.98	1/31/2024	1/14/2019	123.46671	119.4374548	115.562651	111.835549	108.249727	104.7990779	101.477792	98.28034056	95.20146123
181226A00060	12/26/2018	2.9	12/27/2021	12/26/2018	108.85797	107.4259394	106.0212344	104.6431089	103.2908457	101.9637534	100.6611651	99.38243741	98.1269494
181227A00027	12/27/2018	3.24	12/26/2025	12/27/2018	137.99879	131.2135774	124.807495	118.7573416	113.0414579	107.6396133	102.5329042	97.70366001	93.13535703
190102A00026	1/2/2019	2.62	1/4/2022	1/2/2019	108.84794	107.3954443	105.9695272	104.569523	103.1947844	101.8446851	100.5186193	99.21600028	97.9362601
190103A00005	1/3/2019	2.61	1/4/2021	1/3/2019	102.24995	101.8900929	101.5327661	101.1779474	100.8256104	100.4757291	100.1282778	99.7832313	99.44056453
190107A00021	1/7/2019	2.79	1/7/2021	1/7/2019	102.32024	101.9520722	101.5865553	101.2236629	100.8633665	100.5056384	100.1504511	99.79777758	99.44759109
190107A00023	1/7/2019	2.87	1/6/2023	1/7/2019	115.8088	113.1623522	110.5902204	108.0898977	105.6589808	103.295161	100.9962198	98.76002497	96.58452676
190107A00035	1/7/2019	2.82	10/15/2021	1/7/2019	107.52886	106.2846012	105.0690884	103.8813366	102.7204024	101.5853847	100.4754223	99.38969195	98.32740607
190107A00036	1/7/2019	2.84	4/15/2022	1/7/2019	110.79795	109.0234446	107.2866931	105.586562	103.9219617	102.291846	100.6952094	99.13108592	97.59854625
190110A00006	1/10/2019	2.73	11/15/2022	1/10/2019	114.9783	112.4940346	110.0767382	107.7240889	105.4338637	103.2039367	101.032273	98.91692484	96.85602622
190110A00012	1/10/2019	2.97	1/18/2024	1/10/2019	123.18551	119.2042285	115.3741098	111.6886033	108.1414826	104.726823	101.4389854	98.27260076	95.22255613
190114A00042	1/14/2019	2.92	1/13/2023	1/14/2019	116.06404	113.3924155	110.796365	108.2733228	105.8208264	103.4365115	101.1181069	98.86343027	96.67038451
190122A00043	1/22/2019	2.96	1/22/2025	1/22/2019	131.14261	125.7084492	120.5326796	115.6016488	110.9025015	106.4231243	102.1520991	98.07865983	94.19265122
190201A00011	2/1/2019	2.8	2/4/2022	2/1/2019	109.41569	107.8693899	106.3529603	104.8656119	103.4065784	101.97512	100.570522	99.19209393	97.83916839
190208A00009	2/8/2019	2.67	2/8/2024	2/8/2019	123.23035	119.157644	115.242603	111.4782629	107.8580089	104.3755533	101.0249181	97.80041737	94.69664141
190214A00006	2/14/2019	2.67	2/14/2024	2/14/2019	123.34666	119.2504362	115.3135479	111.5289246	107.8898496	104.3899404	101.0231301	97.78364985	94.66601287
190215A00006	2/15/2019	2.89	2/15/2024	2/15/2019	123.42476	119.3431188	115.4198989	111.6480787	108.0209919	104.5323035	101.175991	97.94632723	94.83786453
190222A00028	2/22/2019	2.62	2/22/2022	2/22/2019	109.76987	108.156416	106.5753149	105.025675	103.5066354	102.0173666	100.5570681	99.12496811	97.72032142
190228A00039	2/28/2019	2.88	2/28/2024	2/28/2019	123.63863	119.5070223	115.5374331	111.7226103	108.055667	104.5300619	101.1395804	97.8783163	94.74065431
190311A00009	3/11/2019	2.54	3/11/2022	3/11/2019	109.96045	108.2930222	106.6598027	105.0598165	103.4921267	101.9558316	100.4500624	98.97398226	97.52678431
190313A00017	3/13/2019	2.73	7/15/2022	3/13/2019	112.2685	110.2034937	108.1870527	106.2177402	104.2941708	102.4150091	100.5789671	98.78480261	97.03131736
190326A00001	3/26/2019	2.55	3/28/2022	3/26/2019	109.98309	108.2704607	106.5935186	104.9512186	103.3425596	101.7665791	100.2223507	98.70898291	97.22561726
190326A00004	3/26/2019	2.58	9/26/2023	3/26/2019	119.75861	116.2070472	112.780468	109.473732	106.2819454	103.2004453	100.2247877	97.35073534	94.57424683
190326A00014	3/26/2019	2.56	9/28/2020	3/26/2019	100.48207	100.4039353	100.3259239	100.248036	100.1702711	100.0926291	100.0151096	99.93771243	99.86043729
171026A00009	10/26/2017	2.75	10/27/2025	10/26/2017	134.05588	127.5935773	121.4841694	115.7064406	110.2405671	105.0680201	100.1714736	95.53471959	91.1425896
171026A00010	10/26/2017	2.84	10/26/2026	10/26/2017	140.78861	132.8009141	125.3220193	118.3167354	111.7524919	105.5991311	99.82871659	94.41535753	89.33504804
171027A00049	10/27/2017	2.04	10/27/2020	10/27/2017	100.90283	100.7428478	100.583374	100.4244092	100.265951	100.1079969	99.95054472	99.79359194	99.63713623
171030A00023	10/30/2017	2.9	11/1/2027	10/30/2017	147.43656	137.8193256	128.9024708	120.6311287	112.9550209	105.8280462	99.2079116	93.05579829	87.33605855
171031A00007	10/31/2017	2.15	12/27/2021	10/31/2017	107.82532	106.4008634	105.0035907	103.632766	102.2876761	100.967633	99.67197345	98.40005739	97.15126713
171031A00029	10/31/2017	2.43	10/31/2023	10/31/2017	119.8598	116.1944494	112.6613369	109.2548718	105.9697407	102.8008891	99.74350787	96.79301858	93.94506128
171031A00060	10/31/2017	1.98	10/30/2020	10/31/2017	100.94039	100.7719239	100.604014	100.4366615	100.2698637	100.1036178	99.93792117	99.77277109	99.6081649
171101A00022	11/1/2017	2.65	11/1/2024	11/1/2017	127.17599	122.142728	117.3384429	112.7514046	108.370559	104.1854816	100.1863368	96.36384119	92.70922909
171115A00028	11/15/2017	2.25	8/18/2021	11/15/2017	105.86783	104.8162503	103.7854996	102.7749657	101.784058	100.8122088	99.85887193	98.92352217	98.00565386

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
171121A00013	11/21/2017	1.98	11/23/2020	11/21/2017	101.35085	101.1133449	100.876963	100.641695	100.4075328	100.1744688	99.94249501	99.71160392	99.48178785
171129A00010	11/29/2017	2.32	11/29/2021	11/29/2017	107.72223	106.3325087	104.9784964	103.6588312	102.3722194	101.1174314	99.89329787	98.69870621	97.53259705
171206A00040	12/6/2017	2.23	12/6/2022	12/6/2017	114.17512	111.6341304	109.1630679	106.7594899	104.4210575	102.1455332	99.93077562	97.77473476	95.67544681
171206A00042	12/6/2017	2.24	12/7/2020	12/6/2017	101.61075	101.3332	101.0571692	100.7826478	100.5096235	100.2380839	99.968017	99.69941069	99.43225312
171207A00019	12/7/2017	2.41	6/16/2022	12/7/2017	111.13241	109.1672692	107.2469331	105.3700395	103.5352789	101.7413929	99.98717152	98.27145098	96.5931115
171220A00004	12/20/2017	2.52	12/20/2021	12/20/2017	108.24779	106.8282491	105.4382004	104.076741	102.7430009	101.4361458	100.1553751	98.89992023	97.66904308
180102A00021	1/2/2018	2.82	1/2/2026	1/2/2018	135.63044	128.8862607	122.5210519	116.5115559	110.8360603	105.4742851	100.4072818	95.6173389	91.08789546
180109A00025	1/9/2018	2.33	1/11/2021	1/9/2018	102.22109	101.8415474	101.464834	101.0909137	100.7197554	100.3513286	99.98560289	99.62254872	99.26213675
180110A00027	1/10/2018	2.6	1/10/2023	1/10/2018	115.20718	112.5557435	109.979129	107.474805	105.0403409	102.6734021	100.371746	98.13321742	95.95574478
180110A00028	1/10/2018	2.85	1/10/2025	1/10/2018	129.37778	124.0555069	118.9841887	114.1506858	109.5426164	105.1483067	100.9567465	96.95754836	93.14090909
180110A00048	1/10/2018	2.37	1/7/2021	1/10/2018	102.16851	101.8006822	101.4355048	101.07295	100.7129894	100.3555954	100.0007403	99.64839726	99.29853954
180116A00008	1/16/2018	2.37	1/15/2021	1/16/2018	102.30348	101.912156	101.5238328	101.1384763	100.7560524	100.3765276	99.99986894	99.62604396	99.25502064
180117A00017	1/17/2018	2.45	6/17/2021	1/17/2018	104.98588	104.1299304	103.2879121	102.459488	101.6443306	100.8421228	100.0525578	99.27533819	98.51017601
180118A00037	1/18/2018	2.88	1/21/2025	1/18/2018	129.72397	124.3558096	119.2423396	114.3701392	109.7265671	105.2997099	101.0783358	97.05185255	93.21026731
190701A00007	7/2/2019	2.09	7/1/2022	7/2/2019	110.78066	108.7731293	106.811966	104.8958269	103.0234139	101.1934749	99.40480125	97.65622648	95.94662426
190703A00015	7/3/2019	2.02	1/6/2021	7/3/2019	102.07425	101.7089728	101.3463155	100.9862481	100.6287429	100.2737726	99.92131021	99.57132913	99.22380313
190711A00019	7/11/2019	2.19	7/11/2023	7/11/2019	117.20959	113.9465326	110.7914973	107.7403246	104.7890412	101.9338484	99.17111247	96.49735747	93.90925689
190715A00024	7/15/2019	2.17	7/15/2021	7/15/2019	105.22607	104.283051	103.3568938	102.4471453	101.5533722	100.6751561	99.81209351	98.96379446	98.12988241
190715A00029	7/17/2019	2.16	4/18/2022	7/17/2019	109.69495	107.9210141	106.1849817	104.4857106	102.8221014	101.1930989	99.5976894	98.03489893	96.50379096
190724A00022	7/24/2019	1.94	7/23/2021	7/24/2019	105.29407	104.3239459	103.3716389	102.4366584	101.518535	100.6168158	99.7310641	98.86085859	98.00579266
190729A00008	7/29/2019	2.18	1/29/2024	7/29/2019	120.48195	116.5128206	112.696123	109.0251953	105.4936995	102.0956077	98.82518519	95.67697492	92.64578204
190730A00007	7/30/2019	2.19	7/30/2024	7/30/2019	123.54159	118.9025107	114.4636996	110.2154592	106.1486159	102.2544858	98.52484663	94.95191035	91.52829795
190802A00004	8/2/2019	2	8/2/2022	8/2/2019	111.12412	109.0159191	106.9585532	104.950484	102.9902267	101.076351	99.20747949	97.38228453	95.59948664
190802A00032	8/2/2019	2.01	8/2/2024	8/2/2019	122.82189	118.1875552	113.7538563	109.5110549	105.4499389	101.5617895	97.83835243	94.27181023	90.85475708
190807A00021	8/7/2019	2	8/7/2026	8/7/2019	133.86025	126.3811474	119.3665203	112.7851502	106.6080696	100.8083907	95.36114613	90.24314208	85.43282378
190807A00054	8/7/2019	1.66	8/6/2021	8/7/2019	105.25717	104.2438128	103.2498744	102.2748048	101.3180707	100.3791589	99.457575	98.5528428	97.66450343
190809A00001	8/9/2019	1.88	8/9/2022	8/9/2019	110.99189	108.8636933	106.7873132	104.7611622	102.7837121	100.8534918	98.96908475	97.12912653	95.33230259
190809A00005	8/9/2019	1.88	7/11/2022	8/9/2019	110.53442	108.4990117	106.5112827	104.5698259	102.6732884	100.8203658	99.00979982	97.24037663	95.51092488
190813A00007	8/13/2019	1.89	8/15/2022	8/13/2019	111.10687	108.9591572	106.864153	104.8202294	102.8258193	100.8794145	98.97956365	97.12486897	95.31398437
190813A00021	8/13/2019	1.89	8/14/2023	8/13/2019	116.81665	113.4510839	110.2004362	107.0601428	104.0258486	101.0933958	98.25881399	95.51831039	92.86826092
190814A00003	8/14/2019	2.01	8/14/2029	8/14/2019	151.62114	139.1739247	127.8423398	117.5205822	108.1133866	99.53492856	91.707845	84.56236119	78.03551171
190814A00008	8/14/2019	1.84	8/14/2024	8/14/2019	122.27849	117.6152944	113.1557537	108.8899029	104.8083151	100.9020726	97.16273718	93.582321	90.15326057
190815A00008	8/15/2019	1.82	8/15/2022	8/15/2019	110.9628	108.8166028	106.7230822	104.6806126	102.6876278	100.7426205	98.84413998	96.99078939	95.18122331

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
190819A00020	8/19/2019	1.79	8/19/2022	8/19/2019	110.96294	108.8045316	106.6993866	104.6458478	102.6423229	100.6872805	98.7792466	96.91680236	95.09858154
190820A00019	8/20/2019	1.76	8/21/2023	8/20/2019	116.51072	113.1275652	109.8606903	106.7054504	103.6574105	100.7123385	97.86619407	95.11511903	92.45542791
190821A00009	8/21/2019	1.79	8/22/2022	8/21/2019	111.00936	108.8413044	106.7269609	104.6646511	102.6527632	100.6897468	98.77411035	96.90441807	95.07928778
190821A00016	8/21/2019	1.79	8/22/2022	8/21/2019	111.00936	108.8413044	106.7269609	104.6646511	102.6527632	100.6897468	98.77411035	96.90441807	95.07928778
190529A00005	5/29/2019	2.31	11/29/2021	5/29/2019	107.70928	106.3196458	104.9657218	103.6461435	102.359617	101.1049128	99.88086172	98.68635111	97.52032164
190529A00009	5/29/2019	2.35	5/31/2022	5/29/2019	110.76058	108.8475483	106.9775995	105.1493432	103.3614518	101.6126547	99.90173541	98.22752844	96.58891671
190529A00013	5/29/2019	2.38	5/29/2024	5/29/2019	123.29457	118.8680441	114.6255618	110.558353	106.6581272	102.9170416	99.32767354	95.88299468	92.57634747
190529A00034	5/29/2019	2.32	5/28/2021	5/29/2019	104.54399	103.7508318	102.9696725	102.2002446	101.4422854	100.6955399	99.95976066	99.23470761	98.52014748
190529A00049	5/29/2019	2.32	6/29/2021	5/29/2019	105.08559	104.1925138	103.3145656	102.4513659	101.6025459	100.7677485	99.94662864	99.13885236	98.34409654
190529A00059	5/29/2019	2.32	5/28/2021	5/29/2019	104.54399	103.7508318	102.9696725	102.2002446	101.4422854	100.6955399	99.95976066	99.23470762	98.52014748
190529A00079	5/29/2019	2.32	5/28/2021	5/29/2019	104.54399	103.7508318	102.9696725	102.2002446	101.4422854	100.6955399	99.95976066	99.23470762	98.52014748
190530A00003	5/30/2019	2.21	5/27/2022	5/30/2019	110.77073	108.8635994	106.9993049	105.1764742	103.3937911	101.6499962	99.94388336	98.27429697	96.64012915
190530A00031	5/30/2019	2.21	5/31/2022	5/30/2019	110.84003	108.9202154	107.04373	105.2091792	103.4152248	101.6605863	99.94403802	98.26440581	96.62056431
190603A00032	6/3/2019	1.98	6/3/2022	6/3/2019	110.46868	108.5431862	106.6612692	104.8215378	103.0226596	101.2633587	99.54241276	97.85865002	96.21094665
190604A00008	6/4/2019	2.23	6/4/2021	6/4/2019	104.59417	103.7795204	102.9775233	102.1878873	101.4103283	100.6445708	99.89034781	99.14740012	98.41547633
190604A00031	6/4/2019	2.25	6/5/2023	6/4/2019	116.79196	113.6503889	110.6101396	107.6672615	104.8179935	102.0587489	99.38610537	96.79679663	94.28770349
190604A00048	6/4/2019	2.23	6/4/2021	6/4/2019	104.59417	103.7795204	102.9775233	102.1878873	101.4103283	100.6445708	99.89034781	99.14740012	98.41547633
190606A00009	6/6/2019	2	6/4/2021	6/6/2019	104.52936	103.7134125	102.9101663	102.1193244	101.340601	100.5737192	99.81841059	99.07441456	98.34147844
190606A00025	6/6/2019	2.18	6/4/2021	6/6/2019	104.5551	103.7406139	102.9387848	102.149315	101.3719204	100.6063257	99.8522636	99.10947515	98.37770894
190610A00018	6/10/2019	2.52	6/10/2026	6/10/2019	136.42127	129.0730813	122.1687162	115.6789677	109.5767121	103.8367449	98.43563444	93.35158762	88.5643264
190620A00044	6/20/2019	2.04	6/20/2022	6/20/2019	110.503	108.5317424	106.6056001	104.7232159	102.8832881	101.0845645	99.32583974	97.60595329	95.92378743
190621A00040	6/21/2019	2.12	6/21/2021	6/21/2019	104.78211	103.914873	103.0619569	102.2230047	101.3976754	100.5856391	99.78657655	99.00017866	98.22614603
190625A00013	6/25/2019	2.01	6/24/2022	6/25/2019	110.51198	108.5284294	106.5904221	104.6966071	102.8456872	101.0364129	99.26758005	97.53802842	95.84663922
190626A00033	6/26/2019	2.08	6/22/2021	6/26/2019	104.76539	103.8951802	103.0393875	102.197653	101.3696327	100.5549932	99.75341224	98.96457759	98.18818701
190701A00028	7/1/2019	2.11	7/1/2021	7/1/2019	104.93961	104.0410891	103.1578999	102.2896505	101.4359645	100.5964781	99.77083928	98.95870787	98.15975457
190703A00017	7/3/2019	2.33	5/4/2026	7/3/2019	134.63224	127.4698477	120.7341582	114.3974333	108.4338936	102.8195649	97.53214234	92.55086428	87.8563974
190709A00018	7/9/2019	2.24	7/9/2024	7/9/2019	123.40846	118.8421881	114.4703051	110.2835329	106.2730838	102.4306329	98.74829098	95.21857987	91.83440849
190115A00028	1/15/2019	2.86	11/8/2021	1/15/2019	108.03374	106.7093311	105.417339	104.156582	102.925937	101.7243346	100.5507552	99.40422667	98.28382124
190115A00029	1/15/2019	2.86	11/8/2021	1/15/2019	108.03374	106.7093311	105.417339	104.156582	102.925937	101.7243346	100.5507552	99.40422667	98.28382124
190115A00063	1/15/2019	2.96	1/16/2024	1/15/2019	123.11149	119.1381384	115.315421	111.6368281	108.0961637	104.6875313	101.4053184	98.24418075	95.19902861
190118A00023	1/18/2019	2.9	1/19/2021	1/18/2019	102.5804	102.1768101	101.7764013	101.3791381	100.9849834	100.5939008	100.2058542	99.82080844	99.43872858
190123A00036	1/23/2019	3.32	1/23/2029	1/23/2019	161.52893	149.4651881	138.408854	128.2701353	118.9676895	110.4277887	102.5835703	95.37436577	88.74509774
190130A00020	1/30/2019	2.97	4/17/2023	1/30/2019	117.99134	114.9884499	112.0784122	109.2577445	106.5231236	103.871374	101.2994608	98.80448187	96.38366135

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
190201A00016	2/1/2019	2.8	2/1/2022	2/1/2019	109.35738	107.8214555	106.31503	104.8373224	103.3875809	101.9650791	100.5691153	99.19901122	97.8541114
190204A00036	2/4/2019	2.86	11/4/2021	2/4/2019	107.95727	106.646258	105.3670292	104.1184341	102.8993819	101.7088331	100.5457967	99.40932668	98.29852044
190215A00004	2/15/2019	2.84	2/15/2023	2/15/2019	116.4893	113.7033252	110.9991059	108.3737584	105.8245202	103.3487431	100.943888	98.60751912	96.3372997
190215A00046	2/15/2019	2.7	2/15/2024	2/15/2019	123.47854	119.3763472	115.4338258	111.6438881	107.9997983	104.4951558	101.1238769	97.88017731	94.75855523
190219A00026	2/19/2019	2.8	2/22/2022	2/19/2019	109.76583	108.1571142	106.5805844	105.0353535	103.5205671	102.0354017	100.5790627	99.15078341	97.7498239
190227A00005	2/27/2019	2.87	2/27/2024	2/27/2019	123.58155	119.4545339	115.4892363	111.6784242	108.0152281	104.4931239	101.1059124	97.84770183	94.71289075
190305A00010	3/5/2019	2.84	3/7/2022	3/5/2019	110.0736	108.4219173	106.8039003	105.2185956	103.6650895	102.1425017	100.649984	99.18671893	97.75191793
190308A00003	3/8/2019	2.69	3/8/2021	3/8/2019	103.35587	102.809541	102.2689818	101.7341053	101.204822	100.6810444	100.1626869	99.64966556	99.14189815
190326A00003	3/26/2019	2.57	3/27/2023	3/26/2019	116.4996	113.5845672	110.7582362	108.0173451	105.358778	102.7795544	100.2768225	97.84785219	95.49002951
190327A00041	3/27/2019	2.44	3/26/2021	3/27/2019	103.53078	102.9306472	102.3374615	101.7511016	101.1714502	100.5983926	100.0318167	99.47161309	98.91767462
190328A00007	3/28/2019	2.38	3/26/2021	3/28/2019	103.58121	102.9798311	102.385427	101.7978765	101.2170615	100.6428666	100.075179	99.51388851	98.95888737
190328A00018	3/28/2019	2.5	3/29/2021	3/28/2019	103.61844	103.0091211	102.4069529	101.8118082	101.2235647	100.6421029	100.0673061	99.49906037	98.93725414
190328A00024	3/28/2019	2.5	4/23/2021	3/28/2019	104.06017	103.3745404	102.6979322	102.0301678	101.3710745	100.7204842	100.0782331	99.44416147	98.81811377
190328A00079	3/28/2019	2.37	3/28/2024	3/28/2019	122.98814	118.7533816	114.6883146	110.7851695	107.0365829	103.4355709	99.97550648	96.65009973	93.453378
190329A00034	3/29/2019	2.56	3/29/2022	3/29/2019	110.01709	108.3012354	106.6211689	104.9758439	103.364255	101.7854353	100.2384545	98.72241747	97.23646214
190409A00014	4/9/2019	2.59	10/12/2021	4/9/2019	107.20613	105.9734612	104.7690681	103.5919901	102.4413055	101.3161339	100.2156334	99.13899879	98.08545982
190412A00014	4/12/2019	2.63	4/12/2021	4/12/2019	103.94759	103.2953092	102.651206	102.0151304	101.3869329	100.7664675	100.1535921	99.54816767	98.95005896
190509A00030	5/9/2019	2.48	11/9/2021	5/9/2019	107.58273	106.2581002	104.9659924	103.7052185	102.4746492	101.2732085	100.0998713	98.95366002	97.83364188
190510A00004	5/10/2019	2.54	11/10/2020	5/10/2019	101.22393	101.0239014	100.8246706	100.6262358	100.4285924	100.2317354	100.0356603	99.84036228	99.64583669
190514A00022	5/14/2019	2.49	11/16/2020	5/14/2019	101.31895	101.1017204	100.8854334	100.6700836	100.455665	100.2421713	100.0295967	99.81793508	99.60718057
190515A00014	5/15/2019	2.26	5/14/2021	5/15/2019	104.36542	103.6139216	102.8732316	102.1431179	101.4233548	100.7137233	100.0140103	99.32400859	98.64351695
190516A00012	5/16/2019	2.43	11/16/2021	5/16/2019	107.63262	106.2853507	104.9717034	103.6904312	102.4403481	101.2203257	100.0292893	98.86621467	97.73012575
190517A00017	5/17/2019	2.33	2/22/2021	5/17/2019	102.99362	102.4888167	101.9889551	101.4939665	101.0037796	100.518325	100.0375341	99.56133993	99.0896768
190517A00019	5/17/2019	2.41	5/17/2021	5/17/2019	104.41998	103.6606061	102.912265	102.1747145	101.4477221	100.7310623	100.0245157	99.32786906	98.64091532
190521A00027	5/21/2019	2.56	5/21/2024	5/21/2019	123.88652	119.4748005	115.2454423	111.1898038	107.299715	103.5674441	99.98567072	96.54746123	93.24624542
190521A00028	5/21/2019	2.47	11/22/2021	5/21/2019	107.79071	106.423056	105.0899945	103.7902281	102.5225211	101.2856984	100.0786415	98.90028548	97.74961565
190523A00007	5/23/2019	2.28	5/23/2022	5/23/2019	110.82825	108.9326104	107.0793408	105.2670879	103.494557	101.7605089	100.0637564	98.40316179	96.77763394
190523A00009	5/23/2019	2.43	5/21/2021	5/23/2019	104.50481	103.7329922	102.9725566	102.223253	101.484838	100.7570756	100.0397362	99.33259702	98.63544142
190523A00017	5/23/2019	2.51	3/15/2024	5/23/2019	122.51707	118.353937	114.3559063	110.5155032	106.8256354	103.2795713	99.87091927	96.59360901	93.44187287
190524A00013	5/24/2019	2.39	5/24/2021	5/24/2019	104.52749	103.7465039	102.9771625	102.2192093	101.4723926	100.7364683	100.0111993	99.29635538	98.59171283
190524A00032	5/24/2019	2.45	5/24/2023	5/24/2019	117.17462	114.0655644	111.0558104	108.1415019	105.3189612	102.5846817	99.9353184	97.36767937	94.87871703
190529A00006	5/29/2019	2.32	5/28/2021	5/29/2019	104.54399	103.7508318	102.9696725	102.2002446	101.4422854	100.6955399	99.95976066	99.23470762	98.52014748
190529A00016	5/29/2019	2.32	5/28/2021	5/29/2019	104.54399	103.7508318	102.9696725	102.2002446	101.4422854	100.6955399	99.95976066	99.23470762	98.52014748

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
190529A00028	5/29/2019	2.38	5/29/2024	5/29/2019	123.29457	118.8680441	114.6255618	110.558353	106.6581272	102.9170416	99.32767353	95.88299468	92.57634747
190530A00002	5/30/2019	2.24	5/28/2021	5/30/2019	104.59512	103.8002174	103.0173648	102.2462898	101.4867281	100.7384233	100.0011265	99.27459625	98.55859802
190530A00024	5/30/2019	2.25	5/30/2024	5/30/2019	123.61361	119.1551219	114.8826141	110.7872008	106.8604793	103.0945021	99.48174874	96.01509978	92.68781235
190530A00042	5/30/2019	2.3	11/30/2020	5/30/2019	101.54505	101.2872977	101.0308507	100.775698	100.5218299	100.2692367	100.0179088	99.76783684	99.51901142
190531A00003	5/31/2019	2.31	10/29/2021	5/31/2019	107.17976	105.8930901	104.6371882	103.4109658	102.2133804	101.0434382	99.90019061	98.78273212	97.69019773
190531A00007	6/5/2019	2.14	6/4/2021	6/5/2019	104.63884	103.8224174	103.0186996	102.2273912	101.4482064	100.6808682	99.92510796	99.18066511	98.44728687
190531A00035	5/31/2019	2.29	5/31/2022	5/31/2019	110.65063	108.7386436	106.8697142	105.042458	103.2555479	101.5077139	99.79773995	98.1244611	96.48676074
190328A00023	3/28/2019	2.51	2/24/2021	3/28/2019	103.05002	102.5399933	102.0350074	101.534987	101.039859	100.549552	100.0639959	99.5831217	99.10686208
190328A00083	3/28/2019	2.37	3/28/2024	3/28/2019	122.98814	118.7533816	114.6883146	110.7851695	107.0365829	103.4355709	99.97550648	96.65009973	93.453378
190404A00024	4/5/2019	2.61	2/15/2022	4/5/2019	109.34023	107.7581327	106.2072676	104.6867902	103.1958822	101.733754	100.2996438	98.89281593	97.51256013
190409A00009	4/9/2019	2.57	4/9/2021	4/9/2019	103.85615	103.2131699	102.5781426	101.950922	101.3313647	100.7193306	100.1146832	99.51728932	98.92701884
190430A00002	4/30/2019	2.4	11/2/2022	4/30/2019	113.97145	111.540538	109.1743298	106.8706123	104.6272694	102.4422755	100.3136904	98.23965526	96.2183879
190514A00073	5/14/2019	2.53	5/14/2024	5/14/2019	123.64386	119.2599872	115.0565491	111.0250407	107.1574132	103.4460474	99.88372712	96.46361557	93.1792324
190515A00038	5/15/2019	2.38	5/14/2021	5/15/2019	104.34584	103.5958412	102.8566083	102.1279114	101.4095261	100.7012346	100.002825	99.31409133	98.63483345
190515A00041	5/15/2019	2.41	11/15/2021	5/15/2019	107.58968	106.2459212	104.9356174	103.6575343	102.410494	101.193376	100.0051126	98.84468675	97.71112859
190520A00054	5/20/2019	2.46	5/20/2021	5/20/2019	104.50941	103.7405983	102.9830813	102.2366118	101.5009491	100.7758598	100.0611169	99.35649994	98.66179471
190521A00025	5/21/2019	2.47	5/21/2021	5/21/2019	104.53447	103.7625295	103.001972	102.2525478	101.5140135	100.786133	100.0686766	99.36142167	98.66415147
190523A00015	5/23/2019	2.51	4/1/2024	5/23/2019	122.81023	118.5863845	114.5317399	110.6385502	106.8994729	103.307544	99.85615593	96.5390368	93.35023147
190523A00022	5/23/2019	2.47	10/12/2022	5/23/2019	113.31699	110.9667579	108.6776896	106.4477513	104.2749934	102.1575469	100.0936188	98.08148898	96.11950619
190524A00026	5/28/2019	2.45	6/15/2023	5/28/2019	117.55519	114.3703028	111.2887283	108.3064796	105.4197526	102.6249151	99.91849744	97.29718398	94.75780535
190528A00039	5/28/2019	2.38	11/29/2021	5/28/2019	107.79995	106.4096862	105.0551436	103.7349575	102.4478339	101.1925428	99.96791474	98.77283686	97.60624953
190529A00002	5/29/2019	2.32	5/28/2021	5/29/2019	104.54399	103.7508318	102.9696725	102.2002446	101.4422854	100.6955399	99.95976066	99.23470762	98.52014748
190529A00067	5/29/2019	2.32	6/1/2021	5/29/2019	104.61295	103.8073614	103.0141445	102.2330128	101.4636917	100.7059153	99.95942504	99.22397049	98.49930836
190529A00080	5/29/2019	2.31	11/29/2021	5/29/2019	107.70928	106.3196458	104.9657218	103.6461435	102.359617	101.1049128	99.88086172	98.68635111	97.52032164
190530A00008	5/30/2019	2.38	5/30/2025	5/30/2019	130.61039	124.7300298	119.1499846	113.853201	108.8237011	104.0465042	99.50755808	95.19367506	91.09247385
190530A00025	5/30/2019	2.36	6/1/2021	5/30/2019	104.64386	103.8381459	103.0447974	102.2635355	101.4940858	100.7361819	99.98956569	99.25398643	98.5292009
190530A00034	5/30/2019	2.44	5/30/2024	5/30/2019	123.5555	119.1205592	114.8700708	110.7952447	106.8877678	103.1397761	99.54382726	96.0928745	92.78024304
190531A00009	6/5/2019	2.1	6/3/2022	6/5/2019	110.69	108.762399	106.878416	105.036658	103.2357913	101.4745391	99.75167794	98.06603497	96.41648544
190603A00019	6/3/2019	2.19	6/3/2021	6/3/2019	104.54609	103.7347002	102.9358623	102.1492909	101.374705	100.6118325	99.86040916	99.12017879	98.39089276
190604A00030	6/4/2019	2.2	6/3/2022	6/4/2019	110.53674	108.6166704	106.7399517	104.9052008	103.1110952	101.3563679	99.63980521	97.96024345	96.31656643
180124A00038	1/24/2018	2.51	9/1/2021	1/24/2018	106.3769	105.2787949	104.2032943	103.1497038	102.1173593	101.1056232	100.1138831	99.14155085	98.18806098
180201A00033	2/1/2018	2.53	2/1/2022	2/1/2018	109.22625	107.6869518	106.1772804	104.6964556	103.2437201	101.8183428	100.4196175	99.04686171	97.69941588
180202A00004	2/2/2018	2.57	2/2/2022	2/2/2018	109.30498	107.7617409	106.2482671	104.7637695	103.3074859	101.8786805	100.4766424	99.10068487	97.75014418

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
180205A00018	2/5/2018	2.66	2/3/2023	2/5/2018	116.30153	113.5491045	110.8765365	108.281041	105.7599514	103.3107097	100.9308619	98.61805284	96.3700216
180205A00050	2/5/2018	2.81	2/6/2023	2/5/2018	116.2352	113.483931	110.812559	108.2182995	105.6984811	103.2505418	100.8720234	98.56056697	96.3139082
180226A00043	2/26/2018	2.73	9/27/2021	2/26/2018	107.08795	105.9037034	104.7455851	103.612741	102.5043506	101.4196284	100.3578223	99.31821181	98.30010629
180306A00010	3/6/2018	2.8	2/15/2022	3/6/2018	109.62962	108.0451974	106.4920554	104.9693418	103.4762374	102.0119514	100.5757209	99.16680927	97.78450515
180315A00017	3/15/2018	2.72	3/15/2021	3/15/2018	103.49932	102.9318086	102.3705199	101.8153548	101.266213	100.7229969	100.1856107	99.65396071	99.12795534
180328A00006	3/28/2018	2.73	3/26/2021	3/28/2018	103.69954	103.0988482	102.5051027	101.9181876	101.3379855	100.7643817	100.1972641	99.63652305	99.08205149
180328A00010	3/28/2018	3.1	3/28/2025	3/28/2018	132.01812	126.3602754	120.9805815	115.8638288	110.995725	106.3628336	101.9525187	97.75289182	93.75276402
180329A00010	3/29/2018	2.76	3/29/2021	3/29/2018	103.77196	103.1621223	102.5594391	101.9637837	101.3750338	100.7930698	100.2177749	99.64903508	99.08673879
180402A00005	4/2/2018	2.94	4/3/2023	4/2/2018	117.64203	114.6893008	111.8268199	109.0512497	106.3594014	103.7482263	101.2148079	98.75635556	96.37019779
180416A00027	4/16/2018	2.86	4/16/2021	4/16/2018	104.16738	103.5023216	102.845753	102.1975124	101.5574417	100.9253871	100.3011984	99.68472934	99.07583715
180425A00008	4/25/2018	2.89	4/25/2022	4/25/2018	111.3908	109.574717	107.7978235	106.0589167	104.3568465	102.6905091	101.0588454	99.46083806	97.89550957
180511A00035	5/11/2018	2.93	5/11/2023	5/11/2018	118.90716	115.8015004	112.7940294	109.8809717	107.0587275	104.3238627	101.6730994	99.10330779	96.6114981
180517A00036	5/17/2018	2.74	9/17/2020	5/17/2018	100.309	100.2615147	100.2140929	100.1667324	100.1194331	100.072195	100.0250178	99.97790153	99.93084599
180517A00059	5/17/2018	3.13	5/17/2022	5/17/2018	111.91706	110.0352261	108.1950137	106.3951056	104.6342436	102.9112225	101.224887	99.57412942	97.95788699
180525A00005	5/25/2018	3.32	5/25/2028	5/25/2018	156.8293	145.950766	135.9178011	126.6598419	118.112592	110.2174289	102.9208738	96.17411293	89.93256708
180525A00016	5/25/2018	2.72	5/25/2021	5/25/2018	104.90441	104.1173062	103.3419999	102.5782265	101.82573	101.0842619	100.3535809	99.63345279	98.92364995
180529A00056	5/29/2018	3	5/26/2023	5/29/2018	118.8129	115.6738582	112.6350666	109.6926295	106.8428306	104.0821266	101.4071381	98.81464027	96.30155448
180530A00038	5/30/2018	2.77	5/28/2021	5/30/2018	104.88667	104.0920528	103.3094541	102.538602	101.7792336	101.0310936	100.2939345	99.56751564	98.8516037
180531A00015	5/31/2018	2.95	5/31/2023	5/31/2018	118.76034	115.6062102	112.5532501	109.5975035	106.7352036	103.9627601	101.2767494	98.67390565	96.15111158
180601A00018	6/1/2018	2.87	6/1/2023	6/1/2018	119.13486	115.9587641	112.8848456	109.9091089	107.0277441	104.2371199	101.5337736	98.91440203	96.37585248
190214A00013	2/14/2019	2.64	2/14/2023	2/14/2019	116.46666	113.6734679	110.9623716	108.3304689	105.774982	103.2932488	100.8827166	98.54093707	96.26556133
190219A00020	2/19/2019	2.88	2/16/2024	2/19/2019	123.4067	119.3218542	115.3956781	111.621142	107.9915634	104.5005921	101.1421915	97.91062154	94.80042213
190301A00009	3/1/2019	2.83	3/1/2022	3/1/2019	109.94772	108.3147128	106.7147772	105.1469924	103.6104696	102.1043523	100.6278147	99.18006021	97.76032059
190313A00018	3/13/2019	2.68	3/12/2021	3/13/2019	103.42297	102.8645882	102.3122327	101.7658102	101.2252255	100.6903853	100.161198	99.63757432	99.11942668
190313A00029	3/13/2019	2.56	3/13/2023	3/13/2019	116.76458	113.8777446	111.0780124	108.3622139	105.7273194	103.1704291	100.6887668	98.27967341	95.94060152
190314A00018	3/14/2019	2.53	3/14/2022	3/14/2019	109.99855	108.3219531	106.6798593	105.0712815	103.4952703	101.9509119	100.4373263	98.95366578	97.49911334
190318A00024	3/18/2019	2.57	3/18/2024	3/18/2019	123.58366	119.3705018	115.3250322	111.4396255	107.7070512	104.1204482	100.6733039	97.35943416	94.17296471
190319A00008	3/19/2019	2.72	3/21/2022	3/19/2019	110.1362	108.4428396	106.7845023	105.1601752	103.5688862	102.0097001	100.4817165	98.98406813	97.51591982
190320A00005	3/20/2019	2.75	3/20/2024	3/20/2019	123.52568	119.3275349	115.2961986	111.4240956	107.7040426	104.1292227	100.6931649	97.38972407	94.21306278
190321A00018	3/21/2019	2.45	3/21/2022	3/21/2019	109.9947	108.2974859	106.6354522	105.0075856	103.4129075	101.8504762	100.3193855	98.81876271	97.34776722
190327A00006	3/27/2019	2.53	3/27/2024	3/27/2019	122.80105	118.5937121	114.5543991	110.675443	106.9495745	103.3698978	99.92986827	96.62327307	93.44421173
190328A00025	3/28/2019	2.51	7/23/2021	3/28/2019	105.67391	104.7039695	103.7517998	102.8169122	101.8988391	100.9971299	100.1113497	99.24107927	98.38591361
190411A00017	4/15/2019	2.65	4/15/2024	4/15/2019	123.60659	119.3203898	115.2073087	111.2593516	107.4689397	103.8288892	100.3323878	96.97297333	93.74451338

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
190411A00029	4/11/2019	2.46	4/11/2024	4/11/2019	123.59071	119.2972664	115.1773072	111.2228167	107.4262009	103.7802616	100.2781725	96.91345818	93.67997328
190424A00007	4/24/2019	2.66	4/24/2024	4/24/2019	123.80884	119.4883135	115.3432781	111.3655794	107.5474909	103.8816913	100.3612409	96.97955906	93.73040308
190426A00009	4/26/2019	2.63	4/26/2024	4/26/2019	123.72627	119.4005473	115.250777	111.2687666	107.4467588	103.7774045	100.2537377	96.86915383	93.6173877
190429A00076	4/29/2019	2.52	4/29/2021	4/29/2019	104.1799	103.4758416	102.7812749	102.0960079	101.4198548	100.7526349	100.094172	99.44429477	98.80283615
190507A00004	5/7/2019	2.88	5/7/2029	5/7/2019	159.0763	146.6853799	135.3654624	125.0179459	115.5538147	106.8926555	98.96178334	91.69546075	85.03419921
190507A00027	5/7/2019	2.59	5/7/2024	5/7/2019	123.76212	119.3990627	115.2147475	111.2007858	107.3492413	103.6525986	100.1037381	96.69591189	93.42272247
190514A00013	5/14/2019	2.49	11/16/2020	5/14/2019	101.31895	101.1017204	100.8854334	100.6700836	100.455665	100.2421713	100.0295967	99.81793508	99.60718057
190514A00014	5/14/2019	2.43	5/14/2021	5/14/2019	104.38192	103.631771	102.8923934	102.1635532	101.4450262	100.7365942	100.0380456	99.34917431	98.66978012
190515A00003	5/15/2019	2.45	11/16/2020	5/15/2019	101.31035	101.0931299	100.8768561	100.6615196	100.447114	100.2336335	100.0210719	99.8094233	99.59868175
190515A00023	5/15/2019	2.25	5/16/2022	5/15/2019	110.65184	108.7788943	106.9474576	105.1562132	103.4039053	101.6893306	100.0113363	98.36881658	96.76071092
190826A00028	8/26/2019	1.56	8/26/2022	8/26/2019	110.99598	108.8081038	106.6748571	104.5945191	102.5654379	100.5860253	98.65475369	96.77015318	94.93080922
190827A00002	8/27/2019	1.74	8/27/2024	8/27/2019	122.04142	117.3398012	112.845376	108.5479084	104.4377264	100.5056855	96.74313732	93.14189958	89.69422848
190828A00009	8/28/2019	1.71	8/28/2024	8/28/2019	121.92574	117.2232073	112.7280746	108.4300886	104.3195607	100.3873315	96.62473851	93.02358657	89.57612007
190828A00015	8/28/2019	2.04	8/28/2029	8/28/2019	149.66659	137.374804	126.1863349	115.9963676	106.7105486	98.24389104	90.51980171	83.46921299	77.02980913
190829A00031	8/29/2019	1.54	8/29/2024	8/29/2019	122.08268	117.3486455	112.8241442	108.4987855	104.3627508	100.4067593	96.62203571	93.00027966	89.53363734
190904A00001	9/4/2019	1.5	9/4/2024	9/4/2019	121.99749	117.2449448	112.7035319	108.3627436	104.2126515	100.2438732	96.44753944	92.81526275	89.33910881
190904A00020	9/4/2019	1.69	9/1/2023	9/4/2019	116.45097	113.0335951	109.7348126	106.5498372	103.4741031	100.5032552	97.63313805	94.85978545	92.17941069
190905A00035	9/5/2019	1.82	9/7/2021	9/5/2019	105.75678	104.6433397	103.5532387	102.4857485	101.4401716	100.4158385	99.41210698	98.42836046	97.46400669
190910A00027	9/10/2019	1.86	9/9/2022	9/10/2019	111.43824	109.2103215	107.0386944	104.9215647	102.8572043	100.8439532	98.88021593	96.96445836	95.09520513
190919A00017	9/19/2019	1.8	9/19/2022	9/19/2019	111.88793	109.6159908	107.4021226	105.2444428	103.1411435	101.0904896	99.09081414	97.14051612	95.23805659
190919A00025	9/19/2019	1.8	9/19/2024	9/19/2019	123.55519	118.7185458	114.0982086	109.6833282	105.4636581	101.4295205	97.57177197	93.88177023	90.35134402
190923A00032	9/23/2019	1.72	9/22/2023	9/23/2019	117.51894	114.0008656	110.6069085	107.3319659	104.1711742	101.1198996	98.17372535	95.32844052	92.58002862
190923A00081	9/23/2019	1.96	9/20/2024	9/23/2019	123.37668	118.5660439	113.9700512	109.5779568	105.3796121	101.3654312	97.52635596	93.85382407	90.33973881
190926A00010	9/26/2019	2.11	9/30/2020	9/26/2019	100.4789	100.3952061	100.3116499	100.2282304	100.1449474	100.0618005	99.97878953	99.89591408	99.81317387
190927A00019	9/30/2019	1.91	9/30/2022	9/30/2019	111.88007	109.5823396	107.3437924	105.1624844	103.0365547	100.9642177	98.94375947	96.97353419	95.05196093
191002A00005	10/2/2019	1.83	10/2/2020	10/2/2019	100.50071	100.411239	100.3219322	100.2327877	100.143805	100.0549836	99.96632306	99.87782301	99.78948296
191002A00014	10/2/2019	1.78	10/3/2022	10/2/2019	111.64027	109.3361611	107.091587	104.9045861	102.7732796	100.6958649	98.67061235	96.69586124	94.77001662
191008A00018	10/8/2019	1.74	10/11/2022	10/8/2019	111.67284	109.3442238	107.0762461	104.8668901	102.7142238	100.6163953	98.571628	96.57821714	94.63452631
191009A00027	10/9/2019	1.74	10/6/2023	10/9/2019	117.1404	113.599328	110.1841325	106.8895919	103.7107337	100.6428226	97.68134777	94.82201026	92.06071194
191015A00029	10/15/2019	1.91	10/15/2024	10/15/2019	123.54094	118.643341	113.9673406	109.5016799	105.2357385	101.1594943	97.26348626	93.53877948	89.97693256
191104A00009	11/4/2019	1.91	11/6/2023	11/4/2019	118.1846	114.5273903	111.0029905	107.6057504	104.3303029	101.1715451	98.12462245	95.18491558	92.34802654
191104A00022	11/4/2019	2.17	8/4/2027	11/4/2019	140.17163	131.1547252	122.7788911	114.9952501	107.7588879	101.0285149	94.76615587	88.93686856	83.50848675
191106A00012	11/6/2019	2.02	10/11/2024	11/6/2019	123.97409	119.0803922	114.4075026	109.9442321	105.6800238	101.6049143	97.70949593	93.98488298	90.42267922

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
190531A00047	5/31/2019	2.32	5/28/2021	5/31/2019	104.54399	103.7508318	102.9696725	102.2002446	101.4422854	100.6955399	99.95976066	99.23470762	98.52014748
190603A00003	6/3/2019	2.05	6/3/2024	6/3/2019	122.8641	118.4069182	114.1362466	110.0431713	106.1192603	102.3565372	98.74745319	95.28486141	91.96199238
190603A00031	6/3/2019	1.98	6/3/2022	6/3/2019	110.46868	108.5431862	106.6612692	104.8215378	103.0226596	101.2633587	99.54241276	97.85865002	96.21094665
190606A00027	6/6/2019	2.51	6/5/2026	6/6/2019	136.27725	128.9516107	122.0676219	115.5962451	109.5105087	103.7853511	98.39747533	93.32521408	88.54840717
190607A00005	6/7/2019	1.92	6/7/2022	6/7/2019	110.42504	108.4877052	106.5943562	104.7436096	102.9341381	101.1646694	99.43398362	97.74090985	96.08432421
190607A00012	6/7/2019	2.13	6/7/2022	6/7/2019	110.47506	108.5433744	106.6554417	104.8098878	103.0053951	101.2407008	99.51459333	97.82591028	96.17353548
190607A00019	6/7/2019	2.04	12/7/2020	6/7/2019	101.59277	101.314843	101.0384451	100.7635635	100.4901856	100.2182991	99.94789163	99.67895111	99.41146554
190607A00023	6/7/2019	1.92	6/7/2022	6/7/2019	110.42504	108.4877052	106.5943562	104.7436096	102.9341381	101.1646694	99.43398362	97.74090985	96.08432421
190611A00046	6/11/2019	2.25	6/13/2022	6/11/2019	110.80043	108.8472984	106.9386114	105.0729993	103.2491503	101.4658047	99.72175246	98.0158304	96.34692027
190613A00022	6/13/2019	2.2	6/14/2021	6/13/2019	104.73924	103.8934405	103.0612747	102.2424106	101.436531	100.6433288	99.8625064	99.09377554	98.33685681
190621A00015	6/21/2019	2.2	6/21/2024	6/21/2019	122.94414	118.4474274	114.1401459	110.0132962	106.0583542	102.2672465	98.63232361	95.14633512	91.80240673
190621A00019	6/21/2019	2.12	6/21/2021	6/21/2019	104.78211	103.914873	103.0619569	102.2230047	101.3976754	100.5856391	99.78657655	99.00017866	98.22614603
190621A00061	6/21/2019	2.12	6/21/2021	6/21/2019	104.78211	103.914873	103.0619569	102.2230047	101.3976754	100.5856391	99.78657655	99.00017866	98.22614603
190624A00008	6/24/2019	2.08	6/24/2022	6/24/2019	110.64521	108.6603633	106.7210771	104.8260079	102.9738577	101.1633762	99.39335891	97.66264469	95.97011421
190625A00003	6/25/2019	2.03	6/27/2022	6/25/2019	110.59953	108.6059656	106.6582811	104.7551314	102.8952219	101.0773046	99.30017616	97.56267569	95.8636832
190625A00016	6/25/2019	2.13	6/25/2024	6/25/2019	122.72009	118.2144296	113.8990425	109.764892	105.803419	102.0065145	98.36649401	94.87607218	91.52834048
190626A00015	6/26/2019	2.15	6/26/2024	6/26/2019	122.81954	118.308532	113.9881068	109.849213	105.883279	102.0821836	98.43822988	94.94412069	91.59293585
190627A00052	6/27/2019	2.1	6/27/2022	6/27/2019	110.73339	108.7385109	106.7895363	104.8851213	103.0239708	101.204836	99.42651275	97.6878397	95.98769619
190701A00009	7/3/2019	2.14	7/2/2024	7/3/2019	122.87596	118.3437498	114.0036859	109.846634	105.8639444	102.047421	98.38929452	94.88219849	91.51914607
190703A00021	7/3/2019	2.11	7/2/2021	7/3/2019	104.95621	104.0545344	103.1682972	102.2971033	101.4405723	100.5983367	99.77004085	98.95534104	98.1539047
190708A00021	7/8/2019	1.99	7/8/2022	7/8/2019	111.07909	109.0403627	107.0492917	105.1044784	103.2045726	101.3482722	99.53432148	97.7615089	96.02866529
190711A00020	7/11/2019	1.98	7/11/2022	7/11/2019	111.10964	109.0614459	107.0613242	105.1078594	103.1996838	101.3354789	99.51397326	97.73394037	95.99419682
190711A00022	7/11/2019	2	7/11/2023	7/11/2019	117.23829	113.960724	110.7919559	107.7277898	104.7642138	101.8973926	99.12365836	96.43950249	93.84156798
190710A00012	7/10/2019	2.18	7/10/2023	7/10/2019	117.1627	113.9035443	110.7521848	107.704479	104.7564655	101.9043559	99.14452711	96.47351263	93.88799506
190724A00005	7/24/2019	2.12	7/26/2021	7/24/2019	105.36427	104.3866469	103.4271043	102.4851438	101.5602856	100.6520672	99.76004251	98.88378153	98.02286919
190802A00003	8/2/2019	2.01	8/2/2024	8/2/2019	122.82189	118.1875552	113.7538563	109.5110549	105.4499389	101.5617895	97.83835243	94.27181023	90.85475708
190802A00015	8/2/2019	2	2/15/2023	8/2/2019	114.29552	111.5382018	108.8619878	106.2640117	103.7415307	101.2919157	98.91264594	96.60130321	94.35556755
190805A00029	8/5/2019	1.93	8/5/2022	8/5/2019	111.03039	108.9140001	106.8488579	104.8334037	102.8661344	100.9456026	99.07041413	97.23922602	95.45074396
190806A00026	8/6/2019	1.71	8/7/2023	8/6/2019	116.76779	113.4107221	110.1678848	107.0347641	104.0070465	101.0806135	98.2515313	95.5160413	92.8705515
190808A00024	8/8/2019	1.69	2/8/2024	8/8/2019	119.57719	115.5706933	111.7199493	108.0180642	104.4584914	101.0350083	97.74169895	94.57293682	91.52336907
190808A00041	8/8/2019	1.74	8/6/2021	8/8/2019	105.33422	104.3204552	103.326116	102.350651	101.3935267	100.4542298	99.53226568	98.62715818	97.73844828
190812A00006	8/12/2019	1.86	8/12/2024	8/12/2019	122.3341	117.6764236	113.2218761	108.96053	104.8829951	100.9803881	97.24430223	93.66677903	90.2402821
190813A00030	8/13/2019	1.71	8/15/2022	8/13/2019	111.13608	108.9804838	106.8779215	104.8267535	102.825399	100.8723372	98.96610416	97.10529082	95.28854007

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
190814A00006	8/14/2019	1.84	8/14/2023	8/14/2019	116.65854	113.2954368	110.0471889	106.9092341	103.8772191	100.9469883	98.11457307	95.37618253	92.72819433
190816A00036	8/16/2019	1.77	8/16/2024	8/16/2019	122.00689	117.3426545	112.8824604	108.616307	104.534736	100.628801	96.89003685	93.31043132	89.88239828
190820A00020	8/20/2019	1.76	8/20/2024	8/20/2019	122.02361	117.3456976	112.8729711	108.5953464	104.5032877	100.5877767	96.84028172	93.25272893	89.81747495
190820A00029	8/20/2019	1.76	8/20/2024	8/20/2019	122.02361	117.3456976	112.8729711	108.5953464	104.5032877	100.5877767	96.84028172	93.25272893	89.81747495
190826A00004	8/26/2019	1.74	8/26/2022	8/26/2019	110.96672	108.7869093	106.6613886	104.588452	102.5664621	100.5938438	98.66908242	96.79072012	94.9573538
190826A00025	8/26/2019	1.76	11/26/2024	8/26/2019	123.49701	118.4581745	113.6530197	109.0693625	104.6957328	100.5213255	96.53595823	92.7300304	89.09448668
190829A00005	8/30/2019	2.06	8/30/2023	8/30/2019	117.60945	114.1801806	110.8695744	107.6728503	104.5854498	101.6030245	98.72142471	95.9366895	93.24503667
190829A00015	8/30/2019	2.06	8/30/2022	8/30/2019	111.70096	109.5010739	107.3562296	105.2646865	103.2247762	101.2348945	99.29349863	97.39910441	95.55028351
190904A00008	9/4/2019	1.69	9/3/2024	9/4/2019	121.92769	117.205035	112.691438	108.3765256	104.250497	100.3040888	96.52854208	92.91557271	89.4573424
190905A00002	9/5/2019	1.78	9/6/2022	9/5/2019	111.22094	109.0046327	106.8441835	104.7378131	102.6838134	100.6805426	98.72642278	96.81993635	94.95962355
190906A00012	9/6/2019	1.76	9/6/2024	9/6/2019	122.27919	117.5390477	113.0090053	108.6786241	104.53804	100.5779306	96.78948266	93.16436094	89.69467993
190910A00004	9/11/2019	1.86	9/11/2024	9/11/2019	122.79473	118.0268516	113.4707758	109.1159495	104.9524042	100.9707208	97.16199623	93.51781162	90.03020377
190912A00028	9/12/2019	1.94	9/12/2024	9/12/2019	123.16227	118.3832535	113.8165601	109.4516095	105.2784052	101.2875019	97.46997185	93.81737347	90.32172203
190604A00047	6/4/2019	2.31	12/4/2020	6/4/2019	101.57997	101.3110713	101.0435965	100.7775353	100.5128765	100.2496091	99.98772205	99.72720453	99.4680458
190605A00055	6/5/2019	2.11	6/6/2022	6/5/2019	110.42125	108.4931299	106.6086476	104.7664288	102.965155	101.2035627	99.48044027	97.79462521	96.14500169
190606A00026	6/6/2019	2.23	6/6/2023	6/6/2019	116.74972	113.605562	110.5628787	107.6177196	104.7663208	102.0050924	99.33060878	96.73959987	94.22894272
190614A00005	6/14/2019	1.99	6/14/2022	6/14/2019	110.67377	108.7125719	106.7961481	104.9231211	103.0921706	101.3020289	99.55147779	97.83934635	96.16450864
190620A00055	6/25/2019	2.08	4/17/2023	6/25/2019	115.5018	112.5335518	109.6573331	106.8696859	104.1673123	101.5470618	99.00592283	96.54101622	94.14958779
190620A00057	6/25/2019	2.09	5/15/2023	6/25/2019	115.98274	112.9190768	109.9526436	107.0796949	104.2966565	101.6001188	98.98682804	96.4536777	93.99770059
190625A00007	6/25/2019	2.06	6/25/2021	6/25/2019	104.79803	103.9185156	103.0537151	102.2032621	101.3668017	100.5439909	99.73449759	98.93800049	98.15418856
190625A00012	6/25/2019	2.12	6/25/2024	6/25/2019	122.67859	118.1737621	113.8591794	109.7258085	105.7650911	101.9689194	98.3296094	94.83987687	91.49281402
190625A00024	6/25/2019	2.26	6/25/2025	6/25/2019	129.31238	123.4074107	117.8071047	112.4941636	107.4523637	102.6664806	98.12222193	93.80616579	89.70570316
190628A00024	6/28/2019	2.09	6/28/2022	6/28/2019	110.73094	108.7330319	106.7811338	104.8739039	103.0100482	101.1883186	99.40751137	97.66646493	95.96405843
190701A00023	7/1/2019	1.95	7/1/2024	7/1/2019	122.91671	118.3637453	114.0042519	109.8290165	105.8293135	101.9968754	98.32386642	94.8028577	91.426804
190703A00004	7/3/2019	2.08	7/5/2022	7/3/2019	110.82692	108.8067903	106.8335805	104.9059197	103.0224874	101.1820098	99.38325784	97.62504557	95.90622803
190708A00001	7/8/2019	1.99	7/8/2022	7/8/2019	111.07909	109.0403627	107.0492917	105.1044784	103.2045726	101.3482722	99.53432148	97.7615089	96.02866529
190711A00026	7/11/2019	2.17	7/11/2022	7/11/2019	111.10105	109.0599622	107.066665	105.1197484	103.2178562	101.3596811	99.54396192	97.76948198	96.03506727
190712A00009	7/12/2019	2.19	7/12/2023	7/12/2019	117.22593	113.9594375	110.8011755	107.7469737	104.792848	101.9349887	99.1697526	96.49365428	93.9033585
190712A00018	7/12/2019	2.25	7/12/2024	7/12/2019	123.49993	118.921793	114.5389272	110.341992	106.3221434	102.4710042	98.78063646	95.2435166	91.85251136
190715A00014	7/15/2019	2.16	3/30/2022	7/15/2019	109.37492	107.6616525	105.984167	104.3414178	102.7323981	101.1561398	99.61171147	98.0982167	96.61479251
190715A00027	7/15/2019	1.99	7/15/2021	7/15/2019	105.20635	104.2613936	103.333365	102.4218093	101.5262906	100.6463882	99.78169631	98.93182281	98.09638912
190715A00028	7/17/2019	2.17	1/18/2022	7/17/2019	108.19312	106.708092	105.2508862	103.8207873	102.4171028	101.0391633	99.68632146	98.35795112	97.05344638
190716A00046	7/16/2019	2.19	7/18/2022	7/16/2019	111.25712	109.1931819	107.1780235	105.2101928	103.2882927	101.4109765	99.57694616	97.78494952	96.03377891

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
190719A00006	7/19/2019	2.17	7/19/2024	7/19/2019	123.27745	118.6804727	114.2805474	110.0682035	106.0344755	102.1708733	98.46935433	94.92229787	91.52248047
190724A00046	7/24/2019	2.12	7/23/2021	7/24/2019	105.3143	104.3461875	103.3958141	102.4626999	101.546378	100.646398	99.76232568	98.89374203	98.04024264
190726A00005	7/26/2019	1.97	7/26/2022	7/26/2019	111.33996	109.2435749	107.1973972	105.1999098	103.2496561	101.345233	99.48528873	97.66852012	95.89367096
190416A00026	4/16/2019	2.63	10/14/2021	4/16/2019	107.28918	106.0496161	104.8386284	103.6552398	102.4985146	101.3675589	100.2615183	99.1795758	98.12095001
190424A00027	4/24/2019	2.55	4/23/2021	4/24/2019	104.09325	103.4074974	102.7307663	102.0628801	101.4036662	100.7529564	100.1105869	99.47639794	98.85023397
190426A00011	5/1/2019	2.56	3/15/2022	5/1/2019	109.77116	108.0985045	106.4602337	104.8553626	103.2829456	101.7420726	100.2318671	98.75148463	97.30011128
190501A00003	5/1/2019	2.61	5/1/2024	5/1/2019	123.73644	119.3936982	115.2281696	111.2315776	107.3960843	103.7142655	100.1790857	96.78387573	93.52231053
190503A00009	5/3/2019	2.57	5/3/2021	5/3/2019	104.28552	103.5690056	102.8623119	102.1652422	101.4776009	100.7991975	100.1298471	99.46936909	98.81758812
190513A00013	5/13/2019	2.52	5/13/2024	5/13/2019	123.58637	119.2069142	115.0076055	110.9799587	107.1159427	103.4079546	99.84879381	96.43163752	93.15001864
190514A00015	5/14/2019	2.43	5/14/2021	5/14/2019	104.38192	103.631771	102.8923934	102.1635532	101.4450262	100.7365942	100.0380456	99.34917431	98.66978012
190514A00023	5/14/2019	2.43	5/14/2021	5/14/2019	104.38192	103.631771	102.8923934	102.1635532	101.4450262	100.7365942	100.0380456	99.34917431	98.66978012
190514A00056	5/14/2019	2.32	5/15/2023	5/14/2019	117.22093	114.1266857	111.130782	108.2294213	105.4189822	102.6960105	100.0572103	97.49943498	95.01967964
190515A00011	5/15/2019	2.38	5/17/2021	5/15/2019	104.39807	103.6387932	102.8905409	102.1530782	101.4261729	100.7095991	100.0031377	99.30657555	98.61970538
190515A00046	5/15/2019	2.4	5/14/2021	5/15/2019	104.36027	103.6102131	102.8709224	102.1421681	101.4237261	100.7153784	100.0169132	99.32812452	98.64881212
190515A00057	5/15/2019	2.25	5/16/2022	5/15/2019	110.65184	108.7788943	106.9474576	105.1562132	103.4039053	101.6893306	100.0113363	98.36881658	96.76071092
190520A00025	5/20/2019	2.32	5/20/2021	5/20/2019	104.51471	103.7444124	102.9854525	102.2375817	101.500558	100.7741466	100.0581191	99.35225405	98.65633591
190521A00044	5/21/2019	2.47	5/17/2021	5/21/2019	104.46378	103.704232	102.9557133	102.217987	101.4908207	100.7739887	100.0672715	99.37045609	98.6833352
190523A00020	5/23/2019	2.5	2/9/2024	5/23/2019	121.85851	117.8264554	113.9504004	110.223466	106.6391136	103.191128	99.87359908	96.68090518	93.60769754
190524A00004	5/24/2019	2.27	5/24/2021	5/24/2019	104.54786	103.7652899	102.9944145	102.2349707	101.4867054	100.7493733	100.0227358	99.30656131	98.60062508
190524A00014	5/24/2019	2.24	5/24/2022	5/24/2019	110.7732	108.8750634	107.0194112	105.20488	103.4301703	101.6940378	99.99529091	98.33278748	96.7054325
190524A00040	5/24/2019	2.47	5/24/2024	5/24/2019	123.5745	119.1589811	114.9263916	110.8680521	106.9757498	103.2417131	99.65858529	96.21939897	92.91755291
190524A00044	5/24/2019	2.27	5/24/2021	5/24/2019	104.54786	103.7652899	102.9944145	102.2349707	101.4867054	100.7493733	100.0227358	99.30656131	98.60062508
190528A00003	5/28/2019	2.42	5/31/2022	5/28/2019	110.88885	108.9746039	107.1034656	105.2740426	103.4850063	101.7350856	100.0230634	98.34777367	96.70809867
190529A00011	5/29/2019	2.36	5/30/2023	5/29/2019	117.01379	113.8881802	110.8629267	107.9341104	105.0979945	102.351017	99.68978156	97.11104793	94.61172344
190529A00012	5/29/2019	2.34	11/29/2021	5/29/2019	107.74814	106.3582345	105.0040454	103.6842066	102.3974242	101.1424685	99.91817016	98.72341643	97.55714788
190529A00032	5/29/2019	2.38	5/29/2024	5/29/2019	123.29457	118.8680441	114.6255618	110.558353	106.6581272	102.9170416	99.32767354	95.88299468	92.57634747
190515A00024	5/15/2019	2.38	5/17/2021	5/15/2019	104.39807	103.6387932	102.8905409	102.1530782	101.4261729	100.7095991	100.0031377	99.30657555	98.61970538
190515A00044	5/15/2019	2.38	5/17/2021	5/15/2019	104.39807	103.6387932	102.8905409	102.1530782	101.4261729	100.7095991	100.0031377	99.30657555	98.61970538
190515A00059	5/15/2019	2.38	5/14/2021	5/15/2019	104.34584	103.5958412	102.8566083	102.1279114	101.4095261	100.7012346	100.002825	99.31409133	98.63483345
190520A00036	5/20/2019	2.43	11/19/2021	5/20/2019	107.68616	106.328877	105.0056957	103.7153458	102.4566165	101.2283561	100.0294683	98.85890866	97.71568189
190521A00023	5/21/2019	2.47	11/22/2021	5/21/2019	107.79071	106.423056	105.0899945	103.7902281	102.5225211	101.2856984	100.0786415	98.90028548	97.74961565
190523A00024	5/23/2019	2.47	10/31/2022	5/23/2019	113.64563	111.2338189	108.8859133	106.5997435	104.3732291	102.2043778	100.0912811	98.03210968	96.02510963
190524A00002	5/24/2019	2.39	5/24/2021	5/24/2019	104.52749	103.7465039	102.9771625	102.2192093	101.4723926	100.7364683	100.0111993	99.29635538	98.59171283

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
190529A00089	5/29/2019	2.38	5/29/2024	5/29/2019	123.29457	118.8680441	114.6255618	110.558353	106.6581272	102.9170416	99.32767354	95.88299468	92.57634747
190603A00047	6/3/2019	2.22	6/2/2023	6/3/2019	116.65353	113.5236003	110.4944255	107.5620718	104.7227895	101.9730043	99.3093068	96.72844422	94.22731126
190605A00004	6/5/2019	2.11	1/12/2022	6/5/2019	108.00946	106.5435825	105.1048767	103.6926465	102.3062227	100.9449583	99.60822738	98.29542408	97.00596211
190605A00020	6/5/2019	2.19	2/5/2024	6/5/2019	120.63723	116.6412673	112.7996201	109.1054964	105.5524454	102.134334	98.84532919	95.67988198	92.63271167
190606A00023	6/6/2019	2.23	6/6/2024	6/6/2019	122.81784	118.3739699	114.1158133	110.0345153	106.1217043	102.3694585	98.77027827	95.31706119	92.00307791
190611A00006	6/11/2019	2.26	6/11/2021	6/11/2019	104.73677	103.9001362	103.076843	102.2665696	101.4690088	100.6838629	99.91084365	99.14967155	98.40007567
190612A00011	6/12/2019	2.2	6/30/2022	6/12/2019	110.97559	108.9691682	107.0090185	105.0938006	103.2222212	101.3930323	99.60502936	97.85704981	96.14797095
190613A00011	6/13/2019	2.26	6/13/2024	6/13/2019	123.05803	118.5859096	114.3013447	110.195408	106.2596532	102.4860841	98.86712806	95.39561033	92.06473094
190620A00024	6/20/2019	2.05	6/21/2021	6/20/2019	104.72399	103.8570267	103.0043748	102.1656837	101.3406124	100.5288313	99.73002115	98.94387276	98.17008687
190621A00041	6/21/2019	2.12	6/21/2022	6/21/2019	110.67108	108.6951321	106.7644383	104.8776414	103.03344	101.2305815	99.46786031	97.7441151	96.05822714
190625A00021	6/25/2019	1.88	6/26/2023	6/25/2019	116.62893	113.4087119	110.2941167	107.281095	104.3657778	101.5444664	98.81362349	96.16986538	93.60995419
190626A00009	6/26/2019	2.08	6/25/2021	6/26/2019	104.81486	103.9352703	103.0703924	102.2198629	101.3833269	100.5604413	99.75087407	98.9543039	98.17041972
190626A00019	6/26/2019	2.1	6/24/2022	6/26/2019	110.68328	108.6980587	106.7584072	104.8629796	103.0104779	101.1996515	99.42929572	97.69824934	96.00539278
190627A00010	6/27/2019	1.97	6/27/2024	6/27/2019	122.93437	118.3945521	114.0471967	109.8831415	105.8937095	102.0706805	98.40626452	94.89307702	91.52411544
190628A00004	6/28/2019	2.12	6/28/2023	6/28/2019	116.7855	113.5702655	110.4603201	107.4516435	104.5403942	101.7228987	98.99564202	96.35526101	93.79853621
190701A00006	7/1/2019	2.11	7/1/2021	7/1/2019	104.93961	104.0410891	103.1578999	102.2896505	101.4359645	100.5964781	99.77083928	98.95870787	98.15975457
180614A00006	6/14/2018	2.94	6/14/2021	6/14/2018	105.33877	104.4902745	103.6554417	102.8339407	102.0254537	101.2296729	100.4463004	99.67504717	98.91563345
180618A00026	6/18/2018	3.05	4/13/2023	6/18/2018	118.13793	115.1459706	112.2461961	109.4351637	106.7095862	104.0663223	101.5023688	99.01485356	96.60102855
180620A00038	6/20/2018	3.4	6/20/2028	6/20/2018	155.88285	145.0309809	135.0265651	125.7986811	117.2826979	109.4196894	102.1559032	95.44228117	89.23402678
180625A00040	6/25/2018	3	6/24/2022	6/25/2018	112.39634	110.3943522	108.4382579	106.5267044	104.6583841	102.8320379	101.0464525	99.30045846	97.59292841
180703A00015	7/3/2018	3.06	7/3/2023	7/3/2018	119.71754	116.4424082	113.2746151	110.210068	107.2448504	104.3752161	101.597581	98.90851474	96.30473344
180713A00030	7/13/2018	2.8	7/13/2021	7/13/2018	105.89702	104.9548495	104.0294221	103.1202987	102.2270508	101.3492651	100.4865422	99.63849649	98.80475556
180713A00035	7/13/2018	3.02	7/13/2022	7/13/2018	112.80022	110.7359767	108.7201314	106.7512541	104.8279678	102.948945	101.1129057	99.31861477	97.56488088
180719A00059	7/19/2018	2.98	7/19/2021	7/19/2018	106.03078	105.0714138	104.1293923	103.2042505	102.2955374	101.402818	100.5256723	99.66369522	98.81649537
180723A00026	10/23/2018	3.2	10/23/2023	10/23/2018	122.32551	118.6448841	115.0959325	111.6731294	108.3712215	105.1852096	102.1103349	99.14206538	96.27608358
180726A00032	7/26/2018	2.95	10/26/2020	7/26/2018	101.02916	100.8718298	100.7149964	100.5586567	100.4028083	100.2474489	100.0925763	99.93818808	99.7842821
180730A00002	7/30/2018	3.03	7/30/2021	7/30/2018	106.28828	105.2935554	104.3174203	103.3593569	102.4188669	101.4954702	100.5887037	99.69812137	98.82329263
180730A00081	7/30/2018	3.5	7/28/2028	7/30/2018	157.5049	146.4362201	136.2413128	126.8463024	118.183924	110.1929045	102.8174002	96.00648972	89.7137171
180808A00009	8/8/2018	3.12	8/7/2023	8/8/2018	120.57169	117.1703829	113.8840009	110.7080219	107.6381247	104.6701826	101.8002531	99.02456908	96.33952937
180813A00026	8/13/2018	2.87	8/11/2023	8/13/2018	120.49779	117.0697234	113.7582471	110.5587371	107.4667831	104.4781749	101.5888914	98.79509135	96.09310441
180815A00009	8/15/2018	2.93	8/16/2021	8/15/2018	106.50762	105.4588045	104.4306273	103.4224808	102.4337834	101.4639759	100.5125203	99.57889904	98.66261367
180827A00020	8/27/2018	3.21	8/27/2025	8/27/2018	135.52262	129.2386109	123.2874575	117.6497317	112.3072408	107.2429439	102.4408729	97.88605885	93.56446456
180827A00060	8/27/2018	2.9	8/27/2021	8/27/2018	106.68648	105.6022994	104.5401155	103.4992666	102.4791147	101.4790469	100.4984743	99.53683077	98.59357199

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
180904A00012	9/4/2018	3.35	9/4/2030	9/4/2018	173.27263	158.1409437	144.4841488	132.1497123	121.0016512	110.9186555	101.792435	93.52626017	86.03367382
180904A00036	9/4/2018	2.83	9/4/2020	9/4/2018	100.07171	100.0605717	100.0494416	100.0383216	100.0272119	100.0161123	100.0050228	99.99394348	99.98287428
180910A00028	9/10/2018	3.56	9/9/2033	9/10/2018	197.78532	176.1717212	157.2014984	140.5337632	125.8733708	112.9645641	101.5855318	91.54374272	82.67194153
180911A00042	9/11/2018	2.99	9/11/2023	9/11/2018	121.48357	117.9379055	114.515817	111.2122723	108.0224776	104.9418635	101.9660719	99.0909456	96.3125175
180912A00011	9/12/2018	3.41	9/11/2026	9/12/2018	143.91538	135.9945847	128.5676911	121.6011888	115.0640177	108.9273742	103.1645361	97.75070101	92.66283899
180912A00030	9/12/2018	3	9/13/2021	9/12/2018	107.11728	105.9770847	104.861141	103.7686787	102.6989619	101.6512852	100.6249724	99.61937421	98.6338679
190711A00025	7/11/2019	2.18	7/12/2021	7/11/2019	105.18461	104.2510437	103.334005	102.4330585	101.5477831	100.6777725	99.82263422	98.98198927	98.15547133
190724A00024	7/24/2019	2.49	7/24/2029	7/24/2019	156.35998	143.7765441	132.3084785	121.8509233	112.3093818	103.5986495	95.64185704	88.36961656	81.71925921
190729A00006	7/29/2019	2.14	7/29/2022	7/29/2019	111.34069	109.2424406	107.1945117	105.1953839	103.2435952	101.3377373	99.47645348	97.65843582	95.88242354
190805A00011	8/5/2019	1.91	8/5/2024	8/5/2019	122.44115	117.8046276	113.3693299	109.125472	105.0637945	101.1755352	97.45239949	93.88653285	90.47049532
190807A00027	8/7/2019	1.77	8/7/2024	8/7/2019	121.87195	117.2404829	112.8104307	108.5719801	104.5158483	100.6332515	96.91587545	93.35584789	89.9457126
190807A00060	8/7/2019	1.95	2/8/2021	8/7/2019	102.51949	102.0578174	101.6003008	101.1468824	100.6975075	100.2521219	99.81067272	99.37310788	98.9393762
190809A00008	8/9/2019	1.87	8/3/2023	8/9/2019	116.58451	113.257702	110.0433988	106.9371764	103.9348122	101.0322729	98.22570502	95.51142552	92.88591348
190815A00012	8/15/2019	1.81	8/15/2024	8/15/2019	122.16436	117.5001927	113.0398887	108.7734638	104.691475	100.7849896	97.04555549	93.4651721	90.03626419
190816A00022	8/16/2019	1.77	8/16/2024	8/16/2019	122.00689	117.3426545	112.8824604	108.616307	104.534736	100.628801	96.89003685	93.31043132	89.88239828
190816A00035	8/16/2019	1.77	8/16/2023	8/16/2019	116.46729	113.1007783	109.8494708	106.7087811	103.6743347	100.741956	97.90765775	95.16763174	92.51823925
190820A00005	8/21/2019	1.76	2/27/2023	8/21/2019	113.86496	111.071811	108.3620212	105.7326024	103.1806956	100.703562	98.29857745	95.9632263	93.69509667
190821A00002	8/21/2019	1.61	8/21/2024	8/21/2019	122.26737	117.5563781	113.0527434	108.7462387	104.627198	100.6864815	96.91544443	93.3059074	89.85012846
190822A00002	8/22/2019	1.89	8/20/2021	8/22/2019	105.54106	104.4850301	103.4500541	102.435504	101.4407795	100.4653038	99.50852239	98.56990162	97.64892817
190827A00022	8/27/2019	1.83	8/27/2021	8/27/2019	105.59207	104.5139784	103.4578005	102.4228734	101.408561	100.4142522	99.43935997	98.48332009	97.54558993
190828A00031	8/28/2019	1.71	8/28/2024	8/28/2019	121.92574	117.2232073	112.7280746	108.4300886	104.3195607	100.3873315	96.62473851	93.02358657	89.57612007
190829A00021	8/30/2019	2.18	8/30/2021	8/30/2019	106.00074	104.911022	103.843618	102.7978512	101.7730692	100.7686453	99.78397783	98.81848846	97.87162126
190829A00045	8/29/2019	1.9	8/28/2026	8/29/2019	133.47511	125.9326628	118.8632639	112.234807	106.0175278	100.1838198	94.70806718	89.56649151	84.73701054
190830A00021	8/30/2019	1.76	8/30/2024	8/30/2019	122.17333	117.4589558	112.9527177	108.6443155	104.5240153	100.5826152	96.81141345	93.20217822	89.74711982
190904A00019	9/4/2019	1.69	9/4/2024	9/4/2019	121.94262	117.2162833	112.6992856	108.3812308	104.2522998	100.3032119	96.52519287	92.90994375	89.44961278
190905A00003	9/5/2019	1.76	9/5/2024	9/5/2019	122.26404	117.5275844	113.000952	108.6737217	104.5360478	100.5786251	96.79265597	93.16981996	89.70224506
190906A00018	9/6/2019	1.76	9/6/2024	9/6/2019	122.27919	117.5390477	113.0090053	108.6786241	104.53804	100.5779306	96.78948266	93.16436094	89.69467993
190912A00027	9/12/2019	1.95	9/12/2023	9/12/2019	117.46138	113.9923653	110.6445409	107.4129739	104.2929619	101.2800222	98.3698794	95.558455	92.8418567
190912A00034	9/12/2019	1.76	9/12/2022	9/12/2019	111.68834	109.4403737	107.2494997	105.1138858	103.0317692	101.0014568	99.0213219	97.08980087	95.20539042
190918A00007	9/20/2019	1.95	12/15/2022	9/20/2019	113.17291	110.6264057	108.1503198	105.7422296	103.3998167	101.1208597	98.9032293	96.74488355	94.64386361
190919A00007	9/19/2019	2.04	9/19/2024	9/19/2019	123.71473	118.9003074	114.3004904	109.9045444	105.7023302	101.6842701	97.84131317	94.16490377	90.64695109
190923A00020	9/23/2019	2.05	9/24/2029	9/23/2019	152.64966	139.9891052	128.4754739	117.99882	108.460269	99.77085213	91.8504668	84.62695161	78.03526205
190924A00026	9/24/2019	1.9	7/22/2022	9/24/2019	110.74787	108.6769564	106.6552648	104.6813288	102.7537311	100.8711058	99.03213618	97.23555293	95.48013175

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
190924A00035	9/24/2019	1.88	9/13/2024	9/24/2019	122.91376	118.1366137	113.5718888	109.2089933	105.0379192	101.0492108	97.23393087	93.58362909	90.09031292
190925A00004	9/25/2019	1.7	9/24/2024	9/25/2019	123.18955	118.3436168	113.7151137	109.2930987	105.0672421	101.0277898	97.16552773	93.47174862	89.9382213
190925A00011	9/25/2019	1.89	9/25/2024	9/25/2019	123.14475	118.3221154	113.7153326	109.3135565	105.106553	101.084657	97.23873746	93.56016466	90.0407797
190926A00034	9/26/2019	1.88	9/26/2022	9/26/2019	111.7507	109.4667878	107.2414868	105.0728871	102.959154	100.8985263	98.8893132	96.92989071	95.01869853
190927A00012	10/1/2019	1.96	10/1/2024	10/1/2019	123.55014	118.6986328	114.0648988	109.6379633	105.4074699	101.3636399	97.49723733	93.79953478	90.26228287
190930A00069	9/30/2019	1.9	9/29/2023	9/30/2019	117.56498	114.0391896	110.6380457	107.356405	104.1893707	101.1322781	98.18068178	95.33034416	92.57722403
191001A00009	10/1/2019	1.84	10/1/2020	10/1/2019	100.48592	100.3992757	100.3127791	100.2264329	100.1402366	100.0541897	99.968292	99.88254299	99.79694231
191003A00022	10/3/2019	1.72	2/3/2023	10/3/2019	113.36964	110.665777	108.0403861	105.4907389	103.0142185	100.6083146	98.27061846	95.99881815	93.79069392
191007A00018	10/8/2019	1.77	7/16/2021	10/8/2019	104.88208	103.937688	103.0102436	102.099292	101.2043959	100.3251338	99.4610986	98.61189719	97.77715
191009A00017	10/9/2019	1.76	10/4/2024	10/9/2019	122.70223	117.8589769	113.2337123	108.8154291	104.5937381	100.5588314	96.70144611	93.01283113	89.48471545
191009A00021	10/9/2019	1.71	10/7/2022	10/9/2019	111.54596	109.2308405	106.975782	104.7787944	102.6379734	100.5514923	98.51759897	96.53461128	94.60091428
191010A00012	10/10/2019	1.61	10/8/2021	10/10/2019	106.20503	104.9882651	103.7992237	102.636967	101.5005983	100.3892604	99.30213359	98.23843373	97.19741007
191015A00026	10/15/2019	1.69	10/15/2021	10/15/2019	106.40989	105.1695632	103.9579949	102.7741966	101.6172222	100.4861682	99.38017114	98.29840572	97.24008241
191025A00013	10/25/2019	1.98	10/25/2024	10/25/2019	124.01147	119.0705858	114.3543972	109.8514279	105.5508527	101.4424603	97.51661476	93.76421911	90.17668209
191101A00002	11/1/2019	1.85	11/1/2022	11/1/2019	112.2425	109.8437761	107.5087683	105.235306	103.0213112	100.8647944	98.76384976	96.7166507	94.72144605
191105A00008	11/5/2019	1.83	11/5/2024	11/5/2019	124.43354	119.4192808	114.635124	110.069208	105.7103523	101.5480174	97.57226286	93.77371025	90.14350719
191113A00017	11/15/2019	1.93	12/6/2021	11/15/2019	107.29765	105.9008585	104.5379468	103.2076884	101.9089114	100.6404998	99.40139009	98.19056829	97.00706691
191120A00005	11/20/2019	2.63	11/20/2034	11/20/2019	185.26056	162.7971514	143.3306025	126.4423893	111.7745266	99.02053376	87.91778945	78.24105388	69.79697675
191121A00004	11/21/2019	1.77	11/21/2024	11/21/2019	124.41317	119.3437003	114.5091149	109.8971838	105.4963873	101.2958733	97.28541392	93.45536528	89.79663058
191114A00020	11/18/2019	1.91	2/15/2022	11/18/2019	108.27408	106.7005258	105.1580495	103.6458104	102.1629944	100.7088161	99.28251744	97.88336679	96.51065744
191115A00030	11/15/2019	2.35	11/9/2029	11/15/2019	154.0126	141.2289049	129.6108378	119.0457644	109.4324957	100.6800687	92.70666354	85.43863993	78.80968063
191120A00011	11/20/2019	1.88	1/20/2023	11/20/2019	113.56064	110.8988253	108.3130699	105.80077	103.3594272	100.9866431	98.6801148	96.4376304	94.25706478
191120A00024	11/20/2019	2.23	11/16/2029	11/20/2019	152.81927	140.0643784	128.4762455	117.9418348	108.3596227	99.63836963	91.69602887	84.45877555	77.86014341
191125A00036	11/25/2019	2.29	11/23/2029	11/25/2019	153.57197	140.7528609	129.1078046	118.5228865	108.8958121	100.1346666	92.15681125	84.88790213	78.26101739
191129A00010	11/29/2019	1.94	8/27/2021	11/29/2019	105.70458	104.6258619	103.5690665	102.5335307	101.5186179	100.523717	99.54824088	98.59162493	97.65332641
191206A00021	12/6/2019	2.02	12/6/2024	12/6/2019	124.86092	119.7581919	114.8929807	110.252885	105.8262286	101.6020113	97.56986514	93.72001436	90.04323743
191212A00028	12/13/2019	1.93	1/17/2023	12/13/2019	113.64022	110.9867169	108.4087844	105.9038441	103.4694217	101.1031413	98.80272157	96.56597063	94.39078257
191223A00009	12/23/2019	1.95	12/23/2022	12/23/2019	113.298	110.7257697	108.2250615	105.7934522	103.4286151	101.1283177	98.89041689	96.71285512	94.59365599
191231A00006	12/31/2019	1.88	12/31/2021	12/31/2019	107.49581	106.0692295	104.6685079	103.292999	101.9420799	100.6151477	99.31161858	98.03092727	96.77252605
200109A00012	1/14/2020	1.94	12/15/2022	1/14/2020	113.14867	110.6024607	108.1266641	105.7188569	103.3767209	101.098035	98.88066994	96.72258397	94.62181843
200115A00022	1/15/2020	1.88	10/14/2022	1/15/2020	112.0314	109.6896623	107.409063	105.1875609	103.0232017	100.9141124	98.85849653	96.85463053	94.90086028
200123A00013	1/27/2020	1.89	1/27/2025	1/27/2020	125.04293	119.7619323	114.7337446	109.9449618	105.3829624	101.0358552	96.89243293	92.94212951	89.17498017
200129A00017	2/3/2020	1.75	8/15/2022	2/3/2020	110.81873	108.6740484	106.5820114	104.5409958	102.5494363	100.6058264	98.70871631	96.85670981	95.04846225

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
200131A00014	2/5/2020	1.7	2/22/2022	2/5/2020	108.06787	106.4729278	104.909917	103.3779614	101.8762139	100.4038573	98.96010354	97.5441921	96.15538895
200131A00047	1/31/2020	1.68	1/31/2023	1/31/2020	113.21837	110.526784	107.9130459	105.3744566	102.9084296	100.5124831	98.18423538	95.92139991	93.72178113
200203A00001	2/3/2020	1.7	2/3/2023	2/3/2020	113.31814	110.6149365	107.9901946	105.4411818	102.9652818	100.5599846	98.2228819	95.95166215	93.74410601
200203A00004	2/3/2020	1.7	2/3/2023	2/3/2020	113.31814	110.6149365	107.9901946	105.4411818	102.9652818	100.5599846	98.2228819	95.95166215	93.74410601
200205A00011	2/7/2020	2.31	2/7/2024	2/7/2020	121.11697	117.1053466	113.2488073	109.5405234	105.9740025	102.543073	99.24186546	96.06479684	93.00655447
200210A00005	2/10/2020	1.77	2/10/2027	2/10/2020	136.38341	128.0825182	120.3384986	113.1111681	106.3634388	100.0610667	94.17241896	88.66826288	83.5215718
200214A00020	2/18/2020	1.78	1/15/2025	2/18/2020	124.33194	119.1078623	114.132292	109.3921397	104.8750765	100.5694819	96.46439898	92.54949356	88.81501537
200219A00007	2/19/2020	1.81	8/19/2021	2/19/2020	105.44503	104.3926343	103.3611641	102.349996	101.3585351	100.3862095	99.43246932	98.49678551	97.57864898
200220A00008	2/20/2020	1.74	2/20/2024	2/20/2020	119.20579	115.1834067	111.3185422	107.6041751	104.0336361	100.6005889	97.29901173	94.12317996	91.06764957
190729A00007	7/29/2019	2.17	7/28/2023	7/29/2019	117.42532	114.1047305	110.8957303	107.7939549	104.7952396	101.8956056	99.09124995	96.37853723	93.75399099
190729A00017	7/29/2019	1.97	7/29/2021	7/29/2019	105.42185	104.4325143	103.4616743	102.5088128	101.5734341	100.6550607	99.75323222	98.86750488	97.99745056
190731A00004	7/31/2019	2.18	7/31/2024	7/31/2019	123.51526	118.8733938	114.4320489	110.1815153	106.1126015	102.2166073	98.48529509	94.91086256	91.48591758
190806A00007	8/6/2019	1.88	8/5/2022	8/6/2019	110.92898	108.813637	106.7495253	104.7350812	102.7688022	100.8492414	98.97500537	97.14475151	95.35718608
190807A00014	8/7/2019	1.75	8/7/2023	8/7/2019	116.26904	112.934337	109.7128554	106.6001253	103.5918813	100.6840501	97.87274058	95.15423468	92.5249785
190808A00015	8/8/2019	1.92	8/9/2021	8/8/2019	105.40391	104.3826847	103.3811691	102.3988013	101.435036	100.4893487	99.56123427	98.65020639	97.75579643
190808A00023	8/8/2019	1.68	11/8/2023	8/8/2019	118.11245	114.433012	110.8877919	107.4710557	104.1773574	101.0015199	97.93861979	94.98397274	92.13312025
190808A00050	8/8/2019	1.7	8/8/2024	8/8/2019	122.45768	117.7864933	113.3190684	109.0454504	104.9562209	101.0424696	97.29576435	93.70812236	90.27198419
190809A00012	8/9/2019	1.69	8/9/2024	8/9/2019	122.43005	117.7560609	113.2861081	109.0102085	104.9189254	101.0033313	97.25497783	93.66586767	90.22842764
190809A00020	8/9/2019	2.44	8/9/2034	8/9/2019	184.85951	162.5942323	143.2635743	126.4632006	111.84644	99.11580715	88.0158054	78.32681387	69.85989019
190814A00009	8/14/2019	1.84	8/14/2024	8/14/2019	122.27849	117.6152944	113.1557537	108.8899029	104.8083151	100.9020726	97.16273718	93.582321	90.15326057
190814A00010	8/14/2019	1.84	4/5/2023	8/14/2019	114.64324	111.7252617	108.89691	106.1548598	103.4959339	100.9170949	98.41543784	95.98818336	93.63267126
190815A00004	8/15/2019	1.82	8/15/2022	8/15/2019	110.9628	108.8166028	106.7230822	104.6806126	102.6876278	100.7426205	98.84413998	96.99078939	95.18122331
190816A00015	8/16/2019	2.2	8/16/2029	8/16/2019	151.18107	138.8656339	127.6499526	117.4300055	108.1121101	99.61184597	91.85309705	84.76719592	78.29216097
190816A00016	8/16/2019	2.2	8/16/2029	8/16/2019	151.18107	138.8656339	127.6499526	117.4300055	108.1121101	99.61184597	91.85309705	84.76719592	78.29216097
190816A00031	8/16/2019	1.77	8/16/2024	8/16/2019	122.00689	117.3426545	112.8824604	108.616307	104.534736	100.628801	96.89003685	93.31043132	89.88239828
190819A00005	8/19/2019	1.62	8/21/2023	8/19/2019	116.69751	113.2964654	110.0126244	106.8412896	103.7779803	100.8184212	97.95853139	95.19441431	92.52234844
190820A00012	8/20/2019	1.76	8/19/2022	8/20/2019	110.90084	108.7430861	106.638584	104.5856751	102.5827677	100.6283307	98.72089049	96.85902848	95.04137878
190820A00030	8/20/2019	1.76	4/16/2024	8/20/2019	120.1281	115.9047012	111.8526889	107.9641233	104.2314825	100.6476373	97.20582796	93.89964295	90.72299841
190821A00027	8/21/2019	1.79	8/22/2022	8/21/2019	111.00936	108.8413044	106.7269609	104.6646511	102.6527632	100.6897468	98.77411035	96.90441807	95.07928778
190823A00005	8/23/2019	1.62	8/23/2024	8/23/2019	122.34126	117.6219988	113.1107142	108.7971398	104.6715685	100.7248224	96.94822137	93.33355303	89.87304501
190826A00030	8/26/2019	1.72	8/26/2026	8/26/2019	133.73504	126.1366679	119.0161136	112.340884	106.0808575	100.2081005	94.69669713	89.52259393	84.6634564
190826A00058	8/26/2019	1.91	8/26/2026	8/26/2019	133.51559	125.9790507	118.9147415	112.2906453	106.0770739	100.2464895	94.77333809	89.63389706	84.80613448
190710A00022	7/10/2019	2.22	7/10/2024	7/10/2019	123.34099	118.7727451	114.3991203	110.2108195	106.1990386	102.3554375	98.67211308	95.1415739	91.75671689

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
190712A00001	7/12/2019	2.05	7/12/2024	7/12/2019	123.51731	118.9152116	114.5100026	110.2922397	106.2529831	102.3837658	98.67656634	95.12378293	91.71820926
190717A00007	7/17/2019	2.18	10/14/2022	7/17/2019	112.70267	110.3533237	108.0652713	105.8364708	103.6649636	101.5488719	99.48639508	97.47580555	95.5154452
190724A00025	7/24/2019	1.96	7/24/2023	7/24/2019	117.3273	114.0066165	110.79745	107.6954456	104.696445	101.7964749	98.99173804	96.27860394	93.6536008
190730A00016	7/30/2019	2	7/30/2024	7/30/2019	123.60177	118.937335	114.4748646	110.2045556	106.117133	102.2038188	98.45630252	94.86671389	91.42759704
190801A00007	8/1/2019	2.17	8/2/2021	8/1/2019	105.52856	104.5284385	103.5472094	102.5843367	101.6393092	100.7116344	99.80083785	98.90646232	98.02806685
190805A00004	8/5/2019	1.7	8/5/2022	8/5/2019	110.95756	108.8345075	106.763001	104.7414657	102.7683861	100.8423028	98.96181081	97.12555648	95.33223555
190805A00007	8/5/2019	1.88	8/5/2022	8/5/2019	110.92898	108.813637	106.7495253	104.7350812	102.7688022	100.8492414	98.97500537	97.14475151	95.35718608
190806A00027	8/6/2019	1.71	8/7/2023	8/6/2019	116.76779	113.4107221	110.1678848	107.0347641	104.0070465	101.0806135	98.2515313	95.5160413	92.8705515
190807A00020	8/7/2019	1.57	2/7/2024	8/7/2019	119.11395	115.1193591	111.2800114	107.5890418	104.0399285	100.6264727	97.34278046	94.18324605	91.14253628
190807A00022	8/7/2019	1.76	1/17/2023	8/7/2019	113.21118	110.5631067	107.9904841	105.490736	103.0613916	100.7000787	98.40451909	96.17252425	94.00199135
190807A00045	8/7/2019	1.77	8/7/2024	8/7/2019	121.87195	117.2404829	112.8104307	108.5719801	104.5158483	100.6332515	96.91587545	93.35584789	89.9457126
190807A00055	8/7/2019	1.76	8/8/2022	8/7/2019	110.73169	108.6092548	106.5384364	104.5176571	102.5453965	100.620191	98.74063106	96.90535913	95.11306708
190808A00009	8/8/2019	1.89	8/8/2024	8/8/2019	122.40167	117.755944	113.3122653	109.0607846	104.9921864	101.0976565	97.36885228	93.79787459	90.37724209
190808A00049	8/8/2019	1.89	8/8/2024	8/8/2019	122.40167	117.755944	113.3122653	109.0607846	104.9921864	101.0976565	97.36885228	93.79787459	90.37724209
190814A00015	8/14/2019	1.84	8/14/2024	8/14/2019	122.27849	117.6152944	113.1557537	108.8899029	104.8083151	100.9020726	97.16273718	93.582321	90.15326057
190816A00007	8/16/2019	1.77	8/16/2023	8/16/2019	116.46729	113.1007783	109.8494708	106.7087811	103.6743347	100.741956	97.90765775	95.16763174	92.51823925
190816A00011	8/16/2019	1.77	8/16/2024	8/16/2019	122.00689	117.3426545	112.8824604	108.616307	104.534736	100.628801	96.89003685	93.31043132	89.88239828
190819A00001	8/19/2019	1.82	8/19/2021	8/19/2019	105.45502	104.4025773	103.3710534	102.3598322	101.368319	100.3959418	99.44215069	98.50641664	97.58823051
190820A00038	8/20/2019	1.76	8/20/2024	8/20/2019	122.02361	117.3456976	112.8729711	108.5953464	104.5032877	100.5877767	96.84028172	93.25272893	89.81747495
190820A00054	8/20/2019	1.76	8/18/2022	8/20/2019	110.88545	108.7309172	106.6294788	104.5794915	102.5793703	100.6275899	98.72268283	96.86323609	95.04788906
190821A00017	8/21/2019	1.8	8/21/2024	8/21/2019	122.21181	117.5266477	113.0470818	108.7630018	104.6648476	100.7435784	96.99064169	93.39794383	89.95782325
190822A00016	8/22/2019	1.84	8/22/2022	8/22/2019	111.11331	108.944152	106.8287284	104.7653601	102.7524346	100.7884011	98.87176726	97.0010969	95.1750072
190529A00050	5/29/2019	2.31	11/29/2021	5/29/2019	107.70928	106.3196458	104.9657218	103.6461435	102.359617	101.1049128	99.88086172	98.68635111	97.52032164
190529A00062	5/29/2019	2.32	5/28/2021	5/29/2019	104.54399	103.7508318	102.9696725	102.2002446	101.4422854	100.6955399	99.95976066	99.23470762	98.52014748
190530A00009	5/30/2019	2.25	5/30/2024	5/30/2019	123.61361	119.1551219	114.8826141	110.7872008	106.8604793	103.0945021	99.48174874	96.01509978	92.68781235
190530A00021	5/30/2019	2.21	5/27/2022	5/30/2019	110.77073	108.8635994	106.9993049	105.1764742	103.3937911	101.6499962	99.94388336	98.27429697	96.64012915
190530A00030	5/30/2019	2.36	5/28/2021	5/30/2019	104.57445	103.7811626	102.9998753	102.2303208	101.4722363	100.7253669	99.989465	99.26429055	98.54961026
190531A00038	5/31/2019	2.82	5/31/2034	5/31/2019	190.31964	167.9829061	148.5386004	131.5939478	116.811497	103.9010737	92.6129374	82.7319587	74.07266152
190603A00005	6/3/2019	2.25	6/3/2024	6/3/2019	122.84938	118.414957	114.1655394	110.0923038	106.1869072	102.4414563	98.84848004	95.40090377	92.0920257
190604A00009	6/4/2019	2.23	6/4/2021	6/4/2019	104.59417	103.7795204	102.9775233	102.1878873	101.4103283	100.6445708	99.89034781	99.14740012	98.41547633
190604A00028	6/4/2019	2.2	6/3/2022	6/4/2019	110.53674	108.6166704	106.7399517	104.9052008	103.1110952	101.3563679	99.63980521	97.96024345	96.31656643
190606A00029	6/6/2019	2.96	6/6/2034	6/6/2019	188.35778	166.4190631	147.3113575	130.6511689	116.1089022	103.4010391	92.2834828	82.54589343	74.0068626
190607A00003	6/7/2019	1.92	6/7/2022	6/7/2019	110.42504	108.4877052	106.5943562	104.7436096	102.9341381	101.1646694	99.43398362	97.74090985	96.08432421

Classification | Public

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
190610A00016	6/10/2019	2.21	6/10/2022	6/10/2019	110.67445	108.7316937	106.8330446	104.9771279	103.162629	101.3882864	99.6528891	97.9552743	96.29432463
190611A00007	6/11/2019	2.25	6/10/2022	6/11/2019	110.74893	108.8054615	106.9061113	105.0495071	103.2343335	101.4593289	99.72328187	98.02502924	96.36345333
190617A00026	6/17/2019	2.17	6/17/2022	6/17/2019	110.69819	108.7341966	106.8150341	104.9393425	103.1058158	101.3131984	99.56028294	97.84590773	96.16895475
190619A00007	6/19/2019	2.21	6/20/2022	6/19/2019	110.82456	108.8501738	106.9209621	105.0355674	103.1926864	101.3910651	99.62949673	97.90681918	96.22191325
190619A00024	6/19/2019	2.21	7/19/2022	6/19/2019	111.31339	109.2458416	107.2272208	105.2560703	103.3309868	101.450618	99.61366011	97.81885584	96.06499248
190620A00026	6/20/2019	2.09	6/20/2023	6/20/2019	116.56464	113.3783346	110.2958442	107.3131775	104.4265247	101.6322456	98.92686098	96.30704439	93.76961433
190620A00045	6/20/2019	2.14	6/20/2024	6/20/2019	122.6795	118.1914179	113.8923622	109.7733457	105.8258611	102.0418508	98.41368079	94.9341159	91.59629658
190621A00021	6/21/2019	2.12	6/21/2022	6/21/2019	110.67108	108.6951321	106.7644383	104.8776414	103.03344	101.2305815	99.46786031	97.7441151	96.05822714
190621A00023	6/21/2019	1.93	6/21/2022	6/21/2019	110.67874	108.696016	106.7588101	104.8657597	103.0155525	101.2069258	99.43866395	97.70959663	96.01859632
190624A00036	6/24/2019	1.95	12/28/2020	6/24/2019	101.9047	101.5658203	101.2291937	100.8947979	100.5626108	100.2326105	99.90477565	99.57908482	99.25551704
190625A00017	6/25/2019	2.02	12/15/2022	6/25/2019	113.34259	110.7940208	108.3159098	105.9058384	103.5614869	101.2806326	99.06114484	96.9009806	94.79817988
190626A00004	6/26/2019	2.15	6/26/2024	6/26/2019	122.81954	118.308532	113.9881068	109.849213	105.883279	102.0821836	98.43822988	94.94412069	91.59293585
190913A00014	9/13/2019	2.08	9/13/2024	9/13/2019	123.79457	118.9988017	114.4160681	110.0357463	105.8478047	101.842765	98.01166843	94.34604427	90.83788045
190918A00016	9/18/2019	1.78	9/18/2024	9/18/2019	123.45044	118.6194394	114.004401	109.5944944	105.3794943	101.3497431	97.49611563	93.80998686	90.28320148
190924A00010	9/24/2019	1.95	9/24/2021	9/24/2019	106.17128	105.0019902	103.8583399	102.7394949	101.644655	100.5730542	99.52395874	98.4966655	97.49050036
190925A00018	9/25/2019	1.7	9/25/2024	9/25/2019	123.20524	118.3555558	113.7235903	109.2983791	105.0695736	101.027402	97.16263369	93.46654639	89.93089486
190926A00004	9/26/2019	1.93	9/21/2021	9/26/2019	106.1004	104.9409707	103.8067693	102.6969821	101.6108274	100.5475565	99.50645222	98.48682686	97.48802102
190926A00007	9/26/2019	1.88	9/26/2022	9/26/2019	111.7507	109.4667878	107.2414868	105.0728871	102.959154	100.8985263	98.8893132	96.92989071	95.01869853
190926A00016	9/26/2019	2.28	5/24/2030	9/26/2019	156.10812	142.4334247	130.0712852	118.8885349	108.7661803	99.59782215	91.28826226	83.7522702	76.91349225
190926A00017	9/26/2019	2.23	9/26/2029	9/26/2019	152.08923	139.5693252	128.1794744	117.8116422	108.3686441	99.76300907	91.91596283	84.75652243	78.22068916
190930A00041	9/30/2019	1.94	10/25/2021	9/30/2019	106.66816	105.3975212	104.1570106	102.9455654	101.7621736	100.6058697	99.47573192	98.37088009	97.29047299
191002A00015	10/2/2019	1.78	10/3/2022	10/2/2019	111.64027	109.3361611	107.091587	104.9045861	102.7732796	100.6958649	98.67061235	96.69586124	94.77001662
191002A00016	10/2/2019	1.79	10/2/2023	10/2/2019	117.24677	113.7165916	110.3115314	107.0264102	103.856301	100.7965109	97.84256847	94.99021162	92.23537656
191004A00005	10/4/2019	1.54	10/4/2024	10/4/2019	122.62659	117.7589644	113.1111253	108.6719461	104.4309245	100.3781478	96.50425542	92.80040524	89.25824164
191009A00026	10/9/2019	1.74	10/7/2022	10/9/2019	111.61245	109.2965903	107.0407998	104.8430954	102.7015722	100.6144033	98.57983579	96.59618744	94.66184282
191017A00026	10/17/2019	2.3	7/17/2029	10/17/2019	151.793	139.5666728	128.4217725	118.2569353	108.980783	100.5108918	92.77287354	85.69955638	79.23025142
191018A00006	10/18/2019	1.89	6/1/2022	10/18/2019	109.93376	108.0255037	106.1602813	104.3367105	102.5534691	100.8092916	99.10296587	97.43333049	95.79927194
191018A00007	10/18/2019	1.89	7/1/2022	10/18/2019	110.39583	108.3921006	106.4346658	104.522183	102.6533564	100.8269357	99.04171436	97.29652773	95.59025125
191023A00006	10/23/2019	1.95	10/23/2024	10/23/2019	123.84449	118.913856	114.2072421	109.7132192	105.4210054	101.3204294	97.40189218	93.65633128	90.07518721
191104A00018	11/5/2019	1.96	11/5/2024	11/5/2019	124.09253	119.1127924	114.3609489	109.8252801	105.4947394	101.3589109	97.40797005	93.63264597	90.02418663
191104A00019	11/5/2019	1.9	2/1/2022	11/5/2019	108.02355	106.4980549	105.0018651	103.5342107	102.094345	100.6815467	99.29511867	97.93438753	96.59870212
191108A00011	11/8/2019	2.08	10/18/2024	11/8/2019	124.35447	119.4293581	114.7272543	110.2368149	105.9473392	101.8487304	97.9314577	94.18652135	90.60541944
191126A00022	11/26/2019	1.72	5/26/2023	11/26/2019	115.65738	112.550934	109.5443172	106.6336313	103.8151606	101.0853634	98.44086213	95.87843456	93.39500491

Classification | Public

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
191203A00004	12/4/2019	1.87	12/4/2024	12/4/2019	124.1299	119.0500767	114.2066796	109.5873559	105.1804785	100.9750944	96.96088117	93.12810684	89.46759192
191204A00013	12/4/2019	1.72	12/4/2024	12/4/2019	124.3842	119.2707492	114.3959671	109.7473562	105.3131503	101.0822677	97.04426591	93.18930144	89.50809095
191121A00010	11/21/2019	2.59	11/20/2037	11/21/2019	206.41437	176.7200367	151.7181706	130.6358963	112.8315344	97.77174333	85.01274032	74.1848578	64.97982765
191206A00008	12/6/2019	2.44	12/6/2030	12/6/2019	160.85387	146.1399231	132.9038738	120.9890367	110.2561154	100.5811868	91.85393132	83.9760754	76.86001952
191206A00020	12/9/2019	1.91	12/15/2021	12/9/2019	107.36713	105.9596253	104.5831161	103.2365788	101.9190369	100.6295566	99.36724433	98.13124473	96.92073853
191210A00009	12/10/2019	1.92	12/10/2020	12/10/2019	101.56975	101.2836728	100.999218	100.7163693	100.4351131	100.1554359	99.87732436	99.60076524	99.32574554
191212A00027	12/13/2019	1.93	10/17/2022	12/13/2019	112.19029	109.8376794	107.5466554	105.3151601	103.1412184	101.022937	98.95850093	96.94616893	94.98427023
191212A00032	12/12/2019	1.99	12/12/2023	12/12/2019	119.0299	115.2410991	111.5932668	108.0803215	104.6964868	101.4362712	98.29445194	95.26606027	92.3463669
191219A00036	12/20/2019	2.1	12/20/2024	12/20/2019	125.45595	120.2935256	115.3728591	110.68134	106.2070854	101.9388938	97.86620142	93.97904301	90.26801411
191230A00012	12/30/2019	1.77	12/1/2023	12/30/2019	118.78991	115.0226194	111.3950384	107.9011006	104.5350433	101.2913945	98.16495514	95.15078351	92.2441806
200106A00015	1/6/2020	1.87	2/15/2024	1/6/2020	119.61287	115.6005	111.7445438	108.0380569	104.4744446	101.0474399	97.75108558	94.57971691	91.52794568
200110A00004	1/10/2020	1.7	1/10/2022	1/10/2020	107.6513	106.1899214	104.7555952	103.347629	101.9653576	100.6081376	99.27534685	97.96638313	96.68066359
200110A00005	1/10/2020	1.7	1/10/2022	1/10/2020	107.6513	106.1899214	104.7555952	103.347629	101.9653576	100.6081376	99.27534685	97.96638313	96.68066359
200115A00014	1/17/2020	1.88	9/15/2022	1/17/2020	111.57609	109.3281235	107.1372701	105.001692	102.9196239	100.8893701	98.90930157	96.97785273	95.09351831
200116A00005	1/16/2020	1.92	7/16/2021	1/16/2020	105.01737	104.0723081	103.1442009	102.2325947	101.3370523	100.4571517	99.59248574	98.74266119	97.90729831
200122A00003	1/22/2020	1.88	1/22/2021	1/22/2020	102.22388	101.8124563	101.4043472	100.9995115	100.5979101	100.1995041	99.80425546	99.41212674	99.023081
200122A00010	1/22/2020	1.84	1/24/2022	1/22/2020	107.81006	106.3102089	104.8387692	103.3949975	101.9781799	100.5876263	99.22266959	97.88266487	96.56698828
200123A00048	1/23/2020	1.7	1/23/2025	1/23/2020	125.0537	119.7564631	114.7130157	109.9098964	105.3344304	100.9746762	96.81937951	92.85793025	89.08032209
200130A00005	1/30/2020	1.73	1/30/2024	1/30/2020	118.83912	114.8962005	111.105115	107.4592114	103.9521668	100.5779682	97.33089562	94.205506	91.19661835
200130A00010	1/30/2020	1.56	1/31/2022	1/30/2020	107.77036	106.2457596	104.7504594	103.2836874	101.8446968	100.4327665	99.04719962	97.68732292	96.3524855
200130A00012	1/30/2020	1.72	1/30/2023	1/30/2020	113.30596	110.6163504	108.0044408	105.4675418	103.0030745	100.6085642	98.28163592	96.02000954	93.82149548
200131A00005	1/31/2020	1.64	2/1/2021	1/31/2020	102.3332	101.8917875	101.4541766	101.0203138	100.5901511	100.1636415	99.74073846	99.32139653	98.90557089
200131A00006	1/31/2020	1.52	1/31/2022	1/31/2020	107.71112	106.1869795	104.6921341	103.2258087	101.7872569	100.3757576	98.99061432	97.63115397	96.29672584
200203A00012	2/3/2020	1.57	2/3/2025	2/3/2020	124.59136	119.2661355	114.1979093	109.3729578	104.7783606	100.4019505	96.2322654	92.25850373	88.47048308
200203A00050	2/3/2020	1.54	2/3/2022	2/3/2020	107.78975	106.2551044	104.7501291	103.2740398	101.8260756	100.405502	99.01160932	97.64371205	96.30114765
200221A00013	2/21/2020	1.69	2/21/2025	2/21/2020	124.4657	119.1057915	114.0068653	109.1548485	104.5365046	100.1393765	95.95173598	91.96253756	88.16137492
200224A00007	2/24/2020	1.59	2/24/2025	2/24/2020	124.02018	118.6594715	113.5604352	108.7089322	104.0916627	99.69611162	95.5104982	91.52372864	87.7253526
200224A00024	2/24/2020	1.59	2/24/2025	2/24/2020	124.02018	118.6594715	113.5604352	108.7089322	104.0916627	99.69611162	95.5104982	91.52372864	87.7253526
200224A00035	2/24/2020	1.59	2/24/2025	2/24/2020	124.02018	118.6594715	113.5604352	108.7089322	104.0916627	99.69611162	95.5104982	91.52372864	87.7253526
200225A00014	2/25/2020	1.57	2/25/2022	2/25/2020	107.91478	106.3112068	104.7399256	103.2000437	101.6906995	100.2110624	98.76033155	97.33773413	95.94252449
200225A00042	2/25/2020	1.39	2/25/2022	2/25/2020	107.91638	106.3080721	104.7322297	103.1879494	101.6743633	100.1906348	98.735957	97.30955186	95.91066853
200227A00012	2/27/2020	1.41	2/27/2023	2/27/2020	112.93813	110.1572499	107.4594401	104.8417278	102.3012625	99.83531366	97.44126499	95.11660858	92.85893982
200228A00014	2/28/2020	1.4	2/28/2025	2/28/2020	123.14298	117.7879313	112.6952368	107.8506789	103.2408831	98.85326683	94.67598756	90.69789573	86.90849033

Classification | Public

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
200228A00041	2/28/2020	1.14	2/28/2023	2/28/2020	112.75632	109.9632255	107.2539108	104.6253606	102.0746896	99.59913465	97.19604851	94.86289418	92.59723956
200228A00067	2/28/2020	1.4	2/28/2025	2/28/2020	123.14298	117.7879313	112.6952368	107.8506789	103.2408831	98.85326683	94.67598756	90.69789573	86.90849033
200302A00008	3/2/2020	1.2	3/9/2023	3/2/2020	112.51607	109.7100006	106.9884915	104.3484792	101.787035	99.30135458	96.88875245	94.54665571	92.27259865
200302A00028	3/2/2020	1.25	2/26/2024	3/2/2020	117.45224	113.4410863	109.5881146	105.8862259	102.3286851	98.90909525	95.62137894	92.45976018	89.41874785
200304A00053	3/6/2020	2.33	3/6/2025	3/6/2020	127.83892	122.3533072	117.1357643	112.1717588	107.4476228	102.9504984	98.66828577	94.58959384	90.70369527
200305A00011	3/5/2020	0.95	3/7/2022	3/5/2020	107.08411	105.4572032	103.8635007	102.3020703	100.7720105	99.27245333	97.80256209	96.3615303	94.94858017
200306A00065	3/6/2020	1.38	3/6/2030	3/6/2020	144.88415	132.0783584	120.4908983	109.9998317	100.4959932	91.88159136	84.06897147	76.97951953	70.54268912
200309A00003	3/9/2020	0.72	3/9/2022	3/9/2020	106.7446	105.1147205	103.5181837	101.954049	100.4214084	98.91938741	97.44714347	96.00386439	94.5887671
200309A00064	3/9/2020	0.55	3/9/2022	3/9/2020	106.76047	105.1256083	103.5242669	101.9554994	100.4183908	98.91206028	97.43565897	95.98836898	94.56940173
200311A00006	3/13/2020	1.12	3/10/2025	3/13/2020	121.88421	116.5258762	111.4317727	106.5874968	101.9795054	97.59506178	93.42218304	89.44959152	85.66666936
200319A00024	3/19/2020	1.12	3/15/2022	3/19/2020	107.45959	105.8063496	104.1871328	102.6009692	101.0469232	99.52409398	98.0316142	96.56864815	95.13439038
200326A00030	3/26/2020	1.13	3/24/2023	3/26/2020	112.52455	109.6727824	106.9079615	104.2268944	101.6265293	99.10394679	96.65635298	94.28107315	91.97554588
200327A00036	3/27/2020	0.77	9/27/2023	3/27/2020	114.45516	110.9705091	107.6096735	104.367529	101.2391988	98.22003736	95.30561842	92.4917227	89.77432697
200327A00075	3/31/2020	1.75	3/29/2024	3/31/2020	119.8154	115.6576346	111.6666868	107.8349264	104.155116	100.6203906	97.22423608	93.96046888	90.82321742
200331A00030	4/2/2020	1.17	4/1/2022	4/2/2020	107.76949	106.0640933	104.3944291	102.7594486	101.1581431	99.58954281	98.05271486	96.54676166	95.07081912
180914A00034	9/14/2018	2.85	9/15/2020	9/14/2018	100.27723	100.2353336	100.1934922	100.1517025	100.1099646	100.0682783	100.0266435	99.98506016	99.9435281
180920A00027	9/20/2018	3.04	9/20/2022	9/20/2018	114.59507	112.2901439	110.0440401	107.8548509	105.7207444	103.6399624	101.6108162	99.63168362	97.70100568
180924A00044	9/24/2018	3.1	9/24/2021	9/24/2018	107.44058	106.2637029	105.1125791	103.9863734	102.8842828	101.8055385	100.7494042	99.71517421	98.70217188
180928A00011	9/28/2018	3.12	7/15/2022	9/28/2018	113.03516	110.9624259	108.9384094	106.9616692	105.0308157	103.1445091	101.3014577	99.50041543	97.74018032
180928A00029	9/28/2018	2.87	9/28/2020	9/28/2018	100.51925	100.4409584	100.3627884	100.2847434	100.2068232	100.1290274	100.0513557	99.9738078	99.8963835
181004A00028	10/4/2018	3.31	10/4/2023	10/4/2018	122.32279	118.7035932	115.2121235	111.8431	108.5914983	105.4525326	102.4216435	99.49448482	96.6669128
181009A00024	10/9/2018	3.06	10/9/2020	10/9/2018	100.72718	100.6179819	100.5090357	100.4003378	100.2918874	100.1836836	100.0757256	99.96801246	99.86054334
181010A00018	10/10/2018	3.17	6/1/2021	10/10/2018	105.26994	104.4615307	103.6655186	102.8816218	102.1095652	101.3490822	100.599914	99.86180937	99.1345247
181010A00020	10/10/2018	3.27	12/1/2022	10/10/2018	116.09817	113.5588804	111.0889169	108.6858368	106.3473107	104.0711115	101.8551098	99.6972678	97.59563495
181016A00084	10/16/2018	3.21	10/17/2022	10/16/2018	115.06592	112.680571	110.3575031	108.094631	105.8899594	103.7415761	101.6476476	99.60641492	97.61619037
181018A00014	10/18/2018	3.21	10/18/2021	10/18/2018	108.04333	106.7862374	105.5583844	104.3587597	103.1863976	102.0403757	100.919813	99.8238673	98.75173331
181022A00051	10/22/2018	3.11	10/22/2020	10/22/2018	100.97725	100.831245	100.6856771	100.5405409	100.3958345	100.251556	100.1077034	99.96427492	99.8212686
181025A00010	10/25/2018	3.07	10/25/2022	10/25/2018	115.35359	112.9315368	110.5733566	108.2768916	106.0400725	103.8609173	101.7375267	99.66807989	97.65083073
181102A00006	11/2/2018	3.07	11/2/2021	11/2/2018	108.38235	107.0716793	105.7926574	104.5441505	103.3250762	102.1344026	100.9711456	99.83436617	98.72316771
181109A00023	11/9/2018	3.39	11/9/2022	11/9/2018	115.93491	113.4678086	111.0665635	108.7289125	106.4526909	104.235827	102.0763369	99.97232068	97.92195727
181114A00026	11/14/2018	3.32	12/14/2022	11/14/2018	116.47413	113.890417	111.3778679	108.9340338	106.5565714	104.2432352	101.9918735	99.80042305	97.66690477
181115A00036	11/15/2018	3.2	11/15/2021	11/15/2018	108.58078	107.2303361	105.9134624	104.6289215	103.3755326	102.1521716	100.9577684	99.79130276	98.65180222
181121A00016	11/21/2018	3.29	11/21/2023	11/21/2018	123.20811	119.4162059	115.7628013	112.2419464	108.8479936	105.5755766	102.419594	99.3751942	96.43776124

Classification | Public

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
181123A00015	11/23/2018	3.14	11/23/2021	11/23/2018	108.66483	107.2879557	105.9459414	104.6374756	103.3613112	102.1162626	100.9012013	99.71505292	98.55679392
181127A00026	11/27/2018	3.2	11/26/2021	11/27/2018	108.80179	107.4142703	106.0621115	104.7439725	103.458581	102.2047272	100.9812605	99.78708551	98.62115898
181127A00027	11/27/2018	3.25	11/28/2022	11/27/2018	115.99099	113.4624369	111.0027303	108.6094492	106.2802813	104.0130163	101.8055406	99.65583196	97.56195458
181128A00031	11/28/2018	3.29	11/28/2023	11/28/2018	123.34864	119.5307712	115.853061	112.3094617	108.8942275	105.6019006	102.4272945	99.36547813	96.4117615
181129A00023	11/29/2018	3.16	11/29/2021	11/29/2018	108.81027	107.4129938	106.051558	104.7245999	103.430822	102.168991	100.9379341	99.73653523	98.56373181
190826A00029	8/26/2019	1.53	8/26/2024	8/26/2019	121.99418	117.2720807	112.7585952	108.4433941	104.3167201	100.3693496	96.59256012	92.97810024	89.51816169
190828A00008	8/28/2019	1.75	8/29/2022	8/28/2019	111.03371	108.8440256	106.7090894	104.6271727	102.5966177	100.6158304	98.68327798	96.79748541	94.95703328
190903A00004	9/3/2019	1.77	9/6/2022	9/3/2019	111.1997	108.9836244	106.8234001	104.7172502	102.6634664	100.6604073	98.70649498	96.80021202	94.94009877
190906A00014	9/6/2019	1.57	9/6/2024	9/6/2019	122.33547	117.5689989	113.0144381	108.6612278	104.499394	100.519512	96.71267313	93.07045321	89.58488373
190909A00028	9/9/2019	1.84	9/9/2022	9/9/2019	111.39559	109.1681291	106.9969556	104.8802702	102.8163452	100.8035209	98.84020199	96.92485459	95.05600359
190917A00022	9/17/2019	2.02	9/16/2022	9/17/2019	111.89348	109.6389437	107.4417258	105.2999778	103.2119263	101.1758677	99.19016577	97.25324784	95.36360203
190917A00045	9/17/2019	1.86	9/17/2021	9/17/2019	106.14262	104.992715	103.8676138	102.7665221	101.6886777	100.6333503	99.59984005	98.58747575	97.5956135
190918A00003	9/18/2019	1.95	9/19/2022	9/18/2019	111.79096	109.5282635	107.3232581	105.1740776	103.0789302	101.0360958	99.04392218	97.1008217	95.20526835
190925A00024	9/25/2019	1.88	4/14/2022	9/25/2019	109.15325	107.396303	105.6767316	103.993412	102.3452672	100.7312627	99.15040456	97.60173721	96.08434182
190926A00006	9/26/2019	1.7	9/26/2022	9/26/2019	111.78292	109.4903556	107.2567761	105.0802541	102.9589384	100.8910529	98.87489243	96.90881944	94.99126077
190926A00012	9/26/2019	1.93	9/27/2021	9/26/2019	106.19802	105.0191291	103.8662867	102.7386383	101.6353653	100.5556843	99.49884504	98.46412887	97.45084692
190930A00035	9/30/2019	1.93	9/30/2024	9/30/2019	123.40096	118.5559503	113.9283336	109.5071625	105.2821034	101.243399	97.38183287	93.68869597	90.15575593
190930A00040	9/30/2019	1.92	2/25/2022	9/30/2019	108.45812	106.850116	105.2744875	103.7303366	102.2167997	100.733044	99.27826646	97.85169245	96.45257433
190930A00070	9/30/2019	1.93	9/27/2024	9/30/2019	123.35386	118.5200038	113.9026864	109.4910227	105.2747359	101.2441213	97.39001099	93.70374114	90.17712103
190930A00071	9/30/2019	2.05	9/29/2025	9/30/2019	129.62435	123.3776329	117.4693136	111.8792574	106.5886381	101.5798441	96.83639285	92.34285258	88.08476958
191003A00014	10/3/2019	1.71	9/20/2024	10/3/2019	122.2701	117.4829541	112.9096892	108.5395845	104.3625218	100.3689437	96.54981964	92.89661308	89.40125215
191003A00019	10/3/2019	1.71	9/27/2024	10/3/2019	122.37515	117.5621724	112.9650462	108.5729157	104.3755309	100.3632129	96.52681817	92.85770609	89.34770814
191003A00020	10/3/2019	1.72	10/3/2022	10/3/2019	111.50799	109.2053658	106.9622404	104.7766584	102.6467417	100.5706888	98.54677073	96.57332758	94.64876516
191004A00002	10/4/2019	2.08	10/4/2029	10/4/2019	150.60409	138.1229618	126.7726283	116.444662	107.0415586	98.47558422	90.66775128	83.54690484	77.04890949
191004A00009	10/4/2019	1.71	10/4/2021	10/4/2019	106.06309	104.8629095	103.68974	102.5426823	101.4208723	100.3234842	99.24972735	98.1988452	97.17011307
191009A00018	10/9/2019	1.74	10/12/2021	10/9/2019	106.22363	104.997093	103.7987373	102.6276015	101.4827664	100.3633538	99.26852423	98.19747488	97.1494375
191010A00013	10/10/2019	1.59	10/7/2022	10/10/2019	111.71143	109.3859733	107.1209935	104.9144817	102.764516	100.6692532	98.62692524	96.63583518	94.69435398
191015A00001	10/15/2019	1.87	10/15/2021	10/15/2019	106.4225	105.1852007	103.9765342	102.7955198	101.6412171	100.5127276	99.40919304	98.32979259	97.27374119
190826A00060	8/26/2019	2.02	8/26/2027	8/26/2019	139.29037	130.2238556	121.8080465	113.9928809	106.732399	99.98438242	93.71003184	87.87367341	82.44249212
190826A00065	8/26/2019	2.09	8/28/2029	8/26/2019	150.19328	137.8769039	126.6654337	116.4539379	107.1479526	98.66239001	90.92056394	83.85332169	77.39826925
190827A00039	8/27/2019	1.78	8/26/2022	8/27/2019	111.05036	108.8696551	106.7432609	104.6694684	102.6466395	100.6731989	98.74763115	96.86847814	95.03433627
190828A00019	8/28/2019	2	3/28/2028	8/28/2019	142.11219	132.1350451	122.9271388	114.4251612	106.5713293	99.31287431	92.60158172	86.39337637	80.64794706
190828A00020	8/28/2019	1.95	5/28/2027	8/28/2019	137.5142	128.8424898	120.773921	113.2633331	106.2691887	99.75326072	93.68035083	88.01803294	82.73642041

Classification | Public

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
190829A00024	8/29/2019	1.54	8/29/2024	8/29/2019	122.08268	117.3486455	112.8241442	108.4987855	104.3627508	100.4067593	96.62203571	93.00027966	89.53363734
190829A00029	8/29/2019	1.75	7/14/2023	8/29/2019	115.90924	112.6563102	109.5115154	106.4706779	103.5298077	100.6850903	97.9328778	95.26968095	92.69216104
190829A00050	8/29/2019	1.73	8/29/2024	8/29/2019	122.02767	117.3196794	112.8194383	108.5166741	104.4016762	100.4652645	96.69875733	93.09394184	89.64304579
190830A00012	8/30/2019	1.76	8/30/2024	8/30/2019	122.17333	117.4589558	112.9527177	108.6443155	104.5240153	100.5826152	96.81141345	93.20217822	89.74711982
190830A00023	8/30/2019	1.78	9/15/2022	8/30/2019	111.36102	109.1154043	106.9268553	104.7935346	102.7136783	100.6855922	98.70764845	96.77828268	94.89599082
190909A00025	9/9/2019	1.88	9/9/2024	9/9/2019	122.85161	118.0892838	113.5382642	109.1880308	105.0286502	101.0507352	97.24541228	93.60429018	90.11943097
190909A00029	9/9/2019	1.83	9/8/2023	9/9/2019	117.00944	113.5605895	110.2319426	107.0186241	103.9159829	100.9195838	98.02519651	95.22878461	92.52649538
190909A00030	9/9/2019	1.83	9/9/2024	9/9/2019	122.63204	117.8743488	113.3278066	108.9819061	104.8267198	100.852866	97.05147666	93.41416543	89.93299928
190912A00026	9/12/2019	1.94	9/12/2022	9/12/2019	111.657	109.4174207	107.2345836	105.1066644	103.0319157	101.0086587	99.0352803	97.11022983	95.23201619
190912A00031	9/12/2019	1.75	9/12/2024	9/12/2019	123.22228	118.4166133	113.8251076	109.437056	105.2423507	101.2314423	97.39530622	93.72541065	90.21368664
190917A00035	9/19/2019	2.02	10/16/2023	9/19/2019	118.2287	114.6381344	111.175966	107.8368282	104.6156139	101.5074616	98.50774234	95.61204689	92.81617348
190917A00044	9/17/2019	1.86	9/17/2021	9/17/2019	106.14262	104.992715	103.8676138	102.7665221	101.6886777	100.6333503	99.59984005	98.58747575	97.5956135
190925A00019	9/27/2019	1.93	9/27/2023	9/27/2019	117.6326	114.1121978	110.7160672	107.4390887	104.2763873	101.2233188	98.2754571	95.42858236	92.67867014
190926A00015	9/26/2019	2.32	11/26/2030	9/26/2019	159.24606	144.6580544	131.5340927	119.7191456	109.0753677	99.48011043	90.82417349	83.01026661	75.95165418
190927A00036	9/27/2019	1.94	9/6/2024	9/27/2019	123.0679	118.3111617	113.7650673	109.4191514	105.2635288	101.2888573	97.4863043	93.84751669	90.36459161
190930A00077	9/30/2019	2.23	9/28/2029	9/30/2019	152.11834	139.5891236	128.191395	117.8169251	108.3683624	99.7580903	91.90720804	84.74462243	78.20623885
191001A00006	10/1/2019	1.83	6/18/2024	10/1/2019	121.3671	116.9118629	112.6443468	108.5556214	104.6372297	100.8811634	97.27983625	93.82605912	90.51301693
191002A00006	10/2/2019	1.84	10/2/2024	10/2/2019	123.02982	118.1861385	113.5601389	109.1408383	104.9178759	100.8814697	97.02238069	93.33187919	89.80171404
191212A00019	12/13/2019	1.93	12/19/2022	12/13/2019	113.18672	110.6279584	108.1401479	105.7208705	103.3678044	101.078723	98.85149063	96.68405784	94.57445752
191223A00056	12/23/2019	2.46	12/14/2029	12/23/2019	155.73162	142.7259776	130.9154695	120.1837462	110.4263606	101.5494903	93.46880653	86.1084685	79.40022933
200103A00009	1/3/2020	1.9	1/3/2024	1/3/2020	119.0489	115.1898487	111.4763058	107.9020289	104.4610785	101.1477995	97.95680665	94.88296962	91.92140001
200110A00014	1/10/2020	1.73	1/10/2023	1/10/2020	113.5204	110.8799472	108.3143299	105.8210107	103.3975511	101.0416093	98.75093604	96.52337012	94.35683443
200113A00003	1/13/2020	1.72	1/13/2022	1/13/2020	107.72647	106.2556242	104.8121566	103.3953621	102.0045639	100.6391078	99.29836081	97.98171061	96.68856469
200123A00049	1/23/2020	1.63	1/23/2023	1/23/2020	113.46966	110.7892351	108.1858645	105.6568915	103.199771	100.8120601	98.49141419	96.23558157	94.04239965
200128A00015	1/28/2020	1.81	1/28/2025	1/28/2020	124.67071	119.3949114	114.3719311	109.5883562	105.0315551	100.6896273	96.55135774	92.60617312	88.84410242
200129A00010	1/29/2020	1.76	1/31/2022	1/29/2020	107.79968	106.2792184	104.7879094	103.3249876	101.8897119	100.481366	99.09925817	97.74271958	96.41110366
200131A00010	2/3/2020	1.68	2/3/2023	2/3/2020	113.26663	110.564096	107.9400031	105.3916248	102.9163451	100.5116546	98.17514534	95.90450615	93.6975181
200131A00032	1/31/2020	2.1	1/31/2030	1/31/2020	152.45565	139.4207945	127.6035515	116.8837886	107.1537951	98.31694025	90.28648335	82.98451639	76.34102505
200203A00005	2/3/2020	1.7	5/3/2023	2/3/2020	114.68066	111.6729893	108.7599248	105.9378631	103.2033619	100.5531359	97.98404753	95.49309959	93.07742748
200203A00006	2/3/2020	1.76	2/3/2025	2/3/2020	124.52113	119.2274054	114.1883629	109.3904394	104.8208637	100.4676066	96.31933449	92.36536499	88.5956265
200207A00017	2/7/2020	1.96	2/8/2027	2/7/2020	136.1036	127.8832965	120.2119431	113.0500794	106.3612762	100.111887	94.27082178	88.80934065	83.70086481
200214A00013	2/18/2020	1.78	11/10/2021	2/18/2020	106.73268	105.4105049	104.1209114	102.8627064	101.6347551	100.4359766	99.26534113	98.12186686	97.0046171
200220A00002	2/20/2020	1.76	2/20/2025	2/20/2020	124.79408	119.4302449	114.3273059	109.4712107	104.8487379	100.4474434	96.25561125	92.26220652	88.45683256

Classification | Public

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
200224A00004	2/24/2020	1.68	2/24/2021	2/24/2020	102.6376	102.1287852	101.6249978	101.1261672	100.6322207	100.1430868	99.65869546	99.17897797	98.70386696
200225A00012	2/25/2020	1.57	2/25/2025	2/25/2020	123.93703	118.5745262	113.4739828	108.6212325	104.0029523	99.60660559	95.42039189	91.4331994	87.63456124
200226A00006	2/26/2020	1.57	2/26/2025	2/26/2020	123.95248	118.5858775	113.4815972	108.6254486	104.0040818	99.60493558	95.41618658	91.42670203	87.62599572
200227A00005	2/27/2020	1.43	2/27/2024	2/27/2020	118.14591	114.1185838	110.2500669	106.5332375	102.9613304	99.52792062	96.22690414	93.05248	89.99913346
200227A00026	2/27/2020	1.41	2/27/2023	2/27/2020	112.93813	110.1572499	107.4594401	104.8417278	102.3012625	99.83531366	97.44126499	95.11660858	92.85893982
200228A00019	2/28/2020	1.21	2/20/2025	2/28/2020	123.08905	117.7346966	112.6421531	107.79726	103.1867026	98.79795195	94.61921434	90.63938407	86.84799969
200228A00030	2/28/2020	1.32	2/28/2023	2/28/2020	112.71479	109.9334343	107.2352834	104.6173519	102.0767814	99.61083407	97.21688631	94.8924237	92.63503542
200228A00073	2/28/2020	1.32	2/28/2023	2/28/2020	112.71479	109.9334343	107.2352834	104.6173519	102.0767814	99.61083407	97.21688631	94.8924237	92.63503542
200204A00016	2/4/2020	1.72	2/6/2023	2/4/2020	113.41828	110.7034489	108.067691	105.5082447	103.0224635	100.6078093	98.26184702	95.98223984	93.76674457
200207A00006	2/7/2020	1.76	2/8/2021	2/7/2020	102.43368	101.9722437	101.5149574	101.0617678	100.6126201	100.1674604	99.72623557	99.28889364	98.85538345
200210A00009	2/10/2020	1.57	2/10/2025	2/10/2020	124.70485	119.350482	114.2556904	109.4065506	104.7899555	100.3935658	96.20576068	92.21559238	88.41274353
200214A00015	2/18/2020	1.76	8/6/2024	2/18/2020	121.81413	117.1871841	112.7613338	108.526788	104.4742843	100.5950578	96.88081202	93.32369113	89.91625411
200218A00008	2/18/2020	1.77	2/18/2021	2/18/2020	102.59075	102.0996232	101.613198	101.1314027	100.6541716	100.1814397	99.7131438	99.24922147	98.78961162
200218A00015	2/18/2020	1.77	2/18/2021	2/18/2020	102.59075	102.0996232	101.613198	101.1314027	100.6541716	100.1814397	99.7131438	99.24922147	98.78961162
200220A00015	2/20/2020	1.57	2/20/2025	2/20/2020	124.86708	119.4710191	114.338246	109.4545404	104.8065256	100.3816139	96.16795554	92.15439193	88.33041127
200224A00017	2/24/2020	1.59	2/24/2025	2/24/2020	124.02018	118.6594715	113.5604352	108.7089322	104.0916627	99.69611162	95.5104982	91.52372864	87.7253526
200224A00018	2/24/2020	1.58	8/19/2024	2/24/2020	121.23025	116.5721597	112.1184406	107.8590513	103.7844957	99.88579289	96.15444651	92.58241568	89.16208817
200224A00021	2/24/2020	1.58	9/24/2024	2/24/2020	121.75304	116.9634216	112.3884062	108.017212	103.8396616	99.84614319	96.02757614	92.3753782	88.88143535
200224A00029	2/24/2020	1.56	2/24/2023	2/24/2020	113.28809	110.5129185	107.8203293	105.2073748	102.6712315	100.2091943	97.81867086	95.49717577	93.24232562
200225A00003	2/25/2020	1.54	2/27/2023	2/25/2020	113.28238	110.496944	107.7946845	105.1726241	102.627909	100.1578059	97.75969533	95.43106659	93.16951237
200226A00002	2/26/2020	1.53	2/27/2023	2/26/2020	113.2559	110.4708137	107.7688965	105.1471705	102.6027824	100.1329988	97.73520069	95.40687751	93.14562217
200226A00009	2/26/2020	1.75	2/26/2030	2/26/2020	151.55028	138.3140773	126.3316408	115.4777711	105.6403642	96.71897967	88.62357377	81.27337576	74.59589099
200226A00017	2/26/2020	1.53	2/27/2023	2/26/2020	113.2559	110.4708137	107.7688965	105.1471705	102.6027824	100.1329988	97.73520069	95.40687751	93.14562217
200226A00025	2/26/2020	1.38	2/26/2025	2/26/2020	124.02235	118.6234262	113.4892376	108.6054213	103.9584702	99.53567781	95.32508567	91.31543581	87.49612572
200227A00006	2/27/2020	1.47	2/27/2025	2/27/2020	123.47393	118.1148227	113.0179938	108.169241	103.5552048	99.16331541	94.98174234	90.99934655	87.20563648
200227A00023	2/27/2020	1.47	2/27/2025	2/27/2020	123.47393	118.1148227	113.0179938	108.169241	103.5552048	99.16331541	94.98174234	90.99934655	87.20563648
200227A00027	2/27/2020	1.47	2/27/2025	2/27/2020	123.47393	118.1148227	113.0179938	108.169241	103.5552048	99.16331541	94.98174234	90.99934655	87.20563648
200228A00016	2/28/2020	1.35	2/22/2024	2/28/2020	117.77126	113.7681162	109.922263	106.2266687	102.6746582	99.25989049	95.9763399	92.81827876	89.7802608
200302A00045	3/4/2020	1.31	3/4/2025	3/4/2020	122.75068	117.3916502	112.2958244	107.4489016	102.8374361	98.44878	94.27103117	90.2929855	86.50409209
200303A00004	3/3/2020	1.06	3/3/2022	3/3/2020	107.48924	105.8657934	104.2754112	102.7171677	101.1901696	99.69355602	98.22649747	96.78819405	95.3778743
200303A00018	3/3/2020	1.27	3/3/2025	3/3/2020	122.53941	117.1886539	112.1006289	107.2610672	102.656552	98.27446181	94.10291934	90.13074341	86.34740442
200302A00033	3/2/2020	1.31	3/3/2025	3/2/2020	122.73753	117.3821097	112.2895874	107.4456873	102.8369855	98.45085404	94.27540935	90.29946426	86.51248354
200303A00002	3/3/2020	1.06	3/3/2023	3/3/2020	112.58406	109.7840823	107.0683029	104.4336846	101.8773196	99.39642341	96.98832888	94.65048032	92.38042809

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
200304A00007	3/4/2020	1.01	3/15/2022	3/4/2020	107.28301	105.6312544	104.0134932	102.4287586	100.8761159	99.35466505	97.86353932	96.4019037	94.96895337
200304A00040	3/4/2020	1.12	3/1/2024	3/4/2020	117.01618	112.9995152	109.1418065	105.435905	101.8750205	98.45270508	95.16283375	91.99958655	88.95743148
200305A00040	3/10/2020	0.99	3/10/2023	3/10/2020	111.96623	109.1644796	106.4472781	103.8115574	101.2543858	98.77295635	96.36458129	94.0266856	91.75680169
200306A00014	3/6/2020	1.38	3/6/2030	3/6/2020	144.88415	132.0783584	120.4908983	109.9998317	100.4959932	91.88159136	84.06897147	76.97951953	70.54268912
200306A00037	3/6/2020	1.11	3/6/2026	3/6/2020	126.21531	119.5057708	113.1897225	107.242099	101.6395618	96.36036886	91.38425685	86.69233311	82.26697601
200306A00100	3/10/2020	1.82	3/10/2031	3/10/2020	154.48037	139.7231546	126.4937166	114.6259212	103.972476	94.40271185	85.80063171	78.06319741	71.09882382
200309A00020	3/9/2020	0.96	3/10/2025	3/9/2020	121.08811	115.7485933	110.6726357	105.8458624	101.2547587	96.88661465	92.72947285	88.77207979	85.00384057
200311A00040	3/12/2020	1.3	3/11/2025	3/12/2020	122.79295	117.4098313	112.2920099	107.4250218	102.79527	98.38996739	94.19708404	90.20529792	86.40394958
200311A00056	3/13/2020	1.27	4/10/2024	3/13/2020	118.12066	113.9552984	109.9587048	106.1230855	102.4410542	98.90560864	95.51010824	92.24825277	89.11406285
200312A00004	3/13/2020	1.23	1/24/2025	3/13/2020	121.80918	116.6127391	111.6655694	106.9544529	102.4669432	98.19131322	94.11651025	90.23211339	86.52829437
200312A00042	3/16/2020	1.38	3/16/2023	3/16/2020	113.09494	110.2598084	107.5105225	104.8439572	102.257121	99.74715097	97.31130618	94.9469616	92.65160238
200313A00032	3/18/2020	1.46	3/18/2025	3/18/2020	123.62847	118.2041391	113.0477534	108.1446615	103.4810947	99.04410683	94.82152104	90.80187937	86.97439654
200323A00007	3/23/2020	1.05	9/23/2021	3/23/2020	105.16419	104.0040524	102.8693295	101.7591943	100.672855	99.60955341	98.56856346	97.54918912	96.55076308
200403A00016	4/3/2020	0.63	4/17/2023	4/3/2020	111.99066	109.0591858	106.2191939	103.4672409	100.8000348	98.21443092	95.70742433	93.27614225	90.91783732
200413A00032	4/13/2020	0.82	4/13/2023	4/13/2020	111.9273	109.0214212	106.2056795	103.476701	100.8312619	98.26628192	95.77881626	93.36604889	91.02528573
200429A00018	5/4/2020	0.73	4/17/2023	5/4/2020	111.72552	108.80983	105.9849098	103.2473497	100.5938907	98.02141955	95.52696077	93.10766945	90.76082452
200430A00016	4/30/2020	0.82	4/30/2024	4/30/2020	116.60753	112.4051234	108.3755312	104.5106573	100.8028326	97.24479362	93.82965796	90.55090194	87.40233933
200430A00017	4/30/2020	0.94	4/30/2025	4/30/2020	121.55251	116.0324762	110.7919663	105.8153262	101.0878688	96.59580748	92.32619594	88.26687153	84.40640336
200511A00018	5/11/2020	0.98	2/2/2026	5/11/2020	125.03149	118.4752366	112.2976841	106.4750937	100.9853315	95.8077522	90.92309167	86.31336768	81.96178836
200511A00023	5/11/2020	1.7	2/3/2031	5/11/2020	152.52318	138.020837	125.0089695	113.3267848	102.831582	93.39663134	84.90931669	77.26950093	70.38808844
200513A00002	5/13/2020	0.56	5/13/2024	5/13/2020	116.51396	112.2502093	108.1638537	104.2464755	100.4901152	96.88723969	93.43071645	90.11378935	86.93005622
200401A00025	4/1/2020	0.54	4/1/2022	4/1/2020	107.02476	105.3206378	103.6523235	102.0187604	100.4189357	98.85187558	97.3166435	95.81233845	94.33809319
200406A00020	4/6/2020	0.65	4/6/2022	4/6/2020	107.27194	105.5505148	103.8654814	102.2157551	100.6002981	99.01811312	97.46824129	95.94976057	94.4617838
200413A00023	4/13/2020	0.74	2/7/2022	4/13/2020	106.38481	104.8525267	103.350057	101.876605	100.4314023	99.01370695	97.62280257	96.25799703	94.91862155
200424A00006	4/24/2020	0.6	4/24/2023	4/24/2020	111.99373	109.0399626	106.1789312	103.4071138	100.7211521	98.11783914	95.59411165	93.14704221	90.77383218
200428A00011	4/30/2020	1.95	4/29/2025	4/30/2020	126.72796	121.0853701	115.7265981	110.6358112	105.7981483	101.1996572	96.82723386	92.66856551	88.71207825
200429A00015	4/29/2020	0.66	4/29/2024	4/29/2020	116.74712	112.5241236	108.4751696	104.5920867	100.8671377	97.29299528	93.86271737	90.56972428	87.40777732
200429A00046	5/1/2020	2.07	4/30/2025	5/1/2020	127.36027	121.698804	116.3220486	111.2141141	106.3600909	101.7459815	97.35863981	93.18571363	89.21559233
200430A00006	4/30/2020	0.61	4/29/2022	4/30/2020	107.18709	105.4021515	103.6559234	101.9472189	100.2748961	98.63785983	97.0350589	95.46548404	93.92816573
200506A00010	5/6/2020	0.94	5/6/2026	5/6/2020	127.2026	120.2035633	113.6270654	107.4454077	101.6328608	96.16550945	91.02111391	86.17898378	81.61986135
200511A00016	5/11/2020	0.71	2/1/2024	5/11/2020	115.10259	111.2201093	107.4880359	103.8997563	100.448985	97.1297459	93.93635449	90.86340241	87.9057424
200527A00022	5/27/2020	0.53	5/27/2022	5/27/2020	107.3784	105.5091417	103.6818757	101.895256	100.1479934	98.43885439	96.76665734	95.13027008	93.52860718
200529A00004	5/29/2020	0.56	5/29/2024	5/29/2020	116.70254	112.3834454	108.2458744	104.2811266	100.4809732	96.83763235	93.34374076	89.99232867	86.77679572

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
200601A00006	6/1/2020	0.6	6/1/2023	6/1/2020	111.88253	108.8251857	105.8667206	103.0032618	100.2311173	97.54676817	94.94685878	92.42818801	89.98770062
200604A00004	6/4/2020	0.76	6/4/2024	6/4/2020	116.78198	112.4638224	108.3272154	104.3634753	100.5643875	96.92218087	93.42950016	90.07938118	86.86522711
200604A00010	6/4/2020	0.89	6/4/2025	6/4/2020	121.76662	116.1227779	110.7699129	105.6914542	100.8718691	96.2965937	91.95196602	87.82516493	83.9041532
200615A00005	6/15/2020	0.61	6/15/2023	6/15/2020	112.07619	108.9720743	105.9692631	103.0638421	100.2520713	97.53037976	94.8953567	92.34374297	89.87242331
200626A00015	6/26/2020	0.43	6/26/2023	6/26/2020	112.25025	109.0954201	106.044578	103.0937272	100.2390513	97.47690215	94.80379085	92.21638007	89.71147647
200709A00003	7/10/2020	1.63	7/10/2026	7/10/2020	131.04047	123.7475107	116.9032787	110.477933	104.4437635	98.7750268	93.4477969	88.43982844	83.73043064
200709A00007	7/10/2020	1.67	7/9/2027	7/10/2020	135.89838	127.129847	118.9815198	111.4064543	104.3614838	97.80689629	91.70614161	86.02556515	80.73416509
200709A00008	7/10/2020	1.88	7/10/2026	7/10/2020	132.68482	125.3416921	118.449522	111.9783475	105.9003462	100.1896696	94.82229275	89.77587724	85.02964481
200720A00035	7/20/2020	1.81	7/20/2035	7/20/2020	173.67115	151.0139369	131.5446293	114.7971353	100.3756315	87.94367003	77.21502095	67.94596452	59.92879771
200720A00044	7/22/2020	2.22	7/21/2026	7/22/2020	135.08106	127.6253476	120.6285094	114.0599565	107.8912884	102.0961272	96.64996372	91.53001604	86.7150995
200722A00010	7/22/2020	0.66	7/22/2024	7/22/2020	116.93077	112.4532025	108.1694077	104.070025	100.1461907	96.38951312	92.79204474	89.34625647	86.04501339
190626A00010	6/26/2019	2.1	6/26/2023	6/26/2019	116.6925	113.4850635	110.3825341	107.3808975	104.4763207	101.6651388	98.94384665	96.3090905	93.75766091
190701A00008	7/3/2019	2.1	7/3/2023	7/3/2019	116.80592	113.574435	110.4491925	107.4261378	104.5013899	101.6712362	98.93212505	96.28065705	93.71357821
190701A00017	7/1/2019	1.9	7/1/2022	7/1/2019	110.78868	108.774203	106.8063723	104.8838327	103.005275	101.1694365	99.37509892	97.62108617	95.90626302
190703A00022	7/3/2019	2.08	7/5/2022	7/3/2019	110.82692	108.8067903	106.8335805	104.9059197	103.0224874	101.1820098	99.38325784	97.62504557	95.90622803
190719A00002	7/19/2019	2.12	4/21/2022	7/19/2019	109.67703	107.8940803	106.149373	104.4417427	102.7700756	101.1333025	99.53039678	97.96037203	96.42228014
190724A00021	7/24/2019	2.33	7/23/2027	7/24/2019	143.06302	133.9144052	125.413858	117.5121142	110.1638934	103.3275595	96.96480945	91.04039144	85.52184674
190726A00017	7/26/2019	2.44	7/24/2026	7/26/2019	136.58203	129.0694556	122.0190984	115.4001278	109.1839256	103.343913	97.85539589	92.69542163	87.84264806
190731A00029	7/31/2019	1.93	7/29/2022	7/31/2019	111.30951	109.2042684	107.1496442	105.1441062	103.1861803	101.2744465	99.40753698	97.58413344	95.8029652
190802A00016	8/2/2019	2.01	7/12/2023	8/2/2019	116.67502	113.4168557	110.2667123	107.220426	104.2740194	101.4236895	98.66579929	95.99686924	93.4135699
190802A00029	8/2/2019	2	8/2/2022	8/2/2019	111.12412	109.0159191	106.9585532	104.950484	102.9902267	101.076351	99.20747949	97.38228453	95.59948664
190805A00009	8/5/2019	1.91	8/5/2024	8/5/2019	122.44115	117.8046276	113.3693299	109.125472	105.0637945	101.1755352	97.45239949	93.88653285	90.47049532
190805A00037	8/5/2019	2.17	8/6/2029	8/5/2019	153.19367	140.7051474	129.331471	118.9672489	109.5175586	100.8968565	93.0280086	85.84142483	79.27428672
190805A00050	8/5/2019	1.91	8/5/2024	8/5/2019	122.44115	117.8046276	113.3693299	109.125472	105.0637945	101.1755352	97.45239949	93.88653285	90.47049532
190806A00010	8/6/2019	1.7	8/5/2022	8/6/2019	110.95756	108.8345075	106.763001	104.7414657	102.7683861	100.8423028	98.96181081	97.12555648	95.33223555
190807A00012	8/7/2019	1.76	2/7/2023	8/7/2019	113.53799	110.8181616	108.1776375	105.613644	103.1235241	100.7047294	98.35481509	96.0714353	93.85233818
190807A00023	8/7/2019	1.77	8/7/2024	8/7/2019	121.87195	117.2404829	112.8104307	108.5719801	104.5158483	100.6332515	96.91587545	93.35584789	89.9457126
190808A00025	8/8/2019	1.7	8/8/2024	8/8/2019	122.45768	117.7864933	113.3190684	109.0454504	104.9562209	101.0424696	97.29576435	93.70812236	90.27198419
190808A00052	8/8/2019	1.7	8/8/2024	8/8/2019	122.45768	117.7864933	113.3190684	109.0454504	104.9562209	101.0424696	97.29576435	93.70812236	90.27198419
190809A00011	8/9/2019	1.69	8/9/2024	8/9/2019	122.43005	117.7560609	113.2861081	109.0102085	104.9189254	101.0033313	97.25497783	93.66586767	90.22842764
190809A00015	8/9/2019	1.88	8/9/2022	8/9/2019	110.99189	108.8636933	106.7873132	104.7611622	102.7837121	100.8534918	98.96908475	97.12912653	95.33230259
190813A00008	8/13/2019	1.88	8/13/2024	8/13/2019	122.43549	117.7723751	113.3127422	109.0466371	104.9646481	101.0578716	97.31788201	93.73670336	90.30678298
190813A00022	8/13/2019	1.88	8/13/2024	8/13/2019	122.43549	117.7723751	113.3127422	109.0466371	104.9646481	101.0578716	97.31788201	93.73670336	90.30678298

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
190814A00005	8/14/2019	1.65	8/14/2024	8/14/2019	122.33416	117.6453351	113.1619047	108.8737891	104.7714569	100.8458934	97.08856931	93.49141227	90.04677966
191021A00021	10/21/2019	2.22	12/21/2027	10/21/2019	142.58965	132.9653366	124.0577315	115.8097335	108.1690741	101.0878824	94.5222942	88.43209702	82.78040881
191021A00033	10/22/2019	1.9	7/18/2022	10/22/2019	110.68445	108.6263099	106.6168333	104.6545732	102.7381359	100.8661778	99.03740364	97.25056436	95.50445498
191104A00023	11/4/2019	2.24	8/4/2028	11/4/2019	146.09374	135.4673572	125.6917827	116.6944638	108.4093806	100.7764312	93.74087323	87.25282107	81.26679239
191105A00014	11/5/2019	1.96	11/6/2023	11/5/2019	118.3557	114.6956291	111.1684404	107.7684867	104.4903981	101.3290693	98.27964327	95.3374983	92.4982342
191106A00004	11/6/2019	2.01	11/6/2024	11/6/2019	124.33719	119.3486509	114.5884831	110.0449346	105.7069305	101.5640294	97.60638224	93.82469581	90.2101972
191108A00013	11/8/2019	2.25	11/8/2029	11/8/2019	155.48414	142.5083621	130.7193114	120.0020345	110.2532837	101.3802687	93.29954697	85.93603678	79.22213933
191113A00016	11/15/2019	2.02	8/15/2024	11/15/2019	123.06981	118.3868756	113.9084063	109.6243947	105.5253741	101.60239	97.84696897	94.25109052	90.80716017
191114A00021	11/18/2019	1.91	6/15/2022	11/18/2019	110.17645	108.2236027	106.3152815	104.4501219	102.6268185	100.8441168	99.10081112	97.39574199	95.72779414
191115A00016	11/18/2019	2.48	11/18/2024	11/18/2019	126.6982	121.6162109	116.7679119	112.1412003	107.7246789	103.5076075	99.47986007	95.63188591	91.95467295
191115A00028	11/15/2019	2.34	9/28/2029	11/15/2019	153.28923	140.7048231	129.2555115	118.8327889	109.3390522	100.6864546	92.7958841	85.59605377	79.02269117
191120A00032	11/20/2019	1.73	5/20/2021	11/20/2019	104.07865	103.3101565	102.5529851	101.8068842	101.0716123	100.3469348	99.63262369	98.92845773	98.23422176
191122A00007	11/22/2019	1.87	11/21/2025	11/22/2019	130.66496	124.1619104	118.0210395	112.2201886	106.7386824	101.5572202	96.65777605	92.02350715	87.63866905
191126A00023	11/26/2019	1.81	5/27/2025	11/26/2019	127.5641	121.7698024	116.2720017	111.0538583	106.0995938	101.3944134	96.92443902	92.67664599	88.63880562
191206A00044	12/10/2019	2.01	10/31/2024	12/10/2019	124.24126	119.275491	114.5362537	110.0119366	105.6915923	101.5648963	97.62210816	93.85403421	90.25199377
191212A00026	12/13/2019	1.92	6/16/2022	12/13/2019	110.21137	108.2551431	106.3435494	104.4752307	102.6488824	100.8632507	99.11713021	97.40936137	95.73882857
191217A00012	12/20/2019	2.03	12/20/2024	12/20/2019	125.12571	119.9707201	115.057233	110.3726487	105.905095	101.64338	97.57694954	93.69584709	89.99067677
191223A00008	12/23/2019	1.93	12/23/2021	12/23/2019	107.47959	106.0622039	104.6732444	103.3118823	101.9773169	100.6687782	99.38552647	98.12684973	96.8920631
191223A00022	12/23/2019	1.93	12/30/2021	12/23/2019	107.55453	106.128654	104.7289608	103.3547867	102.0054861	100.6804348	99.37902921	98.1006853	96.84483786
191223A00043	12/23/2019	1.77	3/23/2021	12/23/2019	103.17829	102.5871589	102.0027885	101.4250665	100.8538797	100.2891176	99.73067214	99.17843772	98.63231102
191223A00055	12/23/2019	2.46	12/7/2029	12/23/2019	155.62743	142.6541113	130.8709574	120.1622425	110.4240743	101.5631223	93.49549289	86.14572994	79.44592574
191226A00019	12/26/2019	2.4	12/22/2028	12/26/2019	149.68285	138.3665057	127.992928	118.4785711	109.7477014	101.731628	94.36801485	87.60026264	81.37695417
191226A00020	12/26/2019	2.44	12/21/2029	12/26/2019	155.61693	142.5895296	130.7615338	120.0160267	110.2480542	101.3633461	93.27717876	85.91336409	79.20335016
200108A00017	1/8/2020	2.55	1/8/2035	1/8/2020	189.18974	165.9089103	145.7702502	128.3304614	113.2109385	100.0880453	88.68489034	78.76436829	70.1232659
191004A00003	10/4/2019	1.89	10/5/2026	10/4/2019	133.91985	126.2264069	119.0226999	112.2750012	105.9520778	100.024996	94.46694072	89.25304894	84.3602578
191004A00012	10/4/2019	1.78	10/4/2024	10/4/2019	122.79165	117.9464809	113.3193634	108.8992878	104.6758625	100.6392773	96.78026707	93.09007844	89.56043841
191004A00032	10/4/2019	2.01	1/3/2028	10/4/2019	141.0084	131.396607	122.5048643	114.2755925	106.6560868	99.5980847	93.05737118	86.99342057	81.36907176
191007A00024	10/7/2019	1.7	7/14/2022	10/7/2019	110.22848	108.1870589	106.1936657	104.2468771	102.345325	100.48769	98.67270021	96.89912846	95.16579085
191007A00027	10/7/2019	1.69	10/7/2022	10/7/2019	111.50162	109.1870073	106.9324367	104.7359271	102.5955741	100.5095517	98.47610776	96.49356051	94.56029526
191017A00025	10/17/2019	1.74	10/19/2020	10/17/2019	100.75462	100.6170906	100.4799572	100.3432133	100.2068574	100.0708876	99.93530238	99.80010002	99.66527884
191021A00002	10/21/2019	1.9	10/21/2020	10/21/2019	100.78626	100.6433014	100.5007563	100.3586274	100.2169128	100.0756107	99.93471935	99.79423686	99.65416147
191025A00009	10/25/2019	2.26	5/25/2029	10/25/2019	150.60496	138.6407221	127.7201838	117.7466518	108.632882	100.3001053	92.67716196	85.69972934	79.30963127
191031A00019	10/31/2019	1.88	10/31/2022	10/31/2019	112.29537	109.8991845	107.5665729	105.2953756	103.083522	100.929029	98.82999708	96.78460546	94.79110844

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
191101A00006	11/1/2019	1.69	11/2/2020	11/1/2019	100.96174	100.7844924	100.6078703	100.4318689	100.256485	100.0817154	99.90755673	99.7340059	99.5610597
191104A00025	11/4/2019	2.33	8/2/2030	11/4/2019	157.69532	143.6586363	130.9916989	119.5534386	109.2179852	99.87296388	91.41798684	83.76332038	76.82870604
191114A00009	11/18/2019	1.94	8/16/2023	11/18/2019	117.00591	113.6309955	110.3714981	107.2228281	104.1806039	101.2406432	98.3989522	95.6517163	92.99529085
191119A00027	11/19/2019	1.8	11/19/2024	11/19/2019	124.52038	119.4554947	114.6249714	110.0166234	105.6189708	101.4211978	97.41310978	93.58509362	89.92808067
191120A00010	11/20/2019	1.88	1/20/2022	11/20/2019	107.80626	106.3182725	104.8582638	103.4255138	102.0193241	100.6390193	99.28394645	97.95347397	96.64699092
191122A00005	11/22/2019	2.03	11/22/2027	11/22/2019	142.49101	132.8991184	124.0178241	115.7907018	108.1661029	101.0967231	94.53921498	88.45383557	82.8041286
191122A00006	11/22/2019	1.74	11/22/2023	11/22/2019	118.54171	114.8084672	111.2128014	107.7487674	104.4107229	101.193308	98.09142892	95.10024252	92.21514212
191122A00018	11/26/2019	3.11	11/22/2039	11/26/2019	223.71229	189.2811821	160.7587288	137.0850831	117.3962855	100.987156	87.28137015	75.8073031	66.17850487
191202A00005	12/2/2019	2.03	12/2/2024	12/2/2019	124.84537	119.7562189	114.9034966	110.2748581	105.8586806	101.644016	97.62054742	93.77854825	90.10884475
191209A00009	12/9/2019	1.91	12/9/2021	12/9/2019	107.30327	105.9030272	104.5357053	103.2001404	101.8952254	100.619905	99.37317194	98.15406479	96.96166518
191220A00001	12/20/2019	2.62	12/19/2031	12/20/2019	168.87662	152.1414762	137.2315082	123.9371756	112.0740138	101.4795212	92.01044354	83.54040651	75.95784937
191223A00007	12/23/2019	1.95	6/23/2021	12/23/2019	104.67321	103.8003758	102.9420519	102.0978771	101.2675037	100.4505953	99.64682644	98.85588204	98.07745699
200109A00014	1/14/2020	1.93	8/15/2022	1/14/2020	111.1892	109.0406169	106.9447649	104.9000105	102.9047858	100.9575826	99.0569486	97.20148588	95.38984783
200117A00026	1/17/2020	1.69	1/18/2022	1/17/2020	107.76116	106.2752193	104.8171842	103.3863355	101.9819773	100.6034369	99.25006384	97.92122906	96.616324
200305A00008	3/10/2020	1.01	6/19/2023	3/10/2020	113.31917	110.1840911	107.1514608	104.2173304	101.3779318	98.62966535	95.96909092	93.39292002	90.8980079
200305A00012	3/5/2020	1.14	3/5/2025	3/5/2020	121.92072	116.5779537	111.4979853	106.6665233	102.07013	97.69616558	93.53273628	89.56864639	85.79335348
200306A00001	3/6/2020	1.11	3/6/2026	3/6/2020	126.21531	119.5057708	113.1897225	107.242099	101.6395618	96.36036886	91.38425685	86.69233311	82.26697601
200306A00039	3/6/2020	0.88	3/6/2023	3/6/2020	111.62207	108.8370363	106.1358077	103.5153623	100.9728039	98.50535904	96.11037133	93.78529543	91.52769168
200309A00021	3/9/2020	1.05	3/9/2026	3/9/2020	125.87865	119.1686367	112.8527947	106.9059821	101.3047886	96.02740753	91.05351738	86.36417326	81.94170655
200316A00013	3/16/2020	1	4/15/2022	3/16/2020	107.67637	105.9294051	104.2196861	102.5460879	100.9075353	99.30299576	97.73147714	96.1920259	94.6837251
200318A00043	3/18/2020	1.06	3/20/2023	3/18/2020	112.81286	109.9577898	107.1896998	104.5054048	101.9018553	99.37613377	96.92544794	94.54712452	92.23860321
200325A00030	3/25/2020	1.5	3/25/2025	3/25/2020	125.01115	119.4973097	114.2572701	109.2759759	104.5392844	100.0339032	95.74733417	91.66782187	87.78430486
200326A00029	3/26/2020	1.82	3/26/2027	3/26/2020	135.69808	127.3190122	119.5102303	112.2299776	105.4397669	99.10410648	93.1902519	87.66797944	82.5093796
200330A00027	3/30/2020	0.62	3/30/2022	3/30/2020	107.13209	105.4329888	103.7695002	102.1405827	100.545232	98.98248228	97.45140467	95.95110531	94.48072373
200403A00014	4/3/2020	0.63	4/17/2023	4/3/2020	111.99066	109.0591858	106.2191939	103.4672409	100.8000348	98.21443092	95.70742433	93.27614225	90.91783732
200406A00006	4/6/2020	1.13	4/7/2025	4/6/2020	122.2318	116.7739212	111.5888576	106.661524	101.9777554	97.52424327	93.28847909	89.25870142	85.42384713
200408A00019	4/10/2020	1.7	4/11/2022	4/10/2020	108.80186	107.0571357	105.3494	103.6775458	102.0405119	100.4372791	98.86686794	97.32833643	95.82077864
200408A00021	4/8/2020	0.99	4/4/2025	4/8/2020	122.56712	117.0779472	111.8635424	106.9086997	102.1991378	97.72144031	93.46299746	89.41195353	85.55715728
200429A00035	5/1/2020	1.41	4/30/2024	5/1/2020	118.95149	114.7040215	110.6307374	106.7234819	102.9745357	99.37658742	95.92270899	92.60633306	89.42123172
200429A00044	5/1/2020	1.86	4/30/2025	5/1/2020	126.28095	120.6457696	115.2943342	110.2107996	105.3802974	100.7888695	96.42340688	92.27159254	88.32184925
200429A00053	5/1/2020	2.18	4/30/2025	5/1/2020	127.92563	122.2503934	116.8603752	111.7396599	106.873316	102.2473259	97.84852372	93.66453897	89.68374347
200501A00003	5/1/2020	0.66	4/14/2023	5/1/2020	111.4937	108.5906801	105.7778312	103.0517722	100.4092745	97.84725342	95.36276005	92.95297464	90.61519971
200504A00013	5/4/2020	1.26	5/4/2027	5/4/2020	131.96274	123.57063	115.7606899	108.4895724	101.7173839	95.40738702	89.52573478	84.04122778	78.92509375

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
200511A00019	5/11/2020	1.18	2/1/2027	5/11/2020	130.32976	122.3304588	114.8671963	107.9014359	101.3975944	95.32280315	89.6466884	84.34116996	79.38027722
200511A00020	5/11/2020	1.4	2/1/2028	5/11/2020	136.21135	126.6765978	117.8674844	109.725226	102.1960744	95.23086585	88.7846092	82.81611199	77.2876425
200604A00012	6/4/2020	1.59	6/4/2030	6/4/2020	148.30352	134.980313	122.9500435	112.0806346	102.2541336	93.36513488	85.31938596	78.03255537	71.42914216
200611A00010	6/11/2020	1.08	6/11/2027	6/11/2020	130.99448	122.5012051	114.6060585	107.2639455	100.4333969	94.07625859	88.15741025	82.64450842	77.50775323
200513A00003	5/13/2020	0.68	5/13/2025	5/13/2020	121.46316	115.8673021	110.557771	105.5183689	100.7339105	96.19015156	91.87372521	87.77208205	83.87343546
200604A00001	6/4/2020	0.65	6/5/2023	6/4/2020	112.07669	109.003964	106.0308585	103.1534852	100.3681369	97.67127869	95.05953801	92.52969603	90.07867931
200720A00014	7/20/2020	0.35	7/20/2022	7/20/2020	108.02531	105.9809949	103.9853817	102.0370101	100.1344781	98.27643427	96.46157619	94.68864803	92.95643867
200720A00042	7/22/2020	2.04	7/21/2026	7/22/2020	133.8905	126.4712973	119.5093378	112.9741223	106.8373325	101.0726675	95.6556909	90.56368885	85.77554085
200728A00007	7/28/2020	0.52	1/27/2022	7/28/2020	105.91934	104.4252726	102.9596701	101.5217874	100.110906	98.72633199	97.36739431	96.03344434	94.72385476
200730A00002	7/30/2020	0.67	11/6/2024	7/30/2020	118.20461	113.3503348	108.7199229	104.3018114	100.0851057	96.05953547	92.21541495	88.54360574	85.03548253
200731A00005	7/31/2020	0.45	7/31/2024	7/31/2020	116.98374	112.4521095	108.1183777	103.972894	100.0065317	96.21065452	92.57708762	89.09809018	85.76633022
200807A00004	8/7/2020	0.29	8/8/2022	8/7/2020	108.12691	106.0241989	103.9728753	101.9713619	100.0181408	98.11175091	96.25078548	94.43388955	92.65975776
200811A00003	8/11/2020	0.57	8/11/2025	8/11/2020	121.92566	116.0116584	110.4143089	105.1150845	100.0966384	95.34272037	90.83810177	86.56850602	82.52054435
200812A00004	8/12/2020	0.59	8/12/2025	8/12/2020	122.04715	116.1265865	110.5231452	105.2182688	100.1945767	95.43578773	90.92664468	86.65284475	82.60097498
200819A00007	8/19/2020	0.38	8/21/2023	8/19/2020	112.7381	109.3993051	106.1760924	103.0638247	100.0580747	97.15461798	94.34942249	91.63863861	89.01858971
181203A00053	12/4/2018	3.23	12/1/2023	12/4/2018	123.19837	119.3731183	115.6886172	112.138781	108.7178328	105.4202851	102.2409234	99.17479028	96.21717057
181207A00018	12/7/2018	3.21	7/15/2024	12/7/2018	127.59413	122.922899	118.4503853	114.1670861	110.0640032	106.1326136	102.364842	98.7530346	95.28993534
181213A00031	12/13/2018	2.97	12/13/2023	12/13/2018	123.23473	119.3521825	115.6139092	112.0136863	108.5456019	105.2040361	101.9836436	98.87933937	95.88628315
181214A00012	12/14/2018	3.07	12/14/2021	12/14/2018	108.9097	107.4922953	106.106402	104.7509706	103.4249971	102.127522	100.8576276	99.61443563	98.39710557
181218A00033	12/18/2018	2.96	12/18/2020	12/18/2018	102.01144	101.7015622	101.3935819	101.0874772	100.7832311	100.4808267	100.180247	99.88147556	99.58449603
181219A00006	12/19/2018	3.06	12/19/2023	12/19/2018	122.94378	119.0648724	115.3302269	111.7336584	108.2692806	104.931494	101.7149701	98.61463604	95.62566144
181227A00022	12/27/2019	2.91	12/27/2022	12/27/2019	115.72244	113.1081267	110.5665367	108.0952259	105.6918439	103.3541339	101.0799279	98.86714321	96.71377809
181227A00026	12/27/2018	3.03	12/27/2023	12/27/2018	122.98773	119.0822748	115.3227391	111.7028855	108.2167749	104.8587539	101.6234391	98.50570299	95.50066003
181227A00029	12/27/2018	2.91	12/27/2021	12/27/2018	108.87174	107.4396071	106.034803	104.6565801	103.3042213	101.977035	100.6743543	99.39553581	98.1399585
190102A00003	1/2/2019	2.8	1/27/2021	1/2/2019	102.68566	102.2585816	101.8350488	101.4150213	100.9984557	100.5853093	100.1755402	99.76910712	99.36596938
190102A00043	1/2/2019	2.79	1/4/2021	1/2/2019	102.26609	101.906739	101.5499114	101.1955818	100.8437239	100.4943119	100.1473204	99.80272426	99.46049874
190104A00021	1/4/2019	2.58	1/4/2021	1/4/2019	102.23937	101.879529	101.5222255	101.1674299	100.8151158	100.4652574	100.1178288	99.77280491	99.43016063
190107A00020	1/7/2019	2.8	1/7/2021	1/7/2019	102.32385	101.9556767	101.5901518	101.2272513	100.8669469	100.5092109	100.1540157	99.80133425	99.45113994
190107A00029	1/7/2019	2.59	1/7/2021	1/7/2019	102.29649	101.9278096	101.5617968	101.1984188	100.8376472	100.479454	100.1238113	99.77069205	99.42006926
190110A00002	1/10/2019	2.93	1/10/2023	1/10/2019	116.03304	113.3712262	110.7844685	108.2702253	105.8260588	103.4496281	101.1386839	98.89106505	96.70469412
190110A00010	1/10/2019	2.97	1/16/2024	1/10/2019	123.14793	119.1739246	115.3505788	111.6713753	108.1301173	104.7209078	101.4381336	98.27645004	95.23076668
190110A00014	1/10/2019	2.97	1/17/2024	1/10/2019	123.16672	119.1890764	115.3623442	111.6799893	108.1358	104.7238653	101.4385592	98.27452488	95.2266606
190110A00022	1/10/2019	2.86	5/10/2021	1/10/2019	104.61706	103.8780656	103.1495061	102.4311601	101.7228137	101.0242589	100.3352936	99.65572116	98.98535015

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
190114A00030	1/14/2019	2.85	1/14/2021	1/14/2019	102.46949	102.080675	101.694818	101.3118864	100.931847	100.554667	100.1803141	99.80875641	99.43996267
190114A00045	1/14/2019	2.84	1/14/2021	1/14/2019	102.46568	102.0768738	101.6910257	101.308103	100.9280725	100.5509012	100.176557	99.80500805	99.43622294
190122A00008	1/22/2019	2.98	1/20/2023	1/22/2019	116.34678	113.6495744	111.0292257	108.4831014	106.0086791	103.6035379	101.2653527	98.99189061	96.78100619
190122A00045	1/22/2019	3.17	1/22/2027	1/22/2019	146.31093	137.752041	129.756459	122.2840908	115.297899	108.7636526	102.6497006	96.92676502	91.56775165
190123A00005	1/23/2019	2.94	1/24/2022	1/23/2019	109.41456	107.9023445	106.4187565	104.9630528	103.5345132	102.1324417	100.7561657	99.4050345	98.07841915
200121A00009	1/24/2020	1.94	1/24/2025	1/24/2020	125.23872	119.9633881	114.9400806	110.1554653	105.5969818	101.252795	97.11174955	93.16332692	89.39760614
200122A00028	1/22/2020	1.84	1/21/2022	1/22/2020	107.7638	106.2731797	104.81064	103.3754555	101.9669238	100.5843661	99.227126	97.89456885	96.58608059
200127A00016	1/27/2020	1.81	1/27/2025	1/27/2020	124.65573	119.3836553	114.3640788	109.5836082	105.0296352	100.6902805	96.55434867	92.61128464	88.85113416
200127A00018	1/27/2020	1.8	1/27/2025	1/27/2020	124.60733	119.3363707	114.3178705	109.5384391	104.9854693	100.6470837	96.51208814	92.56992903	88.8106534
200130A00006	1/30/2020	1.77	1/30/2025	1/30/2020	124.50668	119.2279083	114.202445	109.4168359	104.8584098	100.5152295	96.37604642	92.43025652	88.66786041
200131A00048	1/31/2020	1.69	1/31/2024	1/31/2020	118.70643	114.762651	110.9708805	107.3244505	103.8170259	100.4425825	97.1953898	94.06999493	91.06120786
200203A00009	2/3/2020	1.52	2/3/2023	2/3/2020	113.35876	110.644381	108.0089888	105.4498329	102.9642726	100.5497751	98.20391038	95.92434641	93.70884443
200204A00012	2/4/2020	1.98	2/4/2027	2/4/2020	136.19049	127.9833097	120.3231409	113.1707403	106.4898697	100.2470536	94.41135527	88.95417222	83.84904871
200204A00015	2/4/2020	1.72	2/6/2023	2/4/2020	113.41828	110.7034489	108.067691	105.5082447	103.0224635	100.6078093	98.26184702	95.98223984	93.76674457
200207A00018	2/7/2020	2.14	2/7/2030	2/7/2020	153.00571	139.9134947	128.0462191	117.2828046	107.5147167	98.64460753	90.58511171	83.25777732	76.59211617
200211A00022	2/11/2020	1.73	2/10/2023	2/11/2020	113.50911	110.779313	108.1293976	105.5565613	103.0581178	100.6314913	98.27421118	95.98390712	93.75830423
200214A00014	2/18/2020	1.8	2/18/2025	2/18/2020	124.95839	119.5982271	114.4983842	109.6448636	105.0244904	100.6248635	96.43430609	92.44181931	88.63703953
200219A00006	2/19/2020	1.76	2/18/2022	2/19/2020	108.09484	106.5128478	104.9622846	103.4422952	101.9520517	100.4907557	99.05763663	97.65195083	96.27298025
200221A00001	2/21/2020	1.57	2/22/2021	2/21/2020	102.62015	102.1164266	101.6176423	101.1237232	100.6345985	100.1501984	99.67045479	99.19530064	98.7246703
200221A00014	2/21/2020	1.49	2/21/2023	2/21/2020	113.57298	110.793348	108.0963361	105.4790007	102.9385202	100.4721911	98.07742249	95.75173031	93.49273232
200224A00019	2/24/2020	1.59	2/18/2025	2/24/2020	123.92708	118.5910042	113.5143976	108.6832977	104.0845651	99.70583269	95.53545548	91.56246516	87.77652696
200225A00045	2/25/2020	1.54	2/24/2023	2/25/2020	113.23531	110.4608354	107.7689264	105.1566364	102.6211427	100.1597406	97.76983817	95.4489504	93.19469431
200225A00050	2/25/2020	1.57	2/25/2025	2/25/2020	123.93703	118.5745262	113.4739828	108.6212325	104.0029523	99.60660559	95.42039189	91.4331994	87.63456124
200226A00015	2/26/2020	1.53	2/26/2024	2/26/2020	118.50829	114.4777855	110.6060248	106.88589	103.3106257	99.87381585	96.56936446	93.39147799	90.33464846
200227A00013	2/27/2020	1.43	2/27/2024	2/27/2020	118.14591	114.1185838	110.2500669	106.5332375	102.9613304	99.52792062	96.22690414	93.05248	89.99913346
200227A00022	2/27/2020	1.41	2/27/2023	2/27/2020	112.93813	110.1572499	107.4594401	104.8417278	102.3012625	99.83531366	97.44126499	95.11660858	92.85893982
200227A00030	2/27/2020	1.59	2/27/2026	2/27/2020	129.08032	122.3129048	115.9398083	109.936037	104.2783062	98.94491728	93.91564119	89.17161151	84.69522582
200228A00025	2/28/2020	1.57	3/2/2027	2/28/2020	133.54985	125.3287149	117.6636399	110.5142037	103.8431196	97.61598043	91.80102179	86.36890628	81.29252628
190815A00025	8/15/2019	1.97	8/15/2029	8/15/2019	151.21222	138.7801187	127.4630986	117.1553562	107.7616283	99.19609605	91.38140526	84.24779257	77.73230587
190815A00032	8/15/2019	1.83	8/13/2021	8/15/2019	105.38012	104.3465808	103.3332362	102.3394984	101.3648023	100.4086047	99.47038258	98.5496327	97.64587035
190816A00013	8/16/2019	2.2	8/16/2029	8/16/2019	151.18107	138.8656339	127.6499526	117.4300055	108.1121101	99.61184597	91.85309705	84.76719592	78.29216097
190816A00021	8/16/2019	1.77	8/16/2023	8/16/2019	116.46729	113.1007783	109.8494708	106.7087811	103.6743347	100.741956	97.90765775	95.16763174	92.51823925
190819A00004	8/20/2019	1.81	5/24/2024	8/20/2019	120.90245	116.5391933	112.3572695	108.3480552	104.5033971	100.8155808	97.27730374	93.88165043	90.62206912

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
190820A00008	8/20/2019	1.76	8/20/2024	8/20/2019	122.02361	117.3456976	112.8729711	108.5953464	104.5032877	100.5877767	96.84028172	93.25272893	89.81747495
190821A00028	8/21/2019	1.8	8/21/2023	8/21/2019	116.63808	113.2529204	109.9841007	106.8269657	103.7770792	100.8302071	97.98230767	95.2295212	92.56816079
190821A00030	8/21/2019	1.8	8/21/2024	8/21/2019	122.21181	117.5266477	113.0470818	108.7630018	104.6648476	100.7435784	96.99064169	93.39794383	89.95782325
190826A00018	8/26/2019	1.9	8/27/2029	8/26/2019	150.64034	138.1871775	126.8556525	116.5389314	107.1408629	98.57486351	90.76292155	83.63470869	77.12678815
190827A00001	8/27/2019	1.74	8/27/2024	8/27/2019	122.04142	117.3398012	112.845376	108.5479084	104.4377264	100.5056855	96.74313732	93.14189958	89.69422848
190829A00012	8/29/2019	1.54	8/29/2024	8/29/2019	122.08268	117.3486455	112.8241442	108.4987855	104.3627508	100.4067593	96.62203571	93.00027966	89.53363734
190904A00007	9/4/2019	1.69	9/1/2023	9/4/2019	116.45097	113.0335951	109.7348126	106.5498372	103.4741031	100.5032552	97.63313805	94.85978545	92.17941069
190910A00009	9/10/2019	1.86	9/10/2020	9/10/2019	100.1572	100.1293079	100.1014462	100.0736151	100.0458146	100.0180447	99.99030518	99.9625961	99.93491738
190910A00017	9/16/2019	1.86	9/16/2024	9/16/2019	122.87212	118.0857125	113.5125141	109.1418708	104.963721	100.9685596	97.1474035	93.49176013	89.99359777
190910A00030	9/10/2019	1.86	9/10/2024	9/10/2019	122.77925	118.0150805	113.4624284	109.1107652	104.950141	100.971154	97.16491679	93.52302538	90.03753016
190916A00009	9/16/2019	2.04	9/16/2022	9/16/2019	111.93655	109.6815461	107.4838661	105.3416655	103.2531704	101.2166772	99.23054918	97.29321356	95.40315819
190917A00029	9/17/2019	2.02	12/6/2022	9/17/2019	113.20003	110.680414	108.2300234	105.8464427	103.527361	101.2705671	99.07394505	96.93546848	94.85319625
190923A00078	9/23/2019	1.96	6/28/2024	9/23/2019	122.06218	117.5596499	113.2477166	109.1173293	105.159914	101.3673462	97.73192518	94.24634956	90.90369454
190930A00008	9/30/2019	1.9	10/10/2023	9/30/2019	117.73387	114.1704461	110.7339741	107.4191706	104.2210073	101.1346963	98.15567775	95.27960666	92.50234169
190930A00075	9/30/2019	2.19	9/29/2027	9/30/2019	141.14153	131.8801674	123.2901627	115.3193246	107.9197794	101.0475945	94.66243411	88.72724703	83.20798313
191001A00023	10/1/2019	1.85	9/27/2024	10/1/2019	122.99797	118.1717015	113.5617263	109.1571656	104.9477522	100.9237909	97.07612269	93.39609203	89.87551634
191004A00013	10/4/2019	1.53	10/22/2021	10/4/2019	106.3334	105.0712636	103.8389033	102.6352793	101.4593962	100.3103038	99.18709517	98.0889037	97.01490115
191008A00031	10/8/2019	1.52	10/8/2024	10/8/2019	122.59567	117.7154216	113.0560404	108.606318	104.3556772	100.2941357	96.41226889	92.70117558	89.15244553
200615A00019	6/17/2020	1.34	6/16/2025	6/17/2020	124.29337	118.5455336	113.0947687	107.9241725	103.0178945	98.36106573	93.93973296	89.74079678	85.75195484
200709A00006	7/10/2020	2.58	7/10/2030	7/10/2020	160.28315	146.2063003	133.4912129	121.9986666	111.6043407	102.1971534	93.67779194	85.95741214	78.95648785
200720A00012	7/20/2020	0.77	7/15/2025	7/20/2020	121.60939	115.830688	110.3560183	105.1678939	100.2499238	95.58673492	91.16390407	86.96789438	82.98599653
200722A00012	7/22/2020	0.41	7/21/2023	7/22/2020	112.47804	109.2411181	106.113205	103.0900461	100.167578	97.34191826	94.60935554	91.96634155	89.40948271
200803A00005	8/3/2020	0.54	6/30/2023	8/3/2020	112.04077	108.8900545	105.8431997	102.8962397	100.0453831	97.28700275	94.61762821	92.03393767	89.53275098
200814A00009	8/18/2020	1.36	8/16/2028	8/18/2020	138.16943	127.8249547	118.3193744	109.58053	101.5428124	94.14653366	87.33736605	81.06583534	75.28686522
200817A00011	8/17/2020	0.53	2/18/2025	8/17/2020	119.70486	114.4373356	109.4280914	104.6631502	100.1293679	95.81437575	91.70653086	87.79486937	84.06906339
200828A00002	8/28/2020	0.73	8/28/2026	8/28/2020	127.0468	119.6506318	112.72365	106.2337913	100.1513414	94.44875156	89.10046999	84.08278728	79.37369442
200108A00021	1/13/2020	1.97	1/13/2025	1/13/2020	125.21322	119.97576	114.9868886	110.2335344	105.7033842	101.3848312	97.26693044	93.33935809	89.59237277
200114A00006	1/15/2020	1.99	1/15/2025	1/15/2020	125.34022	120.093079	115.0952434	110.333594	105.7957689	101.4701161	97.34564907	93.41200525	89.65940746
200115A00017	1/15/2020	1.88	1/17/2023	1/15/2020	113.51403	110.8621256	108.2857549	105.7823417	103.3494128	100.9845935	98.68560319	96.45025111	94.27643221
200115A00024	1/15/2020	1.88	1/17/2023	1/15/2020	113.51403	110.8621256	108.2857549	105.7823417	103.3494128	100.9845935	98.68560319	96.45025111	94.27643221
200117A00002	1/17/2020	1.72	1/19/2021	1/17/2020	102.16708	101.7638721	101.363851	100.9669821	100.5732282	100.1825526	99.79491912	99.41029227	99.02863702
200127A00019	1/27/2020	1.8	1/27/2025	1/27/2020	124.60733	119.3363707	114.3178705	109.5384391	104.9854693	100.6470837	96.51208814	92.56992903	88.8106534
200127A00030	1/27/2020	1.8	1/27/2025	1/27/2020	124.60733	119.3363707	114.3178705	109.5384391	104.9854693	100.6470837	96.51208814	92.56992903	88.8106534

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
200128A00028	1/28/2020	1.81	1/28/2025	1/28/2020	124.67071	119.3949114	114.3719311	109.5883562	105.0315551	100.6896273	96.55135774	92.60617312	88.84410242
200129A00008	1/29/2020	1.76	1/31/2022	1/29/2020	107.79968	106.2792184	104.7879094	103.3249876	101.8897119	100.481366	99.09925817	97.74271958	96.41110366
200203A00022	2/3/2020	1.75	2/3/2025	2/3/2020	124.47251	119.1799051	114.1419485	109.3450731	104.7765092	100.4242294	96.2769013	92.32384412	88.55498755
200214A00016	2/14/2020	1.57	2/14/2024	2/14/2020	119.22536	115.2041807	111.3401626	107.6263145	104.0559972	100.6229024	97.32103408	94.14469124	91.08845174
200218A00024	2/20/2020	1.73	7/17/2023	2/20/2020	115.89269	112.6305033	109.4770499	106.4281224	103.479698	100.6279314	97.86914569	95.19982436	92.61660305
200219A00016	2/19/2020	1.57	10/19/2022	2/19/2020	111.8493	109.4858416	107.1845626	104.9433686	102.7602559	100.633305	98.56067574	96.54060334	94.57139484
200220A00007	2/20/2020	1.72	2/21/2023	2/20/2020	113.66162	110.891882	108.204239	105.5957752	103.0636942	100.6053158	98.21807123	95.89949742	93.64723187
200220A00019	2/20/2020	1.59	2/22/2021	2/20/2020	102.62998	102.1262263	101.6274137	101.1334665	100.6443138	100.159886	99.68011477	99.20493325	98.73427573
200221A00006	2/21/2020	1.5	2/21/2025	2/21/2020	124.53735	119.1452395	114.0164984	109.1368917	104.4930275	100.0723045	95.86286101	91.85352746	88.0337823
200221A00031	2/21/2020	1.69	2/21/2025	2/21/2020	124.4657	119.1057915	114.0068653	109.1548485	104.5365046	100.1393765	95.95173598	91.96253756	88.16137492
200224A00005	2/24/2020	1.59	2/24/2022	2/24/2020	107.92991	106.3295035	104.7612645	103.2243048	101.7177677	100.2408274	98.79268724	97.37257877	95.97976031
200224A00016	2/24/2020	1.56	2/24/2023	2/24/2020	113.28809	110.5129185	107.8203293	105.2073748	102.6712315	100.2091943	97.81867086	95.49717577	93.24232562
200225A00005	2/25/2020	1.57	2/25/2025	2/25/2020	123.93703	118.5745262	113.4739828	108.6212325	104.0029523	99.60660559	95.42039189	91.4331994	87.63456124
200225A00018	2/25/2020	1.94	2/25/2030	2/25/2020	151.04305	137.9691749	126.1278944	115.3965715	105.6653496	96.83576551	88.81951539	81.53736021	74.91815413
200225A00046	2/25/2020	1.54	2/23/2024	2/25/2020	118.50061	114.4806713	110.6186717	106.9075513	103.3406044	99.91146141	96.61406975	93.44267625	90.39181059
200226A00012	2/26/2020	1.54	2/28/2022	2/26/2020	107.91549	106.302048	104.7212849	103.172288	101.6541808	100.1661187	98.70728712	97.27690053	95.87420098
200226A00014	2/26/2020	1.53	2/27/2023	2/26/2020	113.2559	110.4708137	107.7688965	105.1471705	102.6027824	100.1329988	97.73520069	95.40687751	93.14562217
200226A00019	2/26/2020	1.38	2/26/2025	2/26/2020	124.02235	118.6234262	113.4892376	108.6054213	103.9584702	99.53567781	95.32508567	91.31543581	87.49612572
200227A00004	2/27/2020	1.65	2/27/2030	2/27/2020	150.43518	137.2497828	125.3151877	114.5063795	104.7114246	95.83004307	87.77234261	80.457695	73.81373958
200227A00009	2/27/2020	1.47	2/27/2025	2/27/2020	123.47393	118.1148227	113.0179938	108.169241	103.5552048	99.16331541	94.98174234	90.99934655	87.20563648
200227A00011	2/27/2020	1.42	2/28/2022	2/27/2020	107.72815	106.116242	104.5369843	102.9894654	101.47281	99.98617387	98.52874338	97.09973362	95.6983873
200227A00016	2/27/2020	1.47	2/27/2025	2/27/2020	123.47393	118.1148227	113.0179938	108.169241	103.5552048	99.16331541	94.98174234	90.99934655	87.20563648
200228A00020	2/28/2020	1.32	2/24/2023	2/28/2020	112.65474	109.8879211	107.2034935	104.5985145	102.0701666	99.61575033	97.23267863	94.91847131	92.67074992
200228A00061	2/28/2020	1.13	7/20/2022	2/28/2020	109.57311	107.5130504	105.5020031	103.5385005	101.6211314	99.74853599	97.91940379	96.13247108	94.3865192
200302A00031	3/2/2020	1.02	11/18/2022	3/2/2020	111.02075	108.5737891	106.1932632	103.8768508	101.6223356	99.42759814	97.29061063	95.20943224	93.18220428
200304A00021	3/4/2020	0.94	3/4/2024	3/4/2020	117.12575	113.0778359	109.1908649	105.4575643	101.8710294	98.42470501	95.11236647	91.9281003	88.86628709
200304A00038	3/4/2020	1.01	3/1/2022	3/4/2020	107.10106	105.4913917	103.9143693	102.369084	100.8546587	99.37024815	97.91503731	96.48824021	95.08909853
200304A00052	3/6/2020	2.11	3/8/2027	3/6/2020	137.61143	129.2314136	121.4168162	114.1265451	107.3226995	100.9703074	95.03708479	89.49321555	84.3111509
200304A00054	3/6/2020	2.35	3/8/2027	3/6/2020	139.38485	130.9446876	123.0728761	115.7281505	108.8724507	102.470656	96.49034301	90.90156553	85.67665284
200305A00002	3/5/2020	1.14	3/5/2025	3/5/2020	121.92072	116.5779537	111.4979853	106.6665233	102.07013	97.69616558	93.53273628	89.56864639	85.79335348
200309A00027	3/9/2020	0.97	3/10/2025	3/9/2020	121.13787	115.7971735	110.7200817	105.8922146	101.3000554	96.93089259	92.77276723	88.81442427	85.04526737
200309A00056	3/9/2020	0.97	3/7/2025	3/9/2020	121.10171	115.7716983	110.704378	105.8854442	101.3014457	96.93973097	92.78839621	88.8362373	85.07270478
200324A00020	3/24/2020	1.23	3/24/2022	3/24/2020	107.75906	106.077135	104.4301501	102.8170922	101.2369868	99.68889664	98.17191955	96.68518693	95.22786217

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
200325A00029	3/25/2020	1.15	3/24/2023	3/25/2020	113.11253	110.2411204	107.457441	104.7582595	102.1404902	99.60118122	97.13750833	94.74676793	92.42637129
200406A00013	4/6/2020	0.83	4/1/2022	4/6/2020	107.20671	105.5061685	103.8412689	102.2109656	100.6142524	99.05016192	97.51776359	96.01616202	94.54449526
200407A00001	4/8/2020	2.41	4/7/2025	4/8/2020	128.71505	123.1013855	117.7661828	112.6941053	107.8707479	103.2825746	98.91686091	94.76164059	90.80565614
200413A00031	4/13/2020	0.73	4/13/2022	4/13/2020	107.19299	105.456337	103.756625	102.0927476	100.4636413	98.86828486	97.30569677	95.77493359	94.27508793
200416A00005	4/16/2020	0.49	4/15/2022	4/16/2020	107.11685	105.3694935	103.6594863	101.9857029	100.3470627	98.74252785	97.1711015	95.63182562	94.12377907
200417A00016	4/21/2020	2.18	4/21/2025	4/21/2020	127.77866	122.1384931	116.7804873	111.6889763	106.8492531	102.2475057	97.87075765	93.70681199	89.74420026
190123A00034	1/23/2019	2.98	1/23/2025	1/23/2019	131.25898	125.8186397	120.6370957	115.7006763	110.996499	106.5124255	102.2370147	98.15947879	94.26964269
190128A00035	1/28/2019	3.04	1/26/2024	1/28/2019	123.59307	119.5780761	115.7163839	112.0013179	108.4265275	104.9859721	101.673904	98.48485265	95.41360963
190129A00028	1/30/2019	2.92	2/1/2022	1/30/2019	109.53522	107.9979089	106.4901186	105.0110707	103.5600124	102.1362168	100.7389815	99.36762771	98.0214993
190130A00012	1/30/2019	2.92	1/31/2022	1/30/2019	109.51543	107.9815856	106.4771344	105.0013048	103.5533489	102.1325441	100.7381923	99.36961896	98.02617173
190130A00019	1/30/2019	3.01	1/30/2024	1/30/2019	123.55852	119.5309088	115.6575624	111.9317362	108.3470214	104.897323	101.5768425	98.38006197	95.30172866
190131A00007	1/31/2019	2.67	1/31/2023	1/31/2019	116.26798	113.5265152	110.8643045	108.2785957	105.7667516	103.3262425	100.9546408	98.64961624	96.40893152
190208A00008	2/8/2019	2.86	2/8/2024	2/8/2019	123.17786	119.1254844	115.2295277	111.4831063	107.8796737	104.4130063	101.077186	97.8665831	94.7758409
190211A00017	2/11/2019	3.12	2/11/2026	2/11/2019	138.15576	131.1924565	124.6272772	118.4353308	112.5934125	107.0798789	101.8745349	96.95852941	92.31425927
190214A00008	2/14/2019	2.64	2/14/2023	2/14/2019	116.46666	113.6734679	110.9623716	108.3304689	105.774982	103.2932488	100.8827166	98.54093707	96.26556133
190225A00026	2/25/2019	3.43	2/27/2034	2/25/2019	199.02504	176.5054801	156.8313634	139.6241684	124.5576931	111.350582	99.75995081	89.57594523	80.6170941
190321A00021	3/21/2019	2.67	3/21/2024	3/21/2019	123.2359	119.0399086	115.0107974	111.1409811	107.4232679	103.8508332	100.4171989	97.11621344	93.9420335
190321A00029	3/21/2019	2.62	3/22/2021	3/21/2019	103.56386	102.9754694	102.393762	101.8186233	101.2499424	100.6876108	100.1315226	99.58157394	99.03766362
190326A00021	3/26/2019	2.52	3/26/2021	3/26/2019	103.57733	102.9770475	102.3837074	101.7971943	101.217391	100.6441827	100.0774574	99.51710549	98.96301996
190328A00032	4/25/2019	2.48	4/26/2021	4/25/2019	104.09984	103.4050753	102.7195653	102.0431255	101.3755769	100.7167449	100.0664597	99.42455572	98.79087181
190328A00065	3/28/2019	2.56	3/28/2024	3/28/2019	122.93441	118.7213247	114.676572	110.7924635	107.061713	103.4774087	100.0329912	96.72223362	93.53922258
190329A00018	3/29/2019	2.6	3/29/2024	3/29/2019	123.10666	118.8871067	114.836205	110.9462559	107.2099555	103.620375	100.1709396	96.85540788	93.66785267
190401A00010	4/1/2019	2.62	4/1/2024	4/1/2019	123.23719	119.0053155	114.9428766	111.0421224	107.2957019	103.6966426	100.2383291	96.91448198	93.71913879
190402A00014	4/2/2019	2.64	4/2/2024	4/2/2019	123.33285	119.095796	115.0284776	111.1231256	107.3723713	103.7692261	100.3070592	96.9795771	93.7808041
190408A00047	4/8/2019	2.43	4/7/2023	4/8/2019	116.85809	113.8911475	111.0155262	108.2278231	105.5247905	102.903324	100.3604554	97.89334532	95.49927666
190416A00021	4/16/2019	2.73	4/16/2024	4/16/2019	123.93897	119.643055	115.5207052	111.5638946	107.7650216	104.1168809	100.6126404	97.24581923	94.01026726
190423A00002	4/23/2019	2.52	4/23/2024	4/23/2019	124.04684	119.7037161	115.5373697	111.5395698	107.7025195	104.0188321	100.4815062	97.08390356	93.81972736
190424A00004	4/24/2019	2.55	4/23/2021	4/24/2019	104.09325	103.4074974	102.7307663	102.0628801	101.4036662	100.7529564	100.1105869	99.47639794	98.85023397
190424A00021	4/24/2019	2.6	4/22/2022	4/24/2019	110.51803	108.7245222	106.9695099	105.2518177	103.570323	101.9239482	100.3116588	98.73246053	97.18539821
191008A00033	10/8/2019	1.71	10/8/2024	10/8/2019	122.53722	117.6843364	113.0504131	108.6243685	104.3957427	100.3546629	96.49180652	92.79836711	89.26602283
191010A00011	10/10/2019	1.6	10/10/2023	10/10/2019	117.39741	113.8233559	110.3770502	107.0531571	103.8466034	100.7525594	97.7664259	94.88382113	92.10056922
191015A00013	10/15/2019	1.72	10/15/2024	10/15/2019	123.60358	118.6782507	113.9764548	109.486805	105.1985613	101.1015903	97.18632729	93.44374096	89.86530009
191017A00022	10/17/2019	2.25	7/17/2028	10/17/2019	145.92317	135.3722743	125.6612358	116.7188451	108.4802728	100.8864664	93.88360906	87.42263149	81.45877091

Classification | Public

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
191018A00015	10/18/2019	1.89	10/18/2021	10/18/2019	106.49459	105.2473039	104.0291004	102.8389708	101.6759533	100.5391297	99.42762275	98.34059392	97.27724148
191024A00016	10/25/2019	1.91	2/16/2021	10/25/2019	102.62662	102.1412511	101.6604681	101.1842083	100.7124081	100.2450051	99.78193778	99.32314605	98.86857081
191025A00002	10/25/2019	1.75	10/26/2020	10/25/2019	100.86413	100.7067664	100.5499049	100.39354	100.2376691	100.08229	99.9274003	99.77299771	99.6190799
191106A00022	11/6/2019	2.34	1/2/2030	11/6/2019	154.69604	141.6663855	129.8412107	119.1027623	109.3453593	100.4740981	92.40370465	85.05751433	78.36656372
191108A00014	11/8/2019	2.25	11/8/2029	11/8/2019	155.48414	142.5083621	130.7193114	120.0020345	110.2532837	101.3802687	93.29954697	85.93603678	79.22213933
191113A00020	11/13/2019	1.88	11/13/2020	11/13/2019	101.1393	100.9308783	100.72333	100.5166468	100.3108234	100.1058541	99.9017338	99.69845705	99.4960186
191115A00014	11/18/2019	2.45	11/18/2024	11/18/2019	126.55975	121.4808151	116.6354676	112.0116086	107.5978451	103.3834409	99.35827357	95.51279607	91.83799972
191115A00015	11/18/2019	2.61	11/18/2024	11/18/2019	127.29815	122.202926	117.3418372	112.7027642	108.2742919	104.0456628	100.0067349	96.14794187	92.46025696
191121A00009	11/21/2019	2.55	11/21/2036	11/21/2019	199.93396	172.5690431	149.3135723	129.5238393	112.6601806	98.26969665	85.97191158	75.44686408	66.4252076
191206A00009	12/6/2019	2.87	12/4/2037	12/6/2019	206.85301	177.5027634	152.7648529	131.8819719	114.225098	99.27117705	86.58478587	75.8030463	66.62320071
191216A00042	12/16/2019	1.95	12/16/2022	12/16/2019	113.18854	110.6388247	108.159662	105.7486324	103.4034164	101.1217913	98.90162601	96.74087679	94.6375826
191223A00006	12/23/2019	1.92	12/23/2020	12/23/2019	101.77214	101.4483999	101.1267195	100.807084	100.4894738	100.1738697	99.86025266	99.54860395	99.23890504
191223A00019	12/23/2019	1.92	12/30/2020	12/23/2019	101.8812	101.5371363	101.1953881	100.8559323	100.5187459	100.1838063	99.85109114	99.52057843	99.19224639
191230A00013	12/30/2019	1.84	12/2/2024	12/30/2019	124.91517	119.7965279	114.9164136	110.2623429	105.8225603	101.5859943	97.54221349	93.68138481	89.99423551
191230A00031	12/30/2019	1.85	12/30/2024	12/30/2019	125.40162	120.1784544	115.2018703	110.4589729	105.9376078	101.6263146	97.51428312	93.59131398	89.84778038
200106A00019	1/6/2020	1.89	7/16/2024	1/6/2020	122.04808	117.4860762	113.1195061	108.9389934	104.9356571	101.1010865	97.42731335	93.90678665	90.53234841
200110A00013	1/10/2020	1.76	1/10/2024	1/10/2020	119.37696	115.4709669	111.7134299	108.0979319	104.6183669	101.2689239	98.04407133	94.93854192	91.94731868
200122A00034	1/22/2020	1.87	1/22/2024	1/22/2020	119.23243	115.3084445	111.534569	107.9042736	104.4113446	101.0498708	97.81422685	94.69905843	91.6992672
200123A00005	1/23/2020	1.81	1/24/2022	1/23/2020	107.7663	106.266787	104.7956786	103.3522324	101.9357344	100.5454949	99.18084697	97.8411457	96.52576744
200228A00060	2/28/2020	1.31	2/28/2022	2/28/2020	107.55642	105.94592	104.368042	102.8218781	101.3065534	99.82122445	98.36507829	96.93733062	95.53722476
200228A00062	2/28/2020	1.32	2/28/2023	2/28/2020	112.71479	109.9334343	107.2352834	104.6173519	102.0767814	99.61083407	97.21688631	94.8924237	92.63503542
200228A00063	2/28/2020	1.32	2/28/2023	2/28/2020	112.71479	109.9334343	107.2352834	104.6173519	102.0767814	99.61083407	97.21688631	94.8924237	92.63503542
200228A00066	2/28/2020	1.35	2/28/2024	2/28/2020	117.85847	113.8329486	109.9663501	106.2515388	102.6817385	99.25051395	95.95175169	92.77964215	89.72866261
200302A00011	3/2/2020	1.31	2/27/2025	3/2/2020	122.68352	117.342972	112.2640452	107.4325632	102.8351941	98.45939456	94.29335882	90.32597149	86.54676347
200302A00051	3/2/2020	1.22	8/8/2023	3/2/2020	114.61786	111.3055503	108.1060178	105.0148	102.0276414	99.14047826	96.3494288	93.65078411	91.04099933
200302A00054	3/2/2020	1.31	3/3/2025	3/2/2020	122.73753	117.3821097	112.2895874	107.4456873	102.8369855	98.45085404	94.27540935	90.29946426	86.51248354
200303A00010	3/3/2020	1.34	3/3/2025	3/3/2020	122.88612	117.5272015	112.4313062	107.5841523	102.9723106	98.58314821	94.40477686	90.42600491	86.63629287
200305A00020	3/5/2020	0.95	3/5/2025	3/5/2020	121.98192	116.6069547	111.4972031	106.6382059	102.0163671	97.6189003	93.43377574	89.44967153	85.65592814
200305A00035	3/5/2020	1.25	3/5/2026	3/5/2020	127.06576	120.3351953	113.9987813	108.0314384	102.409809	97.112132	92.11812534	87.40887776	82.96674939
200306A00002	3/6/2020	0.64	3/7/2022	3/6/2020	106.87868	105.2486395	103.6519541	102.0876787	100.5549063	99.05276302	97.58040709	96.13702707	94.72184055
200306A00009	3/6/2020	0.82	3/7/2022	3/6/2020	106.87849	105.2532811	103.661251	102.1014627	100.5730157	99.07504259	97.60670768	96.16720515	94.75575799
200309A00033	3/9/2020	1.06	3/9/2026	3/9/2020	125.94032	119.228537	112.9109956	106.9625546	101.3598003	96.08092244	91.1055964	86.41487424	81.9910845
200309A00046	3/9/2020	0.78	3/11/2025	3/9/2020	121.20781	115.8312956	110.7211207	105.8627108	101.2423679	96.84721236	92.66512971	88.68472071	84.89525532

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
200310A00019	3/10/2020	0.95	3/10/2023	3/10/2020	111.85897	109.0586554	106.3428562	103.7085055	101.1526726	98.67255165	96.26545575	93.92881081	91.66015011
200310A00025	3/10/2020	0.87	3/11/2024	3/10/2020	116.94824	112.8813045	108.9767977	105.2273445	101.6259457	98.16595866	94.84107713	91.6453119	88.57297311
200310A00037	3/10/2020	0.84	3/7/2022	3/10/2020	106.91012	105.2846537	103.6923664	102.1323254	100.6036302	99.10541347	97.63683913	96.19710133	94.78542294
200310A00042	3/10/2020	1.41	3/11/2030	3/10/2020	145.2757	132.4317554	120.8108039	110.2903279	100.7606491	92.12352821	84.29092002	77.18386939	70.731532
200310A00065	3/13/2020	1.1	3/13/2025	3/13/2020	121.82212	116.4553984	111.3537352	106.5026613	101.8885718	97.49867272	93.32092904	89.34401489	85.55726814
200311A00022	3/11/2020	1.23	3/11/2026	3/11/2020	128.36052	121.5251034	115.0918628	109.035082	103.3308246	97.95679822	92.8922331	88.11777007	83.61535765
200311A00036	3/16/2020	1.03	4/15/2022	3/16/2020	107.72726	105.9798514	104.2696916	102.5956608	100.9566836	99.35172701	97.77979887	96.23994536	94.73124935
200313A00022	3/13/2020	1.11	3/8/2022	3/13/2020	107.35048	105.7184635	104.1197883	102.5535145	101.0187357	99.51457871	98.0402023	96.59479551	95.17757635
200326A00026	3/26/2020	1.32	3/26/2024	3/26/2020	118.10995	113.9937336	110.0427033	106.2493078	102.6063869	99.10714796	95.74514522	92.51425945	89.40867958
190426A00012	5/1/2019	2.57	7/15/2022	5/1/2019	111.95397	109.8921369	107.8788038	105.9125385	103.9919576	102.115727	100.2825607	98.49121786	96.74050179
190429A00003	4/29/2019	2.62	10/13/2023	4/29/2019	120.19019	116.5769319	113.0923226	109.7309999	106.4878633	103.3580569	100.3369564	97.4201559	94.60345644
190430A00013	4/30/2019	2.52	4/30/2021	4/30/2019	104.19763	103.4905162	102.7929688	102.1047976	101.4258146	100.7558368	100.0946861	99.4421891	98.79817684
190501A00028	5/1/2019	2.42	5/1/2024	5/1/2019	123.79447	119.4289708	115.2421404	111.2256093	107.3714558	103.6721773	100.1206654	96.71018237	93.43433923
190502A00027	5/2/2019	2.42	5/2/2022	5/2/2019	110.70527	108.8739273	107.0824568	105.3296234	103.6142446	101.9351864	100.2913609	98.68172403	97.10527289
190506A00011	5/6/2019	2.45	11/6/2020	5/6/2019	101.16504	100.9761546	100.7879855	100.6005263	100.4137727	100.2277208	100.0423667	99.85770619	99.67373551
190510A00009	5/10/2019	2.47	11/10/2021	5/10/2019	107.58834	106.2604611	104.9652566	103.7015354	102.4681598	101.2640467	100.0881636	98.93952639	97.81719608
190513A00076	5/13/2019	2.42	11/12/2021	5/13/2019	107.56203	106.2278854	104.9267349	103.6573625	102.4186147	101.2093931	100.0286513	98.87539187	97.74866349
190515A00002	5/15/2019	2.44	5/16/2022	5/15/2019	110.66383	108.7965994	106.9706534	105.1846852	103.437448	101.7277475	100.054439	98.41642465	96.81265109
190515A00060	5/15/2019	2.38	5/14/2021	5/15/2019	104.34584	103.5958412	102.8566083	102.1279114	101.4095261	100.7012346	100.002825	99.31409133	98.63483345
190516A00006	5/16/2019	2.43	5/13/2021	5/16/2019	104.36437	103.6173132	102.8809424	102.1550248	101.4393388	100.7336689	100.0378058	99.35154584	98.67469115
190517A00005	5/17/2019	2.31	5/17/2024	5/17/2019	123.63298	119.2173584	114.9843879	110.9254148	107.0322553	103.2971644	99.7128093	96.2722442	92.96888735
190521A00047	5/21/2019	2.54	5/19/2023	5/21/2019	117.34956	114.2537355	111.2563517	108.3536042	105.5418636	102.8176684	100.1777162	97.61885435	95.1380723
190522A00021	5/23/2019	2.47	10/15/2021	5/23/2019	107.12126	105.8795589	104.6665684	103.4812988	102.3228078	101.1901952	100.082601	98.99920271	97.93921374
190523A00008	5/23/2019	2.29	5/23/2023	5/23/2019	117.27237	114.1520235	111.1315191	108.2069738	105.3746843	102.6311201	99.97291374	97.39685186	94.89986677
190523A00014	5/23/2019	2.5	11/15/2023	5/23/2019	120.36211	116.6384679	113.0506399	109.5928166	106.259477	103.0453736	99.94551689	96.95516058	94.06978777
190523A00023	5/23/2019	2.48	3/22/2023	5/23/2019	116.16771	113.272651	110.4653727	107.7426643	105.101455	102.5388067	100.0519074	97.6380646	95.29469963
190524A00031	5/24/2019	2.43	5/24/2022	5/24/2019	110.78525	108.8929403	107.0428832	105.2337267	103.4641806	101.7330101	100.0390318	98.38111178	96.75816264
190528A00002	5/28/2019	2.45	11/30/2020	5/28/2019	101.54897	101.2915917	101.0355065	100.7807094	100.5271908	100.2749412	100.0239511	99.77421115	99.52571209
190528A00006	5/28/2019	2.43	9/15/2023	5/28/2019	119.07408	115.5694972	112.1873804	108.9227398	105.7708168	102.7270752	99.78718954	96.94703377	94.20267073
190528A00042	5/28/2019	2.38	11/29/2021	5/28/2019	107.79995	106.4096862	105.0551436	103.7349575	102.4478339	101.1925428	99.96791474	98.77283686	97.60624953
190529A00022	5/29/2019	2.32	5/28/2021	5/29/2019	104.54399	103.7508318	102.9696725	102.2002446	101.4422854	100.6955399	99.95976066	99.23470762	98.52014748
190529A00069	5/29/2019	2.34	11/29/2021	5/29/2019	107.74814	106.3582345	105.0040454	103.6842066	102.3974242	101.1424685	99.91817016	98.72341643	97.55714788
200428A00013	4/30/2020	1.49	4/29/2024	4/30/2020	119.2549	115.0049217	110.9290488	107.019143	103.2674944	99.66680034	96.21014042	92.89095437	89.70302071

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
200429A00010	4/29/2020	0.78	4/29/2025	4/29/2020	121.81388	116.2565437	110.9813532	105.9724734	101.2150482	96.69513506	92.39964241	88.31627308	84.43347122
200429A00017	5/4/2020	0.66	8/15/2022	5/4/2020	108.57538	106.4542727	104.385337	102.3669624	100.3975971	98.47574762	96.59997635	94.76889916	92.98118289
200429A00056	5/1/2020	1.54	4/30/2025	5/1/2020	124.63628	119.0411458	113.7282932	108.6819393	103.8872787	99.33041316	94.99829003	90.8786461	86.95995503
200506A00002	5/8/2020	0.97	5/5/2025	5/8/2020	121.7667	116.2248145	110.9642287	105.9691458	101.2247499	96.71713629	92.43325029	88.36082959	84.48835174
200506A00005	5/6/2020	0.97	5/6/2025	5/6/2020	121.7787	116.2331963	110.9693181	105.9712436	101.2241323	96.71405704	92.42794229	88.35350686	84.47921088
200507A00005	5/7/2020	0.67	5/5/2023	5/7/2020	111.77254	108.7998376	105.9211081	103.1327594	100.4313611	97.81363938	95.27646844	92.81686248	90.43196838
200508A00004	5/8/2020	0.43	5/8/2023	5/8/2020	111.67725	108.6841666	105.7862221	102.979755	100.2612743	97.62744932	95.07510098	92.60119345	90.20282659
200511A00017	5/11/2020	0.83	2/3/2025	5/11/2020	119.99894	114.8098822	109.8718252	105.1713696	100.6958965	96.43352144	92.37304816	88.50392485	84.8162039
200611A00013	6/11/2020	0.59	6/12/2023	6/11/2020	111.9816	108.8882911	105.8957493	103.0000653	100.1975103	97.48452513	94.85771177	92.31382427	89.84976096
200709A00004	7/10/2020	1.4	7/10/2025	7/10/2020	124.93706	119.0908009	113.5500649	108.2973662	103.3163052	98.59149695	94.10850348	89.85377048	85.8145691
200709A00005	7/10/2020	2.23	7/10/2030	7/10/2020	156.19911	142.3311942	129.8103437	118.4985369	108.2725449	99.02227979	90.64933452	83.06569092	76.19257664
200720A00037	7/22/2020	2.1	7/21/2025	7/22/2020	128.80783	122.8272528	117.1595977	111.7868898	106.6922791	101.8599628	97.27511469	92.92382053	88.79301688
200722A00011	7/22/2020	0.59	7/24/2023	7/22/2020	112.46606	109.2340515	106.1108759	103.0922853	100.1742227	97.35281127	94.62434543	91.98528211	89.43223284
200818A00004	8/18/2020	0.92	8/18/2026	8/18/2020	126.76695	119.4686935	112.6297329	106.2189148	100.2073478	94.56823098	89.2766921	84.30963939	79.64562548
200818A00007	8/18/2020	1.31	8/20/2029	8/18/2020	141.88826	129.9900114	119.1662543	109.3146969	100.3432615	92.16901594	84.71722309	77.92049468	71.71803543
200818A00008	8/18/2020	1.5	8/18/2031	8/18/2020	152.27046	136.9965144	123.3692941	111.2029977	100.3336368	90.61637691	81.92321554	74.14095281	67.16941502
200818A00009	8/18/2020	1.7	8/18/2033	8/18/2020	163.55074	144.5986824	128.0114472	113.4815068	100.7427233	89.56460207	79.74736417	71.11772149	63.52525006
200127A00013	1/27/2020	1.56	1/27/2023	1/27/2020	113.35205	110.6606449	108.0469433	105.5082621	103.0420236	100.6457542	98.31708035	96.05372292	93.8534934
200129A00018	2/3/2020	1.74	12/15/2022	2/3/2020	112.66385	110.1235605	107.6535499	105.2514032	102.9148061	100.6415412	98.4294827	96.27659238	94.18091481
200130A00016	1/30/2020	1.58	1/30/2025	1/30/2020	124.57655	119.2664271	114.2119184	109.3994044	104.8160663	100.4498302	96.2893201	92.32381376	88.54320193
200130A00028	1/30/2020	1.54	2/7/2023	1/30/2020	113.47578	110.7460082	108.0960498	105.5231061	103.0244963	100.5976495	98.24009985	95.94948136	93.7235233
200131A00007	1/31/2020	1.68	1/31/2023	1/31/2020	113.21837	110.526784	107.9130459	105.3744566	102.9084296	100.5124831	98.18423538	95.92139991	93.72178113
200203A00011	2/3/2020	1.7	2/15/2023	2/3/2020	113.51202	110.7649434	108.0987313	105.5105307	102.9976058	100.5573345	98.18720236	95.88479753	93.64780607
200203A00051	2/3/2020	1.58	11/3/2021	2/3/2020	106.58329	105.2812065	104.0107338	102.7707309	101.5601129	100.3778456	99.22294286	98.09446386	96.9915104
200207A00004	2/7/2020	1.53	2/7/2023	2/7/2020	113.44984	110.7204093	108.0707799	105.4981579	102.9998626	100.5733233	98.21607437	95.92575007	93.70007985
200207A00009	2/7/2020	1.58	2/7/2025	2/7/2020	124.70517	119.3621573	114.2776536	109.4378201	104.8296281	100.4408107	96.25981374	92.27575085	88.47836125
200207A00015	2/7/2020	1.73	2/7/2022	2/7/2020	107.86943	106.3254176	104.8114295	103.326665	101.8703499	100.4417366	99.04010338	97.66475282	96.31501116
200212A00003	2/12/2020	1.63	2/12/2025	2/12/2020	125.03207	119.6624793	114.5534561	109.6909988	105.0619366	100.6538711	96.45512667	92.45470497	88.64224161
200214A00004	2/14/2020	1.81	2/16/2021	2/14/2020	102.5792	102.0939602	101.6133099	101.137182	100.6655128	100.1982399	99.7353018	99.27663842	98.82219066
200214A00005	2/14/2020	1.59	2/14/2025	2/14/2020	124.86812	119.4947799	114.3825818	109.5174768	104.8862472	100.4764512	96.27637376	92.27498021	88.46187284
200214A00019	2/14/2020	1.81	2/16/2021	2/14/2020	102.5792	102.0939602	101.6133099	101.137182	100.6655128	100.1982399	99.7353018	99.27663842	98.82219066
200220A00029	2/20/2020	1.72	2/21/2023	2/20/2020	113.66162	110.891882	108.204239	105.5957752	103.0636942	100.6053158	98.21807123	95.89949742	93.64723187
200221A00003	2/25/2020	1.69	2/25/2025	2/25/2020	124.52906	119.1526737	114.0387368	109.1730649	104.5423141	100.1339284	95.93608868	91.93766549	88.12817521

Classification | Public

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
200221A00016	2/21/2020	1.69	2/21/2025	2/21/2020	124.4657	119.1057915	114.0068653	109.1548485	104.5365046	100.1393765	95.95173598	91.96253756	88.16137492
200224A00015	2/24/2020	1.57	1/10/2024	2/24/2020	117.96086	114.0983115	110.3823834	106.8067466	103.3653814	100.0525587	96.86282384	93.79098247	90.83208629
200225A00004	2/25/2020	1.54	2/26/2024	2/25/2020	118.546	114.5148105	110.6423787	106.9215923	103.345695	99.90827016	96.60322108	93.42475362	90.36735919
200225A00015	2/25/2020	1.54	2/26/2024	2/25/2020	118.546	114.5148105	110.6423787	106.9215923	103.345695	99.90827016	96.60322108	93.42475362	90.36735919
200225A00017	2/25/2020	1.94	2/25/2030	2/25/2020	151.04305	137.9691749	126.1278944	115.3965715	105.6653496	96.83576551	88.81951539	81.53736021	74.91815413
200226A00008	2/26/2020	1.38	2/26/2025	2/26/2020	124.02235	118.6234262	113.4892376	108.6054213	103.9584702	99.53567781	95.32508567	91.31543581	87.49612572
200227A00031	2/27/2020	1.43	2/27/2024	2/27/2020	118.14591	114.1185838	110.2500669	106.5332375	102.9613304	99.52792062	96.22690414	93.05248	89.99913346
200228A00005	2/28/2020	1.35	2/28/2024	2/28/2020	117.85847	113.8329486	109.9663501	106.2515388	102.6817385	99.25051395	95.95175169	92.77964215	89.72866261
200228A00029	2/28/2020	1.31	2/28/2022	2/28/2020	107.55642	105.94592	104.368042	102.8218781	101.3065534	99.82122445	98.36507829	96.93733062	95.53722476
200228A00040	2/28/2020	1.14	2/28/2023	2/28/2020	112.75632	109.9632255	107.2539108	104.6253606	102.0746896	99.59913465	97.19604851	94.86289418	92.59723956
200228A00042	2/28/2020	1.17	2/28/2024	2/28/2020	117.93202	113.885491	109.9991723	106.2658521	102.6786825	99.231161	95.91711106	92.73066404	89.66624186
200228A00043	2/28/2020	1.21	2/28/2025	2/28/2020	123.20948	117.8221698	112.6996299	107.8274685	103.192154	98.78095774	94.5819021	90.58371196	86.77576979
200228A00065	2/28/2020	1.4	2/28/2025	2/28/2020	123.14298	117.7879313	112.6952368	107.8506789	103.2408831	98.85326683	94.67598756	90.69789573	86.90849033
200304A00034	3/4/2020	1.12	3/4/2024	3/4/2020	117.05471	113.0278426	109.160629	105.4458669	101.8767238	98.44671294	95.14967295	91.97975003	88.93138062
200306A00098	3/10/2020	1.59	3/8/2030	3/10/2020	147.26245	134.3316394	122.6285033	112.0302806	102.4270602	93.72037754	85.82197071	78.65267675	72.14145266
200306A00099	3/10/2020	1.92	3/10/2031	3/10/2020	155.73566	140.9099167	127.6170678	115.6905333	104.9826215	95.36230182	86.71324941	78.9321287	71.92708454
200306A00101	3/10/2020	1.93	3/8/2030	3/10/2020	151.07768	137.9583744	126.0795879	115.317544	105.5614025	96.71185081	88.67985201	81.38553462	74.7572073
200309A00004	3/9/2020	0.71	3/8/2024	3/9/2020	116.29904	112.2536926	108.3697427	104.6398725	101.0571377	97.61494697	94.30704195	91.12747842	88.07060862
200309A00041	3/9/2020	0.73	3/9/2022	3/9/2020	106.76048	105.1304647	103.5337983	101.9695364	100.4367708	98.93462715	97.46226265	96.01886511	94.60365139
200311A00021	3/11/2020	1.09	3/11/2024	3/11/2020	117.79056	113.7079727	109.7882805	106.0240854	102.4083714	98.93448018	95.59609012	92.38719761	89.30209891
200312A00017	3/16/2020	1.09	2/15/2023	3/16/2020	111.91892	109.1926515	106.5467765	103.9784527	101.4849587	99.06368608	96.71213375	94.42790265	92.20869105
200317A00026	3/17/2020	1.22	3/15/2024	3/17/2020	117.57882	113.5074349	109.5984475	105.844488	102.2385613	98.77402901	95.44458856	92.24425443	89.1673402
200407A00002	4/8/2020	1.82	4/8/2024	4/8/2020	120.24016	116.0413181	112.0119551	108.1442626	104.4308418	100.8646776	97.43911629	94.14784454	90.98486978
200415A00019	4/15/2020	0.68	4/15/2022	4/15/2020	107.13348	105.3913113	103.6862935	102.0173098	100.3832873	98.78319573	97.21604544	95.68088503	94.17679968
200415A00035	4/17/2020	2.16	4/16/2025	4/17/2020	127.59512	121.976893	116.6390438	111.5660496	106.7433312	102.1571938	97.79476872	93.64395825	89.69338518
200417A00009	4/17/2020	1.35	4/16/2027	4/17/2020	132.43775	124.0943108	116.3253975	109.0885384	102.3446137	96.05757673	90.19419636	84.72382315	79.61817559
200429A00043	5/1/2020	1.56	4/30/2025	5/1/2020	124.73907	119.1414348	113.8261707	108.777493	103.9805924	99.42156668	95.08735983	90.96570525	87.04507341
200430A00008	4/30/2020	0.94	4/30/2025	4/30/2020	121.55251	116.0324762	110.7919663	105.8153262	101.0878688	96.59580748	92.32619594	88.26687153	84.40640336
200515A00001	5/15/2020	0.59	5/15/2023	5/15/2020	111.65859	108.6567911	105.7507221	102.9366848	100.2111521	97.57076012	95.01229853	92.53270264	90.1290454
200604A00005	6/4/2020	0.89	6/4/2025	6/4/2020	121.76662	116.1227779	110.7699129	105.6914542	100.8718691	96.2965937	91.95196602	87.82516493	83.9041532
190530A00004	5/30/2019	2.24	5/30/2023	5/30/2019	117.24647	114.1043052	111.0632842	108.1194452	105.2690134	102.5083915	99.8341495	97.24301571	94.73186772
190530A00007	5/30/2019	2.35	11/30/2021	5/30/2019	107.7787	106.3853706	105.027919	103.7049735	102.4152315	101.1574555	99.93046854	98.73315104	97.56443695
190530A00047	5/30/2019	2.36	5/28/2021	5/30/2019	104.57445	103.7811626	102.9998753	102.2303208	101.4722363	100.7253669	99.989465	99.26429055	98.54961026

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
190530A00074	5/30/2019	2.4	5/31/2022	5/30/2019	110.8522	108.9383023	107.0675039	105.2384142	103.449705	101.7001054	99.98839829	98.31341789	96.67404668
190531A00037	5/31/2019	2.61	5/31/2029	5/31/2019	156.71409	144.3339552	133.0339486	122.7138279	113.2831646	104.6603369	96.77162799	89.55042055	82.9364781
190603A00002	6/3/2019	2.03	6/2/2023	6/3/2019	116.67975	113.5362213	110.494163	107.5496029	104.6987559	101.9380138	99.26393612	96.67324023	94.16279299
190603A00009	6/3/2019	2.17	7/6/2022	6/3/2019	111.01781	108.9927452	107.0147734	105.0825162	103.1946464	101.3498838	99.54699344	97.78478343	96.06210337
190603A00041	6/3/2019	2.01	6/3/2021	6/3/2019	104.52044	103.7075912	102.9073425	102.1194049	101.343496	100.579342	99.8266772	99.08524416	98.35479286
190603A00046	6/3/2019	2.17	6/3/2022	6/3/2019	110.4815	108.561956	106.6857518	104.8515057	103.0578953	101.303654	99.58756843	97.90847503	96.26525789
190603A00048	6/3/2019	2.24	6/3/2024	6/3/2019	122.80858	118.3749592	114.1263207	110.0538403	106.149176	102.4044354	98.81214823	95.36524073	92.05701184
190605A00012	6/5/2019	1.92	6/6/2022	6/5/2019	110.40829	108.4741729	106.5839407	104.7362015	102.929627	101.162944	99.43493216	97.74442057	96.09028548
190605A00035	6/5/2019	2.18	6/5/2023	6/5/2019	116.58566	113.4471078	110.4097961	107.4697838	104.6233123	101.866797	99.19681805	96.61011098	94.10355868
190607A00011	6/7/2019	1.94	6/7/2021	6/7/2019	104.53205	103.7069246	102.8947899	102.0953387	101.3082755	100.5333142	99.77017695	99.0185948	98.27830669
190607A00018	6/7/2019	2.19	6/7/2024	6/7/2019	122.67081	118.2264954	113.9680405	109.8865899	105.9737656	102.2216391	98.62270429	95.16985205	91.85634643
190617A00004	6/17/2019	2.2	6/15/2021	6/17/2019	104.74754	103.8987764	103.0637345	102.2420856	101.433509	100.6376947	99.85434198	99.08315977	98.32386593
190618A00002	6/18/2019	2.11	6/18/2025	6/18/2019	129.5078	123.5876273	117.9728574	112.6461171	107.5911134	102.7925626	98.23612193	93.9083264	89.79653038
190620A00010	6/20/2019	2.04	6/20/2022	6/20/2019	110.503	108.5317424	106.6056001	104.7232159	102.8832881	101.0845645	99.32583974	97.60595329	95.92378743
190620A00027	6/20/2019	2.14	6/20/2024	6/20/2019	122.6795	118.1914179	113.8923622	109.7733457	105.8258611	102.0418508	98.41368079	94.9341159	91.59629658
190624A00026	6/24/2019	2.08	6/24/2022	6/24/2019	110.64521	108.6603633	106.7210771	104.8260079	102.9738577	101.1633762	99.39335891	97.66264469	95.97011421
190625A00008	6/25/2019	2.04	6/27/2022	6/25/2019	110.61865	108.6249007	106.6770319	104.7737014	102.9136146	101.0955234	99.31822425	97.58055626	95.88139934
190625A00027	6/25/2019	2.04	6/24/2022	6/25/2019	110.56908	108.5849725	106.6464171	104.7520646	102.9006174	101.0908257	99.32148527	97.59143539	95.89955707
190626A00020	6/26/2019	2.08	6/25/2021	6/26/2019	104.81486	103.9352703	103.0703924	102.2198629	101.3833269	100.5604413	99.75087407	98.9543039	98.17041972
190627A00037	6/27/2019	1.93	6/27/2023	6/27/2019	116.79638	113.5704318	110.4503452	107.4320653	104.5117176	101.6855971	98.95016074	96.30201845	93.73792613
200604A00014	6/4/2020	2.42	6/4/2040	6/4/2020	209.13093	175.2154334	147.3346012	124.372604	105.4255557	89.76033112	76.78155336	66.00509848	57.03680469
200626A00014	6/26/2020	0.62	6/26/2025	6/26/2020	121.66824	115.917622	110.4675268	105.3007664	100.4012255	95.75378617	91.34426072	87.15932975	83.18648469
200701A00004	7/1/2020	0.54	7/1/2022	7/1/2020	107.79822	105.8201569	103.8878889	102.0000864	100.1554676	98.35279597	96.59087788	94.86856118	93.18473341
200710A00006	7/10/2020	0.4	7/10/2023	7/10/2020	112.32107	109.1211089	106.0278666	103.0372171	100.1452203	97.34810949	94.64228256	92.02429371	89.49084593
200720A00041	7/22/2020	2.34	7/21/2027	7/22/2020	141.30692	132.3010678	123.931283	116.1493553	108.9109624	102.175338	95.90497015	90.06532566	84.62459975
200727A00016	7/27/2020	0.43	7/27/2023	7/27/2020	112.60931	109.3515003	106.2039734	103.1624059	100.2226658	97.38080579	94.63305398	91.97580484	89.40561099
200806A00002	8/6/2020	0.43	8/6/2024	8/6/2020	116.9664	112.4154046	108.0639686	103.9023234	99.92122922	96.11194489	92.46619822	88.97615828	85.63440947
200810A00004	8/10/2020	0.43	8/9/2024	8/10/2020	117.00055	112.4389796	108.0778351	103.9072821	99.91802299	96.10126276	92.44867936	88.95239563	85.60495307
190702A00002	7/2/2019	2.16	7/2/2024	7/2/2019	122.95939	118.4255109	114.0838219	109.9251953	105.9409796	102.1229767	98.46341553	94.95492786	91.59052524
190711A00027	7/11/2019	2.19	7/11/2023	7/11/2019	117.20959	113.9465326	110.7914973	107.7403246	104.7890412	101.9338484	99.17111247	96.49735747	93.90925689
190711A00028	7/11/2019	2.22	7/11/2024	7/11/2019	123.3574	118.7854906	114.408482	110.217062	106.2024081	102.3561631	98.67040772	95.13763597	91.7507309
190717A00008	7/17/2019	2.22	7/17/2024	7/17/2019	123.4559	118.8619712	114.4646541	110.2545171	106.2226267	102.3605222	98.66018876	95.1140309	91.7148487
190722A00035	7/22/2019	2.18	4/13/2021	7/22/2019	103.68072	103.02641	102.3803436	101.7423694	101.1123358	100.4900951	99.8755032	99.26841966	98.66870731

Classification | Public

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
190724A00023	7/24/2019	2.13	7/24/2025	7/24/2019	130.21328	124.1482251	118.4016309	112.9551337	107.7915254	102.894672	98.24944049	93.84163226	89.65792027
190731A00028	7/31/2019	1.93	7/29/2022	7/31/2019	111.30951	109.2042684	107.1496442	105.1441062	103.1861803	101.2744465	99.40753698	97.58413344	95.8029652
190805A00021	8/5/2019	1.89	1/16/2024	8/5/2019	119.21318	115.3090196	111.5535334	107.9402771	104.4631237	101.1162427	97.89408488	94.79136649	91.80305543
190807A00036	8/7/2019	1.75	8/7/2023	8/7/2019	116.26904	112.934337	109.7128554	106.6001253	103.5918813	100.6840501	97.87274058	95.15423468	92.5249785
190807A00053	8/7/2019	1.66	8/6/2021	8/7/2019	105.25717	104.2438128	103.2498744	102.2748048	101.3180707	100.3791589	99.457575	98.5528428	97.66450343
190808A00011	8/8/2019	1.86	8/8/2023	8/8/2019	116.62983	113.2863474	110.0564393	106.9356194	103.9196061	101.0043105	98.18582678	95.46042309	92.82453241
190808A00045	8/8/2019	1.86	8/8/2023	8/8/2019	116.62983	113.2863474	110.0564393	106.9356194	103.9196061	101.0043105	98.18582678	95.46042309	92.82453241
190809A00010	8/9/2019	1.88	8/8/2024	8/9/2019	122.35877	117.7139348	113.2711127	109.0204613	104.9526664	101.0589148	97.33086475	93.76061816	90.34069453
190812A00003	8/12/2019	1.67	8/12/2024	8/12/2019	122.38994	117.7066884	113.2282972	108.9447269	104.8464837	100.9245871	97.17054022	93.57630013	90.13425172
190813A00016	8/13/2019	1.88	8/13/2024	8/13/2019	122.43549	117.7723751	113.3127422	109.0466371	104.9646481	101.0578716	97.31788201	93.73670336	90.30678298
190813A00020	8/13/2019	1.89	8/12/2022	8/13/2019	111.05958	108.9215178	106.8357229	104.8005841	102.8145539	100.8761425	98.98391593	97.13649321	95.33254395
190815A00007	8/15/2019	1.81	7/6/2023	8/15/2019	115.97187	112.7433707	109.6214066	106.6018969	103.6809381	100.854797	98.11990222	95.47283647	92.91032878
190816A00006	8/16/2019	1.77	8/16/2024	8/16/2019	122.00689	117.3426545	112.8824604	108.616307	104.534736	100.628801	96.89003685	93.31043132	89.88239828
190816A00025	8/16/2019	1.89	3/16/2021	8/16/2019	103.05228	102.4833087	101.9206164	101.3640978	100.8136515	100.2691783	99.73058137	99.19776574	98.67063858
190816A00033	8/16/2019	1.77	8/16/2024	8/16/2019	122.00689	117.3426545	112.8824604	108.616307	104.534736	100.628801	96.89003685	93.31043132	89.88239828
190819A00026	8/19/2019	1.62	8/19/2024	8/19/2019	122.28043	117.5758957	113.0781533	108.7770177	104.6628615	100.7265809	96.95956451	93.35366359	89.90116483
190819A00030	8/19/2019	2.01	8/20/2029	8/19/2019	151.70806	139.2327977	127.8775813	117.5360042	108.1122791	99.52012758	91.68179193	84.52715443	77.9929517
190820A00013	8/20/2019	1.76	8/21/2023	8/20/2019	116.51072	113.1275652	109.8606903	106.7054504	103.6574105	100.7123385	97.86619407	95.11511903	92.45542791
190820A00021	8/20/2019	2.13	8/20/2029	8/20/2019	150.50267	138.2031412	127.0040392	116.8011147	107.5004976	99.01761175	91.27621232	84.20752629	77.74948612
190821A00021	8/21/2019	1.79	8/18/2022	8/21/2019	110.94747	108.792275	106.6901955	104.63958	102.6388429	100.6864587	98.78095959	96.92093217	95.10501553
190826A00006	8/26/2019	1.72	8/26/2024	8/26/2019	121.93957	117.2434171	112.7540981	108.4614068	104.3556932	100.4278337	96.66919871	93.07162382	89.62738177
190826A00034	8/26/2019	1.9	8/24/2029	8/26/2019	150.59807	138.1588281	126.839026	116.5321255	107.1422367	98.58300342	90.77661136	83.65290378	77.14859286
190826A00056	8/26/2019	1.72	8/26/2024	8/26/2019	121.93957	117.2434171	112.7540981	108.4614068	104.3556932	100.4278337	96.66919871	93.07162382	89.62738177
190826A00057	8/26/2019	1.87	8/26/2025	8/26/2019	128.10064	122.0133102	116.2509874	110.7946269	105.6264013	100.729614	96.08862167	91.688762	87.51628732
190829A00011	8/30/2019	1.98	12/15/2020	8/30/2019	101.66536	101.3647756	101.0659756	100.7689475	100.4736752	100.1801434	99.88833638	99.59823904	99.30983627
190905A00015	9/5/2019	1.78	9/6/2022	9/5/2019	111.22094	109.0046327	106.8441835	104.7378131	102.6838134	100.6805426	98.72642278	96.81993635	94.95962355
190913A00001	9/13/2019	1.96	9/14/2020	9/13/2019	100.22401	100.1849462	100.1459265	100.1069541	100.0680288	100.0291506	99.99031928	99.95153489	99.91279729
190913A00025	9/13/2019	2.04	3/15/2022	9/13/2019	108.93643	107.2707819	105.6393918	104.0412761	102.4754931	100.9411359	99.43733135	97.96323812	96.5180454
190916A00008	9/16/2019	2.05	9/16/2021	9/16/2019	106.14876	105.0047667	103.8853404	102.7896947	101.7170778	100.6667694	99.63807888	98.6303441	97.64292952
190917A00028	9/17/2019	2.02	3/1/2023	9/17/2019	114.5863	111.7770943	109.0518241	106.4074754	103.8411642	101.3501283	98.93172128	96.58340648	94.30275204
190920A00018	9/20/2019	1.98	9/20/2022	9/20/2019	111.87201	109.605329	107.3964876	105.2436149	103.1449126	101.0986541	99.10318109	97.15690038	95.25828057
190920A00021	9/20/2019	1.96	9/18/2026	9/20/2019	135.6964	127.9518529	120.6978654	113.9007999	107.5295023	101.5551014	95.95083021	90.69186141	85.75515726
190923A00012	9/23/2019	2.43	9/25/2034	9/23/2019	185.41228	162.8908373	143.3623217	126.4110121	111.6809576	98.86711419	87.70783625	77.97850783	69.4861358

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
190926A00019	9/26/2019	1.94	9/26/2024	9/26/2019	123.3826	118.5515198	113.9367227	109.5273451	105.313128	101.284383	97.4319573	93.74720095	90.22193616
190930A00014	9/30/2019	1.89	9/30/2022	9/30/2019	111.83615	109.5389173	107.3008491	105.1200104	102.9945404	100.9226538	98.90263693	96.9328443	95.01169517
191001A00005	10/1/2019	1.8	4/18/2023	10/1/2019	114.73405	111.7732997	108.9044929	106.1241786	103.4290575	100.8159777	98.28192695	95.82402508	93.43951743
191002A00017	10/2/2019	1.84	10/2/2024	10/2/2019	123.02982	118.1861385	113.5601389	109.1408383	104.9178759	100.8814697	97.02238069	93.33187919	89.80171404
191003A00013	10/3/2019	1.66	10/3/2022	10/3/2019	111.37572	109.0745704	106.8328938	104.6487306	102.5202038	100.4455127	98.42292912	96.45079392	94.5275137
191003A00033	10/3/2019	1.54	10/3/2022	10/3/2019	111.54	109.2286064	106.9770967	104.7834929	102.6459007	100.5625029	98.53155581	96.55138573	94.6203853
191004A00011	10/4/2019	1.77	10/5/2020	10/4/2019	100.54181	100.4438731	100.3461368	100.2485996	100.1512608	100.0541198	99.95717595	99.86042861	99.76387717
191009A00028	10/9/2019	1.76	10/9/2024	10/9/2019	122.77621	117.9148934	113.2729826	108.8393661	104.6035586	100.5556633	96.68633565	92.9867485	89.44856084
200327A00074	3/31/2020	1.76	3/29/2024	3/31/2020	119.85412	115.6956284	111.7039752	107.8715303	104.1910553	100.6556846	97.25890318	93.99452699	90.85668372
200331A00060	3/31/2020	1.09	3/31/2025	3/31/2020	121.93971	116.5127718	111.3561838	106.4550567	101.7954007	97.36406826	93.14869879	89.13766717	85.32003572
200402A00021	4/2/2020	0.77	10/2/2024	4/2/2020	119.14554	114.3592805	109.7897888	105.4260808	101.2577898	97.27513048	93.46886304	89.83025916	86.35107078
200403A00021	4/3/2020	0.74	4/29/2022	4/3/2020	107.41301	105.6260286	103.8778024	102.167137	100.4928895	98.85396367	97.24930734	95.67791029	94.13880207
200420A00047	4/20/2020	0.77	4/20/2023	4/20/2020	111.87444	108.9472143	106.111334	103.3633594	100.700002	98.11812055	95.61471363	93.18691183	90.83197109
200429A00003	4/29/2020	0.74	4/28/2023	4/29/2020	111.88831	108.9356423	106.0757411	103.3050848	100.6203093	98.01820259	95.4956967	93.04986001	90.67789008
200430A00007	4/30/2020	0.72	4/28/2023	4/30/2020	111.8317	108.8798228	106.0206989	103.2508015	100.566767	97.9653839	95.44358486	92.99843877	90.62714371
200430A00009	4/30/2020	1.16	4/30/2026	4/30/2020	127.1539	120.2263439	113.7143726	107.5908999	101.8307519	96.41051914	91.30842355	86.50419565	81.97896193
200505A00004	5/5/2020	0.77	5/5/2025	5/5/2020	121.83514	116.2570297	110.9630065	105.9370776	101.1642397	96.63041495	92.32238821	88.22774882	84.33483688
200505A00005	5/5/2020	0.77	5/5/2025	5/5/2020	121.83514	116.2570297	110.9630065	105.9370776	101.1642397	96.63041495	92.32238821	88.22774882	84.33483688
200511A00014	5/11/2020	0.52	2/1/2022	5/11/2020	105.97836	104.4688407	102.9883456	101.5361061	100.1113833	98.71346355	97.34165722	95.99529788	94.67374121
200511A00015	5/11/2020	0.6	2/1/2023	5/11/2020	110.45976	107.8002232	105.217922	102.7101761	100.2744135	97.90816666	95.60906743	93.37484268	91.20330976
200511A00021	5/11/2020	1.53	2/1/2029	5/11/2020	141.77546	130.646906	120.4653054	111.1453883	102.6099595	94.78909824	87.61943995	81.04353138	75.00925265
200513A00001	5/13/2020	0.44	5/12/2023	5/13/2020	111.75223	108.745707	105.8350753	103.0166274	100.2868319	97.64232046	95.07987859	92.59643747	90.18906599
200709A00002	7/10/2020	1.66	7/10/2025	7/10/2020	126.33382	120.4521372	114.8773233	109.5918275	104.5791911	99.82397309	95.31168233	91.02871429	86.96229248
200709A00014	7/13/2020	0.57	1/20/2023	7/13/2020	110.2426	107.6229331	105.0783753	102.6063573	100.204409	97.87015928	95.60133146	93.39573869	91.25128001
200716A00015	7/20/2020	1.54	7/19/2024	7/20/2020	120.61514	116.0723371	111.7248711	107.5633409	103.5788462	99.76295921	96.10769688	92.60549496	89.24918401
200731A00004	7/31/2020	0.38	7/31/2023	7/31/2020	112.49915	109.2304455	106.0728036	103.0218525	100.0734167	97.223508	94.46831595	91.80419888	89.22767548
200814A00011	8/18/2020	1.58	8/16/2030	8/18/2020	149.04437	135.3982661	123.1008384	112.0120073	102.0068872	92.97407325	84.81412522	77.43822957	70.76701664
200818A00010	8/18/2020	1.88	8/20/2035	8/18/2020	175.34094	152.4213116	132.7390667	115.818777	101.2570211	88.71117455	77.88998815	68.54566472	60.46719044
200827A00007	8/27/2020	0.77	8/27/2025	8/27/2020	122.0351	116.1022005	110.4885426	105.175342	100.1450181	95.38110787	90.86818996	86.59181282	82.53842892
191018A00005	10/18/2019	1.89	5/2/2022	10/18/2019	109.45914	107.6447167	105.8697395	104.1329862	102.4332889	100.7695277	99.14062796	97.54555822	95.98332767
191021A00034	10/22/2019	1.9	10/17/2022	10/22/2019	112.1229	109.7710491	107.4807761	105.2500163	103.0767948	100.9592189	98.89547405	96.88381942	94.9225846
191025A00010	10/25/2019	2.24	7/25/2028	10/25/2019	145.94839	135.366056	125.6283152	116.6633675	108.4058646	100.7962974	93.78044608	87.30888626	81.33654224
191104A00024	11/4/2019	2.26	8/3/2029	11/4/2019	151.62265	139.3377523	128.1451403	117.9419193	108.6353792	100.1419398	92.38620983	85.3001471	78.82230849

Classification | Public

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
191105A00007	11/5/2019	1.98	11/5/2026	11/5/2019	136.52441	128.5783969	121.1449974	114.1884136	107.6755377	101.5757358	95.86064968	90.50401554	85.48149802
191107A00011	11/8/2019	2.02	2/24/2023	11/8/2019	114.50201	111.7108301	109.002598	106.374357	103.8232724	101.3466286	98.94182263	96.60635932	94.33784572
191120A00002	11/20/2019	1.73	11/20/2020	11/20/2019	101.24593	101.0171276	100.7893729	100.5626568	100.3369724	100.1123125	99.88867009	99.66603818	99.44440987
191120A00027	11/20/2019	1.73	11/20/2020	11/20/2019	101.24593	101.0171276	100.7893728	100.5626568	100.3369724	100.1123125	99.88867009	99.66603818	99.44440987
191120A00031	11/20/2019	1.69	11/21/2022	11/20/2019	112.64165	110.1659592	107.7575835	105.4141667	103.1334567	100.9133006	98.75163905	96.64650096	94.5959992
191121A00034	11/21/2019	2.28	11/2/2029	11/21/2019	153.15375	140.4392356	128.8827502	118.3725621	108.8082709	100.0996058	92.1653544	84.93241046	78.33492627
191126A00015	11/27/2019	1.88	10/14/2022	11/27/2019	112.0314	109.6896623	107.409063	105.1875609	103.0232017	100.9141124	98.85849653	96.85463053	94.90086028
191126A00026	11/26/2019	1.91	11/25/2026	11/26/2019	136.32159	128.3071616	120.8142169	113.8060259	107.2486472	101.1106983	95.36314842	89.97912925	84.93376206
191206A00019	12/6/2019	1.96	11/15/2023	12/6/2019	118.49906	114.8068725	111.2496369	107.8215758	104.5171978	101.3312835	98.25887042	95.29523803	92.43589418
191210A00011	12/10/2019	1.92	12/12/2022	12/10/2019	113.05356	110.5175817	108.0515859	105.6531562	103.3199778	101.0498337	98.84060007	96.69024122	94.59680516
191218A00014	12/18/2019	2.04	12/18/2024	12/18/2019	125.14166	119.9929349	115.0851805	110.4058255	105.943024	101.6856102	97.62305528	93.74542737	90.04335427
191220A00002	12/20/2019	3.02	12/20/2038	12/20/2019	216.16516	184.1253731	157.3661223	134.9779564	116.2128772	100.4549475	87.19636928	76.01799633	66.57344085
200115A00015	1/17/2020	1.88	1/17/2023	1/17/2020	113.51403	110.8621256	108.2857549	105.7823417	103.3494128	100.9845935	98.68560319	96.45025111	94.27643221
200115A00018	1/15/2020	1.9	1/16/2024	1/15/2020	119.24961	115.3448058	111.5886913	107.9748244	104.4970773	101.1496192	97.92690015	94.82363578	91.8347935
200124A00008	1/24/2020	1.92	1/22/2027	1/24/2020	137.20509	128.9504127	121.2444171	114.0478559	107.3244774	101.0407854	95.16581644	89.67093636	84.52965383
200130A00011	1/30/2020	1.54	1/30/2023	1/30/2020	113.34624	110.6455386	108.0230628	105.4760989	103.002044	100.5984008	98.26277298	95.99286028	93.78645399
200130A00021	1/30/2020	1.54	1/30/2023	1/30/2020	113.34624	110.6455386	108.0230628	105.4760989	103.002044	100.5984008	98.26277298	95.99286028	93.78645399
200130A00048	1/30/2020	1.74	1/31/2022	1/30/2020	107.7701	106.2498673	104.7587848	103.2960856	101.8610285	100.4528974	99.07100069	97.71466959	96.38325766
200131A00017	1/31/2020	1.51	1/31/2024	1/31/2020	118.78044	114.8164146	111.0056052	107.3412816	103.8170421	100.4268003	97.16476692	94.02543434	91.0035609
200131A00038	1/31/2020	1.73	1/30/2025	1/31/2020	124.31269	119.0384004	114.0172588	109.2358212	104.6814227	100.3421326	96.20670787	92.26455021	88.50566548
200204A00001	2/4/2020	1.79	2/4/2025	2/4/2020	124.68315	119.3819271	114.3358668	109.5313742	104.9556468	100.5966266	96.44295324	92.48391962	88.70943114
200205A00013	2/5/2020	1.77	2/6/2023	2/5/2020	113.5475	110.8309939	108.1936024	105.6325591	103.1452166	100.7290356	98.38157988	96.10051173	93.88358694
200214A00002	2/14/2020	1.58	11/15/2024	2/14/2020	123.43883	118.4117572	113.6170347	109.0426035	104.6771016	100.5098227	96.53067392	92.7301368	89.09923075
200214A00017	2/14/2020	1.59	2/14/2025	2/14/2020	124.86812	119.4947799	114.3825818	109.5174768	104.8862472	100.4764512	96.27637376	92.27498021	88.46187284
200218A00023	2/18/2020	1.55	2/21/2023	2/18/2020	113.73116	110.9494383	108.2503893	105.6310633	103.088637	100.6204058	98.22377733	95.89626618	93.63548891
200219A00015	2/19/2020	1.77	2/19/2027	2/19/2020	136.51784	128.1758068	120.3956316	113.1366073	106.3611762	100.034672	94.12508311	88.6028364	83.44059945
200220A00001	2/20/2020	1.74	2/22/2022	2/20/2020	108.12962	106.5341709	104.9706685	103.4382302	101.9360086	100.4631862	99.01897478	97.6026136	96.2133684
200220A00025	2/20/2020	1.72	2/21/2023	2/20/2020	113.66162	110.891882	108.204239	105.5957752	103.0636942	100.6053158	98.21807123	95.89949742	93.64723187
200224A00020	2/24/2020	1.59	2/24/2025	2/24/2020	124.02018	118.6594715	113.5604352	108.7089322	104.0916627	99.69611162	95.5104982	91.52372864	87.7253526
200225A00044	2/25/2020	1.57	2/25/2022	2/25/2020	107.91478	106.3112068	104.7399256	103.2000437	101.6906995	100.2110624	98.76033155	97.33773413	95.94252449
200226A00013	2/26/2020	1.35	2/26/2024	2/26/2020	118.58389	114.5323626	110.6408658	106.9022042	103.3095508	99.85642241	96.53666036	93.34441218	90.27411471
200228A00012	3/3/2020	1.4	3/3/2025	3/3/2020	123.1833	117.8173852	112.7147439	107.8610823	103.2429608	98.84773656	94.66351187	90.67908619	86.88391154
200228A00013	3/3/2020	1.33	1/14/2022	3/3/2020	106.9269	105.4633142	104.026954	102.6171282	101.2331642	99.87441181	98.54024185	97.23004566	95.94323412

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
200228A00026	2/28/2020	2.14	2/28/2035	2/28/2020	177.95436	155.5840543	136.2731073	119.5853055	105.1487014	92.64586244	81.80564255	72.39623102	64.21927361
200228A00027	2/28/2020	1.31	2/28/2022	2/28/2020	107.55642	105.94592	104.368042	102.8218781	101.3065534	99.82122445	98.36507829	96.93733062	95.53722476
200228A00059	2/28/2020	1.79	2/28/2030	2/28/2020	149.40756	136.4013592	124.6246408	113.9548472	104.282218	95.50839356	87.54517791	80.31344291	73.7421546
200302A00034	3/2/2020	1.25	3/1/2024	3/2/2020	117.50812	113.4824104	109.6159242	105.9014995	102.3323365	98.90197809	95.60429085	92.43344651	89.38390515
200302A00036	3/2/2020	1.45	3/2/2026	3/2/2020	128.25982	121.5052238	115.1451236	109.1544687	103.5099238	98.18974565	93.1736661	88.44278469	83.97946934
200302A00053	3/2/2020	1.31	3/3/2025	3/2/2020	122.73753	117.3821097	112.2895874	107.4456873	102.8369855	98.45085404	94.27540935	90.29946426	86.51248354
200303A00001	3/3/2020	1.15	3/3/2025	3/3/2020	122.95154	117.5603149	112.4345305	107.5597369	102.9223469	98.5095811	94.30941525	90.31053167	86.50227386
200303A00012	3/3/2020	1.71	3/1/2030	3/3/2020	148.52426	135.5577932	123.8185163	113.184015	103.544659	94.80221123	86.86859167	79.66478132	73.11984898
200303A00034	3/3/2020	1.21	3/3/2025	3/3/2020	122.24223	116.8984702	111.8171912	106.9841372	102.3859018	98.00987346	93.84418433	89.87766213	86.09978575
200304A00008	3/4/2020	1.03	11/15/2021	3/4/2020	105.85839	104.5263103	103.2274831	101.9606805	100.7247306	99.51851769	98.34097971	97.19110435	96.06792654
200304A00017	3/4/2020	0.83	3/16/2022	3/4/2020	107.2967	105.6369778	104.011532	102.4193801	100.859576	99.33120905	97.83340256	96.36531202	94.92612366
200305A00007	3/5/2020	1.14	3/5/2025	3/5/2020	121.92072	116.5779537	111.4979853	106.6665233	102.07013	97.69616558	93.53273628	89.56864639	85.79335348
200305A00009	3/10/2020	1.04	10/18/2023	3/10/2020	114.96421	111.4211275	108.005409	104.7117101	101.5349483	98.47028669	95.51312038	92.65906343	89.90393702
200305A00029	3/5/2020	1.14	3/5/2025	3/5/2020	121.92072	116.5779537	111.4979853	106.6665233	102.07013	97.69616558	93.53273628	89.56864639	85.79335348
200305A00036	3/5/2020	1.36	3/5/2027	3/5/2020	132.03594	123.8555152	116.2299785	109.1189131	102.4850434	96.29397684	90.51396733	85.11569814	80.07208441
200305A00043	3/5/2020	0.95	3/7/2022	3/5/2020	107.08411	105.4572032	103.8635007	102.3020703	100.7720105	99.27245333	97.80256209	96.3615303	94.94858017
200306A00030	3/6/2020	0.88	3/6/2023	3/6/2020	111.62207	108.8370363	106.1358077	103.5153623	100.9728039	98.50535904	96.11037133	93.78529543	91.52769168
200306A00046	3/6/2020	1.01	3/3/2025	3/6/2020	121.25163	115.9311914	110.8723989	106.0610371	101.4837344	97.1279123	92.98173428	89.03405785	85.27439019
200306A00063	3/6/2020	0.64	3/16/2022	3/6/2020	106.9907	105.3335573	103.7106434	102.1209771	100.5636138	99.03764413	97.54219252	96.07641566	94.63950092
200309A00016	3/9/2020	0.77	9/12/2022	3/9/2020	109.15116	106.9388878	104.7827968	102.6810806	100.6320074	98.63391391	96.6852019	94.78433488	92.92983547
200310A00022	3/10/2020	1.12	3/10/2027	3/10/2020	131.94623	123.6872743	115.9918555	108.8187256	102.1298554	95.89017093	90.06730941	84.63139635	79.554842
200310A00073	3/12/2020	2.12	3/11/2027	3/12/2020	137.72662	129.3319546	121.5042379	114.2022273	107.3878854	101.0261171	95.08452763	89.53320099	84.34449835
200311A00016	3/11/2020	0.87	5/11/2021	3/11/2020	103.21706	102.4806502	101.7547054	101.0390017	100.3333237	99.63746169	98.95121195	98.27437633	97.60676211
200311A00058	3/16/2020	1.1	10/14/2022	3/16/2020	110.28609	107.9641427	105.7029215	103.5003949	101.3546209	99.26373782	97.22596029	95.23957549	93.30293949
200312A00016	3/16/2020	1.09	2/15/2023	3/16/2020	111.91892	109.1926515	106.5467765	103.9784527	101.4849587	99.06368608	96.71213375	94.42790265	92.20869105
200326A00028	3/26/2020	1.54	3/26/2025	3/26/2020	124.13943	118.6764342	113.4841952	108.5478594	103.8534657	99.38789071	95.13879379	91.09456599	87.2442826
200330A00041	4/1/2020	1.09	4/1/2025	4/1/2020	121.95249	116.5218303	111.3618454	106.4576209	101.7951431	97.36124251	93.14353854	89.13038751	85.31083473
200330A00045	3/30/2020	1.47	3/30/2027	3/30/2020	133.13671	124.8311048	117.0932735	109.8815196	103.1574219	96.88555658	91.03324835	85.57034329	80.46900189
200331A00029	4/2/2020	1.77	4/3/2023	4/2/2020	114.41923	111.5107135	108.691398	105.9579835	103.3073137	100.7363706	98.24226762	95.82224243	93.47365103
200414A00016	4/16/2020	1.64	4/15/2024	4/16/2020	119.64176	115.4309415	111.3909869	107.5139821	103.7924311	100.2192289	96.78763864	93.49127021	90.32405986
200415A00030	4/15/2020	0.76	3/15/2023	4/15/2020	111.40916	108.5997553	105.8755102	103.2333238	100.6702291	98.18338642	95.77007684	93.42769649	91.15375068
200420A00011	4/20/2020	0.7	4/19/2024	4/20/2020	116.78036	112.5898765	108.5709737	104.7156451	101.0163125	97.46579617	94.05729068	90.78434318	87.64083273
200427A00010	4/27/2020	0.68	4/27/2022	4/27/2020	107.28369	105.5039252	103.7626658	102.0587323	100.3909925	98.75835988	97.15979183	95.59428698	94.06088326

Classification | Public

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
200429A00045	5/1/2020	1.54	4/30/2025	5/1/2020	124.63628	119.0411458	113.7282932	108.6819393	103.8872787	99.33041316	94.99829003	90.8786461	86.95995503
200429A00050	5/1/2020	2.61	4/30/2025	5/1/2020	130.13566	124.4066066	118.9647428	113.7940659	108.8795598	104.2071266	99.76352448	95.53631074	91.51378883
200429A00051	5/1/2020	2.54	4/30/2025	5/1/2020	129.77589	124.0555952	118.6221713	113.4596277	108.552962	103.8880893	99.45178017	95.23160371	91.21587447
200429A00058	5/1/2020	1.83	4/30/2025	5/1/2020	126.12676	120.4953361	115.1475178	110.0674689	105.2403269	100.6521392	96.28980217	92.14100381	88.19417166
200504A00004	5/4/2020	0.75	5/5/2025	5/4/2020	121.73153	116.1559539	110.8643763	105.8408037	101.0702368	96.53860159	92.23268652	88.14008438	84.24913852
200504A00015	5/4/2020	0.68	5/4/2023	5/4/2020	111.78937	108.8195002	105.9434316	103.1575813	100.4585284	97.84300795	95.30790252	92.85023409	90.46715682
200529A00008	5/29/2020	0.33	5/31/2022	5/29/2020	107.38948	105.5023542	103.6579336	101.8548377	100.0917462	98.36739564	96.6805767	95.03013092	93.41494809
200529A00009	5/29/2020	0.42	5/30/2023	5/29/2020	111.90198	108.8375917	105.8724354	103.0026116	100.2244063	97.53428072	94.92886091	92.40492882	89.95941359
200611A00011	6/11/2020	1.2	6/9/2028	6/11/2020	135.94931	125.94668	116.7394125	108.260328	100.4482499	93.24743769	86.60707732	80.48082185	74.8263771
200615A00023	6/17/2020	1.68	6/17/2024	6/17/2020	120.733	116.2937136	112.0415155	107.9674985	104.0632304	100.320727	96.7324252	93.29115837	89.99013318
200629A00005	6/29/2020	0.55	6/29/2022	6/29/2020	107.79354	105.8215254	103.8950669	102.0128373	100.1735596	98.37600152	96.61897436	94.90133072	93.22196297
200730A00001	7/30/2020	0.46	7/30/2024	7/30/2020	117.01504	112.4860487	108.1546939	104.0113515	100.0469124	96.25275696	92.6207252	89.14309044	85.81253372
200803A00011	8/3/2020	0.72	8/4/2025	8/3/2020	121.50274	115.661389	110.1306775	104.8925504	99.93009346	95.22745418	90.76977028	86.54310258	82.53437312
200818A00005	8/18/2020	1.05	8/18/2027	8/18/2020	131.47369	122.7198831	114.5980576	107.0595173	100.0595526	93.55709351	87.5143953	81.89675396	76.67224689
200818A00006	8/18/2020	1.18	8/18/2028	8/18/2020	136.53452	126.2503023	116.8022077	108.1182009	100.1327908	92.78640471	86.02482635	79.79868943	74.06302172
200825A00007	8/27/2020	4.79	8/27/2026	8/27/2020	152.93507	144.7893062	137.1436358	129.9645008	123.2207718	116.8835602	110.9260451	105.3233151	100.0522224
150921A00031	9/21/2015	1.92	9/21/2020	9/21/2015	100.32342	100.2648929	100.206447	100.1480822	100.0897983	100.0315951	99.97347242	99.91543017	99.85746816
150923A00049	9/23/2015	1.97	9/23/2021	9/23/2015	106.36327	105.1931057	104.0485788	102.9288514	101.8331244	100.7606326	99.71064312	98.68245352	97.67539039
150924A00030	9/24/2015	1.67	9/24/2020	9/24/2015	100.36476	100.2977431	100.2308263	100.1640091	100.0972913	100.0306727	99.96415295	99.89773192	99.83140937
151008A00019	10/8/2015	1.58	10/15/2020	10/8/2015	100.67287	100.5466899	100.4208432	100.2953284	100.1701442	100.0452893	99.92076224	99.79656174	99.67268645
151015A00006	10/15/2015	1.68	10/15/2020	10/15/2015	100.66602	100.5400466	100.4144027	100.2890881	100.1641014	100.0394413	99.91510648	99.79109565	99.66740751
151022A00011	10/22/2015	1.57	10/22/2020	10/22/2015	100.77621	100.630213	100.4846572	100.3395357	100.1948467	100.0505881	99.90675805	99.76335451	99.6203756
151123A00014	11/23/2015	2.13	11/23/2020	11/23/2015	101.35454	101.1173671	100.8813148	100.6463708	100.4125273	100.1797766	99.948111	99.71752293	99.48800485
151221A00014	12/21/2015	2.94	12/22/2025	12/21/2015	136.1506	129.4306982	123.0864243	117.0947774	111.434289	106.0849092	101.0279053	96.24576803	91.72212615
151223A00072	12/23/2015	2.81	12/23/2025	12/23/2015	136.73765	129.9533012	123.5494732	117.5028042	111.7914887	106.3951655	101.2948141	96.47265968	91.91208495
151229A00079	12/29/2015	3	12/30/2025	12/29/2015	136.64786	129.8860646	123.5032692	117.476257	111.7833483	106.404292	101.320165	96.51327837	91.96709085
160119A00026	1/19/2016	3.14	1/19/2029	1/19/2016	157.31769	145.5611284	134.7846752	124.9011859	115.8316911	107.5045933	99.85494352	92.82379358	86.35761321
160129A00016	1/29/2016	1.76	1/29/2021	1/29/2016	102.28161	101.8497452	101.4215194	100.9968837	100.5757932	100.1582038	99.74407179	99.3333546	98.92601013
160129A00068	1/29/2016	1.97	1/30/2023	1/29/2016	114.45099	111.7360723	109.0997002	106.5391519	104.0518146	101.6351819	99.2868484	97.00450526	94.7859355
160211A00035	2/11/2016	2.25	2/11/2025	2/11/2016	127.04486	121.6624493	116.5396033	111.6624419	107.0179013	102.5936808	98.37819399	94.36052346	90.5303789
160216A00002	2/16/2016	1.88	2/16/2022	2/16/2016	108.24515	106.6685297	105.1231132	103.6080504	102.1225223	100.6657392	99.23693871	97.83538511	96.46036781
160218A00029	2/18/2016	1.81	4/15/2021	2/18/2016	103.47789	102.8183345	102.1671721	101.5242416	100.8893875	100.2624583	99.64330613	99.0317868	98.42775971
160331A00024	3/31/2016	1.91	3/31/2022	3/31/2016	108.97824	107.2654605	105.5884992	103.9463063	102.3378725	100.7622273	99.21843718	97.70560378	96.22286218

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
160422A00026	4/22/2016	2.62	4/22/2026	4/22/2016	136.27912	129.1116199	122.3680885	116.0211375	110.0452995	104.4168799	99.11382347	94.11559185	89.40305118
160523A00047	5/23/2016	1.77	5/18/2021	5/23/2016	103.96839	103.2078535	102.4584125	101.7198274	100.9918636	100.2742931	99.56689423	98.86945188	98.18175681
160524A00027	5/24/2016	3.06	5/27/2031	5/24/2016	171.36772	155.3597028	141.0123196	128.1433685	116.5915735	106.214076	96.88424302	88.48974558	80.93087469
160615A00045	6/15/2016	1.59	6/15/2021	6/15/2016	104.25161	103.4050814	102.5722525	101.7527914	100.9463783	100.1527032	99.37146624	98.60237657	97.84515251
160620A00015	6/20/2016	1.71	6/20/2023	6/20/2016	116.02089	112.8290675	109.7415854	106.754427	103.8637523	101.0658932	98.35734411	95.73475382	93.19491763
160630A00042	6/30/2016	1.52	6/30/2021	6/30/2016	104.41799	103.5250059	102.6472185	101.7842397	100.9356976	100.1012326	99.28049701	98.47315451	97.67887961
160701A00027	7/1/2016	1.93	7/1/2024	7/1/2016	121.98436	117.4733996	113.1537468	109.0163142	105.0524913	101.2541186	97.61346178	94.1231869	90.77633804
160705A00104	7/5/2016	2.1	7/6/2026	7/5/2016	134.07531	126.7040641	119.7839698	113.2851305	107.179779	101.4421131	96.04814687	90.97557458	86.20364462
160706A00014	7/6/2016	1.41	7/6/2021	7/6/2016	104.41138	103.500017	102.6044896	101.7243863	100.8593114	100.0088826	99.17273053	98.35049809	97.54184001
160706A00029	7/6/2016	2.49	7/8/2030	7/6/2016	159.20318	145.1896405	132.5324748	121.0930028	110.7473869	101.3849746	92.90683581	85.22446736	78.25864754
160830A00010	8/30/2016	1.65	8/30/2021	8/30/2016	105.45407	104.3674119	103.3030296	102.2602418	101.2383969	100.2368695	99.2550586	98.29238694	97.34829943
160830A00031	8/30/2016	1.65	8/31/2021	8/30/2016	105.46944	104.3795858	103.3121307	102.2663898	101.2417063	100.2374497	99.25301445	98.28781858	97.34130282
160830A00037	8/30/2016	2.16	8/29/2025	8/30/2016	129.75026	123.6095299	117.7965543	112.2921148	107.0782229	102.1380326	97.45576146	93.01661803	88.80673437
160909A00024	9/9/2016	1.7	9/9/2021	9/9/2016	105.6614	104.5422344	103.4466605	102.3739409	101.3233663	100.2942567	99.28595935	98.29784803	97.32932128
160921A00021	9/21/2016	1.45	9/21/2021	9/21/2016	105.7595	104.5992482	103.4643062	102.353853	101.2671029	100.2033035	99.16173423	98.14170404	97.14255048
160923A00002	9/23/2016	1.5	9/23/2020	9/23/2016	100.32733	100.2632392	100.1992426	100.1353384	100.0715262	100.007806	99.94417742	99.88064043	99.81719477
160926A00004	9/26/2016	1.66	9/26/2023	9/26/2016	117.38373	113.854784	110.4507137	107.1663645	103.9968288	100.9374314	97.98371724	95.13143917	92.37654718
160926A00016	9/26/2016	1.47	9/28/2020	9/26/2016	100.39703	100.3189657	100.2410274	100.1632124	100.0855203	100.007951	99.93050414	99.85317946	99.7759767
160930A00005	9/30/2016	2.03	9/30/2024	9/30/2016	123.84678	118.9922447	114.3554136	109.9253289	105.6916446	101.6445918	97.77494271	94.07397772	90.53345432
161003A00004	10/3/2016	1.91	10/3/2023	10/3/2016	117.65975	114.1196933	110.7051331	107.4108746	104.2319731	101.1637191	98.20162518	95.3414147	92.57900985
161004A00034	10/4/2016	1.67	10/4/2021	10/4/2016	106.01779	104.8178795	103.6449832	102.4981942	101.376649	100.2795216	99.20602155	98.15539239	97.12690954
161004A00040	10/4/2016	1.45	10/4/2021	10/4/2016	105.95988	104.7573413	103.5819287	102.4327302	101.3088773	100.2095391	99.13392087	98.08126188	97.05083358
170111A00009	1/11/2017	3.16	1/11/2028	1/11/2017	150.83192	140.814292	131.5414142	122.953886	114.9973381	107.6219813	100.7821985	94.43617564	88.54556703
170111A00020	1/11/2017	2.27	1/11/2022	1/11/2017	108.22056	106.7560589	105.3186455	103.9076346	102.5223603	101.1621782	99.82646503	98.51461763	97.22605211
170123A00039	1/23/2017	2.79	1/23/2026	1/23/2017	137.17415	130.265359	123.7495703	117.6023646	111.8009675	106.3241261	101.1520004	96.26606184	91.6490004
170130A00008	1/30/2017	2.58	1/30/2023	1/30/2017	115.51023	112.792324	110.1527567	107.5888192	105.0979133	102.6775459	100.3253242	98.03895112	95.81622063
170203A00013	2/3/2017	3.67	2/1/2036	2/3/2017	211.91475	185.3692548	162.5628648	142.9414899	126.0361394	111.4494535	98.84442524	87.93494712	78.47788027
170215A00038	2/15/2017	2.71	8/22/2022	2/15/2017	112.92204	110.733701	108.5994824	106.5176956	104.486717	102.5049852	100.5709977	98.68330838	96.84052518
170216A00043	2/16/2017	3.17	2/16/2027	2/16/2017	145.08003	136.5257767	128.5392326	121.079651	114.1094148	107.5937823	101.5006522	95.80035076	90.46543597
170224A00011	2/24/2017	1.83	2/24/2021	2/24/2017	102.77962	102.2695681	101.764566	101.2645421	100.7694231	100.2791371	99.79361346	99.31278315	98.8365783
170303A00020	3/3/2017	2	3/3/2021	3/3/2017	102.97907	102.4478089	101.9220217	101.4016212	100.8865248	100.3766518	99.87192285	99.3722605	98.8775887
170307A00033	3/7/2017	2.2	3/7/2022	3/7/2017	109.34971	107.6991539	106.082328	104.4982777	102.9460854	101.4248673	99.93377204	98.47197894	97.03869669
170314A00006	3/14/2017	2.67	3/14/2024	3/14/2017	123.89511	119.6892823	115.6503776	111.7708331	108.0434693	104.4614729	101.0183752	97.70803294	94.52460978

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
170322A00024	3/22/2017	3.72	9/22/2036	3/22/2017	217.33422	189.2024696	165.1713391	144.6120866	126.995831	111.8772191	98.88083491	87.68987982	78.03673528
170323A00013	3/23/2017	2.1	3/23/2022	3/23/2017	109.45939	107.7608299	106.0975703	104.4685835	102.8728847	101.3095264	99.777597	98.27621867	96.80454606
170327A00075	3/27/2019	2.47	3/28/2022	3/27/2019	109.85161	108.1401102	106.4642744	104.8230604	103.2154679	101.6405346	100.0973348	98.58497759	97.10260489
170328A00015	3/28/2017	2.75	11/29/2024	3/28/2017	128.1464	122.9939651	118.0796173	113.3909552	108.9163028	104.6446619	100.5656678	96.66954855	92.94708699
170412A00045	4/12/2017	2.01	4/12/2022	4/12/2017	109.64848	107.8879394	106.1648319	104.4780374	102.826478	101.2091187	99.62496501	98.07306077	96.55248659
170417A00057	4/17/2017	2.32	4/17/2023	4/17/2017	116.17313	113.1955468	110.3102084	107.5136567	104.8025873	102.1738426	99.62440497	97.15138898	94.75203459
170417A00068	4/17/2019	2.59	4/17/2024	4/17/2019	123.40683	119.1176645	115.0020051	111.0518255	107.2595192	103.617877	100.1200631	96.75959356	93.53031577
170419A00023	4/19/2017	2.11	4/19/2023	4/19/2017	116.17542	113.1790827	110.2759861	107.4626168	104.7356202	102.0917921	99.52807064	97.04152899	94.62936813
170419A00025	4/19/2017	2.72	4/19/2027	4/19/2017	144.53516	135.695575	127.459629	119.782814	112.6241399	105.9458353	99.71307773	93.89374828	88.45820746
170427A00044	4/27/2017	3.02	4/27/2027	4/27/2017	145.18912	136.3641394	128.1407711	120.4746859	113.3250543	106.6542528	100.4275949	94.61308697	89.18120457
170502A00028	5/2/2017	2.84	5/3/2027	5/2/2017	145.68985	136.7562486	128.4352039	120.6813431	113.4528985	106.7113984	100.4213896	94.55018449	89.06763105
170508A00010	5/8/2017	2.43	5/8/2024	5/8/2017	123.95839	119.5664038	115.3549625	111.3155671	107.4401766	103.7211781	100.1513606	96.72389136	93.43229329
170515A00010	5/15/2017	2.58	5/15/2024	5/15/2017	123.86222	119.4708023	115.2602023	111.2218917	107.3478006	103.6302898	100.0621246	96.63645096	93.34677235
170515A00054	5/15/2017	3.2	5/17/2032	5/15/2017	183.04723	164.6079627	148.2337918	133.6806325	120.7345065	109.2076824	98.93533038	89.77261905	81.5921938
170515A00056	5/15/2017	3.2	5/17/2032	5/15/2017	183.04723	164.6079627	148.2337918	133.6806325	120.7345065	109.2076824	98.93533038	89.77261905	81.5921938
170517A00027	5/17/2017	1.99	5/17/2022	5/17/2017	110.20286	108.3310839	106.5008493	104.7108428	102.9598054	101.2465311	99.56986412	97.92869646	96.32196514
170530A00060	5/30/2017	2.12	3/25/2022	5/30/2017	109.22756	107.5301954	105.8681	104.2402494	102.6456585	101.0833799	99.55250164	98.05214599	96.58146747
170531A00004	5/31/2017	1.79	6/1/2021	5/31/2017	104.31683	103.5109617	102.7174993	101.9361537	101.166649	100.4087179	99.66210081	98.92654608	98.20180934
170608A00003	6/8/2017	1.97	6/8/2021	6/8/2017	104.45573	103.6294923	102.8162879	102.0158092	101.2277593	100.4518504	99.68780348	98.93534797	98.19422157
170612A00003	6/12/2017	1.97	6/13/2022	6/12/2017	110.61931	108.6617112	106.7487657	104.8790994	103.0513914	101.2643732	99.51682666	97.80758089	96.13551037
170615A00015	6/15/2017	2.25	6/14/2024	6/15/2017	123.87524	119.3606957	115.0359839	110.8920529	106.9203368	103.1127272	99.46154534	95.95951669	92.59974729
170615A00033	6/15/2017	2.01	6/15/2021	6/15/2017	104.59307	103.7450026	102.91065	102.0896825	101.2817798	100.4866318	99.70393806	98.93340763	98.17475847
170621A00014	6/21/2017	1.82	6/21/2021	6/21/2017	104.66401	103.7954981	102.9413489	102.1012129	101.2747475	100.4616209	99.66151201	98.87411017	98.09911437
170622A00037	6/22/2017	3.27	6/22/2033	6/22/2017	187.48226	167.1784586	149.3248765	133.6101204	119.7639584	107.5516867	96.76929477	87.23930889	78.80721747
170622A00040	6/22/2017	3.41	6/23/2036	6/22/2017	209.44733	182.4066386	159.2729013	139.4534655	122.448728	107.8370979	95.26245203	84.42366129	75.06583802
170628A00056	6/28/2017	1.97	6/28/2022	6/28/2017	110.87315	108.8670166	106.9071992	104.9923396	103.1211318	101.2923167	99.50467999	97.75705019	96.04829689
170630A00010	6/30/2017	2.63	6/30/2026	6/30/2017	138.94884	131.3979922	124.3072811	117.6462882	111.3867571	105.5024279	99.96888668	94.76342661	89.86492057
170630A00027	6/30/2017	2.35	6/28/2024	6/30/2017	124.5374	119.9619603	115.5802385	111.3830257	107.3615964	103.5076835	99.81345212	96.27147431	92.87470605
170717A00033	7/17/2017	2.19	7/18/2022	7/17/2017	111.25712	109.1931819	107.1780235	105.2101928	103.2882927	101.4109765	99.57694616	97.78494952	96.03377891
170721A00007	7/21/2017	1.8	7/21/2021	7/21/2017	105.1325	104.1693789	103.2238378	102.2953999	101.3836044	100.4880068	99.60817842	98.74370539	97.89418837
170818A00035	8/18/2017	1.77	8/18/2021	8/18/2017	105.55734	104.5049523	103.4734598	102.4622471	101.4707208	100.49831	99.5444662	98.60866131	97.6903873
170829A00025	8/29/2017	1.9	8/30/2021	8/29/2017	105.71193	104.6238318	103.5580242	102.5138311	101.4906008	100.4877071	99.5045488	98.54054803	97.59514935
170830A00029	8/30/2017	1.87	3/30/2021	8/30/2017	103.26224	102.6511698	102.0473036	101.4505162	100.8606838	100.2776856	99.70140346	99.13172187	98.56852806

Classification | Public

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
170831A00010	8/31/2017	2.05	8/30/2022	8/31/2017	111.67993	109.4802705	107.3356469	105.2443201	103.2046218	101.2149478	99.27375563	97.37956113	95.53093612
170831A00022	8/31/2017	2.27	2/29/2024	8/31/2017	121.35148	117.258356	113.3262922	109.5480648	105.9168139	102.4260248	99.06950832	95.84138301	92.73605768
170906A00006	9/6/2017	1.81	9/6/2022	9/6/2017	111.69801	109.4685957	107.2954851	105.1768854	103.1110706	101.0963823	99.1312263	97.21407016	95.34343968
170906A00033	9/6/2017	1.75	9/8/2020	9/6/2017	100.11937	100.0970978	100.074853	100.052631	100.0304318	100.0082553	99.98610159	99.96397056	99.94186219
170908A00016	9/10/2018	1.94	9/10/2021	9/10/2018	105.93217	104.8083038	103.7081835	102.6310657	101.576235	100.5430049	99.53071726	98.5387402	97.56646713
170912A00031	9/12/2017	1.89	9/12/2022	9/12/2017	111.96733	109.7163116	107.5224526	105.3839146	103.2989329	101.2658127	99.2829255	97.34870621	95.46164998
170913A00003	9/13/2017	2.08	9/13/2022	9/13/2017	111.9733	109.7271849	107.5380062	105.4039391	103.3232278	101.2941859	99.31519294	97.38469135	95.50118344
170919A00073	9/19/2017	2.28	9/19/2024	9/19/2017	125.68672	120.8047081	116.1404919	111.6831601	107.4224076	103.3485012	99.45224434	95.72494444	92.15838221
170922A00006	9/22/2017	2.09	9/22/2021	9/22/2017	106.29234	105.1286235	103.9902866	102.8765089	101.7865022	100.7195117	99.67481422	98.65171676	97.64955465
170929A00057	9/29/2017	2.16	9/29/2023	9/29/2017	119.08762	115.5211623	112.0809338	108.7617129	105.5585321	102.4666601	99.48158874	96.59902083	93.81485894
171005A00003	10/5/2017	2.02	10/5/2022	10/5/2017	112.63345	110.3037047	108.0343703	105.8234521	103.6690349	101.5692821	99.52243155	97.52679181	95.58073889
171006A00034	10/6/2017	2.27	10/6/2022	10/6/2017	112.77056	110.4447083	108.1790658	105.9716424	103.8205318	101.7239059	99.68001038	97.68716149	95.7437423
171016A00045	10/16/2017	2.2	10/17/2022	10/16/2017	112.79687	110.4373518	108.1395686	105.9014548	103.7210309	101.5964	99.52574279	97.50731457	95.53944088
171017A00024	10/17/2017	2.04	4/19/2021	10/17/2017	103.69031	103.0180307	102.3544486	101.6994001	101.0527212	100.4142523	99.78383756	99.16132522	98.54656728
171018A00011	10/18/2017	2.68	10/18/2027	10/18/2017	147.31	137.6725145	128.7365226	120.4471518	112.7541047	105.611255	98.97627967	92.81032629	87.07771084
171024A00069	10/24/2017	1.99	10/26/2020	10/24/2017	100.87915	100.7220092	100.5653606	100.4092051	100.2535405	100.0983645	99.94367469	99.78946888	99.63574479
171026A00006	10/26/2017	2.32	10/26/2022	10/26/2017	113.21809	110.8264196	108.497845	106.2302348	104.0215458	101.8698208	99.77318419	97.72983797	95.73805747
171026A00007	10/26/2017	2.47	10/26/2023	10/26/2017	119.9104	116.2601849	112.7411827	109.3478732	106.0750029	102.9175737	99.87082858	96.93023805	94.09148763
171030A00021	10/30/2017	2.29	11/30/2022	10/30/2017	113.74731	111.2392788	108.7998215	106.4265236	104.1170743	101.8692652	99.68098485	97.55021315	95.47501678
171031A00012	10/31/2017	2.28	10/31/2022	10/31/2017	113.2108	110.8040213	108.461041	106.1796928	103.9578997	101.7936723	99.68510488	97.63037103	95.62771942
171204A00020	12/4/2017	2.48	12/5/2022	12/4/2017	114.28539	111.7557105	109.2954062	106.9020558	104.5733405	102.3070425	100.1010394	97.95329895	95.86187492
171206A00048	12/6/2017	3.04	12/6/2032	12/6/2017	184.39691	164.955702	147.7860848	132.6085752	119.1795003	107.2862378	96.74311332	87.38785742	79.07854554
171208A00008	12/8/2017	2.25	12/8/2022	12/8/2017	114.25746	111.7093615	109.2314794	106.82137	104.476692	102.1952048	99.97476358	97.81331418	95.70888827
171213A00019	12/13/2017	2.17	12/13/2021	12/13/2017	107.93489	106.5216808	105.1403327	103.7897707	102.4689659	101.1769354	99.91273969	98.67548048	97.46429819
171215A00004	12/15/2017	2.29	12/15/2020	12/15/2017	101.75729	101.4565193	101.1575421	100.8603375	100.5648897	100.271183	99.97920202	99.68893142	99.40035616
171218A00020	12/18/2017	2.99	12/20/2027	12/18/2017	149.02074	139.1558809	130.0203726	121.5563316	113.7107573	106.4350984	99.68485749	93.41923254	87.6007922
171219A00063	12/19/2017	2.8	12/20/2027	12/19/2017	149.39609	139.435574	130.2143303	121.6735012	113.7592148	106.4221345	99.61705444	93.30253336	87.44056308
171228A00089	12/28/2017	2.13	12/28/2020	12/28/2017	101.96467	101.6256656	101.2889135	100.9543929	100.6220816	100.2919579	99.96400002	99.63818683	99.31449731
171229A00007	12/29/2017	2.12	12/30/2020	12/29/2017	101.99438	101.6495553	101.3070585	100.9668649	100.6289515	100.2932953	99.95987394	99.62866505	99.29964671
180103A00011	1/3/2018	2.35	1/3/2023	1/3/2018	114.95263	112.3161432	109.7537065	107.2628259	104.8411079	102.4862529	100.1960515	97.96837991	95.80119643
180104A00018	1/4/2018	2.97	1/4/2027	1/4/2018	142.87308	134.5589407	126.7877794	119.5212812	112.7240226	106.3632404	100.4086185	94.83209391	89.60767842
180109A00006	1/9/2018	2.18	1/8/2021	1/9/2018	102.16503	101.7937493	101.425172	101.0592705	100.6960154	100.335378	99.97733005	99.62184356	99.26889101
180109A00028	1/9/2018	2.6	1/9/2025	1/9/2018	129.16133	123.8180506	118.7274241	113.8761988	109.2518822	104.8426975	100.637539	96.62593039	92.79798597

Classification | Public

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
180110A00005	1/10/2018	2.22	1/11/2021	1/10/2018	102.23007	101.8499307	101.4726282	101.0981302	100.7264054	100.357423	99.99115256	99.62756409	99.26662811
180111A00007	1/11/2018	2.66	1/14/2025	1/11/2018	129.54167	124.1722723	119.0574241	114.1837295	109.5385697	105.1100512	100.8869602	96.85872029	93.01535284
180116A00010	1/16/2018	2.58	1/17/2023	1/16/2018	115.28067	112.6064028	110.0081676	107.4833749	105.0295365	102.6442631	100.3252605	98.07032445	95.87733725
180116A00012	1/16/2018	2.4	1/15/2021	1/16/2018	102.36649	101.9744155	101.585355	101.1992739	100.816138	100.4359134	100.058567	99.68406586	99.31237789
180116A00014	1/16/2018	3.01	1/19/2027	1/16/2018	143.4138	135.0259821	127.1890373	119.8638699	113.01435	106.6070768	100.6111596	94.99801628	89.74119061
180116A00046	1/16/2018	2.58	1/11/2023	1/16/2018	115.17477	112.5206165	109.9414411	107.4347087	104.9979808	102.6289154	100.3252628	98.08486119	95.90563283
180116A00048	1/16/2018	2.37	1/19/2021	1/16/2018	102.37099	101.9679057	101.5680015	101.1712401	100.7775842	100.3869975	99.99944399	99.61488846	99.23329608
180123A00024	1/23/2018	2.44	2/16/2021	1/23/2018	102.87797	102.3918933	101.9104064	101.4334476	100.9609532	100.4928606	100.0291085	99.56963652	99.11438558
180130A00070	1/30/2018	3.14	1/29/2027	1/30/2018	144.52683	136.0646684	128.1598867	120.7727924	113.8667147	107.4077633	101.3646033	95.70825086	90.41188485
180202A00012	2/2/2018	2.57	2/2/2022	2/2/2018	109.30498	107.7617409	106.2482671	104.7637695	103.3074859	101.8786805	100.4766424	99.10068487	97.75014418
180205A00049	2/5/2018	2.55	2/5/2021	2/5/2018	102.73809	102.2846104	101.8351318	101.3895993	100.947961	100.510166	100.0761644	99.64590683	99.21934511
180215A00018	2/15/2018	2.57	9/15/2020	2/15/2018	100.25857	100.2167595	100.1749994	100.1332903	100.0916322	100.0500248	100.0084682	99.96696222	99.92550681
180222A00027	2/22/2018	3.24	2/22/2028	2/22/2018	154.33713	143.9296224	134.3084966	125.4099783	117.1757862	109.5526333	102.491774	95.9485954	89.88224657
180308A00015	3/8/2018	2.82	12/15/2021	3/8/2018	108.58825	107.1719946	105.7868874	104.4319038	103.1060628	101.8084265	100.5380972	99.29421564	98.0759588
180313A00026	3/13/2018	3.34	3/13/2028	3/13/2018	153.51397	143.145407	133.5629014	124.702462	116.5056367	108.919002	101.8937053	95.38505175	89.35212999
180323A00013	3/23/2018	3.18	3/23/2028	3/23/2018	154.38306	143.8543916	134.1292241	125.1417615	116.831935	109.1448732	102.0304258	95.44273506	89.33984632
180327A00013	3/27/2018	2.77	3/26/2021	3/27/2018	103.72282	103.1220484	102.5282256	101.9412339	101.3609559	100.7872767	100.2200844	99.65926926	99.10472416
180328A00008	3/28/2018	2.85	3/25/2022	3/28/2018	110.42086	108.7133085	107.0412186	105.403556	103.7993308	102.2275905	100.6874182	99.17793172	97.69828101
180328A00035	3/28/2018	2.73	3/29/2021	3/28/2018	103.75424	103.1444683	102.5418446	101.9462481	101.3575566	100.7756505	100.2004131	99.6317303	99.06949056
180406A00009	4/6/2018	2.58	4/6/2021	4/6/2018	103.89873	103.2634191	102.6358731	102.0159476	101.4035042	100.798408	100.2005272	99.60973324	99.02590051
180425A00019	4/25/2018	3.02	10/25/2021	4/25/2018	107.95724	106.6783087	105.4296416	104.2101726	103.018886	101.854813	100.7170285	99.60464901	98.51683025
180426A00018	4/26/2018	2.94	4/26/2023	4/26/2018	118.64565	115.5918798	112.6334557	109.7667602	106.988345	104.2949178	101.6833337	99.15058719	96.69380525
180427A00011	4/27/2018	3.03	4/27/2022	4/27/2018	111.35366	109.5373111	107.7601585	106.021	104.3186841	102.6521061	101.0202054	99.42196384	97.85640286
180430A00014	4/30/2018	3.01	3/15/2022	4/30/2018	110.49352	108.8148029	107.1705778	105.5598605	103.9817026	102.435191	100.9194462	99.43362103	97.97689906
180430A00016	4/30/2018	3.07	12/15/2022	4/30/2018	115.88787	113.3082469	110.7997597	108.3599707	105.9865399	103.6772254	101.4298779	99.24243642	97.1129239
180430A00069	4/30/2018	2.75	3/30/2021	4/30/2018	103.87146	103.2572136	102.650218	102.0503458	101.4574723	100.8714754	100.2922362	99.71963816	99.15356767
180514A00032	5/14/2018	3.27	5/14/2026	5/14/2018	142.26129	134.7854457	127.7548526	121.1404835	114.9153647	109.0544211	103.534331	98.33339407	93.431409
180515A00035	5/16/2018	2.98	5/17/2021	5/16/2018	104.83613	104.0750518	103.3250239	102.5858036	101.8571585	101.1388626	100.4306962	99.73244584	99.04390419
180518A00020	5/21/2018	3.08	3/15/2022	5/21/2018	110.60589	108.9262271	107.2810757	105.6694491	104.0903982	102.5430094	101.0264029	99.53973114	98.08217716
180522A00038	5/22/2018	3.23	5/22/2025	5/22/2018	134.92244	128.9632633	123.3056982	117.9327354	112.8284292	107.9778228	103.3668805	98.98242511	94.81208019
180523A00014	5/23/2018	2.79	5/24/2021	5/23/2018	104.93813	104.1539245	103.3814274	102.620379	101.8705259	101.1316223	100.4034293	99.68571537	98.97825519
180524A00006	5/24/2018	2.71	2/16/2021	5/24/2018	103.07032	102.5829168	102.1001325	101.621897	101.1481462	100.678817	100.2138475	99.7531772	99.29674642
180529A00043	5/29/2018	2.99	5/30/2023	5/29/2018	118.85884	115.7064506	112.6550743	109.7007706	106.8397816	104.0685255	101.3835868	98.78170662	96.25977476

Classification | Public

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
180529A00063	5/29/2018	2.95	5/31/2022	5/29/2018	111.86002	109.9365955	108.0564522	106.218195	104.4204905	102.6620627	100.94169	99.25820182	97.6104764
180530A00028	5/30/2018	3.67	5/31/2033	5/30/2018	193.32325	172.7331153	154.6050004	138.6279784	124.5320434	112.0825258	101.0752974	91.33264797	82.69973848
180530A00057	5/30/2018	2.76	5/28/2021	5/30/2018	104.87905	104.0844701	103.3019034	102.531083	101.7717459	101.0236369	100.2865084	99.5601199	98.84423801
180531A00032	5/31/2018	2.8	6/1/2021	5/31/2018	104.98396	104.1767747	103.3819793	102.5992861	101.8284203	101.0691154	100.3211129	99.58416186	98.85801877
180605A00010	6/5/2018	2.87	6/5/2023	6/5/2018	119.2122	116.0219236	112.934547	109.9460599	107.0526376	104.2506331	101.5365674	98.90711973	96.35911963
180612A00018	6/12/2018	2.88	6/10/2022	6/12/2018	112.26587	110.3016367	108.3820462	106.5057103	104.6712957	102.8775234	101.1231659	99.40704427	97.72802605
180619A00019	6/19/2018	2.89	6/18/2021	6/19/2018	105.36493	104.5041977	103.657516	102.8245427	102.0049466	101.1984071	100.4046138	99.62326614	98.85407277
180619A00031	6/19/2018	2.74	6/21/2021	6/19/2018	105.42833	104.5562894	103.6986602	102.8550845	102.0252186	101.2087302	100.4052974	99.61460886	98.83636285
180620A00015	6/20/2018	3.04	6/20/2023	6/20/2018	119.40804	116.179621	113.0560648	110.033345	107.1076181	104.2752117	101.5326159	98.8764745	96.30357772
180620A00017	6/20/2018	3.24	6/20/2028	6/20/2018	156.60888	145.6343327	135.5199778	126.1936095	117.5894483	109.6475373	102.3131979	95.53653946	89.27201696
180621A00051	6/25/2018	3.63	6/23/2023	6/25/2018	121.23698	117.9716669	114.8124183	111.755176	108.7960642	105.9313778	103.1575744	100.4712659	97.86921052
180627A00030	6/27/2018	3.02	6/27/2023	6/27/2018	119.48218	116.2299584	113.0838487	110.0398076	107.093965	104.2426202	101.4822331	98.80941614	96.22092726
180702A00034	7/2/2018	2.86	7/3/2023	7/2/2018	119.72272	116.4334994	113.2523826	110.1752339	107.1980992	104.3171969	101.5289091	98.82977394	96.21647781
180706A00010	7/6/2018	2.92	7/6/2021	7/6/2018	105.72992	104.812216	103.9104211	103.0241261	102.1529337	101.2964602	100.4543345	99.62619834	98.81170501
180716A00056	7/16/2018	3.1	7/16/2025	7/16/2018	135.33588	129.1682389	123.3212	117.7764119	112.5166667	107.5258239	102.7887388	98.29119566	94.01984663
180718A00026	7/18/2018	3.03	7/18/2023	7/18/2018	119.91041	116.5839729	113.3680205	110.258281	107.2506706	104.3412855	101.5263932	98.80242357	96.16596143
180720A00011	7/20/2018	2.93	7/20/2021	7/20/2018	106.00423	105.0419026	104.0970297	103.1691408	102.2577808	101.3625106	100.4829066	99.61855989	98.76907579
180731A00004	7/31/2018	2.97	7/31/2023	7/31/2018	120.60054	117.2068863	113.9275012	110.7578984	107.6937979	104.7311112	101.8659322	99.09452713	96.41332657
180731A00022	7/31/2018	3.47	7/31/2028	7/31/2018	157.28713	146.2155508	136.0190374	126.6235203	117.9615688	109.971765	102.5981389	95.78965898	89.49977353
180801A00010	8/1/2018	2.99	4/15/2021	8/1/2018	104.23172	103.5694273	102.9155471	102.2699233	101.6324	101.0028253	100.381051	99.76693266	99.16032922
180809A00016	8/9/2018	3.1	8/9/2023	8/9/2018	120.54718	117.1397412	113.8476537	110.6663615	107.5915199	104.6189801	101.7447792	98.96513039	96.27641458
180814A00010	8/14/2018	3.1	8/14/2025	8/14/2018	135.90809	129.6211384	123.6659252	118.0231649	112.6747977	107.6039018	102.794616	98.23206705	93.90230374
180814A00032	8/14/2018	3.1	8/14/2025	8/14/2018	135.90809	129.6211384	123.6659252	118.0231649	112.6747977	107.6039018	102.794616	98.23206705	93.90230374
180815A00011	8/15/2018	2.97	8/15/2022	8/15/2018	113.32964	111.1585681	109.0406745	106.9743175	104.9579167	102.9899513	101.0689574	99.1935254	97.36229785
180820A00002	8/20/2018	2.91	8/20/2021	8/20/2018	106.56375	105.5021294	104.461638	103.4416485	102.4415589	101.4607907	100.4987875	99.55501443	98.62895641
180823A00001	8/23/2018	2.88	8/23/2021	8/23/2018	106.59039	105.5192437	104.4695985	103.4408092	102.4322585	101.4433532	100.4735233	99.5222204	98.58891717
180828A00032	8/28/2018	3.49	8/29/2033	8/28/2018	196.43553	174.9657268	156.1188839	139.5572338	124.9882621	112.1584288	100.847793	90.8654021	82.04533461
180905A00011	9/5/2018	2.85	9/8/2020	9/5/2018	100.14389	100.1215973	100.0993314	100.0770884	100.0548682	100.0326708	100.0104961	99.98834415	99.96621487
180905A00024	9/5/2018	2.9	9/5/2023	9/5/2018	121.07378	117.5545707	114.1575469	110.8777583	107.7104854	104.6512279	101.695693	98.83978438	96.07959202
180914A00028	9/14/2018	3.37	9/12/2025	9/14/2018	136.72512	130.3519128	124.3184751	118.6048321	113.1922919	108.0633551	103.2016324	98.59176798	94.21936884
180917A00032	9/17/2018	3.17	9/15/2023	9/17/2018	121.48723	117.9439632	114.5241857	111.2228676	108.0352164	104.9566635	101.9828524	99.10962734	96.33302251
180918A00023	9/18/2018	3.17	9/18/2023	9/18/2018	121.54597	117.9918732	114.5618923	111.2509657	108.0542656	104.9671907	101.9853539	99.10457053	96.32084803
180920A00035	9/20/2018	3.16	9/20/2022	9/20/2018	114.42751	112.1326969	109.8963042	107.7164431	105.5912987	103.5191284	101.4982585	99.52708108	97.60405048

Classification | Public

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
180920A00062	9/20/2018	3.12	9/20/2023	9/20/2018	122.08819	118.5028793	115.043241	111.7041221	108.4806167	105.36805	102.3619655	99.4581137	96.6524408
180920A00063	9/20/2018	3	9/20/2021	9/20/2018	107.4386	106.2715392	105.1298004	104.012569	102.9190618	101.8485287	100.8002509	99.77353937	98.7677332
180924A00021	9/24/2018	2.88	9/24/2020	9/24/2018	100.44569	100.3786037	100.3116173	100.2447306	100.1779434	100.1112554	100.0446665	99.97817635	99.91178479
180924A00043	9/24/2018	2.99	9/24/2020	9/24/2018	100.44121	100.3742479	100.3073794	100.2406091	100.173937	100.1073627	100.0408861	99.97450699	99.90822511
180924A00052	9/24/2018	3.22	9/22/2023	9/24/2018	121.78845	118.2172451	114.7710786	111.4448295	108.2336209	105.1328054	102.1379524	99.2448368	96.4494281
180927A00030	9/27/2018	3.01	10/27/2020	9/27/2018	101.05711	100.8969356	100.7372704	100.5781148	100.4194664	100.2613226	100.1036811	99.94653954	99.78989555
181001A00074	10/1/2018	3.03	10/3/2022	10/1/2018	114.8316	112.4832968	110.1956492	107.9666543	105.7943952	103.6770336	101.6128052	99.60001656	97.63704139
181004A00029	10/4/2018	3.7	10/4/2028	10/4/2018	160.67581	149.2020858	138.6512341	128.9436856	120.0071397	111.7758672	104.1900808	97.19536812	90.74218228
181009A00035	10/9/2018	3.12	10/11/2022	10/9/2018	115.18925	112.8122605	110.4971287	108.2417919	106.0442774	103.9026941	101.8152282	99.78013946	97.79575746
181017A00023	10/17/2018	3.07	10/14/2020	10/17/2018	100.82177	100.6984347	100.5754118	100.4527047	100.330312	100.2082326	100.0864652	99.96500855	99.8438615
181026A00002	10/26/2018	3.28	10/26/2023	10/26/2018	122.65466	118.9588857	115.395556	111.9591069	108.6442433	105.4459271	102.3593631	99.37998515	96.50344368
181029A00081	10/29/2018	3.27	4/28/2023	10/29/2018	119.05024	115.9968151	113.038576	110.1719224	107.3934145	104.6997676	102.0878442	99.55464581	97.09730574
181114A00014	11/14/2018	3.17	11/14/2023	11/14/2018	123.35895	119.5708414	115.9207319	112.4027144	109.0111788	105.740793	102.5864875	99.54343954	96.6070601
181115A00076	11/15/2018	3.22	12/31/2021	11/15/2018	109.35641	107.916103	106.5018978	105.1131436	103.7492106	102.4094894	101.0933899	99.80034058	98.52978797
181126A00046	11/26/2018	3.13	11/25/2020	11/26/2018	101.62716	101.3838631	101.1417313	100.9007598	100.6609402	100.4222643	100.1847238	99.94831077	99.71301713
181128A00010	11/28/2018	2.95	11/30/2020	11/28/2018	101.71041	101.4523746	101.1956484	100.9402177	100.6860727	100.4332036	100.181601	99.93125533	99.68215727
181129A00027	11/29/2018	3.16	11/29/2021	11/29/2018	108.81027	107.4129938	106.051558	104.7245999	103.430822	102.168991	100.9379341	99.73653523	98.56373181
181206A00009	12/6/2018	3.03	12/4/2020	12/6/2018	101.77119	101.5019564	101.2341455	100.9677496	100.7027575	100.4391581	100.1769404	99.91609352	99.65660679
181211A00009	12/11/2018	3.14	12/11/2023	12/11/2018	123.07495	119.2195534	115.5068674	111.9307447	108.485348	105.1651278	101.9648065	98.87936303	95.90401837
181211A00018	12/11/2018	3.14	12/11/2023	12/11/2018	123.07495	119.2195534	115.5068674	111.9307447	108.485348	105.1651278	101.9648065	98.87936303	95.90401837
181212A00019	12/12/2018	3.19	12/12/2023	12/12/2018	123.27081	119.4088135	115.6898184	112.1076737	108.6565323	105.3308353	102.1252955	99.03488229	96.0548073
181217A00052	12/17/2018	3.04	12/17/2021	12/17/2018	108.91134	107.4904585	106.1001226	104.7393538	103.4072139	102.1028046	100.8252654	99.5737718	98.34753312
181220A00020	12/20/2018	2.78	12/20/2021	12/20/2018	108.84679	107.4189419	106.0208147	104.6514913	103.3100937	101.9957799	100.7077418	99.44520413	98.20742217
181226A00033	12/26/2018	2.87	12/28/2020	12/26/2018	102.16646	101.8275433	101.4908696	101.15642	100.8241726	100.4941056	100.1661978	99.84042792	99.51677519
181226A00034	12/26/2018	2.9	12/27/2021	12/26/2018	108.85797	107.4259394	106.0212344	104.6431089	103.2908457	101.9637534	100.6611651	99.38243741	98.1269494
181226A00035	12/26/2018	2.95	12/27/2022	12/26/2018	115.82086	113.205321	110.6625409	108.190066	105.7855451	103.4467206	101.171424	98.95757156	96.80316106
181226A00061	12/26/2018	2.95	12/27/2022	12/26/2018	115.82086	113.205321	110.6625409	108.190066	105.7855451	103.4467206	101.171424	98.95757156	96.80316106
181226A00062	12/26/2018	3.02	12/26/2023	12/26/2018	122.93312	119.0318422	115.2762508	111.6601171	108.1775095	104.8227821	101.5905593	98.47572126	95.47338998
181231A00007	12/31/2018	2.86	12/31/2021	12/31/2018	108.85655	107.419928	106.0093453	104.6241495	103.2637128	101.9274275	100.6147051	99.32497581	98.05768775
190102A00058	1/2/2019	2.91	1/2/2024	1/2/2019	122.66901	118.7496601	114.977376	111.3458627	107.8491322	104.4814829	101.2374843	98.11196313	95.09998934
190103A00010	1/3/2019	2.7	1/3/2024	1/3/2019	122.66493	118.7239353	114.9313633	111.2808422	107.7663087	104.3819907	101.1223918	97.98227649	94.95665641
190104A00003	1/4/2019	2.81	1/4/2022	1/4/2019	108.86005	107.4115229	105.9894441	104.5931501	103.2219986	101.8753676	100.5526555	99.2532796	97.97667577
190104A00012	1/4/2019	2.76	1/4/2021	1/4/2019	102.25551	101.8961782	101.5393738	101.1850672	100.8332323	100.4838431	100.1368743	99.79230069	99.45009762

Classification | Public

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
190107A00006	1/7/2019	2.82	3/29/2021	1/7/2019	103.80739	103.1974302	102.5946283	101.998855	101.4099882	100.8279083	100.2524985	99.68364463	99.12123525
190108A00039	1/8/2019	3.04	4/30/2024	1/8/2019	125.42715	121.0552145	116.8612222	112.8368786	108.9743256	105.2661195	101.7052059	98.28489699	94.99884966
190110A00016	1/10/2019	2.88	1/25/2022	1/10/2019	109.3455	107.8308407	106.3449053	104.886948	103.4562449	102.0520965	100.6738269	99.32078231	97.99233069
190110A00077	1/10/2019	2.68	12/8/2020	1/10/2019	101.78626	101.5051064	101.2255174	100.9474785	100.6709766	100.3959991	100.1225332	99.8505663	99.58008613
190110A00090	1/10/2019	2.88	10/7/2020	1/10/2019	100.6702	100.5666901	100.4634017	100.3603358	100.2574914	100.1548678	100.0524645	99.95028047	99.84831518
190117A00002	1/17/2019	2.87	1/7/2021	1/17/2019	102.34914	101.9809083	101.6153269	101.2523701	100.8920098	100.5342181	100.1789675	99.82623097	99.47598187
190122A00007	1/22/2019	3.03	1/22/2024	1/22/2019	123.4804	119.4806447	115.6331697	111.9313568	108.3689159	104.9398631	101.6385035	98.45941609	95.39743899
190130A00011	1/30/2019	2.88	1/29/2021	1/30/2019	102.75573	102.3226637	101.893237	101.4674077	101.045131	100.6263625	100.2110588	99.79917683	99.39067466
190130A00018	1/30/2019	2.95	10/17/2022	1/30/2019	114.48181	112.1031086	109.7865497	107.530051	105.3316214	103.1893526	101.1014147	99.06605245	97.08158159
190211A00002	2/11/2019	2.88	2/12/2024	2/11/2019	123.32943	119.2601462	115.3484305	111.5873193	107.9701976	104.4907783	101.1430833	97.92142737	94.82040168
190214A00004	2/14/2019	2.6	2/14/2022	2/14/2019	109.58314	107.997817	106.4437983	104.9202366	103.4263114	101.961231	100.5242315	99.11457566	97.73155137
190215A00003	2/15/2019	2.82	2/15/2022	2/15/2019	109.66008	108.0754148	106.522033	104.9990841	103.5057485	102.0412354	100.6047817	99.19565067	97.81313094
190215A00017	2/15/2019	2.89	2/15/2024	2/15/2019	123.42476	119.3431188	115.4198989	111.6480787	108.0209919	104.5323035	101.175991	97.94632723	94.83786453
190220A00007	2/20/2019	2.87	2/20/2024	2/20/2019	123.44647	119.3467259	115.4067489	111.6194315	107.9780241	104.4761139	101.1076061	97.86670588	94.74790246
190221A00002	2/21/2019	2.81	2/22/2022	2/21/2019	109.78127	108.172425	106.5957723	105.0504207	103.5355158	102.0502339	100.5937805	99.16538878	97.76431876
190222A00021	2/22/2019	2.95	8/21/2024	2/22/2019	127.19219	122.4033693	117.8234914	113.442304	109.2501177	105.2377689	101.3965878	97.71836909	94.19534487
190228A00035	2/28/2019	2.8	2/26/2021	2/28/2019	103.23048	102.7140557	102.2027878	101.6965992	101.1954147	100.6991603	100.2077635	99.72115347	99.23926044
190314A00027	3/22/2019	2.92	3/21/2025	3/22/2019	130.9839	125.3746518	120.0405316	114.9665371	110.138569	105.5433694	101.1684675	97.00212796	93.03330363
190318A00021	3/18/2019	2.76	3/18/2024	3/18/2019	123.5281	119.3364252	115.3110919	111.4445631	107.7296835	104.1596629	100.7280547	97.42873695	94.25589333
190319A00013	3/19/2019	2.72	3/18/2022	3/19/2019	110.08209	108.3980117	106.7486506	105.1330129	103.5501393	101.9991067	100.4790261	98.98904122	97.52832707
190321A00004	3/21/2019	2.62	3/22/2021	3/21/2019	103.56386	102.9754694	102.393762	101.8186233	101.2499424	100.6876108	100.1315226	99.58157394	99.03766362
190321A00020	3/21/2019	2.62	3/22/2021	3/21/2019	103.56386	102.9754694	102.393762	101.8186233	101.2499424	100.6876108	100.1315226	99.58157394	99.03766362
190321A00044	3/21/2019	2.45	3/21/2022	3/21/2019	109.9947	108.2974859	106.6354522	105.0075856	103.4129075	101.8504762	100.3193855	98.81876271	97.34776722
190322A00022	3/22/2019	2.56	7/22/2021	3/22/2019	105.70209	104.7351013	103.7857688	102.8536138	101.938173	101.0389997	100.1556629	99.2877468	98.43485012
190325A00014	3/25/2019	2.43	9/25/2020	3/25/2019	100.43292	100.3630612	100.2933063	100.2236571	100.1541134	100.084675	100.0153416	99.94611303	99.87698899
190326A00002	3/26/2019	2.56	9/26/2022	3/26/2019	113.23557	110.9351883	108.6937608	106.5093657	104.3801583	102.304368	100.280295	98.30630656	96.38083401
190327A00011	3/27/2019	2.51	9/28/2020	3/27/2019	100.47817	100.4000376	100.3220296	100.244145	100.1663834	100.0887447	100.0112286	99.93383477	99.85656295
190327A00031	3/27/2019	2.53	3/27/2024	3/27/2019	122.80105	118.5937121	114.5543991	110.675443	106.9495745	103.3698978	99.92986827	96.62327307	93.44421173
190328A00003	3/28/2019	2.64	9/30/2024	3/28/2019	126.5663	121.6536406	116.9606018	112.4761442	108.1898465	104.0918679	100.1729128	96.42419639	92.83741448
190328A00009	3/28/2019	2.33	3/28/2022	3/28/2019	109.92178	108.2045275	106.5231433	104.8765744	103.2638125	101.6838881	100.1358685	98.61885618	97.13198687
190328A00019	3/28/2019	2.56	3/28/2024	3/28/2019	122.93441	118.7213247	114.676572	110.7924635	107.061713	103.4774087	100.0329912	96.72223362	93.53922258
190328A00022	3/28/2019	2.53	11/20/2020	3/28/2019	101.39662	101.1679027	100.9402305	100.7135927	100.4879822	100.263392	100.0398151	99.81724475	99.595674
190328A00046	3/28/2019	2.7	3/4/2025	3/28/2019	129.63982	124.1185323	118.8662304	113.8683619	109.1112385	104.5819821	100.2684721	96.15929697	92.24370898

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
190328A00053	3/28/2019	2.33	3/28/2022	3/28/2019	109.92178	108.2045275	106.5231433	104.8765744	103.2638125	101.6838881	100.1358685	98.61885618	97.13198687
190329A00016	3/29/2019	2.56	3/29/2022	3/29/2019	110.01709	108.3012354	106.6211689	104.9758439	103.364255	101.7854353	100.2384545	98.72241747	97.23646214
190329A00017	3/29/2019	2.59	3/29/2023	3/29/2019	116.58929	113.6668464	110.83346	108.0858494	105.420881	102.835558	100.3270125	97.89250003	95.52939261
190401A00006	4/1/2019	2.58	4/1/2022	4/1/2019	110.10337	108.3778399	106.6884169	105.0340399	103.4136899	101.8263871	100.2711893	98.74718958	97.25351511
190401A00009	4/1/2019	2.39	4/1/2022	4/1/2019	110.0915	108.360866	106.6665328	105.0074289	103.3825279	101.7908427	100.2314244	98.70335983	97.20577001
190403A00006	4/3/2019	2.48	4/3/2024	4/3/2019	123.52333	119.2584452	115.165003	111.2351242	107.4613434	103.8365817	100.3541236	97.00759664	93.79095121
190404A00023	4/5/2019	2.62	5/16/2022	4/5/2019	110.98567	109.1154701	107.286603	105.4977686	103.7477185	102.035257	100.3592378	98.71856174	97.11217408
190409A00019	4/9/2019	2.91	4/9/2029	4/9/2019	158.87952	146.6128067	135.3977956	125.138434	115.747924	107.1477889	99.26703467	92.04140044	85.41268691
190409A00020	4/9/2019	2.41	4/8/2022	4/9/2019	110.25186	108.4983085	106.7818512	105.1013809	103.4558366	101.8441989	100.265488	98.7187619	97.20311417
190409A00031	4/9/2019	2.64	4/9/2024	4/9/2019	123.45909	119.1959867	115.104423	111.1765103	107.4047676	103.7821021	100.3017859	96.95743538	93.74299121
190409A00033	4/9/2019	2.62	6/9/2023	4/9/2019	117.95396	114.7825403	111.7135377	108.7429848	105.8670937	103.0822502	100.3850042	97.7720611	95.24027352
190411A00020	5/1/2019	2.63	5/2/2022	5/1/2019	110.75165	108.9255324	107.139073	105.3910516	103.6802943	102.0056751	100.3661138	98.76057344	97.18805798
190426A00033	6/27/2019	2.55	6/27/2022	6/27/2019	111.59392	109.5905877	107.6333195	105.720771	103.8516423	102.0246803	100.2386765	98.49246548	96.78492255
190501A00017	5/1/2019	2.61	5/1/2024	5/1/2019	123.73644	119.3936982	115.2281696	111.2315776	107.3960843	103.7142655	100.1790857	96.78387573	93.52231053
190506A00027	5/6/2019	2.38	5/6/2022	5/6/2019	110.70652	108.8631371	107.0600948	105.2961337	103.5700504	101.8806913	100.22695	98.60776478	97.0221165
190510A00005	5/10/2019	2.47	5/10/2021	5/10/2019	104.34012	103.6022335	102.8747688	102.1575068	101.4502337	100.7527417	100.0648288	99.38629853	98.71695973
190514A00024	5/14/2019	2.34	5/14/2024	5/14/2019	123.70189	119.2949071	115.0698498	111.0181156	107.1315696	103.4025118	99.82365074	96.38807931	93.08925141
190515A00008	5/15/2019	2.41	11/15/2021	5/15/2019	107.58968	106.2459212	104.9356174	103.6575343	102.410494	101.193376	100.0051126	98.84468675	97.71112859
190515A00015	5/15/2019	2.25	5/16/2022	5/15/2019	110.65184	108.7788943	106.9474576	105.1562132	103.4039053	101.6893306	100.0113363	98.36881658	96.76071092
190515A00055	5/15/2019	2.26	5/15/2023	5/15/2019	117.04751	113.9557486	110.9622721	108.0632801	105.255153	102.5344385	99.89784235	97.34221985	94.86456754
190520A00034	5/20/2019	2.44	5/20/2021	5/20/2019	104.49464	103.7258863	102.9684298	102.2220201	101.4864168	100.7613861	100.0467013	99.34214178	98.64749345
190521A00005	5/21/2019	2.56	5/21/2024	5/21/2019	123.88652	119.4748005	115.2454423	111.1898038	107.299715	103.5674441	99.98567072	96.54746123	93.24624542
190521A00026	5/21/2019	2.54	5/19/2023	5/21/2019	117.34956	114.2537355	111.2563517	108.3536042	105.5418636	102.8176684	100.1777162	97.61885435	95.1380723
190522A00003	5/22/2019	2.55	5/22/2024	5/22/2019	123.86355	119.4489753	115.2170027	111.1589732	107.2667006	103.5324383	99.94885205	96.50899549	93.20628654
190522A00017	5/23/2019	2.53	3/1/2023	5/23/2019	115.9399	113.1127496	110.369951	107.7084745	105.1254237	102.6180241	100.1836177	97.8196568	95.52369871
190524A00005	5/24/2019	2.34	11/24/2020	5/24/2019	101.45249	101.2119723	100.9726041	100.7343755	100.4972783	100.2613044	100.0264458	99.79269464	99.56004298
190524A00015	5/24/2019	2.24	5/24/2022	5/24/2019	110.7732	108.8750634	107.0194112	105.20488	103.4301703	101.6940378	99.99529091	98.33278748	96.7054325
190528A00028	5/28/2019	2.42	5/30/2023	5/28/2019	117.18951	114.0613488	111.0336074	108.1023638	105.263879	102.5145892	99.85109634	97.27015828	94.76868071
190529A00023	5/29/2019	2.38	5/29/2024	5/29/2019	123.29457	118.8680441	114.6255618	110.558353	106.6581272	102.9170416	99.32767353	95.88299468	92.57634747
190529A00031	5/29/2019	2.36	5/30/2023	5/29/2019	117.01379	113.8881802	110.8629267	107.9341104	105.0979945	102.351017	99.68978156	97.11104793	94.61172344
190529A00060	5/29/2019	2.31	11/29/2021	5/29/2019	107.70928	106.3196458	104.9657218	103.6461435	102.359617	101.1049128	99.88086172	98.68635111	97.52032164
190530A00005	5/30/2019	2.36	5/28/2021	5/30/2019	104.57445	103.7811626	102.9998753	102.2303208	101.4722363	100.7253669	99.989465	99.26429055	98.54961026
190530A00006	5/30/2019	2.25	5/30/2024	5/30/2019	123.61361	119.1551219	114.8826141	110.7872008	106.8604793	103.0945021	99.48174874	96.01509978	92.68781235

Classification | Public

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
190530A00045	5/30/2019	2.44	5/30/2024	5/30/2019	123.5555	119.1205592	114.8700708	110.7952447	106.8877678	103.1397761	99.54382726	96.0928745	92.78024304
190531A00013	5/31/2019	2.31	12/6/2022	5/31/2019	113.89514	111.3671293	108.9085281	106.5169137	104.1899696	101.9254798	99.72132318	97.57546855	95.48597021
190603A00033	6/3/2019	2.05	6/3/2024	6/3/2019	122.8641	118.4069182	114.1362466	110.0431713	106.1192603	102.3565372	98.74745319	95.28486141	91.96199238
190605A00017	6/5/2019	2.12	6/4/2021	6/5/2019	104.5082	103.693926	102.8922986	102.1030283	101.325831	100.5604315	99.80656254	99.06396519	98.33238806
190605A00034	6/5/2019	2.11	6/6/2022	6/5/2019	110.42125	108.4931299	106.6086476	104.7664288	102.965155	101.2035627	99.48044027	97.79462521	96.14500169
190605A00058	6/5/2019	2.14	12/5/2022	6/5/2019	113.47146	110.9515977	108.5008964	106.1169422	103.7974227	101.5401261	99.34293576	97.20382521	95.12085342
190606A00028	6/6/2019	2.74	6/6/2029	6/6/2019	155.69419	143.4515341	132.274893	122.0655025	112.7342538	104.2006974	96.39215944	89.24295132	82.69366465
190607A00009	6/7/2019	2.14	6/7/2022	6/7/2019	110.49359	108.561729	106.6736227	104.8278984	103.0232386	101.2583802	99.53211183	97.84327076	96.19074079
190611A00015	6/11/2019	2.32	6/11/2024	6/11/2019	123.27078	118.8011631	114.5187447	110.4146136	106.4803386	102.7079388	99.08985648	95.61893206	92.28838048
190611A00047	6/11/2019	2.26	6/11/2021	6/11/2019	104.73677	103.9001362	103.076843	102.2665696	101.4690088	100.6838629	99.91084365	99.14967155	98.40007567
190614A00018	6/14/2019	2.21	6/14/2021	6/14/2019	104.74734	103.9015058	103.069304	102.2504042	101.4444894	100.6512524	99.87039551	99.10163057	98.34467812
190620A00056	6/25/2019	2.07	1/17/2023	6/25/2019	113.99355	111.3355723	108.7532669	106.2440507	103.8054464	101.4350753	99.13065302	96.8899853	94.71096358
190624A00052	6/24/2019	1.89	6/24/2022	6/24/2019	110.65289	108.6612058	106.7153635	104.8139992	102.9558038	101.139517	99.36392416	97.62785512	95.93018169
190625A00023	6/25/2019	2.47	6/25/2027	6/25/2019	141.93074	132.9993167	124.6921319	116.9623073	109.7667129	103.0656514	96.8225688	91.00379032	85.5782798
190627A00009	6/27/2019	1.93	6/27/2023	6/27/2019	116.79638	113.5704318	110.4503452	107.4320653	104.5117176	101.6855971	98.95016074	96.30201845	93.73792613
190627A00038	6/27/2019	2.12	6/27/2023	6/27/2019	116.76911	113.5573303	110.4506558	107.4450727	104.5367436	101.7219989	98.99732824	96.35937278	93.80491784
190703A00014	7/3/2019	2.23	10/5/2020	7/3/2019	100.57051	100.4727123	100.3751086	100.2777019	100.1804916	100.0834771	99.98665788	99.89003322	99.79360256
190703A00019	7/3/2019	2.08	7/5/2022	7/3/2019	110.82692	108.8067903	106.8335805	104.9059197	103.0224874	101.1820098	99.38325784	97.62504557	95.90622803
190708A00011	7/8/2019	2.2	7/8/2024	7/8/2019	123.22435	118.6651282	114.2999095	110.119435	106.1149395	102.278119	98.60110389	95.07643425	91.69703611
190711A00016	7/11/2019	2.17	7/11/2022	7/11/2019	111.10105	109.0599622	107.066665	105.1197484	103.2178562	101.3596811	99.54396192	97.76948198	96.03506727
190715A00010	7/15/2019	2.23	7/15/2024	7/15/2019	123.4652	118.8777532	114.4863788	110.2816791	106.2547567	102.3971846	98.70097893	95.15857314	91.76279424
190729A00009	7/29/2019	2.19	7/29/2024	7/29/2019	123.52526	118.8898544	114.4544267	110.209302	106.1453254	102.2538306	98.52661168	94.95589559	91.53431741
190729A00019	7/29/2019	2.16	7/29/2021	7/29/2019	105.45182	104.4644895	103.4955841	102.5445878	101.6110078	100.6943691	99.79421391	98.91010082	98.04160402
190801A00010	8/1/2019	1.97	8/1/2023	8/1/2019	117.48889	114.1399981	110.9043559	107.7775081	104.755203	101.8333796	99.00815814	96.27583053	93.63285198
190802A00017	8/2/2019	2.01	11/15/2023	8/2/2019	118.67157	114.9764647	111.4163964	107.9855796	104.6785199	101.4899955	98.41504139	95.44893457	92.58718062
190805A00008	8/5/2019	1.88	8/4/2023	8/5/2019	116.63117	113.3004506	110.082461	106.9727678	103.9671359	101.0615207	98.25205774	95.53505381	92.9069784
190805A00048	8/5/2019	1.88	8/5/2022	8/5/2019	110.92898	108.813637	106.7495253	104.7350812	102.7688022	100.8492414	98.97500537	97.14475152	95.35718608
190805A00049	8/5/2019	1.88	8/4/2023	8/5/2019	116.63117	113.3004506	110.082461	106.9727678	103.9671359	101.0615207	98.25205774	95.53505381	92.9069784
190806A00012	8/6/2019	1.93	8/6/2021	8/6/2019	105.36508	104.3533774	103.3610309	102.3874858	101.4322117	100.4946978	99.57445257	98.67100216	97.78389006
190807A00005	8/7/2019	1.77	8/7/2024	8/7/2019	121.87195	117.2404829	112.8104307	108.5719801	104.5158483	100.6332515	96.91587545	93.35584789	89.9457126
190807A00017	8/7/2019	1.76	3/12/2024	8/7/2019	119.60142	115.5020491	111.565508	107.7844251	104.1518073	100.6610171	97.30575194	94.08002535	90.97814915
190808A00012	8/8/2019	1.89	8/8/2024	8/8/2019	122.40167	117.755944	113.3122653	109.0607846	104.9921864	101.0976565	97.36885228	93.79787459	90.37724209
190808A00047	8/8/2019	1.89	8/8/2024	8/8/2019	122.40167	117.755944	113.3122653	109.0607846	104.9921864	101.0976565	97.36885228	93.79787459	90.37724209

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
190809A00021	8/9/2019	2.12	8/9/2029	8/9/2019	152.71069	140.2326354	128.8700488	118.5173572	109.0794873	100.4707695	92.61396509	85.43939735	78.88417673
190809A00022	8/9/2019	1.88	8/9/2024	8/9/2019	122.37412	117.7256222	113.2794384	109.0256964	104.9550626	101.0587056	97.32826695	93.75583306	90.33390903
190815A00015	8/15/2019	1.82	8/15/2022	8/15/2019	110.9628	108.8166028	106.7230822	104.6806126	102.6876278	100.7426205	98.84413998	96.99078939	95.18122331
190816A00014	8/16/2019	1.77	8/16/2024	8/16/2019	122.00689	117.3426545	112.8824604	108.616307	104.534736	100.628801	96.89003685	93.31043132	89.88239828
190816A00020	8/16/2019	1.79	8/16/2024	8/16/2019	122.09319	117.4271616	112.965235	108.6974044	104.6142091	100.7067007	96.96641195	93.38532877	89.95586317
190816A00039	8/16/2019	1.91	2/16/2021	8/16/2019	102.62662	102.1412511	101.6604681	101.1842083	100.7124081	100.2450051	99.78193778	99.32314605	98.86857081
190819A00022	8/19/2019	1.8	8/19/2024	8/19/2019	122.18162	117.5037536	113.0308978	108.7529823	104.6604866	100.7444064	96.99622294	93.40787411	89.97172743
190826A00038	8/26/2019	1.74	8/26/2022	8/26/2019	110.96672	108.7869093	106.6613886	104.588452	102.5664621	100.5938438	98.66908242	96.79072012	94.9573538
190826A00063	8/26/2019	2.05	8/28/2028	8/26/2019	144.68684	134.0271157	124.2290726	115.2185787	106.9282408	99.29675821	92.26834298	85.79219845	79.82204919
190830A00002	8/30/2019	1.93	8/28/2026	8/30/2019	133.67736	126.128599	119.0531756	112.4189646	106.1961868	100.3572223	94.8764422	89.73005605	84.89597023
190830A00010	9/3/2019	1.75	9/1/2023	9/3/2019	116.64404	113.2236021	109.9218433	106.7339686	103.6554095	100.6818085	97.80900758	95.03303839	92.35011193
190906A00004	9/6/2019	1.78	9/6/2022	9/6/2019	111.22094	109.0046327	106.8441835	104.7378131	102.6838134	100.6805426	98.72642278	96.81993635	94.95962355
190906A00005	9/6/2019	1.77	9/6/2023	9/6/2019	116.78459	113.3457829	110.0266899	106.8224631	103.7284766	100.7403194	97.8537832	95.06485265	92.36969468
190910A00013	9/10/2019	1.9	9/9/2022	9/10/2019	111.52356	109.2947062	107.122172	105.0041536	102.9389224	100.9248178	98.9602438	97.04366589	95.17360821
190912A00033	9/12/2019	1.77	9/12/2023	9/12/2019	117.52438	114.0388635	110.6754512	107.4291597	104.2952397	101.2691641	98.34661593	95.52347755	92.79581983
190923A00017	9/23/2019	1.74	9/23/2024	9/23/2019	123.35201	118.5060185	113.8773009	109.4549251	105.2285757	101.1885115	97.32553031	93.63093579	90.09650672
190924A00033	9/24/2019	1.84	9/30/2022	9/24/2019	111.72638	109.4303613	107.193491	105.0138253	102.8895045	100.818744	98.7998306	96.83111957	94.91103079
190930A00011	9/30/2019	1.89	10/24/2022	9/30/2019	112.20933	109.835316	107.5238745	105.2728932	103.0803495	100.9443059	98.86290539	96.83436751	94.85698437
190930A00012	9/30/2019	1.93	9/30/2024	9/30/2019	123.40096	118.5559503	113.9283336	109.5071625	105.2821034	101.243399	97.38183287	93.68869597	90.15575593
191002A00013	10/2/2019	1.78	10/3/2022	10/2/2019	111.64027	109.3361611	107.091587	104.9045861	102.7732796	100.6958649	98.67061235	96.69586124	94.77001662
191003A00002	10/3/2019	1.58	10/4/2021	10/3/2019	106.10727	104.9038313	103.7275287	102.5774541	101.4527383	100.3525504	99.27609531	98.22261186	97.19137123
191004A00001	10/4/2019	2.47	10/4/2034	10/4/2019	181.76344	159.7643554	140.6843288	124.1183222	109.7194772	97.19049881	86.27635128	76.75806114	68.44745585
191004A00004	10/4/2019	1.54	10/4/2024	10/4/2019	122.62659	117.7589644	113.1111253	108.6719461	104.4309245	100.3781478	96.50425542	92.80040524	89.25824164
191007A00020	10/7/2019	1.69	10/7/2022	10/7/2019	111.50162	109.1870073	106.9324367	104.7359271	102.5955741	100.5095517	98.47610776	96.49356051	94.56029526
191007A00029	10/7/2019	1.88	10/9/2029	10/7/2019	151.03527	138.3916234	126.9000437	116.4495588	106.9404187	98.28291202	90.39630775	83.2079142	76.65224079
191008A00006	10/8/2019	1.73	10/8/2021	10/8/2019	106.1489	104.9355108	103.7497184	102.5905908	101.4572366	100.3488038	99.26447752	98.20347816	97.16505934
191011A00013	10/11/2019	1.88	10/11/2022	10/11/2019	111.98484	109.6526998	107.3812708	105.1685348	103.012558	100.9114864	98.86354125	96.86701611	94.92027267
191017A00003	10/17/2019	1.9	12/10/2021	10/17/2019	107.30064	105.8992808	104.5305205	103.1932179	101.8862878	100.6086949	99.35945095	98.13761214	96.94227653
191024A00017	10/25/2019	1.9	7/15/2021	10/25/2019	104.98332	104.0415034	103.1165319	102.2079544	101.3153379	100.4382643	99.57633024	98.72914624	97.89633597
191025A00005	10/28/2019	1.98	10/28/2024	10/28/2019	124.05802	119.1061787	114.3799034	109.8676498	105.5585336	101.4422889	97.50922936	93.75021138	90.15660069
191031A00033	10/31/2019	2.2	5/31/2028	10/31/2019	144.78382	134.4586608	124.9442109	116.1724592	108.0814543	100.6147301	93.72079157	87.35265163	81.46741369
191031A00041	10/31/2019	1.72	10/31/2023	10/31/2019	118.12322	114.4701645	110.9495432	107.5557376	104.2834082	101.1274769	98.08311255	95.14571681	92.31091129
191105A00018	11/5/2019	1.78	11/6/2023	11/5/2019	118.42427	114.7462377	111.2021142	107.7861932	104.4930505	101.3175294	98.25472508	95.29997058	92.44882345

Classification | Public

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
191113A00019	11/15/2019	1.93	3/15/2021	11/15/2019	103.06423	102.4981056	101.9381966	101.3844002	100.8366166	100.294748	99.75869901	99.22837598	98.70368741
191114A00008	11/18/2019	1.93	4/17/2023	11/18/2019	115.08221	112.1198049	109.2492861	106.4672041	103.7702655	101.1553237	98.61937149	96.15953325	93.77305854
191120A00006	11/20/2019	2.67	11/20/2035	11/20/2019	191.49478	166.9057953	145.7947912	127.6473871	112.0278673	98.56679194	86.95061415	76.91296833	68.22735437
191122A00020	11/26/2019	3.2	11/23/2037	11/26/2019	213.93008	184.0029258	158.74594	137.3958337	119.3181752	103.9850339	90.95660304	79.86607245	70.40716427
191122A00021	11/26/2019	3.4	11/22/2038	11/26/2019	224.6265	191.9265497	164.5627187	141.6223956	122.354111	106.1383249	92.46363603	80.9073857	71.11982486
191129A00012	11/29/2019	1.99	11/29/2024	11/29/2019	124.61219	119.5382753	114.6997786	110.0844121	105.6806078	101.4774697	97.46473042	93.6327106	89.97228116
191206A00013	12/6/2019	3.05	12/6/2044	12/6/2019	251.52337	204.5804049	167.4366546	137.9585168	114.4893605	95.74067681	80.70851864	68.60925821	58.83012001
191210A00010	12/10/2019	1.91	12/10/2020	12/10/2019	101.56692	101.2808534	100.9964039	100.7135604	100.4323094	100.1526374	99.87453099	99.597977	99.3229624
191212A00029	12/13/2019	1.94	5/16/2023	12/13/2019	115.56588	112.5050559	109.5414982	106.6714568	103.8913521	101.1977696	98.58745104	96.0572858	93.6043029
191218A00013	12/18/2019	1.94	12/19/2022	12/18/2019	113.21109	110.6520213	108.1639187	105.7443557	103.39101	101.1016551	98.87415487	96.70645992	94.59660289
191219A00047	12/19/2019	1.76	12/17/2021	12/19/2019	107.42932	106.0151669	104.6315212	103.2773997	101.9518633	100.6540129	99.38298749	98.13796201	96.9181455
200108A00018	1/8/2020	1.68	1/18/2022	1/8/2020	107.74673	106.2608997	104.8029729	103.3722307	101.967977	100.5895393	99.23626723	97.90753168	96.60272419
200110A00022	1/13/2020	2	1/6/2025	1/13/2020	125.24799	120.0334734	115.0654024	110.330877	105.8177382	101.5145213	97.41041278	93.49521011	89.7592839
200121A00008	1/24/2020	1.84	1/20/2022	1/24/2020	107.74838	106.2608376	104.801264	103.3689416	101.9631718	100.5832797	99.22861234	97.89853853	96.59244742
200122A00035	1/22/2020	1.94	1/22/2025	1/22/2020	125.20792	119.9400781	114.9236109	110.145237	105.5924422	101.2534337	97.11709554	93.17294541	89.41109585
200127A00023	1/27/2020	1.8	1/27/2025	1/27/2020	124.60733	119.3363707	114.3178705	109.5384391	104.9854693	100.6470837	96.51208814	92.56992903	88.8106534
200130A00015	1/30/2020	1.63	7/30/2021	1/30/2020	105.11795	104.1270882	103.154815	102.200608	101.2639677	100.3444128	99.44147937	98.5547203	97.68370424
200130A00025	1/30/2020	1.54	1/30/2023	1/30/2020	113.34624	110.6455386	108.0230628	105.4760989	103.002044	100.5984008	98.26277298	95.99286028	93.78645399
200131A00015	2/5/2020	1.73	2/5/2025	2/5/2020	124.40716	119.1085768	114.0652877	109.2636739	104.6909165	100.3349427	96.18437874	92.22850533	88.45721693
200131A00016	1/31/2020	1.73	1/31/2025	1/31/2020	124.32741	119.0493996	114.0248685	109.2403402	104.6831266	100.3412758	96.20352503	92.25925777	88.49846316
200204A00020	2/4/2020	1.6	2/4/2025	2/4/2020	124.75418	119.4213838	114.3460779	109.5145004	104.9136992	100.5314781	96.35634776	92.3774816	88.5846739
200207A00016	2/7/2020	1.74	2/7/2024	2/7/2020	119.00109	115.0276714	111.2082408	107.5360057	104.0045131	100.6076283	97.33951789	94.19463271	91.16769275
200210A00021	2/10/2020	1.76	2/10/2025	2/10/2020	124.63349	119.310913	114.2455714	109.4236982	104.8323377	100.4592912	96.29306832	92.32284239	88.53840863
200214A00007	2/14/2020	1.59	2/14/2025	2/14/2020	124.86812	119.4947799	114.3825818	109.5174768	104.8862472	100.4764512	96.27637376	92.27498021	88.46187284
200218A00004	2/18/2020	1.73	2/21/2023	2/18/2020	113.68792	110.9178348	108.2298539	105.62106	103.0886562	100.6299623	98.24240927	95.92353372	93.67097298
200218A00028	2/18/2020	1.73	2/21/2023	2/18/2020	113.68792	110.9178348	108.2298539	105.62106	103.0886562	100.6299623	98.24240927	95.92353372	93.67097298
200221A00004	2/21/2020	1.69	2/21/2025	2/21/2020	124.4657	119.1057915	114.0068653	109.1548485	104.5365046	100.1393765	95.95173598	91.96253756	88.16137492
200221A00009	2/21/2020	1.69	2/22/2022	2/21/2020	108.05244	106.457617	104.8947291	103.3628942	101.8612652	100.3890251	98.94538573	97.52958672	96.14089408
200224A00001	2/24/2020	1.59	2/24/2025	2/24/2020	124.02018	118.6594715	113.5604352	108.7089322	104.0916627	99.69611162	95.5104982	91.52372864	87.7253526
200224A00002	2/24/2020	1.56	2/24/2023	2/24/2020	113.28809	110.5129185	107.8203293	105.2073748	102.6712315	100.2091943	97.81867086	95.49717577	93.24232562
200224A00025	2/24/2020	1.59	1/23/2025	2/24/2020	123.53383	118.3010824	113.3186808	108.5733732	104.0526784	99.74483575	95.63875986	91.72399847	87.99069295
200224A00046	2/24/2020	1.59	2/24/2025	2/24/2020	124.02018	118.6594715	113.5604352	108.7089322	104.0916627	99.69611162	95.5104982	91.52372864	87.7253526
200225A00006	2/25/2020	1.57	2/25/2022	2/25/2020	107.91478	106.3112068	104.7399256	103.2000437	101.6906995	100.2110624	98.76033155	97.33773413	95.94252449

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
200226A00005	2/26/2020	1.53	2/27/2023	2/26/2020	113.2559	110.4708137	107.7688965	105.1471705	102.6027824	100.1329988	97.73520069	95.40687751	93.14562217
200226A00016	2/26/2020	1.57	2/26/2025	2/26/2020	123.95248	118.5858775	113.4815972	108.6254486	104.0040818	99.60493558	95.41618658	91.42670203	87.62599572
200227A00052	2/27/2020	1.41	2/27/2023	2/27/2020	112.93813	110.1572499	107.4594401	104.8417278	102.3012625	99.83531366	97.44126499	95.11660858	92.85893982
200228A00015	3/3/2020	1.34	10/16/2023	3/3/2020	115.94596	112.3929727	108.9673742	105.6638327	102.4772749	99.40287193	96.43602612	93.57235801	90.80769448
200228A00031	2/28/2020	1.35	2/28/2024	2/28/2020	117.85847	113.8329486	109.9663501	106.2515388	102.6817385	99.25051395	95.95175169	92.77964215	89.72866261
200228A00039	2/28/2020	1.33	4/28/2023	2/28/2020	113.55849	110.582319	107.6994852	104.9064422	102.1998081	99.57635412	97.03299593	94.56678634	92.17490796
200228A00058	2/28/2020	1.31	2/28/2022	2/28/2020	107.55642	105.94592	104.368042	102.8218781	101.3065534	99.82122445	98.36507829	96.93733062	95.53722476
200228A00064	2/28/2020	1.35	2/28/2024	2/28/2020	117.85847	113.8329486	109.9663501	106.2515388	102.6817385	99.25051395	95.95175169	92.77964215	89.72866261
200302A00035	3/2/2020	1.22	7/3/2023	3/2/2020	114.13694	110.9454594	107.8592217	104.8742018	101.986551	99.19258798	96.48879039	93.8717875	91.33835259
200303A00007	3/3/2020	1.11	3/4/2024	3/3/2020	117.77287	113.712997	109.8144211	106.069853	102.4723754	99.01542121	95.69275411	92.49844968	89.42687798
200304A00010	3/4/2020	1.2	3/4/2027	3/4/2020	132.47336	124.2177552	116.5238931	109.3507491	102.6604994	96.41825278	90.59180872	85.1514368	80.06967514
200306A00012	3/6/2020	0.95	3/6/2024	3/6/2020	116.43442	112.4126768	108.550695	104.8412588	101.2775206	97.85297911	94.56146031	91.39709867	88.35432
200309A00005	3/9/2020	0.77	3/7/2025	3/9/2020	121.10945	115.7484993	110.6526157	105.8073259	101.1990221	96.81490738	92.64294359	88.67180177	84.89081668
200309A00019	3/9/2020	0.89	3/11/2024	3/9/2020	116.26704	112.2326337	108.3590098	104.6388867	101.0653509	97.63184003	94.33212335	91.16028255	88.11069441
200316A00064	3/16/2020	0.99	3/16/2022	3/16/2020	107.26385	105.6093549	103.988947	102.4016542	100.8465377	99.32269357	97.82925159	96.36537326	94.93025052
200317A00065	3/19/2020	2.05	3/19/2025	3/19/2020	126.59416	121.0960502	115.8687117	110.897359	106.1680948	101.6678521	97.38433931	93.30599064	89.4219187
200323A00010	3/23/2020	1.19	3/23/2022	3/23/2020	107.68025	106.0019041	104.3583881	102.7486943	101.1718529	99.62693077	98.11302994	96.62928562	95.17486486
200327A00026	3/27/2020	0.57	3/29/2021	3/27/2020	102.56492	101.9580745	101.3583751	100.7656966	100.1799164	99.60091484	99.02857477	98.46278187	97.90342437
200401A00020	4/1/2020	0.72	3/29/2022	4/1/2020	106.9877	105.2978524	103.6433151	102.0230514	100.4360691	98.8814142	97.35816882	95.86544953	94.40240571
200402A00011	4/2/2020	0.8	3/31/2023	4/2/2020	111.71008	108.8481776	106.0740804	103.3845465	100.7764738	98.24689605	95.79297555	93.41199658	91.10135932
200403A00006	4/3/2020	1.05	4/3/2025	4/3/2020	121.77598	116.3427098	111.1805993	106.2746814	101.6109018	97.17605442	92.95772489	88.94423885	85.12461361
200429A00009	4/29/2020	0.78	4/29/2025	4/29/2020	121.81388	116.2565437	110.9813532	105.9724734	101.2150482	96.69513506	92.39964241	88.31627308	84.43347122
200429A00047	5/1/2020	2.7	4/30/2025	5/1/2020	130.59822	124.8579071	119.4051919	114.2240579	109.2994713	104.6173175	100.1643386	95.92807693	91.89682158
200429A00052	5/1/2020	1.43	4/30/2024	5/1/2020	119.03094	114.7819502	110.7071851	106.7984929	103.0481528	99.44885162	95.99365987	92.67600869	89.48966875
200505A00006	5/5/2020	0.39	11/4/2021	5/5/2020	105.14272	103.8469183	102.5827258	101.3489952	100.1446378	98.96861623	97.81994135	96.69766964	95.60090046
200511A00022	5/11/2020	1.6	2/1/2030	5/11/2020	146.92298	134.1543897	122.5859222	112.0987653	102.5864209	93.95337138	86.11389794	78.99103177	72.51562193
200511A00028	5/13/2020	1.02	5/13/2024	5/13/2020	117.56561	113.3029978	109.2169727	105.2991866	101.5417406	97.93715773	94.47835731	91.15863128	87.97162195
200527A00021	5/27/2020	0.53	11/26/2021	5/27/2020	105.36667	104.0028694	102.6740087	101.3787605	100.1158642	98.8841216	97.68239293	96.50959334	95.36468967
200601A00009	6/1/2020	0.84	6/2/2025	6/1/2020	121.48014	115.8501968	110.5103541	105.4440837	100.6359	96.07128388	91.7366167	87.61911851	83.70679137
200604A00009	6/4/2020	0.7	6/4/2025	6/4/2020	121.8293	116.150156	110.7647526	105.6563151	100.8091233	96.20844005	91.84044338	87.69216408	83.75142792
200604A00013	6/4/2020	2.21	6/4/2035	6/4/2020	180.48837	157.5087351	137.717081	120.6522078	105.921856	93.19209674	82.17839794	72.63809798	64.36405773
200605A00007	6/5/2020	0.52	6/5/2023	6/5/2020	112.26791	109.1792781	106.1910422	103.2992698	100.5002164	97.79031189	95.16615064	92.62448269	90.16220518
200615A00004	6/15/2020	0.56	6/15/2022	6/15/2020	107.64289	105.7145321	103.8302249	101.9886196	100.1884241	98.4283966	96.70734382	95.02411815	93.37761568

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
200630A00004	6/30/2020	0.66	7/1/2024	6/30/2020	116.69002	112.2854382	108.068832	104.0312455	100.1641944	96.45963945	92.9099608	89.5079339	86.24670704
200720A00034	7/20/2020	0.77	7/21/2025	7/20/2020	121.61698	115.8198448	110.3286411	105.1257188	100.1945375	95.51958749	91.08631993	86.88108298	82.8910619
200720A00039	7/22/2020	2.48	7/21/2025	7/22/2020	130.86236	124.8293693	119.1112995	113.6900815	108.5487767	103.6714985	99.04334176	94.65031698	90.47928973
200817A00014	8/17/2020	0.51	8/17/2022	8/17/2020	108.28997	106.1658268	104.0940904	102.0731317	100.1013875	98.1773539	96.29958356	94.46668289	92.67730986
050923A00096	9/23/2005	4.86	9/22/2025	9/23/2005	146.61091	139.8984891	133.5431228	127.5237747	121.8207647	116.4156744	111.2912582	106.431363	101.8208525
051003A00008	10/3/2005	5.08	10/15/2020	10/3/2005	101.09275	100.9663016	100.8401804	100.7143895	100.5889277	100.4637935	100.3389856	100.2145028	100.0903438
051107A00074	11/7/2005	5.24	11/16/2020	11/7/2005	101.93944	101.7209422	101.5033956	101.2867944	101.0711324	100.8564034	100.6426012	100.4297199	100.2177533
100930A00008	9/30/2010	3.82	9/30/2025	9/30/2010	139.62119	133.1059402	126.9398724	121.102321	115.5739576	110.336697	105.3736099	100.6688427	96.20754344
101208A00006	12/8/2010	4.12	12/15/2020	12/8/2010	102.29992	101.9981029	101.6980798	101.3998339	101.1033495	100.8086108	100.5156024	100.224309	99.93471551
110805A00013	8/5/2011	3.43	8/16/2021	8/5/2011	107.00317	105.951678	104.920856	103.9101007	102.9188297	101.9464831	100.9925221	100.0564283	99.13770255
110805A00014	8/5/2011	4.06	8/17/2026	8/5/2011	147.80945	139.8613928	132.4016717	125.3975755	118.8187509	112.6370231	106.8262289	101.3620624	96.22193415
111006A00023	10/6/2011	3.81	10/15/2026	10/6/2011	147.30462	139.1491239	131.507277	124.3438284	117.6261399	111.3239748	105.4093085	99.85615442	94.64040545
120112A00013	1/12/2012	2.76	1/16/2024	1/12/2012	123.12628	119.1338949	115.2933092	111.5979429	108.0415361	104.618133	101.3220649	98.14793538	95.09060519
120228A00010	2/28/2012	2.34	3/2/2022	2/28/2012	109.48421	107.8472583	106.243576	104.6722341	103.1323352	101.6230143	100.1434379	98.692802	97.27033147
120330A00009	3/30/2012	2.98	3/30/2022	3/30/2012	110.72739	109.0024885	107.3135883	105.6596339	104.0396123	102.4525498	100.8975093	99.37358925	97.87992151
120824A00023	8/24/2012	2.4	8/30/2022	8/24/2012	112.41593	110.2083881	108.0560397	105.9571438	103.9100273	101.913082	99.96476084	98.06357577	96.20809466
121116A00006	11/16/2012	2.64	11/13/2025	11/16/2012	133.71795	127.2035699	121.0480249	115.2295488	109.7278242	104.5238731	99.59996103	94.93950791	90.52700636
130424A00004	4/24/2013	2.46	4/24/2025	4/24/2013	130.39431	124.6452948	119.1844648	113.9957754	109.0641637	104.3754873	99.9164617	95.6746037	91.63817807
130424A00005	4/24/2013	3.07	4/24/2030	4/24/2013	167.5012	153.2343896	140.3177856	128.6157721	118.0070475	108.383041	99.64651372	91.71032176	84.49631939
130513A00007	5/13/2013	2.54	5/15/2023	5/13/2013	117.27999	114.1977625	111.21322	108.3225979	105.5223078	102.8089264	100.1791869	97.62997022	95.15829715
130517A00013	5/17/2013	2.07	5/17/2022	5/17/2013	110.34637	108.4732613	106.6417194	104.8504303	103.0981342	101.3836244	99.70574463	98.0633861	96.45548526
130926A00009	9/26/2013	4	10/2/2028	9/26/2013	165.77347	153.992189	143.1575517	133.1879221	124.0091314	115.5537568	107.7604741	100.5734758	93.94194727
131210A00003	12/10/2013	2.67	12/15/2020	12/10/2013	101.90982	101.6083164	101.308608	101.0106815	100.7145208	100.42011	100.1274337	99.83647638	99.54722281
140113A00012	1/13/2014	3.48	1/17/2023	1/13/2014	117.55207	114.8490448	112.2226982	109.6704176	107.1896954	104.778124	102.4333912	100.1532759	97.93564374
140423A00035	4/23/2014	2.71	4/23/2021	4/23/2014	104.19911	103.5129596	102.8358353	102.1675596	101.5079597	100.8568676	100.2141191	99.57955468	98.95301861
140820A00025	8/20/2014	2.59	8/19/2022	8/20/2014	113.02458	110.8367047	108.7028551	106.6213514	104.5905755	102.6089707	100.6750393	98.78733963	96.94448383
140911A00027	9/11/2014	3.18	9/16/2024	9/11/2014	128.69806	123.7882705	119.0957237	114.6095987	110.3196762	106.216301	102.2903472	98.53318596	94.93665605
051230A00040	12/30/2005	5.16	12/30/2020	12/30/2005	102.97861	102.6322153	102.2881515	101.9463917	101.6069128	101.2696922	100.9347074	100.6019363	100.2713571
061221A00005	12/21/2006	5.28	12/30/2021	12/21/2006	112.19629	110.7362163	109.3029392	107.8957755	106.5140627	105.1571601	103.8244481	102.5153276	101.2292188
081215A00091	12/15/2008	4.19	12/15/2023	12/15/2008	127.61027	123.6453055	119.8271416	116.1494702	112.6062929	109.1919059	105.9008832	102.7280616	99.66852565
100809A00029	8/9/2010	4.23	8/15/2025	8/9/2010	140.88937	134.5094635	128.4633778	122.7318094	117.296674	112.1410222	107.2489628	102.6055905	98.19692037
110524A00009	5/24/2011	3.64	6/1/2021	5/24/2011	105.74763	104.9356021	104.1360428	103.348666	102.5731947	101.8093604	101.0569024	100.3155679	99.58511149
110601A00013	6/1/2011	3.49	6/15/2021	6/1/2011	105.92542	105.0695507	104.227521	103.3989972	102.5836559	101.7811838	100.9912776	100.2136434	99.44799653

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
110802A00008	8/2/2011	3.34	8/16/2021	8/2/2011	107.08236	106.0279484	104.9942994	103.9808082	102.9868888	102.0119778	101.0555331	100.1170332	99.19597589
111031A00013	10/31/2011	2.82	11/1/2021	10/31/2011	108.05831	106.7529978	105.4791451	104.2356245	103.0213624	101.8353354	100.6765673	99.54412636	98.43712303
111223A00006	12/23/2011	2.98	12/30/2021	12/23/2011	109.00941	107.5728153	106.1625958	104.7780817	103.418622	102.0835875	100.7723695	99.48437916	98.2190468
120709A00016	7/9/2012	3.2	7/15/2027	7/9/2012	147.95075	138.7296871	130.1537799	122.1744201	114.7469021	107.8300907	101.3861193	95.38011432	89.77994457
120907A00024	9/7/2012	2.31	9/16/2024	9/7/2012	125.76702	120.8936436	116.2372944	111.7871135	107.5328497	103.4648193	99.57387171	95.85135667	92.28909412
130117A00010	1/17/2013	1.98	1/31/2022	1/17/2013	108.39241	106.8629497	105.3628748	103.8914134	102.4478162	101.0313599	99.64134524	98.27709691	96.93796191
130211A00017	2/11/2013	3.27	2/15/2028	2/11/2013	152.40795	142.1903139	132.7408667	123.9976128	115.9038707	108.4077921	101.4619261	95.02282513	89.05068793
130213A00039	2/13/2013	1.92	2/16/2021	2/13/2013	102.63136	102.1459802	101.6651839	101.1889109	100.7170977	100.2496816	99.78660138	99.32779682	98.87320882
130314A00027	3/14/2013	2.38	3/15/2023	3/14/2013	116.31406	113.4270649	110.6273572	107.9117527	105.2772092	102.7208158	100.2397853	97.83144897	95.49324988
130509A00004	5/9/2013	2.4	5/15/2023	5/9/2013	116.8764	113.7999492	110.8210407	107.935917	105.140994	102.4328529	99.8082308	97.26401255	94.79722266
130523A00042	5/28/2013	2.38	5/23/2022	5/28/2013	110.67739	108.7890894	106.942897	105.137473	103.3715335	101.643849	99.95324153	98.29858209	96.67878792
130712A00004	7/12/2013	2.82	7/15/2021	7/12/2013	105.95313	105.0044804	104.0727979	103.1576336	102.2585509	101.3751281	100.5069586	99.65364924	98.81482076
130821A00018	8/21/2013	3.37	8/30/2022	8/21/2013	114.87123	112.6294618	110.4437647	108.3123655	106.2335615	104.2057161	102.2272553	100.2966652	98.41248908
131106A00003	11/6/2013	3.57	11/15/2023	11/6/2013	124.05371	120.2677402	116.6192941	113.1024975	109.711771	106.4418114	103.2875757	100.2442664	97.30731767
131113A00040	11/13/2013	2.8	11/16/2020	11/13/2013	101.38563	101.1682965	100.951907	100.736455	100.5219346	100.3083395	100.0956637	99.88390134	99.6730464
131217A00024	12/17/2013	4.34	1/2/2029	12/17/2013	168.64744	156.4675217	145.2866139	135.0168715	125.578619	116.8995518	108.9140198	101.5623829	94.79043279
140204A00007	2/4/2014	2.68	2/16/2021	2/4/2014	102.99179	102.5053916	102.023586	101.5463107	101.0735019	100.6050971	100.1410349	99.68125484	99.22569793
001003A00016	10/3/2000	7.13	10/5/2020	10/3/2000	101.04856	100.9502978	100.8522378	100.7543757	100.6567109	100.5592427	100.4619706	100.3648939	100.2680121
011107A00022	11/7/2001	5.56	11/5/2021	11/7/2001	111.28535	109.9491755	108.6453025	107.3725712	106.1298731	104.9161515	103.730399	102.5716543	101.4390001
020916A00006	9/16/2002	5.38	9/16/2022	9/16/2002	119.12994	116.7961491	114.5213009	112.3035043	110.1409389	108.0318566	105.9745778	103.9674885	102.0090368
051107A00075	11/7/2005	5.29	11/17/2025	11/7/2005	150.53561	143.5048742	136.8566815	130.56793	124.6170532	118.9839048	113.6496572	108.5967067	103.8085869
060908A00017	9/8/2006	5.27	9/15/2021	9/8/2006	109.78797	108.6230121	107.4829073	106.3668679	105.2741361	104.2039855	103.1557199	102.1286712	101.1221985
071231A00068	12/31/2007	4.93	12/30/2022	12/31/2007	121.26796	118.5654171	115.9380191	113.3832449	110.8986741	108.4819815	106.1309331	103.8433816	101.6172626
101130A00010	11/30/2010	3.25	11/30/2020	11/30/2010	101.78672	101.5285639	101.2717089	101.0161499	100.761877	100.5088807	100.2571512	100.0066792	99.75745535
110113A00008	1/13/2011	4.15	1/15/2021	1/13/2011	102.9867	102.59376	102.2038274	101.8168706	101.4328555	101.0517484	100.6735164	100.2981267	99.92554746
110302A00006	3/2/2011	4.26	3/15/2021	3/2/2011	104.34748	103.7772548	103.2132769	102.6554434	102.1036542	101.5578111	101.0178182	100.4835816	99.95500928
110818A00006	8/18/2011	3.09	8/30/2021	8/18/2011	106.93937	105.8443903	104.7717981	103.7209166	102.6910914	101.6816944	100.6921222	99.72179485	98.77015497
110824A00004	8/24/2011	3.11	8/30/2023	8/24/2011	121.6339	118.1256675	114.7386233	111.467886	108.3087973	105.2569138	102.3079962	99.45799774	96.70305489
111024A00022	10/24/2011	3.11	10/30/2023	10/24/2011	122.84895	119.1201544	115.5257292	112.059992	108.7175426	105.4932444	102.3822102	99.37978756	96.48154614
111201A00005	12/1/2011	3.16	12/15/2021	12/1/2011	109.0445	107.6249677	106.2366481	104.8785087	103.549567	102.2488834	100.9755587	99.72873225	98.50757956
120126A00006	1/26/2012	2.93	1/31/2022	1/26/2012	109.53022	107.9962611	106.4916967	105.0157558	103.5676906	102.1467784	100.7523211	99.38364396	98.04009473
120202A00020	2/2/2012	2.7	2/15/2022	2/2/2012	109.47731	107.8941107	106.3421671	104.8206304	103.328682	101.8655317	100.4304172	99.02260225	97.64137619
120209A00012	2/9/2012	2.27	2/16/2021	2/9/2012	102.86157	102.3747597	101.8925608	101.4149066	100.9417331	100.4729773	100.0085774	99.54847277	99.09260389

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
120306A00004	3/6/2012	2.95	3/15/2023	3/6/2012	117.31494	114.4260789	111.6242256	108.9062225	106.2690459	103.7098015	101.2257184	98.81414248	96.47253073
120307A00002	3/7/2012	2.21	3/15/2021	3/7/2012	103.29342	102.7256348	102.1640882	101.6086822	101.059316	100.5158915	99.97831245	99.44648464	98.92031596
120312A00009	3/12/2012	2.72	3/15/2024	3/12/2012	124.10559	119.8925485	115.8467855	111.9607109	108.2271267	104.6392023	101.1904527	97.87471945	94.68615201
120320A00005	3/20/2012	3.18	3/30/2022	3/20/2012	111.05726	109.3295216	107.6378374	105.98115	104.3584451	102.7687473	101.2111185	99.68465573	98.18848956
120411A00013	4/11/2012	3.59	4/15/2027	4/11/2012	149.26714	140.34752	132.0306027	124.2722746	117.0318856	110.2719582	103.9579233	98.05787906	92.54237144
120517A00007	5/17/2012	2.42	5/31/2023	5/17/2012	117.79271	114.6394227	111.5876617	108.6334479	105.7729898	103.0026746	100.3190576	97.71885324	95.19892599
120726A00001	7/26/2012	2.36	8/1/2022	7/26/2012	111.83393	109.7214623	107.6598334	105.6475063	103.6829983	101.7648813	99.89177933	98.06236663	96.27536523
001003A00018	10/3/2000	7.13	10/5/2020	10/3/2000	101.04856	100.9502978	100.8522378	100.7543757	100.6567109	100.5592427	100.4619706	100.3648939	100.2680121
020920A00012	9/20/2002	5.4	9/20/2022	9/20/2002	119.27863	116.9304123	114.6417188	112.4106255	110.2352859	108.113927	106.0448462	104.0264072	102.0570374
060308A00014	3/8/2006	5.44	3/16/2026	3/8/2006	153.13245	145.6119577	138.5215187	131.8340427	125.5242948	119.5687573	113.9455037	108.6340823	103.6154095
060808A00022	8/8/2006	5.57	6/15/2026	8/8/2006	156.30688	148.340811	140.8469184	133.7944446	127.1548071	120.9014302	115.0095934	109.456292	104.2201083
081219A00069	12/19/2008	4.26	12/22/2023	12/19/2008	127.27886	123.3148431	119.4978217	115.8215057	112.2799158	108.8673625	105.5784299	102.4079609	99.351043
091210A00005	12/10/2009	5.08	12/16/2024	12/10/2009	139.41323	133.9506299	128.7394465	123.7666649	119.0200198	114.4879475	110.1595416	106.0245121	102.0731463
101006A00011	10/6/2010	2.9	10/15/2020	10/6/2010	100.83857	100.7122055	100.5861732	100.4604732	100.3351042	100.2100649	100.0853539	99.96096989	99.8369115
110103A00009	1/3/2011	3.99	1/3/2022	1/3/2011	110.74643	109.2827888	107.8458828	106.4350352	105.0495954	103.6889339	102.3524416	101.0395289	99.74962478
110104A00019	1/4/2011	3.78	1/15/2021	1/4/2011	102.89635	102.503014	102.1127037	101.7253799	101.3410083	100.959555	100.5809867	100.2052706	99.8323744
111006A00021	10/6/2011	2.93	10/15/2020	10/6/2011	100.82291	100.696758	100.5709386	100.4454489	100.3202875	100.1954531	100.0709444	99.94676006	99.82289879
121116A00022	11/16/2012	2.78	11/16/2029	11/16/2012	161.39824	148.1052449	136.0235888	125.0360471	115.0373335	105.9328276	97.63744195	90.0746149	83.1754145
130211A00015	2/11/2013	1.88	2/16/2021	2/11/2013	102.6124	102.1270639	101.6463206	101.1701004	100.6983395	100.2309755	99.76794698	99.30919376	98.85465676
130212A00017	2/12/2013	2.29	2/15/2023	2/12/2013	115.05289	112.2856849	109.5998024	106.9923766	104.460658	102.0020109	99.61390807	97.29392537	95.03973698
130920A00020	9/20/2013	2.71	9/30/2020	9/20/2013	100.54298	100.4590906	100.3753442	100.2917364	100.2082668	100.1249351	100.041741	99.95868415	99.87576422
131003A00005	10/3/2013	2.65	10/15/2020	10/3/2013	100.80719	100.6808579	100.5548607	100.4291958	100.3038618	100.1788574	100.0541813	99.92983199	99.80580827
131024A00019	10/24/2013	3.23	10/30/2023	10/24/2013	123.25826	119.5226263	115.9215504	112.4493418	109.1005936	105.8701635	102.7531583	99.74492005	96.84101321
140307A00010	3/7/2014	2.63	3/15/2021	3/7/2014	103.52484	102.9563075	102.3940261	101.837891	101.2878016	100.7436593	100.2053681	99.67283357	99.14596361
140827A00037	8/27/2014	2.55	8/30/2021	8/27/2014	106.38238	105.2905234	104.2210099	103.1731635	102.146331	101.1398851	100.1532233	99.18576688	98.23695914
140908A00062	9/8/2014	2.45	5/28/2021	9/8/2014	104.64299	103.8494068	103.0678316	102.2979923	101.539626	100.7924776	100.0562998	99.33085215	98.6159015
140908A00065	9/8/2014	2.63	2/28/2022	9/8/2014	109.61715	107.989785	106.3953491	104.8329262	103.3016328	101.8006175	100.3290594	98.8861666	97.47117523
150105A00027	1/5/2015	2.23	1/5/2022	1/5/2015	108.31825	106.8667228	105.4418116	104.0428447	102.6691731	101.320169	99.99522486	98.69375256	97.41518274
150112A00014	1/12/2015	1.86	1/15/2021	1/12/2015	102.15916	101.7675726	101.3790012	100.9934064	100.610754	100.2310102	99.85414184	99.48011618	99.108901
150407A00008	4/7/2015	1.78	4/7/2021	4/7/2015	103.42395	102.7873209	102.1585092	101.5373759	100.9237807	100.3175869	99.71866124	99.1268734	98.54209627
011029A00020	10/29/2001	5.73	10/29/2021	10/29/2001	111.51061	110.1925072	108.9057832	107.6493224	106.4220639	105.2229958	104.0511527	102.9056127	101.7854953
050912A00098	9/12/2005	4.74	9/21/2020	9/12/2005	100.4988	100.4400201	100.3813245	100.3227115	100.2641807	100.2057321	100.1473653	100.0890804	100.030877
050916A00047	9/16/2005	4.98	9/21/2020	9/16/2005	100.50248	100.4437951	100.3851955	100.3266771	100.2682399	100.2098836	100.151608	100.0934131	100.0352986

Classification | Public

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
080909A00042	9/9/2008	4.74	9/11/2023	9/9/2008	127.18556	123.5485715	120.0375659	116.6474249	113.373275	110.2104699	107.1545784	104.201373	101.3468191
080910A00065	9/10/2008	5.03	9/15/2023	9/10/2008	127.5527	123.9122154	120.3977772	117.0042697	113.7268153	110.5607639	107.5016808	104.5453355	101.6876905
081211A00029	12/11/2008	4.57	12/15/2023	12/11/2008	128.21872	124.2614278	120.450134	116.7785813	113.2408207	109.8311946	106.5443203	103.3750746	100.3185801
091112A00011	11/12/2009	4.77	11/15/2024	11/12/2009	138.19052	132.837595	127.7280469	122.8493454	118.1896851	113.7379383	109.4836116	105.4168056	101.5281771
101101A00006	11/1/2010	3.34	11/16/2020	11/1/2010	101.50178	101.2842678	101.0676997	100.8520698	100.6373719	100.4236001	100.2107482	99.99881031	99.78778044
110810A00020	8/10/2011	2.86	8/16/2021	8/10/2011	106.60622	105.5543805	104.5232775	103.5122975	102.5208554	101.5483884	100.5943552	99.65823506	98.73952653
111024A00009	10/24/2011	2.65	10/30/2020	10/24/2011	101.07667	100.9077713	100.7394392	100.5716687	100.4044569	100.2378011	100.0716986	99.90614648	99.74114216
111024A00010	10/24/2011	3.11	10/30/2023	10/24/2011	122.84895	119.1201544	115.5257292	112.059992	108.7175426	105.4932444	102.3822102	99.37978756	96.48154614
111024A00021	10/24/2011	2.65	10/30/2020	10/24/2011	101.07667	100.9077713	100.7394392	100.5716687	100.4044569	100.2378011	100.0716986	99.90614648	99.74114216
111024A00026	10/24/2011	2.65	10/30/2020	10/24/2011	101.07667	100.9077713	100.7394392	100.5716687	100.4044569	100.2378011	100.0716986	99.90614648	99.74114216
111216A00001	12/16/2011	3.95	12/30/2031	12/16/2011	187.18229	169.3264623	153.3908374	139.1565388	126.4307685	115.0435771	104.8450493	95.70284761	87.50006924
120113A00012	1/13/2012	3.62	1/15/2027	1/13/2012	147.74615	139.2294662	131.2686457	123.8243925	116.8603864	110.3430421	104.2412904	98.52637667	93.17167826
120315A00021	3/15/2012	3.12	3/15/2022	3/15/2012	110.6701	108.989898	107.3442174	105.7320711	104.1525099	102.6046199	101.087521	99.60036548	98.14233607
120515A00020	5/15/2012	2.28	5/16/2022	5/15/2012	110.70556	108.8321234	107.000198	105.2084742	103.4556957	101.7406592	100.0622114	98.41924648	96.81070359
120601A00012	6/1/2012	1.93	6/15/2021	6/1/2012	104.65626	103.8061292	102.9697723	102.146857	101.3370612	100.5400729	99.75558974	98.98331911	98.22297732
120709A00015	7/9/2012	2.5	7/15/2022	7/9/2012	111.81637	109.7559183	107.7439449	105.7790128	103.8597393	101.9847911	100.1528829	98.36277454	96.61326998
121031A00004	10/31/2012	2.07	10/31/2022	10/31/2012	113.17846	110.7631279	108.4119946	106.1228712	103.8936624	101.7223622	99.60704922	97.54588191	95.53709486
121116A00021	11/16/2012	2.35	11/17/2025	11/16/2012	133.40046	126.8372781	120.6377667	114.7797583	109.2425622	104.0068588	99.05460075	94.36892129	89.93405035
130405A00006	4/5/2013	2.41	4/7/2025	4/5/2013	129.83328	124.1585311	118.765886	113.6397676	108.7655518	104.129499	99.71869529	95.5209981	91.52498571
130530A00008	5/30/2013	2.29	6/1/2021	5/30/2013	104.58976	103.7842731	102.9911548	102.2101207	101.4408962	100.6832152	99.93681954	99.20145852	98.47688896
010824A00028	8/24/2001	6.24	8/24/2021	8/24/2001	110.0169	108.923701	107.8523862	106.8023049	105.7728287	104.7633536	103.7732994	102.8021078	101.8492418
011107A00031	11/7/2001	5.56	11/5/2021	11/7/2001	111.28535	109.9491755	108.6453025	107.3725712	106.1298731	104.9161515	103.730399	102.5716543	101.4390001
050902A00032	9/2/2005	4.69	8/22/2025	9/2/2005	144.87395	138.32447	132.1187471	126.2368154	120.6599732	115.3706991	110.3525713	105.5901925	101.0691205
050923A00095	9/23/2005	4.77	9/21/2020	9/23/2005	100.50055	100.4417743	100.3830772	100.3244627	100.2659304	100.2074802	100.149112	100.0908256	100.0326207
051003A00009	10/3/2005	5.15	10/15/2025	10/3/2005	147.49986	140.7203176	134.3036637	128.2283665	122.4742904	117.0226011	111.8556743	106.9570103	102.3111569
081205A00033	12/5/2008	4.77	12/7/2023	12/5/2008	128.73349	124.7937289	120.9985655	117.341783	113.8174756	110.4200306	107.1441112	103.9846409	100.9367891
100923A00051	9/23/2010	3.4	9/30/2021	9/23/2010	107.89482	106.6962092	105.5242138	104.3779552	103.2565925	102.1593209	101.08537	100.0340019	99.00450951
110222A00011	2/22/2011	4.35	3/2/2021	2/22/2011	104.10013	103.5693263	103.0439388	102.5238817	102.0090742	101.4994371	100.9948927	100.4953651	100.0007796
110818A00012	8/18/2011	2.86	8/31/2022	8/18/2011	113.81592	111.5823887	109.4048409	107.281509	105.2106902	103.1907478	101.220108	99.29725702	97.42073841
110825A00016	8/25/2011	3.06	8/31/2022	8/25/2011	114.23792	111.9998516	109.8178589	107.6901719	105.6150851	103.5909593	101.6162182	99.68934571	97.80888317
120113A00013	1/13/2012	3.87	1/15/2032	1/13/2012	186.40775	168.5265631	152.5766423	138.3369906	125.6130379	114.2333582	104.0468074	94.92002909	86.73527718
120119A00010	1/18/2012	2.43	1/31/2022	1/18/2012	109.0589	107.5242249	106.0190342	104.5425483	103.0940156	101.6727099	100.2779298	98.90899761	97.56525807
120127A00018	1/27/2012	3.64	2/1/2027	1/27/2012	148.21548	139.6184627	131.5862358	124.0786042	117.0584386	110.491425	104.3458369	98.59232758	93.20374037

Classification | Public

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
121101A00011	11/1/2012	2.03	11/1/2022	11/1/2012	113.10368	110.6860347	108.332727	106.0415564	103.8104206	101.6373071	99.52028832	97.45751697	95.44722226
130107A00002	1/7/2013	3.22	1/18/2028	1/7/2013	151.4642	141.3953159	132.0763693	123.4474254	115.4536321	108.044768	101.1748294	94.80165639	88.88659349
130211A00025	2/11/2013	1.88	2/16/2021	2/11/2013	102.6124	102.1270639	101.6463206	101.1701004	100.6983395	100.2309755	99.76794698	99.30919376	98.85465676
130212A00015	2/12/2013	1.91	2/16/2021	2/12/2013	102.62662	102.1412511	101.6604681	101.1842083	100.7124081	100.2450051	99.78193778	99.32314605	98.86857081
130405A00007	4/5/2013	2.91	4/17/2028	4/5/2013	152.46616	141.9138877	132.1751701	123.1827904	114.8754301	107.1971222	100.0967575	93.52763841	87.44707631
130508A00013	5/8/2013	2.23	5/15/2023	5/8/2013	116.96079	113.87028	110.8780172	107.9802095	105.1732384	102.4536524	99.8181584	97.26361228	94.78701148
130531A00020	5/31/2013	2.5	5/30/2023	5/31/2013	118.00997	114.8566929	111.804834	108.8504214	105.9896716	103.2189787	100.534905	97.93417098	95.41364688
130702A00018	7/2/2013	3.17	7/17/2023	7/2/2013	120.94575	117.5924568	114.3506253	111.215943	108.1842849	105.2517083	102.4144435	99.66888566	97.0115861
140411A00009	4/11/2014	3.1	4/11/2024	4/11/2014	126.10387	121.7626428	117.5963357	113.5968755	109.7566158	106.0683081	102.5250787	99.12040618	95.84810177
140701A00002	7/1/2014	2.84	7/1/2022	7/1/2014	112.22378	110.2019869	108.2268421	106.2969917	104.4111299	102.567997	100.7663771	99.00509678	97.28302306
141024A00009	10/24/2014	2.05	10/26/2020	10/24/2014	100.91101	100.7535936	100.5966743	100.4402516	100.2843232	100.1288867	99.97393982	99.81948015	99.66550541
141028A00012	10/28/2014	2.73	10/28/2022	10/28/2014	114.18643	111.7775073	109.4322036	107.1483614	104.923917	102.7568937	100.6453975	98.58761291	96.58179874
141201A00024	12/1/2014	2.19	12/1/2020	12/1/2014	101.49916	101.2389953	100.9801608	100.7226451	100.4664384	100.2115305	99.95791182	99.70557253	99.45450302
150202A00018	2/2/2015	1.89	2/2/2021	2/2/2015	102.39888	101.9550674	101.5150938	101.078906	100.6464555	100.2176943	99.79257543	99.37105275	98.95308079
150220A00020	2/20/2015	2.42	2/18/2022	2/20/2015	109.10588	107.515737	105.9571777	104.4293361	102.93138	101.4625072	100.0219432	98.60894073	97.22277836
150220A00022	2/20/2015	2.8	2/20/2025	2/20/2015	129.90825	124.4248135	119.2065135	114.2391107	109.5092063	105.0041886	100.7121823	96.622001	92.72310444
150303A00011	3/3/2015	2.06	3/3/2021	3/3/2015	103.01008	102.4787294	101.9528493	101.4323566	100.9171687	100.4072048	99.90238566	99.40263377	98.90787306
150319A00012	3/19/2015	3.13	3/19/2029	3/19/2015	158.29294	146.2483666	135.2260392	125.1334213	115.8868226	107.4105076	99.63590034	92.50087365	85.94911155
150601A00405	6/1/2015	4.63	1/17/2034	6/1/2015	212.42966	189.4625471	169.3256971	151.6495058	136.114671	122.4451041	110.4018729	99.77802054	90.39412999
150601A00470	6/1/2015	2.98	5/31/2024	6/1/2015	126.43986	121.922337	117.5927772	113.4422022	109.4621281	105.6445304	101.9818156	98.46679503	95.09266006
150601A00608	6/1/2015	2.45	6/30/2021	6/1/2015	105.18304	104.2864398	103.4050804	102.5385719	101.6865417	100.8486292	100.0244861	99.21377516	98.4161702
150601A00640	6/1/2015	2.57	12/31/2021	6/1/2015	108.40261	106.9693296	105.5620244	104.1800482	102.8227748	101.4895983	100.1799316	98.89320648	97.6288724
150601A00644	6/1/2015	2.64	6/30/2022	6/1/2015	111.74898	109.7349109	107.7672606	105.8446872	103.965893	102.129626	100.3346779	98.57988221	96.86411279
150601A00650	6/1/2015	2.75	3/31/2023	6/1/2015	116.95759	114.0238994	111.179708	108.4217158	105.7467689	103.1518508	100.6340758	98.19068205	95.81902539
150601A00681	6/1/2015	2.7	2/7/2025	6/1/2015	128.97701	123.5649888	118.4126858	113.5062693	108.8327142	104.3797534	100.13583	96.09005196	92.23215087
150601A00688	6/1/2015	2.61	2/21/2025	6/1/2015	129.8359	124.319483	119.0708561	114.0755864	109.3200972	104.7916121	100.4781027	96.3682416	92.45135711
150601A00696	6/1/2015	2.83	3/13/2025	6/1/2015	130.24204	124.675989	119.3821424	114.3457057	109.5527733	104.9902667	100.6458804	96.50803204	92.56581592
150601A00825	6/1/2015	2.87	5/29/2025	6/1/2015	131.84316	125.9700605	120.3953405	115.1021283	110.0746087	105.2979497	100.7582353	96.44240252	92.33818438
150601A00839	6/1/2015	6.93	10/30/2020	6/1/2015	101.75018	101.5806853	101.4117529	101.2433807	101.075566	100.908306	100.7415981	100.5754394	100.4098274
150601A00940	6/1/2015	6.58	2/16/2021	6/1/2015	104.7925	104.3010191	103.8141675	103.3318809	102.854095	102.3807468	101.9117746	101.4471178	100.9867167
150601A01022	6/1/2015	5.28	2/22/2021	6/1/2015	104.33557	103.8276736	103.3247349	102.8266785	102.3334333	101.8449298	101.3610998	100.8818764	100.4071938
150623A00025	6/23/2015	2.65	6/30/2022	6/23/2015	111.84012	109.8251702	107.8566566	105.9332366	104.0536118	102.21653	100.4207822	98.6652017	96.94866179
150715A00009	7/15/2015	2.67	7/15/2022	7/15/2015	112.15055	110.0867349	108.0714593	106.1032896	104.1808409	102.3027783	100.4678147	98.67470833	96.92226152

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
020619A00062	6/19/2002	5.86	6/20/2022	6/19/2002	118.10897	116.0568122	114.0514782	112.0915597	110.1757032	108.3026073	106.4710193	104.6797334	102.9275883
020627A00001	6/27/2002	6.07	6/27/2022	6/27/2002	118.32522	116.2557214	114.2335788	112.2574079	110.3258725	108.4376845	106.591602	104.7864272	103.0210043
050927A00012	9/27/2005	5.06	9/21/2020	9/27/2005	100.50716	100.4484723	100.3898687	100.3313463	100.272905	100.2145447	100.1562651	100.0980662	100.0399477
060613A00029	6/13/2006	5.47	6/15/2021	6/13/2006	107.53628	106.6731241	105.8238943	104.988252	104.1658721	103.3564399	102.5596506	101.7752089	101.0028286
081217A00076	12/17/2008	3.86	12/22/2023	12/17/2008	126.59193	122.621546	118.7989297	115.1177414	111.5719533	108.1558304	104.8639145	101.6910088	98.63216402
090226A00006	2/26/2009	4.55	3/1/2024	2/26/2009	130.79446	126.5041594	122.3815105	118.4190008	114.609502	110.9462449	107.4227989	104.0330531	100.7711984
100824A00009	8/24/2010	3.91	9/2/2025	8/24/2010	139.52159	133.1116366	127.0407698	121.2891786	115.8383168	110.6708144	105.7703967	101.1218095	96.7107494
100930A00007	9/30/2010	3.27	9/30/2020	9/30/2010	100.57586	100.4920845	100.4084476	100.3249476	100.2415842	100.1583572	100.0752661	99.99231064	99.90949058
110201A00004	2/1/2011	4.25	2/16/2021	2/1/2011	103.73636	103.2478597	102.7639692	102.2846233	101.8097581	101.3393108	100.8732198	100.4114247	99.95386623
110302A00007	3/2/2011	4.86	3/16/2026	3/2/2011	149.54183	142.1249983	135.133827	128.5414535	122.3228552	116.4547141	110.9152918	105.684314	100.7428642
110505A00021	5/5/2011	4.08	5/17/2021	5/5/2011	105.63922	104.8748594	104.121576	103.3791336	102.647299	101.9258456	101.2145532	100.513208	99.82160202
110505A00022	5/5/2011	4.59	5/15/2026	5/5/2011	149.23985	141.6043248	134.4187472	127.6539707	121.2829035	115.2803511	109.6228728	104.288649	99.25736042
110822A00010	8/22/2011	2.8	8/30/2021	8/22/2011	106.81511	105.7181938	104.6437547	103.591109	102.5595988	101.5485924	100.557483	99.58568763	98.63264585
110919A00026	9/19/2011	2.66	9/30/2021	9/19/2011	107.25585	106.0581518	104.8871276	103.7418922	102.6216008	101.5254456	100.4526529	99.40248207	98.37422331
111024A00027	10/24/2011	3.11	10/30/2023	10/24/2011	122.84895	119.1201544	115.5257292	112.059992	108.7175426	105.4932444	102.3822102	99.37978756	96.48154614
120112A00014	1/12/2012	3.43	1/15/2032	1/12/2012	183.93288	166.0004557	150.0196644	135.7660348	123.0420479	111.6737753	101.5079517	92.40942433	84.25892873
120127A00019	1/27/2012	3.87	1/30/2032	1/27/2012	186.70476	168.7395466	152.7208789	138.4252928	125.6561355	114.2402206	104.0249174	94.87561462	86.67350748
120130A00009	1/30/2012	2.79	1/31/2022	1/30/2012	109.32315	107.790803	106.2878247	104.8134417	103.3669068	101.9474983	100.5545187	99.18729403	97.84517272
120928A00018	9/28/2012	1.87	9/30/2020	9/28/2012	100.45884	100.3751623	100.2916228	100.2082199	100.1249535	100.0418233	99.95882887	99.87596997	99.79324627
130107A00001	1/7/2013	2.53	1/17/2023	1/7/2013	115.15448	112.4818115	109.8851381	107.3618726	104.9095276	102.5257153	100.2081421	97.95460492	95.76298689
130501A00013	5/1/2013	1.82	5/3/2021	5/1/2013	103.76794	103.0534361	102.3487339	101.6536364	100.9679484	100.2914797	99.62404554	98.96546586	98.3155654
130531A00021	5/31/2013	3.22	5/30/2028	5/31/2013	156.02486	145.1589783	135.1397461	125.8963669	117.3643429	109.4848792	102.2043492	95.47381346	89.24858563
130606A00013	6/6/2013	2.94	6/15/2023	6/6/2013	119.01427	115.8078745	112.705325	109.7026168	106.7959287	103.9816121	101.2561817	98.61630686	96.05880383
010824A00019	8/24/2001	6.24	8/24/2021	8/24/2001	110.0169	108.923701	107.8523862	106.8023049	105.7728287	104.7633536	103.7732994	102.8021078	101.8492418
060613A00028	6/13/2006	5.47	6/15/2021	6/13/2006	107.53628	106.6731241	105.8238943	104.988252	104.1658721	103.3564399	102.5596506	101.7752089	101.0028286
061220A00034	12/20/2006	5.07	12/30/2021	12/20/2006	112.16085	110.6969681	109.2600204	107.8493119	106.4641749	105.1039646	103.768057	102.4558491	101.1667573
081209A00008	12/9/2008	4.87	12/15/2023	12/9/2008	129.28175	125.3060678	121.4768936	117.7879546	114.2332842	110.8072077	107.5043261	104.3195009	101.2478395
110527A00007	5/27/2011	3.98	6/1/2021	5/27/2011	105.89602	105.0849155	104.2862398	103.499708	102.7250447	101.9619825	101.2102622	100.4696323	99.73984851
111006A00022	10/6/2011	3.08	10/15/2021	10/6/2011	107.83166	106.5854897	105.3681032	104.1785075	103.0157584	101.878954	100.7672324	99.67976966	98.61577751
120411A00012	4/11/2012	2.87	4/15/2022	4/11/2012	110.84885	109.0738909	107.3366987	105.636135	103.97111	102.3405772	100.7435312	99.17900537	97.64607051
120503A00014	5/3/2012	2.4	5/16/2022	5/3/2012	110.92047	109.0450398	107.2111596	105.4175178	103.6628572	101.9459732	100.2657118	98.62096607	97.01067427
120718A00011	7/18/2012	2.29	7/30/2021	7/18/2012	105.59107	104.5999437	103.6273559	102.6727938	101.7357601	100.8157755	99.91237809	99.02512257	98.15357935
120907A00022	9/7/2012	1.88	9/15/2021	9/7/2012	106.13106	104.9875333	103.8685419	102.7733035	101.7010681	100.6511167	99.62276013	98.61533751	97.62821454

	Parallel-Shift Sensitivity Analysis												
8/31/2020					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	112.36169	110.0970062	107.8899687	105.7387168	103.6414648	101.5964977	99.60216833	97.65689363	95.75915185
121116A00007	11/16/2012	1.99	11/16/2021	11/16/2012	107.07933	105.7358056	104.4258339	103.1481743	101.9016429	100.6851127	99.49751066	98.33781444	97.20504929
121121A00003	11/21/2012	2.3	11/30/2022	11/21/2012	113.7711	111.2627818	108.8230455	106.4494746	104.1397581	101.8916874	99.70315092	97.57212838	95.49668632
130117A00011	1/17/2013	2.18	1/30/2023	1/17/2013	114.99052	112.2686586	109.6254999	107.0583173	104.5644933	102.1415168	99.78697826	97.49856444	95.27405438
130212A00016	2/12/2013	2.13	2/15/2022	2/12/2013	108.60916	107.0329165	105.4878038	103.9729755	102.4876163	101.0309394	99.60218571	98.20062223	96.82554115
130528A00028	5/28/2013	2.63	5/30/2023	5/28/2013	117.80453	114.667439	111.6309899	108.6912505	105.8444747	103.0870921	100.4156981	97.82704451	95.31803115
130531A00019	5/31/2013	2.09	6/1/2021	5/31/2013	104.54885	103.7419845	102.9475334	102.1652097	101.3947375	100.6358491	99.88828485	99.15179286	98.42612861
131011A00006	10/11/2013	3.28	10/15/2021	10/11/2013	108.06457	106.8169424	105.5981146	104.4071005	103.2429553	102.1047765	100.9917017	99.90290637	98.83760169
131029A00011	10/29/2013	2.47	10/30/2020	10/29/2013	101.04652	100.8776655	100.7093716	100.5416391	100.3744652	100.2078472	100.0417823	99.87626786	99.71130103
140113A00011	1/13/2014	2.88	1/15/2021	1/13/2014	102.49924	102.1074471	101.7186627	101.3328477	100.9499679	100.5699897	100.1928803	99.818607	99.44713787
140131A00024	1/31/2014	2.71	2/1/2021	1/31/2014	102.73737	102.2956071	101.8576332	101.4233994	100.9928581	100.5659623	100.1426661	99.72292402	99.30669155
140922A00026	9/22/2014	3.02	9/30/2024	9/22/2014	129.19201	124.1969224	119.4251765	114.8655264	110.5073626	106.3406678	102.3559802	98.54435951	94.89735474
141009A00029	10/9/2014	3.5	10/9/2029	10/9/2014	165.843	152.6219855	140.5822704	129.6113602	119.6080509	110.48124	102.1488692	94.53698195	87.57888494
140307A00011	3/7/2014	3.19	3/15/2023	3/7/2014	118.50383	115.587298	112.7587417	110.014956	107.3528778	104.7695756	102.2622428	99.82819194	97.46484808
140313A00030	3/13/2014	3.27	3/15/2024	3/13/2014	126.21833	121.9659262	117.8819609	113.9588021	110.1892101	106.5663137	103.0835898	99.73484337	96.51418886
140521A00019	5/21/2014	3.43	5/22/2028	5/21/2014	157.75899	146.8549133	136.7967672	127.5140684	118.9425782	111.0237192	103.7040469	96.93477324	90.67133659
140626A00036	6/26/2014	3.55	6/26/2029	6/26/2014	166.9343	153.9775264	142.1480884	131.3413936	121.4630819	112.4279718	104.1591246	96.5870069	89.6487437
140815A00029	8/15/2014	2.56	10/15/2021	8/15/2014	107.22607	105.9837126	104.7700735	103.5841657	102.4250464	101.2918154	100.1836122	99.09961423	98.03903463
140815A00030	8/15/2014	2.96	10/16/2023	8/15/2014	121.38426	117.7417404	114.2290193	110.840675	107.5715531	104.4167472	101.3715853	98.43161682	95.59260035
140930A00030	9/30/2014	2.36	9/30/2020	9/30/2014	100.4998	100.4160851	100.3325115	100.2490746	100.1657743	100.0826101	99.99958189	99.9166892	99.83393178
141009A00027	10/9/2014	2.69	10/11/2022	10/9/2014	113.78999	111.4374541	109.146056	106.9137648	104.7386343	102.6187987	100.5524679	98.53792443	96.57351949
141015A00025	10/15/2014	2.48	10/17/2022	10/15/2014	113.42591	111.0592344	108.7544415	106.509464	104.322318	102.1911023	100.1139936	98.08924338	96.11517341
141024A00008	10/24/2014	2.52	10/24/2022	10/24/2014	114.08406	111.6796994	109.338762	107.0591045	104.8386735	102.675502	100.5677054	98.51347643	96.51108203
141128A00003	11/28/2014	2.62	11/30/2023	11/28/2014	121.75602	117.9410848	114.2670682	110.7278582	107.3176496	104.03093	100.8624622	97.80726861	94.86061577
150316A00043	3/16/2015	2.37	3/16/2023	3/16/2015	116.30449	113.4145164	110.6119858	107.8937088	105.2566352	102.697846	100.2145471	97.80406268	95.4638295
150317A00012	3/17/2015	2.46	3/18/2024	3/17/2015	123.16007	118.9548201	114.9170268	111.0390714	107.3137317	103.7341548	100.2938358	96.98659789	93.80657393
150413A00034	4/13/2015	2.25	4/13/2022	4/13/2015	109.76273	108.0034691	106.2815733	104.5959216	102.9454387	101.3290921	99.74588955	98.19487723	96.67513773
150422A00017	4/22/2015	2.16	4/22/2022	4/22/2015	109.76248	107.9757135	106.2273148	104.5161136	102.8409906	101.2008717	99.59472557	98.02156119	96.48042626
150422A00019	4/22/2015	2.62	4/22/2025	4/22/2015	130.04502	124.3464076	118.9322921	113.7868851	108.8953696	104.2438303	99.81919295	95.60916891	91.60220308
150601A00148	6/1/2015	3.45	7/30/2021	6/1/2015	106.78627	105.7867903	104.8060046	103.843396	102.8984623	101.97072	101.0597029	100.1649618	99.28606299
150601A00149	6/1/2015	3.45	7/30/2021	6/1/2015	106.78627	105.7867903	104.8060046	103.843396	102.8984623	101.97072	101.0597029	100.1649618	99.28606299
150601A00222	6/1/2015	2.2	9/27/2022	6/1/2015	112.39836	110.1041426	107.8688204	105.6904719	103.5672516	101.4973883	99.47918156	97.51099845	95.59126995
150601A00531	6/1/2015	3.28	7/24/2024	6/1/2015	127.86778	123.1604398	118.6544983	114.3402717	110.2085897	106.2507691	102.4585858	98.8242474	95.34036885

Classification | Public

	Parallel-Shift Sensitivity Analysis												
8/31/2020					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	100.48916	100.4054608	100.321896	100.238468	100.1551765	100.0720211	99.98900165	99.90611773	99.82336907
150601A00634	6/1/2015	2.39	3/31/2021	6/1/2015	103.5663	102.9512261	102.3434365	101.7428	101.149191	100.5624869	99.98256783	99.40931676	98.84261931
150601A00642	6/1/2015	2.6	3/31/2022	6/1/2015	110.05706	108.3349702	106.6488756	104.9977169	103.3804799	101.7961897	100.2439083	98.72273304	97.231795
121227A00024	12/27/2012	2.2	12/30/2021	12/27/2012	107.92865	106.5000097	105.0976098	103.7207768	102.3688639	101.0412455	99.73731671	98.4564923	97.19820588
130523A00038	5/28/2013	2.58	5/23/2023	5/28/2013	117.53544	114.4243281	111.4124626	108.4959915	105.6712431	102.9347163	100.2830714	97.71312112	95.22182223
130821A00019	8/21/2013	3.81	8/29/2025	8/21/2013	140.15368	133.7014265	127.5907939	121.8018126	116.3157866	111.1152065	106.1836673	101.5057933	97.0671679
131217A00023	12/17/2013	3.74	1/2/2024	12/17/2013	125.65663	121.6848429	117.8615968	114.1805457	110.6356497	107.2211579	103.9315928	100.7617358	97.70661374
140423A00036	4/23/2014	4.03	4/23/2029	4/23/2014	167.98786	155.3673054	143.8187917	133.2448143	123.5572518	114.6764132	106.5301892	99.05329331	92.18658187
140710A00026	7/10/2014	2.36	7/15/2021	7/10/2014	105.53925	104.5926491	103.6629917	102.7498274	101.8527199	100.9712482	100.105006	99.25360086	98.41665383
140710A00027	7/10/2014	2.8	7/17/2023	7/10/2014	119.80443	116.4685127	113.2436216	110.1254535	107.1098977	104.1930251	101.3710793	98.64046804	95.99775471
140820A00026	8/20/2014	2.94	8/19/2024	8/20/2014	128.01078	123.1867909	118.5734461	114.1604063	109.9378948	105.8966659	102.0279725	98.32353692	94.775523
140827A00038	8/27/2014	3.07	8/30/2024	8/27/2014	127.88413	123.0501875	118.4282546	114.0078721	109.7791557	105.7327604	101.8598481	98.15205713	94.60147409
140908A00061	9/8/2014	2.39	2/26/2021	9/8/2014	103.02444	102.5086203	101.9979563	101.4923673	100.991778	100.4961146	100.0053046	99.5192772	99.03796271
140908A00064	9/8/2014	2.57	11/30/2021	9/8/2014	108.0643	106.6689853	105.3095818	103.9847187	102.6930926	101.4334648	100.2046577	99.0055506	97.83507668
141009A00026	10/9/2014	2.23	10/9/2020	10/9/2014	100.63692	100.5278206	100.4189674	100.3103623	100.2020045	100.0938931	99.98602732	99.87840621	99.77102895
141017A00029	10/17/2014	2.02	10/19/2020	10/17/2014	100.7929	100.6553258	100.5181477	100.3813592	100.2449588	100.1089447	99.97331522	99.83806871	99.70320349
150121A00004	1/21/2015	1.97	1/24/2022	1/21/2015	108.26321	106.7555837	105.2765706	103.8254275	102.4014334	101.0038914	99.63212808	98.28549249	96.96335502
150601A00485	6/1/2015	3.09	6/21/2024	6/1/2015	127.30251	122.6956019	118.2824001	114.0536942	110.0007662	106.1153591	102.3896504	98.81622604	95.38805719
150601A00494	6/1/2015	2.37	6/25/2021	6/1/2015	105.16256	104.2794795	103.4111912	102.5573273	101.7175305	100.8914553	100.0787673	99.27914324	98.49226981
150601A00606	6/1/2015	2.39	3/31/2021	6/1/2015	103.5663	102.9512261	102.3434365	101.7428	101.149191	100.5624869	99.98256783	99.40931676	98.84261931
150601A00613	6/1/2015	2.63	3/31/2022	6/1/2015	110.10592	108.3834109	106.6969032	105.0453389	103.4277037	101.8430224	100.2903569	98.76880427	97.27749545
150601A00665	6/1/2015	3.82	1/14/2033	6/1/2015	192.10531	172.2276146	154.6622176	139.124859	125.3677007	113.1744871	102.356374	92.74832444	84.20599661
150601A00666	6/1/2015	3.88	1/16/2035	6/1/2015	207.4341	183.0698019	161.9298064	143.5643285	127.5887369	113.6738102	101.5374942	90.93791988	81.66748701
150601A01053	6/1/2015	5.28	2/26/2027	6/1/2015	162.05595	152.8194675	144.1907299	136.1261774	128.5856025	121.5318759	114.9306954	108.750356	102.96154
150610A00037	6/10/2015	2.48	6/10/2022	6/10/2015	111.51981	109.5627489	107.6501953	105.7807618	103.9531189	102.1659914	100.4181553	98.70843519	97.03570201
150626A00039	6/26/2015	3.23	6/26/2025	6/26/2015	134.49556	128.4566721	122.7276747	117.2910304	112.1302814	107.2299812	102.5756268	98.15359682	93.95109302
150408A00004	4/8/2015	2.17	4/10/2023	4/8/2015	116.18867	113.2212746	110.3455068	107.557949	104.8553323	102.2345323	99.69256213	97.22656526	94.83380855
150424A00035	4/24/2015	1.8	4/23/2021	4/24/2015	103.69414	103.0086184	102.3321371	101.6645205	101.0055949	100.3551915	99.71314576	99.07929718	98.45348948
150515A00003	5/15/2015	2.17	5/17/2021	5/15/2015	104.24476	103.4861027	102.7384718	102.0016243	101.2753279	100.5593569	99.8534923	99.15752094	98.47123579
150518A00014	5/18/2016	2.38	5/18/2021	5/18/2016	104.41549	103.6531117	102.9018521	102.1614672	101.4317218	100.7123876	100.0032429	99.30407196	98.61466544
150601A00006	6/1/2015	4.71	6/27/2025	6/1/2015	143.21679	136.918567	130.9417452	125.2681683	119.8807978	114.7636414	109.9016837	105.2808212	100.8878023
150601A00404	6/1/2015	4.29	1/17/2029	6/1/2015	167.88306	155.6746611	144.4730483	134.1892477	124.7426021	116.0599528	108.0749058	100.7271749	93.96199016
150601A00484	6/1/2015	2.45	6/23/2021	6/1/2015	105.19309	104.3160007	103.4535042	102.6052409	101.7708606	100.9500244	100.1424045	99.34768335	98.56555377

Classification | Public

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
150601A00603	6/1/2015	2.26	9/30/2020	6/1/2015	100.48834	100.4046393	100.3210752	100.2376479	100.154357	100.0712024	99.98818359	99.90530035	99.82255236
150601A00632	6/1/2015	2.33	12/31/2020	6/1/2015	102.02376	101.6765218	101.331636	100.9890801	100.6488305	100.310864	99.97515791	99.64168958	99.31043679
150601A00664	6/1/2015	3.78	1/16/2032	6/1/2015	184.45597	166.6853145	150.8376521	136.6926807	124.0564603	112.7581394	102.6470979	93.59045746	85.47090798
150601A00694	6/1/2015	3.56	3/6/2030	6/1/2015	168.75729	154.7727547	142.0868454	130.5712651	120.1110445	110.6030932	101.9549148	94.08346828	86.91415639
150601A00731	6/1/2015	2.4	4/29/2022	6/1/2015	110.23839	108.4259272	106.6526965	104.9174928	103.2191598	101.5565883	99.92871373	98.33451412	96.77300754
150601A00733	6/1/2015	2.72	5/1/2025	6/1/2015	131.66008	125.8552767	120.3421091	115.1042913	110.1265377	105.3945003	100.8947047	96.61449187	92.54196416
150603A00017	6/3/2015	2.84	6/3/2025	6/3/2015	133.10762	127.1508833	121.4980812	116.1319698	111.0363893	106.1961863	101.5971448	97.22592257	93.06999188
150630A00008	6/30/2015	2.41	6/30/2022	6/30/2015	111.75383	109.7328549	107.7585787	105.8296453	103.9447458	102.1026179	100.3020434	98.54184636	96.82089173
150902A00002	9/2/2015	2.25	9/2/2021	9/2/2015	106.12439	105.0245618	103.9474506	102.8923542	101.8586033	100.8455552	99.85259297	98.87912386	97.92457826
150904A00021	9/4/2015	2.52	9/5/2023	9/4/2015	119.84273	116.3431262	112.965199	109.7040104	106.5548581	103.513258	100.5749331	97.73580187	94.99196885
150914A00052	9/14/2015	1.77	9/14/2020	9/14/2015	100.2166	100.1775396	100.1385262	100.0995602	100.0606412	100.0217693	99.98294442	99.94416637	99.90543509
151020A00008	10/20/2015	1.76	10/20/2020	10/20/2015	100.7513	100.611183	100.4714734	100.3321651	100.1932563	100.0547452	99.91663017	99.77890947	99.64158137
151102A00012	11/2/2015	2.4	11/2/2022	11/2/2015	113.52031	111.1036163	108.7511048	106.4605877	104.2299707	102.0572482	99.9404995	97.87788363	95.86763578
151208A00019	12/8/2015	2.1	12/8/2020	12/8/2015	101.58846	101.3080773	101.0292536	100.7519714	100.4762178	100.2019802	99.92924602	99.65800285	99.38823844
151211A00004	12/11/2015	2.48	12/15/2023	12/11/2015	121.53147	117.6719817	113.9563441	110.3783582	106.9321281	103.6120479	100.4127853	97.32926665	94.35666242
151211A00007	12/11/2015	2.73	12/15/2025	12/11/2015	136.11995	129.3811746	123.0193744	117.0114202	111.3357261	105.9721393	100.901837	96.10723102	91.57188034
130712A00005	7/12/2013	3.25	7/17/2023	7/12/2013	121.19253	117.8354717	114.5899774	111.4517245	108.4165849	105.4806128	102.6400358	99.89124622	97.23079289
130904A00035	9/4/2013	2.85	9/15/2020	9/4/2013	100.27723	100.2353336	100.1934922	100.1517025	100.1099646	100.0682783	100.0266435	99.98506016	99.9435281
130926A00008	9/26/2013	2.91	9/30/2021	9/26/2013	107.53639	106.336993	105.1642919	104.0174052	102.8954877	101.7977308	100.7233602	99.67163479	98.64184408
131106A00002	11/6/2013	2.76	11/16/2020	11/6/2013	101.37703	101.159706	100.9433297	100.727891	100.5133836	100.2998016	100.0871389	99.87538956	99.66454758
131113A00036	11/13/2013	3.14	11/15/2021	11/13/2013	108.50551	107.1555704	105.8391957	104.5551453	103.3022385	102.0793517	100.8854148	99.71940787	98.58035866
140416A00014	4/16/2014	2.66	4/30/2021	4/16/2014	104.29305	103.5855657	102.8876557	102.1991253	101.5197865	100.8494563	100.1879565	99.53511367	98.89075875
140815A00032	8/15/2014	3.59	10/15/2029	8/15/2014	166.91862	153.6222424	141.5146267	130.482454	120.423791	111.2468909	102.8691258	95.21603566	88.22048091
141017A00020	10/17/2014	2.28	10/18/2021	10/17/2014	107.15138	105.8967937	104.6714789	103.4744249	102.3046623	101.1612658	100.0433515	98.95007443	97.88062694
141024A00010	10/24/2014	2.81	10/24/2024	10/24/2014	128.70507	123.6386126	118.8019112	114.1832372	109.7715283	105.5563498	101.527855	97.67674819	93.99425055
141202A00012	12/2/2014	2.32	12/2/2021	12/2/2014	107.99966	106.5986205	105.2330097	103.9014915	102.6027977	101.3357224	100.0991181	98.89189233	97.71300448
150123A00010	1/23/2015	2.02	1/31/2022	1/23/2015	108.45166	106.9217297	105.4212001	103.949292	102.5052562	101.0883688	99.69793054	98.33326586	96.99372157
150130A00050	1/30/2015	1.87	1/31/2022	1/30/2015	108.2295	106.7013047	105.2024803	103.732247	102.2898564	100.8745854	99.48573567	98.12263229	96.78462285
150220A00021	2/20/2015	2.72	2/20/2024	2/20/2015	122.88355	118.794073	114.8640666	111.0864329	107.4544328	103.9616637	100.6020405	97.36977767	94.25937331
150317A00013	3/17/2015	2.58	3/17/2025	3/17/2015	130.31745	124.7041509	119.3667853	114.2902849	109.4604912	104.8640922	100.4885664	96.32213152	92.35369699
150518A00020	5/18/2015	1.99	5/18/2021	5/18/2015	104.23737	103.4742764	102.722336	101.9813034	101.2509424	100.5310236	99.82132405	99.12162704	98.43172209
150601A00039	6/1/2015	5.76	6/12/2026	6/1/2015	158.51853	150.4431988	142.8467423	135.6979218	128.9677127	122.6291334	116.6570905	111.0282364	105.7208377
150601A00522	6/1/2015	4.52	7/25/2030	6/1/2015	182.49443	167.2159065	153.3910476	140.8723268	129.5279545	119.2401268	109.9034743	101.4236898	93.71631473

Classification | Public

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
150601A00523	6/1/2015	4.55	7/25/2031	6/1/2015	190.97486	173.6083611	158.0373449	144.0643084	131.5145137	120.2332574	110.0834778	100.9436583	92.7059902
150601A00548	6/1/2015	2.55	8/13/2021	6/1/2015	106.05084	105.0136976	103.9967942	102.9995457	102.021386	101.0617708	100.1201761	99.19609758	98.28904967
150601A00604	6/1/2015	2.33	12/31/2020	6/1/2015	102.02376	101.6765218	101.331636	100.9890801	100.6488305	100.310864	99.97515791	99.64168958	99.31043679
150601A00648	6/1/2015	2.71	12/30/2022	6/1/2015	115.19001	112.5731008	110.0291829	107.5558125	105.1506405	102.8114098	100.5359513	98.32218008	96.16809142
150603A00018	6/3/2015	2.84	6/3/2025	6/3/2015	133.10762	127.1508833	121.4980812	116.1319698	111.0363893	106.1961863	101.5971448	97.22592257	93.06999188
150610A00009	6/10/2015	3.03	6/10/2025	6/10/2015	134.24861	128.2381726	122.5350095	117.1216936	111.9818871	107.100266	102.4624517	98.05494607	93.86507333
140702A00034	7/2/2014	2.7	7/1/2022	7/2/2014	112.3308	110.3010473	108.3182409	106.3810158	104.4880544	102.6380858	100.8298839	99.06226526	97.33408733
140908A00060	9/8/2014	2.34	11/30/2020	9/8/2014	101.521	101.2636619	101.0076238	100.7528737	100.4994019	100.2471989	99.99625521	99.74656151	99.49810852
140929A00098	9/29/2014	2.62	9/29/2021	9/29/2014	107.00213	105.8120763	104.648423	103.5102954	102.3968606	101.3073218	100.2409159	99.19691226	98.17461054
141009A00028	10/9/2014	3.02	10/9/2024	10/9/2014	128.42983	123.4469539	118.68751	114.1402151	109.7944251	105.6400923	101.6677281	97.86836858	94.23354244
150116A00039	1/16/2015	1.85	1/19/2021	1/16/2015	102.16553	101.7629429	101.3635338	100.9672646	100.5740981	100.183998	99.79692828	99.41285376	99.03173965
150203A00005	2/3/2015	2.11	2/3/2022	2/3/2015	108.36961	106.8348197	105.3296327	103.8532646	102.4049577	100.9839807	99.58962687	98.22121343	96.87808041
150213A00025	2/13/2015	2.37	2/14/2022	2/13/2015	108.9565	107.3807806	105.8361123	104.3216571	102.8366028	101.3801661	99.95159084	98.55014698	97.1751295
150319A00013	3/19/2015	3.25	3/19/2030	3/19/2015	166.08395	152.1785702	139.5720528	128.1354994	117.7534509	108.3224253	99.74961774	91.95174814	84.85403848
150331A00004	3/31/2015	2.08	3/31/2022	3/31/2015	109.56042	107.8374451	106.1505746	104.4987469	102.8809426	101.2961816	99.74352119	98.22205435	96.73090799
150407A00010	4/7/2015	2.21	4/10/2023	4/7/2015	116.29999	113.331052	110.4537786	107.6647508	104.9606984	102.3384959	99.79515546	97.32781947	94.93375386
150506A00014	5/6/2015	2.21	5/6/2022	5/6/2015	110.4071	108.5664595	106.7660996	105.0047706	103.2812706	101.5944474	99.94319596	98.32645584	96.74320906
150512A00029	5/12/2015	3.03	5/12/2025	5/12/2015	132.51867	126.6898187	121.1542156	115.8954341	110.8980694	106.1476646	101.6306463	97.33426492	93.24654017
150518A00016	5/18/2015	1.84	11/18/2020	5/18/2015	101.2394	101.0162945	100.7941877	100.5730709	100.3529373	100.1337802	99.91559321	99.69836973	99.48210334
150519A00012	5/19/2015	2.44	5/19/2022	5/19/2015	110.71614	108.8394536	107.0044061	105.2096823	103.4540193	101.7362075	100.0550879	98.40954907	96.79852493
150601A00490	6/1/2015	3.19	7/2/2024	6/1/2015	127.06628	122.4498464	118.0281911	113.7920818	109.732769	105.8419613	102.1117987	98.53482826	95.10398058
150601A00512	6/1/2015	3.79	7/16/2029	6/1/2015	166.67853	153.7702416	141.986604	131.2230681	121.3853265	112.3882641	104.1550181	96.61613968	89.70884362
150601A00514	6/1/2015	3.07	11/15/2024	6/1/2015	130.12339	124.9487336	120.0114237	115.2991831	110.8004491	106.5043247	102.4005359	98.47939178	94.73174768
150601A00609	6/1/2015	2.52	9/30/2021	6/1/2015	106.86723	105.6748361	104.5089626	103.3687322	102.2533064	101.1618826	100.0936927	99.04800087	98.02410226
150601A00734	6/1/2015	2.92	5/1/2025	6/1/2015	131.52973	125.7633295	120.2856858	115.0807114	110.1333125	105.4293182	100.9554183	96.69910603	92.64862436
150727A00013	7/27/2015	3.04	7/28/2025	7/27/2015	134.02126	127.8829162	122.0650489	116.5492381	111.3182159	106.3557901	101.6467712	97.1769056	92.93281281
150819A00011	8/19/2015	2.53	8/19/2022	8/19/2015	112.49478	110.3201875	108.1991859	106.1301073	104.1113503	102.1413745	100.2186972	98.34189149	96.50958314
150821A00017	8/21/2015	2.22	8/23/2022	8/21/2015	112.32661	110.1337795	107.9954174	105.90982	103.8753471	101.8904211	99.95352474	98.06319777	96.21803461
150824A00072	8/24/2015	2.14	8/24/2022	8/24/2015	112.17685	109.9825275	107.8427909	105.7559289	103.7202956	101.7343082	99.79644409	97.90523837	96.05928089
150720A00012	7/20/2015	2.99	7/21/2025	7/20/2015	134.83684	128.6639969	122.8130704	117.2655767	112.0041903	107.0126631	102.2757524	97.77915334	93.50943648
150721A00027	7/21/2015	3.74	7/22/2030	7/21/2015	174.05192	159.2197908	145.8083557	133.6729458	122.6843558	112.7271186	103.6979795	95.50454756	88.06410169
150803A00053	8/3/2015	2.49	8/3/2022	8/3/2015	112.13115	110.0094757	107.9389956	105.9181505	103.9454433	102.0194322	100.1387286	98.30199445	96.50794011
150817A00099	8/17/2015	3.19	8/17/2027	8/17/2015	148.45759	139.0924441	130.3905067	122.3011993	114.7780519	107.7783527	101.2628251	95.19533537	89.54262536

Classification | Public

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
150824A00049	8/24/2015	1.99	5/24/2021	8/24/2015	104.22746	103.4477303	102.6796337	101.9229121	101.1773143	100.4425963	99.71852122	99.00485909	98.30138642
150915A00048	9/15/2015	1.79	9/15/2020	9/15/2015	100.23292	100.1910608	100.1492574	100.1075059	100.065806	100.0241576	99.98256074	99.94101523	99.89952099
150923A00012	9/23/2015	1.86	9/23/2020	9/23/2015	100.3504	100.286291	100.2222746	100.1583506	100.0945187	100.0307787	99.96713047	99.9035738	99.84010851
150930A00011	9/30/2015	2.06	9/30/2021	9/30/2015	106.39257	105.2030624	104.0400297	102.9025967	101.7899257	100.7012154	99.63569858	98.59264057	97.57133735
151001A00048	10/1/2015	1.74	10/1/2020	10/1/2015	100.46292	100.3764339	100.2900985	100.2039116	100.1178728	100.0319817	99.94623793	99.8606412	99.77519112
151002A00041	10/2/2015	1.76	10/4/2021	10/2/2015	106.31136	105.1066638	103.9291288	102.7778409	101.6519305	100.5505662	99.47295224	98.41832722	97.38596184
151002A00047	10/2/2015	1.64	9/2/2020	10/2/2015	100.02922	100.0236588	100.0181001	100.0125461	100.006997	100.0014526	99.99591292	99.99037804	99.98484791
151002A00075	10/2/2015	2.04	10/3/2022	10/2/2015	112.64456	110.3207844	108.0571479	105.8516679	103.7024425	101.6076474	99.56553211	97.57441621	95.632686
151005A00053	10/5/2015	1.99	10/5/2021	10/5/2015	106.39679	105.1913847	104.0131737	102.8612417	101.7347172	100.6327669	99.5545936	98.49943423	97.46655809
151014A00030	10/14/2015	1.68	10/14/2020	10/14/2015	100.6512	100.52805	100.4052157	100.2826967	100.1604917	100.0385996	99.9170191	99.79574897	99.67478799
151116A00015	11/16/2015	2.02	11/16/2020	11/16/2015	101.21786	101.0007825	100.7846509	100.569456	100.3551917	100.1418519	99.92943054	99.71792171	99.50731946
151116A00027	11/16/2015	2.02	11/16/2020	11/16/2015	101.21786	101.0007825	100.7846509	100.569456	100.3551917	100.1418519	99.92943054	99.71792171	99.50731946
151211A00055	12/11/2015	2.62	12/11/2024	12/11/2015	128.7287	123.4943761	118.5039712	113.7447456	109.2047028	104.8725395	100.737601	96.78983968	93.01977716
151223A00070	12/23/2015	2.57	12/26/2023	12/23/2015	122.05012	118.1460561	114.3883545	110.7707352	107.2872217	103.9321262	100.700034	97.58578871	94.5844785
151229A00081	12/29/2015	3.76	12/31/2035	12/29/2015	213.04541	186.564148	163.7897229	144.1759638	127.2601242	112.649749	100.0116666	89.06275202	79.56217027
160107A00042	1/7/2016	2.05	1/7/2021	1/7/2016	102.05291	101.6853375	101.3204187	100.9581211	100.5984164	100.2412768	99.88667493	99.53458368	99.18497644
160113A00030	1/13/2016	2.52	1/13/2025	1/13/2016	128.84907	123.4990345	118.4026736	113.5466437	108.918372	104.5060074	100.2983763	96.28493954	92.45575377
160119A00019	1/19/2016	2.95	1/19/2027	1/19/2016	142.9802	134.6067938	126.7835705	119.4714743	112.6344122	106.2390182	100.2544336	94.65210685	89.40560997
160216A00028	2/16/2016	1.69	2/16/2022	2/16/2016	108.23151	106.6504014	105.1006599	103.5814264	102.0918762	100.6312134	99.19867058	97.79350671	96.41500642
130904A00036	9/4/2013	3.57	9/15/2023	9/4/2013	123.45942	119.8687189	116.4032443	113.057888	109.8277827	106.708289	103.6949832	100.783646	97.97025165
130904A00039	9/4/2013	4.19	9/15/2028	9/4/2013	167.18415	155.4148283	144.5849801	134.6140491	125.4288083	116.9626548	109.1549775	101.9505887	95.29921187
130911A00009	9/11/2013	2.87	9/15/2020	9/11/2013	100.27806	100.236169	100.1943268	100.1525364	100.1107978	100.0691108	100.0274753	99.9858912	99.94435843
131011A00005	10/11/2013	2.97	10/15/2020	10/11/2013	100.82793	100.7017727	100.5759478	100.4504525	100.3252855	100.2004455	100.0759312	99.95174132	99.82787451
131024A00018	10/24/2013	2.8	11/1/2021	10/24/2013	108.03401	106.7288532	105.4551569	104.2117901	102.9976793	101.8118012	100.6531795	99.52088274	98.41402128
140131A00025	1/31/2014	3.28	1/30/2023	1/31/2014	117.3044	114.5634654	111.9013859	109.3154403	106.8030146	104.3616008	101.9887914	99.68227566	97.43983412
140402A00010	4/2/2014	2.62	4/2/2021	4/2/2014	103.84951	103.2263658	102.6106877	102.0023411	101.4011956	100.807124	100.2200018	99.63970763	99.06612297
140701A00001	7/1/2014	3.22	7/1/2024	7/1/2014	127.36208	122.7430612	118.318739	114.0798879	110.0177692	106.1241014	102.3910337	98.81112106	95.3773018
140905A00017	9/5/2014	2.19	9/8/2020	9/5/2014	100.13311	100.1107925	100.0884996	100.06623	100.0439837	100.0217605	99.99956054	99.97738366	99.95522985
140908A00063	9/8/2014	2.5	8/31/2021	9/8/2014	106.34863	105.2538383	104.1815119	103.1309688	102.1015506	101.0926252	100.1035855	99.13384802	98.18285216
141208A00008	12/8/2014	3.02	12/16/2024	12/8/2014	129.72121	124.4762603	119.475269	114.7055371	110.1551025	105.8126897	101.6676662	97.71000208	93.93023223
150115A00002	1/15/2015	1.72	1/15/2021	1/15/2015	102.1054	101.7139467	101.325502	100.9400333	100.5575063	100.1778871	99.80114274	99.42724034	99.05614773
150206A00017	2/6/2015	2.05	2/7/2022	2/6/2015	108.62097	107.0665406	105.5424016	104.0477407	102.5817748	101.1437481	99.73293087	98.34861826	96.9901293
150401A00008	4/1/2015	2.62	4/1/2025	4/1/2015	129.67224	124.0567378	118.718598	113.6426022	108.8144529	104.2207123	99.84874476	95.68666493	91.72328861

Classification | Public

	Parallel-Shift Sensitivity Analysis												
8/31/2020					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	103.39168	102.7592992	102.1346369	101.5175507	100.9079035	100.3055611	99.71039292	99.12227131	98.54107163
150407A00009	4/7/2015	2.03	4/7/2022	4/7/2015	109.59701	107.8522587	106.1443783	104.4722763	102.8348994	101.2312359	99.66031281	98.12119484	96.61298202
150518A00026	5/18/2015	2.08	11/18/2021	5/18/2015	107.45437	106.0981653	104.7760347	103.4867094	102.2289803	101.001697	99.80376436	98.63413925	97.49182738
150519A00013	5/19/2015	2.98	5/19/2025	5/19/2015	132.4506	126.5971834	121.0394061	115.760642	110.7453038	105.9787673	101.447306	97.13803004	93.03883034
150601A00147	6/1/2015	3.45	7/30/2021	6/1/2015	106.78627	105.7867903	104.8060046	103.843396	102.8984623	101.97072	101.0597029	100.1649618	99.28606299
150601A00495	6/1/2015	2.99	6/27/2024	6/1/2015	127.01128	122.3895506	117.9628465	113.7219067	109.6579571	105.7626848	102.0282117	98.44706903	95.01217394
150601A00530	6/1/2015	3.08	7/24/2024	6/1/2015	127.91392	123.1814137	118.6520007	114.3158828	110.1637895	106.1869441	102.3770349	98.72618827	95.2269427
150601A00615	6/1/2015	2.67	6/30/2022	6/1/2015	111.8058	109.7911681	107.822968	105.8998553	104.0205321	102.1837462	100.3882889	98.63299354	96.91673359
150601A00616	6/1/2015	2.72	9/30/2022	6/1/2015	113.57416	111.2575312	109.0004781	106.8010451	104.6573597	102.5676257	100.5301187	98.54318271	96.60522725
160223A00014	2/23/2016	1.75	2/23/2021	2/23/2016	102.65718	102.1512286	101.650256	101.154186	100.6629468	100.1764682	99.69468121	99.21751825	98.74491298
160307A00027	3/7/2016	2.71	3/6/2026	3/7/2016	136.06731	129.0747544	122.4876252	116.2802469	110.4287066	104.9107207	99.70551607	94.79371934	90.15725564
160329A00004	3/29/2016	1.78	3/25/2021	3/29/2016	103.13116	102.535319	101.9463503	101.3641318	100.788548	100.2194859	99.65683514	99.10048782	98.55033843
160329A00006	3/29/2016	2.12	3/29/2023	3/29/2016	115.30182	112.396948	109.5807195	106.8498667	104.2012689	101.6319413	99.13902792	96.7197955	94.37162689
160330A00034	3/30/2016	1.95	3/30/2022	3/30/2016	109.02856	107.3182677	105.6437054	104.0038259	102.3976238	100.8241324	99.28242178	97.7715969	96.29079606
160427A00019	4/27/2016	1.78	4/27/2021	4/27/2016	103.64637	102.9503351	102.263615	101.5860243	100.9173821	100.257512	99.60624236	98.96340594	98.32883982
160610A00009	6/10/2016	1.89	6/12/2023	6/10/2016	115.84066	112.690633	109.6427715	106.6931245	103.8379183	101.0735509	98.39658308	95.80372932	93.29185008
160615A00031	6/15/2016	2.51	6/17/2030	6/15/2016	161.92936	147.7188552	134.8795602	123.2716023	112.7700605	103.2632975	94.65148524	86.84530004	79.76476892
160616A00027	6/16/2016	2.27	6/16/2026	6/16/2016	134.89228	127.5683653	120.6886164	114.2237584	108.1465965	102.4318595	97.05605288	91.99732536	87.23534488
160624A00011	6/24/2016	1.83	6/26/2023	6/24/2016	115.8794	112.6840798	109.5933582	106.603237	103.709893	100.9096707	98.19907357	95.57475664	93.03351866
160627A00070	6/27/2016	1.52	9/27/2021	6/27/2016	105.74193	104.5657847	103.4156463	102.2906606	101.1900103	100.1129129	99.05861919	98.02641136	97.01560149
160628A00054	6/28/2016	1.28	6/28/2021	6/28/2016	104.31806	103.4297582	102.5565023	101.6979146	100.8536284	100.0232888	99.20655276	98.4030883	97.61257422
160707A00032	7/7/2016	1.52	7/7/2023	7/7/2016	115.70691	112.4652936	109.3310734	106.3001205	103.3684859	100.5323937	97.78823259	95.13254725	92.56203117
160712A00023	7/12/2016	1.79	7/12/2023	7/12/2016	116.00168	112.7537002	109.6134794	106.5768676	103.6398956	100.7987683	98.04985635	95.38968752	92.8149394
160714A00053	7/14/2016	1.58	7/15/2021	7/14/2016	104.69562	103.7552247	102.8316586	101.9244689	101.0332231	100.1575035	99.29690711	98.45104466	97.61954019
160726A00005	7/26/2016	2.28	7/27/2026	7/26/2016	135.56638	128.0742112	121.0441429	114.4452993	108.249018	102.4286831	96.95956909	91.81869694	86.98470274
160727A00002	7/27/2016	1.87	7/27/2023	7/27/2016	116.477	113.1741392	109.9822901	106.8971133	103.9144677	101.0303964	98.24111759	95.5430157	92.93263327
160727A00017	7/27/2016	2.03	7/29/2024	7/27/2016	122.84404	118.2225918	113.8006765	109.5686379	105.5173381	101.6381271	97.92281432	94.36364146	90.95325764
160802A00003	8/2/2016	2.53	8/1/2031	8/2/2016	168.78638	152.466706	137.8799351	124.8323085	113.1526683	102.6897174	93.30962416	84.89392784	77.33770319
160815A00006	8/15/2016	2.23	8/17/2026	8/15/2016	135.53992	127.972782	120.8768018	114.2201988	107.9734948	102.1093364	96.60233144	91.42889861	86.5671294
160920A00004	9/20/2016	1.68	9/20/2021	9/20/2016	105.81109	104.6565196	103.5270165	102.4217744	101.3400183	100.281006	99.24402602	98.22839656	97.23346353
160922A00014	9/22/2016	2.06	9/22/2026	9/22/2016	136.44166	128.6587352	121.3691699	114.5391053	108.137177	102.1343222	96.50359898	91.22002033	86.26040253
160923A00033	9/23/2016	2.04	9/23/2026	9/23/2016	136.31918	128.5364299	121.247295	114.4178825	108.0167985	102.0149542	96.38538388	91.10307986	86.14483979
150601A00636	6/1/2015	2.45	6/30/2021	6/1/2015	105.18304	104.2864398	103.4050804	102.5385719	101.6865417	100.8486292	100.0244861	99.21377516	98.4161702

Classification | Public

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
150601A00667	6/1/2015	3.88	1/16/2036	6/1/2015	214.59457	187.9128437	164.9718055	145.2192131	128.1873603	113.4797366	100.7598517	89.74186432	80.18271431
150601A00668	6/1/2015	3.89	1/16/2037	6/1/2015	221.86708	192.7870321	168.0088995	146.8630739	128.7878795	113.3116674	100.0379563	88.63309174	78.8159843
150601A00704	6/1/2015	2.3	3/25/2022	6/1/2015	109.46816	107.768729	106.1046052	104.4747633	102.8782173	101.3140185	99.78125429	98.2790458	96.80654668
150601A00737	6/1/2015	2.68	12/31/2024	6/1/2015	129.19293	123.8803078	118.817523	113.991538	109.3900626	105.0015067	100.8149369	96.82003627	93.00706613
150601A00768	6/1/2015	2.34	5/13/2022	6/1/2015	110.3744	108.5187983	106.7040786	104.9289523	103.1921899	101.4926134	99.82909332	98.20054639	96.60593294
150601A00916	6/1/2015	7.27	4/5/2030	6/1/2015	210.71877	194.5209173	179.7867923	166.3735544	154.1531188	143.0105589	132.8426854	123.556787	115.069512
150601A01024	6/1/2015	5.33	2/27/2026	6/1/2015	151.5531	144.142337	137.1529559	130.5585753	124.334611	118.4581401	112.9077802	107.6635777	102.7069045
150610A00008	6/10/2015	3.58	6/10/2030	6/10/2015	174.31024	159.4978968	146.095742	133.9610198	122.9661666	112.9971174	103.9518113	95.73886979	88.27642668
150717A00009	7/17/2015	2.18	7/19/2021	7/17/2015	105.4464	104.4878873	103.5467502	102.6225237	101.7147548	100.8230068	99.94685805	99.08590187	98.23974547
150720A00011	7/20/2015	2.69	7/20/2023	7/20/2015	119.52073	116.1794076	112.94962	109.827037	106.8075177	103.8871048	101.0620151	98.32863139	95.68349373
150722A00014	7/22/2015	2.32	7/22/2021	7/22/2015	105.48149	104.5156108	103.5673774	102.6363074	101.721938	100.8238227	99.94153092	99.07464704	98.22277
150825A00007	8/25/2015	2.46	8/25/2022	8/25/2015	112.45471	110.2621153	108.1239786	106.0385976	104.0043319	102.0196043	100.0828973	98.19275059	96.34775856
150910A00039	9/10/2015	1.81	9/10/2020	9/10/2015	100.15581	100.1279157	100.1000552	100.0722253	100.044426	100.0166572	99.98891893	99.96121104	99.93353351
151008A00024	10/8/2015	1.58	10/8/2020	10/8/2015	100.56814	100.4617468	100.3555935	100.2496775	100.1439979	100.0385538	99.93334455	99.82836918	99.72362691
151102A00009	11/2/2015	1.89	11/2/2020	11/2/2015	100.97162	100.7946329	100.6182611	100.4425062	100.267365	100.0928342	99.91891067	99.74559132	99.57287298
151106A00011	11/6/2015	3.1	1/15/2026	11/6/2015	137.53174	130.6877263	124.2299361	118.1345457	112.3793196	106.943498	101.8076917	96.95378441	92.36484343
151217A00014	12/17/2015	3	12/17/2025	12/17/2015	136.41628	129.706601	123.3710953	117.3868694	111.7325555	106.3881996	101.3351599	96.55601354	92.03447027
151223A00065	12/23/2015	2.15	12/23/2021	12/23/2015	108.02674	106.601405	105.2047096	103.8358165	102.4939172	101.1782347	99.88802227	98.62256158	97.3811616
151223A00074	12/23/2015	3.01	12/23/2027	12/23/2015	151.22112	141.1794969	131.8824579	123.2707542	115.2901472	107.8909617	101.0276797	94.6585718	88.74536423
160113A00005	1/13/2016	1.95	1/13/2021	1/13/2016	102.11089	101.725816	101.3436509	100.9643634	100.5879209	100.2142915	99.84344351	99.47534593	99.10996812
160114A00015	1/14/2016	1.92	1/14/2021	1/14/2016	102.11515	101.7271684	101.342141	100.9600345	100.5808155	100.2044513	99.83090964	99.46015875	99.09216735
160301A00009	3/1/2016	2.06	3/1/2023	3/1/2016	114.69246	111.8818516	109.1552066	106.5095145	103.9418904	101.4495711	99.02990924	96.68036729	94.39851257
141015A00020	10/15/2014	2.13	10/15/2021	10/15/2014	106.92283	105.6792691	104.4645206	103.2775929	102.1175383	100.9834521	99.87446965	98.78976438	97.72854564
150105A00026	1/5/2015	2.54	1/5/2024	1/5/2015	122.12284	118.184764	114.395325	110.7481271	107.2370877	103.8564169	100.6006018	97.46439174	94.44278426
150116A00040	1/16/2015	2.07	1/18/2022	1/16/2015	108.04901	106.5650808	105.1089548	103.6799165	102.277274	100.9003584	99.54852294	98.22114181	96.91760965
150123A00012	1/23/2015	2	1/29/2021	1/23/2015	102.38321	101.9510849	101.5226017	101.0977103	100.6763656	100.2585235	99.84414042	99.43317365	99.0255811
150206A00015	2/6/2015	1.87	2/8/2021	2/6/2015	102.54416	102.0816971	101.6234003	101.1692179	100.7190946	100.272976	99.83080875	99.39254042	98.95811952
150310A00019	3/10/2015	2.24	3/10/2021	3/10/2015	103.15068	102.5990675	102.0533505	101.5134354	100.9792299	100.4506437	99.92758824	99.40997701	98.89772518
150601A00182	6/1/2015	3.85	7/18/2022	6/1/2015	114.42743	112.3313783	110.2847381	108.2860411	106.3338724	104.4268683	102.5637139	100.7431413	98.9639276
150601A00360	6/1/2015	2.82	10/2/2020	6/1/2015	100.57005	100.480668	100.3914458	100.3023841	100.2134824	100.1247404	100.0361577	99.94773369	99.85946809
150601A00515	6/1/2015	2.95	1/16/2024	6/1/2015	123.66996	119.6678637	115.81784	112.1133022	108.547981	105.115911	101.8114147	98.62908713	95.5637809
150601A00532	6/1/2015	2.48	9/24/2020	6/1/2015	100.40439	100.3374548	100.2706179	100.2038792	100.1372386	100.0706959	100.0042507	99.93790294	99.87165241
150601A00594	6/1/2015	3.2	10/20/2026	6/1/2015	142.86535	134.8330577	127.3100488	120.2612201	113.6540764	107.4585221	101.6466714	96.19267362	91.07255457

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
150601A00611	6/1/2015	2.58	12/31/2021	6/1/2015	108.4163	106.9829142	105.5755097	104.193436	102.8360669	101.5027963	100.1930371	98.90622103	97.64179753
150601A00638	6/1/2015	2.51	9/30/2021	6/1/2015	106.85618	105.6638552	104.4980476	103.3578821	102.2425202	101.1511594	100.0830316	99.03740093	98.01356258
150601A00646	6/1/2015	2.68	9/30/2022	6/1/2015	113.48757	111.1719131	108.9158051	106.7172976	104.574519	102.4856733	100.4490369	98.46295428	96.5258354
150601A00689	6/1/2015	2.81	2/28/2025	6/1/2015	129.91133	124.3973241	119.1513323	114.1588819	109.406362	104.8809653	100.5706363	96.46402307	92.55043242
150601A00717	6/1/2015	2.13	4/1/2022	6/1/2015	109.30824	107.5895581	105.9068542	104.2590732	102.6451995	101.0642568	99.51530598	97.99744336	96.50979906
150610A00017	6/10/2015	2.9	6/15/2023	6/10/2015	118.89516	115.6905217	112.5896845	109.5886464	106.6835878	103.8708613	101.1469829	98.50862336	95.95259988
150804A00002	8/4/2015	2.84	8/5/2024	8/4/2015	126.42142	121.7029594	117.1883411	112.8676743	108.731599	104.7712574	100.9782635	97.34467602	93.86297197
150817A00097	8/17/2015	3.1	8/17/2026	8/17/2015	141.37298	133.6247445	126.3558383	119.5340337	113.1294362	107.1143022	101.4628729	96.15122236	91.15711854
150821A00018	8/21/2015	2.6	8/21/2024	8/21/2015	126.57148	121.7706426	117.1800641	112.7894001	108.5888719	104.569233	100.7217363	97.03810533	93.51050546
150824A00048	8/24/2015	1.93	2/24/2021	8/24/2015	102.76183	102.2526431	101.7484947	101.2493057	100.7550034	100.2655161	99.7807739	99.30070801	98.82525103
150824A00097	8/24/2015	2.67	8/25/2025	8/24/2015	133.73887	127.4687167	121.5321749	115.9097151	110.5830535	105.5350662	100.7497099	96.21194761	91.90768062
150904A00015	9/4/2015	1.79	10/15/2020	9/4/2015	100.69923	100.5730219	100.4471457	100.3216014	100.1963879	100.0715036	99.94694728	99.82271758	99.69881316
150601A00830	6/1/2015	6.743	7/31/2025	6/1/2015	155.01541	148.2874774	141.9050038	135.8482623	130.0987581	124.6391458	119.4531516	114.525502	109.8418565
150601A00930	6/1/2015	7.1	8/30/2030	6/1/2015	213.43239	196.3911588	180.9470665	166.9387603	154.222111	142.6682847	132.1620419	122.6002329	113.8904679
150817A00016	8/17/2015	2.24	8/17/2021	8/17/2015	105.84081	104.7924871	103.7648751	102.7573614	101.7693606	100.8003098	99.84966755	98.91691287	98.00154427
150819A00012	8/19/2015	3.04	8/19/2025	8/19/2015	134.43308	128.2059165	122.3075868	116.7189691	111.4221518	106.4003525	101.6378411	97.11986772	92.83259736
150819A00013	8/19/2015	3.51	8/19/2030	8/19/2015	171.87951	157.0405421	143.6364108	131.5197766	120.5591741	110.6372281	101.6490765	93.5009778	86.10907906
150824A00047	8/24/2015	1.88	11/24/2020	8/24/2015	101.3113	101.0713658	100.8325686	100.5949044	100.3583652	100.1229432	99.88863023	99.65541862	99.42330056
150824A00093	8/24/2015	1.87	8/24/2021	8/24/2015	105.75603	104.6838096	103.6332408	102.6036715	101.5944767	100.6050565	99.63483408	98.68325486	97.74978552
150824A00095	8/24/2015	2.34	8/24/2023	8/24/2015	119.04893	115.6011588	112.2722064	109.0572994	105.9518887	102.9516343	100.0523941	97.25021335	94.54131555
150827A00005	8/27/2015	2.07	8/27/2021	8/27/2015	106.01025	104.9272363	103.8662667	102.8266708	101.8078079	100.8090627	99.82984378	98.86958307	97.92773412
150827A00029	8/27/2015	2.74	8/27/2024	8/27/2015	127.29295	122.4564418	117.8324274	113.410417	109.1804938	105.1332827	101.2599175	97.5520104	94.00162341
150909A00018	9/9/2015	2.28	9/9/2021	9/9/2015	106.27642	105.1537055	104.0546407	102.978481	101.9245159	100.8920641	99.88047172	98.88911142	97.91738068
150914A00018	9/14/2015	3.05	9/15/2025	9/14/2015	134.99607	128.6574572	122.6578928	116.9773998	111.5972843	106.5000474	101.6693024	97.08969849	92.74684903
150914A00053	9/14/2015	1.77	9/14/2020	9/14/2015	100.2166	100.1775396	100.1385262	100.0995602	100.0606412	100.0217693	99.98294442	99.94416637	99.90543509
150921A00037	9/21/2015	1.92	9/21/2020	9/21/2015	100.32342	100.2648929	100.206447	100.1480822	100.0897983	100.0315951	99.97347242	99.91543017	99.85746816
150921A00051	9/21/2015	1.92	9/21/2020	9/21/2015	100.32342	100.2648929	100.206447	100.1480822	100.0897983	100.0315951	99.97347242	99.91543017	99.85746816
151001A00038	10/1/2015	1.75	10/1/2020	10/1/2015	100.46378	100.377297	100.2909608	100.2047732	100.1187336	100.0328418	99.94709729	99.86149983	99.77604901
151001A00051	10/1/2015	1.75	10/1/2020	10/1/2015	100.46378	100.377297	100.2909608	100.2047732	100.1187336	100.0328418	99.94709729	99.86149983	99.77604901
151008A00049	10/8/2015	1.75	10/8/2020	10/8/2015	100.56972	100.4634905	100.3574989	100.2517423	100.1462201	100.0409313	99.93587516	99.83105093	99.72645777
151116A00025	11/16/2015	3.04	11/14/2025	11/16/2015	136.05007	129.46875	123.2491858	117.3694526	111.8090847	106.5489651	101.5712289	96.85917381	92.39717765
151223A00066	12/23/2015	2.34	12/23/2022	12/23/2015	114.73565	112.1357971	109.6083267	107.1507778	104.7607912	102.4361034	100.174542	97.97402133	95.83253847
160119A00029	1/19/2016	3.39	1/20/2032	1/19/2016	179.92261	162.4021715	146.786927	132.8579346	120.4225155	109.3109826	99.37379022	90.47905061	82.51036697

Classification | Public

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
160122A00022	1/22/2016	1.9	1/22/2021	1/22/2016	102.23195	101.820508	101.4123791	101.0075238	100.6059028	100.2074774	99.81220952	99.42006161	99.0309968
160128A00058	1/28/2016	1.83	1/28/2021	1/28/2016	102.29587	101.8668759	101.4414677	101.0196042	100.6012413	100.1863356	99.77484454	99.366726	98.96193872
150710A00040	7/10/2015	2.63	7/11/2022	7/10/2015	111.99984	109.9497458	107.9476163	105.9920392	104.0816534	102.2151468	100.3912535	98.60875254	96.86646555
150813A00008	8/13/2015	3.03	8/13/2025	8/13/2015	134.26592	128.0644378	122.1894415	116.6220047	111.3443958	106.3399972	101.5932298	97.0894826	92.81504753
150817A00077	8/17/2015	2.49	8/17/2023	8/17/2015	119.40376	115.9731972	112.6600785	109.4597185	106.3676487	103.3796047	100.4915148	97.69949085	94.99981825
150824A00071	8/24/2015	2.86	8/25/2025	8/24/2015	133.55165	127.3260447	121.4305762	115.8459735	110.5541916	105.5383269	100.7825396	96.27198077	91.99272551
150826A00038	8/26/2015	2.94	8/26/2026	8/26/2015	142.0024	134.1453384	126.7778378	119.8667643	113.3813948	107.2932312	101.5758283	96.2046349	91.15684929
150901A00002	9/1/2015	1.98	9/1/2020	9/1/2015	100.01556	100.0127757	100.0099957	100.007218	100.0044426	100.0016695	99.99889876	99.99613029	99.99336412
150923A00045	9/23/2015	1.97	9/23/2021	9/23/2015	106.36327	105.1931057	104.0485788	102.9288514	101.8331244	100.7606326	99.71064312	98.68245352	97.67539039
150925A00023	9/25/2015	3.03	9/25/2025	9/25/2015	135.0723	128.6956384	122.6616373	116.9500126	111.5417908	106.4192176	101.5656724	96.96559021	92.60438861
150930A00052	9/30/2015	1.79	9/30/2020	9/30/2015	100.45215	100.3684811	100.2849471	100.2015498	100.1182889	100.0351642	99.95217532	99.86932193	99.78660374
150930A00083	9/30/2015	2.06	9/30/2021	9/30/2015	106.39257	105.2030624	104.0400297	102.9025967	101.7899257	100.7012154	99.63569858	98.59264057	97.57133735
151001A00028	10/1/2015	1.74	10/1/2020	10/1/2015	100.46292	100.3764339	100.2900985	100.2039116	100.1178728	100.0319817	99.94623793	99.8606412	99.77519112
151002A00048	10/2/2015	1.68	11/2/2020	10/2/2015	100.9347	100.7577554	100.581432	100.4057253	100.2306322	100.0561494	99.88227374	99.70900209	99.53633132
151002A00081	10/2/2015	2.29	10/2/2023	10/2/2015	119.57035	115.9863364	112.5293679	109.1941863	105.9757819	102.8693835	99.87044573	96.97463636	94.17782509
151109A00020	11/9/2015	2.79	11/9/2023	11/9/2015	121.25158	117.532959	113.9492199	110.4946186	107.1637004	103.9512795	100.8524232	97.86243782	94.97685537
151211A00002	12/11/2015	2.05	12/15/2021	12/11/2015	107.7975	106.3829852	104.9996669	103.6465183	102.3225548	101.0268349	99.75845797	98.51656181	97.30032073
160104A00014	1/4/2016	2.49	1/4/2023	1/4/2016	114.82767	112.1997428	109.6455178	107.1625175	104.7483628	102.4007681	100.1175366	97.89655708	95.73579946
160108A00020	1/8/2016	2.04	1/8/2021	1/8/2016	102.06523	101.6947384	101.3269396	100.9618043	100.5993037	100.2394091	99.88209243	99.5273261	99.17508275
160119A00028	1/19/2016	3.34	1/21/2031	1/19/2016	172.66316	157.1275615	143.1521362	130.5709086	119.2363859	109.0174166	99.79730398	91.47214613	83.94937382
160119A00030	1/19/2016	3.44	1/18/2033	1/19/2016	187.28501	167.6981698	150.4009876	135.1111197	121.5824768	109.6004021	98.977512	89.55010402	81.17505445
160307A00026	3/7/2016	2.2	3/7/2023	3/7/2016	115.16189	112.3266035	109.5763746	106.908136	104.3189501	101.806004	99.36660332	96.99816647	94.69821914
160307A00028	3/7/2016	2.91	3/7/2028	3/7/2016	149.68933	139.4932334	130.0716985	121.3616527	113.3054802	105.8505188	98.94861059	92.55569458	86.63143816
160328A00014	3/28/2016	2.49	3/27/2026	3/28/2016	136.44875	129.3223824	122.6142311	116.2975075	110.3472824	104.7403461	99.45508005	94.4713393	89.7703445
160516A00019	5/16/2016	1.44	5/17/2021	5/16/2016	103.81887	103.0605198	102.3132195	101.5767253	100.8508038	100.1352286	99.42977953	98.73424258	98.04840985
160926A00018	9/26/2016	1.47	9/28/2020	9/26/2016	100.39703	100.3189657	100.2410274	100.1632124	100.0855203	100.007951	99.93050414	99.85317946	99.7759767
161109A00018	11/9/2016	2.63	11/9/2026	11/9/2016	139.55348	131.5535807	124.0668927	117.0576854	110.4929127	104.341992	98.576608	93.17053148	88.09945492
161117A00014	11/17/2016	1.88	11/17/2020	11/17/2016	101.20319	100.9832952	100.7643721	100.5464095	100.3294011	100.1133407	99.89822185	99.68403847	99.4707844
170111A00014	1/11/2017	3.47	1/12/2032	1/11/2017	180.87341	163.3316708	147.692336	133.7372761	121.2744739	110.1347775	100.1690716	91.24581121	83.2488702
170207A00023	2/7/2017	2.26	2/7/2022	2/7/2017	108.66423	107.1139349	105.5937804	104.1029598	102.6406956	101.2062374	99.79886038	98.4178645	97.06257327
170215A00017	2/15/2017	3.26	2/16/2027	2/15/2017	145.73896	137.1625462	129.1549125	121.6752511	114.6858872	108.1520245	102.0415116	96.32462701	90.97388445
170216A00044	2/16/2017	3.52	2/17/2032	2/16/2017	182.24022	164.4555524	148.6138552	134.4906285	121.8884603	110.6336302	100.5731556	91.57221872	83.51192479
170224A00020	2/24/2017	3.08	2/24/2027	2/24/2017	144.56899	135.9989066	127.9999692	120.53102	113.5540788	107.0340793	100.9386312	95.23780234	89.90392044

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
170313A00033	3/13/2017	3.31	3/15/2027	3/13/2017	146.60317	137.892251	129.7648217	122.1785886	115.094542	108.4766846	102.2917836	96.50914443	91.1004041
170322A00026	3/22/2017	3.22	3/22/2028	3/22/2017	152.63501	142.2664773	132.6869561	123.8320154	115.6428115	108.0655779	101.0511631	94.55461079	88.53478175
170417A00094	4/17/2017	1.95	4/19/2022	4/17/2017	109.66484	107.882679	106.1387323	104.4318449	102.7609047	101.1248441	99.52263781	97.95330086	96.41588642
170419A00024	4/19/2017	2.45	4/21/2025	4/19/2017	130.28884	124.5531068	119.1044752	113.9269832	109.0056462	104.3263934	99.87600668	95.64206346	91.61288444
170515A00022	5/15/2017	2.04	5/17/2021	5/15/2017	104.14984	103.39158	102.6443338	101.9078671	101.1819476	100.4663499	99.76085464	99.06524905	98.37932605
170515A00038	5/15/2017	2.43	5/15/2023	5/15/2017	116.96288	113.8851949	110.9050791	108.0187772	105.2227041	102.5134401	99.88772139	97.34243205	94.87459577
170522A00044	5/22/2017	1.99	5/24/2021	5/22/2017	104.22746	103.4477303	102.6796337	101.9229121	101.1773143	100.4425963	99.71852122	99.00485909	98.30138642
170602A00007	6/2/2017	1.94	6/2/2021	6/2/2017	104.33533	103.5278931	102.7329078	101.9500869	101.1791531	100.4198373	99.67187856	98.93502357	98.20902662
170608A00021	6/8/2017	1.8	6/8/2021	6/8/2017	104.4375	103.6097381	102.7950576	101.9931494	101.203715	100.4264649	99.66111853	98.90740402	98.16505761
170609A00043	6/9/2017	3.07	6/9/2032	6/9/2017	181.59896	163.1453979	146.7714333	132.2299973	119.304625	107.8055226	97.5661555	88.44028818	80.29941428
170616A00017	6/16/2017	2.11	6/16/2023	6/16/2017	117.15338	113.9576674	110.8660232	107.8744219	104.9790245	102.1761655	99.4623433	96.83421213	94.28857368
170619A00067	6/19/2017	1.84	9/20/2021	6/19/2017	106.17047	105.0109301	103.8766022	102.7666708	101.6803552	100.6169082	99.57561353	98.55578457	97.55676292
170622A00038	6/22/2017	3.32	6/22/2034	6/22/2017	194.7611	172.2921956	152.7156269	135.6398081	120.7281859	107.6912541	96.27975945	86.27891762	77.50348609
170622A00039	6/22/2017	3.36	6/22/2035	6/22/2017	201.96523	177.2612493	155.9334439	137.4970306	121.5393704	107.7089012	95.70581429	85.27419422	76.19538666
170629A00015	6/29/2017	1.92	10/26/2020	6/29/2017	100.86822	100.7110848	100.5544496	100.3983076	100.2426564	100.0874937	99.93281728	99.77862477	99.62491394
160119A00005	1/19/2016	1.89	1/19/2021	1/19/2016	102.18133	101.7787092	101.3792621	100.982955	100.5897509	100.1996133	99.81250641	99.42839489	99.04724399
160119A00027	1/19/2016	3.25	1/18/2030	1/19/2016	164.97984	151.3858791	139.0414149	127.8244286	117.6254194	108.3460629	99.89801853	92.20186897	85.1861779
160120A00010	1/20/2016	1.99	10/20/2021	1/20/2016	106.64503	105.3904375	104.1652323	102.9683935	101.7989448	100.6559542	99.53853153	98.44582632	97.37702532
160122A00029	1/22/2016	2.48	1/22/2025	1/22/2016	128.81718	123.4366233	118.3125746	113.4314694	108.7805297	104.347716	100.1216801	96.0917224	92.24775075
160329A00044	3/29/2016	1.79	3/29/2022	3/29/2016	109.04884	107.3361548	105.6592934	104.0172065	102.4088854	100.8333605	99.28969854	97.77700195	96.29440634
160330A00054	3/30/2016	2.9	3/31/2031	3/30/2016	171.53335	155.5892964	141.2850805	128.4424888	116.9035682	106.5282244	97.19211915	88.78482367	81.20819787
160407A00007	4/7/2016	1.6	3/25/2021	4/7/2016	103.02692	102.4314262	101.8428019	101.260925	100.6856801	100.1169541	99.55463672	98.99862012	98.44879881
160420A00005	4/20/2016	1.48	4/20/2021	4/20/2016	103.43667	102.7610973	102.0943229	101.4361802	100.7865024	100.1451268	99.51189504	98.88665252	98.26924871
160429A00007	4/29/2016	1.52	4/29/2021	4/29/2016	103.60078	102.8976288	102.2039848	101.5196546	100.8444519	100.1781949	99.52070705	98.87181613	98.23135449
160429A00041	4/29/2016	1.71	4/29/2021	4/29/2016	103.63015	102.9281981	102.2357156	101.552513	100.8784048	100.2132105	99.55675443	98.90886537	98.2693766
160527A00026	5/27/2016	1.72	4/29/2021	5/27/2016	103.63694	102.9349591	102.2424509	101.5592228	100.8850894	100.2198701	99.56338922	98.91547561	98.27596252
160613A00047	6/15/2016	2.18	6/16/2025	6/15/2016	128.74021	122.8811067	117.323247	112.0495367	107.0439425	102.2914232	97.77786166	93.49000372	89.41540017
160624A00010	6/24/2016	1.66	6/24/2022	6/24/2016	109.84579	107.8687597	105.9371468	104.049603	102.2048348	100.4015959	98.63868574	96.9149471	95.22926425
160627A00025	6/27/2016	1.65	6/27/2022	6/27/2016	109.87285	107.8864342	105.9457532	104.0494717	102.1962993	100.3849917	98.61434897	96.88321391	95.19046983
160628A00030	6/28/2016	1.48	6/28/2021	6/28/2016	104.3542	103.4676122	102.5960123	101.7390245	100.8962838	100.0674377	99.25214484	98.45007521	97.66090934
160629A00052	6/29/2016	1.29	6/29/2021	6/29/2016	104.34127	103.4498017	102.5734834	101.7119315	100.8647755	100.0316573	99.21223052	98.40616007	97.61312174
160630A00011	6/30/2016	1.8	6/30/2023	6/30/2016	115.85064	112.6429838	109.5406086	106.5395061	103.635839	100.8259363	98.10628544	95.47352414	92.92443353
160630A00019	6/30/2016	1.52	7/1/2021	6/30/2016	104.43289	103.5367715	102.6559522	101.7900446	100.9386727	100.1014734	99.27809514	98.46819827	97.671454

Classification | Public

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
160630A00021	6/30/2016	1.59	6/30/2023	6/30/2016	115.81481	112.5939012	109.4790075	106.4660818	103.5512503	100.7308076	98.00120869	95.35906069	92.80111585
160630A00044	6/30/2016	1.42	10/30/2020	6/30/2016	100.84663	100.6782784	100.5104869	100.3432525	100.1765724	100.010444	99.84486442	99.67983112	99.51534139
160630A00091	6/30/2016	1.51	6/30/2021	6/30/2016	104.40943	103.5164866	102.6387391	101.7757997	100.9272966	100.0928701	99.27217259	98.46486771	97.67063002
160705A00005	7/5/2016	1.49	7/5/2023	7/5/2016	115.58567	112.3522532	109.2257847	106.2021557	103.2774408	100.4478861	97.70990096	95.06004963	92.49504402
160706A00026	7/6/2016	2.19	7/6/2027	7/6/2016	139.91574	131.0150363	122.7403252	115.0443923	107.8838086	101.2186116	95.01201272	89.23012994	83.84174492
160328A00012	3/28/2016	1.85	3/28/2022	3/28/2016	109.13174	107.4212822	105.7465601	104.1065309	102.5001899	100.926571	99.38474466	97.87381642	96.39292508
160330A00042	3/30/2016	1.53	3/30/2021	3/30/2016	103.14728	102.5354981	101.9309443	101.3334934	100.7430208	100.1594051	99.5825272	99.01227119	98.44852358
160401A00016	4/1/2016	2.42	4/1/2025	4/1/2016	128.66312	123.0717825	117.756931	112.7033889	107.8968961	103.3240496	98.97224722	94.8296352	90.88505934
160407A00004	4/7/2016	1.41	4/7/2021	4/7/2016	103.19589	102.5600652	101.9320504	101.3117068	100.6988946	100.0934771	99.49532106	98.90429627	98.32027572
160415A00010	4/15/2016	1.66	4/15/2021	4/15/2016	103.38206	102.7228566	102.0720396	101.4294515	100.7949368	100.1683439	99.549525	98.93833606	98.33463647
160505A00007	5/5/2016	1.45	5/5/2021	5/5/2016	103.64416	102.9227556	102.2113624	101.5097696	100.8177757	100.1351847	99.46180598	98.79745395	98.14194803
160510A00010	5/10/2016	1.6	5/3/2021	5/10/2016	103.61612	102.9022023	102.1980843	101.5035654	100.8184503	100.1425492	99.4756771	98.81765424	98.1683054
160510A00012	5/10/2016	1.49	10/12/2021	5/10/2016	106.12995	104.9009264	103.7002001	102.5268016	101.3798066	100.258332	99.16153365	98.08860443	97.03877194
160606A00004	6/6/2016	2.43	6/8/2026	6/6/2016	135.80716	128.4847215	121.6045011	115.1374001	109.0563922	103.3363646	97.95397163	92.88750111	88.11675071
160614A00009	6/14/2016	1.55	6/14/2021	6/14/2016	104.21262	103.3691944	102.5393712	101.7228233	100.919234	100.1282968	99.34971442	98.58319912	97.82847193
160616A00006	6/16/2016	1.51	6/16/2021	6/16/2016	104.20142	103.3520747	102.5165243	101.6944335	100.885479	100.0893478	99.30573691	98.53435256	97.7749103
160620A00003	6/20/2016	1.59	6/21/2021	6/20/2016	104.3421	103.476894	102.6259779	101.7890025	100.9656275	100.1555234	99.35837136	98.57386259	97.80169814
160624A00063	6/24/2016	1.52	6/24/2022	6/24/2016	109.94736	107.9626039	106.0235493	104.1288416	102.2771758	100.4672948	98.69798784	96.96808801	95.27647038
160628A00031	6/28/2016	1.77	6/28/2023	6/28/2016	115.72934	112.5298669	109.4352869	106.4415947	103.5449616	100.741726	98.02838485	95.40158598	92.85812068
160628A00049	6/28/2016	1.88	6/27/2025	6/28/2016	128.42724	122.5024761	116.8849987	111.5573077	106.5029853	101.7066271	97.15377376	92.83084871	88.72509945
160628A00068	6/28/2016	1.28	6/28/2021	6/28/2016	104.31806	103.4297582	102.5565023	101.6979146	100.8536284	100.0232888	99.20655276	98.4030883	97.61257422
160630A00012	6/30/2016	2.11	6/30/2025	6/30/2016	128.59401	122.6896522	117.0908746	111.7803156	106.7416882	101.9597063	97.42001806	93.10914449	89.01442188
160701A00019	7/1/2016	1.73	7/3/2023	7/1/2016	115.68374	112.4690703	109.3602275	106.3531647	103.4440144	100.6290773	97.90481389	95.2678369	92.7149038
160701A00039	7/1/2016	1.92	7/1/2026	7/1/2016	134.28897	126.8765327	119.9183509	113.3843077	107.2464256	101.478708	96.05698942	90.95879777	86.1632277
160706A00006	7/6/2016	1.47	7/6/2023	7/6/2016	115.53947	112.3035648	109.1747908	106.1490309	103.2223491	100.390982	97.65132962	94.9999477	92.43354002
160706A00019	7/6/2016	1.41	7/6/2021	7/6/2016	104.41138	103.500017	102.6044896	101.7243863	100.8593114	100.0088826	99.17273053	98.35049809	97.54184001
160708A00002	7/8/2016	1.46	7/8/2021	7/8/2016	104.48452	103.5666641	102.664864	101.7786989	100.907765	100.0516722	99.2100437	98.38251535	97.5687351
160712A00016	7/12/2016	1.32	7/12/2021	7/12/2016	104.55912	103.6266201	102.710672	101.8108427	100.9267095	100.0578645	99.20391371	98.36447674	97.53918593
150923A00041	9/23/2015	2.23	9/23/2022	9/23/2015	112.88996	110.5944655	108.357811	106.1780771	104.0534242	101.982087	99.9623704	97.99264626	96.07135015
151013A00099	10/15/2015	2.44	10/15/2020	10/15/2015	100.78083	100.6545259	100.5285582	100.4029227	100.2776182	100.1526431	100.0279962	99.90367614	99.77968156
151014A00024	10/14/2015	1.51	10/14/2020	10/14/2015	100.64931	100.5259714	100.4029486	100.2802437	100.1578555	100.0357827	99.91402393	99.79257804	99.67144373
151015A00063	10/15/2015	1.68	10/15/2020	10/15/2015	100.66602	100.5400466	100.4144027	100.2890881	100.1641014	100.0394413	99.91510648	99.79109565	99.66740751
151119A00030	11/19/2015	2.1	11/19/2020	11/19/2015	101.28324	101.0575489	100.8328716	100.6092037	100.3865382	100.1648685	99.94418784	99.72448953	99.50576699

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
151120A00017	11/20/2015	2.11	11/20/2020	11/20/2015	101.30157	101.0730046	100.8454833	100.6189959	100.3935352	100.1690943	99.94566626	99.72324413	99.50182112
151211A00012	12/11/2015	1.89	12/11/2020	12/11/2015	101.61506	101.3256067	101.037817	100.7516738	100.4671629	100.1842703	99.90298214	99.62328463	99.3451642
151223A00077	12/23/2015	3.57	12/24/2035	12/23/2015	214.62604	187.6895571	164.5403381	144.6187099	127.4506975	112.6344994	99.82915894	88.74506315	79.13596658
151229A00080	12/29/2015	3.49	12/30/2030	12/29/2015	174.11421	158.5937618	144.6212888	132.0331092	120.6836678	110.4434445	101.1971128	92.8419193	85.28625427
160113A00006	1/13/2016	1.95	1/11/2021	1/13/2016	102.07952	101.700306	101.3239179	100.9503212	100.5794847	100.2113778	99.84597039	99.48323275	99.1231356
160114A00007	1/14/2016	1.92	1/14/2021	1/14/2016	102.11515	101.7271684	101.342141	100.9600345	100.5808155	100.2044513	99.83090964	99.46015876	99.09216735
160119A00025	1/19/2016	3.05	1/19/2028	1/19/2016	150.04152	140.0233971	130.7527997	122.1699162	114.2200134	106.8529831	100.0229286	93.68779151	87.80901229
160129A00067	1/29/2016	2.53	1/29/2026	1/29/2016	135.70298	128.8140079	122.3186901	116.1924846	110.4124992	104.9573771	99.80718553	94.94331402	90.34838006
160204A00024	2/4/2016	1.68	2/4/2021	2/4/2016	102.33758	101.8880908	101.4425375	101.0008718	100.563043	100.1290014	99.69869781	99.27208428	98.84911346
160212A00043	2/12/2016	1.8	2/14/2022	2/12/2016	108.09002	106.5212321	104.9833699	103.4755986	101.9971097	100.547123	99.12488563	97.7296707	96.36077614
160328A00013	3/28/2016	2.17	3/28/2024	3/28/2016	122.21164	117.9914988	113.9406062	110.0512174	106.3159848	102.7279395	99.28046902	95.96729714	92.78246439
160331A00023	3/31/2016	1.68	3/31/2021	3/31/2016	103.16477	102.5510728	101.9446427	101.3453543	100.753082	100.1677035	99.58909901	99.01715169	98.45174729
160510A00011	5/10/2016	1.59	4/5/2021	5/10/2016	103.1865	102.5578212	101.936779	101.323235	100.717054	100.1181042	99.52625675	98.94138585	98.36336873
160603A00004	6/3/2016	1.65	6/3/2021	6/3/2016	104.12562	103.3160431	102.5190071	101.734218	100.9613954	100.2002673	99.45056987	98.71204725	97.98445112
160606A00040	6/8/2016	1.98	12/15/2020	6/8/2016	101.66536	101.3647756	101.0659756	100.7689475	100.4736752	100.1801434	99.88833638	99.59823904	99.30983627
160606A00043	6/8/2016	2.23	12/15/2021	6/8/2016	107.79653	106.385953	105.0064203	103.6569129	102.3364526	101.0441043	99.77897282	98.54020153	97.32696984
160614A00066	6/14/2016	1.35	6/14/2021	6/14/2016	104.16954	103.3246582	102.4934296	101.6755237	100.870622	100.0784161	99.29860747	98.53090673	97.77503347
160615A00023	6/15/2016	1.38	6/15/2021	6/15/2016	104.2088	103.3606922	102.5263352	101.7053974	100.8975567	100.1025017	99.31993057	98.54955093	97.79107952
160129A00066	1/29/2016	3.04	1/29/2031	1/29/2016	172.19336	156.4855806	142.3673898	129.6686688	118.2383476	107.9421822	98.66080232	90.28799544	82.72919534
160211A00033	2/11/2016	1.67	2/11/2022	2/11/2016	107.84399	106.2870297	104.7605878	103.2638426	101.796001	100.3562976	98.9439932	97.55837436	96.19875164
160212A00029	2/12/2016	1.8	2/11/2022	2/12/2016	108.04047	106.481941	104.9539639	103.455711	101.9863884	100.5452299	99.13149575	97.74447166	96.38346759
160212A00044	2/12/2016	1.93	2/13/2023	2/12/2016	114.07898	111.3314073	108.6644766	106.0753473	103.5612987	101.119722	98.74811582	96.44408039	94.20531309
160329A00045	3/29/2016	2.12	3/29/2024	3/29/2016	122.03419	117.8141289	113.7634523	109.8744015	106.1396181	102.552123	99.10529456	95.79284804	92.60881611
160502A00002	5/2/2016	1.68	5/3/2021	5/2/2016	103.67133	102.9571964	102.252866	101.5581367	100.8728132	100.1967057	99.52962926	98.87140392	98.22185449
160523A00018	5/23/2016	1.77	5/24/2021	5/23/2016	104.06244	103.2834049	102.5159928	101.7599486	101.0150212	100.2809666	99.55754826	98.84453613	98.1417069
160526A00010	5/26/2016	1.58	5/26/2021	5/26/2016	104.06111	103.2745302	102.4998007	101.736653	100.9848287	100.2440774	99.51415576	98.7948277	98.08586386
160601A00016	6/1/2016	1.74	6/1/2021	6/1/2016	104.16464	103.3609871	102.5696775	101.7904325	101.0229781	100.2670484	99.52238553	98.78873925	98.06586662
160603A00021	6/3/2016	1.66	6/3/2021	6/3/2016	104.1334	103.323796	102.5267266	101.7419046	100.9690493	100.2078889	99.45815949	98.71960525	97.99197781
160615A00043	6/15/2016	1.59	6/15/2021	6/15/2016	104.25161	103.4050814	102.5722525	101.7527914	100.9463783	100.1527032	99.37146624	98.60237657	97.84515251
160616A00028	6/16/2016	1.81	6/16/2023	6/16/2016	115.66488	112.5046641	109.4472445	106.4886516	103.6251	100.852975	98.16882309	95.56934405	93.05138283
160617A00045	6/17/2016	1.55	6/17/2021	6/17/2016	104.24902	103.3964161	102.5577066	101.7325535	100.9206302	100.1216204	99.33521775	98.56112572	97.79905687
160627A00040	6/27/2016	1.28	6/28/2021	6/27/2016	104.31806	103.4297582	102.5565023	101.6979146	100.8536284	100.0232888	99.20655276	98.4030883	97.61257422
160628A00040	6/28/2016	1.56	6/28/2023	6/28/2016	115.69324	112.4805676	109.3735185	106.3680492	103.4602946	100.6465586	97.92330614	95.2871544	92.734866

Classification | Public

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
160628A00050	6/28/2016	1.56	6/28/2023	6/28/2016	115.69324	112.4805676	109.3735185	106.3680492	103.4602946	100.6465586	97.92330614	95.2871544	92.734866
160701A00034	7/1/2016	1.43	7/21/2021	7/1/2016	104.64875	103.6901459	102.7490248	101.8249087	100.9173401	100.0258776	99.15009542	98.28958275	97.44394293
160705A00009	7/5/2016	1.21	7/6/2021	7/5/2016	104.37425	103.4611123	102.5638733	101.6821177	100.8154475	99.96347835	99.1258387	98.30216951	97.49212363
160706A00027	7/6/2016	2.29	7/6/2028	7/6/2016	146.12547	135.6081351	125.9247211	117.0047897	108.7841851	101.2044476	94.21228219	87.75907776	81.80047455
160707A00034	7/7/2016	1.25	7/7/2021	7/7/2016	104.42379	103.507338	102.6068935	101.7220388	100.8523721	99.99750479	99.1570618	98.33068047	97.51801026
160801A00001	8/1/2016	1.97	8/1/2024	8/1/2016	122.63545	118.0082918	113.5813607	109.3449494	105.2898694	101.4074241	97.68937958	94.12793756	90.7157101
160811A00011	8/11/2016	2.25	8/11/2026	8/11/2016	135.58642	128.0395164	120.9612241	114.3200197	108.0866574	102.2339939	96.73682653	91.57174516	86.71699588
160906A00017	9/6/2016	1.65	9/7/2021	9/6/2016	105.5775	104.4650874	103.3759987	102.3095062	101.2649126	100.2415489	99.23877324	98.25596924	97.292545
150814A00004	8/14/2015	2.32	8/15/2022	8/14/2015	112.39396	110.2251136	108.1095673	106.0456747	104.0318473	102.0665568	100.1483327	98.27575879	96.44747167
150817A00073	8/17/2015	2.06	8/17/2021	8/17/2015	105.82966	104.7789117	103.7489581	102.7391876	101.7490112	100.7778626	99.82519722	98.89049104	97.97323971
150824A00039	8/24/2015	1.93	1/25/2021	8/24/2015	102.29099	101.8707004	101.4538654	101.0404394	100.6303805	100.2236477	99.82020071	99.41999972	99.02300568
150824A00040	8/24/2015	2.36	8/24/2022	8/24/2015	112.22874	110.0416174	107.9087594	105.8284693	103.7991147	101.8191259	99.88699259	98.00126128	96.16053284
150826A00039	8/26/2015	3.22	8/27/2029	8/26/2015	164.67004	151.5589223	139.6121887	128.719764	118.7825296	109.711183	101.4252183	93.85201792	86.92604262
151005A00012	10/5/2015	1.53	10/5/2020	10/5/2015	100.51839	100.4204775	100.3227636	100.2252488	100.1279323	100.0308135	99.93389186	99.83716669	99.74063738
151013A00030	10/13/2015	1.89	4/14/2021	10/13/2015	103.51305	102.8563573	102.2079794	101.5677613	100.9355495	100.3111945	99.6945504	99.0854748	98.4838289
151120A00016	11/20/2015	2.11	11/20/2020	11/20/2015	101.30157	101.0730046	100.8454833	100.6189959	100.3935352	100.1690943	99.94566626	99.72324413	99.50182112
160107A00039	1/7/2016	2.06	2/10/2021	1/7/2016	102.60131	102.1335638	101.6700828	101.2108063	100.7556773	100.3046396	99.8576383	99.41461923	98.97552929
160328A00045	3/28/2016	2.49	3/27/2026	3/28/2016	136.44875	129.3223824	122.6142311	116.2975075	110.3472824	104.7403461	99.45508005	94.4713393	89.7703445
160330A00035	3/30/2016	2.32	4/1/2024	3/30/2016	122.07274	117.8627766	113.8215948	109.9414708	106.2150773	102.6354646	99.19603858	95.89054058	92.7130279
160330A00056	3/30/2016	2.26	3/31/2025	3/30/2016	128.94833	123.3197933	117.9702976	112.8844933	108.0479585	103.4471403	99.06929725	94.9024459	90.93531171
160401A00055	4/1/2016	1.66	4/1/2021	4/1/2016	103.16812	102.551431	101.9420819	101.3399454	100.7448941	100.1568037	99.57555266	99.00102239	98.43309694
160419A00005	4/19/2016	1.66	4/19/2021	4/19/2016	103.44323	102.7718557	102.1091781	101.4550258	100.8092351	100.1716462	99.54210364	98.92045568	98.30655444
160420A00002	4/20/2016	1.96	11/16/2022	4/20/2016	112.73641	110.2846556	107.8990343	105.5772534	103.317118	101.116529	98.97347738	96.88603958	94.85237315
160504A00004	5/4/2016	2.3	5/4/2026	5/4/2016	135.872	128.6227234	121.8063378	115.394644	109.361432	103.6823322	98.33467528	93.29736433	88.55075704
160524A00035	5/24/2016	1.79	5/24/2021	5/24/2016	104.07745	103.2983436	102.5308692	101.7747635	101.0297751	100.2956602	99.57218216	98.85911094	98.15622322
160609A00010	6/9/2016	1.58	6/9/2022	6/9/2016	109.82542	107.8877101	105.9940895	104.1431766	102.3336496	100.564241	98.83373455	97.14096266	95.48480387
160610A00036	6/10/2016	1.42	6/10/2021	6/10/2016	104.16607	103.3334116	102.5140103	101.7075553	100.9137417	100.1322738	99.36286534	98.60523873	97.85912486
160620A00026	6/20/2016	1.39	6/21/2021	6/20/2016	104.30678	103.4399108	102.5873881	101.7488599	100.9239838	100.1124285	99.31387318	98.52800752	97.75453084
160624A00065	6/28/2016	2.08	6/28/2021	6/28/2016	104.86435	103.9753654	103.1013992	102.242073	101.3970212	100.5658908	99.74833985	98.94403791	98.15266498
160701A00020	7/1/2016	2.13	7/1/2026	7/1/2016	134.20107	126.843884	119.93591	113.4474496	107.3509136	101.6206604	96.23284971	91.16530719	86.39740008
160705A00006	7/5/2016	1.38	7/5/2022	7/5/2016	109.84583	107.8285454	105.8582705	103.9336276	102.0532901	100.215979	98.42046002	96.66554252	94.95007711
170720A00009	7/20/2017	2.14	7/20/2022	7/20/2017	111.19152	109.1221677	107.1018553	105.1291212	103.2025572	101.320806	99.48255921	97.68655521	95.9315771
170724A00016	7/24/2017	2.5	7/24/2024	7/24/2017	124.75855	120.1146559	115.670152	111.4154321	107.3414025	103.4394534	99.70143028	96.1196073	92.6866628

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
170726A00011	7/26/2017	2.2	7/26/2022	7/26/2017	111.41087	109.321031	107.2811073	105.2895992	103.3450622	101.4461043	99.59138442	97.77960956	96.00953306
170728A00031	7/28/2017	2.27	1/27/2023	7/28/2017	114.6655	111.9677985	109.3476758	106.8024545	104.3295686	101.926556	99.59105306	97.32079041	95.11358845
170728A00033	7/28/2017	2.46	1/29/2024	7/28/2017	121.51345	117.5258183	113.6911547	110.0027714	106.4543116	103.0397295	99.75327339	96.58946979	93.5431082
170731A00027	7/31/2017	2	7/30/2021	7/31/2017	105.31784	104.3281229	103.3569252	102.4037353	101.468056	100.5494086	99.64733155	98.76137979	97.89112414
170801A00020	8/1/2017	2.02	8/2/2021	8/1/2017	105.38593	104.3865588	103.4060616	102.4439112	101.4995966	100.5726256	99.66252389	98.76883438	97.89111633
170802A00027	8/2/2017	2.16	8/2/2022	8/2/2017	111.44722	109.335678	107.2750426	105.2637685	103.3003689	101.3834118	99.51151802	97.68335823	95.89765137
170818A00037	8/18/2017	2.08	8/18/2022	8/18/2017	111.54692	109.3854006	107.277124	105.2204351	103.2137447	101.255524	99.34430157	97.47866096	95.65723811
170822A00012	8/22/2017	2.11	8/22/2022	8/22/2017	111.67464	109.4995293	107.3782727	105.3091883	103.2906602	101.3211341	99.39911463	97.52316253	95.69189209
170822A00018	8/22/2017	2.25	8/22/2023	8/22/2017	118.08732	114.6762294	111.3822747	108.2007749	105.1272621	102.1574726	99.28733607	96.51296597	93.83064971
170822A00019	8/22/2017	2.44	8/22/2024	8/22/2017	125.00063	120.2540519	115.7152272	111.3739483	107.2205634	103.2459446	99.44145712	95.79892939	92.31062584
170831A00004	8/31/2017	2	8/31/2023	8/31/2017	118.07503	114.6199476	111.2848029	108.0647463	104.9551561	101.951624	99.04994452	96.24610373	93.53626963
170831A00029	8/31/2017	1.87	8/31/2022	8/31/2017	111.72702	109.5159474	107.3604018	105.2586278	103.2089357	101.2097012	99.25936268	97.35641801	95.49942186
170831A00054	8/31/2017	1.85	6/30/2022	8/31/2017	110.67602	108.6657032	106.7018785	104.7831942	102.9083474	101.0760813	99.28518308	97.53448226	95.82284864
170905A00072	9/5/2017	1.84	3/5/2021	9/5/2017	102.85748	102.3215441	101.7911833	101.2663089	100.7468362	100.2326819	99.72376484	99.22000515	98.72132472
170906A00005	9/6/2017	1.69	9/7/2021	9/6/2017	105.79755	104.6811752	103.5882453	102.5180262	101.4698159	100.442941	99.43675551	98.45063909	97.48399606
170906A00028	9/6/2017	1.57	9/8/2020	9/6/2017	100.11929	100.0969816	100.0747006	100.0524429	100.0302084	100.0079971	99.98580893	99.96364386	99.94150186
170911A00032	9/11/2017	1.85	9/12/2022	9/11/2017	111.88149	109.6314076	107.4384671	105.3008288	103.2167287	101.1844724	99.20243208	97.26904303	95.38280089
170915A00005	9/15/2017	1.81	9/15/2021	9/15/2017	106.05555	104.9124644	103.793909	102.6991001	101.6272879	100.5777536	99.54980816	98.5427908	97.55606738
171004A00034	10/4/2017	1.73	10/5/2020	10/4/2017	100.53791	100.4399738	100.3422413	100.2447078	100.1473727	100.0502354	99.95329527	99.85655162	99.76000387
171016A00005	10/16/2017	2.2	10/17/2022	10/16/2017	112.79687	110.4373518	108.1395686	105.9014548	103.7210309	101.5964	99.52574279	97.50731457	95.53944088
171016A00060	10/16/2017	1.93	10/16/2020	10/16/2017	100.71292	100.5840835	100.4555935	100.3274469	100.1996423	100.0721783	99.94505355	99.8182666	99.6918161
160725A00010	7/25/2016	1.61	7/26/2021	7/25/2016	104.88962	103.9144234	102.9572709	102.0176699	101.0951411	100.1892227	99.29946935	98.42545155	97.56675481
160727A00018	7/27/2016	2.27	7/27/2026	7/27/2016	135.50004	128.0099082	120.9817886	114.3848074	108.1903068	102.3716753	96.90419121	91.76487958	86.93238001
160809A00002	8/9/2016	1.6	8/9/2021	8/9/2016	105.0932	104.0736183	103.0737299	102.0929675	101.1307864	100.1866624	99.26009101	98.35058626	97.45767997
160815A00005	8/15/2016	2.23	8/17/2026	8/15/2016	135.53992	127.972782	120.8768018	114.2201988	107.9734948	102.1093364	96.60233144	91.42889861	86.5671294
160825A00055	8/29/2016	2.32	8/30/2021	8/29/2016	106.14515	105.0546171	103.986415	102.9398613	101.9143034	100.9091144	99.92369235	98.95745868	98.00985721
160829A00039	8/29/2016	1.61	3/26/2021	8/29/2016	103.04776	102.4492443	101.8576609	101.27289	100.6948146	100.1233203	99.55829495	98.99962939	98.44721667
160830A00035	8/30/2016	2.06	8/30/2024	8/30/2016	123.48115	118.7393905	114.2066574	109.8726109	105.7274826	101.7620378	97.96754352	94.33573828	90.858804
160830A00038	8/30/2016	2.24	8/28/2026	8/30/2016	135.76724	128.1532735	121.0155972	114.3219262	108.0423305	102.1490481	96.61631745	91.42022297	86.53855369
160916A00014	9/16/2016	1.66	9/16/2021	9/16/2016	105.72732	104.5858008	103.4688092	102.375562	101.3053085	100.2573292	99.23093444	98.22546267	97.24027923
160922A00051	9/22/2016	2.5	9/22/2028	9/22/2016	149.23903	138.2927597	128.233939	118.9858477	110.4787762	102.6493541	95.43994265	88.79808886	82.6760341
160926A00046	9/26/2016	1.66	9/26/2023	9/26/2016	117.38373	113.854784	110.4507137	107.1663645	103.9968288	100.9374314	97.98371723	95.13143917	92.37654718
161123A00008	11/23/2016	2.2	11/23/2021	11/23/2016	107.46367	106.0950351	104.7611181	103.4606088	102.1922645	100.9549032	99.74740026	98.56868496	97.41773717

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
161212A00040	12/12/2016	2.45	12/12/2023	12/12/2016	121.37178	117.524736	113.8208546	110.2539581	106.8181725	103.5079142	100.3178733	97.24299857	94.27848283
170111A00012	1/11/2017	3.31	1/11/2030	1/11/2017	165.51639	151.9250663	139.5799101	128.3594915	118.1548152	108.8679876	100.4110345	92.70484966	85.67826038
170111A00016	1/11/2017	3.51	1/11/2033	1/11/2017	188.21178	168.5967345	151.2694567	135.948365	122.3879724	110.3740944	99.71971287	90.26140447	81.85625412
170120A00008	1/20/2017	3.63	1/20/2034	1/20/2017	197.12432	175.2035947	156.0180777	139.207948	124.4625988	111.5136761	100.1291342	90.10815297	81.27678934
170120A00011	1/20/2017	3.75	1/20/2037	1/20/2017	220.20397	191.2444642	166.5768908	145.5323247	127.5497746	112.1582633	98.96195695	87.6278162	77.87533018
170215A00009	2/15/2017	2.21	2/16/2021	2/15/2017	102.7689	102.283124	101.8019426	101.3252871	100.853094	100.3853007	99.92184573	99.46266896	99.00771125
170217A00014	2/17/2017	2.27	2/14/2022	2/17/2017	108.80449	107.2299826	105.6865084	104.1732258	102.6893233	101.2340182	99.80655484	98.40620377	97.03226049
170228A00014	2/28/2017	2.89	3/1/2027	2/28/2017	144.97043	136.301251	128.2131537	120.6640507	113.6151202	107.0305334	100.8772091	95.12458906	89.74443321
170313A00035	3/13/2017	3.31	3/15/2027	3/13/2017	146.60317	137.892251	129.7648217	122.1785886	115.094542	108.4766846	102.2917836	96.50914443	91.1004041
170405A00013	4/5/2017	2.07	4/5/2022	4/5/2017	109.62969	107.8907879	106.1885421	104.5218704	102.8897292	101.2911156	99.72506509	98.19065037	96.686979
170428A00030	4/28/2017	2.25	4/28/2022	4/28/2017	110.01993	108.2125101	106.4441725	104.7137176	103.0199953	101.3619022	99.73837917	98.14840924	96.5910154
160714A00054	7/14/2016	2.03	7/15/2024	7/14/2016	122.62256	118.0522132	113.6773978	109.4887389	105.4773595	101.6348522	97.95325178	94.42500958	91.04296952
160718A00010	7/18/2016	1.65	7/18/2023	7/18/2016	116.27239	112.987064	109.8116057	106.7417451	103.7734046	100.9026873	98.12586752	95.4393826	92.83982474
160804A00014	8/4/2016	1.99	8/5/2024	8/4/2016	122.78354	118.139968	113.697847	109.4473819	105.3793046	101.4848447	97.75569962	94.18400753	90.76232127
160812A00005	8/12/2016	1.69	8/12/2022	8/12/2016	110.64974	108.5159733	106.4343821	104.4033635	102.4213722	100.486921	98.5985781	96.75496468	94.95475243
160816A00003	8/16/2016	1.63	8/16/2023	8/16/2016	116.65313	113.2688719	110.0007289	106.8440651	103.794461	100.8476983	97.99974999	95.24676985	92.58508368
160830A00007	8/30/2016	1.65	8/30/2021	8/30/2016	105.45407	104.3674119	103.3030296	102.2602418	101.2383969	100.2368695	99.2550586	98.29238694	97.34829943
160830A00032	8/30/2016	1.82	8/30/2022	8/30/2016	111.19627	109.0017933	106.8622459	104.7758931	102.7410695	100.7561739	98.81966649	96.9300658	95.08594622
160907A00009	9/7/2016	1.36	9/8/2021	9/7/2016	105.46432	104.3467172	103.2526601	102.1814124	101.1322669	100.1045454	99.09759719	98.1107976	97.14354684
160926A00002	9/26/2016	1.6	9/27/2021	9/26/2016	105.83092	104.6542422	103.5035761	102.3780709	101.2769089	100.1993073	99.14451692	98.11181966	97.10052743
161006A00011	10/6/2016	1.64	10/6/2022	10/6/2016	111.80709	109.483595	107.2204578	105.0156794	102.8673439	100.7736136	98.73272582	96.74298853	94.80277733
161006A00012	10/6/2016	1.98	10/7/2024	10/6/2016	124.6503	119.7291207	115.0300008	110.5416898	106.2535715	102.1556259	98.23839229	94.49293447	90.91080846
161031A00005	10/31/2016	1.56	11/2/2020	10/31/2016	100.9136	100.7366825	100.5603868	100.3847077	100.2096421	100.0351867	99.86133835	99.68809396	99.51545038
161215A00014	12/15/2016	2.66	12/15/2022	12/15/2016	114.894	112.3265014	109.8298755	107.4016905	105.0396144	102.7414129	100.504944	98.32815367	96.20907147
170110A00022	1/10/2017	2.27	1/10/2023	1/10/2017	114.87494	112.2174289	109.635134	107.125506	104.6860952	102.3145488	100.008607	97.76609847	95.58493641
170120A00009	1/20/2017	3.67	1/22/2035	1/20/2017	204.78979	180.5940347	159.610292	141.389502	125.5477662	111.7565915	99.73463439	89.24071129	80.06787563
170130A00010	1/30/2017	2.92	1/30/2025	1/30/2017	130.0838	124.6762604	119.5265484	114.6210104	109.9467879	105.4917668	101.2445298	97.19431283	93.33096448
170130A00054	3/30/2017	2.33	4/29/2022	3/30/2017	110.1761	108.3642181	106.5915533	104.8569048	103.1591166	101.4970799	99.86973057	98.27604665	96.71504656
170213A00011	2/13/2017	2.13	2/16/2021	2/13/2017	102.73096	102.2452913	101.764216	101.2876661	100.8155778	100.3478885	99.88453694	99.42546285	98.97060713
170215A00040	2/15/2017	2.59	5/15/2023	2/15/2017	117.42413	114.3398387	111.353284	108.4606983	105.6584913	102.9432383	100.3116712	97.76066939	95.28725232
170215A00041	2/15/2017	2.6	10/16/2023	2/15/2017	120.17575	116.5531254	113.0597648	109.6902656	106.4394912	103.3025527	100.2747944	97.35178153	94.52928793
170215A00043	2/15/2017	2.7	8/28/2024	2/15/2017	126.23524	121.442598	116.8602699	112.4778849	108.2856414	104.2742723	100.4350125	96.75956926	93.24009383
170216A00045	2/16/2017	3.73	2/17/2037	2/16/2017	220.33619	191.2201029	166.4389992	145.3141833	127.2769679	111.8503212	98.63365842	87.29022247	77.53660337

Classification | Public

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
170224A00021	2/24/2017	3.4	2/24/2032	2/24/2017	180.71492	162.9884082	147.2044476	133.1380393	120.5913928	109.3905062	99.38219424	90.43149996	82.41944073
160616A00034	6/16/2016	1.97	6/17/2024	6/16/2016	121.9291	117.4660081	113.1907488	109.0943814	105.1684458	101.4049311	97.79624904	94.33520883	91.01499409
160624A00006	6/24/2016	1.52	6/24/2021	6/24/2016	104.32865	103.454365	102.5946698	101.7492011	100.9176081	100.0995514	99.29470271	98.50274417	97.72336812
160624A00026	6/24/2016	1.52	6/24/2021	6/24/2016	104.32865	103.454365	102.5946698	101.7492011	100.9176081	100.0995514	99.29470271	98.50274417	97.72336812
160701A00028	7/1/2016	2.16	7/1/2026	7/1/2016	134.39749	127.034335	120.1206579	113.6267445	107.5249922	101.7897471	96.39715716	91.32503702	86.55274361
160714A00029	8/10/2016	2.27	8/10/2026	8/10/2016	135.70545	128.1584729	121.0798414	114.4380633	108.2039234	102.3503061	96.8520332	91.68571656	86.82962185
160829A00037	8/31/2016	2.35	8/31/2021	8/31/2016	106.19348	105.0995584	104.0280917	102.978396	101.9498134	100.9417119	99.95348469	98.98454871	98.03434345
160922A00009	9/22/2016	1.55	9/22/2022	9/22/2016	111.39268	109.1168756	106.8994348	104.7384538	102.6321093	100.5786516	98.57640005	96.62374071	94.71912254
160923A00030	9/23/2016	1.41	9/23/2021	9/23/2016	105.7462	104.5797244	103.4388292	102.3226787	101.2304752	100.1614547	99.11488575	98.09006709	97.08632652
160926A00022	9/26/2016	1.6	9/24/2021	9/26/2016	105.78497	104.6179907	103.476615	102.3600102	101.267377	100.1979503	99.15099707	98.12581502	97.12173076
160926A00074	9/26/2016	1.38	9/27/2021	9/26/2016	105.77389	104.5946486	103.4415271	102.3136691	101.2102523	100.1304895	99.07362717	98.03894325	97.02574588
161014A00024	10/18/2016	2.34	10/16/2020	10/18/2016	100.76552	100.6366288	100.5080793	100.3798734	100.2520095	100.1244865	99.99730273	99.87045696	99.74394777
161031A00006	10/31/2016	1.76	11/1/2021	10/31/2016	106.56463	105.2723843	104.0113012	102.7802608	101.5782003	100.4041065	99.25701263	98.13599637	97.04017674
161031A00007	10/31/2016	1.91	10/31/2022	10/31/2016	112.36403	109.9670472	107.633658	105.3616994	103.1491003	100.9938773	98.89413017	96.84803787	94.85385426
161213A00013	12/13/2016	1.85	12/14/2020	12/13/2016	101.65087	101.352736	101.0563653	100.7617407	100.4688467	100.177668	99.88818934	99.60039582	99.31427263
161213A00014	12/13/2016	2.07	12/13/2021	12/13/2016	107.80112	106.3888683	105.0084604	103.658822	102.3389247	101.047786	99.7844669	98.54806949	97.33773462
170110A00021	1/10/2017	1.89	1/11/2021	1/10/2017	102.10709	101.7272366	101.350217	100.9760005	100.6045556	100.2358515	99.86985791	99.50654477	99.14588261
170111A00011	1/11/2017	3.24	1/11/2029	1/11/2017	158.14906	146.3881528	135.604451	125.7113139	116.6302126	108.2899285	100.6258389	93.5792754	87.09694731
170117A00046	1/17/2017	2.55	1/17/2024	1/17/2017	121.63522	117.6847902	113.8844909	110.2278235	106.7086034	103.3209459	100.0592496	96.91818155	93.89266277
170130A00011	1/30/2017	2.15	2/1/2021	1/30/2017	102.49556	102.0544254	101.6170735	101.1834579	100.7535308	100.3272455	99.90455597	99.48541682	99.06978359
170203A00012	2/3/2017	3.63	2/2/2035	2/3/2017	204.28292	180.0724075	159.0836424	140.8652161	125.031359	111.2520928	99.24490087	88.76767747	79.61275629
170206A00012	2/6/2017	2.04	2/5/2021	2/6/2017	102.5121	102.0592197	101.6103372	101.1653969	100.724347	100.2871366	99.8537159	99.42403562	98.99804752
170216A00028	2/16/2017	1.97	2/16/2021	2/16/2017	102.71924	102.2328345	101.7510346	101.2737768	100.800997	100.3326321	99.86862052	99.40890158	98.95341579
170216A00041	2/16/2017	2.37	2/16/2022	2/16/2017	108.99289	107.4102693	105.8589593	104.3381086	102.8468956	101.3845275	99.95023918	98.5432922	97.16297343
160913A00021	9/13/2016	1.52	9/14/2020	9/13/2016	100.20036	100.1613795	100.1224408	100.0835487	100.0447029	100.0059035	99.96715033	99.9284433	99.88978235
160923A00032	9/23/2016	1.67	9/25/2023	9/23/2016	117.40116	113.8751979	110.4739127	107.192165	104.0250585	100.9679284	98.01632961	95.16602421	92.41297077
160929A00004	9/29/2016	1.74	9/29/2022	9/29/2016	111.49138	109.2010655	106.9697096	104.7953789	102.6762213	100.6104596	98.5963878	96.63236769	94.71682547
161006A00010	10/6/2016	1.35	10/6/2020	10/6/2016	100.51514	100.41442	100.3139128	100.2136172	100.1135324	100.0136577	99.91399253	99.81453612	99.7152878
161014A00006	10/14/2016	1.74	10/14/2021	10/14/2016	106.25528	105.0222014	103.8175968	102.6404901	101.4899482	100.3650798	99.26503297	98.18899328	97.13618146
161027A00013	10/28/2016	1.66	3/15/2021	10/28/2016	102.91553	102.349878	101.7904405	101.2371119	100.6897925	100.1483845	99.61279249	99.08292297	98.55868445
161214A00023	12/14/2016	3.3	12/15/2031	12/14/2016	181.55038	163.8960539	148.1538666	134.1049754	121.5566964	110.3392561	100.3029583	91.31571572	83.26089503
161215A00001	12/15/2016	2.5	12/15/2021	12/15/2016	108.15885	106.7456669	105.3635832	104.0115697	102.6886471	101.3938789	100.1263687	98.88525884	97.6697275
161223A00028	12/23/2016	2.23	12/23/2021	12/23/2016	108.1361	106.70996	105.3124816	103.9428193	102.6001642	101.2837391	99.99279665	98.72661834	97.48451276

Classification | Public

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
170111A00013	1/11/2017	3.4	1/10/2031	1/11/2017	173.20653	157.6882159	143.7232427	131.1468468	119.8125671	109.5901231	100.3635523	92.02957068	84.49612776
170117A00037	1/17/2017	2	1/18/2022	1/17/2017	108.20849	106.7191276	105.2577336	103.8235859	102.4159867	101.0342617	99.67775885	98.34584762	97.03791798
170117A00045	1/17/2017	2.21	1/18/2022	1/17/2017	108.25077	106.7652965	105.3076588	103.8771356	102.4730343	101.0946852	99.74144087	98.41267484	97.10778107
170119A00006	1/19/2017	2.85	1/21/2025	1/19/2017	129.57935	124.2145101	119.1042451	114.2351387	109.5945545	105.1705836	100.9519986	96.92821118	93.0892325
170120A00010	1/20/2017	3.71	1/22/2036	1/20/2017	212.49914	185.9553717	163.1425098	143.5087236	126.5867861	111.9807044	99.3545238	88.42293988	78.94341964
170130A00031	1/30/2017	2.96	7/30/2025	1/30/2017	133.62383	127.4886098	121.6741847	116.1620954	110.9350361	105.9767801	101.2721069	96.80673491	92.56725842
170203A00031	2/3/2017	2.09	2/3/2022	2/3/2017	108.6092	107.0681062	105.5568059	104.0745048	102.6204388	101.1938701	99.79408619	98.42039865	97.07214219
170207A00013	2/7/2017	2.05	2/7/2022	2/7/2017	108.62097	107.0665406	105.5424016	104.0477407	102.5817748	101.1437481	99.73293087	98.34861826	96.9901293
170215A00034	2/15/2017	2.69	12/18/2020	2/15/2017	101.9291	101.6193863	101.311568	101.0056246	100.7015391	100.3992945	100.0988739	99.80026083	99.50343896
170215A00035	2/15/2017	2.51	5/7/2021	2/15/2017	104.3152	103.5864788	102.8679223	102.1593193	101.460464	100.7711561	100.0912009	99.42040883	98.75859555
170224A00019	2/24/2017	2.21	2/24/2022	2/24/2017	108.89058	107.2823526	105.7064396	104.1619443	102.6480061	101.1637953	99.70851179	98.28138349	96.88166538
170313A00034	3/13/2017	3.31	3/15/2027	3/13/2017	146.60317	137.892251	129.7648217	122.1785886	115.094542	108.4766846	102.2917836	96.50914443	91.1004041
170316A00018	3/16/2017	2.8	3/18/2024	3/16/2017	123.68161	119.4870678	115.4589606	111.5897388	107.8722445	104.2996844	100.8656091	97.56389391	94.3887201
170322A00010	3/22/2017	2.11	3/22/2022	3/22/2017	109.45891	107.7632967	106.1028864	104.4766553	102.8836225	101.3228448	99.79341417	98.29445649	96.82512978
160706A00010	7/6/2016	1.99	7/7/2025	7/6/2016	128.06061	122.1455097	116.5378965	111.220233	106.1760679	101.3899646	96.84743401	92.53487168	88.43949929
160706A00028	7/6/2016	2.39	7/6/2029	7/6/2016	152.56403	140.3452687	129.2028733	119.0363243	109.7549646	101.2769908	93.52854739	86.44291881	79.95980679
160706A00030	7/6/2016	2.59	7/7/2031	7/6/2016	165.96178	150.0837285	135.8770986	123.1565387	111.7581418	101.5368673	92.3642847	84.12659694	76.72290717
160714A00023	8/10/2016	2.49	8/10/2028	8/10/2016	148.47681	137.7290959	127.8414587	118.740501	110.3594483	102.6375186	95.51935618	88.95452174	82.89703275
160727A00016	7/27/2016	1.78	7/27/2022	7/27/2016	110.587	108.5025576	106.4680015	104.4818313	102.5426011	100.6489181	98.7994402	96.99287349	95.22797059
160728A00022	7/28/2016	1.37	7/28/2021	7/28/2016	104.84287	103.8596063	102.8946839	101.9475944	101.0178472	100.1049697	99.20850629	98.32801764	97.46307996
160808A00011	8/8/2016	1.6	8/9/2021	8/8/2016	105.0932	104.0736183	103.0737299	102.0929675	101.1307863	100.1866624	99.26009101	98.35058626	97.45767997
160815A00074	8/15/2016	1.57	8/13/2021	8/15/2016	105.12467	104.0924977	103.0805058	102.0881023	101.1147227	100.159824	99.22288383	98.30339915	97.40088566
160825A00054	8/29/2016	2.49	8/30/2021	8/29/2016	106.3205	105.2289826	104.1598112	103.1123021	102.085802	101.079684	100.0933457	99.12620822	98.17771516
160830A00061	8/30/2018	1.89	8/30/2023	8/30/2018	117.06349	113.6428445	110.3406408	107.152102	104.0726771	101.0980248	98.22400215	95.44665484	92.76220689
160916A00016	9/16/2016	1.66	9/16/2021	9/16/2016	105.72732	104.5858008	103.4688092	102.375562	101.3053085	100.2573292	99.23093444	98.22546267	97.24027923
160921A00020	9/21/2016	1.97	9/21/2023	9/21/2016	117.66926	114.1677243	110.7892714	107.5288511	104.3816565	101.3431068	98.40883528	95.57467765	92.83666136
160922A00050	9/22/2016	2.24	9/22/2025	9/22/2016	130.58167	124.3343755	118.4240236	112.8306481	107.5355697	102.5213091	97.77150388	93.27083065	89.00493364
160926A00023	9/26/2016	1.74	9/26/2022	9/26/2016	111.44499	109.1644701	106.9424892	104.7771415	102.6665943	100.6090883	98.60293459	96.64651098	94.73825887
160928A00014	9/28/2016	1.37	9/28/2021	9/28/2016	105.77792	104.5954998	103.4393384	102.3085706	101.2023677	100.1199367	99.06051835	98.02338556	97.00784147
160930A00010	9/30/2016	1.47	9/30/2022	9/30/2016	111.34073	109.0406559	106.8000105	104.6168356	102.4892577	100.4154796	98.39377633	96.4224917	94.50003503
161006A00013	10/6/2016	2.07	10/6/2025	10/6/2016	131.09601	124.7449282	118.7396796	113.0595756	107.68528	102.5987113	97.78295396	93.222177	88.9015584
161102A00026	11/2/2016	1.54	10/30/2020	11/2/2016	100.86672	100.6983453	100.5305284	100.3632687	100.1965634	100.0304098	99.86480515	99.69974683	99.53523214
161115A00010	11/15/2016	2.09	11/15/2021	11/15/2016	107.18823	105.8471708	104.5395283	103.2640609	102.0195924	100.805003	99.6192267	98.46124735	97.33009623

Classification | Public

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
161115A00011	11/15/2016	2.46	11/15/2023	11/15/2016	120.22411	116.5027942	112.9172323	109.4616136	106.1304193	102.9184039	99.82058012	96.83220335	93.94875862
161117A00015	11/17/2016	2.08	11/17/2021	11/17/2016	107.20933	105.8617159	104.5478277	103.2664162	102.0162885	100.7963099	99.60539978	98.44252859	97.30671498
161206A00008	12/6/2016	2.6	12/6/2023	12/6/2016	121.08084	117.2758221	113.6115516	110.0819499	106.6812436	103.403947	100.2448451	97.19897831	94.26162822
161213A00016	12/13/2016	2.06	12/14/2020	12/13/2016	101.67312	101.3753888	101.0794072	100.7851643	100.4926445	100.2018327	99.91271388	99.62527319	99.33949597
171025A00020	10/25/2017	2.02	10/26/2020	10/25/2017	100.88384	100.7266911	100.5700367	100.4138755	100.2582052	100.1030234	99.94832786	99.79411635	99.64038658
171026A00005	10/26/2017	2.16	10/26/2021	10/26/2017	106.94781	105.672187	104.4268713	103.2107898	102.0229225	100.8622963	99.72798255	98.61909427	97.534784
171026A00008	10/26/2017	2.6	10/25/2024	10/26/2017	126.82513	121.8231125	117.0478358	112.4877329	108.1318976	103.9700414	99.99245483	96.18997127	92.55393292
171026A00023	10/26/2017	2	10/26/2020	10/26/2017	100.88072	100.7235699	100.5669193	100.4107619	100.2550954	100.0999174	99.94522574	99.79101803	99.63729205
171027A00029	10/27/2017	2.04	10/27/2020	10/27/2017	100.90283	100.7428478	100.583374	100.4244092	100.265951	100.1079969	99.95054472	99.79359194	99.63713623
171031A00006	10/31/2017	2.02	1/25/2021	10/31/2017	102.32807	101.9076915	101.4907644	101.0772468	100.6670968	100.2602735	99.85673647	99.45644602	99.05936305
171116A00009	11/16/2017	2.17	10/20/2020	11/16/2017	100.80848	100.6683042	100.5285274	100.3891519	100.2501762	100.1115984	99.97341673	99.83562958	99.69823519
171116A00013	11/16/2017	2.2	1/15/2021	11/16/2017	102.23823	101.847059	101.4588895	101.0736858	100.6914139	100.3120402	99.93553183	99.56185628	99.19098156
171116A00022	11/16/2017	1.92	11/16/2020	11/16/2017	101.22518	101.0077886	100.7913416	100.5758362	100.3612662	100.1476254	99.93490778	99.72310725	99.5122178
171122A00012	11/22/2017	2.22	11/23/2020	11/22/2017	101.37566	101.1384575	100.9023709	100.6673928	100.4335153	100.2007306	99.96903127	99.73840954	99.50885793
171201A00025	12/1/2017	2.08	5/3/2021	12/1/2017	104.04885	103.3319064	102.624821	101.9273869	101.2394077	100.560692	99.89105368	99.23031157	98.57828926
171205A00004	12/6/2017	2.07	12/7/2020	12/6/2017	101.60099	101.3230507	101.046638	100.7717415	100.4983489	100.2264477	99.95602558	99.68707048	99.4195704
171205A00012	12/5/2017	2.28	12/7/2020	12/5/2017	101.62171	101.344141	101.0680904	100.7935493	100.5205054	100.2489462	99.9788598	99.71023408	99.44305719
171207A00017	12/7/2017	2.23	10/16/2020	12/7/2017	100.75141	100.6225313	100.4939977	100.3658077	100.2379598	100.1104526	99.98328466	99.85645467	99.72996123
171213A00032	12/13/2017	2.17	12/13/2021	12/13/2017	107.93489	106.5216808	105.1403327	103.7897707	102.4689659	101.1769354	99.91273969	98.67548048	97.46429819
171213A00034	12/13/2017	2.05	12/15/2020	12/13/2017	101.72593	101.4247823	101.1254289	100.8278557	100.5320467	100.2379862	99.94565849	99.65504821	99.36614015
180108A00006	1/8/2018	2.18	1/8/2021	1/8/2018	102.16503	101.7937493	101.425172	101.0592705	100.6960154	100.335378	99.97733005	99.62184356	99.26889101
180116A00031	1/16/2018	2.58	1/17/2023	1/16/2018	115.28067	112.6064028	110.0081676	107.4833749	105.0295365	102.6442631	100.3252605	98.07032445	95.87733725
180116A00039	1/16/2018	2.37	1/19/2021	1/16/2018	102.37099	101.9679057	101.5680015	101.1712401	100.7775842	100.3869975	99.99944399	99.61488846	99.23329608
180123A00026	1/23/2018	2.57	1/14/2022	1/23/2018	108.69938	107.2223664	105.7728192	104.3500403	102.9533505	101.582093	100.2356325	98.91335443	97.6146639
180124A00020	1/24/2018	2.53	1/24/2023	1/24/2018	115.78092	113.0678136	110.4326002	107.8725937	105.3852204	102.9680104	100.618593	98.33469183	96.11412041
180125A00022	1/25/2018	2.69	1/25/2023	1/25/2018	115.7022	112.9975084	110.3703443	107.8180433	105.3380475	102.9279016	100.5852488	98.30782573	96.0934586
180207A00012	2/7/2018	2.53	2/7/2022	2/7/2018	109.34176	107.7816276	106.2518845	104.7517199	103.2803479	101.83701	100.4209736	99.03153146	97.66800015
170501A00008	5/1/2017	2.23	5/2/2022	5/1/2017	110.053	108.2331996	106.4529468	104.7110163	103.0062373	101.3374873	99.70368903	98.10380846	96.5368524
170515A00041	5/15/2017	3.02	5/17/2027	5/15/2017	145.52892	136.6172563	128.3174808	120.5841743	113.3755355	106.6530707	100.3813141	94.52757315	89.06169749
170518A00011	5/18/2017	1.94	5/18/2022	5/18/2017	110.12968	108.2555863	106.4231377	104.6310175	102.8779617	101.1627596	99.48425112	97.84132399	96.23291139
170518A00034	5/18/2017	2.15	5/18/2023	5/18/2017	116.78007	113.6826568	110.6839868	107.7802334	104.9677498	102.2430581	99.60284036	97.04392966	94.56330185
170530A00026	5/30/2017	1.81	6/1/2021	5/30/2017	104.33229	103.5263632	102.7328349	101.9514241	101.1818549	100.42386	99.67717975	98.94156253	98.21676396
170531A00018	5/31/2017	1.97	5/28/2021	5/31/2017	104.27747	103.4854377	102.7053979	101.9370777	101.1802145	100.4345536	99.69984771	98.97585693	98.26234819

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
170602A00026	6/2/2017	2.25	6/3/2024	6/2/2017	123.68313	119.2097647	114.9234109	110.8151342	106.8764837	103.099465	99.47651258	96.00046305	92.66453147
170606A00014	6/6/2017	1.9	6/6/2022	6/6/2017	110.37122	108.4374622	106.5475776	104.7001793	102.8939392	101.1275845	99.39989478	97.70969943	96.05587484
170612A00013	6/12/2017	1.83	6/14/2021	6/12/2017	104.55867	103.7120384	102.879076	102.0594559	101.2528591	100.4589771	99.67751073	98.90817042	98.15067542
170622A00016	6/22/2017	2.11	6/22/2022	6/22/2017	110.66886	108.6898828	106.7562632	104.8666483	103.0197376	101.2142796	99.44906863	97.72294368	96.03478572
170628A00008	6/28/2017	2.04	9/15/2021	6/28/2017	106.12137	104.9806878	103.8644313	102.7718259	101.7021259	100.6546168	99.62861329	98.62345828	97.63852112
170629A00017	6/29/2017	2	4/26/2021	6/29/2017	103.77816	103.0846172	102.4003146	101.7250708	101.058707	100.4010488	99.75192664	99.11117506	98.47863299
170629A00067	6/29/2017	2.19	6/29/2022	6/29/2017	110.93944	108.9364182	106.9795595	105.0675172	103.1989972	101.3727509	99.58757372	97.84230325	96.13581724
170630A00009	6/30/2017	2.53	6/30/2025	6/30/2017	131.96234	125.9375752	120.2244521	114.8052551	109.6633608	104.7831688	100.1500337	95.75020219	91.57075411
170706A00090	7/6/2017	2.48	7/6/2023	7/6/2017	118.01012	114.7509782	111.5991433	108.550507	105.601141	102.7472884	99.98535499	97.31190154	94.72363614
170724A00014	7/24/2017	2.14	7/25/2022	7/24/2017	111.27438	109.1889825	107.1533301	105.1659338	103.2253554	101.3302095	99.47916101	97.67092262	95.90425319
170725A00047	7/25/2017	2.19	7/25/2022	7/25/2017	111.37416	109.28774	107.2510884	105.2627125	103.3211736	101.4250858	99.57311326	97.76396834	95.99640937
170728A00040	7/28/2017	2.44	1/27/2025	7/28/2017	128.71207	123.316581	118.1791098	113.2859708	108.6242748	104.1818792	99.94734117	95.90987339	92.05930326
170803A00019	8/3/2017	2.14	8/3/2022	8/3/2017	111.42333	109.30898	107.2456724	105.2318581	103.266044	101.3467925	99.47271865	97.64248813	95.85481483
170803A00032	8/3/2017	2.12	8/3/2023	8/3/2017	117.99208	114.6289463	111.3796875	108.2398156	105.2050485	102.2712971	99.43465447	96.69138747	94.03792741
170809A00023	8/9/2017	2.86	8/9/2027	8/9/2017	145.70369	136.4685643	127.8873398	119.9102231	112.4914573	105.5889776	99.16409587	93.1812132	87.60755835
170824A00038	8/24/2017	2.23	8/24/2023	8/24/2017	118.05654	114.6394978	111.3400111	108.1533706	105.0750847	102.1008673	99.22662733	96.44845866	93.76263033
170825A00025	8/25/2017	2.12	8/25/2022	8/25/2017	111.74481	109.5597698	107.4290379	105.3509131	103.3237594	101.3460036	99.41613236	97.53268924	95.69427234
170228A00015	2/28/2017	2.87	5/28/2025	2/28/2017	132.04239	126.1677664	120.5913743	115.2963659	110.2669433	105.4882898	100.9465031	96.62853284	92.52212319
170309A00024	3/9/2017	2.27	3/9/2021	3/9/2017	103.14984	102.6011861	102.0583654	101.5212844	100.9898524	100.4639805	99.94358167	99.42857064	98.91886397
170322A00023	3/22/2017	3.82	9/22/2039	3/22/2017	240.23109	204.4805435	174.7474689	149.9678514	129.2720075	111.9481582	97.41298692	85.18781574	74.87930535
170329A00015	3/29/2017	2.11	3/29/2021	3/29/2017	103.38816	102.7796193	102.1782236	101.5838448	100.9963609	100.4156525	99.84160298	99.27409832	98.71302716
170330A00012	3/30/2017	2.11	3/30/2021	3/30/2017	103.40463	102.7930788	102.1887331	101.5914704	101.0011666	100.417701	99.84095514	99.27081371	98.70716381
170404A00007	4/4/2017	2.22	4/4/2022	4/4/2017	109.5586	107.8286139	106.1349705	104.4765988	102.8524679	101.2615871	99.70300351	98.17580043	96.6790957
170417A00043	4/17/2017	2.14	4/18/2022	4/17/2017	109.66085	107.8872093	106.1514737	104.4524937	102.7891704	101.1604487	99.5653149	98.00279521	96.47195327
170427A00046	4/27/2017	3.1	4/27/2028	4/27/2017	152.23031	141.7365973	132.0513012	123.1076265	114.8446419	107.2067362	100.143127	93.6074168	87.55719256
170427A00047	4/27/2017	3.18	4/27/2029	4/27/2017	159.48972	147.2344063	136.029913	125.7801366	116.3982524	107.8057752	99.9317179	92.71183772	86.08796249
170501A00007	5/1/2017	2.04	5/3/2021	5/1/2017	103.91977	103.2046698	102.4993835	101.8037075	101.1174464	100.4404103	99.77241399	99.11327747	98.46282539
170505A00003	5/5/2017	2.09	5/5/2021	5/5/2017	103.98741	103.2660191	102.5546078	101.8529731	101.1609145	100.4782369	99.80475051	99.14027061	98.48461743
170517A00098	5/19/2017	2.32	5/19/2022	5/19/2017	110.50051	108.6258272	106.7927455	104.9999504	103.2461801	101.5302262	99.85093044	98.20718246	96.59791708
170519A00034	5/19/2017	1.97	5/19/2022	5/19/2017	110.2002	108.3224415	106.4864682	104.6909486	102.9346127	101.2162446	99.53467917	97.88879934	96.27753376
170524A00046	5/24/2017	1.84	5/24/2021	5/24/2017	104.22513	103.4439191	102.6743845	101.9162676	101.1693155	100.4332828	99.70793143	98.99303007	98.28835403
170530A00002	5/30/2017	2.15	5/31/2022	5/30/2017	110.3941	108.4845326	106.6179819	104.7930592	103.0084389	101.262852	99.55508389	97.88397065	96.24839681
170530A00003	5/30/2017	1.99	5/28/2021	5/30/2017	104.2927	103.5006031	102.7204993	101.9521158	101.19519	100.4494671	99.71469988	98.9906484	98.27707958

Classification | Public

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
170531A00005	5/31/2017	1.94	5/31/2022	5/31/2017	110.34448	108.4293523	106.557472	104.7274387	102.9379167	101.1876281	99.47534943	97.79990888	96.16018326
170606A00017	6/6/2017	1.9	6/6/2022	6/6/2017	110.37122	108.4374622	106.5475776	104.7001793	102.8939392	101.1275845	99.39989478	97.70969943	96.05587484
170614A00012	6/14/2017	1.9	6/14/2022	6/14/2017	110.50483	108.5452707	106.6304495	104.7589944	102.929586	101.1409574	99.39189123	97.68121738	96.00781064
170616A00016	6/16/2017	1.82	6/16/2021	6/16/2017	104.58297	103.7301163	102.8911283	102.065673	101.2534248	100.4540687	99.66729929	98.89282097	98.13034727
170626A00042	6/26/2017	1.92	6/27/2022	6/26/2017	110.76043	108.7584814	106.8027168	104.8917789	103.0243614	101.1992051	99.41509594	97.67086309	95.96537698
170629A00016	6/29/2017	1.94	12/21/2020	6/29/2017	101.74726	101.4293067	101.1133444	100.7993578	100.4873282	100.1772374	99.86906719	99.56279982	99.25841761
170629A00020	6/29/2017	2.03	6/29/2021	6/29/2017	104.83819	103.9462763	103.0694787	102.2074162	101.35972	100.5260333	99.70601137	98.89932046	98.1056377
170223A00003	2/23/2017	2.05	2/23/2022	2/23/2017	108.90666	107.2969012	105.7194977	104.1735539	102.6582075	101.1726275	99.71601235	98.28758899	96.88661124
170310A00026	3/10/2017	2.15	9/8/2020	3/10/2017	100.12828	100.1060067	100.0837542	100.0615246	100.0393177	100.0171337	99.99497232	99.97283368	99.95071771
170313A00027	3/13/2017	2.27	3/14/2022	3/13/2017	109.58135	107.9082545	106.2696014	104.6644016	103.0917075	101.550607	100.0402218	98.55970577	97.10824344
170314A00005	3/14/2017	2.29	3/14/2022	3/14/2017	109.61344	107.9400775	106.3011597	104.6957	103.1227508	101.5813997	100.0707683	98.59001039	97.13831035
170417A00069	4/17/2018	2.07	4/16/2021	4/17/2018	103.66044	102.9972377	102.3425039	101.6960814	101.0578126	100.4275437	99.80512489	99.19041013	98.58325685
170504A00038	5/4/2017	2.09	5/4/2022	5/4/2017	110.16186	108.3294539	106.5370559	104.7834258	103.0673734	101.3877573	99.7434828	98.1334994	96.55679831
170515A00005	5/15/2017	2.04	5/16/2022	5/15/2017	110.27574	108.4062906	106.5782748	104.7903868	103.0413727	101.330031	99.65521054	98.0158073	96.41076224
170519A00002	5/19/2017	2.15	5/19/2022	5/19/2017	110.19504	108.3231898	106.4928929	104.7028302	102.9517414	101.2384193	99.56170736	97.92049643	96.31372263
170524A00011	5/24/2017	2.54	5/24/2024	5/24/2017	123.8579	119.4368374	115.1988742	111.1353245	107.237969	103.4990302	99.91114545	96.467342	93.16101331
170525A00028	5/25/2017	1.97	5/25/2022	5/25/2017	110.29985	108.4031617	106.5489832	104.7359573	102.9627813	101.2282081	99.53104361	97.87014325	96.2444098
170531A00003	5/31/2017	1.94	5/31/2022	5/31/2017	110.34448	108.4293523	106.557472	104.7274387	102.9379167	101.1876281	99.47534943	97.79990888	96.16018326
170601A00018	6/1/2017	1.96	6/1/2022	6/1/2017	110.39805	108.479358	106.6040198	104.7706435	102.9778944	101.2244952	99.50922275	97.83090519	96.18841911
170608A00017	6/8/2017	1.95	6/8/2022	6/8/2017	110.49758	108.5564795	106.6594887	104.8052199	102.9923466	101.2195971	99.48575141	97.78963862	96.13013439
170609A00007	6/9/2017	1.96	6/9/2022	6/9/2017	110.53305	108.5885437	106.6882583	104.830808	103.0148674	101.2391654	99.50248221	97.80364705	96.14153526
170609A00026	6/9/2017	2.3	6/9/2023	6/9/2017	117.00699	113.8494405	110.7939742	107.8366264	104.9736201	102.2013513	99.51638027	96.91542192	94.39533811
170613A00032	6/13/2017	2.45	6/13/2025	6/13/2017	131.22891	125.2833126	119.643131	114.2910072	109.210671	104.3868618	99.80525971	95.4524224	91.31572617
170615A00034	6/15/2017	2.13	6/15/2022	6/15/2017	110.58932	108.6324883	106.7202536	104.8512557	103.0241865	101.2377898	99.49085764	97.78222884	96.11078618
170616A00019	6/16/2017	2.64	6/16/2027	6/16/2017	144.89598	135.8228401	127.3824287	119.5272374	112.2135639	105.4011916	99.05309398	93.13516532	87.61597568
170629A00073	6/29/2017	2.2	6/29/2023	6/29/2017	117.64713	114.4019903	111.2633792	108.2272294	105.2896487	102.4469144	99.69546525	97.03189333	94.45293668
170724A00015	7/24/2017	2.32	7/24/2023	7/24/2017	117.82477	114.5108517	111.307847	108.2114406	105.2175077	102.3221066	99.52146967	96.8119942	94.19023455
170731A00004	7/31/2017	2.16	7/29/2022	7/31/2017	111.38084	109.2821769	107.2338439	105.2343199	103.2821427	101.375904	99.51424646	97.69586223	95.91949029
170822A00020	8/22/2017	2.59	8/22/2025	8/22/2017	132.00918	125.8342604	119.9868388	114.4478089	109.1992817	104.2244988	99.50775493	95.03432652	90.79040498
170824A00037	8/24/2017	1.98	8/24/2021	8/24/2017	105.69654	104.6272123	103.5794334	102.5525603	101.5459721	100.5590723	99.59128761	98.64206687	97.71087984
170322A00015	3/22/2017	2.31	3/22/2022	3/22/2017	109.48764	107.7968533	106.1410801	104.5193117	102.9305746	101.3739321	99.84848266	98.35335815	96.88772229
170323A00009	3/23/2017	2.1	3/23/2022	3/23/2017	109.45939	107.7608299	106.0975703	104.4685835	102.8728847	101.3095264	99.777597	98.27621867	96.80454606
170331A00004	3/31/2017	2.12	3/31/2021	3/31/2017	103.42707	102.8124806	102.2051642	101.6049969	101.0118532	100.4256104	99.84614885	99.27335152	98.70710406

Classification | Public

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
170424A00009	4/24/2017	2.04	4/25/2022	4/24/2017	109.92142	108.1185388	106.3545933	104.6283933	102.9387955	101.284703	99.66506281	98.0788639	96.52513471
170515A00039	5/15/2017	2.58	5/15/2024	5/15/2017	123.86222	119.4708023	115.2602023	111.2218917	107.3478006	103.6302898	100.0621246	96.63645096	93.34677235
170530A00005	5/30/2017	1.99	5/28/2021	5/30/2017	104.2927	103.5006031	102.7204993	101.9521158	101.19519	100.4494671	99.71469988	98.9906484	98.27707958
170530A00027	5/30/2017	1.97	5/31/2022	5/30/2017	110.39954	108.4838927	106.6115007	104.7809654	102.9909509	101.240179	99.52742594	97.85151965	96.21133671
170609A00006	6/9/2017	1.89	12/9/2021	6/9/2017	107.51594	106.1102932	104.7377485	103.3971374	102.0873451	100.8073086	99.55601364	98.33249224	97.13581973
170613A00007	6/13/2017	2.01	6/11/2021	6/13/2017	104.53637	103.7006332	102.8782228	102.0688223	101.2721248	100.4878327	99.71565796	98.95532123	98.20655175
170622A00036	6/22/2017	3.23	6/22/2032	6/22/2017	180.45047	162.2195139	146.0392319	131.6662852	118.8874335	107.515675	97.38689648	88.35696574	80.29920632
170626A00017	6/26/2017	1.8	6/28/2021	6/26/2017	104.76051	103.8701215	102.9948099	102.1341908	101.2878968	100.4555728	99.6368752	98.83147161	98.03904039
170706A00013	7/6/2017	2.27	7/6/2022	7/6/2017	111.21171	109.184718	107.204854	105.2707414	103.3810518	101.534504	99.72986206	97.96593316	96.24156597
170726A00034	7/26/2017	2.05	7/26/2021	7/26/2017	105.29912	104.3218319	103.3626174	102.4209807	101.4964422	100.5885395	99.69682659	98.8208735	97.96026525
170728A00030	7/28/2017	2.18	7/27/2022	7/28/2017	111.3876	109.2949513	107.2523569	105.2583064	103.3113496	101.4100892	99.55317865	97.73932014	95.96726228
170731A00012	7/31/2017	1.82	8/2/2021	7/31/2017	105.34599	104.3446274	103.3622155	102.3982208	101.4521295	100.5234466	99.61169526	98.71641587	97.83716536
170731A00029	7/31/2017	2.34	7/31/2023	7/31/2017	118.00441	114.6653509	111.4387205	108.3201177	105.3053368	102.39036	99.57134779	96.84463013	94.20669792
170803A00020	8/3/2017	2.84	8/3/2027	8/3/2017	145.44589	136.2427852	127.6899913	119.7380955	112.3416805	105.458986	99.05159621	93.08415625	87.52411342
170803A00021	8/3/2017	2.5	8/5/2024	8/3/2017	124.96627	120.2777628	115.7921434	111.4995573	107.3906813	103.4566923	99.68923797	96.08040863	92.62271169
170804A00020	8/4/2017	2.13	8/1/2022	8/4/2017	111.37017	109.2624811	107.2055386	105.1978056	103.2378019	101.3241019	99.45533225	97.6301696	95.84733824
170818A00004	8/18/2017	1.95	8/18/2021	8/18/2017	105.56877	104.5188148	103.4896687	102.4807173	101.4913707	100.5210615	99.56924417	98.63539388	97.71900541
170822A00017	8/22/2017	2.11	8/22/2022	8/22/2017	111.67464	109.4995293	107.3782727	105.3091883	103.2906602	101.3211341	99.39911463	97.52316253	95.69189209
170829A00044	8/29/2017	2.01	8/29/2022	8/29/2017	111.57968	109.3841531	107.2434936	105.1559689	103.1199177	101.1337428	99.19590824	97.30493599	95.45940377
170830A00034	8/30/2017	2.05	8/30/2022	8/30/2017	111.67993	109.4802705	107.3356469	105.2443201	103.2046218	101.2149478	99.27375563	97.37956113	95.53093612
170109A00031	1/9/2017	2.29	1/10/2022	1/9/2017	108.23226	106.7706245	105.3359821	103.9276433	102.5449457	101.1872487	99.85393213	98.54439619	97.25806007
170215A00036	2/15/2017	2.61	7/30/2021	2/15/2017	105.89257	104.8998839	103.9257621	102.9696859	102.0311576	101.1096975	100.2048432	99.31614907	98.44318509
170215A00037	2/15/2017	2.71	5/23/2022	2/15/2017	111.27428	109.380397	107.5287314	105.7179377	103.946729	102.2138727	100.5181882	98.85854392	97.23385443
170215A00039	2/15/2017	2.72	11/7/2022	2/15/2017	114.34661	111.9044414	109.5274298	107.2133362	104.9600226	102.7654424	100.6276362	98.5447266	96.51491438
170216A00010	2/16/2017	2.37	2/16/2022	2/16/2017	108.99289	107.4102693	105.8589593	104.3381086	102.8468956	101.3845275	99.95023918	98.5432922	97.16297343
170217A00035	2/17/2017	1.9	2/17/2021	2/17/2017	102.70208	102.2127844	101.7281543	101.2481198	100.7726155	100.3015776	99.83494301	99.37265024	98.91463875
170224A00044	5/24/2017	3.29	5/24/2029	5/24/2017	161.08895	148.6532514	137.2905838	126.9021386	117.3987177	108.6997529	100.7324277	93.43089254	86.73556333
170228A00018	2/28/2017	2.25	2/28/2022	2/28/2017	109.02391	107.4013996	105.8117304	104.2539881	102.7272918	101.2307923	99.76367089	98.32513806	96.91443191
170303A00023	3/3/2017	2	3/3/2021	3/3/2017	102.97907	102.4478089	101.9220217	101.4016212	100.8865248	100.3766518	99.87192285	99.3722605	98.8775887
170310A00032	3/10/2017	2.27	3/10/2022	3/10/2017	109.51233	107.8515987	106.224904	104.6312837	103.0698071	101.5395782	100.0397338	98.56944207	97.12790124
170317A00060	3/17/2017	2.04	3/17/2021	3/17/2017	103.23311	102.6595834	102.0924291	101.5315404	100.9768138	100.428148	99.88544388	99.34860442	98.81753478
170322A00025	3/22/2017	3.58	3/22/2033	3/22/2017	190.60858	170.513976	152.7938319	137.1519334	123.3305658	111.1053249	100.2806546	90.68600156	82.17250007
170404A00049	4/6/2017	2.42	4/6/2022	4/6/2017	109.92668	108.1873853	106.4847122	104.8175763	103.1849355	101.5857884	100.0191721	98.4841605	96.97986234

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
170410A00007	4/10/2017	2.1	4/11/2022	4/10/2017	109.78334	108.0246786	106.3033652	104.6182805	102.9683512	101.3525461	99.76987449	98.21938385	96.70015808
170417A00014	4/17/2017	1.95	4/18/2022	4/17/2017	109.64802	107.8690685	106.128225	104.4243315	102.7562807	101.1230097	99.52349786	97.95676427	96.42186617
170509A00006	5/9/2017	2.3	5/9/2022	5/9/2017	110.29435	108.4514607	106.6489623	104.8855986	103.1601615	101.4714931	99.81848281	98.2000653	96.61521777
170515A00007	5/15/2017	2.04	5/14/2021	5/15/2017	104.10052	103.3515184	102.6132695	101.8855467	101.1681258	100.460789	99.76332468	99.07552709	98.39719612
170515A00043	5/15/2017	3.1	5/15/2028	5/15/2017	152.54584	141.9697948	132.2130826	123.2076238	114.8913502	107.2076449	100.1048358	93.53573751	87.45723969
170531A00080	5/31/2017	2.3	5/31/2024	5/31/2017	123.83504	119.3688633	115.0890608	110.9867215	107.053421	103.2811911	99.66249221	96.19018712	92.85751632
170608A00020	6/8/2017	2.27	6/10/2024	6/8/2017	123.88772	119.386519	115.0741756	110.9416759	106.9804941	103.1825619	99.5402399	96.04629289	92.69386514
170609A00025	6/9/2017	2.13	6/9/2022	6/9/2017	110.50867	108.5705631	106.6764211	104.8248757	103.0146117	101.2443677	99.51293303	97.81914549	96.16188855
170612A00039	6/12/2017	2.29	6/12/2024	6/12/2017	124.00526	119.4949225	115.1740094	111.0334817	107.0647907	103.2598453	99.61098396	96.11094924	92.75286399
170616A00018	6/16/2017	2.4	6/16/2025	6/16/2017	131.01666	125.065692	119.4209094	114.0649076	108.9813689	104.1549866	99.57139656	95.21711411	91.07947502
180223A00026	2/23/2018	2.92	12/15/2022	2/23/2018	115.52426	112.9490717	110.444924	108.0093803	105.6401038	103.334855	101.0914874	98.90794273	96.78224618
180308A00010	3/8/2018	2.72	4/8/2021	3/8/2018	103.93112	103.2908612	102.6584883	102.0338521	101.416811	100.807227	100.2049655	99.60989481	99.02188676
180308A00011	3/8/2018	2.9	9/15/2022	3/8/2018	113.76982	111.4978588	109.2835014	107.1248978	105.0202685	102.9679044	100.9661634	99.01346724	97.10829871
180314A00005	3/14/2018	2.74	3/15/2021	3/14/2018	103.51034	102.9427884	102.3814648	101.826265	101.2770889	100.7338386	100.1964186	99.66473501	99.1386963
180316A00010	3/16/2018	2.58	3/16/2021	3/16/2018	103.5155	102.9440288	102.3788734	101.8199274	101.2670886	100.7202571	100.1793352	99.64422723	99.11483962
180320A00007	3/20/2018	2.92	3/21/2022	3/20/2018	110.46078	108.7646659	107.103627	105.4766477	103.8827545	102.3210106	100.7905144	99.29039745	97.81982338
180321A00005	3/21/2018	2.65	3/22/2021	3/21/2018	103.66474	103.0749648	102.4919018	101.9154357	101.3454548	100.7818499	100.2245143	99.67334367	99.12823598
180412A00016	4/12/2018	2.79	4/12/2021	4/12/2018	104.04844	103.3957951	102.7513327	102.114901	101.4863506	100.8655354	100.2523131	99.646545	99.0480955
180426A00016	4/26/2018	2.77	4/26/2021	4/26/2018	104.39293	103.6957643	103.0078972	102.3291451	101.6593275	100.998269	100.3457983	99.70174899	99.06595865
180430A00013	4/30/2018	3.01	2/15/2022	4/30/2018	109.94946	108.3624795	106.8068208	105.2816358	103.7861037	102.3194328	100.8808588	99.46964401	98.08507596
180430A00015	4/30/2018	3.02	4/15/2022	4/30/2018	111.10332	109.3261224	107.5867264	105.8839997	104.2168513	102.5842335	100.9851398	99.41860266	97.8836918
180518A00012	5/18/2018	3.1	5/18/2022	5/18/2018	111.88272	109.998196	108.1554046	106.3530243	104.5897919	102.8644972	101.1759804	99.52312967	97.90487803
180524A00050	5/24/2018	2.9	5/24/2021	5/24/2018	104.91003	104.1274402	103.3565119	102.5969883	101.8486175	101.1111552	100.3843639	99.66801315	98.961879
180529A00007	5/29/2018	2.83	6/1/2021	5/29/2018	105.00714	104.199863	103.404969	102.6221782	101.8512158	101.0918154	100.3437184	99.60667382	98.88043817
180529A00026	5/29/2018	2.67	6/1/2021	5/29/2018	104.99742	104.1886285	103.392266	102.6080514	101.8357086	101.0749695	100.325574	99.58726997	98.85981253
180529A00066	5/29/2018	2.99	5/26/2023	5/29/2018	118.78374	115.6451158	112.6067355	109.6646999	106.8152927	104.0549711	101.380356	98.78822286	96.27549326
180530A00025	5/30/2018	3.49	5/30/2030	5/30/2018	170.13287	155.7250934	142.683595	130.8705748	120.1628496	110.4502308	101.6340894	93.62608574	86.3470454
180530A00039	5/30/2018	2.93	5/30/2023	5/30/2018	118.68313	115.533282	112.4843936	109.5325172	106.6738971	103.9049533	101.222272	98.62259627	96.10281749
180530A00044	5/30/2018	2.87	5/31/2022	5/30/2018	111.71343	109.7913893	107.9126052	106.0756814	104.2792853	102.5221416	100.8030294	99.12077871	97.47426844
180601A00023	6/1/2018	3.3	6/1/2028	6/1/2018	156.78365	145.8790644	135.8240381	126.5475238	117.984796	110.0768527	102.769879	96.01476422	89.76666638
180611A00030	6/11/2018	2.91	6/12/2023	6/11/2018	119.46665	116.2497824	113.1371296	110.1246538	107.2085029	104.3850006	101.6506369	99.00205914	96.43606362
180614A00008	6/14/2018	2.94	6/14/2021	6/14/2018	105.33877	104.4902745	103.6554417	102.8339407	102.0254537	101.2296729	100.4463004	99.67504717	98.91563345
180615A00063	6/15/2018	3.2	6/15/2026	6/15/2018	142.41601	134.8160506	127.67475	120.9619186	114.6495133	108.7114756	103.1235796	97.86329357	92.90965282

Classification | Public

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
170830A00030	8/30/2017	2	3/30/2022	8/30/2017	109.11103	107.400026	105.7247677	104.0842049	102.477332	100.9031818	99.36082409	97.84936352	96.36793807
170830A00033	8/30/2017	1.93	8/30/2021	8/30/2017	105.74288	104.6546022	103.5886235	102.5442619	101.5208653	100.5178076	99.53448763	98.57032737	97.62477134
170831A00050	8/31/2017	1.72	6/14/2021	8/31/2017	104.4695	103.6232637	102.7906987	101.9714714	101.1652631	100.3717652	99.59067873	98.82171416	98.0645908
170831A00052	8/31/2017	1.78	11/30/2021	8/31/2017	107.2731	105.8794283	104.5217404	103.1986575	101.9088707	100.6511366	99.42427274	98.22715431	97.05871049
170912A00007	9/12/2017	1.84	12/15/2020	9/12/2017	101.62385	101.323343	101.024623	100.7276745	100.4324816	100.1390287	99.84730028	99.55728119	99.26895632
170912A00008	9/12/2017	1.98	12/15/2021	9/12/2017	107.46106	106.0528845	104.6757139	103.3285269	102.0103466	100.7202389	99.45730994	98.22070403	97.00960163
170921A00062	9/21/2017	1.95	9/21/2020	9/21/2017	100.32518	100.2666468	100.2081995	100.1498331	100.0915477	100.033343	99.97521885	99.9171751	99.8592116
170926A00002	9/26/2017	1.73	12/3/2020	9/26/2017	101.44622	101.1800309	100.9152414	100.6518396	100.3898145	100.1291553	99.86985132	99.61189203	99.35526694
171005A00006	10/5/2017	2.32	10/7/2024	10/5/2017	126.17982	121.2256944	116.4947245	111.9756097	107.6576905	103.530906	99.58575628	95.81326799	92.20496173
171016A00033	10/16/2017	2.2	10/17/2022	10/16/2017	112.79687	110.4373518	108.1395686	105.9014548	103.7210309	101.5964	99.52574279	97.50731457	95.53944088
171025A00027	10/25/2017	2.36	10/25/2022	10/25/2017	113.29206	110.902581	108.5760734	106.310414	104.1035658	101.9535776	99.85857929	97.81677806	95.82645415
171030A00022	10/30/2017	2.28	10/31/2022	10/30/2017	113.2108	110.8040213	108.461041	106.1796928	103.9578997	101.7936723	99.68510488	97.63037103	95.62771942
171030A00094	10/30/2017	2.13	11/1/2021	10/30/2017	107.01377	105.7185959	104.4546277	103.22075	102.0158987	100.839059	99.68926337	98.56558799	97.46715086
171101A00021	11/1/2017	2.51	11/1/2023	11/1/2017	120.1497	116.4761982	112.9352811	109.5213458	106.229061	103.053356	99.98940586	97.03261776	94.17861804
171101A00023	11/1/2017	2.78	11/3/2025	11/1/2017	134.35062	127.855466	121.7160678	115.9109703	110.4201299	105.2248169	100.3075219	95.65186907	91.24253638
171103A00017	11/3/2017	2.09	11/3/2022	11/3/2017	113.27574	110.8497414	108.4884262	106.1895801	103.9510845	101.7709117	99.64711944	97.57784694	95.56131053
171122A00009	11/22/2017	2.2	11/22/2022	11/22/2017	113.86117	111.3677779	108.9421743	106.5819821	104.2849321	102.0488553	99.87167673	97.75141082	95.68615645
171130A00005	11/30/2017	2.45	11/30/2022	11/30/2017	114.12793	111.6153278	109.1714062	106.7937399	104.480015	102.2280205	100.035642	97.90085693	95.82172953
171205A00013	12/5/2017	2.4	12/6/2021	12/5/2017	107.91602	106.5148684	105.1476784	103.8132171	102.5103105	101.2378403	99.99474115	98.77999698	97.59263848
171208A00006	12/8/2017	2.67	12/8/2026	12/8/2017	141.92407	133.6786091	125.9689921	118.7574779	112.0091831	105.6918529	99.77564847	94.2329529	89.03819416
171212A00027	12/12/2017	2.21	12/13/2021	12/12/2017	107.9884	106.5748059	105.1930816	103.8421502	102.5209824	101.2285951	99.96404881	98.72644488	97.51492361
180102A00020	1/2/2018	2.5	1/3/2023	1/2/2018	114.83512	112.2102205	109.65886	107.1785664	104.7669685	102.4217879	100.1408352	97.92200587	95.76327616
180103A00027	1/3/2018	2.51	1/3/2023	1/3/2018	114.85993	112.2347254	109.6830626	107.2024732	104.790586	102.4451223	100.1638926	97.94479214	95.78579697
170630A00008	6/30/2017	2.35	7/1/2024	6/30/2017	124.59047	120.0037752	115.6116106	111.4047213	107.3743415	103.5121654	99.8103207	96.26134369	92.85815596
170630A00036	6/30/2017	2.01	6/30/2022	6/30/2017	110.98397	108.9706037	107.0037929	105.0821802	103.2044612	101.3693775	99.57571459	97.82230057	96.10800381
170706A00028	7/6/2017	2.09	7/6/2022	7/6/2017	111.23994	109.2057105	107.2188999	105.2781163	103.3820199	101.5293186	99.71876616	97.94916004	96.21933966
170728A00029	7/28/2017	2.1	1/27/2022	7/28/2017	108.23785	106.7258124	105.2425663	103.7873545	102.3594497	100.9581489	99.58277314	98.23266565	96.9071915
170728A00032	7/28/2017	2.36	7/27/2023	7/28/2017	117.9993	114.6731136	111.4585263	108.351186	105.3469322	102.4417894	99.63195795	96.91380545	94.28385801
170808A00036	8/8/2017	2.04	11/15/2021	8/8/2017	107.1255	105.7848661	104.4776394	103.2025807	101.958514	100.7443198	99.55893204	98.40133495	97.27055992
170821A00038	8/23/2017	2.39	8/23/2024	8/23/2017	125.69384	120.9044993	116.3254033	111.9461918	107.7570696	103.7487752	99.91254861	96.24010158	92.72358936
170829A00023	8/29/2017	1.83	8/29/2022	8/29/2017	111.61023	109.4065622	107.2581005	105.163102	103.1198911	101.1268569	99.18245032	97.28518131	95.43361589
170907A00059	9/7/2017	1.99	9/7/2022	9/7/2017	111.68312	109.4587281	107.2904214	105.1764166	103.1149963	101.1045104	99.14337272	97.23005814	95.36309955
170911A00044	9/11/2017	1.73	9/13/2021	9/11/2017	105.93687	104.8007886	103.6889558	102.600605	101.5349982	100.4914283	99.46921732	98.46771465	97.48629597

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
170914A00039	9/14/2017	2.23	9/16/2024	9/14/2017	125.41253	120.5466898	115.8976238	111.4544895	107.2070454	103.145617	99.26106251	95.54473999	91.98847732
170915A00031	9/15/2017	2.1	9/15/2023	9/15/2017	118.65146	115.1380374	111.7477982	108.4757083	105.3169685	102.2670044	99.32145466	96.47615979	93.72715111
170918A00108	9/18/2017	1.97	9/20/2022	9/18/2017	112.2731	109.9937929	107.7727828	105.6081733	103.4981479	101.4409628	99.43494366	97.47848165	95.57003078
170921A00063	9/21/2017	2.23	9/21/2022	9/21/2017	112.43035	110.1544193	107.9365879	105.7749745	103.6677711	101.6132418	99.60971932	97.65560205	95.74935056
170926A00036	9/26/2017	1.7	9/25/2020	9/26/2017	100.38206	100.3122449	100.2425337	100.1729282	100.1034282	100.0340333	99.9647434	99.89555824	99.82647757
170928A00020	9/29/2017	2.29	9/29/2022	9/29/2017	112.69731	110.3935749	108.149075	105.9618706	103.8301017	101.7519833	99.72580206	97.74991256	95.82273418
171010A00024	10/10/2017	2.38	10/10/2023	10/10/2017	119.33629	115.7466205	112.2846065	108.9449387	105.7225648	102.6126746	99.61068647	96.71223474	93.91315819
171011A00013	10/11/2017	2.77	10/13/2026	10/11/2017	140.09349	132.1751334	124.7589498	117.8103695	111.2973831	105.1903408	99.46176539	94.08618192	89.03996124
171013A00021	10/13/2017	2	10/17/2022	10/13/2017	112.78696	110.4188823	108.1129248	105.867005	103.6791264	101.5473757	99.46991864	97.44499602	95.47091985
171025A00026	10/25/2017	2.64	10/25/2024	10/25/2017	127.00666	122.0006949	117.2216061	112.6578171	108.2984166	104.1331111	100.1521865	96.34647141	92.70730394
171031A00037	10/31/2017	1.98	10/30/2020	10/31/2017	100.94039	100.7719239	100.604014	100.4366615	100.2698637	100.1036178	99.93792117	99.77277109	99.6081649
171206A00038	12/6/2017	2.69	12/6/2027	12/6/2017	148.23257	138.3696057	129.2363191	120.7747313	112.9317744	105.6588488	98.91142335	92.64867418	86.83315668
171207A00029	12/7/2017	2.04	12/7/2020	12/7/2017	101.59277	101.314843	101.0384451	100.7635635	100.4901856	100.2182991	99.94789163	99.67895111	99.41146554
170828A00031	8/28/2017	2.07	8/1/2022	8/28/2017	111.24919	109.1427469	107.087027	105.0804924	103.1216636	101.2091159	99.34147649	97.51742255	95.73567902
170831A00009	8/31/2017	1.93	8/30/2021	8/31/2017	105.74288	104.6546022	103.5886235	102.5442619	101.5208653	100.5178076	99.53448763	98.57032737	97.62477134
170831A00021	8/31/2017	1.99	2/25/2022	8/31/2017	108.56679	106.9578979	105.3813999	103.8363952	102.3220197	100.8374403	99.38185345	97.95448411	96.55458429
170831A00048	8/31/2017	1.64	11/16/2020	8/31/2017	101.16494	100.9476431	100.7312888	100.5158758	100.3013979	100.087849	99.8752228	99.66351341	99.4527148
170831A00049	8/31/2017	1.68	3/1/2021	8/31/2017	102.78238	102.2576335	101.7382245	101.2240759	100.7151079	100.2112427	99.71240394	99.21851664	98.72950742
170906A00036	9/6/2017	1.81	9/6/2022	9/6/2017	111.69801	109.4685957	107.2954851	105.1768854	103.1110706	101.0963823	99.1312263	97.21407016	95.34343968
170906A00037	9/6/2017	1.99	9/6/2022	9/6/2017	111.66694	109.445807	107.2806341	105.1696355	103.1111004	101.1033843	99.14490658	97.23414721	95.36964404
170911A00023	9/11/2017	1.77	9/11/2020	9/11/2017	100.16476	100.1341307	100.1035381	100.0729795	100.0424548	100.0119638	99.98150672	99.95108331	99.92069357
170912A00009	9/12/2017	2.11	12/15/2022	9/12/2017	113.56076	111.0095259	108.5288112	106.1161926	103.7693486	101.4860548	99.2641791	97.10167682	94.99658651
170913A00027	9/13/2017	2.08	9/13/2022	9/13/2017	111.9733	109.7271849	107.5380062	105.4039391	103.3232278	101.2941859	99.31519294	97.38469135	95.50118344
170915A00001	9/15/2017	2.43	9/16/2024	9/15/2017	125.38787	120.5481808	115.9234456	111.5029351	107.2765199	103.2346298	99.36822008	95.66873947	92.12810021
170915A00009	9/15/2017	1.86	9/15/2020	9/15/2017	100.22889	100.1871093	100.1453747	100.103691	100.0620582	100.0204763	99.97894502	99.93746437	99.89603424
170918A00007	9/18/2017	2.8	9/20/2027	9/18/2017	145.92513	136.5220864	127.7950166	119.6916708	112.1641006	105.1682863	98.66379514	92.61347098	86.98315296
170928A00044	9/28/2017	1.9	9/28/2021	9/28/2017	106.36961	105.1836107	104.023927	102.8896907	101.7800717	100.6942757	99.63154219	98.59114289	97.5723797
171003A00008	10/3/2017	2.88	10/4/2027	10/3/2017	146.80617	137.317458	128.5135678	120.3413415	112.7520189	105.7008528	99.14675804	93.05199373	87.38187416
171018A00002	10/18/2017	1.82	10/19/2020	10/18/2017	100.76555	100.628015	100.4908687	100.3541121	100.2177435	100.0817611	99.9461632	99.81094822	99.67611445
171026A00004	10/26/2017	2	10/26/2020	10/26/2017	100.88072	100.7235699	100.5669193	100.4107619	100.2550954	100.0999174	99.94522574	99.79101804	99.63729205
171030A00020	10/30/2017	2.16	1/14/2022	10/30/2017	108.11332	106.6407443	105.1955573	103.7770613	102.3845792	101.0174565	99.6750598	98.35677653	97.06201373
171116A00021	11/16/2017	2.16	11/16/2022	11/16/2017	113.66256	111.1906521	108.785537	106.4448931	104.1664995	101.9482324	99.7880592	97.68403439	95.63429442
171120A00017	11/20/2017	2.41	11/21/2022	11/20/2017	113.87537	111.3943205	108.9804749	106.6314857	104.3451112	102.1192078	99.95172483	97.84069943	95.7842519

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
171130A00003	11/30/2017	2.22	11/30/2020	11/30/2017	101.49048	101.233193	100.9772063	100.7225075	100.4690867	100.2169346	99.96604152	99.71639827	99.46799553
171208A00007	12/8/2017	2.47	12/9/2024	12/8/2017	127.98702	122.7761205	117.8080118	113.0700128	108.5501778	104.2372523	100.1206284	96.19030391	92.43684371
171211A00033	12/11/2017	2.26	12/12/2022	12/11/2017	114.35027	111.7888117	109.2981357	106.8757924	104.5194361	102.2268209	99.99579503	97.82429641	95.71034802
170905A00071	9/5/2017	1.78	9/8/2020	9/5/2017	100.12003	100.097766	100.0755206	100.053298	100.0310982	100.0089212	99.98676689	99.9646353	99.94252636
170906A00020	9/6/2017	2.14	9/6/2023	9/6/2017	117.98087	114.5230367	111.1854195	107.9631494	104.8515839	101.8462961	98.94306282	96.137854	93.42682274
170906A00034	9/6/2017	1.87	9/7/2021	9/6/2017	105.80951	104.6957668	103.6053681	102.5375845	101.4917183	100.4671001	99.4630875	98.47906376	97.5144366
170907A00002	9/7/2017	1.69	9/7/2021	9/7/2017	105.79755	104.6811752	103.5882453	102.5180262	101.4698159	100.442941	99.43675551	98.45063909	97.48399606
170919A00076	9/19/2017	1.97	9/19/2022	9/19/2017	112.25633	109.9803317	107.7624872	105.6009123	103.493797	101.4394036	99.43606322	97.4821725	95.5761905
170926A00031	9/26/2017	1.94	9/28/2020	9/26/2017	100.4337	100.355604	100.2776342	100.1997877	100.1220642	100.0444636	99.96698539	99.88962946	99.81239549
171002A00012	10/2/2017	2.08	10/1/2021	10/2/2017	106.43179	105.2388694	104.0725713	102.9320118	101.8163467	100.7247679	99.65650243	98.61080971	97.58698038
171002A00013	10/2/2017	2.23	11/30/2022	10/2/2017	113.60459	111.0982604	108.6604772	106.2888175	103.9809715	101.734732	99.54798843	97.41872173	95.34499949
171010A00005	10/10/2017	2.06	10/11/2022	10/10/2017	112.82203	110.471857	108.1829752	105.953343	103.7810042	101.6640832	99.60078118	97.58937245	95.62820046
171012A00025	10/12/2017	1.93	10/13/2020	10/12/2017	100.66636	100.5460012	100.4259433	100.3061871	100.1867313	100.0675748	99.94871639	99.83015501	99.71188947
171013A00020	10/13/2017	1.9	10/15/2020	10/13/2017	100.69363	100.5676278	100.441953	100.3166076	100.1915902	100.0668994	99.94253396	99.81849259	99.69477398
171026A00011	10/26/2017	2.94	10/26/2027	10/26/2017	147.66317	138.0601518	129.154851	120.8927343	113.2238119	106.1022379	99.48594581	93.33631733	87.61788228
171027A00005	10/27/2017	1.88	10/27/2020	10/27/2017	100.90026	100.7400391	100.5803325	100.4211383	100.2624542	100.1042775	99.9466059	99.78943697	99.63276828
171031A00061	10/31/2017	2.28	10/31/2022	10/31/2017	113.2108	110.8040213	108.461041	106.1796928	103.9578997	101.7936723	99.68510488	97.63037103	95.62771942
171127A00016	11/27/2017	2.28	11/27/2023	11/27/2017	120.51054	116.7269945	113.0830957	109.5727903	106.1903351	102.930276	99.78743025	96.75687149	93.8339146
171129A00020	11/29/2017	2.89	11/30/2026	11/29/2017	141.72486	133.575698	125.9526492	118.818813	112.1400821	105.8849139	100.0241229	94.53069144	89.37959702
171206A00008	12/6/2017	2.36	12/6/2021	12/6/2017	107.86339	106.4626122	105.0957864	103.7616828	102.4591276	101.1870028	99.94424319	98.72983284	97.5428026
171211A00024	12/11/2017	2.26	12/11/2020	12/11/2017	101.6823	101.3931514	101.1056537	100.8197957	100.5355634	100.2529427	99.97191994	99.69248154	99.41461402
171212A00024	12/12/2017	2.29	12/12/2022	12/12/2017	114.42288	111.8605401	109.3689983	106.945808	104.5886229	102.2951966	100.0633766	97.89110057	95.77639087
171227A00018	12/27/2017	2.83	12/27/2024	12/27/2017	129.02697	123.7605903	118.7406615	113.9543549	109.3895785	105.0349292	100.8796499	96.91358965	93.12716616
180103A00018	1/3/2018	2.29	1/4/2021	1/3/2018	102.08969	101.7307262	101.3742848	101.0203392	100.6688634	100.3198315	99.97321808	99.62899811	99.28714682
180110A00029	1/10/2018	3.13	1/10/2028	1/10/2018	150.56091	140.5575089	131.2977446	122.722316	114.7769449	107.4119241	100.581711	94.24455867	88.36218215
180116A00009	1/16/2018	2.49	1/14/2022	1/16/2018	108.58503	107.1088791	105.6601828	104.2382396	102.8423708	101.47192	100.1262525	98.80475387	97.50682972
180618A00032	6/18/2018	2.93	6/18/2021	6/18/2018	105.39779	104.5369119	103.6900822	102.8569625	102.0372218	101.2305392	100.4366045	99.65511692	98.88578519
180625A00009	6/25/2018	3	6/27/2022	6/25/2018	112.45446	110.4426644	108.4771026	106.5564206	104.6793138	102.8445246	101.0508403	99.29709127	97.58214891
180713A00027	7/13/2018	3.23	7/13/2028	7/13/2018	156.95619	145.8747253	135.6680214	126.2622028	117.5900013	109.5901303	102.206725	95.38883664	89.08997726
180719A00060	7/19/2018	3.05	7/19/2022	7/19/2018	112.97465	110.8902659	108.8551407	106.8678086	104.9268572	103.0309249	101.1786993	99.36891488	97.60035081
180720A00006	7/20/2018	3.03	7/17/2023	7/20/2018	119.89148	116.5685574	113.3559063	110.2492669	107.2445667	104.3379126	101.525582	98.80401452	96.16980372
180720A00008	7/20/2018	3	7/20/2022	7/20/2018	112.89489	110.8082535	108.7709956	106.7816478	104.8387922	102.9410623	101.0871407	99.27575726	97.50568683
180720A00030	7/20/2018	2.79	7/20/2021	7/20/2018	106.0213	105.0568033	104.1098298	103.1799091	102.2665833	101.3694108	100.4879656	99.62183658	98.77062674

Classification | Public

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
180724A00075	7/24/2018	2.98	7/24/2023	7/24/2018	120.49574	117.1264915	113.8700006	110.7218681	107.6778955	104.7340708	101.8865598	99.13169643	96.46597496
180727A00038	7/27/2018	3.36	7/25/2025	7/27/2018	135.69935	129.5287154	123.6791316	118.1321894	112.8706314	107.8782725	103.1399279	98.64134636	94.36914773
180731A00002	7/31/2018	2.83	2/16/2021	7/31/2018	103.12725	102.6396869	102.1567429	101.6783489	101.2044406	100.734955	100.2698303	99.80900568	99.35242166
180731A00009	7/31/2018	2.97	7/31/2023	7/31/2018	120.60054	117.2068863	113.9275012	110.7578984	107.6937979	104.7311112	101.8659322	99.09452713	96.41332657
180731A00046	7/31/2018	2.84	3/26/2021	7/31/2018	103.84903	103.2467585	102.6514646	102.0630316	101.4813414	100.9062785	100.3377299	99.77558536	99.21973703
180801A00011	8/1/2018	3	5/14/2021	8/1/2018	104.79318	104.0413711	103.3003438	102.5698705	101.8497267	101.1396942	100.4395608	99.74912024	99.06817212
180806A00008	8/6/2018	2.95	8/7/2023	8/6/2018	120.67336	117.2556655	113.9537619	110.7630816	107.6792603	104.6981302	101.8157108	99.02819852	96.3319583
180813A00037	8/13/2018	2.95	2/14/2022	8/13/2018	109.83819	108.2554088	106.7038151	105.1825587	103.6908239	102.2278241	100.7927997	99.38501757	98.00376976
180816A00032	8/16/2018	3.02	8/16/2023	8/16/2018	120.42776	116.9994347	113.6879069	110.4885385	107.3969028	104.408774	101.5201169	98.72707705	96.02597161
180817A00022	8/17/2018	2.87	8/17/2023	8/17/2018	120.61241	117.1629162	113.8313547	110.6130254	107.503444	104.4983303	101.5935981	98.78534474	96.06984222
180820A00036	8/20/2018	3	8/21/2023	8/20/2018	120.45863	117.0135784	113.6864109	110.4724271	107.3671394	104.3662652	101.4657156	98.66158626	95.95014712
180823A00053	8/23/2018	3.2	8/23/2028	8/23/2018	157.45415	146.1868092	135.8207467	126.2788376	117.4909443	109.3932496	101.9276569	95.04124947	88.68580426
180823A00055	8/23/2018	3.44	8/23/2033	8/23/2018	195.51241	174.1333344	155.3649028	138.8711953	124.3612533	111.5828508	100.3171577	90.37416108	81.58873545
180831A00016	8/31/2018	2.99	8/31/2023	8/31/2018	120.615	117.1349903	113.7750999	110.5304905	107.3965504	104.3688805	101.443283	98.6157509	95.88245808
180831A00018	8/31/2018	2.95	8/31/2022	8/31/2018	113.59143	111.3682167	109.2005963	107.0868178	105.0251945	103.0141046	101.0519886	99.13734631	97.26873399
180911A00012	9/11/2018	3.06	9/9/2022	9/11/2018	113.99757	111.7418619	109.5430225	107.3992322	105.3087466	103.2698901	101.2810523	99.3406845	97.44729757
170622A00015	6/22/2017	1.99	6/22/2021	6/22/2017	104.69041	103.8205508	102.9650999	102.1237033	101.2960169	100.4817077	99.68045313	98.89194128	98.11586991
170623A00028	6/23/2017	2.79	6/23/2027	6/23/2017	144.38093	135.370204	126.9871574	119.1847342	111.9196398	105.1520227	98.84518394	92.96531251	87.48124392
170629A00022	6/29/2017	2.2	6/29/2023	6/29/2017	117.64713	114.4019903	111.2633792	108.2272294	105.2896487	102.4469144	99.69546525	97.03189333	94.45293668
170712A00019	7/12/2017	2.18	7/12/2022	7/12/2017	111.13727	109.0927794	107.0962236	105.1461858	103.241304	101.3802652	99.56180282	97.78469524	96.04776353
170721A00017	7/21/2017	1.8	7/21/2021	7/21/2017	105.1325	104.1693789	103.2238378	102.2953999	101.3836044	100.4880068	99.60817842	98.74370539	97.89418837
170731A00028	7/31/2017	2.16	8/1/2022	7/31/2017	111.43066	109.3223483	107.2647945	105.2564622	103.295871	101.3815948	99.51226013	97.68654312	95.90316785
170731A00069	7/31/2017	1.75	1/29/2021	7/31/2017	102.33407	101.9013984	101.4723787	101.046964	100.625109	100.2067692	99.79190071	99.38046055	98.97240635
170803A00013	8/3/2017	2.14	8/3/2022	8/3/2017	111.42333	109.30898	107.2456724	105.2318581	103.266044	101.3467925	99.47271865	97.64248813	95.85481483
170808A00037	8/8/2017	2.19	12/15/2022	8/8/2017	113.75469	111.201086	108.7180569	106.3031741	103.9541145	101.6686524	99.44465399	97.28007345	95.17294796
170818A00025	8/18/2017	1.77	8/18/2021	8/18/2017	105.55734	104.5049523	103.4734598	102.4622471	101.4707208	100.49831	99.5444662	98.60866131	97.6903873
170824A00031	8/24/2017	1.98	8/24/2021	8/24/2017	105.69654	104.6272123	103.5794334	102.5525603	101.5459721	100.5590723	99.59128761	98.64206687	97.71087984
170828A00030	8/28/2017	1.96	9/1/2021	8/28/2017	105.80642	104.7115299	103.6391988	102.5887329	101.5594688	100.5507702	99.56202562	98.59264783	97.64207235
170829A00018	8/29/2017	1.9	8/30/2021	8/29/2017	105.71193	104.6238318	103.5580242	102.5138311	101.4906008	100.4877071	99.5045488	98.54054803	97.59514935
170829A00022	8/29/2017	1.72	8/30/2021	8/29/2017	105.70012	104.609468	103.5412034	102.4946446	101.4691359	100.4640476	99.47877475	98.51273628	97.56537355
170830A00044	8/30/2017	1.94	8/30/2021	8/30/2017	105.75319	104.664859	103.5988233	102.5544054	101.5309534	100.5278412	99.54446724	98.58025381	97.63464533
170831A00051	8/31/2017	1.75	8/31/2021	8/31/2017	105.74725	104.6532008	103.5816742	102.5319763	101.5034459	100.4954483	99.5073738	98.53863667	97.58867394
170831A00053	8/31/2017	1.81	3/1/2022	8/31/2017	108.63662	107.0095752	105.4155781	103.8537073	102.3230728	100.8228169	99.35211287	97.91016354	96.49619991

Classification | Public

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
170906A00039	9/6/2017	1.99	9/6/2022	9/6/2017	111.66694	109.445807	107.2806341	105.1696355	103.1111004	101.1033843	99.14490658	97.23414721	95.36964404
170908A00017	9/9/2019	2.32	9/9/2024	9/9/2019	124.78376	119.9807124	115.3902912	111.0019281	106.8056377	102.7919837	98.9520458	95.27738799	91.76002984
170913A00025	9/13/2017	1.94	8/16/2021	9/13/2017	105.52642	104.4829149	103.4599745	102.4569934	101.4733916	100.5086116	99.56211681	98.63339116	97.72193769
171003A00007	10/3/2017	2.22	10/3/2022	10/3/2017	112.61028	110.2953272	108.040129	105.842723	103.7012239	101.6138229	99.5787842	97.5944414	95.65919398
171010A00037	10/10/2017	2.09	10/12/2021	10/10/2017	106.62819	105.399127	104.1982853	103.0247027	101.877459	100.755675	99.65851034	98.5851612	97.53485846
171012A00027	10/12/2017	2.21	10/12/2022	10/12/2017	112.73678	110.3931108	108.1104688	105.8868235	103.7202294	101.6088211	99.55080948	97.5444778	95.58817823
180104A00013	1/4/2018	2.39	1/4/2023	1/4/2018	115.0698	112.4287072	109.8618633	107.3667685	104.94102	102.5823097	100.28842	98.05721942	95.88665893
180111A00016	1/11/2018	2.57	1/11/2023	1/11/2018	115.14972	112.4958754	109.9170081	107.410577	104.9741437	102.6053666	100.3019961	98.06187057	95.88291245
180112A00025	1/12/2018	2.39	1/12/2021	1/12/2018	102.26037	101.8778393	101.4981809	101.121359	100.7473418	100.3760979	100.0075964	99.64180702	99.27869971
180123A00023	1/23/2018	2.43	1/29/2021	1/23/2018	102.56524	102.1326518	101.7037076	101.2783579	100.8565578	100.438263	100.0234301	99.61201611	99.20397909
180123A00025	1/23/2018	2.44	3/1/2021	1/23/2018	103.10125	102.5763969	102.0568754	101.5426018	101.0334968	100.5294831	100.0304844	99.53642634	99.04723589
180212A00042	2/12/2018	2.57	2/11/2022	2/12/2018	109.47933	107.9048127	106.3612057	104.8476779	103.3634236	101.9076655	100.4796532	99.07866237	97.70399322
180214A00003	2/14/2018	2.45	2/16/2021	2/14/2018	102.94697	102.4599149	101.9774765	101.4995845	101.0261748	100.5571844	100.0925516	99.63221549	99.17611674
180222A00014	2/22/2018	2.68	2/19/2021	2/22/2018	103.0453	102.549947	102.0593592	101.5734644	101.0921953	100.615486	100.1432719	99.67548948	99.21207658
180226A00034	2/26/2018	2.82	6/27/2022	2/26/2018	112.11025	110.1018337	108.1395893	106.2221607	104.3482452	102.5165868	100.7259748	98.97524095	97.26325837
180227A00004	2/27/2018	2.67	3/26/2021	2/27/2018	103.66463	103.064048	102.4704183	101.8836181	101.3035299	100.7300391	100.1630336	99.60240375	99.04804248
180227A00016	2/27/2018	2.66	2/26/2021	2/27/2018	103.16012	102.6439071	102.1328453	101.6268615	101.1258802	100.6298276	100.1386312	99.65222011	99.17052463
180307A00010	3/7/2018	2.68	2/16/2021	3/7/2018	102.99179	102.5053916	102.023586	101.5463107	101.0735019	100.6050971	100.1410349	99.68125484	99.22569793
180308A00016	3/8/2018	2.88	6/1/2022	3/8/2018	111.75077	109.8253139	107.9432178	106.1030938	104.3036102	102.5434927	100.8215204	99.13652386	97.48738149
180313A00022	3/13/2018	2.54	3/12/2021	3/13/2018	103.42097	102.8616732	102.3084295	101.7611405	101.2197101	100.6840446	100.1540519	99.62964209	99.11072712
180406A00014	4/6/2018	2.95	4/6/2023	4/6/2018	117.72652	114.762921	111.8901277	109.1047718	106.4036362	103.7836448	101.2418561	98.77545559	96.38174955
180411A00014	4/11/2018	2.88	6/27/2022	4/11/2018	112.22498	110.215444	108.2520938	106.3335807	104.4586014	102.6258994	100.8342633	99.08252439	97.36955521
180425A00020	4/25/2018	3.11	10/25/2022	4/25/2018	114.995	112.5859469	110.2402823	107.9558669	105.7306518	103.5626741	101.4500527	99.39098414	97.38373831
180430A00010	4/30/2018	2.88	1/15/2021	4/30/2018	102.49924	102.1074471	101.7186627	101.3328477	100.9499679	100.5699897	100.1928803	99.818607	99.44713787
180430A00066	4/30/2018	2.84	3/30/2022	4/30/2018	110.79908	109.0683742	107.3738705	105.7145079	104.0892659	102.4971629	100.9372552	99.40863425	97.9104258
180430A00078	10/30/2018	3.24	10/30/2023	10/30/2018	122.59713	118.8893744	115.3148865	111.868043	108.5435003	105.3361755	102.2412315	99.25406295	96.37028392
180510A00024	5/10/2018	2.77	5/10/2021	5/10/2018	104.65784	103.9172877	103.1872139	102.4673935	101.7576116	101.0576588	100.3673317	99.68643272	99.0147693
180514A00030	5/14/2018	2.9	5/16/2022	5/14/2018	111.81593	109.9321915	108.0901663	106.2885331	104.52603	102.8014485	101.1136302	99.46146435	97.84388542
180515A00018	5/15/2018	2.98	5/14/2021	5/15/2018	104.77875	104.0269992	103.2860297	102.5556138	101.8355267	101.1255503	100.4254725	99.73508705	99.05419345
171219A00025	12/19/2017	2.33	12/19/2022	12/19/2017	114.64149	112.0550515	109.5404194	107.0951405	104.7168604	102.4033216	100.1523591	97.96189576	95.82993786
171220A00003	12/20/2017	2.36	12/21/2020	12/20/2017	101.87889	101.5606673	101.2444409	100.9301914	100.6179002	100.307549	99.99911966	99.69259432	99.38795535
180111A00044	1/11/2018	2.34	1/11/2021	1/11/2018	102.22481	101.8452643	101.4685423	101.0946135	100.7234468	100.3550115	99.98927743	99.62621493	99.26579468
180116A00045	1/16/2018	2.49	1/11/2022	1/16/2018	108.53311	107.0662476	105.6265216	104.2132391	102.8257329	101.4633577	100.125489	98.81152253	97.52087354

Classification | Public

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
180117A00016	1/17/2018	2.46	7/19/2021	1/17/2018	105.55729	104.6002911	103.6606089	102.737777	101.8313451	100.9408786	100.0659583	99.20617955	98.36115153
180125A00023	1/25/2018	2.57	1/25/2022	1/25/2018	108.89242	107.3812549	105.8987559	104.4441737	103.0167862	101.6158958	100.2408279	98.89093043	97.56557283
180126A00028	1/26/2018	2.69	1/26/2023	1/26/2018	115.7202	113.0121361	110.3817839	107.8264638	105.3436091	102.9307567	100.5855421	98.30569474	96.08903405
180130A00085	1/30/2018	2.79	1/30/2025	1/30/2018	130.46998	125.0233713	119.8371685	114.8975508	110.1915002	105.7067538	101.4317563	97.35561496	93.46805871
180130A00091	1/30/2018	2.74	1/25/2023	1/30/2018	115.8296	113.1232805	110.4945261	107.9406705	105.4591542	103.0475213	100.7034137	98.42456717	96.20880699
180205A00019	2/5/2018	2.88	2/5/2025	2/5/2018	131.02985	125.5473894	120.3279133	115.3574121	110.6226939	106.1113352	101.8116319	97.71255408	93.80370327
180207A00003	2/7/2018	3.28	2/7/2028	2/7/2018	152.34136	142.1594436	132.7407515	124.0238734	115.9526461	108.4756809	101.5459346	95.12032076	89.15935877
180215A00043	2/15/2018	2.63	1/7/2021	2/15/2018	102.26244	101.8943998	101.5290123	101.1662484	100.80608	100.4484792	100.0934184	99.74087079	99.39080955
180222A00026	2/22/2018	2.98	2/21/2025	2/22/2018	131.85187	126.2880587	120.9937236	115.9543588	111.1563172	106.586755	102.2335805	98.08540555	94.13150129
180227A00005	2/27/2018	2.59	9/22/2020	2/27/2018	100.3799	100.3185494	100.2572815	100.1961003	100.1350056	100.0739971	100.0130748	99.9522385	99.89148794
180306A00005	3/6/2018	2.65	3/4/2022	3/6/2018	110.00741	108.3602455	106.7466244	105.1656021	103.6162708	102.0977558	100.6092139	99.1498327	97.71882831
180326A00010	3/26/2018	2.6	3/26/2021	3/26/2018	103.7093	103.107492	102.5126624	101.9246898	101.3434562	100.7688462	100.2007468	99.63904787	99.08364156
180326A00012	3/26/2018	2.74	12/28/2020	3/26/2018	102.12316	101.7843336	101.4477504	101.1133908	100.7812329	100.451255	100.1234358	99.79775418	99.47418924
180327A00024	3/27/2018	2.79	5/26/2023	3/27/2018	118.78632	115.6345051	112.5836365	109.6297747	106.7691686	103.9982425	101.3135866	98.71194716	96.19021866
180328A00014	3/28/2018	2.55	3/29/2021	3/28/2018	103.7346	103.1237928	102.5201638	101.9235886	101.3339442	100.7511103	100.1749695	99.60540686	99.0423103
180402A00028	4/2/2018	2.58	4/1/2021	4/2/2018	103.8071	103.1871013	102.5744921	101.9691417	101.3709217	100.7797067	100.1953742	99.61780466	99.04688112
180403A00005	4/3/2018	2.72	4/3/2023	4/3/2018	117.58672	114.6227433	111.7496066	108.9639462	106.2625446	103.6423255	101.1003469	98.63379385	96.23997201
180425A00004	4/25/2018	2.97	4/26/2021	4/25/2018	104.42822	103.7322096	103.0454671	102.3678064	101.6990482	101.0390179	100.3875454	99.74446515	99.10961561
180426A00053	4/26/2018	2.94	4/26/2023	4/26/2018	118.64565	115.5918798	112.6334557	109.7667602	106.988345	104.2949178	101.6833337	99.15058719	96.69380525
180102A00004	1/2/2018	2.28	1/8/2021	1/2/2018	102.15261	101.7819211	101.4139254	101.0485944	100.685899	100.3258107	99.96830144	99.61334349	99.26090954
180103A00007	1/3/2018	2.44	1/7/2022	1/3/2018	108.39344	106.9394913	105.5122385	104.1110098	102.7351531	101.3840379	100.0570539	98.75361021	97.47313502
180116A00015	1/16/2018	3.06	1/18/2028	1/16/2018	150.10889	140.0920205	130.8222692	122.2398751	114.2901548	106.9230433	100.0926824	93.75704751	87.87760857
180124A00019	1/24/2018	2.41	1/24/2022	1/24/2018	108.90587	107.3932707	105.9093816	104.4534496	103.024751	101.6225866	100.2462807	98.89518013	97.56865313
180126A00029	1/26/2018	2.88	1/27/2025	1/26/2018	129.83454	124.4431107	119.308359	114.4167116	109.7553869	105.3123421	101.0762257	97.03633482	93.1825746
180129A00004	1/29/2018	2.63	1/31/2022	1/29/2018	109.0865	107.5559938	106.0548281	104.5822255	103.1374396	101.7197496	100.3284588	98.96289412	97.62240471
180202A00011	2/2/2018	2.45	2/2/2021	2/2/2018	102.70066	102.2553641	101.813926	101.3762933	100.9424171	100.512249	100.0857417	99.66284865	99.24352402
180207A00022	2/7/2018	2.79	2/7/2023	2/7/2018	116.20298	113.448637	110.7743829	108.1774186	105.6550634	103.204746	100.824	98.51045852	96.26184952
180222A00023	2/22/2018	2.84	2/22/2022	2/22/2018	109.82757	108.2183574	106.6413359	105.0956223	103.5803618	102.0947306	100.6379339	99.20920491	97.80780335
180302A00020	3/2/2018	2.79	3/17/2022	3/2/2018	110.17684	108.4948993	106.8475969	105.2339396	103.652972	102.1037744	100.5854611	99.09717911	97.63810644
180402A00041	4/2/2018	2.77	4/6/2021	4/2/2018	103.92518	103.2909326	102.6644173	102.0454942	101.4340259	100.829878	100.2329197	99.64302306	99.06006332
180403A00006	4/3/2018	3.07	4/3/2028	4/3/2018	153.62078	143.0789946	133.3452	124.3529791	116.0417183	108.3560676	101.2454574	94.66366151	88.56840277
180403A00009	4/3/2018	2.91	4/3/2025	4/3/2018	132.29983	126.5800243	121.1431596	115.9736769	111.0569573	106.3792636	101.9276813	97.6900649	93.65498757
180403A00041	4/3/2018	2.91	4/3/2025	4/3/2018	132.29983	126.5800243	121.1431596	115.9736769	111.0569573	106.3792636	101.9276813	97.6900649	93.65498757

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
180410A00016	4/10/2018	2.89	4/11/2022	4/10/2018	110.80667	109.0443719	107.319384	105.6305956	103.9769365	102.3573788	100.7709345	99.21665366	97.69362257
180411A00001	4/11/2018	2.84	1/25/2022	4/11/2018	109.28704	107.7728296	106.2873377	104.8298158	103.3995406	101.9958126	100.6179561	99.26531755	97.93726516
180412A00034	4/12/2018	3.23	4/15/2030	4/12/2018	169.17039	154.8584821	141.8956617	130.1468554	119.4912053	109.8205006	101.0377934	93.05617151	85.79767176
180416A00015	4/16/2018	2.79	4/14/2022	4/16/2018	111.00547	109.2268118	107.4860324	105.7819953	104.1136066	102.4798162	100.8796148	99.31203283	97.77613768
180416A00016	4/16/2018	2.85	4/17/2023	4/16/2018	118.21655	115.1982009	112.273418	109.4386811	106.6906337	104.0260689	101.4419224	98.93526416	96.50329194
180427A00010	4/27/2018	2.95	4/27/2023	4/27/2018	118.69364	115.635923	112.6737513	109.8034962	107.0216994	104.3250589	101.7104207	99.17477103	96.71522875
180503A00040	5/3/2018	3.3	5/5/2025	5/3/2018	133.77985	127.9445618	122.4013543	117.1339445	112.1270529	107.3663358	102.8383219	98.53035418	94.43053583
180507A00025	5/7/2018	2.92	5/7/2021	5/7/2018	104.60283	103.8729707	103.1532899	102.4435737	101.743616	101.0532164	100.37218	99.70031709	99.03744315
180514A00033	5/14/2018	3.36	5/15/2028	5/14/2018	156.99545	146.1500327	136.144707	126.9096011	118.3810248	110.5008894	103.2161861	96.4785153	90.24366248
180118A00010	1/18/2018	2.51	8/18/2021	1/18/2018	106.12702	105.0740277	104.0418864	103.029981	102.0377204	101.0645364	100.1098827	99.17323336	98.25408253
180124A00018	1/24/2018	2.3	1/25/2021	1/24/2018	102.4987	102.0772434	101.6592516	101.2446853	100.8335023	100.4256612	100.0211215	99.61984295	99.22178628
180125A00026	1/26/2018	2.46	1/25/2021	1/26/2018	102.50937	102.0885372	101.6711594	101.2571938	100.8465986	100.4393327	100.0353557	99.63462793	99.23711018
180201A00003	2/1/2018	2.54	2/1/2021	2/1/2018	102.66396	102.2223912	101.7846062	101.35056	100.9202052	100.4934947	100.0703827	99.65082362	99.23477307
180207A00002	2/7/2018	3.13	2/6/2026	2/7/2018	138.11956	131.1772691	124.6308407	118.4555959	112.6285188	107.1281382	101.9344153	97.02864165	92.39334382
180215A00044	2/15/2018	2.64	2/1/2021	2/15/2018	102.70714	102.2654594	101.8275632	101.3934067	100.9629422	100.5361227	100.1129023	99.69323562	99.27707806
180216A00001	2/16/2018	2.5	2/16/2021	2/16/2018	102.97069	102.4835691	102.0010641	101.5231061	101.0496308	100.5805753	100.1158777	99.65547736	99.19931476
180216A00004	2/16/2018	2.75	2/16/2023	2/16/2018	116.79439	113.9898841	111.267965	108.6257143	106.0603315	103.5691325	101.1495437	98.79909755	96.51542654
180220A00027	2/20/2018	2.69	2/19/2021	2/20/2018	103.05012	102.5547605	102.0641591	101.5782506	101.096968	100.6202453	100.1480178	99.68022216	99.2167961
180223A00022	2/23/2018	2.93	2/23/2023	2/23/2018	116.88356	114.064464	111.3288386	108.6737133	106.0962418	103.5936968	101.1634642	98.80303778	96.51001403
180226A00040	2/26/2018	2.79	2/28/2022	2/26/2018	109.86694	108.2375262	106.6410833	105.0766896	103.5434606	102.040544	100.5671177	99.12238915	97.70559347
180329A00033	4/2/2018	2.79	4/1/2021	4/2/2018	103.84498	103.2259688	102.6143217	102.0099066	101.412596	100.8222651	100.2387923	99.66205861	99.09194788
180417A00005	4/17/2018	2.67	4/19/2021	4/17/2018	104.19565	103.5202544	102.8536136	102.1955559	101.5459159	100.9045329	100.2712498	99.64591371	99.0283756
180418A00021	4/18/2018	2.85	4/19/2021	4/18/2018	104.217	103.5427722	102.877262	102.2203031	101.5717312	100.9313863	100.2991125	99.67475767	99.05817359
180420A00012	4/20/2018	2.91	4/20/2021	4/20/2018	104.27487	103.5974274	102.9287843	102.2687685	101.6172139	100.9739583	100.3388437	99.71171616	99.09242554
180426A00011	4/26/2018	2.94	4/26/2023	4/26/2018	118.64565	115.5918798	112.6334557	109.7667602	106.988345	104.2949178	101.6833337	99.15058719	96.69380525
180507A00005	5/7/2018	3.06	5/5/2023	5/7/2018	118.58925	115.5199834	112.5470205	109.6666911	106.8754917	104.1700783	101.547258	99.00398041	96.53733043
180516A00019	5/16/2018	3.19	5/16/2023	5/16/2018	119.17317	116.0606792	113.046716	110.1274833	107.2993616	104.5588987	101.9027997	99.32791907	96.83125233
180518A00014	5/18/2018	3.17	5/18/2023	5/18/2018	119.15409	116.035524	113.015844	110.0912362	107.2580613	104.5128485	101.8522854	99.27321034	96.77260346
180523A00025	5/23/2018	2.86	12/15/2021	5/23/2018	108.88577	107.4634344	106.0724377	104.7117464	103.380372	102.0773692	100.8018338	99.5528999	98.32973861
180529A00042	5/29/2018	3.42	5/30/2028	5/29/2018	155.66613	144.9065571	134.9819772	125.822794	117.3655801	109.5524997	102.330787	95.6522751	89.47297135
180530A00006	5/30/2018	2.87	5/31/2022	5/30/2018	111.71343	109.7913893	107.9126052	106.0756814	104.2792853	102.5221416	100.8030294	99.12077871	97.47426844
180530A00007	5/30/2018	2.66	11/30/2021	5/30/2018	108.41687	107.0152188	105.6496977	104.31892	103.0215727	101.7564085	100.5222412	99.31794237	98.14243778
180914A00013	9/14/2018	3.48	9/14/2028	9/14/2018	158.2323	146.9415369	136.5555331	126.9966304	118.1942361	110.0841417	102.6079139	95.71234741	89.34897154

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
180917A00078	9/17/2018	3.05	9/15/2023	9/17/2018	121.75865	118.1952806	114.7564198	111.4369809	108.2321205	105.1372223	102.1478847	99.2599094	96.46929092
180918A00038	9/18/2018	3.11	9/16/2022	9/18/2018	114.24102	111.9607752	109.7383737	107.5719552	105.459731	103.3999831	101.3910614	99.43137948	97.51941272
180918A00041	9/18/2018	3.18	9/18/2024	9/18/2018	129.6629	124.6997631	119.9569195	115.4233632	111.0886992	106.9431078	102.97731	99.18253399	95.55048481
180920A00028	9/20/2018	3.12	9/20/2023	9/20/2018	122.08819	118.5028793	115.043241	111.7041221	108.4806167	105.36805	102.3619655	99.4581137	96.6524408
180921A00021	9/21/2018	2.99	9/21/2021	9/21/2018	107.44752	106.2772258	105.1323957	104.0122028	102.9158578	101.8426048	100.7917196	99.7625079	98.75430395
180921A00024	9/21/2018	2.99	9/21/2021	9/21/2018	107.44752	106.2772258	105.1323957	104.0122028	102.9158578	101.8426048	100.7917196	99.7625079	98.75430395
180924A00056	9/24/2018	3.14	9/23/2022	9/24/2018	114.44313	112.1387515	109.893199	107.7045641	105.5710128	103.490785	101.46219	99.48360406	97.55346656
180927A00029	9/27/2018	3.01	10/27/2020	9/27/2018	101.05711	100.8969356	100.7372704	100.5781148	100.4194664	100.2613226	100.1036811	99.94653954	99.78989555
180927A00042	9/27/2018	3.02	9/27/2022	9/27/2018	114.69113	112.3630793	110.0948236	107.884406	105.7299497	103.629654	101.5817901	99.58469797	97.63678292
181005A00017	10/5/2018	3.27	4/11/2023	10/5/2018	118.71071	115.7173103	112.81593	110.0031371	107.2756574	104.6303618	102.0642581	99.57448453	97.15830273
181009A00008	10/9/2018	3.24	10/7/2022	10/9/2018	114.93733	112.5840826	110.2916931	108.0581461	105.8815143	103.7599491	101.6916768	99.67499527	97.70826978
181023A00020	10/23/2018	3.15	10/22/2021	10/23/2018	108.05263	106.7826777	105.54256	104.3312299	103.1476929	101.991	100.860245	99.75456208	98.6731235
181023A00025	10/23/2018	3.27	10/23/2023	10/23/2018	122.56201	118.8774747	115.3247122	111.8982002	108.5926816	105.403154	102.3248553	99.35325033	96.48401856
181106A00003	11/6/2018	3.31	11/5/2021	11/6/2018	108.52788	107.2098838	105.923889	104.6687377	103.4433294	102.2466155	101.0775962	99.93531772	98.81886967
181109A00027	11/13/2018	3.48	4/15/2024	11/13/2018	126.86482	122.516669	118.3434939	114.3372295	110.490229	106.7952437	103.2453995	99.83417491	96.55538113
181109A00028	11/9/2018	3.72	11/9/2026	11/9/2018	147.16927	138.9238988	131.2031716	123.9707251	117.1929137	110.838594	104.8789243	99.28718245	94.0385979
181115A00012	11/15/2018	3.14	11/16/2020	11/15/2018	101.45876	101.2413154	101.0248135	100.8092495	100.5946174	100.380911	100.1681243	99.95625143	99.74528635
181120A00007	11/20/2018	3.15	11/15/2021	11/20/2018	108.51806	107.1680313	105.8515735	104.5674413	103.3144542	102.0914884	100.8974737	99.73139035	98.59226592
181121A00013	11/21/2018	3.11	11/20/2020	11/21/2018	101.52788	101.2989525	101.0710719	100.8442264	100.618409	100.3936126	100.1698302	99.94705512	99.72528037
181123A00013	11/23/2018	3.14	11/23/2021	11/23/2018	108.66483	107.2879557	105.9459414	104.6374756	103.3613112	102.1162626	100.9012013	99.71505292	98.55679392
181126A00047	11/26/2018	3.19	11/26/2021	11/26/2018	108.78892	107.4014935	106.049422	104.7313687	103.4460615	102.1922905	100.9689052	99.77481026	98.60896247
181126A00050	11/26/2018	3.29	11/24/2023	11/26/2018	123.26833	119.4653027	115.8014833	112.2708815	108.8678078	105.5868567	102.4228904	99.37102348	96.42660821
171016A00021	10/16/2017	2.2	10/17/2022	10/16/2017	112.79687	110.4373518	108.1395686	105.9014548	103.7210309	101.5964	99.52574279	97.50731457	95.53944088
171018A00001	10/18/2017	1.96	10/18/2021	10/18/2017	106.77555	105.5233427	104.3003741	103.1056286	101.9381379	100.7969776	99.6812647	98.59015534	97.52284255
171030A00019	10/30/2017	2.04	3/16/2021	10/30/2017	103.13531	102.5660778	102.0031211	101.4463402	100.8956336	100.3509022	99.81204894	99.27897903	98.75159952
171102A00001	11/3/2017	1.84	11/3/2020	11/3/2017	101.00382	100.823675	100.6441802	100.4653282	100.2871155	100.1095386	99.9325941	99.75627861	99.58058878
171115A00006	11/15/2017	2.14	11/16/2020	11/15/2017	101.24367	101.0265538	100.8103826	100.5951481	100.3808444	100.1674653	99.95500487	99.74345704	99.53281591
171205A00005	12/6/2017	2.27	12/6/2022	12/6/2017	114.27121	111.7290581	109.2568577	106.8521665	104.5126447	102.236054	100.0202526	97.86318951	95.76290048
171205A00014	12/5/2017	2.49	12/5/2022	12/5/2017	114.30933	111.7793609	109.3187741	106.9251473	104.5961616	102.3295989	100.1233365	97.9753423	95.88366967
171206A00010	12/6/2017	2.45	12/6/2022	12/6/2017	114.23071	111.698647	109.236082	106.8405893	104.5098497	102.2416446	100.0338506	97.8844341	95.79144729
171206A00029	12/6/2017	2.21	9/16/2020	12/6/2017	100.25977	100.2151782	100.1706453	100.1261679	100.0817461	100.0373798	99.99306873	99.9488129	99.9046122
171206A00041	12/6/2017	2.44	12/6/2024	12/6/2017	127.79315	122.5967302	117.642133	112.9167202	108.408593	104.1065427	100.0000058	96.07902295	92.33420054
171207A00036	12/7/2017	2.23	12/7/2022	12/7/2017	114.19221	111.6479546	109.1737683	106.7672044	104.4259228	102.1476848	99.93034749	97.7718589	95.67025316

Classification | Public

	Parallel-Shift Sensitivity Analysis												
8/31/2020					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	114.45743	111.8885503	109.3907483	106.9615759	104.5986846	102.2998252	100.062842	97.88566853	95.76632289
171221A00003	12/21/2017	2.35	12/21/2020	12/21/2017	101.87576	101.5575397	101.2413196	100.9270763	100.6147914	100.3044463	99.99602317	99.68950398	99.38487111
180103A00019	1/3/2018	2.51	1/3/2023	1/3/2018	114.85993	112.2347254	109.6830626	107.2024732	104.790586	102.4451223	100.1638926	97.94479214	95.78579697
180104A00017	1/4/2018	2.77	1/3/2025	1/4/2018	128.86854	123.5819804	118.5437826	113.7409983	109.1614183	104.7935285	100.6264668	96.64998295	92.85440078
180117A00011	1/17/2018	2.4	1/14/2021	1/17/2018	102.29804	101.9096234	101.5241678	101.1416355	100.761993	100.3852078	100.0112474	99.64008012	99.27167461
180118A00004	1/18/2018	2.88	1/17/2025	1/18/2018	129.65027	124.2976159	119.1983283	114.339091	109.7073558	105.2912951	101.0797564	97.06222083	93.2287633
180118A00039	1/18/2018	3.09	1/19/2027	1/18/2018	143.99194	135.5848997	127.7296597	120.387064	113.5209336	107.0978217	101.0867942	95.45922886	90.18863147
180123A00045	1/23/2018	2.43	1/25/2021	1/23/2018	102.49701	102.0762068	101.6588598	101.2449247	100.8343599	100.4271241	100.0231772	99.62247916	99.22499106
180129A00006	1/29/2018	2.49	11/30/2020	1/29/2018	101.55915	101.3017481	101.0456457	100.7908315	100.5372959	100.2850293	100.0340223	99.78426556	99.53574975
180130A00084	1/30/2018	2.59	1/30/2023	1/30/2018	116.04389	113.3084698	110.6520612	108.0719259	105.5654374	103.1300756	100.7634223	98.46315616	96.22704837
180206A00013	2/6/2018	2.72	2/6/2024	2/6/2018	123.37766	119.3094209	115.3983896	111.637633	108.0205666	104.5409312	101.1927748	97.97043585	94.86852758
180214A00004	2/14/2018	2.71	2/14/2023	2/14/2018	116.6497	113.8541168	111.1406804	108.5064906	105.9487682	103.4648492	101.0521794	98.70830914	96.43088803
180522A00035	5/22/2018	2.83	5/21/2021	5/22/2018	104.91077	104.1357935	103.3722593	102.6199161	101.8785189	101.1478299	100.427618	99.71765895	99.01773466
180522A00039	5/22/2018	3.43	5/22/2028	5/22/2018	157.75899	146.8549133	136.7967672	127.5140684	118.9425782	111.0237192	103.7040469	96.93477324	90.67133659
180524A00029	5/24/2018	2.74	5/24/2021	5/24/2018	104.9006	104.1165558	103.3442147	102.5833205	101.8336201	101.0948675	100.3668242	99.64925825	98.9419446
180529A00014	5/29/2018	2.83	5/30/2023	5/29/2018	118.97903	115.8116465	112.7460319	109.778199	106.9043531	104.1208779	101.4243255	98.81140651	96.27898197
180530A00005	5/30/2018	2.78	5/30/2023	5/30/2018	118.8322	115.6669565	112.6034262	109.6376266	106.765765	103.9842265	101.2895648	98.67849204	96.14787059
180530A00024	5/30/2018	3.44	5/30/2029	5/30/2018	162.72936	150.1951225	138.7425775	128.2720293	118.6934967	109.9257148	101.8952462	94.53568706	87.78695852
180531A00014	5/31/2018	2.8	5/31/2023	5/31/2018	118.90976	115.7402007	112.6725693	109.702872	106.8273049	104.0422427	101.3442291	98.72996719	96.19631075
180604A00045	6/4/2018	2.87	6/4/2021	6/4/2018	105.09435	104.2775244	103.4733761	102.6816123	101.9019485	101.1341088	100.3778257	99.63283973	98.898899
180618A00011	6/18/2018	3.02	6/20/2022	6/18/2018	112.3567	110.367406	108.4235692	106.5238304	104.666878	102.8514504	101.076333	99.34035664	97.64239511
180619A00021	6/19/2018	3.24	6/19/2028	6/19/2018	156.58962	145.6199088	135.509764	126.1870439	117.5860291	109.6468169	102.314778	95.54006634	89.2771771
180619A00023	6/19/2018	3.04	6/19/2023	6/19/2018	119.38884	116.1639472	113.0437368	110.0241845	107.1014505	104.2718667	101.5319272	98.87828059	96.30772163
180621A00052	6/25/2018	3.35	6/23/2023	6/25/2018	120.39635	117.143521	113.9964466	110.9510779	108.0035487	105.1501638	102.3873898	99.71184738	97.12030321
180622A00018	6/22/2018	2.92	6/22/2023	6/22/2018	119.69145	116.4385803	113.2917631	110.2469303	107.3001908	104.4478268	101.686284	99.01216416	96.42221651
180626A00045	6/26/2018	2.91	6/25/2021	6/26/2018	105.51343	104.6305907	103.7625	102.9087952	102.0691207	101.2431326	100.4304982	99.6308955	98.84401282
180627A00017	6/27/2018	2.9	6/25/2021	6/27/2018	105.50502	104.6222133	103.7541614	102.9004948	102.0608581	101.2349074	100.4223099	99.62274379	98.83589724
180627A00026	6/27/2018	2.87	6/27/2023	6/27/2018	119.63787	116.3694514	113.2079554	110.1492945	107.1895599	104.325014	101.552082	98.86734371	96.26752615
180628A00027	6/28/2018	2.72	6/28/2021	6/28/2018	105.54329	104.6492258	103.7702771	102.9060639	102.0562178	101.220383	100.3982149	99.58938055	98.79355746
180629A00008	6/29/2018	3.02	6/29/2023	6/29/2018	119.52047	116.2611868	113.1083867	110.0580148	107.1061931	104.2492125	101.4835239	98.80573058	96.21258086
180702A00012	7/2/2018	3.01	7/3/2023	7/2/2018	119.5659	116.2930346	113.1274577	110.0650716	107.1019618	104.2343839	101.4587552	98.77164716	96.16977744
180705A00060	7/5/2018	3	7/6/2022	7/5/2018	112.6272	110.5861192	108.5924427	106.6447854	104.7418112	102.8822315	101.064803	99.28832616	97.55164292
180705A00062	7/5/2018	3.04	7/6/2023	7/5/2018	119.71373	116.4289786	113.2521769	110.179196	107.2060867	104.3290723	101.5445394	98.84903055	96.23923632

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
180716A00054	7/16/2018	3.59	7/16/2040	7/16/2018	247.67129	208.9913896	177.1015303	150.7528706	128.9333936	110.8218818	95.75102949	83.1778453	72.65987386
180717A00047	7/17/2018	3.3	9/17/2025	7/17/2018	136.43293	130.0492788	124.0068621	118.2855717	112.8665916	107.7323093	102.8662323	98.25291085	93.87786647
160524A00011	5/24/2016	1.78	5/19/2021	5/24/2016	103.99142	103.2277716	102.4753063	101.7337821	101.0029617	100.2826143	99.57251605	98.87244918	98.18220215
160526A00011	5/26/2016	1.58	5/26/2021	5/26/2016	104.06111	103.2745302	102.4998007	101.736653	100.9848287	100.2440774	99.51415576	98.7948277	98.08586386
160606A00003	6/6/2016	1.66	6/7/2021	6/6/2016	104.1946	103.372558	102.5634389	101.7669401	100.9827681	100.2106384	99.45027526	98.70141122	97.96378696
160606A00005	6/6/2016	2.92	6/6/2031	6/6/2016	169.73512	153.7759274	139.4786929	126.6605545	115.1596957	104.8328194	95.55293999	87.20744952	79.69642136
160614A00025	6/14/2016	1.83	6/14/2023	6/14/2016	115.69352	112.5392693	109.4874771	106.5341843	103.6756122	100.9081531	98.22836121	95.63294438	93.11875589
160614A00067	6/14/2016	1.51	2/16/2021	6/14/2016	102.43692	101.9520873	101.4718354	100.9961032	100.5248269	100.0579443	99.59539385	99.13711551	98.68305022
160616A00044	6/20/2016	2.31	6/18/2021	6/20/2016	104.8884	104.0298414	103.185306	102.3544545	101.5369563	100.7324911	99.94074902	99.16142981	98.39424266
160624A00005	6/24/2016	1.52	6/24/2021	6/24/2016	104.32865	103.454365	102.5946698	101.7492011	100.9176081	100.0995514	99.29470271	98.50274417	97.72336812
160628A00038	6/28/2016	1.88	6/27/2025	6/28/2016	128.42724	122.5024761	116.8849987	111.5573077	106.5029853	101.7066271	97.15377376	92.83084871	88.72509945
160628A00039	6/28/2016	2.01	6/29/2026	6/28/2016	134.85219	127.4298597	120.4617171	113.9176779	107.7697934	101.9920932	96.5604349	91.45236708	86.64700266
160630A00034	6/30/2016	1.51	6/28/2021	6/30/2016	104.37971	103.4929999	102.6212817	101.7641769	100.9213207	100.0923603	99.27695459	98.47477335	97.68549712
160630A00049	6/30/2016	1.51	6/30/2021	6/30/2016	104.40943	103.5164866	102.6387391	101.7757997	100.9272966	100.0928701	99.27217259	98.46486771	97.67063002
160701A00007	7/1/2016	1.42	7/1/2021	7/1/2016	104.34701	103.4512939	102.5708763	101.7053656	100.854386	100.0175743	99.19457919	98.38506105	97.58869119
160701A00026	7/1/2016	1.43	7/1/2021	7/1/2016	104.3556	103.4598417	102.5793839	101.7138335	100.8628147	100.0259642	99.20293078	98.39337478	97.59696747
160714A00020	9/6/2016	2.28	9/4/2026	9/6/2016	136.14036	128.4892879	121.3180326	114.5939867	108.2869242	102.3688149	96.81365392	91.59730508	86.69735722
160726A00024	7/26/2016	1.61	7/26/2021	7/26/2016	104.88962	103.9144234	102.9572709	102.0176699	101.0951411	100.1892227	99.29946935	98.42545155	97.56675481
160810A00032	8/10/2016	1.32	8/10/2021	8/10/2016	104.98924	103.9648488	102.9603384	101.9751381	101.0086954	100.0604787	99.12997621	98.21669524	97.32016122
160815A00007	8/15/2016	2.23	8/17/2026	8/15/2016	135.53992	127.972782	120.8768018	114.2201988	107.9734948	102.1093364	96.60233144	91.42889861	86.5671294
160830A00034	8/30/2016	1.9	8/30/2023	8/30/2016	117.0956	113.6744525	110.3717545	107.1827342	104.1028402	101.1277306	98.2532623	95.47548041	92.79060864
160922A00049	9/22/2016	1.79	9/22/2022	9/22/2016	111.49174	109.2230648	107.0124072	104.8578867	102.7576952	100.7100967	98.71342424	96.76607631	94.8665138
161013A00037	10/13/2016	1.52	10/13/2021	10/13/2016	106.18034	104.9478237	103.7437508	102.5671487	101.417086	100.2926727	99.19305858	98.11743042	97.06501025
161013A00038	10/13/2016	1.52	10/13/2021	10/13/2016	106.18034	104.9478237	103.7437508	102.5671487	101.417086	100.2926727	99.19305859	98.11743042	97.06501025
161020A00002	10/20/2016	1.96	8/15/2023	10/20/2016	117.05364	113.6811818	110.4239476	107.2773596	104.2370474	101.2988392	98.45875113	95.71297791	93.05788359
180521A00025	5/21/2018	3.24	5/21/2025	5/21/2018	134.95461	128.998186	123.343067	117.9722697	112.869873	108.0209423	103.4114622	99.02827421	94.85901894
180521A00072	5/21/2018	2.96	5/23/2022	5/21/2018	112.06019	110.1530081	108.2884178	106.4650584	104.6816293	102.936885	101.2296328	99.55872932	97.92307823
180522A00008	5/22/2018	2.98	5/24/2021	5/22/2018	104.97004	104.1871949	103.4160177	102.6562477	101.9076332	101.1699296	100.4428995	99.7263124	99.01994428
180522A00018	5/22/2018	3.1	5/23/2022	5/22/2018	111.97969	110.0792149	108.2210811	106.4039415	104.6265054	102.887537	101.1858525	99.52031698	97.88984213
180524A00020	5/24/2018	2.74	5/24/2021	5/24/2018	104.9006	104.1165558	103.3442147	102.5833205	101.8336201	101.0948675	100.3668242	99.64925825	98.9419446
180529A00044	5/29/2018	3.11	5/29/2024	5/29/2018	126.26155	121.7767799	117.477846	113.355907	109.4026057	105.6100354	101.9707126	98.47755092	95.12383743
180529A00060	5/29/2018	2.83	6/1/2021	5/29/2018	105.00714	104.199863	103.404969	102.6221782	101.8512158	101.0918154	100.3437184	99.60667382	98.88043817
180614A00038	6/14/2018	3.08	6/14/2023	6/14/2018	119.41183	116.2028185	113.0976238	110.0922401	107.1828451	104.3657896	101.637588	98.99490991	96.43457198

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
180622A00005	6/22/2018	3.5	7/2/2029	6/22/2018	163.97201	151.2454292	139.6259341	129.0108832	119.3076566	110.4326338	102.3102771	94.87231298	88.05699955
180627A00027	6/27/2018	2.87	6/27/2023	6/27/2018	119.63787	116.3694514	113.2079554	110.1492945	107.1895599	104.325014	101.552082	98.86734371	96.26752615
180629A00039	6/29/2018	2.91	6/29/2021	6/29/2018	105.58893	104.6934799	103.8131905	102.9476775	102.0965711	101.2595139	100.4361603	99.62617587	98.82923695
180705A00003	7/5/2018	3.04	7/5/2023	7/5/2018	119.69478	116.4135382	113.2400352	110.1701538	107.1999561	104.3256757	101.5437093	98.85060859	96.24307299
180712A00002	7/12/2018	3.06	7/12/2023	7/12/2018	119.88866	116.5819163	113.3844145	110.2919545	107.3005193	104.406268	101.605527	98.89478196	96.27067004
180716A00016	7/16/2018	3.03	7/14/2023	7/16/2018	119.8347	116.5223133	113.3195645	110.2222247	107.2262553	104.3277952	101.5231519	98.80879344	96.18133997
180719A00065	7/19/2018	3.36	7/20/2026	7/19/2018	142.60291	134.9202333	127.7062944	120.9299871	114.5624297	108.5767914	102.9481362	97.65327993	92.67065874
180723A00029	6/21/2019	3.17	6/21/2022	6/21/2019	112.66031	110.6649712	108.7152628	106.8098168	104.9473212	103.1265132	101.3461774	99.60514304	97.90228235
180725A00029	7/25/2018	2.98	4/16/2021	7/25/2018	104.24438	103.5790432	102.922196	102.2736791	101.6333347	101.0010088	100.3765513	99.7598158	99.15065948
180801A00013	8/1/2018	3.04	10/15/2021	8/1/2018	107.78507	106.5391991	105.3221009	104.1327889	102.970319	101.8337895	100.7223385	99.63514232	98.57141267
180802A00006	8/2/2018	2.99	8/2/2023	8/2/2018	120.70202	117.3002539	114.0132207	110.8364115	107.7655213	104.7964381	101.9252334	99.14815294	96.46160757
180809A00029	8/9/2018	2.99	9/9/2021	8/9/2018	107.02928	105.9022303	104.7988924	103.7185216	102.660406	101.6238628	100.6082369	99.61289936	98.63724649
180813A00059	8/13/2018	3.01	8/11/2023	8/13/2018	120.30171	116.8915841	113.5971382	110.413795	107.3371893	104.3631529	101.4877049	98.70704172	96.01752838
180816A00024	8/16/2018	3.01	8/16/2023	8/16/2018	120.39608	116.9682454	113.6571994	110.4583004	107.3671223	104.3794395	101.4912173	98.69860149	95.99790975
180816A00038	8/16/2018	3.38	8/16/2028	8/16/2018	156.76067	145.6471258	135.4171558	125.9955466	117.3138686	109.3098276	101.9266852	95.11273685	88.82084116
180530A00067	5/30/2018	2.76	5/28/2021	5/30/2018	104.87905	104.0844701	103.3019034	102.531083	101.7717459	101.0236369	100.2865084	99.5601199	98.84423801
180530A00084	5/30/2018	2.61	6/1/2021	5/30/2018	104.95102	104.1424239	103.3462591	102.5622402	101.7900909	101.0295432	100.2803372	99.54222061	98.81494868
180601A00022	6/1/2018	3.03	6/1/2023	6/1/2018	119.01403	115.8529748	112.7933521	109.8311986	106.9627412	104.1843833	101.4926949	98.88440332	96.35638491
180604A00027	6/4/2018	2.87	6/4/2021	6/4/2018	105.09435	104.2775244	103.4733761	102.6816123	101.9019485	101.1341088	100.3778257	99.63283973	98.898899
180604A00047	6/4/2018	2.97	6/3/2022	6/4/2018	111.95454	110.0210065	108.1310815	106.2833756	104.4765585	102.7093565	100.9805492	99.28896635	97.63348558
180604A00050	6/4/2018	3.15	6/4/2024	6/4/2018	126.54111	122.0305558	117.7074889	113.5629933	109.5886325	105.776423	102.1188078	98.60862981	95.23910828
180615A00031	6/15/2018	2.92	6/15/2021	6/15/2018	105.33291	104.4814983	103.6438445	102.8196131	102.0084831	101.2101436	100.4242937	99.65064159	98.88890473
180620A00026	6/20/2018	2.91	6/18/2021	6/20/2018	105.38136	104.5205548	103.6737991	102.8407526	102.0210842	101.2144732	100.4206092	99.63919153	98.86992898
180622A00003	6/22/2018	2.87	6/22/2022	6/22/2018	112.48236	110.4789217	108.5214495	106.6085753	104.7389782	102.9113869	101.1245771	99.37736987	97.6686292
180622A00004	6/22/2018	3.47	12/22/2028	6/22/2018	160.01077	148.2485118	137.4559332	127.5475864	118.4459821	110.0808117	102.3882468	95.31031126	88.7943162
180622A00006	6/22/2018	3.53	12/21/2029	6/22/2018	167.54679	153.9429426	141.577006	130.3290693	120.0914411	110.7673477	102.2697749	94.52043648	87.44885787
180628A00034	6/28/2018	2.72	6/28/2021	6/28/2018	105.54329	104.6492258	103.7702771	102.9060639	102.0562178	101.220383	100.3982149	99.58938055	98.79355747
180628A00081	6/28/2018	2.72	6/21/2021	6/28/2018	105.41171	104.5397505	103.6821969	102.838696	102.008904	101.1924887	100.3891282	99.59851107	98.82033571
180705A00061	7/5/2018	3	7/6/2022	7/5/2018	112.6272	110.5861192	108.5924427	106.6447854	104.7418112	102.8822315	101.064803	99.28832616	97.55164292
180713A00011	7/13/2018	2.95	7/13/2021	7/13/2018	105.88928	104.9491693	104.0257366	103.1185427	102.2271619	101.3511828	100.4902086	99.64385575	98.81175386
180716A00037	7/16/2018	3.01	7/18/2022	7/16/2018	112.87639	110.7960612	108.7648373	106.7812551	104.8439085	102.9514421	101.1025491	99.29596961	97.53048796
180719A00004	7/19/2018	3.07	7/19/2023	7/19/2018	120.05263	116.7207986	113.4997161	110.385094	107.3728354	104.4590245	101.6399171	98.9119324	96.27164489
180719A00064	7/19/2018	3.3	7/21/2025	7/19/2018	135.29582	129.1497261	123.3228668	117.796969	112.5549031	107.5806021	102.8589897	98.37591457	94.11808904

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
180720A00049	7/20/2018	2.93	7/20/2021	7/20/2018	106.00423	105.0419026	104.0970297	103.1691408	102.2577808	101.3625106	100.4829066	99.61855989	98.76907579
180720A00068	7/20/2018	2.89	7/20/2023	7/20/2018	120.13952	116.7887461	113.5497491	110.418189	107.3899169	104.460968	101.6275521	98.88604498	96.23298019
180727A00037	7/27/2018	3.13	7/27/2023	7/27/2018	120.3915	117.0286448	113.7783261	110.6361575	107.5979478	104.6596925	101.8175642	99.06790362	96.40721117
180727A00039	7/27/2018	3.48	7/27/2028	7/27/2018	157.3033	146.2468649	136.0631212	126.6783003	118.0252335	110.0427337	102.6750344	95.87128334	89.58508647
180813A00013	8/13/2018	2.99	12/5/2022	8/13/2018	115.50629	112.9618797	110.4871709	108.0797261	105.7372172	103.4574171	101.2381947	99.07750958	96.97340717
181211A00031	12/11/2018	2.95	12/11/2023	12/11/2018	123.12526	119.25111	115.5207698	111.9280322	108.4670004	105.132069	101.9179082	98.81944759	95.83186213
181213A00025	12/13/2018	3.05	12/11/2020	12/13/2018	101.90767	101.6180934	101.3301743	101.0438967	100.7592466	100.4762099	100.194773	99.91492222	99.63664408
181214A00016	12/14/2018	3.03	12/14/2020	12/14/2018	101.95802	101.6597391	101.3632124	101.0684267	100.7753666	100.4840168	100.1943625	99.90638857	99.6200805
181221A00015	12/21/2018	2.96	12/21/2020	12/21/2018	102.06693	101.7483253	101.4317216	101.1170966	100.8044317	100.4937085	100.1849089	99.87801504	99.57300926
181221A00018	12/21/2018	2.98	12/21/2021	12/21/2018	108.88553	107.4602166	106.06416	104.6964747	103.3563103	102.0428508	100.7553129	99.49294392	98.2550207
181224A00038	12/24/2018	3.04	12/22/2023	12/24/2018	122.92924	119.0409116	115.2974565	111.6926644	108.22063	104.8757343	101.6526285	98.54622014	95.55165853
181228A00006	12/28/2018	2.86	11/13/2020	12/28/2018	101.34184	101.1331196	100.9252684	100.7182832	100.5121588	100.3068896	100.1024703	99.89889551	99.69616005
190102A00050	1/2/2019	3.38	1/3/2034	1/2/2019	197.09422	174.981413	155.6355734	138.6923218	123.8371321	110.7982788	99.3408154	89.26142661	80.38402295
190107A00034	1/7/2019	2.8	4/15/2021	1/7/2019	104.11034	103.4484886	102.795046	102.1498559	101.5127624	100.8836137	100.2622616	99.64856172	99.04237311
190109A00023	1/9/2019	2.92	10/9/2020	1/9/2019	100.71195	100.602774	100.4938434	100.3851612	100.2767264	100.1685382	100.0605958	99.95289815	99.84544453
190110A00013	1/10/2019	2.97	1/17/2024	1/10/2019	123.16672	119.1890764	115.3623442	111.6799893	108.1358	104.7238653	101.4385592	98.27452488	95.2266606
190110A00015	1/10/2019	2.88	1/18/2022	1/10/2019	109.21631	107.723472	106.2585993	104.8209698	103.409887	102.0246777	100.6646909	99.32929718	98.01788718
190111A00013	1/11/2019	2.87	1/7/2022	1/11/2019	108.9993	107.5408149	106.1091123	104.7035125	103.3233613	101.9680259	100.6368939	99.32937251	98.0448879
190115A00025	1/15/2019	2.96	1/12/2024	1/15/2019	123.03647	119.0776561	115.2684769	111.6024848	108.0735428	104.6758094	101.4037239	98.25199032	95.21556407
190122A00042	1/22/2019	2.79	1/23/2023	1/22/2019	116.42524	113.7070622	111.0667852	108.5017299	106.0093255	103.5871046	101.2326988	98.94383389	96.71832547
190122A00046	1/22/2019	3.29	1/22/2029	1/22/2019	161.21431	149.16845	138.1284943	128.0047999	118.7161554	110.18895	102.3564261	95.15800928	88.5387065
190123A00033	1/23/2019	2.8	1/23/2023	1/23/2019	116.45072	113.7322159	111.0916208	108.5262544	106.0335458	103.6110274	101.2563306	98.96718089	96.74139379
190123A00035	1/23/2019	3.18	1/22/2027	1/23/2019	146.38378	137.8224541	129.8245553	122.3499807	115.3616864	108.8254355	102.7095717	96.98481165	91.62405644
190205A00047	2/5/2019	2.85	2/5/2021	2/5/2019	102.87102	102.4171931	101.9673639	101.5214831	101.0794987	100.6413598	100.2070164	99.77641931	99.34952017
190211A00011	2/11/2019	2.8	2/11/2022	2/11/2019	109.55181	107.9812587	106.4414722	104.9316215	103.4509066	101.9985555	100.573823	99.17598938	97.80435947
190212A00024	2/12/2019	2.79	2/12/2021	2/12/2019	102.97139	102.4967732	102.0265327	101.5606089	101.0989427	100.6414756	100.1881505	99.73891131	99.29370275
190215A00005	2/15/2019	2.89	2/15/2024	2/15/2019	123.42476	119.3431188	115.4198989	111.6480787	108.0209919	104.5323035	101.175991	97.94632723	94.83786453
190219A00045	2/19/2019	2.8	2/28/2022	2/19/2019	109.88255	108.2530101	106.6564417	105.0919248	103.5585749	102.0555394	100.5819964	99.13715305	97.72024461
180215A00029	2/15/2018	2.65	2/16/2021	2/15/2018	102.97757	102.4912043	102.0094385	101.5322028	101.0594333	100.5910676	100.1270441	99.66730255	99.21178389
180222A00025	2/22/2018	3.48	2/22/2033	2/22/2018	192.59185	172.2579078	154.3230445	138.4886559	124.494847	112.1152301	101.1524478	91.43431446	82.8104871
180226A00015	2/26/2018	2.85	9/28/2022	2/26/2018	113.90639	111.5923188	109.3376278	107.140375	104.9986987	102.9108121	100.8750001	98.88961547	96.95307573
180306A00038	3/6/2018	2.7	3/5/2021	3/6/2018	103.30672	102.7694154	102.2376967	101.7114746	101.1906641	100.675182	100.1649468	99.65987856	99.15989916
180308A00014	3/8/2018	2.79	9/15/2021	3/8/2018	106.92966	105.7842473	104.6633329	103.5661383	102.4919163	101.4399505	100.4095542	99.40006877	98.41086201

Classification | Public

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
180323A00005	3/23/2018	2.79	3/23/2021	3/23/2018	103.67926	103.0875251	102.5025422	101.9241953	101.3523718	100.7869619	100.2278578	99.6749544	99.12814894
180328A00019	3/28/2018	2.55	3/29/2021	3/28/2018	103.7346	103.1237928	102.5201638	101.9235886	101.3339442	100.7511103	100.1749695	99.60540686	99.0423103
180329A00003	3/29/2018	3.08	3/29/2028	3/29/2018	153.6162	143.094469	133.3778642	124.4003163	116.1015122	108.4263679	101.3245489	94.75003758	88.66074146
180406A00005	4/6/2018	2.76	4/6/2021	4/6/2018	103.91905	103.2848218	102.6583279	102.0394259	101.4279785	100.8238514	100.2269136	99.63703741	99.0540979
180410A00017	4/10/2018	3.02	10/10/2023	4/10/2018	121.47285	117.8481864	114.3521165	110.979296	107.7246415	104.5833123	101.5506981	98.62240552	95.79424686
180412A00036	4/12/2018	3.54	4/15/2038	4/12/2018	230.47093	197.8556802	170.4156494	147.2895313	127.7641298	111.2481941	97.25098697	85.3647124	75.25009281
180425A00007	4/25/2018	2.98	4/25/2023	4/25/2018	118.73917	115.6873566	112.7307367	109.8657036	107.0888179	104.3967955	101.7864989	99.25492999	96.79922219
180425A00023	4/25/2018	2.97	4/23/2021	4/25/2018	104.37113	103.6843356	103.0065724	102.3376637	101.6774367	101.0257231	100.3823589	99.74718436	99.12004365
180426A00017	4/26/2018	2.85	4/26/2022	4/26/2018	111.34115	109.5224229	107.7429888	106.0016419	104.297227	102.628636	100.9948055	99.394714	97.82738039
180430A00070	4/30/2018	2.91	3/30/2023	4/30/2018	118.03374	115.0765277	112.2096053	109.4296408	106.7334487	104.1179828	101.580329	99.11769837	96.72742128
180521A00005	5/21/2018	3.02	5/22/2023	5/21/2018	119.38082	116.2331846	113.1859576	110.2352345	107.3772986	104.6086063	101.9257774	99.32558593	96.80495205
180521A00022	5/21/2018	2.99	5/21/2021	5/21/2018	104.92006	104.1465145	103.3843729	102.6333809	101.893295	101.1638786	100.4449021	99.73614215	99.03738204
180522A00019	5/22/2018	3.16	5/22/2023	5/22/2018	119.20235	116.0703752	113.038053	110.1015178	107.2570892	104.5012581	101.8306764	99.24214873	96.7326239
180522A00037	5/22/2018	3.01	5/22/2023	5/22/2018	119.3517	116.2044858	113.157669	110.2073463	107.3498011	104.5814903	101.8990337	99.29920593	96.77892728
180530A00002	5/30/2018	2.75	11/30/2022	5/30/2018	115.31236	112.7760237	110.3091203	107.9091918	105.5738951	103.3009913	101.0883396	98.93389254	96.83569049
180530A00016	5/30/2018	2.76	5/28/2021	5/30/2018	104.87905	104.0844701	103.3019034	102.531083	101.7717459	101.0236369	100.2865084	99.5601199	98.84423801
180601A00003	6/1/2018	2.65	12/1/2020	6/1/2018	101.65207	101.3912619	101.1317937	100.8736518	100.616826	100.3613062	100.1070826	99.85414518	99.60248435
180604A00048	6/4/2018	3.01	6/5/2023	6/4/2018	119.03171	115.8574408	112.7852981	109.8113053	106.9316754	104.1427972	101.4412249	98.82366941	96.28698998
180719A00011	7/19/2018	3	11/12/2021	7/19/2018	108.28466	106.9456723	105.6397621	104.3657109	103.1223626	101.9086168	100.7234249	99.56578754	98.43475138
180723A00028	1/23/2019	3.22	1/23/2024	1/23/2019	124.19576	120.179931	116.3169872	112.6002835	109.0235024	105.5806339	102.2659588	99.07403286	95.99967229
180723A00030	6/21/2019	3.24	6/21/2024	6/21/2019	127.24676	122.6641831	118.2737179	114.0662538	110.033166	106.1662849	102.4578693	98.90058155	95.48746387
180727A00028	7/27/2018	3.25	7/27/2026	7/27/2018	143.539	135.746888	128.4330246	121.5654936	115.1146737	109.0530589	103.3550964	97.99703873	92.95680718
180730A00004	7/30/2018	3.14	7/28/2023	7/30/2018	120.44185	117.0749843	113.8208877	110.6751562	107.6335869	104.692164	101.8470495	99.09457395	96.43122859
180730A00023	7/30/2018	3.13	7/30/2024	7/30/2018	128.43489	123.6710711	119.1123925	114.7489197	110.5712559	106.570507	102.7382521	99.06651551	95.54774091
180801A00014	8/1/2018	3.03	8/2/2021	8/1/2018	106.34625	105.3418822	104.3564568	103.3894428	102.4403277	101.5086179	100.5938379	99.6955292	98.81324986
180801A00015	8/1/2018	3.16	8/1/2023	8/1/2018	120.58135	117.1994012	113.9311078	110.77202	107.7178874	104.7646495	101.9084263	99.14550882	96.47235109
180814A00033	8/14/2018	3.25	8/13/2027	8/14/2018	150.73762	141.2307518	132.3972975	124.1858689	116.5492626	109.4440947	102.830473	96.67169865	90.9339954
180815A00010	8/15/2018	3.02	8/15/2023	8/15/2018	120.40885	116.9840717	113.6758654	110.4796092	107.3908888	104.4054897	101.5193876	98.72873806	96.02986792
180816A00043	8/16/2018	2.83	8/16/2022	8/16/2018	113.46482	111.2815813	109.152027	107.0744875	105.0473616	103.0691086	101.1382459	99.25334639	97.41303561
180821A00011	8/21/2018	2.98	8/21/2023	8/21/2018	120.39496	116.9509008	113.6247057	110.4116694	107.3073051	104.3073309	101.4076588	98.60438518	95.89378069
180821A00028	8/21/2018	2.99	8/21/2023	8/21/2018	120.4268	116.9822396	113.6555583	110.4420482	107.3372223	104.336798	101.4366872	98.63298572	95.92196391
180823A00033	8/23/2018	2.85	8/23/2023	8/23/2018	120.66308	117.1931488	113.8424717	110.6062741	107.4799977	104.4592928	101.5400081	98.71817991	95.99002273
180823A00035	8/23/2018	3.05	8/22/2025	8/23/2018	135.78898	129.4761764	123.4979545	117.834777	112.4683549	107.381557	102.5583303	97.98362654	93.643334

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
180824A00023	8/24/2018	2.79	8/24/2021	8/24/2018	106.6899	105.612509	104.5568433	103.5222481	102.5080971	101.5137885	100.5387439	99.58240735	98.64424405
180827A00034	8/27/2018	2.99	8/28/2023	8/27/2018	120.55855	117.0891788	113.7392468	110.5039619	107.37875	104.3592471	101.4412885	98.62089808	95.89427876
180830A00006	8/30/2018	2.99	8/30/2022	8/30/2018	113.65662	111.4357864	109.2704162	107.1587608	105.0991396	103.0899367	101.1295982	99.21662901	97.3495905
180831A00019	8/31/2018	3.21	9/2/2025	8/31/2018	135.63847	129.3299316	123.3565323	117.6986527	112.3379243	107.2571448	102.4401982	97.87198041	93.53833016
180904A00004	9/4/2018	2.89	9/5/2023	9/4/2018	121.04138	117.5226906	114.1261693	110.8468702	107.6800742	104.6212814	101.6661993	98.81073221	96.05097035
180905A00015	9/5/2018	2.85	9/1/2022	9/5/2018	113.81421	111.5775532	109.3970151	107.2708172	105.1972507	103.1746732	101.2015055	99.2762286	97.39738134
180910A00033	9/10/2018	3.43	9/8/2028	9/10/2018	157.65333	146.410905	136.0682028	126.5481187	117.7805435	109.7016986	102.2535332	95.38318233	89.04247815
180914A00011	9/14/2018	3.01	4/12/2021	9/14/2018	104.18711	103.5339633	102.8890069	102.2520856	101.6230499	101.0017537	100.3880546	99.78181384	99.18289574
180430A00012	4/30/2018	2.95	7/15/2021	4/30/2018	105.92734	104.9808552	104.0512726	103.1381412	102.2410269	101.3595104	100.4931874	99.64166707	98.80457214
180514A00034	5/14/2018	3.07	5/14/2024	5/14/2018	126.64491	122.1806108	117.8999821	113.7943608	109.8555467	106.0757776	102.4477031	98.96435936	95.61914631
180514A00035	5/14/2018	3.07	5/14/2024	5/14/2018	126.64491	122.1806108	117.8999821	113.7943608	109.8555467	106.0757776	102.4477031	98.96435936	95.61914631
180524A00024	5/24/2018	3	3/21/2022	5/24/2018	110.59061	108.8933964	107.2312769	105.6032367	104.0083018	102.4455348	100.9140335	99.41292919	97.9413848
180525A00001	5/25/2018	3.04	5/25/2023	5/25/2018	118.91063	115.7733438	112.7361602	109.7951893	106.9467237	104.1872288	101.513333	98.9218187	96.40961427
180529A00037	5/29/2018	2.83	5/28/2021	5/29/2018	104.93236	104.137549	103.3547583	102.5837163	101.82416	101.0758341	100.338491	99.61189004	98.89579787
180530A00014	5/30/2018	2.93	5/30/2023	5/30/2018	118.68313	115.533282	112.4843936	109.5325172	106.6738971	103.9049533	101.222272	98.62259627	96.10281749
180530A00026	5/30/2018	3.55	5/30/2031	5/30/2018	177.71448	161.3402194	146.6559642	133.4767583	121.6388541	110.9971776	101.4231068	92.80252582	85.03411792
180530A00027	5/30/2018	3.61	6/1/2032	5/30/2018	185.47903	167.0343393	150.6461464	136.0718829	123.0988643	111.5404667	101.2328068	92.0318603	83.81095987
180530A00030	5/30/2018	3.68	5/30/2034	5/30/2018	200.45843	177.6904459	157.827661	140.4791535	125.3087062	112.0268847	100.3843022	90.16588419	81.18598202
180530A00069	5/30/2018	2.87	5/31/2022	5/30/2018	111.71343	109.7913893	107.9126052	106.0756814	104.2792853	102.5221416	100.8030294	99.12077871	97.47426844
180530A00072	5/30/2018	3.06	5/30/2024	5/30/2018	126.07736	121.5928754	117.2943722	113.1729963	109.2203777	105.4285981	101.7901632	98.29797701	94.9453175
180531A00065	5/31/2018	2.65	6/1/2021	5/31/2018	104.98196	104.173227	103.3769303	102.592781	101.8205027	101.0598274	100.3104951	99.57225352	98.84485791
180607A00026	6/7/2018	2.92	6/7/2021	6/7/2018	105.19016	104.3637389	103.550293	102.7495149	101.9611103	101.1847939	100.420289	99.66732742	98.92564903
180612A00005	6/12/2018	3.09	6/12/2023	6/12/2018	119.40288	116.2004871	113.1015612	110.1021022	107.1982949	104.3864978	101.6632335	99.02518014	96.46916312
180615A00061	6/15/2018	3.28	6/15/2028	6/15/2018	156.87497	145.909875	135.8026746	126.4814395	117.8806372	109.9405337	102.6066513	95.82928012	89.56303751
180615A00069	6/15/2018	2.86	6/15/2022	6/15/2018	112.32638	110.3461008	108.4110141	106.5197334	104.6709306	102.8633304	101.095707	99.36688162	97.6757208
180618A00024	6/18/2018	2.91	4/13/2021	6/18/2018	104.14292	103.4869411	102.8392215	102.1996088	101.5679513	100.944101	100.3279137	99.71924858	99.11796838
180618A00025	6/18/2018	3.01	4/13/2022	6/18/2018	111.0476	109.2770351	107.5440475	105.8475085	104.1863373	102.5594957	100.9659859	99.40484905	97.87516263
180619A00020	6/19/2018	3.1	6/19/2025	6/19/2018	134.79984	128.7430489	122.9970011	117.5440658	112.3677112	107.4524276	102.7836578	98.34773362	94.13181683
180620A00044	6/20/2018	2.89	6/20/2023	6/20/2018	119.5624	116.3179808	113.1792175	110.1420454	107.2025825	104.3571202	101.6021143	98.93417647	96.35006643
180625A00039	6/25/2018	2.93	6/25/2021	6/25/2018	105.53027	104.6473454	103.7791773	102.925396	102.0856458	101.259583	100.4468747	99.64719891	98.86024398
180625A00041	6/25/2018	3.06	6/20/2023	6/25/2018	119.4679	116.2385954	113.1141747	110.0906117	107.1640621	104.3308531	101.5874739	98.93056776	96.35692431
161208A00007	12/8/2016	2.6	12/8/2023	12/8/2016	121.11579	117.3037756	113.6329275	110.0971529	106.6906655	103.4079662	100.2438268	97.19327408	94.25157605
161213A00017	12/13/2016	2.24	12/13/2022	12/13/2016	114.31898	111.7548497	109.2616244	106.8368581	104.4782046	102.1834167	99.95034146	97.77691521	95.66115907

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
161222A00030	12/22/2016	3.09	12/22/2026	12/22/2016	145.16991	136.7660422	128.9091602	121.560715	114.6850719	108.2492756	102.222834	96.5775229	91.28720504
170110A00020	1/10/2017	2.4	1/10/2024	1/10/2017	121.7043	117.7570694	113.9594715	110.3050404	106.7876288	103.4013863	100.1407439	97.00039837	93.97529827
170110A00023	1/10/2017	2.08	1/10/2022	1/10/2017	108.19073	106.7252885	105.2869699	103.8750822	102.488958	101.1279522	99.7914406	98.47881923	97.18950351
170119A00004	1/19/2017	2.36	1/18/2022	1/19/2017	108.46693	106.9798134	105.5205559	104.0884417	102.6827774	101.3028925	99.94813865	98.6178888	97.31153617
170215A00033	2/15/2017	2.24	11/9/2020	2/15/2017	101.14804	100.9509543	100.7546474	100.5591134	100.3643478	100.170346	99.97710339	99.78461555	99.592878
170224A00039	5/24/2017	3.17	5/24/2027	5/24/2017	146.79522	137.8131073	129.4485047	121.6554899	114.3918067	107.6185495	101.29988	95.40276831	89.89675823
170303A00021	3/3/2017	2.2	3/3/2022	3/3/2017	109.28155	107.6433264	106.0384362	104.4659475	102.9249595	101.4146041	99.934045	98.48247557	97.059118
170313A00032	3/13/2017	3.69	6/14/2032	3/13/2017	186.86846	168.2806202	151.7684696	137.0867941	124.0206245	112.3813622	102.0034195	92.7413013	84.46707207
170317A00059	3/17/2017	2.47	3/17/2023	3/17/2017	116.59291	113.6959289	110.886642	108.1618505	105.5184929	102.95364	100.4644874	98.04835	95.70265577
170320A00014	3/20/2017	2.22	3/21/2022	3/20/2017	109.62089	107.9268514	106.2679355	104.6431299	103.0514573	101.4919778	99.96378643	98.46601213	96.99781568
170321A00013	3/21/2017	2.18	3/21/2022	3/21/2017	109.55588	107.8623932	106.2040196	104.5797463	102.9885964	101.4296302	99.90194311	98.40466421	96.93695455
170322A00011	3/22/2017	2.48	3/22/2024	3/22/2017	123.30832	119.0872006	115.0345458	111.1426768	107.4043109	103.8125385	100.3608023	97.04287645	93.85284814
170322A00022	3/22/2017	3.89	9/23/2041	3/22/2017	256.10487	214.846229	181.1292451	153.5060808	130.8156477	112.1254114	96.68525818	83.89087685	73.25465431
170327A00070	3/29/2017	3.05	3/29/2027	3/29/2017	146.65495	137.8234327	129.5888492	121.9075875	114.7394448	108.0473472	101.7970904	95.95710247	90.49822818
170327A00072	3/29/2017	3.09	3/29/2027	3/29/2017	146.95541	138.1135643	129.8691696	122.1785751	115.0015499	108.3009942	102.0426794	96.19501074	90.72881178
170419A00022	4/19/2017	1.75	4/19/2021	4/19/2017	103.59712	102.9239416	102.2594953	101.6036119	100.9561265	100.3168784	99.68571104	99.06247182	98.44701189
170425A00069	4/25/2017	2.06	4/26/2021	4/25/2017	103.81837	103.1246745	102.4402209	101.7648277	101.0983157	100.4405109	99.79124327	99.15034764	98.51766284
170524A00047	5/24/2017	2.22	5/24/2023	5/24/2017	117.08538	113.9645662	110.943717	108.0189384	105.1865189	102.4429205	99.78476883	97.20884396	94.71207218
170530A00006	5/30/2017	2.15	5/31/2022	5/30/2017	110.3941	108.4845326	106.6179819	104.7930592	103.0084389	101.262852	99.55508389	97.88397065	96.24839681
170530A00058	5/30/2017	1.96	3/26/2021	5/30/2017	103.25144	102.6522456	102.0599864	101.4745455	100.8958055	100.323652	99.7579728	99.19865866	98.64560255
170530A00064	5/30/2017	2.32	3/27/2023	5/30/2017	115.81629	112.9105706	110.0933282	107.3613141	104.711419	102.1406691	99.64621865	97.2253436	94.87543562
180829A00008	8/29/2018	3.23	8/30/2027	8/29/2018	150.89799	141.3187793	132.4224152	124.1564641	116.4727834	109.3271513	102.6789279	96.49074738	90.72823812
180904A00014	9/4/2018	3.37	9/1/2028	9/4/2018	156.96513	145.7794948	135.4877157	126.0133156	117.2867485	109.2447366	101.8296745	94.98909399	88.67518045
180906A00004	9/6/2018	2.92	9/7/2021	9/6/2018	106.91682	105.796737	104.7000858	103.6261403	102.5742003	101.5435945	100.5336783	99.54383311	98.5734647
180906A00020	9/6/2018	2.81	9/7/2021	9/6/2018	106.97978	105.8566174	104.7569996	103.6801895	102.6254827	101.5922037	100.5797041	99.58736167	98.61457856
180906A00047	9/6/2018	2.81	9/7/2021	9/6/2018	106.97978	105.8566174	104.7569996	103.6801895	102.6254827	101.5922037	100.5797041	99.58736167	98.61457856
180910A00032	9/10/2018	3.22	9/10/2024	9/10/2018	128.75571	123.8654754	119.1908686	114.7211889	110.4463265	106.3567268	102.4433574	98.69767601	95.11160131
180913A00029	9/13/2018	3.11	9/13/2023	9/13/2018	121.25278	117.7198607	114.3099264	111.0179766	107.8392449	104.769187	101.8034694	98.93795762	96.16870622
180913A00040	9/13/2018	2.89	9/13/2021	9/13/2018	107.18149	106.0381431	104.9191602	103.8237644	102.7512154	101.7008035	100.6718481	99.66369655	98.67572213
180914A00046	9/14/2018	2.93	9/14/2021	9/14/2018	107.24407	106.0971882	104.9748082	103.8761484	102.8004622	101.7470343	100.7151787	99.70423737	98.71357875
180925A00095	9/25/2018	3.01	9/25/2020	9/25/2018	100.46173	100.3919572	100.3222896	100.2527264	100.1832674	100.1139123	100.044661	99.9755132	99.90646869
181001A00020	10/1/2018	3.16	10/3/2022	10/1/2018	114.68259	112.3444545	110.0665596	107.8469247	105.6836505	103.5749149	101.5189695	99.51413538	97.55880017
181005A00011	10/5/2018	3.2	10/5/2023	10/5/2018	122.6549	119.0108041	115.4957207	112.1043052	108.8314667	105.6723571	102.6223583	99.67706925	96.83229428

Classification | Public

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
181005A00016	10/5/2018	3.26	1/10/2023	10/5/2018	116.85889	114.1867088	111.5898081	109.0656455	106.6117767	104.225854	101.9056218	99.64891268	97.45364345
181009A00060	10/9/2018	3.07	10/12/2021	10/9/2018	107.95809	106.7176276	105.505646	104.3211702	103.1632712	102.0310614	100.9236924	99.84035264	98.78026577
181016A00004	10/16/2018	3.07	10/16/2020	10/16/2018	100.85919	100.7301851	100.6015297	100.473218	100.3452488	100.2176205	100.0903318	99.96338126	99.83676758
181016A00011	10/16/2018	3.06	10/15/2021	10/16/2018	108.007	106.756602	105.5351319	104.3415895	103.1750245	102.0345294	100.919237	99.82831793	98.76097927
181018A00011	10/18/2018	3.35	10/18/2023	10/18/2018	122.73314	119.0619435	115.5215576	112.1065152	108.8116175	105.6319163	102.5627	99.59948056	96.73798151
181115A00051	11/15/2018	2.98	5/17/2021	11/15/2018	104.94386	104.1808952	103.4290275	102.6880126	101.9576165	101.2376116	100.5277772	99.82789857	99.13776704
181120A00023	11/20/2018	3.15	11/19/2021	11/20/2018	108.59782	107.2343343	105.9050581	104.6087182	103.3441009	102.1100516	100.9054711	99.72931246	98.58057769
181123A00007	11/23/2018	3.08	11/23/2020	11/23/2018	101.57752	101.3399879	101.1035738	100.8682693	100.6340667	100.4009581	100.168936	99.93799271	99.7081207
181130A00037	11/30/2018	3.05	11/30/2023	11/30/2018	123.26439	119.4235975	115.7244476	112.1607942	108.7268076	105.4169516	102.2259666	99.14885312	96.18085711
181211A00019	12/11/2018	3.04	12/11/2020	12/11/2018	101.90482	101.6152461	101.3273323	101.04106	100.7564151	100.4733838	100.1919521	99.91210651	99.63383357
181213A00024	12/13/2018	3.05	12/11/2020	12/13/2018	101.90767	101.6180934	101.3301743	101.0438967	100.7592466	100.4762099	100.194773	99.91492222	99.63664408
180914A00012	9/14/2018	2.97	10/13/2020	9/14/2018	100.79108	100.6705815	100.5503874	100.4304953	100.310904	100.1916122	100.0726188	99.95392277	99.83552283
180914A00026	9/14/2018	3.15	9/14/2023	9/14/2018	121.40249	117.8638792	114.4485182	111.1513923	107.9677214	104.8929488	101.922729	99.05291651	96.27955537
180918A00012	9/18/2018	3.06	9/17/2021	9/18/2018	107.2597	106.1060334	104.9771618	103.8722935	102.7906683	101.7315581	100.6942647	99.67811869	98.68247769
180918A00013	9/18/2018	3.11	9/16/2022	9/18/2018	114.24102	111.9607752	109.7383737	107.5719552	105.459731	103.3999831	101.3910614	99.43137948	97.51941272
180920A00011	9/20/2018	2.89	9/18/2020	9/20/2018	100.33471	100.2844214	100.2342004	100.1840457	100.1339573	100.083935	100.0339786	99.98408809	99.93426327
180920A00030	9/20/2018	3.12	9/20/2023	9/20/2018	122.08819	118.5028793	115.043241	111.7041221	108.4806167	105.36805	102.3619655	99.4581137	96.6524408
180925A00060	9/25/2018	3.23	8/25/2023	9/25/2018	121.26915	117.7983485	114.4466275	111.2092228	108.0815873	105.0593823	102.1384663	99.31488512	96.584862
180927A00015	9/27/2018	3.02	9/27/2022	9/27/2018	114.69113	112.3630793	110.0948236	107.884406	105.7299497	103.629654	101.5817901	99.58469797	97.63678292
181005A00037	10/9/2018	3.4	10/3/2025	10/9/2018	138.60101	132.060445	125.8725648	120.0163904	114.472309	109.221975	104.2482209	99.53497532	95.06718679
181016A00087	10/16/2018	3.31	10/16/2023	10/16/2018	122.5592	118.8973384	115.3657944	111.9591285	108.6721687	105.4999919	102.4379099	99.48145668	96.6263763
181022A00026	10/22/2018	3.18	10/15/2021	10/22/2018	107.94811	106.7012161	105.4831089	104.292804	103.1293568	101.9918652	100.8794671	99.79133802	98.7266896
181025A00021	10/25/2018	2.97	10/26/2020	10/25/2018	101.05479	100.8971969	100.7401002	100.5835007	100.4273959	100.2717834	100.116661	99.9620263	99.80787699
181102A00007	11/2/2018	3.01	11/2/2020	11/2/2018	101.19389	101.0163373	100.8394104	100.6631052	100.4874184	100.3123467	100.1378869	99.96403575	99.7907901
181107A00008	11/7/2018	3.42	11/7/2023	11/7/2018	123.37245	119.6249514	116.012848	112.5303968	109.1721367	105.9328751	102.8076723	99.79182725	96.88086433
181109A00029	11/9/2018	3.72	11/9/2026	11/9/2018	147.16927	138.9238988	131.2031716	123.9707251	117.1929137	110.838594	104.8789243	99.28718245	94.0385979
181115A00055	11/15/2018	3.01	11/15/2021	11/15/2018	108.57032	107.2162486	105.8959082	104.6080485	103.3514814	102.1250761	100.9277556	99.75849386	98.61631254
181121A00015	11/21/2018	3.24	11/21/2022	11/21/2018	115.82733	113.3231149	110.8866017	108.5154284	106.2073386	103.9601746	101.7718722	99.64045556	97.56403239
181206A00011	12/6/2018	3.11	12/6/2022	12/6/2018	115.81268	113.2615164	110.7802651	108.3664886	106.0178556	103.7321357	101.5071939	99.34098599	97.23155354
181211A00020	12/11/2018	3.04	12/11/2020	12/11/2018	101.90482	101.6152461	101.3273323	101.04106	100.7564151	100.4733838	100.1919521	99.91210651	99.63383357
181212A00033	12/12/2018	2.99	12/12/2023	12/12/2018	123.28632	119.4061381	115.6700428	112.0718234	108.6055738	105.2656796	102.0468016	98.94386051	95.95202229
181219A00023	12/19/2018	2.97	12/20/2021	12/19/2018	108.8582	107.43424	106.039853	104.674132	103.3362047	102.0252345	100.740419	99.48098752	98.24620011
190102A00041	1/2/2019	2.91	1/2/2024	1/2/2019	122.66901	118.7496601	114.977376	111.3458627	107.8491322	104.4814829	101.2374843	98.11196313	95.09998934

Classification | Public

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
190103A00014	1/3/2019	2.8	1/4/2021	1/3/2019	102.26962	101.9102593	101.553424	101.1990867	100.8472211	100.4978015	100.1508024	99.80619878	99.46396578
180614A00034	6/15/2018	2.89	1/11/2021	6/15/2018	102.42971	102.0496926	101.6724998	101.2981027	100.9264702	100.5575718	100.1913771	99.82785647	99.46698056
180615A00066	6/15/2018	3	6/14/2024	6/15/2018	126.9729	122.3966647	118.0121818	113.8103232	109.7824508	105.9203871	102.2163876	98.66311538	95.25361651
180620A00014	6/20/2018	3.4	6/20/2028	6/20/2018	155.88285	145.0309809	135.0265651	125.7986811	117.2826979	109.4196894	102.1559032	95.44228117	89.23402678
180621A00017	6/21/2018	3.42	6/21/2028	6/21/2018	156.08187	145.217939	135.2024984	125.96453	117.439318	109.5678591	102.2963305	95.57560974	89.36084175
180629A00071	6/29/2018	3.02	6/29/2023	6/29/2018	119.52047	116.2611868	113.1083867	110.0580148	107.1061931	104.2492125	101.4835239	98.80573058	96.21258086
180713A00013	7/13/2018	2.88	7/13/2023	7/13/2018	119.97471	116.6491992	113.4339508	110.3247067	107.317399	104.4081387	101.5932071	98.86904725	96.23225599
180719A00061	7/19/2018	3.07	7/19/2023	7/19/2018	120.05263	116.7207986	113.4997161	110.385094	107.3728354	104.4590245	101.6399171	98.9119324	96.27164489
180719A00063	7/19/2018	3.21	7/19/2024	7/19/2018	127.67237	122.9859664	118.4994416	114.2032149	110.0882129	106.1458426	102.3679635	98.74686139	95.27522383
180723A00024	10/23/2018	3.1	10/22/2021	10/23/2018	107.99338	106.7238117	105.4840665	104.2731028	103.0899264	101.9335883	100.8031826	99.69784358	98.61674364
180810A00028	8/10/2018	2.91	8/10/2023	8/10/2018	120.60505	117.1785844	113.8685382	110.6702971	107.5794613	104.5918304	101.7033928	98.91031594	96.20893756
180820A00054	8/20/2018	3	8/18/2023	8/20/2018	120.40209	116.9676638	113.6504591	110.4458083	107.3492606	104.3565683	101.4636751	98.666707	95.96196288
180820A00055	8/20/2018	3.37	8/21/2028	8/20/2018	156.76124	145.6278059	135.3809999	125.9452305	117.2517289	109.2379026	101.8467505	95.02633708	88.72931754
180823A00013	8/23/2018	2.97	8/23/2023	8/23/2018	120.40064	116.9499943	113.6176475	110.3988675	107.2891434	104.2841704	101.3798392	98.57222594	95.8575825
180913A00030	9/13/2018	3.33	9/12/2025	9/13/2018	136.50191	130.1345692	124.1067636	118.3985346	112.9912008	107.8672725	103.0103696	98.40514511	94.03721427
180914A00008	9/14/2018	3.15	9/14/2023	9/14/2018	121.40249	117.8638792	114.4485182	111.1513923	107.9677214	104.8929488	101.922729	99.05291651	96.27955537
180926A00004	9/26/2018	3.04	9/26/2022	9/26/2018	114.71497	112.3898017	110.1243023	107.9165169	105.764575	103.6666816	101.6211136	99.62621619	97.68039948
180927A00008	9/27/2018	3.14	9/27/2022	9/27/2018	114.52173	112.2039472	109.9455542	107.7446087	105.599251	103.5076965	101.4682319	99.47921168	97.53905487
180927A00017	9/27/2018	3	9/29/2020	9/27/2018	100.53486	100.453894	100.3730611	100.2923584	100.2117855	100.1313421	100.0510279	99.97084259	99.89078594
181001A00049	10/1/2018	3.01	10/1/2020	10/1/2018	100.57262	100.4860425	100.3996128	100.3133318	100.227199	100.1412141	100.0553767	99.96968651	99.88414311
181002A00018	10/2/2018	3.1	10/4/2021	10/2/2018	107.63752	106.4276999	105.2450414	104.0886414	102.9576323	101.8511844	100.7685037	99.70883011	98.67143579
181004A00049	10/4/2018	3.06	11/4/2020	10/4/2018	101.21477	101.0317795	100.8494553	100.6677925	100.4867876	100.3064369	100.126737	99.94768417	99.76927508
181005A00041	10/5/2018	3.06	10/5/2020	10/5/2018	100.65149	100.5536095	100.4559284	100.3584446	100.2611573	100.164066	100.06717	99.9704688	99.87396172
181010A00017	10/10/2018	3.08	10/1/2020	10/10/2018	100.57867	100.4920839	100.405649	100.3193628	100.2332248	100.1472348	100.0613922	99.97569688	99.89014834
190226A00020	2/26/2019	2.64	2/26/2024	2/26/2019	123.46588	119.3246312	115.3460333	111.5227935	107.8479906	104.3150516	100.9177321	97.65009768	94.50650669
190227A00002	2/27/2019	2.61	2/28/2022	2/27/2019	109.87143	108.237182	106.6360788	105.0671916	103.5296293	102.0225333	100.5450758	99.09645829	97.67591085
190308A00007	3/8/2019	2.8	3/8/2024	3/8/2019	123.50035	119.3417245	115.3471372	111.5091975	107.8208922	104.2755632	100.8668867	97.58885502	94.43575853
190328A00027	3/28/2019	2.51	9/21/2021	3/28/2019	106.73554	105.5723385	104.4344235	103.3209785	102.2312201	101.1643986	100.1197953	99.09672121	98.09451586
190401A00008	4/1/2019	2.62	4/1/2024	4/1/2019	123.23719	119.0053155	114.9428766	111.0421224	107.2957019	103.6966426	100.2383291	96.91448198	93.71913879
190401A00035	4/1/2019	2.53	10/1/2021	4/1/2019	106.93758	105.7415885	104.572265	103.4287266	102.3101277	101.2156595	100.1445474	99.09605015	98.06945717
190404A00003	4/4/2019	2.47	4/4/2024	4/4/2019	123.50252	119.2346189	115.1383986	111.2059633	107.4298323	103.8029123	100.3184747	96.97013459	93.75183104
190410A00005	4/10/2019	2.49	10/13/2020	4/10/2019	100.75209	100.6314435	100.5111059	100.3910727	100.2713426	100.1519145	100.0327872	99.91395945	99.79543013
190411A00037	4/11/2019	2.59	4/9/2021	4/11/2019	103.86859	103.225561	102.59049	101.963226	101.3436257	100.7315489	100.1268593	99.52942355	98.93911154

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
190416A00018	4/16/2019	2.63	4/16/2021	4/16/2019	104.01979	103.3552719	102.6992375	102.0515261	101.41198	100.7804453	100.1567719	99.54081362	98.9324277
190422A00008	4/22/2019	2.6	4/22/2021	4/22/2019	104.10836	103.4255436	102.7516749	102.0865769	101.4300792	100.7820155	100.1422242	99.51054728	98.88683115
190424A00019	4/24/2019	2.67	4/24/2024	4/24/2019	123.84838	119.5270959	115.3813265	111.4029159	107.5841365	103.9176662	100.3965647	97.01425057	93.76448042
190426A00032	6/27/2019	2.55	6/27/2022	6/27/2019	111.59392	109.5905877	107.6333195	105.720771	103.8516423	102.0246803	100.2386765	98.49246548	96.78492255
190430A00001	4/30/2019	2.47	5/2/2024	4/30/2019	124.01182	119.6387967	115.4448212	111.4215033	107.5609	103.855489	100.2981436	96.88210865	93.60097931
190430A00003	4/30/2019	2.43	8/2/2023	4/30/2019	118.9469	115.5722494	112.3116397	109.1605822	106.1147944	103.1701863	100.3228503	97.56905201	94.90522148
190507A00006	5/7/2019	2.57	5/8/2023	5/7/2019	117.24411	114.1844471	111.2211751	108.3506063	105.569222	102.8736644	100.2607279	97.72735076	95.27060731
090429A00044	4/29/2009	4.1	4/29/2024	4/29/2014	100.64349	100.5596797	100.4760037	100.3924644	100.3090617	100.2257951	100.1426644	99.97486515	99.02356583
100517A00013	5/17/2010	3.71	5/19/2025	5/18/2015	100.62657	100.5426179	100.4588018	100.3751245	100.2915855	100.2081845	100.1249213	99.73643534	98.20868538
100707A00014	7/7/2010	3.19	7/7/2025	7/7/2015	100.5831	100.4991837	100.4154039	100.3317627	100.2482598	100.1648948	100.0754045	99.02086601	97.09635817
111005A00009	10/5/2011	2.72	10/5/2026	10/5/2016	100.54381	100.4599259	100.3761788	100.2925702	100.2091	100.1257676	99.6066924	97.49438027	94.90072289
111215A00019	12/15/2011	2.53	12/15/2026	12/15/2021	107.85528	106.5461579	105.2650003	104.0064377	102.7650532	101.3976963	99.4434203	96.91928073	94.20263439
120702A00016	7/2/2012	2.42	7/6/2027	7/3/2013	100.51873	100.4348677	100.3511415	100.2675538	100.1841043	100.1007928	98.85777178	96.1656486	93.21771739
200612A00001	6/12/2020	0.75	6/12/2030	6/12/2025	117.16418	112.7961879	108.5770413	104.1781294	99.56068297	94.99171065	90.64080885	86.55168734	82.72192209
200423A00009	4/23/2020	1.59	4/23/2030	4/23/2025	124.27164	118.9889311	113.9223957	108.5622061	102.3759522	95.6980241	89.09919853	82.87268516	77.10757899
200423A00010	4/23/2020	1.59	4/23/2030	4/23/2025	124.27162	118.988919	113.9223871	108.5622012	102.3759519	95.69802909	89.09920869	82.87270014	77.10759834
200430A00021	4/30/2020	1.2	4/30/2030	4/30/2025	118.11309	113.7583762	109.5772272	105.3072979	100.8296174	96.34914032	92.04734101	87.98614757	84.17290088
200505A00010	5/5/2020	0.89	5/6/2030	5/5/2025	117.71145	113.3394789	109.1316737	104.7928095	100.2363083	95.70017327	91.36192365	87.27610206	83.44500184
200512A00023	5/12/2020	1.78	5/11/2035	5/12/2025	127.38375	121.9771831	116.5181635	109.8712803	102.2308082	94.44357947	87.06469906	80.30328996	74.19472659
200609A00003	6/9/2020	1.66	6/8/2035	6/9/2025	125.11689	119.6674949	114.3318185	107.9683032	100.1929052	91.9349497	84.02348451	76.79415203	70.30810229
200309A00013	3/9/2020	1.1	3/8/2030	3/9/2025	117.03576	112.886023	108.8918847	104.7714856	100.382048	95.95741087	91.70294657	87.68626915	83.91407136
200316A00030	3/16/2020	1.35	3/15/2030	3/16/2025	118.87753	114.6574218	110.6174956	106.5612617	102.2678759	97.86075838	93.55762534	89.46327992	85.60577606
200316A00032	3/16/2020	1.35	3/15/2030	3/16/2025	118.87753	114.6574227	110.6174962	106.5612618	102.2678751	97.86075643	93.55762221	89.46327569	85.60577085
200318A00015	3/18/2020	1.69	3/18/2030	3/18/2023	112.72716	110.2058217	107.7623545	105.3556094	102.5809692	98.94666434	94.85176589	90.76848734	86.87283817
200326A00035	3/26/2020	1.68	3/26/2030	3/26/2025	119.39058	115.1711895	111.1355018	107.1134927	102.8766946	98.50916424	94.2214858	90.12835438	86.26501708
200423A00008	4/23/2020	1.59	4/23/2030	4/23/2025	124.27164	118.9889311	113.9223957	108.5622061	102.3759522	95.6980241	89.09919853	82.87268516	77.10757899
200108A00009	1/8/2020	2.4	1/8/2035	1/8/2025	125.01784	120.3001525	115.7892827	111.2507711	106.1177606	100.2954517	94.2547923	88.40305853	82.92870655
200108A00040	1/8/2020	2.52	1/8/2030	1/8/2025	125.57213	120.714301	116.0770343	111.4771262	106.4437668	100.8433869	95.02054574	89.31676867	83.90600331
200110A00012	1/10/2020	2.57	1/10/2035	1/10/2025	124.67769	120.0359389	115.5982734	111.1305963	106.1118777	100.4867174	94.67604326	89.03803678	83.74222343
200115A00023	1/15/2020	2.16	1/15/2030	1/15/2025	120.70213	116.5762445	112.6327325	108.7769565	104.7820071	100.6001487	96.40185274	92.33370223	88.46209122
200115A00025	1/15/2020	2.1	1/15/2025	1/15/2023	112.74513	110.3303477	107.9830598	105.7000347	103.4305579	100.9158838	98.04349615	95.02198758	92.02561534
200306A00021	3/6/2020	1.16	3/6/2030	3/6/2025	117.27824	113.1215887	109.1247179	105.0191679	100.6453612	96.22390092	91.96406316	87.93827109	84.15614036
191007A00013	10/7/2019	2	10/5/2029	10/7/2024	119.0978	115.2189449	111.504341	107.8616637	104.0431281	99.99462858	95.91046774	91.94837935	88.17638683

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
191028A00015	10/28/2019	2.49	10/27/2034	10/28/2024	123.94693	119.5474798	115.3371665	111.1387232	106.4350606	101.0468023	95.36700698	89.78920083	84.51669751
191031A00036	10/31/2019	2.9	10/31/2039	10/31/2024	126.75649	122.003652	117.4148934	112.6756169	107.0065288	100.3084636	93.24802593	86.40612284	80.06081174
191031A00037	10/31/2019	2.59	10/30/2034	10/31/2024	124.29291	119.7511247	115.4073722	111.051946	106.1728154	100.6764112	94.96727739	89.40564161	84.16798045
191220A00029	12/20/2019	2.57	12/19/2031	12/20/2024	123.12974	118.8046368	114.6706839	110.6196343	106.3327014	101.6804257	96.88143284	92.17325766	87.68463199
200102A00020	1/2/2020	2.78	1/3/2040	1/2/2025	127.75151	122.8044642	118.0731309	113.2067521	107.415826	100.6037902	93.42930653	86.4749531	80.02672375
190807A00041	8/7/2019	2.27	8/7/2034	7/7/2024	121.79031	117.6864188	113.7495557	109.7877729	105.2161499	99.87244717	94.23132262	88.71647804	83.52442668
190807A00044	8/7/2019	2.27	8/7/2034	8/7/2024	122.58468	118.3073755	114.2087782	110.0784581	105.3525765	99.92186557	94.24676203	88.72100071	83.52573907
190827A00044	8/27/2019	1.9	8/27/2029	8/27/2024	119.10537	115.2882151	111.6315039	108.0590751	104.3362026	100.3746601	96.35115317	92.43099306	88.6891773
190930A00079	9/30/2019	2.04	10/1/2029	9/30/2024	119.96478	116.0564191	112.3151317	108.6712314	104.9044214	100.9169304	96.86393331	92.90579765	89.12173213
190930A00083	9/30/2019	2.04	10/1/2029	9/30/2024	119.96478	116.0564191	112.3151317	108.6712314	104.9044211	100.9169298	96.86393233	92.90579632	89.1217305
191007A00012	10/7/2019	2	10/5/2029	10/7/2024	119.0978	115.2189487	111.5043437	107.8616652	104.0431274	99.99462476	95.9104606	91.94836903	88.17637358
190409A00016	4/9/2019	2.91	4/9/2029	4/9/2024	122.86364	118.9739045	115.2399066	111.627448	107.9128897	103.7433478	99.13380764	94.36382544	89.66957644
190409A00017	4/9/2019	3.01	4/9/2029	4/9/2024	124.17515	120.1106178	116.2100378	112.4354885	108.5281364	104.0698896	99.06617336	93.84046985	88.67750844
190430A00020	4/30/2019	3.41	4/28/2034	4/28/2026	144.30754	136.9088691	129.828199	122.4571994	114.502081	106.165526	97.86172516	89.92819599	82.55573916
190520A00018	5/20/2019	3.7	5/20/2044	5/20/2024	127.29373	122.9641111	118.8117456	114.6971103	109.8332465	103.4013658	95.83105925	88.06203428	80.71673008
190530A00037	5/30/2019	2.85	5/30/2034	5/30/2024	123.11722	119.140362	115.3246883	111.5937154	107.5489501	102.7893531	97.51660528	92.14965964	86.96807853
190530A00044	5/30/2019	2.85	5/30/2034	5/30/2024	123.11724	119.1403795	115.3247021	111.5937255	107.5489552	102.7893506	97.51659316	92.14963738	86.96804645
190204A00054	2/4/2019	3.98	2/6/2034	2/2/2024	126.48376	122.4766913	118.6257404	114.8904821	110.9309916	106.0711777	100.1861677	93.75237174	87.29067239
190222A00023	2/22/2019	3.66	2/22/2034	2/22/2026	143.94273	136.8905971	130.208648	123.4726599	116.0946877	108.0786085	99.89019173	91.96051458	84.5372431
190301A00015	3/1/2019	3.86	3/1/2034	3/2/2026	141.16978	134.3098169	127.8315211	121.4829898	114.7758547	107.5075453	99.95838737	92.49797713	85.40669815
190329A00023	3/29/2019	3	3/29/2034	3/29/2024	123.176	119.2813643	115.5422243	111.9021375	108.0206067	103.4672473	98.35847319	93.08763046	87.95264977
190329A00025	3/29/2019	3	3/29/2034	3/29/2024	123.17596	119.2813307	115.5421976	111.9021177	108.0205968	103.4672524	98.35849699	93.08767379	87.95271171
190329A00026	3/29/2019	3	3/29/2034	3/29/2024	123.176	119.2813643	115.5422243	111.9021377	108.0206081	103.4672513	98.35848069	93.08764147	87.95266397
180627A00005	6/27/2018	3.63	6/30/2033	6/30/2023	120.61151	117.5051775	114.5034297	111.5957423	108.6763358	105.3299433	101.2565364	96.64788399	91.87226034
180703A00033	7/3/2018	3.4	7/3/2028	7/3/2023	117.82146	114.9984704	112.2697177	109.6269397	107.0340741	104.3248676	101.3290794	98.10300834	94.80138202
180712A00016	7/12/2018	3.66	7/12/2033	7/12/2028	150.82204	141.6195293	133.0890716	125.0033023	117.1778644	109.5913824	102.3392872	95.5211137	89.19166867
181212A00026	12/12/2018	3.22	12/12/2028	12/12/2023	120.53192	117.2251191	114.0417503	110.9701817	107.9517803	104.8123056	101.4477245	97.94182097	94.42666815
190111A00040	1/11/2019	3.74	1/11/2034	1/11/2024	125.44567	121.5540406	117.808523	114.1819332	110.4031955	105.8327972	100.2793618	94.17519676	88.02573961
190116A00015	1/16/2019	3.61	1/17/2034	1/16/2024	123.1379	119.4965914	115.9929727	112.6023119	109.1204619	105.0993593	100.4351076	95.43106753	90.4170358
180105A00006	1/5/2018	3.07	1/5/2028	1/5/2023	114.79081	112.4415875	110.1619279	107.94518	105.768348	103.4700764	100.8139454	97.83892169	94.733838
180130A00087	1/30/2018	2.92	1/31/2028	1/30/2023	114.45019	112.1068357	109.8328729	107.6215682	105.444601	103.1147326	100.4025355	97.38153874	94.25336359
180212A00090	2/12/2018	2.92	2/13/2023	2/12/2021	109.37307	107.8423245	106.34409	104.8753068	103.4342584	102.0065316	100.4739683	98.72110327	96.82871263
180302A00003	3/2/2018	3.89	3/2/2033	3/2/2023	120.00102	117.1136247	114.3153572	111.5973317	108.8205678	105.320486	100.5300795	94.77419554	88.68922725

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
180315A00030	3/15/2018	3.76	3/15/2033	3/17/2025	134.49868	128.9902073	123.7458142	118.6638545	113.3273359	107.3103804	100.7103493	93.92289791	87.30081982
180504A00024	5/4/2018	3.62	5/4/2028	5/4/2023	120.82592	117.6724275	114.6209724	111.6653493	108.7472551	105.5227657	101.5600364	96.91339037	91.94718689
171004A00022	10/4/2017	2.74	10/4/2027	10/4/2022	113.62314	111.3719487	109.1822864	107.0485681	104.9039592	102.3142515	98.90791838	94.97126858	90.90404689
171005A00047	10/5/2017	3.29	10/5/2032	10/5/2022	115.23073	112.8979859	110.6286531	108.4156369	106.1115701	102.9339297	98.356356	92.92243425	87.32837548
171012A00039	10/12/2017	3.73	10/12/2032	10/13/2020	101.93018	101.6660807	101.403414	101.142008	100.8819085	100.616893	98.59618097	93.03909146	86.67725397
171016A00037	10/16/2017	3.39	10/18/2032	10/16/2022	115.67691	113.3068226	111.0009666	108.7518258	106.386128	103.0115979	98.04502654	92.11287327	86.0006718
171214A00010	12/14/2017	2.57	12/14/2022	12/14/2020	102.12645	101.7720991	101.4201455	101.0705698	100.7233482	100.3770139	99.75949669	98.25067709	96.4727923
180105A00005	1/5/2018	3.07	1/5/2028	1/5/2023	114.79082	112.441589	110.1619291	107.945181	105.7683486	103.4700764	100.8139441	97.83891848	94.73383262
170515A00052	5/15/2017	3.78	5/15/2042	5/15/2024	129.66035	125.214776	120.9485005	116.7024131	111.853653	105.8303967	98.88623761	91.67254584	84.70490651
170519A00006	5/19/2017	3	5/19/2032	5/19/2022	111.54605	109.7226961	107.9490475	106.2210432	104.4743837	102.1918923	98.72582929	94.43534525	89.93935966
170705A00037	7/5/2017	2.85	7/6/2032	7/6/2027	135.92983	129.0406524	122.5879177	116.4444911	110.4945471	104.7339189	99.22536836	94.02198687	89.14731401
170721A00021	7/21/2017	2.95	7/21/2032	7/21/2022	113.03904	110.9489929	108.9231298	106.9541964	104.9368035	102.2875482	98.53201938	94.09252984	89.52391543
170802A00074	8/2/2017	2.92	8/2/2027	8/2/2022	112.8226	110.6984978	108.6391089	106.6381991	104.6299422	102.2055506	98.89196352	94.96315968	90.87237627
170809A00042	8/9/2017	2.35	8/9/2027	8/9/2022	111.09762	109.1552913	107.2729782	105.4430867	103.614299	101.5115731	98.87631313	95.91787884	92.90634026
161006A00023	10/6/2016	2.49	10/6/2031	10/6/2021	107.76915	106.4180157	105.1547889	103.9145711	102.6291995	100.5872822	97.00317573	92.66221314	88.27691061
161012A00009	10/12/2016	2.56	10/14/2031	10/12/2021	107.85736	106.5053615	105.2413276	104.000347	102.7226833	100.7607512	97.27248846	92.97458065	88.59529083
161012A00020	10/11/2016	2.96	10/14/2031	10/11/2023	121.44907	117.8808392	114.44106	111.0695633	107.2597903	102.2408806	96.17754239	89.76322422	83.49471479
161118A00013	11/18/2016	2.96	11/18/2026	11/18/2021	108.62507	107.2241928	105.9154541	104.630841	103.3456543	101.8521725	99.27952504	95.50804455	91.23702967
170113A00025	1/13/2017	3.59	1/13/2032	1/13/2022	110.25757	108.7829582	107.3392113	105.9225903	104.5273147	102.9795314	100.5707804	97.0342297	92.89648944
170411A00031	4/11/2017	3.39	4/12/2032	4/11/2022	111.87251	110.0509726	108.2790214	106.552703	104.8264545	102.7055372	99.51187208	95.42866488	91.03830956
160311A00019	3/11/2016	3.02	3/11/2031	3/11/2021	103.84749	103.2414456	102.649136	102.0640861	101.481343	100.7300451	98.45542801	94.68789694	90.56501818
160506A00054	5/10/2016	3.31	5/12/2036	5/10/2021	105.35868	104.5277925	103.7304845	102.9474078	102.1589443	100.8178527	96.84914794	91.1439418	85.28827365
160506A00056	5/10/2016	3.77	5/10/2041	5/10/2021	105.72037	104.8857307	104.0848248	103.2982145	102.5067566	101.1582532	96.7572032	90.08416	83.18602035
160627A00034	6/27/2016	1.7	6/26/2026	6/28/2021	104.40642	103.5536408	102.7391869	101.937211	101.1291098	99.91233002	97.69859228	95.1080479	92.52185211
160711A00011	7/11/2016	1.66	7/13/2026	7/11/2021	105.20455	104.1809448	103.2127253	102.2593302	101.2899352	99.86876514	97.55045389	94.91705604	92.29921637
160825A00032	8/25/2016	3.14	8/25/2036	8/25/2021	106.79297	105.7056978	104.6785733	103.6672855	102.6210255	100.6298762	96.28680333	90.72861479	85.10658299
151209A00031	12/9/2015	3.18	12/9/2030	12/9/2020	102.28213	101.9381364	101.5964926	101.257129	100.9200367	100.548699	98.97066031	95.50079114	91.51052719
151223A00007	12/23/2015	3.76	12/23/2030	12/23/2022	117.58902	115.0079921	112.500086	110.0582457	107.5544337	104.3251781	99.81031011	94.36540314	88.60856206
151224A00017	12/24/2015	3.06	12/24/2030	12/24/2020	102.3078	101.9630177	101.6205972	101.2804711	100.9426302	100.5790845	99.11405268	95.70558523	91.71967428
160105A00024	1/5/2016	3.78	1/4/2036	1/5/2021	103.49417	103.062282	102.6340265	102.2093308	101.7880491	101.2250363	99.0428924	94.57981952	89.32957319
160128A00029	1/29/2016	3.45	1/29/2036	1/29/2021	103.44988	103.0171779	102.58813	102.1626613	101.740211	101.089882	98.52511893	93.78562377	88.42145282
160209A00028	2/9/2016	2.04	2/9/2026	2/9/2021	103.19845	102.6087434	102.0322206	101.4626891	100.8949076	100.1015853	98.2468186	95.84679451	93.4001749
150501A00019	5/1/2015	3.69	5/1/2035	5/1/2020	105.65747	104.8234806	104.0232004	103.2372047	102.4499702	101.4974098	98.83062587	93.97903058	88.4862844

Classification | Public

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
150715A00020	7/15/2015	3.45	7/15/2030	7/15/2020	100.58829	100.5045345	100.4209129	100.3374279	100.2540792	100.1708665	99.62844673	96.74694528	93.01683885
150901A00019	9/1/2015	3.26	9/3/2030	9/1/2020	100.57241	100.4886669	100.4050585	100.3215866	100.2382511	100.1550516	99.23180177	95.97611187	92.0999215
151005A00020	10/5/2015	2.27	10/6/2025	10/5/2020	101.46475	101.2115637	100.9596963	100.7090603	100.4596715	100.1648869	98.85828126	96.68126	94.37705565
151027A00015	10/27/2015	2.89	10/28/2030	10/27/2020	101.68315	101.4269717	101.1721116	100.9185196	100.6662	100.3832133	98.73495	95.18711783	91.19695377
151124A00024	11/24/2015	2.6	11/24/2025	11/24/2020	101.5914	101.3285025	101.066927	100.8066664	100.547711	100.2878637	99.34442031	97.14545412	94.72896155
150202A00006	2/2/2015	1.92	2/3/2025	2/3/2020	100.47693	100.393104	100.3094126	100.2258597	100.142445	100.0412925	98.80568457	96.82592672	94.77296307
150223A00011	2/23/2015	3.54	2/22/2030	2/23/2022	110.30093	108.7652469	107.2655695	105.7954484	104.3483878	102.7777177	100.516488	97.37036333	93.75809143
150319A00020	3/19/2015	2.98	3/19/2030	3/19/2020	100.54901	100.465283	100.3816941	100.2982417	100.2149256	100.1317454	98.72634749	95.32081227	91.517381
150327A00011	3/27/2015	2.88	3/27/2030	3/27/2020	104.00584	103.3733858	102.755528	102.1453647	101.5378286	100.8385269	98.80417862	95.10813329	91.02657757
150417A00033	4/17/2015	1.78	4/18/2022	4/17/2020	100.46523	100.3814102	100.2977286	100.2141854	100.1307804	100.0475131	99.28771295	98.04473821	96.76279058
150421A00009	4/21/2015	2.17	4/21/2025	4/21/2020	100.48131	100.397637	100.3141043	100.2307081	100.1474481	100.0621104	98.86158171	96.84296784	94.73110212
141010A00012	10/10/2014	2.44	10/10/2024	10/10/2019	100.50474	100.4210458	100.3374851	100.2540611	100.1707733	100.0876215	99.44610604	97.75673052	95.87046267
141110A00008	11/10/2014	2.31	11/12/2024	11/12/2019	100.50954	100.4256797	100.3419611	100.2583811	100.1749393	100.0916353	99.48137676	97.77967748	95.85862942
141119A00005	11/19/2014	2.53	11/19/2024	11/19/2019	100.51227	100.4285621	100.3449952	100.2615649	100.1782709	100.0951128	99.54005128	97.87239345	95.96203538
141224A00038	12/24/2014	2.93	12/24/2024	12/24/2019	100.5457	100.4619679	100.3783731	100.2949151	100.2115934	100.1284077	99.65545965	97.50160141	94.76809761
150108A00029	1/8/2015	3.16	1/9/2035	1/10/2022	109.84965	108.3402323	106.8594476	105.406459	103.9413175	101.7688465	97.758264	92.52548325	87.0877276
150115A00030	1/15/2015	1.98	1/15/2025	1/15/2020	100.48195	100.3981157	100.3144201	100.230863	100.1474441	100.064163	98.93886803	97.01478617	94.99759381
140416A00025	4/14/2014	3.56	4/16/2029	4/14/2021	104.91997	104.2126109	103.5280807	102.8529925	102.1811896	101.478588	99.99365664	96.76215009	92.55517507
140508A00011	5/8/2014	2.32	5/8/2024	5/8/2019	100.51037	100.4265149	100.3427957	100.259215	100.1757725	100.0924678	99.60034589	98.10201222	96.38730944
140617A00012	6/17/2014	3.14	6/18/2029	6/17/2019	100.57892	100.4950073	100.411231	100.3275933	100.2440938	100.1607324	99.64625667	96.98349441	93.55339521
140714A00012	7/14/2014	3.04	7/16/2029	7/15/2019	100.57056	100.4866546	100.4028852	100.3192544	100.235762	100.1524074	99.46166162	96.61678611	93.11070213
140723A00038	7/23/2014	2.3	7/23/2024	7/23/2019	100.5087	100.4248444	100.3411265	100.2575472	100.1741061	100.0908028	99.54288901	97.96657226	96.18002686
140822A00012	8/22/2014	3.7	8/22/2034	8/23/2021	107.33613	106.2491673	105.2221809	104.2110317	103.1996058	101.9797576	99.39024505	95.13586203	90.231587
120924A00030	9/24/2012	2.2	9/24/2027	9/25/2017	100.50034	100.4164917	100.3327808	100.2492084	100.1657742	100.0494421	98.27458507	95.36534062	92.32877202
130322A00001	3/22/2013	2.06	3/22/2023	3/22/2018	100.48864	100.4047979	100.3210967	100.2375341	100.1541096	100.070823	99.21310998	97.42108118	95.47720936
130416A00025	4/16/2013	2.27	4/18/2028	4/16/2018	100.50619	100.4223386	100.3386228	100.2550456	100.1716065	100.0531972	98.16768893	95.06287694	91.8198705
130521A00009	5/21/2013	2.55	5/22/2028	5/21/2018	100.5296	100.4457262	100.361991	100.2783943	100.1949358	100.1116152	98.82211281	95.89402118	92.6607162
130614A00011	6/14/2013	2.95	6/14/2028	6/14/2018	100.56304	100.4791371	100.395374	100.3117495	100.2282633	100.144915	99.57027579	97.04859918	93.8998581
140328A00011	3/28/2014	3.32	3/30/2026	3/29/2021	104.16248	103.5504799	102.9524076	102.3617015	101.7736222	101.1830523	100.1837476	97.85033734	94.56893747
000929A00001	9/29/2000	6.82	9/29/2020	9/29/2000	100.85705	100.7756753	100.6944336	100.6133242	100.5323466	100.4515006	100.3707857	100.2902019	100.2097486
001127A00007	11/27/2000	6.74	11/27/2020	11/27/2000	101.75548	101.5859409	101.4170533	101.2488152	101.0812226	100.9142713	100.7479574	100.5822768	100.4172257
020129A00031	12/31/2001	6.03	6/30/2021	12/31/2001	104.63812	104.1432528	103.6543048	103.171161	102.6937065	102.2218292	101.7554205	101.2943745	100.8385885
110304A00006	3/4/2011	3.6	3/4/2021	3/4/2011	103.69433	103.1764413	102.6638359	102.1564323	101.6541511	101.1569142	100.6646454	100.1772699	99.69471449

Classification | Public

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
110504A00014	5/4/2011	3.46	5/4/2021	5/4/2011	104.90638	104.1996146	103.5025068	102.8148573	102.1364735	101.4671682	100.8067592	100.1550689	99.51192468
110504A00017	5/4/2011	3.46	5/4/2021	5/4/2011	104.90638	104.1996146	103.5025068	102.8148573	102.1364735	101.4671682	100.8067592	100.1550689	99.51192468
200806A00004	8/6/2020	0.3	3/6/2024	8/6/2020	107.70437	105.6767541	103.7094773	101.8002413	99.94685169	98.14721375	96.39932768	94.70128334	93.0512556
200818A00012	8/18/2020	0.97	8/18/2027	8/18/2020	127.8513	120.0551566	112.8042864	106.0573661	99.77642236	93.92654074	88.47560373	83.39405289	78.65467228
200623A00028	6/23/2020	1.23	6/23/2038	6/23/2020	145.25906	131.4419706	119.2927061	108.5847449	99.12473927	90.74738029	83.31109306	76.69442314	70.79299963
200709A00018	7/9/2020	0.59	7/7/2023	7/9/2020	106.47028	104.8353843	103.2421768	101.6892431	100.1752287	98.69883552	97.2588197	95.85398836	94.4831973
200709A00019	7/9/2020	0.77	7/9/2025	7/9/2020	111.25169	108.4001593	105.6577657	103.0193851	100.4801696	98.03553349	95.68113769	93.41287426	91.22685276
200716A00004	7/16/2020	0.97	7/16/2027	7/16/2020	127.57562	119.8856203	112.7271378	106.0603721	99.84871105	94.05845582	88.65857452	83.62047836	78.91781736
200724A00011	7/24/2020	1.41	7/26/2038	7/24/2020	165.19642	143.8230205	125.6920369	110.2760761	97.13736304	85.91199905	76.29706288	68.04002842	60.93007287
200814A00003	8/14/2020	0.96	8/14/2035	8/14/2020	134.46016	123.9711625	114.5662296	106.1181774	98.51601027	91.66272986	85.47345685	79.87381778	74.79855783
200605A00018	6/5/2020	0.91	6/5/2025	6/5/2020	120.37968	115.139202	110.1633894	105.4373286	100.9470357	96.6793929	92.62208877	88.7635641	85.09296121
200608A00001	6/8/2020	1.34	6/7/2030	6/8/2020	135.83825	125.8088438	116.6762838	108.3530787	100.7608156	93.82917027	87.49502789	81.70170431	76.39825509
200610A00006	6/10/2020	1.11	6/10/2027	6/10/2020	128.2973	120.6737707	113.5704558	106.9487829	100.7732456	95.01114723	89.63236306	84.60912468	79.91582316
200612A00004	6/12/2020	1.42	6/12/2040	6/12/2020	149.16139	133.4168253	119.8028971	107.9962769	97.72633301	88.7660866	80.92478284	74.04178104	67.9815209
200616A00005	6/16/2020	0.74	6/17/2030	6/16/2020	122.27368	116.0064695	110.180506	104.759748	99.71140426	95.00561912	90.61518871	86.51530599	82.68333205
200618A00004	6/18/2020	0.7	6/18/2030	6/18/2020	122.03146	115.776553	109.9620379	104.5519378	99.51352477	94.81700118	90.43521593	86.34341013	82.51898886
200512A00018	5/12/2020	0.85	5/12/2025	5/12/2020	118.93904	114.0183946	109.3400506	104.8905889	100.6574167	96.62871063	92.79336476	89.14094242	85.66163183
200512A00020	5/12/2020	0.86	5/12/2025	5/12/2020	119.82439	114.6718009	109.7764415	105.1239663	100.7009138	96.49464863	92.49330567	88.68573826	85.06147032
200512A00021	5/12/2020	0.86	5/12/2025	5/12/2020	119.82439	114.6718009	109.7764415	105.1239663	100.7009138	96.49464863	92.49330567	88.68573826	85.06147032
200514A00008	5/14/2020	1.23	5/14/2030	5/14/2020	134.60989	124.7205717	115.7109285	107.4955776	99.99795611	93.14936167	86.88810172	81.15873932	75.91142409
200520A00009	5/20/2020	1.63	5/20/2038	5/20/2020	166.21709	145.5562629	127.9763591	112.9829359	100.1646182	89.17864865	79.73902724	71.60676286	64.58185068
200522A00009	5/22/2020	0.96	5/22/2030	5/22/2020	122.56295	116.243252	110.3719763	104.9121602	99.83021357	95.09558356	90.68045716	86.55949498	82.70959264
200512A00001	5/12/2020	1.17	5/12/2027	5/12/2020	128.4765	120.9264652	113.8864264	107.3188889	101.189324	95.46591643	90.11933618	85.12253063	80.45053563
200512A00010	5/12/2020	1.48	5/10/2030	5/12/2020	140.73952	129.5023353	119.3024568	110.0370438	101.6140239	93.9509114	86.97375984	80.61623405	74.81878765
200512A00011	5/12/2020	1.48	5/10/2030	5/12/2020	140.73956	129.5023618	119.3024738	110.0370523	101.6140247	93.9509053	86.97374749	80.61621605	74.81876455
200512A00013	5/12/2020	1.17	5/12/2027	5/12/2020	128.4765	120.9264652	113.8864264	107.3188889	101.189324	95.46591643	90.11933618	85.12253063	80.45053563
200512A00014	5/12/2020	1.17	5/12/2027	5/12/2020	128.4765	120.9264652	113.8864264	107.3188889	101.189324	95.46591643	90.11933618	85.12253063	80.45053563
200512A00017	5/12/2020	0.85	5/12/2025	5/12/2020	118.93904	114.0183946	109.3400506	104.8905889	100.6574167	96.62871063	92.79336476	89.14094242	85.66163183
200424A00022	4/24/2020	1.39	4/24/2030	4/24/2020	135.95797	126.0327198	116.9854944	108.7315152	101.1947156	94.30679848	88.00639972	82.23834625	76.95299726
200428A00009	4/28/2020	1.08	4/29/2030	4/28/2020	122.73752	116.5824256	110.8526637	105.514083	100.5355635	95.88872684	91.54767525	87.48875652	83.69035308
200429A00030	4/29/2020	1.41	4/29/2030	4/29/2020	138.41411	127.7436247	118.0417827	109.2135769	101.1738668	93.84630568	87.16238532	81.0605904	75.48564781
200430A00027	4/30/2020	1.31	4/30/2035	4/30/2020	135.15128	124.9046629	115.6914691	107.3931693	99.90599881	93.1390027	87.01235147	81.45588991	76.40788526
200501A00002	5/1/2020	1.3	5/1/2035	5/1/2020	135.22971	124.9203682	115.6560285	107.3162629	99.795713	93.00208536	86.85442632	81.28163651	76.22119034

Classification | Public

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
200501A00009	5/4/2020	0.67	5/1/2025	5/4/2020	110.58182	107.8433375	105.2066746	102.6671666	100.2203951	97.86217648	95.58854689	93.39574972	91.28022307
200406A00037	4/6/2020	0.9	4/6/2023	4/6/2020	111.61038	108.8349289	106.1442273	103.5351401	101.0046686	98.54994625	96.16823115	93.85689998	91.61344189
200413A00009	4/13/2020	0.77	4/13/2027	4/13/2020	115.76575	111.7374271	107.9097818	104.2708953	100.8096512	97.51567418	94.37927554	91.39140292	88.5435941
200413A00013	4/13/2020	1.19	4/12/2030	4/13/2020	123.39154	117.2043787	111.4446919	106.0781653	101.0735282	96.40226397	92.03834808	87.95801198	84.13953123
200414A00009	4/14/2020	0.82	4/14/2025	4/14/2020	110.80096	108.1038502	105.5056092	103.001763	100.588071	98.26051534	96.01528709	93.84877428	91.75755012
200414A00024	4/14/2020	1.37	4/14/2027	4/14/2020	129.65819	122.1329249	115.1105427	108.5544574	102.4309463	96.70890759	91.35964335	86.35666066	81.67549069
200421A00026	4/21/2020	1.34	4/19/2030	4/21/2020	135.45591	125.5734131	116.5643608	108.3444996	100.8382283	93.97765915	87.70178854	81.95576097	76.69021565
200406A00029	4/6/2020	1.61	4/5/2030	4/6/2020	141.79261	130.5847239	120.4020006	111.1436982	102.7195333	95.04854024	88.05806189	81.68285514	75.8642968
200406A00030	4/6/2020	1.61	4/5/2030	4/6/2020	141.79265	130.5847525	120.4020195	111.1437083	102.7195355	95.04853519	88.05805033	81.68283768	75.864274
200406A00032	4/6/2020	1.09	4/4/2025	4/6/2020	120.55881	115.4898867	110.6690793	106.0828265	101.7183853	97.5637776	93.60773929	89.83967394	86.2496092
200406A00033	4/6/2020	1.09	4/4/2025	4/6/2020	120.5588	115.4898766	110.6690727	106.0828231	101.718385	97.56377999	93.60774424	89.83968126	86.2496187
200406A00035	4/6/2020	1.05	4/4/2025	4/6/2020	118.65745	114.0426975	109.6474988	105.4600349	101.4691896	97.66450749	94.03615091	90.57485965	87.27191364
200406A00036	4/6/2020	1.09	4/4/2025	4/6/2020	120.5588	115.4898766	110.6690727	106.0828231	101.718385	97.56377999	93.60774424	89.83968126	86.2496187
200327A00094	3/27/2020	1.6	3/27/2030	3/27/2020	137.71238	127.7432126	118.6493854	110.3469764	102.7606303	95.82263464	89.47210274	83.65424866	78.31974242
200330A00047	3/30/2020	1.5	3/30/2035	3/30/2020	136.82208	126.5075383	117.2278555	108.8649259	101.3152843	94.488178	88.30390299	82.6923693	77.59186258
200330A00058	3/30/2020	1.49	3/29/2030	3/30/2020	136.68919	126.7818141	117.745073	109.4954405	101.9579209	95.06512939	88.75647831	82.97745416	77.67897563
200330A00079	3/30/2020	1.51	3/30/2035	3/30/2020	136.91992	126.5980078	117.3116989	108.9427976	101.3877648	94.55578322	88.36709187	82.75155076	77.6474015
200406A00014	4/6/2020	1.33	4/6/2035	4/6/2020	137.41987	126.9374337	117.5163027	109.0343769	101.3848061	94.47396603	88.21971491	82.54989237	77.40102453
200406A00027	4/6/2020	1.31	4/5/2030	4/6/2020	137.06897	127.0531684	117.9223684	109.5912647	101.9833033	95.02973372	88.66877051	82.84484988	77.50796894
200317A00043	3/17/2020	1.29	3/15/2030	3/17/2020	125.03181	118.7863414	112.9704723	107.5498627	102.4932116	97.77196348	93.36004818	89.23364608	85.37097773
200318A00012	3/18/2020	1.68	3/18/2033	3/18/2020	141.13388	130.3778583	120.6839515	111.9341614	104.0246209	96.86380347	90.37097079	84.47482367	79.11233082
200319A00035	3/19/2020	1.72	3/18/2033	3/19/2020	141.53878	130.7514486	121.0292766	112.2539336	104.3212572	97.13946068	90.62757575	84.71409997	79.3358221
200323A00090	3/23/2020	1.55	3/23/2027	3/23/2020	118.81508	114.5149256	110.4359249	106.5645908	102.8883636	99.39553957	96.07520685	92.91718665	89.91197891
200326A00032	3/26/2020	1.49	3/26/2030	3/26/2020	124.99105	118.7772386	112.9894578	107.5937469	102.5591426	97.85739089	93.46269031	89.3514614	85.50213917
200327A00084	3/27/2020	1.1	3/27/2025	3/27/2020	119.66088	114.8387885	110.2486585	105.8779521	101.7148799	97.74835351	93.96794004	90.36381952	86.92674532
200309A00082	3/9/2020	1.18	3/8/2030	3/9/2020	137.06911	126.251937	116.4198076	107.4764345	99.33546654	91.91941396	85.15869432	78.99078638	73.35947838
200309A00083	3/9/2020	0.82	3/9/2023	3/9/2020	111.07539	108.3877564	105.7804499	103.2505732	100.7953529	98.41213369	96.09837222	93.85163181	91.66957709
200309A00084	3/9/2020	1.06	3/9/2027	3/9/2020	127.12638	119.8207282	112.9978387	106.623005	100.664197	95.09184334	89.87862994	84.99931634	80.43056763
200311A00015	3/11/2020	1.26	3/11/2027	3/11/2020	128.55412	121.1768174	114.2869503	107.8494661	101.832018	96.20474368	90.94006099	86.01248267	81.39844633
200311A00026	3/11/2020	1.34	3/11/2030	3/11/2020	137.32672	126.8525064	117.318544	108.6336459	100.7159875	93.49209853	86.8959676	80.86824603	75.35554128
200317A00009	3/17/2020	1.61	3/16/2035	3/17/2020	137.89927	127.504147	118.1518986	109.723509	102.1147196	95.23408064	89.00127477	83.34567186	78.20508116
200306A00048	3/6/2020	1.04	3/6/2035	3/6/2020	134.38795	124.1937557	115.0263716	106.7682462	99.31643949	92.58069387	86.48176997	80.95001239	75.92411218
200306A00050	3/6/2020	0.87	3/6/2030	3/6/2020	122.53191	116.4111561	110.7114039	105.3990052	100.4432875	95.81626837	91.49240056	87.44834201	83.66274971

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
200306A00057	3/6/2020	0.92	3/8/2027	3/6/2020	125.92176	119.0525246	112.6284629	106.6178756	100.9914997	95.72230658	90.78531892	86.15744457	81.8173242
200306A00058	3/6/2020	1.06	3/6/2030	3/6/2020	122.44049	116.3536989	110.6841645	105.3986391	100.4668022	95.86098572	91.55592262	87.52852122	83.75766222
200309A00034	3/9/2020	0.96	3/9/2035	3/9/2020	133.61202	123.4763826	114.3616883	106.1510476	98.74210767	92.04512574	85.98131474	80.48141716	75.48447436
200309A00081	3/9/2020	1.18	3/8/2030	3/9/2020	137.06913	126.2519516	116.4198149	107.4764354	99.33546204	91.91940483	85.15868125	78.99076999	73.35945921
200206A00038	2/6/2020	1.78	2/6/2023	2/6/2020	113.15397	110.5227571	107.9675938	105.4858348	103.0749415	100.7324793	98.45611208	96.24359827	94.09278587
200212A00013	2/12/2020	1.98	2/12/2027	2/12/2020	133.35833	125.8445753	118.8206118	112.2516446	106.105535	100.3525826	94.96532861	89.91837482	85.18821907
200220A00026	2/20/2020	2.22	2/21/2040	2/20/2020	159.5319	143.0824656	128.8266454	116.436019	105.6350114	96.19193061	87.91159084	80.62923001	74.2054863
200221A00012	2/21/2020	2.14	2/21/2040	2/21/2020	158.33322	142.0103425	127.864225	115.5689705	104.8511194	95.48075812	87.26419944	80.03794641	73.66370747
200227A00046	2/27/2020	1.52	3/1/2027	2/27/2020	117.49529	113.5235944	109.7449053	106.1480186	102.7224638	99.45845412	96.34683752	93.37905079	90.54707777
200303A00028	3/3/2020	1.54	3/4/2030	3/3/2020	137.0009	127.1234086	118.1091926	109.8758849	102.3494838	95.46345628	89.15794393	83.37905707	78.07824739
200206A00027	2/6/2020	2.15	2/6/2030	2/6/2020	146.86247	135.4974573	125.1539279	115.7331237	107.1463771	99.31402741	92.164461	85.63325865	79.6624369
200206A00031	2/6/2020	2.15	2/6/2030	2/6/2020	146.86247	135.4974573	125.1539279	115.7331237	107.1463771	99.31402741	92.164461	85.63325865	79.6624369
200206A00032	2/6/2020	2.15	2/6/2030	2/6/2020	146.86248	135.4974659	125.1539332	115.7331262	107.1463772	99.31402537	92.16445721	85.63325339	79.66243042
200206A00033	2/6/2020	2.15	2/6/2030	2/6/2020	146.86247	135.4974573	125.1539279	115.7331237	107.1463771	99.31402741	92.164461	85.63325865	79.6624369
200206A00034	2/6/2020	1.84	2/6/2025	2/6/2020	123.53442	118.5379715	113.7782451	109.2427195	104.9195991	100.7977718	96.86676613	93.11671064	89.53829631
200206A00035	2/6/2020	1.78	2/6/2023	2/6/2020	113.15397	110.5227571	107.9675938	105.4858348	103.0749415	100.7324793	98.45611208	96.24359827	94.09278587
200110A00043	1/10/2020	2.32	1/10/2030	1/10/2020	148.33022	136.9536375	126.5914434	117.1463216	108.5308187	100.666298	93.48200694	86.91424831	80.90564143
200110A00053	1/10/2020	1.99	1/10/2025	1/10/2020	123.87011	118.9441336	114.2478024	109.7691615	105.4969411	101.4205136	97.52985396	93.81550213	90.26852839
200115A00013	1/15/2020	2.18	1/15/2030	1/15/2020	138.02629	129.1688187	121.0357558	113.5611139	106.6853701	100.3547943	94.52085143	89.13966851	84.17155969
200116A00012	1/16/2020	2.16	1/19/2027	1/16/2020	134.33177	126.8498295	119.8504933	113.2998344	107.1664843	101.4214299	96.0378249	90.99081759	86.25739257
200130A00046	1/30/2020	1.81	1/29/2027	1/30/2020	118.3849	114.4342868	110.6735012	107.0916316	103.6784782	100.4245016	97.32077491	94.3589405	91.53116977
200206A00008	2/6/2020	1.64	2/6/2025	2/6/2020	122.556	117.7556496	113.1804685	108.8185856	104.6588247	100.6906564	96.90415748	93.28997249	89.83927826
200103A00002	1/3/2020	2.07	1/3/2030	1/3/2020	143.42747	133.2413241	123.9322869	115.4178893	107.6239177	100.4835404	93.93653404	87.92859545	82.41072771
200109A00006	1/9/2020	1.95	1/9/2030	1/9/2020	128.53731	122.2289792	116.3477084	110.8598656	105.7347536	100.9443304	96.46296058	92.26719152	88.33555161
200109A00008	1/9/2020	1.95	1/9/2030	1/9/2020	128.53729	122.2289688	116.3477015	110.8598619	105.7347526	100.9443318	96.46296407	92.26719685	88.33555856
200110A00037	1/10/2020	2.32	1/10/2030	1/10/2020	148.33022	136.9536375	126.5914434	117.1463216	108.5308187	100.666298	93.48200694	86.91424831	80.90564143
200110A00038	1/10/2020	2.32	1/10/2030	1/10/2020	148.33022	136.9536375	126.5914434	117.1463216	108.5308187	100.666298	93.48200694	86.91424831	80.90564143
200110A00039	1/10/2020	2.32	1/10/2030	1/10/2020	148.33022	136.9536375	126.5914434	117.1463216	108.5308187	100.666298	93.48200694	86.91424831	80.90564143
191203A00010	12/3/2019	2.21	12/3/2029	12/3/2019	146.75562	135.5889693	125.4095588	116.1233524	107.6457984	99.90082601	92.81995107	86.34147913	80.40979722
191203A00011	12/3/2019	2.21	12/3/2029	12/3/2019	146.75562	135.5889693	125.4095588	116.1233524	107.6457984	99.90082601	92.81995107	86.34147913	80.40979722
191203A00013	12/3/2019	1.93	12/3/2024	12/3/2019	123.06685	118.2743914	113.7012942	109.3361911	105.1683796	101.187775	97.38487064	93.75070101	90.27680709
191206A00005	12/6/2019	2.18	12/7/2026	12/6/2019	133.9566	126.6167272	119.7430472	113.303152	107.267068	101.6070598	96.29745025	91.31445669	86.63604056
191209A00005	12/9/2019	2.22	12/10/2029	12/9/2019	142.5731	132.5610233	123.4033829	115.0204238	107.3403318	100.2983971	93.83627173	87.9013095	82.44597686

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
191224A00002	12/24/2019	2.17	12/24/2029	12/24/2019	128.36033	122.145275	116.3462893	110.9309381	105.8695876	101.1351435	96.70281541	92.54990405	88.65561
191112A00022	11/12/2019	2.36	11/13/2029	11/12/2019	148.05688	136.8705035	126.6672482	117.3539775	108.8469022	101.0705947	93.95711097	87.44520881	81.47965211
191112A00023	11/12/2019	2.36	11/13/2029	11/12/2019	148.05689	136.8705078	126.6672509	117.3539788	108.8469024	101.0705939	93.95710934	87.44520651	81.47964925
191112A00024	11/12/2019	2.09	11/12/2024	11/12/2019	123.49468	118.7522373	114.2242607	109.8997611	105.768382	101.8203589	98.04648099	94.4380565	90.98687974
191113A00013	11/13/2019	2.17	11/13/2026	11/13/2019	133.58868	126.3373083	119.5423999	113.1724759	107.1984028	101.5932077	96.33190646	91.39134566	86.75005828
191122A00003	11/22/2019	2.32	11/22/2039	11/22/2019	175.00844	154.0645019	136.2516527	121.0562354	108.0537541	96.89275068	87.28169399	78.97830342	71.78084144
191203A00009	12/3/2019	2.21	12/3/2029	12/3/2019	146.75562	135.5889693	125.4095588	116.1233524	107.6457984	99.90082601	92.81995107	86.34147913	80.40979722
191011A00027	10/11/2019	1.84	10/11/2029	10/11/2019	127.17132	121.0950189	115.4202507	110.1160991	105.154286	100.5089293	96.15632184	92.07473343	88.24423173
191015A00025	10/15/2019	2.01	10/15/2029	10/15/2019	126.94979	120.9123385	115.2725537	109.9999009	105.0664465	100.4466168	96.11698202	92.05606111	88.24414553
191031A00025	10/31/2019	1.91	10/31/2024	10/31/2019	112.27666	109.8311584	107.4674629	105.182147	102.97195	100.8337717	98.76466366	96.76181991	94.82256959
191101A00004	11/1/2019	1.91	11/1/2029	11/1/2019	141.30099	131.4077856	122.3540724	114.0619701	106.4613026	99.48879558	93.08735951	87.20545091	81.79650276
191101A00005	11/1/2019	1.83	11/2/2026	11/1/2019	132.57473	125.3643845	118.6076269	112.2732126	106.3322287	100.7579028	95.52543239	90.61182942	85.99577712
191105A00012	11/5/2019	2.07	11/3/2034	11/5/2019	143.64801	133.0012577	123.4043534	114.7395033	106.903276	99.8047415	93.36386073	87.51009339	82.18119366
191004A00023	10/4/2019	2.02	10/4/2029	10/4/2019	144.14335	133.3179348	123.4359871	114.4089413	106.1570341	98.60838525	91.69817875	85.36793233	79.56484646
191004A00025	10/4/2019	1.74	10/4/2024	10/4/2019	121.39009	116.8225193	112.457345	108.2844201	104.2941713	100.4775581	96.82604034	93.33154715	89.9864484
191004A00026	10/4/2019	1.74	10/4/2024	10/4/2019	121.39009	116.8225193	112.457345	108.2844201	104.2941713	100.4775581	96.82604034	93.33154715	89.9864484
191008A00007	10/8/2019	1.67	10/9/2029	10/8/2019	126.19095	120.1613823	114.5302598	109.2669018	104.3432486	99.73361737	95.41448377	91.36428505	87.56324237
191008A00014	10/8/2019	1.85	10/8/2026	10/8/2019	131.00593	123.971346	117.3741408	111.1845424	105.3749694	99.91985712	94.79549923	89.97990277	85.45265508
191009A00009	10/9/2019	1.8	10/9/2026	10/9/2019	117.65275	113.8793573	110.2810677	106.8481317	103.5714138	100.4423533	97.45292383	94.59559669	91.86330627
190926A00002	9/30/2019	2.01	9/29/2034	9/30/2019	142.57291	132.1275531	122.7013207	114.1810055	106.4670733	99.47190602	93.11828103	87.33805419	82.07101922
190930A00026	9/30/2019	1.95	9/30/2024	9/30/2019	121.40055	117.0046087	112.8006324	108.7790834	104.9309559	101.2477426	97.72140359	94.34433804	91.10935752
190930A00028	9/30/2019	1.95	9/30/2024	9/30/2019	121.40054	117.0046009	112.8006267	108.7790796	104.930954	101.2477424	97.72140494	94.34434089	91.10936177
191004A00017	10/4/2019	2.02	10/4/2029	10/4/2019	144.14338	133.3179558	123.4359999	114.4089472	106.1570339	98.60837995	91.69816905	85.36791889	79.56482989
191004A00019	10/4/2019	2.02	10/4/2029	10/4/2019	144.14337	133.317947	123.4359947	114.408945	106.1570343	98.60838243	91.69817332	85.36792466	79.56483688
191004A00022	10/4/2019	2.02	10/4/2029	10/4/2019	144.14338	133.317952	123.4359977	114.4089462	106.1570341	98.60838104	91.69817091	85.3679214	79.56483292
190910A00044	9/10/2019	2.02	9/10/2026	9/10/2019	131.80674	124.8210512	118.2648667	112.1092711	106.3274477	100.8945189	95.78739532	90.98463826	86.46633299
190911A00016	9/11/2019	1.9	9/11/2029	9/11/2019	127.27821	121.2519415	115.620652	110.3541555	105.4248295	100.8073747	96.47860295	92.41724598	88.60378274
190913A00006	9/13/2019	2.33	9/13/2034	9/13/2019	143.59219	133.1364946	123.696852	115.1607622	107.429276	100.4152561	94.04187258	88.24130184	82.9535975
190913A00018	9/13/2019	2.11	9/11/2026	9/13/2019	118.53956	114.7887078	111.2098867	107.7936172	104.5310126	101.4137398	98.43398125	95.58439921	92.85810316
190920A00014	9/20/2019	2.28	9/20/2034	9/20/2019	143.10758	132.6868845	123.2788738	114.7714196	107.065897	100.075454	93.7235134	87.94247478	82.67258952
190925A00009	9/25/2019	2	9/25/2026	9/25/2019	129.97393	123.3932148	117.2112433	111.4013126	105.9386584	100.8003047	95.96492494	91.41271476	87.12527493
190905A00019	9/5/2019	2.08	9/5/2029	9/5/2019	144.42182	133.6649064	123.8383299	114.8554005	106.6379827	99.11560654	92.22467698	85.90776874	80.11299667
190905A00021	9/5/2019	2.08	9/5/2029	9/5/2019	144.42182	133.6649064	123.8383299	114.8554005	106.6379827	99.11560655	92.224677	85.90776876	80.1129967

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
190905A00023	9/5/2019	2.08	9/5/2029	9/5/2019	144.42182	133.6649064	123.8383299	114.8554005	106.6379827	99.11560655	92.224677	85.90776876	80.1129967
190905A00024	9/5/2019	2.08	9/5/2029	9/5/2019	144.42182	133.6649064	123.8383299	114.8554005	106.6379827	99.11560655	92.224677	85.90776876	80.1129967
190905A00025	9/5/2019	2.08	9/5/2029	9/5/2019	144.42182	133.6649064	123.8383299	114.8554005	106.6379827	99.11560654	92.22467698	85.90776874	80.11299667
190906A00009	9/6/2019	2.08	9/6/2034	9/6/2019	141.17609	130.895979	121.6148569	113.2221138	105.6204643	98.72423575	92.45788959	86.75474155	81.55585222
190823A00018	8/23/2019	2.12	8/23/2034	8/23/2019	141.328	131.0966418	121.8542389	113.4918477	105.913581	99.0349424	92.78138318	87.08705156	81.89370796
190826A00032	8/26/2019	1.72	8/24/2029	8/26/2019	126.02192	120.1090626	114.5806011	109.4073868	104.5627213	100.0221359	95.7631895	91.76528628	88.00951052
190829A00032	8/29/2019	1.69	8/28/2026	8/29/2019	117.52811	113.8449378	110.3292489	106.9718774	103.7642331	100.6982576	97.76638773	94.96152162	92.27698745
190829A00039	8/29/2019	1.85	8/29/2034	8/29/2019	140.79106	130.5364763	121.2770155	112.9027032	105.3167814	98.43401956	92.17925003	86.48609952	81.29588919
190830A00013	8/30/2019	2.06	8/30/2034	8/30/2019	140.75567	130.5654374	121.3602251	113.0315165	105.4838022	98.63291905	92.40461327	86.73329391	81.56095246
190905A00018	9/5/2019	1.85	9/5/2029	9/5/2019	140.18839	130.5094626	121.6404728	113.507321	106.0431326	99.18751875	92.88591189	87.08897334	81.7520639
190813A00051	8/13/2019	2.19	8/13/2029	8/13/2019	145.25264	134.5138988	124.697657	115.7185237	107.4994737	99.97098929	93.07029107	86.74065113	80.9307797
190813A00052	8/13/2019	2.24	8/13/2029	8/13/2019	145.75079	134.9815427	125.1371928	116.132132	107.8891457	100.3385442	93.41739262	87.06882164	81.24141322
190813A00057	8/13/2019	1.9	8/13/2024	8/13/2019	121.36499	116.95026	112.7253161	108.680945	104.8084294	101.0995207	97.54641132	94.14170856	90.87841045
190813A00064	8/13/2019	1.9	8/13/2024	8/13/2019	121.36499	116.95026	112.7253161	108.680945	104.8084294	101.0995207	97.54641132	94.14170857	90.87841045
190813A00067	8/13/2019	1.9	8/13/2024	8/13/2019	121.36499	116.95026	112.7253161	108.680945	104.8084294	101.0995207	97.54641132	94.14170857	90.87841045
190816A00023	8/16/2019	2.14	8/16/2034	8/16/2019	141.51854	131.2736489	122.0189905	113.6454813	106.0571143	99.16928708	92.90735673	87.20538794	82.00506681
190719A00017	7/19/2019	2.55	7/19/2034	7/19/2019	145.20976	134.7603387	125.315409	116.7648872	109.0118214	101.9707205	95.566108	89.7312697	84.40716547
190726A00012	7/26/2019	2.58	7/26/2034	7/26/2019	145.50041	135.0299219	125.5659796	116.9982707	109.2296414	102.1744231	95.75698341	89.91047044	84.57572271
190731A00013	7/31/2019	2.23	7/22/2022	7/31/2019	106.04165	104.9516598	103.8833352	102.8360369	101.8091537	100.8020979	99.81430496	98.84523156	97.89435498
190802A00011	8/2/2019	2.01	8/2/2029	8/2/2019	127.66073	121.6721378	116.0727629	110.8330983	105.926119	101.3270563	97.01319346	92.96368049	89.15936784
190802A00020	8/2/2019	2.42	8/2/2034	8/2/2019	144.21124	133.7724845	124.3425945	115.8104506	108.078248	101.0597988	94.67905977	88.8688578	83.56978328
190809A00017	8/9/2019	2.27	8/9/2034	8/9/2019	142.76486	132.4302466	123.0944864	114.6475547	106.992613	100.0443256	93.72740169	87.97533345	82.72930006
190708A00029	7/8/2019	2.57	7/2/2029	7/8/2019	148.52897	137.7153254	127.8183945	118.7543791	110.4475949	102.8296438	95.83867686	89.41873471	83.51915796
190708A00030	7/8/2019	2.57	7/2/2029	7/8/2019	148.52897	137.7153254	127.8183945	118.7543791	110.4475949	102.8296438	95.83867686	89.41873471	83.51915796
190708A00032	7/8/2019	2.58	7/2/2029	7/8/2019	148.62806	137.8084868	127.9060817	118.8370097	110.5255509	102.9032746	95.9083023	89.484648	83.5816279
190712A00003	7/12/2019	2.61	7/12/2034	7/12/2019	145.78915	135.298397	125.8160644	117.2316466	109.4478164	102.3787506	95.94867956	90.09062914	84.74532885
190712A00016	7/12/2019	2.39	7/12/2029	7/12/2019	128.37612	122.436892	116.8792407	111.6745432	106.7965578	102.2212121	97.92640877	93.89184884	90.0988729
190718A00012	7/18/2019	2.55	7/18/2029	7/18/2019	144.05587	134.3287873	125.4009124	117.2003642	109.6621583	102.7275081	96.3432011	90.4610407	85.03734658
190702A00068	7/2/2019	2.69	7/1/2039	7/2/2019	190.31851	165.9195039	145.3050101	127.8413423	113.005987	100.3674155	89.56866638	80.31397778	72.35788802
190702A00071	7/2/2019	2.69	7/1/2039	7/2/2019	190.31833	165.9193772	145.3049302	127.8413003	113.0059756	100.3674287	89.56869927	80.31402634	72.35794898
190705A00007	7/5/2019	2.56	7/5/2034	7/5/2019	145.30495	134.8491341	125.3983517	116.8424732	109.0845015	102.0389042	95.63016757	89.79154337	84.46396072
190708A00025	7/8/2019	2.21	7/1/2024	7/8/2019	122.04483	117.736532	113.6082531	109.6514961	105.8582133	102.2207772	98.73195624	95.38489177	92.1730773
190708A00026	7/8/2019	2.21	7/1/2024	7/8/2019	122.04483	117.736532	113.6082531	109.6514961	105.8582133	102.2207772	98.73195624	95.38489177	92.1730773

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
190708A00028	7/8/2019	2.57	7/2/2029	7/8/2019	148.52889	137.7152636	127.8183497	118.7543498	110.4475795	102.8296411	95.83868558	89.41875377	83.51918637
190607A00013	6/7/2019	2.59	6/7/2034	6/7/2019	145.32773	134.9321704	125.5304212	117.0141392	109.2878406	102.2672723	95.87800259	90.05419788	84.73756028
190614A00022	6/14/2019	2.62	6/14/2034	6/14/2019	145.61662	135.2002546	125.7797184	117.2464433	109.5047485	102.4702076	96.06823611	90.23286565	84.90567933
190619A00010	6/19/2019	2.04	6/17/2022	6/19/2019	105.78055	104.7358881	103.7116354	102.7071857	101.7219608	100.7554056	99.80698661	98.87619136	97.96252695
190620A00033	6/20/2019	2.1	6/20/2029	6/20/2019	127.67016	121.7910027	116.2876707	111.1321057	106.2985746	101.7634623	97.50508288	93.50350804	89.74041188
190621A00020	6/21/2019	2.58	6/21/2034	6/21/2019	145.23318	134.8439257	125.4479478	116.9369508	109.2154955	102.1993695	95.81417758	89.9941193	84.68092673
190628A00026	6/28/2019	2.54	6/28/2034	6/28/2019	144.8503	134.4881287	125.1166816	116.6279369	108.9266972	101.9289638	95.56053064	89.75576504	84.45654794
190531A00036	5/31/2019	2.71	5/31/2034	5/31/2019	146.2091	135.8123268	126.4041268	117.877276	110.1372131	103.1004463	96.69316946	90.85006202	85.51324499
190605A00007	6/5/2019	2.47	6/5/2026	6/5/2019	133.48328	126.7186196	120.353242	114.3611806	108.7183096	103.4021997	98.39198921	93.66826522	89.21295501
190605A00023	6/5/2019	2.64	6/5/2029	6/5/2019	148.86498	138.1142452	128.2683138	119.2449143	110.9697232	103.3755518	96.40162398	89.99293007	84.09964987
190605A00024	6/5/2019	2.64	6/5/2029	6/5/2019	148.86495	138.1142284	128.2683022	119.2449073	110.9697202	103.3755524	96.40162769	89.99293649	84.09965866
190605A00025	6/5/2019	2.64	6/5/2029	6/5/2019	148.86495	138.1142284	128.2683022	119.2449073	110.9697202	103.3755524	96.40162769	89.99293649	84.09965866
190605A00027	6/5/2019	2.64	6/5/2029	6/5/2019	148.86495	138.1142284	128.2683022	119.2449073	110.9697202	103.3755524	96.40162769	89.99293649	84.09965866
190510A00022	5/10/2019	2.95	5/10/2034	5/10/2019	148.51616	137.9565127	128.4007938	119.7401333	111.8785134	104.7311538	98.2231083	92.28804558	86.86718994
190510A00049	5/10/2019	2.58	5/8/2026	5/10/2019	118.87112	115.3644345	112.0091355	108.7973188	105.72155	102.7748362	99.95059688	97.24263684	94.64512078
190515A00035	5/15/2019	2.82	2/15/2029	5/15/2019	149.18291	138.7406501	129.1509316	120.3385173	112.2352219	104.7792139	97.91439087	91.5898207	85.75923864
190517A00012	5/17/2019	2.88	5/17/2034	5/17/2019	147.84126	137.3292017	127.8165947	119.1950447	111.3689582	104.2539308	97.77534848	91.86717478	86.47089557
190524A00041	5/24/2019	2.83	5/24/2034	5/24/2019	147.36029	136.8821396	127.4002489	118.8065695	111.0058089	103.9138289	97.45625159	91.56724976	86.1884951
190529A00061	5/29/2019	2.46	5/29/2026	5/29/2019	118.7369	115.1832085	111.784862	108.5336502	105.4218638	102.4422561	99.58801239	96.85272071	94.23034562
190430A00026	4/30/2019	3.03	4/28/2034	4/30/2019	148.99377	138.4632074	128.9283734	120.2818353	112.4287861	105.2854606	98.77776311	92.84007397	87.41421235
190501A00015	5/1/2019	2.78	5/1/2029	5/1/2019	130.01905	124.1163639	118.5865109	113.4019557	108.5374266	103.9697109	99.67747222	95.64108602	91.84248965
190502A00016	5/2/2019	2.87	5/1/2026	5/2/2019	135.50994	128.7705111	122.4226961	116.4413899	110.8032392	105.4865116	100.4709733	95.73777725	91.26936061
190503A00015	5/3/2019	3.03	5/3/2034	5/3/2019	149.28997	138.6757003	129.0705096	120.364974	112.4625873	105.2781375	98.73629588	92.77039237	87.3213506
190506A00025	5/6/2019	3.03	5/4/2029	5/6/2019	152.26441	141.410857	131.4613142	122.3343435	113.9563048	106.2605665	99.18680154	92.6803581	86.69169576
190506A00026	5/6/2019	3.03	5/4/2029	5/6/2019	152.26441	141.410857	131.4613142	122.3343435	113.9563048	106.2605665	99.18680154	92.6803581	86.69169576
190403A00015	4/3/2019	3.05	4/3/2029	4/3/2019	150.16807	139.8554421	130.38406	121.6793049	113.6736091	106.3057503	99.52022287	93.2666732	87.49939484
190404A00015	4/4/2019	2.88	4/3/2026	4/4/2019	135.14312	128.5047975	122.2477331	116.3477782	110.7824443	105.5307833	100.573274	95.89171658	91.46913635
190405A00004	4/5/2019	3.02	4/5/2034	4/5/2019	148.89486	138.3720133	128.8440532	120.2036528	112.3560975	105.217702	98.71443928	92.78074917	87.35850238
190411A00022	4/11/2019	2.68	4/11/2022	4/11/2019	107.203	105.9951559	104.8113304	103.6508159	102.512935	101.3970368	100.3024955	99.2287095	98.17510008
190412A00011	4/12/2019	3.07	4/12/2034	4/12/2019	149.3873	138.8277331	129.2666325	120.5962801	112.7216121	105.5586357	99.03305258	93.07906324	87.63832672
190422A00037	4/22/2019	3.07	4/21/2034	4/22/2019	149.37827	138.8208437	129.261645	120.5929784	112.7198028	105.5581457	99.0337271	93.08076406	87.64093035
190329A00067	3/29/2019	2.61	3/29/2024	3/29/2019	120.57497	116.8424571	113.2541534	109.8035849	106.4846067	103.2913867	100.2183876	97.26035009	94.41227702
190401A00017	4/1/2019	2.55	4/1/2022	4/1/2019	109.73382	108.0640153	106.429007	104.8277714	103.2593271	101.7227308	100.2170748	98.74148615	97.29512416

Classification | Public

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
190402A00005	4/2/2019	2.77	4/2/2032	4/2/2019	149.18995	138.5214876	128.8387369	120.0389728	112.0310361	104.733955	98.07573577	91.99230507	86.42658261
190403A00010	4/3/2019	3.08	4/3/2029	4/3/2019	152.30004	141.5419109	131.6721162	122.6113156	114.287696	106.63622	99.59795135	93.11945146	87.15223801
190403A00013	4/3/2019	3.05	4/3/2029	4/3/2019	150.16804	139.8554246	130.3840475	121.6792968	113.6736048	106.3057495	99.52022504	93.26667801	87.49940195
190403A00014	4/3/2019	3.05	4/3/2029	4/3/2019	150.16806	139.8554337	130.3840542	121.6793014	113.6736075	106.3057504	99.52022438	93.26667595	87.49939863
190315A00023	3/15/2019	2.88	3/15/2034	3/15/2019	149.35164	138.7976438	129.2398191	120.5709259	112.6962966	105.5322641	99.00479672	93.04831245	87.60464705
190315A00029	3/15/2019	2.88	3/15/2034	3/15/2019	149.35166	138.7976607	129.2398316	120.5709343	112.6963014	105.5322656	99.00479524	93.04830829	87.60464049
190322A00008	3/22/2019	2.64	3/20/2026	3/22/2019	118.7899	115.3373039	112.0318463	108.8659344	105.8324211	102.9245795	100.1360751	97.46094039	94.89355099
190322A00011	3/22/2019	2.99	3/22/2034	3/22/2019	148.31197	137.8929534	128.4536188	119.8888284	112.1057349	105.0222501	98.5657138	92.67173594	87.28318953
190327A00035	3/27/2019	2.68	3/27/2034	3/27/2019	147.43436	137.0150622	127.5793006	119.0211855	111.2472432	104.1748623	97.7309465	91.85074315	86.47682421
190329A00021	3/29/2019	2.96	3/29/2034	3/29/2019	148.02682	137.6275465	128.2061373	119.6576433	111.8893861	104.8194271	98.37523911	92.49255037	87.11433923
190308A00026	3/8/2019	3.18	3/8/2034	3/8/2019	175.39659	158.3234642	143.2519179	129.9271311	118.1285099	107.6648901	98.37043995	90.10115501	82.73185562
190313A00039	3/13/2019	2.7	6/13/2022	3/13/2019	111.33573	109.4266927	107.5608729	105.7369424	103.953627	102.2097033	100.5039958	98.83537501	97.20275469
190313A00044	3/13/2019	2.7	6/13/2022	3/13/2019	111.33573	109.4266927	107.5608729	105.7369424	103.953627	102.2097033	100.5039958	98.83537501	97.20275469
190315A00017	3/15/2019	2.88	3/15/2034	3/15/2019	149.3517	138.7976906	129.2398529	120.5709481	112.6963086	105.532267	99.00479155	93.04830015	87.60462845
190315A00019	3/15/2019	2.88	3/15/2034	3/15/2019	149.35159	138.7976029	129.2397882	120.5709041	112.6962831	105.5322582	99.00479759	93.04831954	87.60465981
190315A00021	3/15/2019	3.11	3/15/2034	3/15/2019	149.45841	138.9593055	129.4473675	120.816661	112.9736338	105.8355733	99.32926644	93.38983259	87.95970923
190207A00003	2/7/2019	2.68	2/7/2024	2/7/2019	120.76079	117.1438074	113.6623247	110.31045	107.0825855	103.9734079	100.9778538	98.09110482	95.3085747
190227A00033	2/27/2019	2.65	2/27/2026	2/27/2019	119.21714	115.7904059	112.5083027	109.3634236	106.3487991	103.4578665	100.6844434	98.02270308	95.46715125
190305A00015	3/5/2019	3.32	3/5/2029	3/5/2019	152.29116	141.9409277	132.427691	123.6778123	115.6245513	108.2073862	101.3714016	95.06674049	89.24811157
190305A00017	3/5/2019	3.12	3/5/2026	3/5/2019	134.16721	127.9694769	122.1170608	116.5885535	111.3639955	106.4247699	101.7535039	97.33397959	93.15105062
190308A00008	3/8/2019	3.19	3/8/2034	3/8/2019	150.22507	139.6725333	130.1121417	121.4374337	113.5543887	106.3798801	99.84032727	93.87052371	88.41261729
190308A00016	3/8/2019	3.18	3/8/2034	3/8/2019	175.39659	158.3234642	143.2519179	129.9271311	118.1285099	107.6648901	98.37043995	90.10115501	82.73185562
190205A00020	2/5/2019	3.32	2/5/2029	2/5/2019	151.85848	141.622427	132.2071071	123.5409379	115.5589818	108.2022991	101.4173623	95.15553208	89.37258533
190205A00021	2/5/2019	3.32	2/5/2029	2/5/2019	151.85848	141.622427	132.2071071	123.5409379	115.5589818	108.2022991	101.4173623	95.15553208	89.37258533
190205A00022	2/5/2019	3.32	2/5/2029	2/5/2019	151.85848	141.622427	132.2071071	123.5409379	115.5589818	108.2022991	101.4173623	95.15553208	89.37258533
190205A00023	2/5/2019	3.32	2/5/2029	2/5/2019	151.85854	141.6224682	132.207139	123.5409611	115.5589972	108.2023071	101.4173637	95.15552723	89.37257477
190205A00025	2/5/2019	2.88	2/7/2022	2/5/2019	109.39817	107.8724553	106.3763436	104.9090405	103.4697811	102.057827	100.6724652	99.31300724	97.97878776
190205A00027	2/5/2019	2.87	2/7/2022	2/5/2019	109.38323	107.8576705	106.3617128	104.8945607	103.4554496	102.043641	100.6584221	99.29910442	97.96502274
190118A00006	1/18/2019	3.14	1/18/2034	1/18/2019	151.21919	140.6638765	131.0936897	122.4037026	114.5011668	107.3040027	100.7394882	94.74311851	89.25761214
190129A00073	1/29/2019	3.11	1/29/2029	1/29/2019	130.66081	124.9527383	119.5930091	114.5567019	109.820885	105.3644405	101.1679082	97.21334342	93.48418869
190131A00013	1/31/2019	3.48	1/31/2034	1/31/2019	180.49498	162.3682969	146.3949517	132.299447	119.8433045	108.8198923	99.05000013	90.37805054	82.66885208
190131A00023	1/31/2019	3.02	1/30/2034	1/31/2019	150.0742	139.5981317	130.099866	121.4752497	113.6322166	106.4892915	99.97428895	94.023181	88.57911018
190205A00017	2/5/2019	3.36	2/5/2029	2/5/2019	152.22955	141.9724741	132.5376758	123.8534449	115.8547277	108.4824784	101.6830733	95.40778472	89.6123094

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
190205A00019	2/5/2019	2.94	2/5/2024	2/5/2019	122.2123	118.3825057	114.6980361	111.1525542	107.740032	104.4547377	101.2912185	98.24428587	95.30900128
190103A00020	1/3/2019	3.12	1/5/2026	1/3/2019	135.18419	128.8207644	122.808323	117.1255185	111.7524118	106.670373	101.8619896	97.31097997	93.00211494
190104A00006	1/4/2019	2.83	1/5/2026	1/4/2019	118.83339	115.4826379	112.270978	109.1913985	106.2372909	103.4024278	100.6809371	98.06728012	95.55623
190104A00034	1/4/2019	3.18	1/4/2029	1/4/2019	142.20808	133.9546254	126.3134269	119.2337237	112.6692977	106.5780411	100.9215682	95.66486454	90.77597185
190104A00035	1/4/2019	3.1	1/5/2026	1/4/2019	134.32421	128.1091747	122.234737	116.6802534	111.4264368	106.4552642	101.7498875	97.29455097	93.07451473
190104A00038	1/4/2019	3.25	1/4/2029	1/4/2019	150.7488	140.6706859	131.3934427	122.8478574	114.9710859	107.7060343	101.0008034	94.80818966	89.08523682
190111A00038	1/11/2019	2.63	1/11/2022	1/11/2019	108.37369	107.0003758	105.6524521	104.3292619	103.0301727	101.7545729	100.5018716	99.27149719	98.06289701
181214A00010	12/14/2018	3.41	12/14/2028	12/14/2018	148.93877	139.5075429	130.80546	122.7705685	115.3465593	108.4822185	102.1309391	96.25028024	90.80157289
181214A00030	12/14/2018	3.47	12/14/2033	12/14/2018	183.19248	164.8637469	148.7013125	134.4295236	121.8095806	110.6344069	100.7242619	91.92298187	84.09475648
181218A00040	12/18/2018	3.23	6/18/2030	12/18/2018	136.57345	129.6100844	123.1352244	117.1090882	111.495472	106.2614042	101.3768337	96.81434978	92.54893082
181218A00086	12/18/2018	3.06	10/18/2023	12/18/2018	119.66538	116.3741822	113.1971632	110.1296128	107.16705	104.3052083	101.5400237	98.86762346	96.28431589
181218A00089	12/18/2018	3.05	6/19/2023	12/18/2018	117.75719	114.8160545	111.9681849	109.2100317	106.5382074	103.9494749	101.44074	99.009044	96.65155662
181226A00030	12/26/2018	2.91	12/26/2028	12/26/2018	130.41683	124.7504165	119.4278334	114.4246193	109.7182515	105.2879802	101.1146763	97.18069321	93.46974189
181116A00006	11/16/2018	3.18	11/17/2025	11/16/2018	119.34254	116.0793076	112.9480576	109.9422817	107.0558408	104.282943	101.6181209	99.0562116	96.59233734
181119A00008	11/19/2018	3.23	11/17/2023	11/19/2018	120.66004	117.272412	114.0046783	110.8517828	107.8089188	104.871516	102.0352269	99.29591388	96.64963791
181128A00004	11/28/2018	3.08	11/28/2023	11/28/2018	122.19888	118.5565874	115.0466377	111.6633385	108.4012863	105.2553479	102.2206448	99.29253878	96.46661753
181128A00011	11/28/2018	3.27	11/28/2023	11/28/2018	122.17708	118.5478409	115.0501366	111.6783214	108.4270371	105.291193	102.2659504	99.3467079	96.52908812
181129A00005	11/29/2018	3.21	11/29/2023	11/29/2018	121.98784	118.3599305	114.8636174	111.4932493	108.2434611	105.1091557	102.0854887	99.16785355	96.35186801
181214A00009	12/14/2018	3.22	12/14/2028	12/14/2018	130.9397	125.2764834	119.955757	114.9532227	110.2465073	105.8149932	101.6396692	97.70299343	93.98876937
180925A00116	9/25/2018	3.28	9/25/2028	9/25/2018	131.41476	125.8758875	120.6640987	115.7567019	111.1327608	106.7729492	102.6594156	98.77566056	95.10642444
181003A00019	10/3/2018	3.44	10/3/2025	10/3/2018	135.42875	129.3445748	123.5823439	118.1231147	112.9491695	108.043926	103.3918589	98.9784261	94.79000098
181003A00032	10/3/2018	3.23	10/3/2025	10/3/2018	119.17918	115.9724949	112.8937187	109.9366175	107.0953123	104.3642527	101.7381956	99.21218651	96.78154165
181010A00025	10/10/2018	3.48	10/10/2030	10/10/2018	140.97832	133.5120639	126.5873807	120.1587765	114.184975	108.6284932	103.4552657	98.63430698	94.13741128
181105A00015	11/5/2018	3.57	11/5/2025	11/5/2018	136.758	130.5262691	124.6289696	119.0461341	113.7591043	108.7504378	104.0038217	99.50399251	95.23666271
181115A00044	11/15/2018	3.26	11/15/2023	11/15/2018	121.55457	118.0184599	114.6088715	111.3204319	108.1480337	105.0868222	102.1321806	99.27971667	96.52525002
180913A00012	9/13/2018	3.31	9/13/2033	9/13/2018	151.5036	141.1899347	131.8169916	123.2867256	115.5122402	108.41643	101.9308013	95.9944432	90.55312799
180913A00033	9/13/2018	3.31	9/13/2033	9/13/2018	151.5036	141.1899383	131.816994	123.286727	115.5122408	108.41643	101.9308007	95.99444222	90.55312669
180913A00062	9/13/2018	3.05	9/13/2023	9/13/2018	119.72001	116.4220155	113.2368555	110.1599803	107.1870505	104.3139284	101.5366669	98.85149994	96.25483252
180914A00049	9/14/2018	3.37	9/14/2033	9/14/2018	152.06482	141.7130001	132.3053805	123.7435556	115.940307	108.8182438	102.308619	96.35029602	90.88884664
180924A00033	9/24/2018	3.08	9/22/2023	9/24/2018	119.88336	116.649836	113.5267383	110.5095924	107.5941352	104.7763029	102.052221	99.41819355	96.87069405
180925A00013	9/25/2018	3.41	9/25/2028	9/25/2018	130.99253	125.4955889	120.3222317	115.4500687	110.8584411	106.5282747	102.441947	98.58316632	94.9368624
180809A00032	8/9/2018	3.08	8/9/2023	8/9/2018	119.57681	116.3261348	113.1842229	110.1468007	107.2097916	104.3693026	101.6216147	98.96317373	96.39058263
180809A00034	8/9/2018	3.08	8/9/2023	8/9/2018	119.57681	116.3261348	113.1842229	110.1468007	107.2097916	104.3693026	101.6216147	98.96317373	96.39058263

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
180813A00045	8/13/2018	2.89	8/13/2025	8/13/2018	118.15443	115.0654248	112.0966517	109.2423762	106.4971821	103.8559504	101.3138406	98.86627385	96.5089167
180905A00017	9/5/2018	3.43	9/6/2033	9/5/2018	180.5858	163.0022244	147.4581466	133.6986652	121.5023727	110.6767757	101.054362	92.4892206	84.85413731
180906A00032	9/6/2018	3.24	9/5/2025	9/6/2018	133.81496	127.8732526	122.2423089	116.9040673	111.8416163	107.0391139	102.4817149	98.15550195	94.04742301
180907A00013	9/7/2018	3.27	9/8/2025	9/7/2018	133.34371	127.5139496	121.987592	116.7470371	111.7758055	107.0584598	102.5805327	98.32846092	94.28952374
180713A00031	7/13/2018	3.06	7/14/2025	7/13/2018	117.77577	114.7573484	111.8544651	109.0616877	106.3738836	103.786198	101.2940368	98.89305123	96.57912238
180716A00062	7/16/2018	2.91	7/16/2025	7/16/2018	117.90566	114.873859	111.9584201	109.1538621	106.455003	103.8569418	101.3550418	98.94491403	96.62240264
180717A00021	7/17/2018	3.34	7/17/2028	7/17/2018	146.23107	137.3617286	129.149409	121.5405827	114.4863951	107.9422343	101.86734	96.22445054	90.97948458
180717A00026	7/17/2018	3.24	7/16/2025	7/17/2018	131.20646	125.7707476	120.6076723	115.7019268	111.0391484	106.605854	102.3893815	98.3778357	94.56003792
180718A00008	7/18/2018	3.37	7/18/2028	7/18/2018	151.92247	141.8085687	132.4703387	123.8433269	115.8687857	108.4931354	101.6674843	95.34719517	89.49149384
180809A00031	8/9/2018	2.98	8/9/2021	8/9/2018	106.34764	105.3348601	104.3415106	103.3670314	102.4108869	101.4725619	100.55156	99.64740339	98.75963168
180615A00021	6/15/2018	3.02	6/15/2023	6/15/2018	117.53123	114.6167811	111.7944135	109.0606142	106.4120313	103.8454632	101.3578508	98.94627001	96.607925
180628A00068	6/28/2018	3.12	6/28/2028	6/28/2018	141.0334	133.2545269	126.0242516	119.2992536	113.0399106	107.2099662	101.7762242	96.70827314	91.97823686
180628A00078	6/28/2018	2.73	6/28/2023	6/28/2018	109.98268	108.3343983	106.7274881	105.1605585	103.6322757	102.1413618	100.6865919	99.26679145	97.88083363
180702A00022	7/2/2018	2.84	6/30/2023	7/2/2018	117.8049	114.8371761	111.9643238	109.1827551	106.4890429	103.8799082	101.3522135	98.90295577	96.52925948
180702A00040	7/2/2018	2.9	7/2/2021	7/2/2018	105.5704	104.6763509	103.7975284	102.9335436	102.0840223	101.2486029	100.4269356	99.61868223	98.82351558
180712A00044	7/12/2018	3.44	7/12/2033	7/12/2018	150.00757	139.9826901	130.8581532	122.5414457	114.9504317	108.0121075	101.6615161	95.84079674	90.49835477
180420A00011	4/20/2018	2.74	4/20/2023	4/20/2018	109.40789	107.8623655	106.3540675	104.8817756	103.4443227	102.0405898	100.6695033	99.33003298	98.02118959
180517A00018	5/17/2018	3.46	5/17/2033	5/17/2018	151.51807	141.4647397	132.3070774	123.9537891	116.3237399	109.3447467	102.952521	97.0897442	91.70525753
180517A00024	5/17/2018	3.46	5/17/2033	5/17/2018	151.51806	141.4647333	132.307073	123.9537863	116.3237385	109.3447465	102.9525217	97.08974566	91.70525961
180601A00037	6/1/2018	2.86	6/1/2021	6/1/2018	104.97694	104.1782546	103.3917729	102.6172193	101.8543235	101.1028234	100.3624647	99.6330005	98.91419126
180601A00038	6/1/2018	2.86	6/1/2021	6/1/2018	104.95634	104.1610073	103.3778083	102.6064696	101.8467224	101.0983064	100.3609689	99.63446465	98.91855561
180605A00031	6/5/2018	3.37	6/5/2030	6/5/2018	137.47934	130.4704769	123.9532485	117.8876227	112.2371684	106.9687068	102.0519975	97.45945672	93.1659046
180309A00015	3/9/2018	3.37	3/10/2031	3/9/2018	140.36069	132.6626088	125.5415772	118.9475951	112.83543	107.16413	101.8965871	96.99914827	92.44126793
180322A00040	3/22/2018	3.16	3/21/2031	3/22/2018	146.798	137.5024272	128.9874045	121.1785346	114.0091251	107.4193375	101.3554362	95.76912377	90.61695276
180322A00044	3/22/2018	3.18	3/22/2033	3/22/2018	148.33416	138.6193612	129.7598116	121.6693118	114.2711551	107.4970074	101.2859292	95.58351802	90.3411564
180402A00013	4/2/2018	2.99	4/3/2028	4/2/2018	139.18198	131.6798625	124.6946452	118.1863806	112.1184725	106.4573743	101.1723168	96.23506182	91.61967933
180403A00014	4/3/2018	3.11	4/3/2025	4/3/2018	130.43942	125.0817013	119.984014	115.1322088	110.5129905	106.1138591	101.9230575	97.92952324	94.12284328
180410A00002	4/10/2018	3.14	4/11/2033	4/10/2018	148.30231	138.5259505	129.6153965	121.4828962	114.0504111	107.2484658	101.015143	95.29520213	90.03930774
180215A00034	2/15/2018	2.9	2/15/2023	2/15/2018	116.00277	113.3250098	110.7250743	108.200227	105.7478477	103.3654244	101.0505485	98.80090941	96.61429014
180220A00107	2/20/2018	3.13	2/20/2025	2/20/2018	128.39936	123.4560927	118.7442091	114.2514902	109.9664276	105.8781817	101.9765396	98.25187544	94.69511289
180223A00012	2/23/2018	3.33	2/24/2031	2/23/2018	139.76172	132.1557534	125.1159478	118.593565	112.5444871	106.9287456	101.710101	96.85566728	92.33557664
180228A00055	2/28/2018	3.33	2/28/2028	2/28/2018	145.0237	136.4151705	128.4209591	120.9927674	114.0863747	107.6612747	101.6803436	96.10953985	90.9176314
180305A00030	3/5/2018	3.12	3/5/2025	3/5/2018	130.04137	124.7819175	119.7742671	115.0049098	110.4611376	106.1309905	102.0032092	98.06718916	94.31293971

Classification | Public

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
180309A00011	3/9/2018	3.19	3/10/2025	3/9/2018	130.47701	125.1886782	120.1540829	115.3595756	110.792323	106.4402497	102.2919891	98.33683749	94.56471233
180126A00011	1/26/2018	2.72	1/26/2028	1/26/2018	126.20329	121.3207277	116.7052993	112.3397299	108.2079953	104.2952267	100.5876188	97.07234651	93.73748839
180202A00027	2/2/2018	3.02	2/3/2025	2/2/2018	129.01557	123.8848363	118.9954667	114.3347448	109.8906964	105.6520392	101.6081385	97.74896701	94.06506657
180206A00040	2/6/2018	2.47	2/8/2021	2/6/2018	102.73762	102.2781684	101.8228377	101.3715742	100.9243235	100.4810321	100.0416474	99.60611793	99.17439292
180206A00045	2/6/2018	2.71	2/6/2023	2/6/2018	115.1135	112.5173039	109.9955209	107.5455673	105.1649669	102.8513443	100.6024207	98.41600888	96.29000933
180206A00046	2/6/2018	2.72	2/6/2023	2/6/2018	115.3786	112.7398626	110.1770483	107.6875201	105.2687479	102.9183047	100.6338623	98.41318612	96.25413101
180206A00048	2/6/2018	2.72	2/6/2023	2/6/2018	115.3786	112.7398636	110.177049	107.6875206	105.2687482	102.9183049	100.6338624	98.41318599	96.25413073
171219A00009	12/19/2017	2.3	12/19/2024	12/19/2017	114.21404	111.6213512	109.1183688	106.7012178	104.366224	102.1098985	99.92892742	97.82016129	95.78060597
171219A00067	12/19/2017	2.72	12/20/2027	12/19/2017	140.35995	132.3013254	124.8057376	117.8298294	111.3338406	105.2812866	99.63867073	94.37522347	89.46266557
180104A00023	1/4/2018	2.91	1/4/2028	1/4/2018	137.17151	129.8315443	122.9882675	116.6041561	110.6447553	105.0784091	99.87601769	95.01081682	90.45817769
180104A00024	1/4/2018	2.98	1/4/2028	1/4/2018	143.23645	134.6320625	126.6416633	119.2174147	112.3154652	105.8955993	99.92091792	94.35754801	89.1743792
180104A00041	1/4/2018	3.08	1/4/2033	1/4/2018	172.47412	156.1723149	141.6850924	128.7949978	117.3119759	107.0697736	97.92283395	89.74360998	82.42024016
180125A00027	1/25/2018	2.69	1/24/2025	1/25/2018	116.02797	113.1746403	110.4263137	107.778241	105.2259205	102.7650858	100.3916915	98.10190048	95.89207186
171207A00020	12/7/2017	2.25	12/7/2020	12/7/2017	101.60808	101.331471	101.0563789	100.7827888	100.5106882	100.240065	99.97090718	99.70320275	99.43693991
171207A00021	12/7/2017	2.25	12/7/2020	12/7/2017	101.60612	101.3298534	101.0550983	100.7818423	100.5100734	100.2397792	99.97094771	99.70356706	99.43762545
171207A00022	12/7/2017	2.45	12/7/2022	12/7/2017	113.71102	111.272982	108.9013232	106.5937422	104.3480354	102.1620942	100.0338999	97.96151889	95.94309835
171207A00024	12/7/2017	2.93	12/7/2027	12/7/2017	143.92662	135.1132624	126.9308797	119.3302654	112.2663286	105.6977259	99.58652934	93.89792655	88.59994759
171207A00025	12/7/2017	2.91	12/7/2027	12/7/2017	142.33351	133.8482462	125.9637901	118.6335753	111.8149155	105.4686577	99.55887037	94.05256056	88.91941788
171207A00026	12/7/2017	2.93	12/7/2027	12/7/2017	143.92662	135.1132624	126.9308797	119.3302654	112.2663286	105.6977259	99.58652934	93.89792655	88.59994759
171013A00024	10/13/2017	2.47	10/15/2024	10/13/2017	123.50722	119.0640933	114.8154759	110.7516535	106.8634535	103.1422146	99.5797553	96.16834445	92.90067327
171030A00039	10/30/2017	2.86	10/30/2030	10/30/2017	135.33742	128.2038348	121.5860372	115.4408206	109.7289678	104.4148573	99.46610711	94.85325663	90.54948141
171109A00016	11/9/2017	2.94	11/9/2032	11/9/2017	169.44949	153.6153132	139.5274699	126.978524	115.7869814	105.7939027	96.85997807	88.86299541	81.69564849
171201A00016	12/1/2017	2.91	12/2/2030	12/1/2017	136.24549	128.9482431	122.1862974	115.9141966	110.0907418	104.6785594	99.64371824	94.95538675	90.58552719
171204A00009	12/4/2017	2.23	12/4/2024	12/4/2017	113.77141	111.2368876	108.7887347	106.4232721	104.1370037	101.9266082	99.78892874	97.72096398	95.71985891
171204A00024	12/4/2017	2.71	12/4/2024	12/4/2017	126.53935	121.6642632	117.0115548	112.569725	108.327945	104.2760101	100.4042992	96.70373781	93.16576325
170921A00048	9/21/2017	1.95	9/21/2020	9/21/2017	100.32518	100.2666468	100.2081995	100.1498331	100.0915477	100.033343	99.97521885	99.9171751	99.8592116
170921A00052	9/21/2017	2.21	9/21/2022	9/21/2017	111.78537	109.6219816	107.5132382	105.4573763	103.4527013	101.4975864	99.5904689	97.72984756	95.91427941
170921A00053	9/21/2017	2.22	9/21/2022	9/21/2017	111.96967	109.7756219	107.6371607	105.5524889	103.519881	101.5376806	99.60429653	97.71820023	95.87792249
170921A00054	9/21/2017	2.22	9/21/2022	9/21/2017	111.96967	109.7756219	107.6371607	105.5524889	103.519881	101.5376806	99.60429653	97.71820023	95.87792249
170921A00055	9/21/2017	2.82	9/21/2027	9/21/2017	140.58942	132.4120664	124.7997552	117.7097344	111.1027237	104.9426176	99.19621198	93.83295552	88.82472396
170921A00057	9/21/2017	2.79	9/21/2027	9/21/2017	138.19142	130.513745	123.3562104	116.6798977	110.4490289	104.6306967	99.19461791	94.11291055	89.35988997
170727A00003	7/27/2017	1.97	7/29/2024	7/27/2017	112.104	109.7995564	107.5686699	105.4083747	103.3158454	101.2883914	99.32344949	97.4185769	95.57144457
170731A00041	7/31/2017	2.74	7/31/2030	7/31/2017	133.70383	126.8283871	120.439038	114.4959061	108.9627291	103.8065042	98.99717171	94.50733066	90.31198465

Classification | Public

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
170802A00013	8/2/2017	2.5	8/2/2024	8/2/2017	123.62789	119.2029457	114.9663019	110.9088987	107.0221592	103.2979637	99.72862293	96.30685265	93.02575039
170804A00005	8/4/2017	1.94	8/5/2024	8/4/2017	112.28431	109.9296317	107.6512911	105.4461742	103.3113147	101.2438888	99.24120765	97.30070996	95.41995473
170829A00066	8/29/2017	2.11	8/29/2024	8/29/2017	123.21079	118.7023032	114.3896151	110.2631079	106.3136884	102.532759	98.91218775	95.44428025	92.1217539
170901A00030	9/1/2017	1.82	9/1/2022	9/1/2017	110.79692	108.7456262	106.7450802	104.7936837	102.8898972	101.0322411	99.21929283	97.44968404	95.72209832
170619A00101	6/16/2017	2.74	6/16/2027	6/16/2017	136.67195	129.3168793	122.4442802	116.019147	110.0092225	104.3847636	99.11833202	94.18460242	89.56018859
170707A00007	7/7/2017	2.65	7/8/2024	7/7/2017	123.85709	119.4994367	115.3242058	111.3227636	107.4869292	103.8089505	100.281479	96.89754742	93.65054714
170707A00013	7/7/2017	2.88	7/8/2030	7/7/2017	134.60483	127.6840872	121.2525343	115.2700492	109.7001484	104.5096266	99.66823844	95.14841319	90.9249986
170710A00079	7/10/2017	2.76	7/12/2032	7/10/2017	142.28058	133.4530776	125.3651244	117.9455975	111.1308605	104.8639213	99.0936884	93.77431463	88.86461893
170711A00010	7/11/2017	2.38	7/12/2027	7/11/2017	123.00609	118.5671078	114.3564658	110.3602024	106.565321	102.9597148	99.53209943	96.2719514	93.16945161
170713A00021	7/13/2017	3.25	7/13/2037	7/13/2017	192.92233	170.4485375	151.1490455	134.5389412	120.2110872	107.8231817	97.08703709	87.75968843	79.63600912
170615A00006	6/15/2017	2.15	6/17/2024	6/15/2017	111.56691	109.3756119	107.2517706	105.1927389	103.1959962	101.2591392	99.37987633	97.55602123	95.78548717
170619A00089	6/16/2017	2.79	6/16/2027	6/16/2017	139.08463	131.254496	123.947941	117.1265657	110.7550047	104.8006687	99.2335119	94.02581953	89.15201492
170619A00092	6/16/2017	2.79	6/16/2027	6/16/2017	139.0846	131.2544701	123.9479214	117.1265518	110.7549962	104.8006652	99.23351303	94.02582492	89.15202426
170619A00095	6/16/2017	2.79	6/16/2027	6/16/2017	139.08463	131.254496	123.947941	117.1265657	110.7550047	104.8006687	99.2335119	94.02581953	89.15201492
170619A00096	6/16/2017	2.79	6/16/2027	6/16/2017	139.08463	131.254496	123.947941	117.1265657	110.7550047	104.8006687	99.2335119	94.02581953	89.15201492
170619A00097	6/16/2017	2.74	6/16/2027	6/16/2017	136.67195	129.3168793	122.4442802	116.019147	110.0092225	104.3847636	99.11833202	94.18460242	89.56018859
170518A00027	5/18/2017	2.11	5/18/2022	5/18/2017	109.80388	107.9923062	106.2207065	104.4878145	102.7924222	101.1333724	99.50955601	97.91990968	96.36341304
170524A00027	5/24/2017	2.32	5/24/2027	5/24/2017	122.21726	117.9118758	113.8233285	109.9386141	106.2456067	102.7329967	99.39022977	96.20745149	93.17545591
170524A00037	5/24/2017	2.46	5/24/2024	5/24/2017	121.39048	117.394915	113.5604356	109.879505	106.3449877	102.9501284	99.68852923	96.55412783	93.54117746
170526A00017	5/26/2017	2.16	5/28/2024	5/26/2017	111.33166	109.1925772	107.1182035	105.106039	103.1536995	101.2589104	99.41950121	97.63339994	95.89862782
170602A00019	6/2/2017	2.42	6/3/2024	6/2/2017	122.35826	118.14356	114.1020601	110.2255643	106.5063193	102.9369876	99.51062227	96.22064346	93.06081615
170602A00030	6/2/2017	1.88	6/2/2022	6/2/2017	109.82846	107.9908252	106.1944466	104.4380067	102.7202439	101.0399503	99.39596884	97.78719067	96.21255231
170407A00001	4/6/2017	2.97	4/6/2027	4/6/2017	137.3709	130.1669822	123.424205	117.1098588	111.1937434	105.6479654	100.4467489	95.56626349	90.98446622
170421A00011	4/21/2017	2.83	4/22/2030	4/21/2017	133.4306	126.7414928	120.514522	114.7125842	109.3018725	104.251558	99.53350591	95.12202074	90.99361693
170504A00012	5/4/2017	2.28	5/4/2026	5/4/2017	118.81794	115.2499997	111.8383827	108.5748117	105.4515151	102.4611886	99.59696388	96.85237941	94.2213536
170504A00049	5/4/2017	2.63	5/6/2024	5/4/2017	122.75423	118.6104862	114.6340676	110.8171876	107.1524709	103.6329309	100.2519473	97.00324393	93.88086834
170511A00011	5/11/2017	2.41	5/11/2027	5/11/2017	122.5849	118.2672468	114.1670012	110.2711231	106.5674589	103.0446722	99.69218404	96.50011636	93.45924093
170512A00024	5/12/2017	2.88	5/13/2030	5/12/2017	134.03048	127.2541589	120.9495897	115.0786245	109.6065294	104.5016506	99.73511909	95.28058545	91.11398147
170406A00029	4/6/2017	3.01	4/6/2027	4/6/2017	139.71318	132.0558605	124.8979488	118.2036444	111.9399133	106.0762625	100.5845305	95.43869627	90.6147051
170406A00032	4/6/2017	3.01	4/6/2027	4/6/2017	139.71318	132.0558605	124.8979488	118.2036444	111.9399133	106.0762625	100.5845305	95.43869627	90.6147051
170406A00033	4/6/2017	3.01	4/6/2027	4/6/2017	139.71318	132.0558561	124.8979457	118.2036423	111.9399123	106.0762625	100.5845313	95.4386977	90.61470714
170406A00034	4/6/2017	3.01	4/6/2027	4/6/2017	139.71318	132.0558561	124.8979457	118.2036423	111.9399123	106.0762625	100.5845313	95.4386977	90.61470714
170406A00036	4/6/2017	3.07	4/6/2032	4/6/2017	142.14238	133.554435	125.6696582	118.4218459	111.7516237	105.6056945	99.93617023	94.69998239	89.8583599

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
170406A00037	4/6/2017	3.07	4/6/2032	4/6/2017	142.14238	133.554429	125.6696542	118.4218435	111.7516227	105.6056947	99.93617146	94.69998445	89.85836265
170322A00033	3/22/2017	3.61	3/24/2042	3/22/2017	193.78871	171.4070857	152.2655912	135.8404163	121.6985254	109.4811117	98.89019175	89.67772132	81.63674391
170330A00060	3/30/2017	2.06	3/30/2022	3/30/2017	109.14619	107.4929589	105.8741572	104.2887772	102.735849	101.2144398	99.72365234	98.26262354	96.83052234
170406A00023	4/6/2017	2.24	4/6/2022	4/6/2017	109.36141	107.6728423	106.0197024	104.4009413	102.8155515	101.262565	99.74105111	98.25011454	96.78889386
170406A00024	4/6/2017	2.61	4/8/2024	4/6/2017	121.86231	117.8829007	114.0606947	110.3885229	106.8595923	103.4674604	100.206014	97.069451	94.05226196
170406A00026	4/6/2017	2.61	4/8/2024	4/6/2017	121.86229	117.8828863	114.0606834	110.3885146	106.8595869	103.4674577	100.2060139	97.06945342	94.05226677
170406A00027	4/6/2017	2.61	4/8/2024	4/6/2017	121.86231	117.8829007	114.0606947	110.3885229	106.8595923	103.4674604	100.206014	97.069451	94.05226196
170310A00008	3/10/2017	3.17	3/11/2030	3/10/2017	135.26475	128.5425769	122.2811604	116.4437803	110.9969577	105.9101425	101.1554354	96.70733948	92.54253522
170313A00045	3/13/2017	3.22	3/15/2032	3/13/2017	143.02474	134.4446047	126.5624838	119.3130489	112.6376792	106.4837198	100.8038294	95.55540394	90.70006678
170317A00039	3/17/2017	2.73	3/18/2024	3/17/2017	121.98064	118.0578634	114.2880875	110.6644313	107.1803674	103.8296993	100.606543	97.50530884	94.52068526
170317A00040	3/17/2017	2.74	3/18/2024	3/17/2017	122.37276	118.3831094	114.5497699	110.8657021	107.3242227	103.9189877	100.6439734	97.49345781	94.46200407
170317A00041	3/17/2017	2.73	3/18/2024	3/17/2017	121.98064	118.0578634	114.2880875	110.6644313	107.1803674	103.8296993	100.606543	97.50530884	94.52068526
170317A00044	3/17/2017	3.11	3/17/2027	3/17/2017	138.03614	130.8572626	124.1345979	117.8360085	111.9318081	106.3945617	101.1989027	96.32136553	91.74023276
170303A00004	3/3/2017	2.8	3/4/2024	3/3/2017	122.37115	118.4213864	114.6251035	110.9754477	107.4659111	104.0903129	100.8427812	97.7177353	94.70986976
170303A00011	3/3/2017	3.09	3/4/2030	3/3/2017	134.76264	128.0656489	121.8276605	116.0120976	110.5856112	105.5177693	100.7807804	96.34924558	92.19993497
170307A00013	3/7/2017	2.33	3/7/2024	3/7/2017	111.41145	109.3203307	107.2912865	105.3219555	103.4100855	101.5535262	99.75022481	97.99821999	96.29563759
170309A00014	3/9/2017	2.58	3/9/2027	3/9/2017	122.71691	118.5009805	114.492734	110.6799663	107.0512813	103.5960354	100.3042832	97.16672611	94.1746664
170309A00016	3/9/2017	2.39	3/8/2024	3/9/2017	111.92408	109.8172048	107.7730326	105.7891712	103.8633401	101.9933627	100.1771606	98.41274901	96.69823123
170309A00042	3/9/2017	2.18	3/11/2024	3/9/2017	111.49679	109.3976906	107.3610738	105.3845545	103.4658597	101.60282	99.79336428	98.03551417	96.32737951
170221A00033	2/21/2017	2.31	2/18/2022	2/21/2017	108.7128	107.1641625	105.6462065	104.1580913	102.6990075	101.2681747	99.86484011	98.48827698	97.13778387
170224A00007	2/24/2017	2.02	2/24/2021	2/24/2017	102.78534	102.2799304	101.7795042	101.2839859	100.7933035	100.3073863	99.82616516	99.34957213	98.87754061
170224A00008	2/24/2017	2.18	2/24/2022	2/24/2017	108.61586	107.049769	105.5150488	104.0108362	102.5362949	101.0906185	99.67302932	98.28277735	96.91913867
170224A00009	2/24/2017	2.39	2/24/2023	2/24/2017	114.79917	112.1209951	109.5214533	106.9977569	104.5472311	102.1673128	99.85554554	97.6095742	95.42713996
170224A00012	2/24/2017	2.92	2/25/2030	2/24/2017	133.41616	126.8422714	120.7155219	115.0005342	109.6650287	104.6795306	100.0171061	95.65312519	91.56504743
170301A00031	3/1/2017	2.11	3/1/2024	3/1/2017	111.09853	109.0529977	107.0673268	105.1392661	103.2666647	101.4474688	99.67971679	97.96153411	96.29112883
170201A00016	2/1/2017	2.49	2/1/2024	2/1/2017	121.39585	117.5552539	113.8607459	110.3059459	106.8847915	103.5915171	100.4206386	97.36693735	94.42544605
170203A00022	2/3/2017	2.99	2/4/2030	2/3/2017	133.84375	127.2498151	121.1042745	115.3716629	110.0196193	105.0185936	100.3415821	95.96388992	91.86291671
170207A00055	2/7/2017	2.36	2/8/2027	2/7/2017	121.56314	117.439353	113.5164637	109.7827802	106.2273828	102.8400667	99.6112901	96.53212616	93.59421949
170210A00007	2/10/2017	2.96	2/11/2030	2/10/2017	133.66013	127.0748788	120.9374677	115.2124718	109.8675671	104.8732374	100.2025104	95.8307204	91.73529379
170217A00012	2/17/2017	2.97	2/19/2030	2/17/2017	133.56517	127.0112147	120.9021441	115.2027993	109.8811023	104.9077595	100.2560007	95.90134268	91.82137797
170221A00028	2/21/2017	2.31	2/18/2022	2/21/2017	108.7128	107.1641625	105.6462065	104.1580913	102.6990075	101.2681747	99.86484011	98.48827698	97.13778387
170120A00027	1/20/2017	2.35	1/20/2022	1/20/2017	108.28606	106.8281673	105.3976536	103.9938062	102.6159392	101.26339	99.9355179	98.63170344	97.35134739
170120A00028	1/20/2017	2.34	1/20/2022	1/20/2017	108.19389	106.749886	105.3329789	103.9424697	102.5776788	101.2379493	99.92264649	98.63115639	97.36288529

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
170124A00017	1/24/2017	2.82	1/23/2032	1/24/2017	140.97617	132.5945862	124.8884168	117.7950396	111.2582007	105.2273203	99.65687766	94.50586719	89.73731619
170126A00003	1/26/2017	2.86	1/26/2027	1/26/2017	137.10274	130.0720972	123.4811897	117.2995478	111.4989896	106.0534342	100.9387332	96.1325177	91.61405798
170126A00004	1/26/2017	2.13	1/26/2022	1/26/2017	108.24216	106.7778551	105.3413817	103.9320065	102.5490234	101.1917501	99.85952752	98.55171878	97.26770814
170127A00008	1/27/2017	3.05	1/28/2030	1/27/2017	133.9197	127.3786455	121.2789778	115.5860344	110.2681648	105.2964497	100.644446	96.28795627	92.20482257
170105A00010	1/5/2017	2.61	1/5/2027	1/5/2017	121.45754	117.4060002	113.5490284	109.8754501	106.3748177	103.0373588	99.85392842	96.81596431	93.91544562
170105A00012	1/5/2017	2.68	1/5/2024	1/5/2017	120.93184	117.1948545	113.5968586	110.1319201	106.7943943	103.5789067	100.4803386	97.49381346	94.61468408
170106A00021	1/6/2017	2.99	1/7/2030	1/6/2017	133.54938	127.0272264	120.9450941	115.2684345	109.965703	105.0080767	100.3691993	96.02495235	91.95324948
170106A00030	1/6/2017	2.39	1/6/2027	1/6/2017	121.40628	117.3405327	113.4706243	109.7852735	106.2739376	102.9267571	99.7345075	96.68855334	93.78080683
170112A00015	1/12/2017	2.32	1/12/2027	1/12/2017	121.13578	117.0787428	113.2171535	109.5397482	106.0360039	102.6960795	99.510768	96.47145026	93.57005399
170113A00028	1/13/2017	2.92	1/14/2030	1/13/2017	133.12366	126.6219394	120.5588922	114.9000753	109.6140379	104.6720428	100.0478125	95.71730099	91.65848834
161216A00008	12/16/2016	3.16	12/17/2029	12/16/2016	134.28588	127.7851758	121.7196042	116.0552441	110.7611078	105.8088628	101.1725858	96.82853971	92.75497415
161222A00013	12/22/2016	2.93	12/22/2026	12/22/2016	137.10732	130.167642	123.6564757	117.5444719	111.8044607	106.4112779	101.3416063	96.57383011	92.0879012
161227A00073	12/27/2016	2.83	12/28/2026	12/27/2016	132.72274	126.5907704	120.8221929	115.3927109	110.2798009	105.4625745	100.9216504	96.63903761	92.5980276
161229A00018	12/29/2016	2.46	12/29/2026	12/29/2016	121.40489	117.3905199	113.5674245	109.924689	106.452108	103.140132	99.97982132	96.96280263	94.08122918
161229A00019	12/29/2016	2.46	12/29/2026	12/29/2016	121.40488	117.3905141	113.5674201	109.924686	106.4521061	103.1401313	99.97982163	96.96280391	94.08123135
170103A00025	1/3/2017	3.09	1/3/2030	1/3/2017	134.1601	127.6083817	121.4986535	115.7962182	110.4693916	105.4892228	100.8292384	96.46521269	92.37496085
161128A00006	11/28/2016	1.93	11/29/2021	11/28/2016	107.09829	105.7738669	104.4829817	103.2243616	101.9967995	100.799148	99.63031581	98.48926434	97.37500444
161202A00001	12/2/2016	2.65	12/1/2023	12/2/2016	120.2577	116.6361469	113.1465889	109.7833465	106.5410269	103.414507	100.3989174	97.48962832	94.68223543
161202A00003	12/2/2016	2.94	12/3/2029	12/2/2016	132.95225	126.5164561	120.5113982	114.903504	109.6621025	104.7591508	100.1689897	95.8681244	91.83502564
161207A00014	12/7/2016	2.75	12/8/2031	12/7/2016	140.13826	131.8674841	124.2587124	117.2509574	110.7893939	104.8246936	99.31243314	94.21256903	89.4889729
161212A00010	12/12/2016	3	12/12/2029	12/12/2016	133.316	126.8623018	120.8405676	115.2171317	109.9612325	105.0447447	100.4419339	96.12923644	92.0850603
161214A00034	12/14/2016	2.65	12/14/2026	12/14/2016	121.33736	117.3415502	113.5355072	109.9084402	106.4502516	103.1514915	100.0033115	96.99742226	94.12605437
161103A00013	11/3/2016	1.69	11/3/2021	11/3/2016	106.36901	105.0995714	103.860664	102.6511908	101.4701093	100.3164256	99.18919206	98.08750407	97.01049805
161110A00010	11/10/2016	2.53	11/9/2029	11/10/2016	130.22852	123.9799009	118.1461702	112.6952343	107.59775	102.8268706	98.3580158	94.16866404	90.23816519
161116A00005	11/16/2016	2.01	11/16/2021	11/16/2016	106.48869	105.263798	104.0685033	102.9017273	101.7624426	100.6496711	99.56248085	98.49998337	97.46133123
161116A00006	11/16/2016	2.39	11/16/2026	11/16/2016	120.0833	116.1801779	112.4603243	108.9134189	105.5298037	102.3004344	99.21683718	96.27106869	93.45567904
161118A00012	11/18/2016	2.72	11/19/2029	11/18/2016	131.35432	125.0514438	119.1671012	113.6689074	108.5272585	103.7150694	99.20754203	94.98195572	91.01747791
161125A00010	11/25/2016	2.86	11/26/2029	11/25/2016	132.18773	125.8446983	119.922894	114.3897206	109.215381	104.3726139	99.83646025	95.58405184	91.59442125
161005A00031	10/5/2016	1.43	10/5/2021	10/5/2016	103.33961	102.6723723	102.0160917	101.3704712	100.7352234	100.1100719	99.49475036	98.88900251	98.29258129
161012A00011	10/12/2016	1.53	10/12/2023	10/12/2016	109.24412	107.3674993	105.5441885	103.7722049	102.0496523	100.3747212	98.74568322	97.16088749	95.61875606
161014A00019	10/14/2016	2.39	10/15/2031	10/14/2016	135.2881	127.4607489	120.2494102	113.5982094	107.4568351	101.7799472	96.52664862	91.66001638	87.14668583
161014A00026	10/14/2016	2.16	10/14/2031	10/14/2016	135.15676	127.2957405	120.0555876	113.3798168	107.2175845	101.5230849	96.25501272	91.37608753	86.85263125
161014A00029	10/14/2016	2.51	10/15/2031	10/14/2016	137.75303	129.7414886	122.3626904	115.5590654	109.2787984	103.4752084	98.10620093	93.13378319	88.52363356

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
161102A00014	11/2/2016	1.99	11/2/2023	11/2/2016	117.55004	114.0755242	110.7251877	107.493804	104.3764007	101.3682481	98.46484506	95.66190675	92.95535216
160908A00036	9/8/2016	2.3	9/8/2031	9/8/2016	134.37815	126.6611493	119.5473513	112.9823907	106.9172861	101.3078663	96.1142624	91.30045633	86.83388022
160908A00037	9/8/2016	1.4	9/8/2023	9/8/2016	109.64353	107.6386716	105.6912803	103.7992489	101.9605609	100.1732891	98.43559004	96.74570063	95.10193338
160923A00009	9/23/2016	2.24	9/23/2031	9/23/2016	133.94492	126.2521708	119.1608003	112.6165975	106.5707232	100.9791349	95.80208095	91.00364961	86.55136978
160930A00025	9/30/2016	1.66	9/30/2027	9/30/2016	120.44696	115.9947615	111.7765204	107.7776505	103.9845908	100.3847248	96.96630925	93.71840664	90.63082494
161004A00070	10/4/2016	1.92	10/4/2023	10/4/2016	116.90591	113.5276485	110.2677559	107.1213574	104.0838118	101.1506981	98.3178038	95.58111318	92.93679711
161005A00016	10/5/2016	2.32	10/6/2031	10/5/2016	134.77343	126.9760559	119.7923015	113.1665131	107.0485781	101.3933353	96.16004834	91.31193912	86.81577357
160908A00030	9/8/2016	2.21	9/8/2026	9/8/2016	131.64543	124.9362201	118.6331409	112.709089	107.1389165	101.8992829	96.96851561	92.32648218	87.95447239
160908A00031	9/8/2016	2.21	9/8/2026	9/8/2016	131.64543	124.9362201	118.6331409	112.709089	107.1389165	101.8992829	96.96851561	92.32648218	87.95447239
160908A00032	9/8/2016	2.17	9/8/2026	9/8/2016	129.81159	123.4807878	117.5263654	111.9234529	106.6489643	101.6814621	97.00103127	92.58916204	88.42864369
160908A00033	9/8/2016	2.17	9/8/2026	9/8/2016	129.81159	123.4807878	117.5263654	111.9234529	106.6489643	101.6814621	97.00103127	92.58916204	88.42864369
160908A00034	9/8/2016	2.17	9/8/2026	9/8/2016	129.81159	123.4807878	117.5263654	111.9234529	106.6489643	101.6814621	97.00103127	92.58916204	88.42864369
160908A00035	9/8/2016	2.3	9/8/2031	9/8/2016	134.37813	126.661136	119.5473421	112.9823851	106.9172838	101.307867	96.11426565	91.30046191	86.83388785
160908A00023	9/8/2016	2.21	9/8/2026	9/8/2016	131.64543	124.9362201	118.6331409	112.709089	107.1389165	101.8992829	96.96851561	92.32648218	87.95447239
160908A00024	9/8/2016	2.21	9/8/2026	9/8/2016	131.64543	124.9362201	118.6331409	112.709089	107.1389165	101.8992829	96.96851561	92.32648218	87.95447239
160908A00025	9/8/2016	2.21	9/8/2026	9/8/2016	131.64543	124.9362201	118.6331409	112.709089	107.1389165	101.8992829	96.96851561	92.32648218	87.95447239
160908A00026	9/8/2016	2.21	9/8/2026	9/8/2016	131.64543	124.9362201	118.6331409	112.709089	107.1389165	101.8992829	96.96851561	92.32648218	87.95447239
160908A00027	9/8/2016	2.21	9/8/2026	9/8/2016	131.64544	124.9362256	118.6331446	112.7090913	107.1389174	101.8992825	96.96851418	92.32647978	87.95446911
160908A00028	9/8/2016	2.21	9/8/2026	9/8/2016	131.64544	124.9362256	118.6331446	112.7090913	107.1389174	101.8992825	96.96851418	92.32647978	87.95446911
160907A00049	9/7/2016	1.41	9/9/2024	9/7/2016	111.30683	108.9243107	106.6203474	104.3916868	102.2352347	100.1480477	98.12732456	96.17039849	94.27472947
160908A00015	9/8/2016	1.87	9/8/2023	9/8/2016	116.14262	112.8985349	109.7657047	106.7396426	103.8160747	100.9909248	98.26030442	95.62050236	93.06797581
160908A00016	9/8/2016	1.87	9/8/2023	9/8/2016	116.14262	112.8985349	109.7657047	106.7396426	103.8160747	100.9909248	98.26030442	95.62050236	93.06797581
160908A00017	9/8/2016	1.87	9/8/2023	9/8/2016	116.14262	112.8985349	109.7657047	106.7396426	103.8160747	100.9909248	98.26030442	95.62050236	93.06797581
160908A00019	9/8/2016	1.87	9/8/2023	9/8/2016	116.14262	112.8985349	109.7657047	106.7396426	103.8160747	100.9909248	98.26030442	95.62050236	93.06797581
160908A00022	9/8/2016	2.21	9/8/2026	9/8/2016	131.64544	124.9362256	118.6331446	112.7090913	107.1389174	101.8992825	96.96851418	92.32647978	87.95446911
160810A00030	8/10/2016	2.24	8/11/2031	8/10/2016	133.69826	126.0774511	119.0482798	112.5577613	106.5581292	101.0062799	95.86328268	91.09394438	86.66642292
160810A00035	8/10/2016	2.1	8/10/2026	8/10/2016	129.08291	122.8560789	116.9952916	111.4766349	106.2778958	101.3784288	96.75903655	92.40186112	88.29028299
160812A00006	8/12/2016	2.16	8/12/2026	8/12/2016	130.70521	124.3785869	118.4249997	112.8200041	107.5408991	102.5665902	97.87746781	93.45529433	89.28310101
160824A00019	8/24/2016	1.98	8/25/2031	8/24/2016	133.34953	125.7082859	118.6624297	112.1584788	106.1482287	100.5881942	95.43911161	90.66549824	86.23525932
160906A00027	9/6/2016	2.03	9/8/2031	9/6/2016	133.95379	126.2206443	119.0941138	112.5193639	106.4470036	100.8325058	95.63569182	90.82027459	86.3534522
160907A00041	9/7/2016	1.83	9/7/2023	9/7/2016	116.2313	112.9453311	109.7724233	106.7080171	103.7477644	100.8875185	98.12332314	95.45140295	92.86815366
160810A00022	8/10/2016	1.53	8/10/2021	8/10/2016	104.95101	103.9469938	102.9623014	101.9963817	101.0487	100.1187421	99.20601289	98.31003548	97.43035056
160810A00024	8/10/2016	1.52	8/10/2021	8/10/2016	104.90877	103.9115422	102.9334635	101.9739864	101.032582	100.1087412	99.20197405	98.31180858	97.43779012

Classification | Public

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
160810A00025	8/10/2016	2.17	8/10/2026	8/10/2016	131.05399	124.4499028	118.2409936	112.4012003	106.9063176	101.7338588	96.86292486	92.27408394	87.94926089
160810A00027	8/10/2016	2.13	8/10/2026	8/10/2016	129.26077	123.026635	117.1589351	111.6337396	106.4288121	101.5234856	96.89854273	92.53610665	88.41954035
160810A00028	8/10/2016	2.19	8/10/2026	8/10/2016	132.13266	125.3033557	118.8867469	112.8554682	107.1841144	101.8490897	96.82846996	92.10187569	87.65035519
160810A00029	8/10/2016	2.17	8/10/2026	8/10/2016	131.05399	124.4499028	118.2409936	112.4012003	106.9063176	101.7338588	96.86292486	92.27408394	87.94926089
160711A00004	7/11/2016	1.51	7/13/2026	7/11/2016	116.65819	113.0534754	109.6106476	106.3209489	103.1761634	100.1685787	97.29095181	94.53647681	91.89875585
160713A00015	7/13/2016	1.57	7/13/2026	7/13/2016	116.86759	113.2564252	109.8074342	106.5118461	103.3614301	100.3484602	97.46568041	94.70627265	92.06382765
160719A00012	7/19/2016	1.32	7/19/2021	7/19/2016	102.52419	101.9982322	101.4790894	100.9666186	100.4606771	99.96112654	99.46783269	98.98066523	98.49949764
160719A00026	7/19/2016	1.87	7/20/2026	7/19/2016	117.20325	113.5949776	110.1483081	106.854519	103.7054279	100.6933528	97.81107781	95.05182159	92.40920839
160801A00002	8/1/2016	1.58	8/3/2026	8/1/2016	117.13262	113.4631233	109.960388	106.6152964	103.4193013	100.3643845	97.44301973	94.64813969	91.97310446
160802A00026	8/2/2016	1.84	8/2/2023	8/2/2016	115.75897	112.5856936	109.5184068	106.5529688	103.6854238	100.9119926	98.22906422	95.63318671	93.12105964
160608A00033	6/8/2016	2.44	6/9/2031	6/8/2016	134.6222	127.0645133	120.0854865	113.6339727	107.6637939	102.1332253	97.00453286	92.24356164	87.81936982
160608A00034	6/8/2016	2.44	6/9/2031	6/8/2016	134.62221	127.0645176	120.0854904	113.6339759	107.6637964	102.1332271	97.00453375	92.24356163	87.81936888
160616A00029	6/16/2016	1.58	6/16/2026	6/16/2016	116.67064	113.1158096	109.7187069	106.4708923	103.3644392	100.3919025	97.54628643	94.82101357	92.20989737
160629A00066	6/29/2016	2.61	6/30/2036	6/29/2016	176.50997	156.9213861	139.9638516	125.255233	112.4716983	101.3384841	91.62216968	83.12420644	75.67549443
160705A00008	7/5/2016	1.7	7/6/2026	7/5/2016	125.30219	119.7516829	114.5114864	109.562028	104.8850847	100.4636837	96.28201	92.3253208	88.57986731
160705A00010	7/5/2016	1.68	7/5/2023	7/5/2016	114.88687	111.8111153	108.8356629	105.956691	103.1705434	100.4737227	97.86288288	95.33482189	92.88647444
160608A00024	6/8/2016	2.36	6/8/2026	6/8/2016	131.47223	125.0253264	118.9544103	113.2351956	107.8451057	102.7631436	97.96977234	93.44680529	89.17730487
160608A00025	6/8/2016	2.36	6/8/2026	6/8/2016	131.47223	125.0253264	118.9544103	113.2351956	107.8451057	102.7631436	97.96977234	93.44680529	89.17730487
160608A00027	6/8/2016	2.36	6/8/2026	6/8/2016	131.47223	125.0253264	118.9544103	113.2351956	107.8451057	102.7631436	97.96977234	93.44680529	89.17730487
160608A00028	6/8/2016	2.36	6/8/2026	6/8/2016	131.47223	125.0253264	118.9544103	113.2351956	107.8451057	102.7631436	97.96977234	93.44680529	89.17730487
160608A00029	6/8/2016	2.36	6/8/2026	6/8/2016	131.47223	125.0253264	118.9544103	113.2351956	107.8451057	102.7631436	97.96977234	93.44680529	89.17730487
160608A00030	6/8/2016	2.36	6/8/2026	6/8/2016	131.47223	125.0253264	118.9544103	113.2351956	107.8451057	102.7631436	97.96977234	93.44680529	89.17730487
160608A00016	6/8/2016	1.63	6/8/2021	6/8/2016	104.12701	103.3137592	102.5132748	101.7252572	100.9494161	100.18547	99.43314651	98.69218108	97.96231732
160608A00019	6/8/2016	2.36	6/8/2026	6/8/2016	131.47223	125.0253264	118.9544103	113.2351956	107.8451057	102.7631436	97.96977234	93.44680529	89.17730487
160608A00020	6/8/2016	2.36	6/8/2026	6/8/2016	131.47223	125.0253264	118.9544103	113.2351956	107.8451057	102.7631436	97.96977234	93.44680529	89.17730487
160608A00021	6/8/2016	1.91	6/8/2023	6/8/2016	114.98679	112.0225163	109.1527803	106.3739337	103.6824959	101.075146	98.54871387	96.10017198	93.72662805
160608A00022	6/8/2016	1.91	6/8/2023	6/8/2016	114.98679	112.0225163	109.1527803	106.3739337	103.6824959	101.075146	98.54871387	96.10017198	93.72662805
160608A00023	6/8/2016	2.36	6/8/2026	6/8/2016	131.47224	125.0253365	118.9544176	113.2352004	107.8451081	102.7631439	97.96977076	93.44680196	89.17729995
160524A00101	5/24/2016	2.98	5/23/2031	5/24/2016	159.77485	146.5387266	134.6059594	123.8377903	114.1110782	105.3164588	97.35672879	90.14542777	83.6055926
160526A00018	5/26/2016	1.68	5/26/2021	5/26/2016	103.80483	103.0634911	102.3330654	101.6133081	100.9039846	100.2048669	99.51573373	98.83637018	98.1665675
160603A00014	6/3/2016	1.74	6/3/2026	6/3/2016	117.21877	113.6480007	110.2356251	106.9731636	103.8526583	100.8666348	98.00806928	95.27035852	92.64729139
160603A00029	6/3/2016	2.18	6/3/2031	6/3/2016	134.27977	126.7023753	119.7071737	113.2425526	107.2619301	101.7232286	96.58840554	91.82303636	87.39594355
160606A00018	6/6/2016	1.74	6/5/2026	6/6/2016	117.21918	113.6482976	110.2358138	106.9732555	103.852664	100.8665639	98.00793077	95.2701606	92.64704157

Classification | Public

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
160608A00015	6/8/2016	1.63	6/8/2021	6/8/2016	104.14045	103.324519	102.521411	101.7308257	100.9524712	100.186065	99.43133279	98.688009	97.95583589
160428A00028	4/28/2016	2	4/28/2026	4/28/2016	117.61013	114.1278073	110.7962539	107.607572	104.5543394	101.6295759	98.82671419	96.13957236	93.56232858
160504A00022	5/4/2016	2	5/4/2023	5/4/2016	114.93799	112.0369204	109.2261855	106.5023518	103.8621465	101.3024453	98.8202644	96.41275317	94.0771868
160511A00015	5/11/2016	2.42	5/11/2026	5/11/2016	131.48453	125.1148444	119.1124927	113.453974	108.1174299	103.0825195	98.33030542	93.84314826	89.60461052
160511A00016	5/11/2016	2.48	5/12/2031	5/11/2016	134.64559	127.1442921	120.2133471	113.8026719	107.8670186	102.3654755	97.26101996	92.52011948	88.11237688
160523A00086	5/23/2016	2.2	5/26/2026	5/23/2016	130.02793	123.9323492	118.185302	112.7645108	107.6492586	102.8202707	98.25960602	93.95055608	89.8775534
160524A00028	5/24/2016	2.06	5/24/2023	5/24/2016	115.39967	112.4336252	109.5614612	106.7795432	104.0844092	101.4727583	98.94144102	96.48745158	94.10791983
160413A00033	4/13/2016	2.32	4/13/2026	4/13/2016	126.1123	120.8363947	115.8443542	111.1188092	106.6435652	102.4035146	98.3845564	94.57352357	90.95811549
160414A00042	4/13/2016	2.48	4/13/2026	4/13/2016	131.48183	125.1909162	119.2585887	113.6621781	108.3805779	103.3941282	98.68450862	94.23463958	90.02859102
160421A00016	4/21/2016	2.26	4/21/2026	4/21/2016	129.96501	123.9608117	118.295111	112.9465779	107.8953588	103.1229611	98.61215188	94.34686475	90.31211426
160427A00004	4/27/2016	2.09	4/27/2026	4/27/2016	117.22617	113.7680108	110.45914	107.291759	104.2585373	101.3525795	98.56739711	95.89688121	93.33527791
160428A00020	4/28/2016	1.69	4/28/2021	4/28/2016	103.51141	102.8301772	102.1580142	101.4947386	100.8401744	100.1941501	99.55649877	98.92705785	98.30566888
160428A00025	4/28/2016	1.25	4/28/2021	4/28/2016	101.92307	101.531041	101.1427867	100.7582431	100.377351	100.0000526	99.62629149	99.25601231	98.88916106
160412A00029	4/12/2016	2.48	4/14/2031	4/12/2016	134.38487	126.95564	120.0873373	113.7310254	107.8424676	102.3816404	97.3123011	92.60160278	88.21975073
160413A00014	4/13/2016	2.55	4/14/2031	4/13/2016	134.87373	127.4175606	120.5243501	114.1449838	108.2350651	102.7544257	97.66669182	92.93889778	88.54114108
160413A00016	4/13/2016	2.55	4/14/2031	4/13/2016	134.87373	127.4175608	120.5243502	114.1449839	108.2350651	102.7544256	97.66669175	92.93889768	88.54114096
160413A00018	4/13/2016	1.78	4/13/2026	4/13/2016	116.87012	113.4104819	110.1005725	106.9325555	103.8990629	100.9931656	98.20834396	95.53846063	92.97773568
160413A00020	4/13/2016	2.48	4/13/2026	4/13/2016	131.48183	125.1909162	119.2585887	113.6621781	108.3805779	103.3941282	98.68450862	94.23463958	90.02859102
160413A00021	4/13/2016	2.48	4/13/2026	4/13/2016	131.48183	125.1909162	119.2585887	113.6621781	108.3805779	103.3941282	98.68450862	94.23463958	90.02859102
160328A00038	3/28/2016	2.54	3/30/2026	3/28/2016	130.08546	124.161809	118.5680707	113.2837059	108.2895761	103.5678383	99.10185003	94.87608195	90.87603706
160329A00017	3/29/2016	2.48	3/30/2026	3/29/2016	129.74919	123.8384991	118.2570532	112.984353	108.0012967	103.290076	98.83408094	94.61781245	90.62680183
160330A00003	3/30/2016	1.68	3/30/2021	3/30/2016	103.11748	102.5130712	101.9157665	101.3254379	100.7419637	100.1652248	99.59510509	99.03149102	98.47427161
160401A00005	4/1/2016	2.02	4/3/2023	4/1/2016	114.53198	111.7278777	109.0088895	106.3718769	103.8138415	101.3319163	98.92335835	96.58554306	94.31595772
160404A00019	4/4/2016	2.48	4/4/2031	4/4/2016	134.38353	126.9547428	120.0868075	113.7307967	107.842484	102.3818545	97.31267302	92.60209894	88.22034296
160405A00011	4/5/2016	1.31	4/5/2021	4/5/2016	101.8492	101.4666827	101.0876969	100.7121928	100.3401177	99.97142011	99.60604942	99.24395621	98.88509206
160212A00047	2/12/2016	1.94	2/12/2026	2/12/2016	116.23731	112.9090091	109.7207224	106.6653036	103.7360262	100.9265551	98.23092101	95.64349682	93.15897552
160225A00011	2/25/2016	1.5	2/27/2023	2/25/2016	108.05675	106.4333427	104.8502407	103.3061138	101.7996845	100.3297276	98.89506749	97.49457599	96.12716984
160301A00012	3/1/2016	2.02	3/1/2023	3/1/2016	114.0481	111.34487	108.7216669	106.1756262	103.7040081	101.3041883	98.97365226	96.70998981	94.51089006
160303A00035	3/3/2016	2.14	3/3/2026	3/3/2016	117.15265	113.7373642	110.468874	107.3395611	104.3422626	101.4702367	98.71713564	96.07697954	93.544133
160307A00024	3/7/2016	2.17	3/6/2026	3/7/2016	117.23377	113.8269967	110.5653685	107.4413933	104.4480238	101.5786268	98.82695623	96.18712724	93.65359333
160328A00030	3/28/2016	1.79	3/29/2021	3/28/2016	103.16719	102.5654496	101.9707447	101.3829543	100.8019584	100.2276394	99.65988268	99.09857609	98.54361008
160209A00008	2/9/2016	2.45	2/10/2031	2/9/2016	133.6567	126.3825205	119.6497795	113.4118692	107.6266029	102.2557614	97.26469027	92.62194156	88.29895309
160210A00049	2/10/2016	1.78	2/10/2026	2/10/2016	116.37876	113.0344066	109.8311334	106.7617249	103.8193867	100.9977208	98.29069946	95.69264154	93.19818986

Classification | Public

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
160210A00051	2/10/2016	2.28	2/10/2031	2/10/2016	133.94297	126.6161504	119.8365788	113.5570135	107.7347014	102.3309208	97.31057189	92.64181084	88.29572394
160210A00054	2/10/2016	1.78	2/10/2026	2/10/2016	116.37877	113.0344127	109.8311379	106.7617278	103.8193881	100.9977208	98.29069821	95.69263913	93.19818636
160211A00038	2/11/2016	1.83	2/11/2026	2/11/2016	115.88292	112.5647826	109.3862299	106.3401363	103.4197964	100.6188947	97.93148057	95.35194423	92.8749952
160212A00006	2/12/2016	1.57	2/13/2023	2/12/2016	106.92368	105.5086266	104.1261541	102.7752277	101.454857	100.1640915	98.9020182	97.66776026	96.46047491
160115A00011	1/15/2016	2.18	1/15/2026	1/15/2016	116.75644	113.4634459	110.3071969	107.2807899	104.3777262	101.5918814	98.91748127	96.3490792	93.88153547
160119A00072	1/19/2016	2.77	1/21/2031	1/19/2016	136.95724	129.2307219	122.0959031	115.5004944	109.3972832	103.7436015	98.50085579	93.63410866	89.11170556
160126A00004	1/26/2016	2.52	1/26/2026	1/26/2016	132.90177	126.5808587	120.6125249	114.9750704	109.6482476	104.6131545	99.85213925	95.34871042	91.08745502
160201A00016	2/1/2016	2.1	2/2/2026	2/1/2016	116.75115	113.4088133	110.2070364	107.1386484	104.1968994	101.3754317	98.66825475	96.06972107	93.57450443
160203A00017	2/3/2016	2.07	2/3/2023	2/3/2016	113.76214	111.1454307	108.6039427	106.1350668	103.7363027	101.4052521	99.13961373	96.93717844	94.79582536
160209A00006	2/9/2016	1.91	2/9/2026	2/9/2016	116.13992	112.8145846	109.6291226	106.5763991	103.6496948	100.8426817	98.14939681	95.56421902	93.08184697
151223A00078	12/23/2015	2.28	12/23/2025	12/23/2015	117.45761	114.1832071	111.0434202	108.0315093	105.1411272	102.3662899	99.70135335	97.1409919	94.68017784
151228A00013	12/28/2015	2.27	12/29/2025	12/28/2015	117.4277	114.153781	111.0144786	108.0030524	105.1131546	102.3388004	99.67434512	97.11446254	94.6541243
151229A00026	12/29/2015	2.28	12/29/2025	12/29/2015	117.45921	114.1844149	111.044273	108.0320415	105.1413707	102.3662745	99.70110652	97.14053914	94.6795427
160104A00020	1/4/2016	2.47	1/4/2023	1/4/2016	114.29337	111.7538839	109.2850826	106.8845966	104.550149	102.2795525	100.0707051	97.92158631	95.8302535
160106A00042	1/6/2016	2.43	1/6/2026	1/6/2016	117.55127	114.2364778	111.0592933	108.0127776	105.0903928	102.2859775	99.59372224	97.00814729	94.52408141
160113A00002	1/13/2016	2.12	1/13/2026	1/13/2016	117.21665	113.8988852	110.7192718	107.670825	104.7469628	101.9414834	99.2485404	96.66262021	94.17852054
151209A00024	12/9/2015	2.22	12/9/2025	12/9/2015	117.26492	113.9966904	110.8627698	107.8564407	104.9713715	102.2015931	99.54147556	96.98570628	94.5292701
151210A00011	12/10/2015	2.16	12/12/2022	12/10/2015	107.47712	106.142915	104.8382217	103.5621229	102.3137352	101.0922109	99.89673626	98.7265297	97.58084015
151215A00039	12/15/2015	2.46	12/15/2025	12/15/2015	117.37745	114.1174627	110.9910855	107.9916526	105.1128805	102.3488446	99.69395565	97.14293902	94.69081433
151216A00005	12/16/2015	2.15	12/16/2020	12/16/2015	101.72447	101.4222305	101.1218014	100.8231666	100.5263099	100.2312154	99.93786735	99.64625016	99.35634845
151216A00006	12/16/2015	2.3	12/16/2021	12/16/2015	107.71533	106.3365823	104.9877044	103.6677283	102.3757258	101.110809	99.87212767	98.65886751	97.47024813
151223A00036	12/23/2015	2.64	12/23/2025	12/23/2015	121.36527	117.3544946	113.5307689	109.8837868	106.4038828	103.081986	99.9095795	96.87866329	93.98171961
151120A00019	11/20/2015	2.72	11/20/2030	11/20/2015	136.11595	128.8470501	122.1093901	115.8580324	110.052228	104.654998	99.63275732	94.95497823	90.59388943
151124A00006	11/24/2015	1.66	11/24/2020	11/24/2015	100.86912	100.7041229	100.5397446	100.3759813	100.2128292	100.0502847	99.88834402	99.72700359	99.56625977
151124A00007	11/24/2015	1.98	11/23/2022	11/24/2015	106.75922	105.4811285	104.2306942	103.0070619	101.8094153	100.6369705	99.48897477	98.36470488	97.26346552
151125A00037	11/25/2015	2.41	11/25/2025	11/25/2015	116.95372	113.7550815	110.685847	107.7396349	104.9104242	102.1925342	99.58060288	97.06956685	94.65464251
151201A00004	12/1/2015	2.44	12/1/2022	12/1/2015	113.67369	111.2392905	108.8709917	106.5664778	104.3235329	102.1400385	100.0139687	97.94338471	95.92643047
151204A00011	12/4/2015	2.28	12/4/2025	12/4/2015	117.45248	114.1793348	111.0406811	108.029795	105.1403365	102.366329	99.7021352	97.14243577	94.68220907
151030A00004	10/30/2015	2.48	10/30/2025	10/30/2015	126.06129	121.141563	116.4694072	112.0305678	107.8117025	103.8003178	99.98470975	96.35390889	92.89762979
151030A00026	10/30/2015	3.29	10/30/2030	10/30/2015	156.91709	145.1301516	134.4244074	124.6914296	115.8343615	107.7666173	100.4107353	93.69736537	87.56437341
151102A00024	11/2/2015	2.37	11/2/2022	11/2/2015	113.03557	110.6955728	108.4172967	106.1986459	104.037612	101.932272	99.88078368	97.88138149	95.93237263
151113A00035	11/13/2015	1.8	11/14/2022	11/13/2015	106.76446	105.4841827	104.2316397	103.0059787	101.8063801	100.6320571	99.48225399	98.3562449	97.2533319
151118A00025	11/18/2015	2.4	11/18/2022	11/18/2015	112.98088	110.6593214	108.3995863	106.1995373	104.0571322	101.9704174	99.93752327	97.95665954	96.0261112

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
151118A00037	11/18/2015	2.75	11/18/2025	11/18/2015	126.6004	121.6345572	116.9200288	112.4422545	108.1876135	104.1433576	100.2975493	96.63900551	93.15724493
151007A00010	10/7/2015	1.7	10/7/2020	10/7/2015	100.54805	100.4447459	100.3416687	100.2388133	100.1361789	100.0337647	99.93157011	99.8295943	99.72783658
151013A00033	10/13/2015	2.23	10/14/2025	10/13/2015	116.13569	113.009954	110.0089439	107.1265781	104.3571214	101.6951594	99.13557772	96.67354367	94.3044886
151022A00020	10/22/2015	1.71	10/22/2020	10/22/2015	100.78221	100.6342216	100.486672	100.3395602	100.1928843	100.0466424	99.90083253	99.75545272	99.6105011
151023A00018	10/23/2015	1.74	10/23/2020	10/23/2015	100.79175	100.643491	100.4956834	100.3483206	100.2014006	100.0549212	99.9088806	99.76327673	99.61810765
151023A00019	10/23/2015	1.74	10/23/2020	10/23/2015	100.79175	100.643491	100.4956834	100.3483206	100.2014006	100.0549212	99.90888059	99.76327673	99.61810764
151029A00008	10/29/2015	2.28	10/29/2025	10/29/2015	116.29093	113.1601438	110.1543382	107.2674167	104.4936295	101.8275483	99.26404593	96.79827785	94.42566429
150929A00087	9/29/2015	2.09	9/29/2025	9/29/2015	116.06998	112.9840987	110.0200757	107.1720275	104.4343971	101.8019359	99.26968406	96.83295299	94.48730833
151001A00023	10/1/2015	2.02	10/1/2025	10/1/2015	116.11419	112.9787265	109.9686804	107.0779269	104.3006871	101.6315058	99.06523094	96.59699474	94.22219592
151002A00003	10/2/2015	1.94	10/2/2025	10/2/2015	115.87244	112.7434187	109.7395597	106.8547519	104.0832278	101.4195432	98.85855623	96.39540877	94.02550874
151002A00042	10/2/2015	1.26	10/2/2020	10/2/2015	100.42145	100.3350056	100.248707	100.162557	100.076555	99.99070075	99.90499391	99.81943409	99.73402092
151005A00084	10/5/2015	2.25	10/5/2022	10/5/2015	112.32356	110.0730129	107.8802842	105.7434756	103.660763	101.6303965	99.65069718	97.72005317	95.83691652
151006A00050	10/6/2015	2.21	10/6/2022	10/6/2015	106.77851	105.5474969	104.342509	103.1627562	102.007483	100.8759641	99.76750204	98.68142643	97.61709237
150915A00072	9/15/2015	1.91	9/15/2020	9/15/2015	100.23098	100.1891973	100.1474609	100.1057755	100.0641409	100.0225572	99.98102412	99.93954168	99.89810977
150922A00014	9/22/2015	1.84	9/22/2020	9/22/2015	100.33393	100.2726128	100.2113844	100.1502426	100.0891872	100.0282181	99.96733507	99.90653794	99.84582653
150925A00034	9/25/2015	2.36	9/25/2025	9/25/2015	116.265	113.1850348	110.2263441	107.3830823	104.6497337	102.0210882	99.49222136	97.05847735	94.715452
150928A00016	9/28/2015	1.73	9/28/2020	9/28/2015	100.41731	100.3392337	100.2612779	100.1834455	100.1057361	100.0281494	99.95068526	99.87334329	99.79612326
150929A00076	9/29/2015	2.28	9/29/2025	9/29/2015	116.02817	112.9542247	110.0013281	107.163648	104.4356784	101.8122176	99.28834989	96.85942725	94.52105317
150929A00083	9/29/2015	2.09	9/29/2025	9/29/2015	116.06998	112.9840987	110.0200757	107.1720275	104.4343971	101.8019359	99.26968406	96.83295299	94.48730833
150824A00050	8/24/2015	2.03	8/25/2025	8/24/2015	115.62885	112.604887	109.6986802	106.9046067	104.2173595	101.6319225	99.1435529	96.74776448	94.44031157
150825A00008	8/25/2015	2.82	8/25/2025	8/25/2015	128.73291	123.422548	118.3813556	113.5939879	109.0460621	104.7240921	100.6154282	96.70820018	92.99126499
150828A00018	8/28/2015	1.7	8/29/2022	8/28/2015	105.68491	104.5947395	103.526318	102.4790034	101.4521801	100.4452562	99.45766303	98.48885365	97.53830179
150902A00008	9/2/2015	1.37	9/2/2020	9/2/2015	100.0287	100.023128	100.0175609	100.0119986	100.0064412	100.0008886	99.99534097	99.98979816	99.9842602
150902A00009	9/2/2015	1.68	9/2/2020	9/2/2015	100.03043	100.0248544	100.0192857	100.013722	100.0081631	100.0026091	99.99705993	99.99151564	99.9859762
150911A00007	9/10/2015	2.51	9/9/2022	9/10/2015	112.45979	110.2815117	108.1578797	106.0871473	104.0676414	102.0977539	100.1759397	98.30071302	96.47064486
150803A00042	8/3/2015	3.01	8/2/2030	8/3/2015	135.74294	128.7057989	122.1698079	116.0935808	110.4395041	105.1733664	100.2640259	95.6831126	91.4047612
150804A00022	8/4/2015	2.37	8/4/2022	8/4/2015	111.57738	109.5141932	107.5005985	105.5350847	103.6162006	101.7425493	99.91278495	98.12561121	96.37977869
150805A00015	8/5/2015	2.29	8/5/2022	8/5/2015	111.81702	109.7418753	107.7167881	105.7402301	103.810731	101.9268755	100.0873008	98.29069395	96.5357901
150812A00052	8/14/2015	2.13	8/14/2025	8/14/2015	115.91807	112.8872583	109.9744163	107.1739226	104.4804624	101.8890123	99.39482265	96.99340006	94.68049233
150814A00029	8/14/2015	2.39	8/14/2025	8/14/2015	116.08169	113.0571795	110.1500692	107.3547736	104.666017	102.0788124	99.58844347	97.19044793	94.88060222
150824A00033	8/24/2015	2.22	8/25/2025	8/24/2015	115.5886	112.57622	109.6808119	106.8968093	104.2189536	101.6422735	99.16206802	96.77388954	94.47352843
150803A00036	8/3/2015	3.41	8/2/2030	8/3/2015	157.08399	145.5183861	134.9925148	125.4041891	116.6619073	108.6836764	101.3959717	94.73281606	88.63496425
150803A00037	8/3/2015	3.41	8/2/2030	8/3/2015	157.08395	145.5183585	134.9924954	125.4041766	116.661901	108.6836752	101.3959749	94.73282304	88.63497441

Classification | Public

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
150803A00038	8/3/2015	3.41	8/2/2030	8/3/2015	157.08399	145.5183861	134.9925148	125.4041891	116.6619073	108.6836764	101.3959717	94.73281606	88.63496425
150803A00039	8/3/2015	3.01	8/2/2030	8/3/2015	135.74293	128.7057914	122.1698026	116.0935775	110.4395026	105.1733665	100.2640273	95.68311509	91.40476467
150803A00040	8/3/2015	3.01	8/2/2030	8/3/2015	135.74297	128.7058233	122.1698262	116.0935935	110.4395118	105.1733696	100.2640249	95.68310783	91.40475301
150803A00041	8/3/2015	3.01	8/2/2030	8/3/2015	135.74291	128.7057786	122.1697932	116.0935711	110.4394988	105.1733652	100.2640282	95.68311797	91.40476932
150714A00003	7/14/2015	3.76	7/12/2030	7/14/2015	141.93534	134.5860636	127.7585791	121.4099418	115.5011094	109.9965593	104.8639451	100.0737902	95.5992117
150722A00033	7/22/2015	2.47	7/22/2025	7/22/2015	116.04447	113.0703057	110.2099954	107.4581924	104.8098375	102.2601454	99.8045878	97.43887815	95.1589568
150722A00035	7/22/2015	2.92	7/22/2025	7/22/2015	128.75643	123.5330493	118.5699926	113.8526704	109.3673953	105.1013183	101.0423728	97.17922317	93.50121607
150729A00028	7/29/2015	2.25	7/29/2025	7/29/2015	116.00089	113.0170735	110.1478345	107.3877704	104.7317757	102.1750224	99.7129425	97.34121281	95.05573949
150729A00041	7/29/2015	2.44	7/29/2025	7/29/2015	115.9604	112.9879388	110.1293017	107.3791342	104.7323771	102.1842455	99.73021154	97.36598899	95.08751873
150803A00033	8/3/2015	3.41	8/2/2030	8/3/2015	157.08399	145.5183861	134.9925148	125.4041891	116.6619073	108.6836764	101.3959717	94.73281606	88.63496425
150617A00017	6/17/2015	2.27	6/17/2025	6/17/2015	115.781	112.8534875	110.0367684	107.3256799	104.7153426	102.2011393	99.77869944	97.44388409	95.19277191
150617A00018	6/17/2015	2.45	6/17/2025	6/17/2015	115.74365	112.8265958	110.0196468	107.3176863	104.7158765	102.2096391	99.79463963	97.46677267	95.22214814
150617A00030	6/17/2015	2.91	6/16/2025	6/17/2015	128.25043	123.1358836	118.2720439	113.6450347	109.2418266	105.0501838	101.0586111	97.25630489	93.63310709
150617A00036	6/17/2015	2.44	6/15/2022	6/17/2015	110.62777	108.7617271	106.9378349	105.1548074	103.411411	101.7064602	100.0388159	98.4073825	96.81110629
150624A00077	6/24/2015	2.54	6/24/2022	6/24/2015	110.95618	109.0614757	107.2098665	105.4000744	103.6308725	101.9010792	100.2095562	98.55520642	96.93697244
150701A00056	7/1/2015	2.34	7/1/2025	7/1/2015	116.25148	113.263009	110.3891835	107.6246048	104.9641701	102.4030539	99.93668991	97.56075632	95.27116029
150427A00014	4/27/2015	2.98	4/27/2035	4/27/2015	152.06524	140.5406712	130.1781703	120.8444676	112.4228967	104.8111923	97.91959665	91.66922795	85.99067359
150529A00055	5/29/2015	1.78	5/31/2022	5/29/2015	105.11154	104.1180837	103.1436777	102.1877582	101.2497883	100.3292528	99.42565646	98.53852357	97.66739653
150603A00012	6/3/2015	2.77	6/3/2030	6/3/2015	134.97659	128.0612672	121.6326761	115.6510649	110.0802708	104.8873682	100.0423553	95.51787289	91.28895263
150603A00032	6/3/2015	2.21	6/3/2025	6/3/2015	115.60729	112.6850546	109.8733601	107.167062	104.5612926	102.0514464	99.63316371	97.30231583	95.0549913
150604A00039	6/4/2015	2.82	6/4/2030	6/4/2015	135.29961	128.3677484	121.9237873	115.9278769	110.3437678	105.1384552	100.281865	95.74657265	91.50754964
150615A00024	6/15/2015	2.26	6/16/2025	6/15/2015	115.75245	112.8257265	110.0097557	107.2993843	104.6897342	102.1761898	99.75438183	97.42017275	95.16964243
150318A00003	3/18/2015	2.04	3/18/2022	3/18/2015	105.00064	104.0957746	103.2083594	102.3378839	101.4838577	100.6458098	99.82328737	99.01585488	98.22309339
150320A00019	3/20/2015	2.25	3/20/2025	3/20/2015	122.47939	118.1709433	114.0586917	110.1323419	106.3822073	102.7991667	99.37462719	96.10049097	92.96912334
150409A00009	4/9/2015	1.89	4/9/2025	4/9/2015	114.20101	111.4123459	108.7261651	106.1378201	103.6429054	101.2372473	98.91689	96.67808243	94.51726646
150410A00021	4/10/2015	2.27	4/10/2025	4/10/2015	114.67924	111.8883493	109.1997452	106.6087988	104.1111241	101.702565	99.37918174	97.13723822	94.97318978
150414A00037	4/14/2015	2.34	4/14/2025	4/14/2015	114.86994	112.0741553	109.3808495	106.7853856	104.2833685	101.8706335	99.54323297	97.29742304	95.12965197
150420A00012	4/20/2015	2.07	4/20/2022	4/20/2015	109.34073	107.6055737	105.9074587	104.2452612	102.617905	101.0243571	99.46362559	97.93475712	96.4368354
150213A00014	2/13/2015	2.41	2/13/2025	2/13/2015	115.05069	112.3402457	109.7264868	107.2051352	104.7721352	102.4236396	100.1559976	97.9657435	95.84958568
150219A00016	2/19/2015	2.68	2/19/2025	2/19/2015	125.80487	121.0021	116.4225031	112.0543324	107.8865235	103.9086541	100.1109028	96.48401125	93.01924862
150223A00017	2/23/2015	1.77	2/23/2022	2/23/2015	105.70718	104.6274917	103.5668685	102.5248193	101.5008684	100.4945563	99.50543942	98.53308917	97.57709134
150224A00010	2/24/2015	2.34	2/24/2025	2/24/2015	115.77842	112.785863	109.9071939	107.1370869	104.4705069	101.9026888	99.42912147	97.04553233	94.74787322
150227A00011	2/27/2015	2.33	2/27/2025	2/27/2015	122.5472	118.2857594	114.2164399	110.3292619	106.6148285	103.0642851	99.66928454	96.42195566	93.31487284

Classification | Public

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
150311A00003	3/11/2015	2.72	3/31/2025	3/11/2015	126.19341	121.3493678	116.734363	112.336117	108.143081	104.1443903	100.3298194	96.68974108	93.21508749
141203A00039	12/3/2014	3.6	12/4/2034	12/3/2014	157.41838	145.7040159	135.1516895	125.630227	117.0245437	109.2335449	102.1683133	95.75054506	89.9111963
150114A00029	1/14/2015	1.99	1/14/2022	1/14/2015	104.33098	103.5224266	102.7283824	101.9484329	101.1821774	100.429231	99.68922367	98.96180001	98.246618
150115A00031	1/15/2015	1.42	1/18/2022	1/15/2015	104.02616	103.2175249	102.4234461	101.6435042	100.8772961	100.1244349	99.38454878	98.65728036	97.94228595
150203A00012	2/3/2015	1.61	2/3/2022	2/3/2015	104.24902	103.3992247	102.5648507	101.7454546	100.9406131	100.1499195	99.37298264	98.60942648	97.8588891
150203A00027	2/3/2015	2.26	2/4/2030	2/3/2015	130.66227	124.1935947	118.1662896	112.5453453	107.2988228	102.3975651	97.81493469	93.52657737	89.51021031
150205A00031	2/5/2015	1.96	10/6/2025	2/5/2015	115.93398	112.803062	109.7974007	106.9108753	104.1377133	101.4724659	98.90998682	96.44541408	94.07415181
140925A00039	9/25/2014	2.02	9/27/2021	9/25/2014	103.39024	102.7651776	102.1497598	101.5437409	100.9468815	100.3589506	99.77972547	99.20899127	98.64654052
140929A00028	9/29/2014	2.62	3/29/2023	9/29/2014	116.02273	113.2892977	110.6378331	108.0653376	105.5689429	103.1459053	100.7935996	98.50951306	96.29123955
141015A00027	10/15/2014	2.01	10/15/2021	10/15/2014	106.56267	105.3611327	104.1871195	103.0396868	101.9179346	100.8210034	99.74807164	98.69835378	97.67109832
141015A00029	10/15/2014	2.32	10/15/2024	10/15/2014	120.91816	117.0052949	113.2569804	109.6651657	106.2222438	102.9210268	99.75472014	96.71689853	93.80148334
141017A00022	10/17/2014	2.78	10/17/2024	10/17/2014	124.15268	119.7992434	115.6347243	111.6497179	107.8353507	104.1832431	100.6854789	97.33457644	94.12346203
141107A00027	11/7/2014	1.98	11/8/2021	11/7/2014	103.84306	103.1259771	102.4215343	101.7293613	101.049103	100.3804188	99.72298186	99.07647799	98.44060547
140730A00037	7/30/2014	2.83	1/30/2024	7/30/2014	112.23506	110.216908	108.2567353	106.3523934	104.5018272	102.7030738	100.9542569	99.25358317	97.59933715
140821A00030	8/21/2014	2.27	8/21/2024	8/21/2014	113.04655	110.6747592	108.3799262	106.1589043	104.0086999	101.9264642	99.90948439	97.95517632	96.06107762
140821A00040	8/21/2014	3.41	8/21/2031	8/21/2014	167.54425	153.6315871	141.1053703	129.8158126	119.6302448	110.4310632	102.1139379	94.5862427	87.76567882
140908A00080	9/8/2014	2.51	3/8/2024	9/8/2014	118.25807	115.0061326	111.873632	108.8553667	105.9463994	103.1420382	100.4378225	97.82951035	95.3130661
140917A00030	9/17/2014	3.23	9/17/2029	9/17/2014	151.22	141.1601058	131.9281582	123.4490809	115.6550836	108.4849156	101.8831988	95.79983135	90.18945506
140924A00057	9/24/2014	3.25	9/25/2028	9/24/2014	151.21266	141.3557994	132.2625199	123.8683507	116.1146374	108.9479831	102.3197494	96.1856074	90.50513284
140428A00015	4/28/2014	2.35	4/29/2024	4/28/2014	112.12762	109.9670668	107.8720339	105.8399831	103.8684947	101.9552608	100.0980792	98.29484819	96.54356062
140508A00008	5/8/2014	1.66	5/10/2021	5/8/2014	102.28421	101.8523787	101.4250896	101.0022607	100.583815	100.1696773	99.75977416	99.35403396	98.95238675
140618A00019	6/18/2014	3.08	6/18/2024	6/18/2014	113.86002	111.5761078	109.3636642	107.2198508	105.1419636	103.1274263	101.173783	99.27869171	97.43991843
140703A00026	7/3/2014	3.11	7/3/2024	7/3/2014	123.89963	119.8273855	115.9212652	112.1735164	108.5767907	105.1241214	101.8089013	98.62486239	95.56605651
140717A00027	7/17/2014	3.14	7/17/2026	7/17/2014	133.86409	127.6843092	121.8589962	116.3654151	111.1824195	106.2903319	101.6708343	97.30686665	93.18253384
140730A00035	7/30/2014	2.67	1/30/2023	7/30/2014	108.4421	107.0478199	105.685085	104.3529071	103.0503345	101.7764542	100.5303892	99.31129707	98.11836808
131018A00006	10/18/2013	3.28	10/20/2025	10/18/2013	132.00543	126.5591864	121.3931637	116.4910541	111.837596	107.418504	103.2204003	99.23075205	95.43781221
140219A00005	2/19/2014	3.13	2/20/2029	2/19/2014	132.22439	126.3652814	120.8680175	115.706435	110.8564741	106.2959973	102.0046225	97.963571	94.15553014
140313A00025	3/13/2014	2.43	3/15/2021	3/13/2014	103.38094	102.8184569	102.2621346	101.7118711	101.1675672	100.6291263	100.0964534	99.56945601	99.04804334
140313A00028	3/13/2014	2.86	3/13/2024	3/13/2014	120.06051	116.6556471	113.3776012	110.2208003	107.1799571	104.250049	101.4263027	98.70418052	96.07936695
140317A00056	3/17/2014	1.82	3/17/2021	3/17/2014	101.82499	101.4831583	101.1441455	100.8079135	100.4744246	100.1436418	99.81552881	99.49004999	99.16717041
140318A00003	3/17/2014	3.08	3/18/2024	3/17/2014	124.21285	120.1944267	116.3332652	112.6222738	109.0547249	105.6242331	102.3247358	99.15047474	96.09597871
130206A00009	2/6/2013	2.83	2/7/2028	2/6/2013	135.97788	128.8000296	122.1071567	115.8624988	110.0323183	104.5856346	99.4939826	94.73119444	90.27320094
130312A00007	3/12/2013	1.76	3/12/2021	3/12/2013	102.94962	102.4007514	101.8577896	101.3206386	100.789205	100.2633976	99.74312674	99.22830501	98.71884668

Classification | Public

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
130321A00009	3/21/2013	2.17	3/23/2026	3/21/2013	122.52312	118.072167	113.8430036	109.8227306	105.9992847	102.3613827	98.89846589	95.60064862	92.4586716
130422A00020	4/22/2013	1.98	4/22/2025	4/22/2013	113.90023	111.1274474	108.4563298	105.8822765	103.4009257	101.0081445	98.70001509	96.47282246	94.32304204
130522A00027	5/22/2013	2.08	5/22/2023	5/22/2013	108.68169	107.0998732	105.556956	104.0516418	102.5826924	101.1489208	99.7491892	98.3824062	97.04752454
130614A00018	6/14/2013	2.83	6/14/2023	6/14/2013	109.83012	108.1899063	106.590723	105.0311915	103.5099911	102.0258567	100.5775754	99.16398431	97.78396795
120807A00026	8/7/2012	2.42	8/9/2027	8/7/2012	122.56195	118.1042204	113.8775082	109.8675947	106.0612475	102.4461451	99.01080821	95.74453624	92.63734907
120808A00006	8/8/2012	2.06	8/9/2027	8/8/2012	121.90948	117.4572685	113.236499	109.2328826	105.4331287	101.8248647	98.39656525	95.13748941	92.03762111
120820A00009	8/20/2012	2.4	8/22/2022	8/20/2012	111.42425	109.3963098	107.4178086	105.487205	103.6030212	101.763836	99.9682819	98.21504295	96.5028521
120820A00011	8/20/2012	2.4	8/22/2022	8/20/2012	111.42424	109.3963013	107.4178019	105.4872	103.6030179	101.7638344	99.96828193	98.21504454	96.50285522
121016A00013	10/16/2012	1.64	10/14/2022	10/16/2012	106.09952	104.875355	103.6770906	102.5039426	101.3551585	100.2300155	99.12781863	98.04790012	96.98961748
121114A00020	11/14/2012	1.74	11/14/2022	11/14/2012	111.64544	109.3892671	107.192845	105.0541186	102.9711221	100.9419743	98.96487479	97.03809924	95.15999553
111220A00025	12/20/2011	2.17	12/20/2021	12/20/2011	104.23233	103.465614	102.7128387	101.9735861	101.2474566	100.5340676	99.83305166	99.14405649	98.4667436
120330A00013	3/30/2012	2.98	4/2/2024	3/30/2012	121.39896	117.7231984	114.1885125	110.7885827	107.5174101	104.3693012	101.3388501	98.42092267	95.61064051
120517A00021	5/17/2012	1.85	5/17/2024	5/17/2012	111.32937	109.1373344	107.0128942	104.9533983	102.956317	101.0192389	99.1398645	97.31600003	95.54555199
120806A00014	8/6/2012	1.77	8/8/2022	8/6/2012	105.77961	104.6494313	103.5421446	102.4570733	101.3935679	100.3510044	99.32878259	98.32632511	97.3430764
120806A00015	8/6/2012	2.38	8/6/2027	8/6/2012	122.39099	117.9395891	113.7188672	109.7146264	105.9136546	102.303649	98.87314774	95.61146654	92.50864028
120807A00025	8/7/2012	1.82	8/8/2022	8/7/2012	105.83485	104.7040831	103.5962213	102.5105865	101.4465288	100.4034238	99.38067099	98.37769278	97.3939333
110505A00036	5/5/2011	3.23	5/5/2021	5/5/2011	104.6495	103.9585237	103.2769386	102.6045508	101.9411731	101.2866235	100.640725	100.0033051	99.37419614
110701A00011	7/1/2011	3.87	7/1/2026	7/1/2011	124.30824	120.4831331	116.8292389	113.337325	109.998728	106.8053134	103.7494404	100.8239276	98.02202296
110719A00017	7/19/2011	3.68	7/20/2026	7/19/2011	123.6275	119.8221591	116.1872299	112.7135155	109.3923881	106.2157471	103.1759838	100.2659476	97.47891556
110810A00009	8/10/2011	2.36	8/10/2021	8/10/2011	103.31155	102.737714	102.1719392	101.6140399	101.063834	100.5211454	99.9858036	99.45764346	98.93650514
110909A00006	9/9/2011	2.26	9/9/2026	9/9/2011	119.08226	115.3144081	111.7193643	108.2876005	105.0101905	101.8787645	98.88547037	96.02293776	93.28424558
111115A00005	11/15/2011	2.26	11/15/2021	11/15/2011	104.03796	103.3181279	102.6110289	101.9162894	101.23355	100.562466	99.90270672	99.25395441	98.61590396
011115A00014	11/15/2001	5.19	11/16/2021	11/15/2001	106.80773	105.9901657	105.1903593	104.4076765	103.6415097	102.8912804	102.1564377	101.4364563	100.7308354
020918A00047	9/18/2002	4.72	9/19/2022	9/18/2002	109.49832	108.2857812	107.1020905	105.9463094	104.8175382	103.7149137	102.6376082	101.5848268	100.5558066
030605A00010	6/5/2003	3.97	6/5/2023	6/5/2003	114.62365	112.5589638	110.5498577	108.5943933	106.690716	104.8370509	103.0316983	101.2730298	99.55948515
050812A00050	8/12/2005	4.97	8/12/2025	8/12/2005	126.93036	123.2429629	119.706827	116.3144579	113.0587834	109.9331308	106.9312014	104.0470474	101.2750496
050823A00085	8/23/2005	4.78	8/25/2025	8/23/2005	139.33489	133.7109968	128.3686659	123.2919411	118.4658642	113.8764073	109.5104095	105.3555188	101.4001376
050823A00088	8/23/2005	4.78	8/25/2025	8/23/2005	139.33499	133.7110825	128.3687367	123.2919982	118.4659084	113.8764395	109.5104306	105.3555295	101.4001387
200428A00018	4/28/2020	1.33	4/27/2035	4/28/2020	134.3156	124.4086003	115.4874776	107.440072	100.1681233	93.58543183	87.61627986	82.19406975	77.26014923
200521A00005	5/21/2020	0.75	5/21/2030	5/21/2020	121.91368	115.7850481	110.082436	104.7713938	99.82055644	95.20134247	90.88768669	86.85580024	83.08395506
970806A00017	8/1/1997	7.02	7/23/2026	8/1/1997	134.0368	130.1301841	126.3941719	122.8196955	119.3982377	116.1217969	112.9828529	109.9743338	107.0895865
970806A00018	8/1/1997	6.7	10/23/2026	8/1/1997	134.44624	130.3581298	126.4551985	122.7272724	119.164818	115.7588964	112.5011221	109.3836244	106.3990128
970806A00059	8/1/1997	8.25	9/22/2025	8/1/1997	158.92996	152.3787171	146.1622417	140.2612395	134.6576466	129.3345399	124.2760582	119.4673297	114.8944045

Classification | Public

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
200326A00037	3/26/2020	1.78	3/26/2035	3/26/2020	138.03514	127.9951502	118.9449528	110.7727872	103.3806527	96.68249915	90.60267128	85.07456674	80.0394766
200327A00004	3/27/2020	0.63	3/28/2022	3/27/2020	103.63094	102.7401204	101.8657809	101.0074517	100.1646773	99.3370201	98.5240594	97.72539062	96.94062444
200330A00010	3/30/2020	0.61	3/30/2022	3/30/2020	103.61495	102.7239157	101.8493765	100.9908559	100.147898	99.32006494	98.50693556	97.70810494	96.92318347
200331A00056	3/31/2020	0.96	3/29/2030	3/31/2020	122.73656	116.6882174	111.0533144	105.7989294	100.8950418	96.31425771	92.03156155	88.02409179	84.2709399
200401A00011	4/1/2020	0.68	4/3/2023	4/1/2020	106.04228	104.5539138	103.1012267	101.6830542	100.2982828	98.94584446	97.62471439	96.33390878	95.07248293
200402A00050	4/6/2020	0.73	4/5/2024	4/6/2020	108.33493	106.2637348	104.2550107	102.3063533	100.415466	98.58015804	96.79833838	95.06801072	93.38726835
200310A00067	3/10/2020	0.94	3/10/2025	3/10/2020	110.87518	108.2412089	105.7021112	103.2536507	100.891814	98.61279573	96.41298632	94.28896029	92.23746572
200311A00027	3/11/2020	1.52	3/9/2035	3/11/2020	135.78712	125.8629956	116.9195576	108.8459191	101.5448551	94.93100816	88.92934229	83.47380954	78.50619806
200311A00028	3/11/2020	1.04	3/12/2024	3/11/2020	108.74499	106.7142587	104.7442388	102.8326242	100.9772135	99.17590401	97.42668713	95.7276433	94.07693746
200316A00008	3/16/2020	1.31	3/15/2030	3/16/2020	123.45398	117.4291743	111.8138267	106.5754721	101.6845002	97.11388192	92.83892551	88.83705736	85.08762484
200317A00022	3/17/2020	0.97	3/17/2022	3/17/2020	103.91649	103.0256255	102.151214	101.2927859	100.4498875	99.62208256	98.80895208	98.01009284	97.22511688
200317A00024	3/17/2020	1.09	3/17/2025	3/17/2020	111.22469	108.585238	106.0408241	103.5872042	101.2203584	98.93647514	96.73193889	94.60331859	92.54735704
191231A00021	12/31/2019	1.9	2/28/2023	12/31/2019	106.8566	105.5402754	104.2529917	102.9938433	101.7619661	100.5565302	99.37673878	98.22182594	97.09105559
191231A00027	12/31/2019	1.9	4/28/2023	12/31/2019	106.85664	105.5403089	104.2530114	102.9938497	101.7619596	100.5565114	99.37670795	98.22178359	97.09100211
200130A00027	1/31/2020	1.79	1/31/2025	1/31/2020	112.5434	109.9784604	107.5030027	105.113137	102.8051713	100.5756005	98.42109638	96.33849667	94.32479599
200203A00046	2/3/2020	1.98	2/3/2040	2/3/2020	154.47845	139.6291124	126.6807377	115.3575441	105.4269751	96.69253674	88.98787377	82.17186378	76.12454798
200210A00007	2/10/2020	1.78	2/10/2025	2/10/2023	119.81397	115.7349017	111.8372001	108.1115615	104.5492161	101.1418938	97.88179346	94.76155319	91.77422323
200225A00049	2/25/2020	1.79	2/24/2040	2/25/2020	152.17825	137.4872852	124.6812595	113.4863142	103.671561	95.04195437	87.43239905	80.70287046	74.73436814
190823A00009	8/23/2019	1.8	8/23/2029	8/23/2019	125.80128	120.035939	114.6412822	109.5893879	104.85467	100.4136699	96.24486395	92.32848977	88.64638943
191114A00012	11/14/2019	1.89	11/15/2021	11/14/2019	103.76744	103.0520258	102.3492385	101.6587118	100.9800894	100.3130298	99.65720523	99.01230093	98.37801448
191114A00013	11/14/2019	1.9	11/14/2022	11/14/2019	106.60863	105.3416728	104.1020395	102.8888955	101.7014356	100.5388867	99.40050631	98.2855809	97.19342451
191114A00014	11/14/2019	1.9	11/14/2023	11/14/2019	109.47306	107.6222503	105.8223276	104.0714646	102.3679125	100.7099989	99.09612383	97.52475637	95.99443076
191115A00029	11/15/2019	2.07	11/15/2029	11/15/2019	126.71282	120.7972406	115.2694039	110.0995438	105.2604351	100.7271574	96.47688246	92.48868362	88.74336348
191216A00013	12/16/2019	1.95	12/16/2024	12/16/2019	112.68483	110.1673452	107.7362702	105.3878951	103.1186989	100.9253377	98.80463436	96.75356878	94.76926908
190604A00010	6/4/2019	2.45	6/4/2021	6/4/2019	102.80893	102.3328579	101.8623042	101.3971602	100.937323	100.4826923	100.0331706	99.58866289	99.1490766
190618A00009	6/18/2019	2.34	6/18/2021	6/18/2019	102.77751	102.2972903	101.8227172	101.3536833	100.8900811	100.4318059	99.97875596	99.53083213	99.08793802
190627A00020	6/27/2019	2.28	6/25/2021	6/27/2019	102.76147	102.2791608	101.8025735	101.3315919	100.8661059	100.4060085	99.95119592	99.50156682	99.05702279
190628A00007	6/28/2019	2.28	6/28/2034	6/28/2019	142.29859	132.483337	123.5907652	115.5212345	108.1868646	101.5100497	95.42217404	89.8624966	84.77718206
190701A00022	7/1/2019	2.28	7/1/2021	7/1/2019	102.98045	102.4588348	101.9438599	101.435384	100.9332713	100.4373899	99.94761188	99.4638128	98.98587191
190813A00019	8/13/2019	2.13	8/13/2021	8/13/2019	103.17742	102.6053217	102.0412684	101.4850716	100.9365493	100.3955253	99.8618292	99.33529608	98.81576615
190118A00031	1/18/2019	2.81	1/19/2021	1/18/2019	101.6052	101.3523711	101.1010544	100.8512334	100.6028936	100.3560204	100.1105995	99.8666169	99.62405867
190220A00012	2/20/2019	2.76	2/19/2021	2/20/2019	101.70386	101.4325281	101.1630883	100.895518	100.6297952	100.3658985	100.103807	99.84349993	99.58495691
190327A00030	3/27/2019	2.9	3/27/2036	3/27/2019	150.7687	139.3210047	129.0583039	119.839922	111.5433843	104.06191	97.30226698	91.1829354	85.63253338

Classification | Public

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
190513A00026	5/13/2019	2.55	5/13/2021	5/13/2019	102.59833	102.1660163	101.7382439	101.3149378	100.8960206	100.4814169	100.0710531	99.66485736	99.26275945
190520A00020	5/20/2019	2.39	5/20/2026	5/20/2019	118.77453	115.2788332	111.9349788	108.7349644	105.6712755	102.7368481	99.92503858	97.22959591	94.64463531
190523A00038	5/23/2019	2.54	5/24/2021	5/23/2019	102.61593	102.1798501	101.7484223	101.3215645	100.8991963	100.4812388	100.0676154	99.65825132	99.25307347
181226A00040	12/26/2018	2.84	12/28/2020	12/26/2018	101.3629	101.1499558	100.9380736	100.7272476	100.5174692	100.3087297	100.1010207	99.89433378	99.68866062
190102A00015	1/2/2019	2.97	1/3/2034	1/2/2019	146.5979	136.8854089	128.0562982	120.0179696	112.6884506	105.9950926	99.873435	94.26621503	89.1225049
190102A00020	1/2/2019	2.97	1/3/2034	1/2/2019	146.59754	136.8851426	128.0561133	120.017854	112.688394	105.9950862	99.87347111	94.26628715	89.12260742
190102A00022	1/2/2019	2.97	1/3/2034	1/2/2019	146.59732	136.8849859	128.0560081	120.0177918	112.6883676	105.9950895	99.87349886	94.26633498	89.1226716
190102A00024	1/2/2019	2.97	1/3/2034	1/2/2019	146.59744	136.8850716	128.0560667	120.0178274	112.6883839	105.9950896	99.87348544	94.26631027	89.12263754
190111A00047	1/11/2019	2.8	1/11/2021	1/11/2019	101.57376	101.3256515	101.0789807	100.8337357	100.589903	100.3474693	100.1064214	99.8667465	99.62843169
181015A00043	10/15/2018	2.91	10/15/2020	10/15/2018	100.68362	100.5786358	100.4738899	100.3693774	100.2650974	100.1610492	100.057232	99.95364496	99.85028723
181029A00097	10/29/2018	3.53	10/27/2028	10/29/2018	146.47487	137.7464549	129.671368	122.1953494	115.2689926	108.8472828	102.8891812	97.35725122	92.21732157
181120A00026	11/20/2018	2.92	11/20/2020	11/20/2018	101.05077	100.8893522	100.7285179	100.568266	100.4085931	100.2494958	100.0909708	99.93301475	99.77562429
181211A00042	12/11/2018	3.7	12/11/2028	12/11/2023	148.53222	139.490645	131.1357044	123.4096025	116.2597762	109.6383919	103.501892	97.81058922	92.5283003
181214A00026	12/14/2018	2.92	12/14/2020	12/14/2018	101.31547	101.1126543	100.9107781	100.7098375	100.5098255	100.3107351	100.1125593	99.91529148	99.71892472
181220A00006	12/20/2018	2.93	12/20/2022	12/20/2018	108.14903	106.8227416	105.5256493	104.256846	103.0154619	101.800662	100.6116445	99.4476391	98.30790534
180725A00035	7/25/2018	2.85	7/25/2023	7/25/2018	110.33158	108.6525404	107.0162913	105.4213787	103.8664095	102.3500488	100.8710177	99.42808988	98.0200893
180727A00030	7/27/2018	2.89	7/27/2021	7/27/2018	103.33282	102.8025436	102.279182	101.7625814	101.252596	100.7490844	100.2519093	99.7609378	99.27604075
180914A00035	9/14/2018	2.82	9/15/2020	9/14/2018	100.26902	100.2271997	100.1854307	100.1437126	100.1020455	100.0604292	100.0188637	99.97734879	99.93588447
180928A00077	9/28/2018	2.85	9/28/2021	9/28/2018	103.97804	103.3509121	102.7334646	102.1254481	101.5266221	100.9367545	100.3556217	99.78300774	99.21870426
181003A00044	10/3/2018	2.78	10/2/2020	10/3/2018	100.56716	100.4804323	100.3938594	100.3074371	100.2211649	100.1350423	100.0490691	99.96324486	99.87756914
181003A00072	10/3/2018	2.78	10/2/2020	10/3/2018	100.56716	100.4804323	100.3938595	100.3074371	100.2211649	100.1350423	100.0490691	99.96324485	99.87756913
170929A00046	9/29/2017	2.49	9/30/2027	9/29/2017	122.48401	118.0897251	113.9229437	109.9696175	106.216681	102.6519722	99.26416422	96.04270193	92.9777439
171206A00020	12/6/2017	2.62	12/6/2027	12/6/2017	123.76404	119.1789718	114.8382927	110.7265011	106.8292062	103.1330379	99.62556705	96.29523277	93.13127548
180126A00018	1/26/2018	2.34	1/26/2023	1/26/2018	107.92062	106.5453325	105.2010609	103.8868357	102.6017227	101.3448253	100.1152825	98.91226711	97.73498406
180529A00057	5/29/2018	3.09	5/30/2028	5/29/2018	133.36416	127.2112101	121.4499377	116.0514458	110.9891962	106.2387989	101.777824	97.58563048	93.64321163
180716A00046	7/16/2018	2.9	7/16/2025	7/16/2018	117.17675	114.2741208	111.4804042	108.7905573	106.1998054	103.7036295	101.2977513	98.97811812	96.74088988
180725A00034	7/25/2018	2.79	7/25/2022	7/25/2018	106.78412	105.6923133	104.6222153	103.5731866	102.5446134	101.5359062	100.546498	99.57584369	98.62341879
170315A00005	3/15/2017	2.1	3/15/2022	3/15/2017	104.88662	103.9901877	103.1102983	102.2464733	101.3982572	100.565212	99.74691657	98.94296608	98.15297078
170530A00019	5/30/2017	1.58	6/1/2021	5/30/2017	102.47002	101.995159	101.5257995	101.0618329	100.6031567	100.1496712	99.70127925	99.25788631	98.81940025
170612A00024	6/12/2017	1.72	6/13/2022	6/12/2017	105.42555	104.3899002	103.3744435	102.3785827	101.4017451	100.443381	99.50296227	98.57998147	97.67395063
170616A00003	6/16/2017	1.91	6/17/2024	6/16/2017	111.57303	109.3530877	107.2024799	105.118453	103.0983838	101.1397726	99.24023706	97.39750556	95.6094111
170705A00028	7/5/2017	1.86	7/6/2021	7/5/2017	102.77584	102.253551	101.7379379	101.2288638	100.726191	100.2297863	99.7395199	99.25526613	98.77690275
170705A00029	7/5/2017	1.98	7/5/2022	7/5/2017	105.72957	104.6512716	103.5943072	102.5580556	101.5419164	100.5453125	99.56768921	98.60851271	97.66726944

Classification | Public

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
160930A00033	9/30/2016	1.8	9/30/2026	9/30/2016	117.12044	113.4734884	109.9926618	106.6688397	103.4934709	100.4585359	97.55651002	94.78032962	92.12336041
170130A00036	1/30/2017	3.11	1/31/2033	1/30/2017	143.78841	134.7641567	126.5135566	118.9599381	112.0349658	105.6776711	99.83360024	94.45406657	89.49549348
170130A00039	1/30/2017	2.74	1/31/2028	1/30/2017	125.66846	120.7536911	116.1094503	111.7181062	107.5633119	103.6299068	99.90382272	96.37199716	93.02229498
170130A00043	1/30/2017	2.64	1/29/2027	1/30/2017	122.12202	117.9410606	113.9637853	110.1783343	106.5736301	103.1393189	99.8657186	96.74377108	93.76499741
170130A00046	1/30/2017	2.52	1/30/2026	1/30/2017	118.56385	115.0867378	111.756896	108.5667785	105.5092814	102.5777133	99.76576978	97.0675076	94.47732213
170313A00041	3/13/2017	3.21	3/15/2032	3/13/2017	140.51474	132.4935495	125.1092487	118.3031143	112.0223876	106.2196239	100.8521156	95.88138276	91.27272135
160928A00032	9/28/2016	2.52	9/29/2036	9/28/2016	148.81416	136.9041698	126.29894	116.8352183	108.371959	100.7871107	93.97489333	87.84348571	82.31305832
160928A00033	9/28/2016	2.46	9/29/2036	9/28/2016	148.22742	136.3541244	125.7823023	116.349057	107.9136531	100.3543124	93.56549582	87.45559517	81.94496955
160928A00041	9/28/2016	3.26	9/29/2036	9/30/2019	156.05057	143.6880625	132.6708062	122.831208	114.0243981	106.1249562	99.02412937	92.62746903	86.85281981
160928A00042	9/28/2016	3.05	9/29/2036	9/28/2021	153.997	141.7629037	130.8625739	121.1296434	112.4203275	104.6101622	97.59123806	91.26985214	85.56450912
160928A00044	9/28/2016	2.89	9/29/2036	9/28/2023	152.43237	140.2961161	129.4848731	119.8332132	111.1981785	103.4560334	96.49951135	90.23547737	84.58293907
160930A00032	9/30/2016	2.15	9/30/2031	9/30/2016	132.07405	124.7386808	117.9675766	111.7103666	105.9216396	100.5604151	95.58967675	90.97595924	86.68897997
160210A00062	2/10/2016	1.36	2/10/2021	2/10/2016	101.44506	101.1512936	100.8595821	100.5699043	100.282237	99.99655728	99.71284253	99.43107056	99.15121949
160210A00068	2/10/2016	2.76	2/10/2031	2/10/2021	133.93948	126.9886444	120.5417967	114.5563413	108.9936609	103.8187188	98.99969999	94.50769087	90.31639241
160331A00096	3/31/2016	1.32	11/30/2020	3/31/2016	100.84074	100.6701842	100.5002933	100.331068	100.1625039	99.99459687	99.82734266	99.66073716	99.49477623
160506A00016	5/6/2016	1.28	5/6/2021	5/6/2016	102.0533	101.6250296	101.2012276	100.7818134	100.3667121	99.95585036	99.54915662	99.14656102	98.74799535
160928A00029	9/28/2016	2.52	9/29/2036	9/28/2016	148.81416	136.9041698	126.29894	116.8352183	108.371959	100.7871107	93.97489333	87.84348571	82.31305832
160928A00030	9/28/2016	2.52	9/29/2036	9/28/2016	148.81416	136.9041698	126.29894	116.8352183	108.371959	100.7871107	93.97489333	87.84348571	82.31305832
150601A01056	6/1/2015	4.7	3/16/2022	6/1/2015	113.02648	111.3658981	109.7393861	108.1459689	106.584706	105.0546922	103.5550561	102.0849583	100.6435901
150819A00027	8/19/2015	3.05	8/19/2030	8/19/2020	135.65241	128.8739959	122.57039	116.7027397	111.2357124	106.1371537	101.3777779	96.93089066	92.77214021
151026A00034	10/26/2015	2.88	10/28/2030	10/26/2020	135.2275	128.3471003	121.956317	116.0144939	110.4847132	105.3334233	100.530107	96.0469841	91.85874521
151110A00011	11/10/2015	3.23	11/12/2030	11/10/2020	136.18579	129.2687815	122.8446757	116.8724483	111.3148572	106.1380649	101.3113017	96.80656472	92.59834794
151119A00027	11/19/2015	1.64	11/19/2020	11/19/2015	100.84094	100.680766	100.5211667	100.3621407	100.2036848	100.0457955	99.88846968	99.73170403	99.57549532
151123A00067	11/23/2015	1.68	11/23/2020	11/23/2015	100.86714	100.7031438	100.5397553	100.3769731	100.2147936	100.053213	99.89222797	99.73183476	99.57202988
150601A01040	6/1/2015	5.4	10/2/2026	6/1/2015	151.48264	144.1402938	137.2361397	130.7410175	124.6278841	118.8716442	113.449	108.3383117	103.5194703
150601A01041	6/1/2015	5.99	10/2/2036	6/1/2015	197.05499	180.5918016	165.9432822	152.8831009	141.2154728	130.7707868	121.4018895	112.9809244	105.3966375
150601A01047	6/1/2015	5.35	12/30/2024	6/1/2015	138.08269	133.0056276	128.1582289	123.5287331	119.1060496	114.8797136	110.839847	106.9771225	103.2827298
150601A01048	6/1/2015	5.27	1/3/2025	6/1/2015	137.83105	132.7471418	127.8937661	123.2590983	118.8319854	114.6019043	110.558923	106.6936639	102.9972701
150601A01051	6/1/2015	4.91	2/7/2025	6/1/2015	137.05778	131.8796916	126.941491	122.2306115	117.7352164	113.4441516	109.3469031	105.4335564	101.6947591
150601A01055	6/1/2015	5.29	3/16/2022	6/1/2015	113.93533	112.2671507	110.6331869	109.0324534	107.4640057	105.926935	104.4203663	102.9434568	101.4953946
150601A01014	6/1/2015	4.96	9/30/2020	6/1/2015	100.7219	100.6381427	100.5545195	100.4710347	100.3876879	100.3044788	100.2214071	100.1384724	100.0556744
150601A01015	6/1/2015	5.61	10/28/2025	6/1/2015	145.29163	139.2013185	133.4273013	127.9510454	122.7552145	117.823588	113.1409819	108.6931764	104.4668491
150601A01016	6/1/2015	5.73	10/28/2025	6/1/2015	145.8907	139.7849294	133.996062	128.5055319	123.2959755	118.3511459	113.6558346	109.1957987	104.9576936

Classification | Public

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
150601A01020	6/1/2015	5.22	10/19/2020	6/1/2015	100.64816	100.5736801	100.4993777	100.4252506	100.3512981	100.2775197	100.2039145	100.1304821	100.0572217
150601A01021	6/1/2015	5.28	10/3/2025	6/1/2015	123.49433	120.3846069	117.3952888	114.5206349	111.7552196	109.0939152	106.531874	104.0645106	101.6874861
150601A01030	6/1/2015	5.43	9/30/2020	6/1/2015	100.76053	100.6767285	100.5930612	100.5095323	100.4261414	100.3428884	100.2597728	100.1767943	100.0939525
150601A00997	6/1/2015	5.46	9/30/2022	6/1/2015	118.93198	116.6604402	114.4465319	112.2883753	110.1841652	108.1321694	106.1307257	104.1782376	102.2731717
150601A01005	6/1/2015	5.82	3/10/2025	6/1/2015	140.9252	135.6598287	130.6399754	125.8526231	121.2855199	116.9271324	112.7665987	108.7936858	104.9987492
150601A01008	6/1/2015	5.08	4/15/2025	6/1/2015	120.88074	118.0976547	115.4144912	112.8267846	110.3303048	107.9210414	105.5951908	103.349144	101.1794752
150601A01011	6/1/2015	5.05	9/8/2025	6/1/2015	122.6155	119.5567466	116.6154182	113.7859581	111.0631136	108.441919	105.9176773	103.4859443	101.1425129
150601A01012	6/1/2015	5.43	9/15/2023	6/1/2015	127.29712	123.8736953	120.5668401	117.3718487	114.2842393	111.2997386	108.4142711	105.6239481	102.9250584
150601A01013	6/1/2015	5.21	9/29/2023	6/1/2015	126.9629	123.5023617	120.1608348	116.9334674	113.8156375	110.8029406	107.8911789	105.076349	102.3546327
150601A00971	6/1/2015	6.42	6/20/2033	6/1/2015	178.98084	166.8888261	155.8863097	145.8613782	136.7146457	128.3577557	120.7120739	113.7075432	107.2816822
150601A00976	6/1/2015	6.8	9/22/2033	6/1/2015	183.56482	171.2352107	160.0230916	149.8125079	140.5006418	131.9962214	124.2181339	117.0942146	110.5601888
150601A00978	6/1/2015	6.32	11/24/2033	6/1/2015	171.11692	160.4338618	150.6892969	141.7873606	133.6429663	126.1805023	119.3326982	113.0396345	107.2478775
150601A00988	6/1/2015	4.57	3/22/2024	6/1/2015	115.07134	113.0116803	111.0124148	109.0712613	107.1860426	105.3546801	103.5751886	101.8456713	100.1643153
150601A00993	6/1/2015	5.37	6/9/2034	6/1/2015	175.6391	162.9474599	151.4759868	141.0912307	131.6756106	123.1254057	115.349013	108.2654361	101.8029721
150601A00994	6/1/2015	5.86	6/24/2022	6/1/2015	117.24031	115.271542	113.3475107	111.4668944	109.6284165	107.8308477	106.0730041	104.3537447	102.67197
150601A00953	6/1/2015	6.6	6/10/2032	6/1/2015	176.2134	165.1511904	155.0172363	145.7225101	137.1873157	129.3402399	122.1172301	115.4607808	109.3192149
150601A00955	6/1/2015	5.84	7/15/2032	6/1/2015	160.44448	151.3455047	142.9758022	135.2671985	128.1585581	121.5949988	115.5272021	109.9108041	104.7058583
150601A00960	6/1/2015	6.49	12/16/2032	6/1/2015	167.19637	157.4694793	148.5430913	140.3403698	132.7926157	125.8383405	119.4224509	113.4955312	108.0132118
150601A00963	6/1/2015	4.76	12/27/2022	6/1/2015	110.23592	108.9328089	107.6583628	106.4116914	105.1919411	103.998292	102.8299571	101.6861801	100.5662342
150601A00964	6/1/2015	5.25	1/6/2033	6/1/2015	158.69265	149.2917618	140.6735295	132.7621736	125.4899985	118.7964641	112.6273724	106.9341515	101.6732257
150601A00966	6/1/2015	4.84	2/3/2023	6/1/2015	110.82422	109.4548489	108.1164275	106.8079785	105.5285688	104.2773023	103.0533189	101.8557919	100.6839273
150601A00943	6/1/2015	6.44	5/9/2031	6/1/2015	166.65562	157.1965723	148.4630108	140.3909593	132.922634	126.0058009	119.5932024	113.6420469	108.1135539
150601A00946	6/1/2015	6.28	8/22/2031	6/1/2015	167.36567	157.6118204	148.6232655	140.3310912	132.6731911	125.5935406	119.0415569	112.9715306	107.3421199
150601A00947	6/1/2015	6.19	8/20/2021	6/1/2015	109.63638	108.5869085	107.5580637	106.5492377	105.5598461	104.5893271	103.6371405	102.7027666	101.785705
150601A00948	6/1/2015	6.04	10/22/2031	6/1/2015	156.30178	148.0156691	140.3547937	133.2639262	126.693242	120.5977474	114.9367729	109.6735237	104.7746801
150601A00950	6/1/2015	6.76	12/18/2031	6/1/2015	172.15996	161.996882	152.6463097	144.0335738	136.0915333	128.7597584	121.9838097	115.7145999	109.9078268
150601A00952	6/1/2015	6.34	2/13/2032	6/1/2015	171.49744	161.0309622	151.4203066	142.5853808	134.4542909	126.9624439	120.051752	113.6699296	107.7698702
150601A00931	6/1/2015	7.13	9/20/2030	6/1/2015	166.60844	157.8015441	149.6297666	142.0401839	134.9847316	128.419724	122.3054244	116.6056587	111.2874708
150601A00932	6/1/2015	5.84	10/20/2020	6/1/2015	101.31888	101.1789025	101.0393314	100.9001627	100.7613946	100.6230255	100.4850534	100.3474768	100.2102938
150601A00935	6/1/2015	6.46	11/21/2030	6/1/2015	162.86651	154.104513	145.9843151	138.4516549	131.457326	124.9566658	118.9091032	113.277754	108.0290592
150601A00938	6/1/2015	6.35	12/21/2020	6/1/2015	103.10029	102.7830531	102.4677977	102.1545084	101.8431669	101.5337549	101.2262542	100.9206472	100.6169162
150601A00939	6/1/2015	5.79	1/17/2031	6/1/2015	158.22326	149.6493101	141.7099732	134.3509988	127.5232425	121.1821487	115.2872889	109.8019489	104.6927604
150601A00941	6/1/2015	6.23	3/8/2021	6/1/2015	105.16104	104.6181596	104.0809809	103.5494142	103.0233712	102.5027658	101.9875134	101.4775314	100.9727386

Classification | Public

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
150601A00912	6/1/2015	5.96	11/30/2029	6/1/2015	153.08708	145.6287927	138.669288	132.1698575	126.0951176	120.4126998	115.0929722	110.1087885	105.4352619
150601A00918	6/1/2015	5.62	4/28/2025	6/1/2015	123.9566	120.9709792	118.094401	115.3219488	112.6489647	110.0710341	107.5839717	105.1838073	102.8667739
150601A00919	6/1/2015	7.41	6/7/2030	6/1/2015	166.78521	158.1888665	150.1984052	142.7644059	135.8418985	129.3899293	123.3711725	117.7515832	112.5000854
150601A00927	6/1/2015	6.08	8/7/2030	6/1/2015	151.85319	144.5911896	137.8267966	131.5199147	125.63404	120.1359127	114.9952048	110.1842389	105.6777362
150601A00928	6/1/2015	5.94	8/21/2030	6/1/2015	151.2651	143.9953905	137.2258155	130.9159338	125.0289368	119.5312977	114.3924547	109.5845255	105.0820522
150601A00929	6/1/2015	5.91	8/30/2030	6/1/2015	157.92361	149.5427035	141.7673172	134.546945	127.8357196	121.5919551	115.7777356	110.3585471	105.3029475
150601A00899	6/1/2015	7.07	6/14/2029	6/1/2015	149.40605	143.1304797	137.2384678	131.702215	126.4961768	121.5968653	116.9826688	112.633688	108.5315871
150601A00900	6/1/2015	6.06	6/28/2024	6/1/2015	120.35923	117.9848032	115.6842349	113.4546054	111.2931355	109.197176	107.1642018	105.191804	103.2776845
150601A00901	6/1/2015	7.16	7/26/2029	6/1/2015	150.49847	144.1045039	138.1055428	132.4726664	127.1793222	122.2011159	117.5156201	113.1022011	108.9418624
150601A00905	6/1/2015	6.14	10/29/2029	6/1/2015	153.57893	146.1808093	139.2728798	132.8174171	126.7799104	121.1287667	115.8350441	110.8722099	106.2159229
150601A00906	6/1/2015	6.2	11/1/2029	6/1/2015	154.42867	146.9309753	139.9336887	133.398034	127.2885603	121.5728339	116.2211598	111.2063312	106.5034029
150601A00909	6/1/2015	6.14	11/30/2020	6/1/2015	100.95938	100.8604752	100.7618831	100.6636063	100.5656433	100.4679922	100.3706516	100.2736196	100.1768948
150601A00883	6/1/2015	6.21	11/30/2028	6/1/2015	147.97584	141.5822183	135.573385	129.9222411	124.6038148	119.5950787	114.8747852	110.4233164	106.2225473
150601A00888	6/1/2015	5.92	3/1/2029	6/1/2015	148.25808	141.6060328	135.368271	129.5146772	124.0175668	118.8514756	113.9929664	109.4204533	105.114042
150601A00889	6/1/2015	6.55	3/2/2029	6/1/2015	153.20286	146.2039201	139.6445779	133.4927059	127.718784	122.2956683	117.1983833	112.4039338	107.8911339
150601A00893	6/1/2015	6.49	4/6/2029	6/1/2015	152.81029	145.8218665	139.2744236	133.1355511	127.3754846	121.96687	116.8845511	112.1053776	107.608031
150601A00897	6/1/2015	6.15	5/28/2029	6/1/2015	150.90654	143.9769047	137.4873085	131.4051923	125.7006714	120.3462973	115.3168421	110.5891029	106.1417252
150601A00898	6/1/2015	6.66	6/8/2029	6/1/2015	148.57584	142.292343	136.3943854	130.85394	125.6452634	120.7446899	116.130449	111.7824988	107.6823763
150601A00864	6/1/2015	7.37	3/31/2028	6/1/2015	150.37582	144.3389526	138.6421764	133.2629625	128.1804488	123.3753083	118.8296261	114.5267857	110.4513667
150601A00865	6/1/2015	6	4/3/2028	6/1/2015	139.19456	134.0374289	129.1604489	124.5454554	120.1756143	116.0353125	112.1100605	108.3864033	104.8518393
150601A00868	6/1/2015	7.08	6/5/2028	6/1/2015	150.22948	144.0460774	138.2183654	132.7223287	127.5357659	122.6381379	118.0104321	113.6350381	109.4956348
150601A00871	6/1/2015	6.74	7/31/2028	6/1/2015	149.48394	143.212371	137.3065159	131.7414082	126.493979	121.5429042	116.8684597	112.4523907	108.277792
150601A00872	6/1/2015	7.42	7/31/2028	6/1/2015	152.22507	145.9359242	140.0108867	134.425202	129.1559974	124.1821244	119.4840172	115.0435629	110.8439831
150601A00875	6/1/2015	7.14	9/29/2028	6/1/2015	152.38183	145.9040832	139.8097847	134.0723599	128.6672859	123.5719209	118.7653468	114.2282258	109.9426701
150601A00745	6/1/2015	1.76	5/7/2021	6/1/2015	101.88777	101.5271965	101.1701873	100.816679	100.4666146	100.119938	99.77659459	99.43653101	99.09969506
150601A00772	6/1/2015	1.84	5/13/2022	6/1/2015	104.77265	103.8503512	102.9455371	102.0576963	101.1863399	100.3309983	99.49122001	98.66657126	97.85663467
150601A00832	6/1/2015	7.17	8/28/2025	6/1/2015	128.10229	124.9649691	121.9467828	119.0421396	116.2457498	113.5526108	110.9579895	108.4574055	106.0466163
150601A00847	6/1/2015	6.59	1/31/2022	6/1/2015	113.72607	112.2871055	110.8755715	109.4907342	108.1318867	106.798347	105.4894566	104.2045796	102.9431018
150601A00848	6/1/2015	6.36	2/18/2022	6/1/2015	107.66566	106.8482699	106.0456736	105.2574484	104.4831866	103.7224964	102.9750014	102.2403395	101.5181623
150601A00851	6/1/2015	7.12	4/30/2027	6/1/2015	142.37463	137.3741916	132.6247358	128.1112807	123.8198584	119.7374359	115.8518458	112.1517231	108.6264465
150601A00693	6/1/2015	2.31	2/27/2025	6/1/2015	113.71136	111.1218099	108.6238473	106.2134387	103.8867619	101.6401908	99.4702836	97.37377214	95.3475519
150601A00714	6/1/2015	1.67	4/1/2022	6/1/2015	104.33831	103.4751098	102.6279242	101.7962931	100.9797736	100.1779401	99.39038363	98.61671064	97.8565426
150601A00732	6/1/2015	1.91	4/29/2022	6/1/2015	104.7584	103.8504542	102.9596246	102.0854098	101.2273328	100.3849355	99.55777761	98.74543587	97.94750299

Classification | Public

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
150601A00735	6/1/2015	2.35	5/1/2025	6/1/2015	114.36381	111.6556259	109.0463611	106.5315397	104.1069226	101.7684933	99.51244448	97.33516549	95.23323107
150601A00736	6/1/2015	2.87	5/1/2030	6/1/2015	131.79639	125.4655028	119.5647632	114.0599699	108.9199374	104.1162107	99.62280538	95.41597531	91.47400298
150601A00739	6/1/2015	2.35	5/6/2025	6/1/2015	114.37225	111.6622895	109.0513568	106.534973	104.1088925	101.7690926	99.51176019	97.33327947	95.23022009
150601A00660	6/1/2015	2.26	1/5/2022	6/1/2015	108.18849	106.7590265	105.3557659	103.9780453	102.6252242	101.2966833	99.99182321	98.71006382	97.45084363
150601A00678	6/1/2015	2.12	1/30/2025	6/1/2015	113.06763	110.5270806	108.0753494	105.7085672	103.4230625	101.2153505	99.08212228	97.02023413	95.02669859
150601A00679	6/1/2015	1.86	2/4/2022	6/1/2015	104.03559	103.2610392	102.5004441	101.7534083	101.0195464	100.2984881	99.58987786	98.89337352	98.20864614
150601A00680	6/1/2015	2.23	2/6/2025	6/1/2015	113.33426	110.787552	108.3299112	105.9574536	103.666496	101.4535427	99.31527415	97.24853694	95.25033432
150601A00685	6/1/2015	1.91	2/10/2022	6/1/2015	104.10487	103.323778	102.5567888	101.8034954	101.0635089	100.3364556	99.62197636	98.91972607	98.22937257
150601A00690	6/1/2015	2.34	2/28/2025	6/1/2015	113.74696	111.1636882	108.6715836	106.2666423	103.9450657	101.70325	99.53777406	97.44538927	95.4230094
150601A00555	6/1/2015	2.13	9/2/2021	6/1/2015	103.06215	102.5059224	101.957914	101.4179187	100.8857412	100.3611929	99.84409152	99.33426115	98.83153153
150601A00557	6/1/2015	2.03	9/2/2021	6/1/2015	102.91474	102.3767168	101.8464307	101.3236914	100.8083193	100.3001412	99.7989891	99.30470095	98.81711977
150601A00558	6/1/2015	2.51	8/30/2024	6/1/2015	112.64123	110.3555011	108.1434449	106.0020644	103.9285047	101.920048	99.97410633	98.08821388	96.26002065
150601A00563	6/1/2015	2.14	9/10/2021	6/1/2015	103.04958	102.4965891	101.9517367	101.4148237	100.8856572	100.3640504	99.84982335	99.34280176	98.84281728
150601A00585	6/1/2015	2.45	10/8/2024	6/1/2015	112.82396	110.4777858	108.2087209	106.0135731	103.8893079	101.8330387	99.84201817	97.91363091	96.04538579
150601A00624	6/1/2015	2.48	12/8/2021	6/1/2015	108.1177	106.7289675	105.3731435	104.0490518	102.7555761	101.4916521	100.2562651	99.04844661	97.86727203
150601A00509	6/1/2015	2.52	7/8/2024	6/1/2015	112.18321	109.9913997	107.8681449	105.8107193	103.8165275	101.8830967	100.0080698	98.18919896	96.42433994
150601A00526	6/1/2015	2	7/28/2021	6/1/2015	102.61825	102.1348158	101.6576661	101.1866604	100.7216665	100.2625563	99.80920547	99.36149346	98.9193032
150601A00527	6/1/2015	2.5	7/26/2024	6/1/2015	112.31273	110.0880361	107.9336772	105.8468354	103.824826	101.865092	99.96519641	98.12281643	96.33573669
150601A00529	6/1/2015	2.08	7/28/2021	6/1/2015	102.43533	101.9928223	101.5556115	101.1235897	100.6966538	100.2747037	99.85764223	99.44537478	99.03780932
150601A00543	6/1/2015	2.23	8/8/2024	6/1/2015	112.26523	110.0146505	107.8358815	105.7260185	103.6823006	101.7020992	99.78291001	97.92234657	96.11813376
150601A00544	6/1/2015	1.95	8/13/2021	6/1/2015	102.71579	102.2089468	101.7089872	101.2157512	100.7290878	100.2488509	99.77489885	99.30709442	98.84530464
150601A00478	6/1/2015	2	6/16/2021	6/1/2015	102.28416	101.8642779	101.4491689	101.0387431	100.6329125	100.2315912	99.83469564	99.44214447	99.05385839
150601A00492	6/1/2015	1.92	6/25/2021	6/1/2015	102.3387	101.9021379	101.4707236	101.0443582	100.6229433	100.2063828	99.79458359	99.38745478	98.9849081
150601A00496	6/1/2015	2.27	6/27/2024	6/1/2015	111.99107	109.8101881	107.6973308	105.6497948	103.665009	101.740524	99.87400494	98.06322508	96.30606038
150601A00497	6/1/2015	1.95	7/1/2021	6/1/2015	102.38735	101.9437112	101.5053984	101.0723011	100.6443154	100.2213408	99.80327902	99.39003495	98.98151587
150601A00505	6/1/2015	2.07	7/8/2021	6/1/2015	102.54257	102.0792895	101.6217747	101.1699042	100.723562	100.2826355	99.84701517	99.41659469	98.99127071
150601A00508	6/1/2015	1.97	7/8/2021	6/1/2015	102.44661	101.9933044	101.5455404	101.1032041	100.6661855	100.234378	99.80767797	99.38598457	98.96919983
150601A00458	6/1/2015	1.86	5/14/2021	6/1/2015	101.98698	101.6139542	101.2447258	100.8792272	100.5173958	100.1591703	99.80449078	99.45329882	99.10553734
150601A00459	6/1/2015	2.42	5/16/2024	6/1/2015	111.52715	109.428074	107.3927597	105.4187273	103.5036164	101.645176	99.84125833	98.08981381	96.3888854
150601A00461	6/1/2015	1.94	5/14/2021	6/1/2015	101.92461	101.5685906	101.2160925	100.8670554	100.521422	100.1791364	99.84014377	99.50439092	99.17182566
150601A00473	6/1/2015	2.22	5/31/2024	6/1/2015	111.67307	109.5368608	107.4663558	105.458977	103.5122661	101.6238803	99.79158541	98.01325026	96.28684096
150601A00475	6/1/2015	3.04	6/1/2029	6/1/2015	129.71112	124.0687766	118.7770631	113.8103286	109.1450143	104.7594693	100.6337824	96.74962981	93.09013669
150601A00477	6/1/2015	3.21	6/1/2029	6/1/2015	137.34397	130.4478938	124.0085476	117.9912091	112.3640673	107.0979572	102.1661211	97.54399396	93.20900857

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
150601A00436	6/1/2015	1.99	3/18/2021	6/1/2015	101.45182	101.1872865	100.9247332	100.6641348	100.405467	100.1487058	99.89382765	99.64080946	99.38962848
150601A00438	6/1/2015	1.91	3/18/2021	6/1/2015	101.5486	101.262066	100.9778101	100.6958059	100.4160237	100.1384343	99.8630093	99.58972053	99.31854047
150601A00447	6/1/2015	2.02	4/28/2021	6/1/2015	101.90892	101.5609112	101.216231	100.8748222	100.5366331	100.2016129	99.86971219	99.54088252	99.21507652
150601A00448	6/1/2015	2.61	4/26/2024	6/1/2015	111.73991	109.6659341	107.6543004	105.7026068	103.8085643	101.9699892	100.1847975	98.45099922	96.76669407
150601A00449	6/1/2015	2.12	4/28/2021	6/1/2015	101.94237	101.5942718	101.2494976	100.9079955	100.5697137	100.2346016	99.90260956	99.57368928	99.24779333
150601A00451	6/1/2015	1.91	4/30/2021	6/1/2015	101.9472	101.5849897	101.2264308	100.8714622	100.5200235	100.1720559	99.82750162	99.48630453	99.14840971
150601A00410	6/1/2015	2.68	1/24/2024	6/1/2015	111.01457	109.1007586	107.2413074	105.4342179	103.6775778	101.96956	100.3084178	98.69248084	97.12015117
150601A00411	6/1/2015	3.38	1/24/2029	6/1/2015	130.11615	124.6998711	119.607516	114.8162081	110.3048769	106.0541032	102.045978	98.26397443	94.6928306
150601A00422	6/1/2015	2.03	2/19/2021	6/1/2015	101.26417	101.0361508	100.8096713	100.5847123	100.3612564	100.1392862	99.9187851	99.69973635	99.48212366
150601A00424	6/1/2015	1.95	2/19/2021	6/1/2015	101.36377	101.1141118	100.8662013	100.620022	100.3755538	100.1327769	99.89167181	99.65221956	99.41440128
150601A00425	6/1/2015	2.64	2/21/2024	6/1/2015	111.20718	109.244523	107.3386187	105.4873476	103.6886873	101.9407063	100.2415589	98.58948082	96.98278509
150601A00426	6/1/2015	3.37	2/21/2029	6/1/2015	130.35177	124.874226	119.7270587	114.8867516	110.3316581	106.0418402	101.9989223	98.1859569	94.58730334
150601A00394	6/1/2015	2.1	12/31/2020	6/1/2015	101.00064	100.8232192	100.6467086	100.4711045	100.2963992	100.122585	99.94965442	99.77760014	99.60641478
150601A00395	6/1/2015	2.86	1/3/2024	6/1/2015	111.14476	109.2614421	107.4309559	105.6513704	103.9208437	102.2376151	100.6000012	99.00639166	97.45524556
150601A00396	6/1/2015	3.61	1/3/2029	6/1/2015	130.97674	125.572661	120.4895103	115.7047648	111.1976666	106.9490759	102.9413332	99.15813415	95.58441569
150601A00397	6/1/2015	2.2	12/31/2020	6/1/2015	100.99843	100.824408	100.6512718	100.4790133	100.3076253	100.1371004	99.96743147	99.79861137	99.63063308
150601A00407	6/1/2015	2.06	1/22/2021	6/1/2015	101.04568	100.8586192	100.6726405	100.4877299	100.3038768	100.1210708	99.93930165	99.75855926	99.57883365
150601A00409	6/1/2015	1.98	1/22/2021	6/1/2015	101.13771	100.9312399	100.7259919	100.5219511	100.3191057	100.1174441	99.91695485	99.71762666	99.51944837
150601A00330	6/1/2015	2.6	8/2/2023	6/1/2015	109.34041	107.7148377	106.130708	104.5866125	103.0812025	101.6131856	100.1813234	98.78442856	97.42136211
150601A00348	6/1/2015	2.11	9/16/2020	6/1/2015	100.09864	100.0812943	100.0639698	100.0466661	100.0293833	100.0121213	99.99488012	99.97765963	99.96045984
150601A00370	6/1/2015	2.58	10/31/2023	6/1/2015	110.09567	108.3239482	106.6000508	104.9222833	103.2890241	101.6987219	100.1498919	98.64111245	97.17102182
150601A00371	6/1/2015	1.88	10/30/2020	6/1/2015	100.46926	100.3833472	100.2976699	100.2122288	100.1270227	100.0420507	99.95731175	99.87280479	99.78852882
150601A00387	6/1/2015	2.81	12/19/2023	6/1/2015	110.92192	109.0644547	107.258634	105.5025839	103.7945138	102.132712	100.5155417	98.94143704	97.40889925
150601A00390	6/1/2015	2.39	5/20/2022	6/1/2015	106.50598	105.384356	104.2864262	103.2114214	102.1586025	101.1272633	100.1167283	99.12635137	98.15551362
150601A00096	6/1/2015	2.32	11/23/2020	6/1/2015	100.71157	100.5930949	100.4750495	100.3574306	100.2402358	100.1234625	100.0071082	99.89117048	99.77564687
150601A00100	6/1/2015	3.26	1/7/2021	6/1/2015	101.23841	101.0549541	100.8724697	100.6909492	100.5103841	100.3307662	100.1520871	99.97433887	99.79751339
150601A00165	6/1/2015	2.66	6/4/2032	6/1/2015	138.46602	130.3687036	122.9286867	116.0841872	109.77981	103.9658383	98.59760703	93.63495043	89.04171316
150601A00261	6/1/2015	3.19	2/11/2033	6/1/2015	164.47178	150.5186295	138.035215	126.8513114	116.8176719	107.8033147	99.69317518	92.38607345	85.79295193
150601A00270	6/1/2015	3.12	3/21/2031	6/1/2015	161.08063	148.1401035	136.4475908	125.8725008	116.2987124	107.622895	99.75303013	92.60711185	86.11200296
150601A00299	6/1/2015	1.8	4/11/2023	6/1/2015	107.42105	105.9565037	104.5268639	103.1309968	101.7678177	100.4362859	99.13540303	97.86421026	96.6217869
150601A00035	6/1/2015	5.73	4/1/2038	6/1/2015	188.74773	173.3069098	159.6107954	147.4325466	136.577485	126.8782408	118.1906691	110.3904067	103.3699681
150601A00038	6/1/2015	5.77	6/2/2023	6/1/2015	126.155	123.0163293	119.9766823	117.0322267	114.1793086	111.4144437	108.7343084	106.1357306	103.6156815
150601A00040	6/1/2015	5.45	7/14/2023	6/1/2015	113.86547	112.1695177	110.516571	108.9051752	107.3339363	105.8015187	104.3066422	102.8480792	101.4246522

Classification | Public

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
150601A00058	6/1/2015	4.46	8/16/2024	6/1/2015	116.56432	114.247969	112.0053083	109.8333644	107.7293081	105.6904452	103.714209	101.7981532	99.93994558
150601A00061	6/1/2015	4.25	9/30/2024	6/1/2015	116.62631	114.2368474	111.9252677	109.6883622	107.5230829	105.4265296	103.3959417	101.4286902	99.52227085
150601A00089	6/1/2015	2.56	10/27/2020	6/1/2015	100.48805	100.4083557	100.3288666	100.2495846	100.170509	100.0916387	100.012973	99.93451105	99.85625196
150601A00019	6/1/2015	5.64	10/3/2022	6/1/2015	119.64395	117.3266643	115.0684782	112.867455	110.7217358	108.6295371	106.5891475	104.598924	102.6572887
150601A00022	6/1/2015	5.43	10/26/2037	6/1/2015	183.4551	168.7280368	155.6330985	143.9621669	133.536069	124.2002916	115.8213615	108.2837848	101.4874547
150601A00023	6/1/2015	5.46	10/30/2037	6/1/2015	198.15079	180.3410555	164.6238008	150.7220872	138.3985094	127.4492293	117.6989492	108.9966727	101.2121265
150601A00024	6/1/2015	5.58	11/8/2022	6/1/2015	120.42683	117.9937805	115.6249292	113.3180823	111.0711392	108.8820896	106.7490082	104.6700508	102.6434499
150601A00030	6/1/2015	5.28	11/26/2027	6/1/2015	159.40314	150.4307401	142.077593	134.296399	127.0437646	120.2798564	113.9680882	108.0748378	102.5691893
150601A00033	6/1/2015	5.96	12/24/2025	6/1/2015	149.52128	143.0062998	136.839682	131.0005738	125.4694885	120.22821	115.2597025	110.5480276	106.0782678
141124A00024	11/24/2014	2.27	11/30/2021	11/24/2014	107.54352	106.2051803	104.9010432	103.6297959	102.3901959	101.1810623	100.0012727	98.84975917	97.72550507
141126A00006	11/26/2014	2.41	11/30/2021	11/26/2014	107.59999	106.2455589	104.9257706	103.6393016	102.3848944	101.1613537	99.96754335	98.80238213	97.66484085
150601A00001	6/1/2015	5.43	6/15/2037	6/1/2015	195.32463	178.144817	162.9432927	149.4632163	137.4837406	126.814675	117.2919752	108.7739282	101.1379216
150601A00005	6/1/2015	4.84	6/9/2025	6/1/2015	139.40458	133.7844664	128.4410439	123.3589256	118.5236754	113.9217425	109.5404015	105.3676975	101.3923939
150601A00011	6/1/2015	5.17	8/3/2022	6/1/2015	117.17572	115.0667813	113.0082966	110.998732	109.0366107	107.1205112	105.2490645	103.4209518	101.6349024
150601A00018	6/1/2015	4.91	9/5/2025	6/1/2015	141.64512	135.6900649	130.0405941	124.679112	119.5891335	114.7552118	110.1628667	105.798519	101.6494295
140311A00037	3/11/2014	2.59	3/11/2021	3/11/2014	103.39206	102.8267669	102.2675568	101.7143354	101.1670071	100.6254779	100.089656	99.55945149	99.03477627
140311A00039	3/11/2014	3.06	3/11/2024	3/11/2014	120.16546	116.7354673	113.4323114	110.2504408	107.184582	104.2297244	101.3811057	98.63419803	95.98469478
140314A00026	3/14/2014	2.99	3/14/2024	3/14/2019	122.30479	118.5491827	114.9368746	111.4614849	108.1169552	104.8975332	101.7977549	98.81242833	95.93661866
140325A00012	3/25/2014	3.61	3/26/2029	3/25/2019	134.46749	128.3378917	122.5973952	117.2168967	112.1697195	107.4313922	102.9794507	98.7932585	94.85384525
140414A00009	4/14/2014	2.32	4/30/2024	4/14/2014	113.84914	111.3381164	108.9087398	106.5576203	104.2815389	102.0774356	99.9424004	97.87366438	95.86859195
140911A00033	9/11/2014	3.02	9/13/2027	9/11/2014	129.3263	123.77728	118.563367	113.6612322	109.0493425	104.7078076	100.6182446	96.76365379	93.12830597
130425A00032	4/25/2013	2.59	4/25/2028	4/25/2018	126.61937	121.3261643	116.3403357	111.6407326	107.2078365	103.023623	99.0714363	95.33587556	91.80269122
130624A00017	6/24/2013	3.4	6/26/2023	6/24/2013	119.08022	116.0434141	113.102978	110.2552825	107.4968595	104.8243915	102.234704	99.72475856	97.29164618
130624A00019	6/24/2013	3.4	6/26/2023	6/24/2013	119.08022	116.0434141	113.102978	110.2552825	107.4968595	104.8243915	102.234704	99.72475856	97.29164618
130913A00018	9/13/2013	3.72	9/13/2028	9/13/2013	131.24528	125.8331747	120.7485934	115.9682208	111.4705955	107.2359489	103.24606	99.48412284	95.93462654
130918A00010	9/18/2013	2.43	9/18/2020	9/18/2013	100.31163	100.2613661	100.2111649	100.1610301	100.1109614	100.0609589	100.0110223	99.96115147	99.91134634
130925A00035	9/25/2013	1.53	6/25/2025	9/25/2013	115.667	112.3422459	109.151408	106.0879757	103.1458004	100.319074	97.60230732	94.99031115	92.47817748
121217A00009	12/17/2012	2.02	12/17/2027	12/17/2012	123.01053	118.2024678	113.6641544	109.3776999	105.3265414	101.4953356	97.8698615	94.43692992	91.18430199
121219A00029	12/19/2012	1.75	12/19/2022	12/21/2017	106.90977	105.5452397	104.2114037	102.9072731	101.631904	100.3843921	99.16387047	97.96950792	96.80050681
121219A00045	12/19/2012	1.75	12/19/2022	12/19/2017	106.65147	105.3390105	104.0554912	102.8000352	101.5717961	100.3699601	99.19374444	98.04239618	96.91519051
121220A00023	12/20/2012	1.82	12/20/2022	12/20/2012	111.32668	109.1534618	107.0380423	104.978484	102.9729279	101.0195906	99.11676058	97.26279494	95.45611579
130206A00004	2/6/2013	2.14	2/7/2028	2/6/2013	124.4838	119.4785193	114.7531929	110.2893267	106.0697936	102.0787254	98.30141079	94.72420385	91.334439
130207A00012	2/7/2013	2.9	2/7/2033	2/7/2013	142.83001	133.6556081	125.285955	117.6395595	110.6439676	104.2346931	98.35427916	92.9514758	87.98051993

Classification | Public

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
120907A00026	9/7/2012	1.71	9/7/2022	9/7/2012	109.45714	107.6249404	105.8383804	104.0959945	102.3963793	100.7381867	99.12012164	97.54093916	95.99944236
120907A00032	9/7/2012	1.86	9/9/2024	9/7/2012	116.4722	113.1774041	110.0159765	106.9815783	104.0682164	101.2702189	98.58221561	95.99912067	93.51611516
121120A00010	11/20/2012	1.93	11/22/2027	11/20/2012	122.16743	117.4735031	113.0425673	108.8571697	104.901164	101.1595995	97.61862409	94.26539498	91.087998
121120A00011	11/20/2012	2.22	11/22/2027	11/20/2012	131.45514	124.7935052	118.5722432	112.7585359	107.3222311	102.2356121	97.47318528	93.01148867	88.828917
121126A00009	11/26/2012	1.07	11/30/2020	11/26/2012	101.23563	100.9774765	100.7206277	100.4650763	100.2108125	99.95782679	99.70610947	99.45565108	99.20644223
121214A00014	12/14/2012	2.16	12/14/2027	12/14/2017	123.4603	118.6830176	114.1733815	109.913664	105.8874488	102.0795276	98.47580358	95.06320199	91.82958928
120614A00015	6/14/2012	1.89	6/14/2022	6/14/2012	109.74661	107.9215603	106.1374468	104.3930238	102.6870957	101.0185141	99.38617503	97.78901721	96.22601967
120621A00009	6/21/2012	3.18	6/21/2032	6/21/2012	154.2488	142.6788185	132.2303802	122.7818508	114.2257569	106.4670486	99.42158235	93.01479813	87.18056476
120716A00025	7/16/2012	1.83	7/18/2022	7/17/2017	107.84501	106.3208885	104.8303872	103.372526	101.946358	100.5509708	99.18548472	97.84905149	96.54085291
120827A00048	8/27/2012	2.01	8/27/2027	8/27/2012	123.90068	118.952577	114.2740928	109.8478928	105.6578962	101.6891739	97.92785813	94.36105932	90.97679078
120827A00052	8/27/2012	2.01	8/27/2027	8/27/2012	123.90068	118.9525806	114.2740952	109.8478941	105.6578965	101.6891734	97.92785681	94.36105733	90.9767882
120907A00005	9/7/2012	1.76	9/7/2022	9/7/2012	105.89154	104.7282875	103.5925496	102.4834408	101.4001109	100.3417441	99.30755718	98.29679807	97.30874426
120217A00007	2/17/2012	2.25	2/20/2024	2/17/2012	116.63065	113.5470341	110.5737015	107.7059404	104.9392692	102.2694246	99.69235073	97.20418682	94.80125711
120315A00002	3/14/2012	2.56	3/15/2027	3/14/2022	123.76922	119.2838603	115.028303	110.9884739	107.1512739	103.5045027	100.036791	96.73753811	93.59685453
120410A00005	4/10/2012	2.35	4/12/2027	4/10/2012	123.44081	118.8693402	114.5347376	110.42233	106.5184752	102.8104785	99.28652008	95.9355887	92.74742031
120423A00011	4/23/2012	2.07	4/25/2022	4/24/2017	106.76368	105.5133855	104.2872044	103.0844524	101.904469	100.7466191	99.61029165	98.4948987	97.3998741
120523A00024	5/23/2012	2.6	5/24/2027	5/23/2012	124.12061	119.4496572	115.022998	110.825335	106.8424588	103.0611596	99.46914949	96.05499119	92.80803297
120614A00013	6/14/2012	1.89	6/14/2022	6/14/2012	109.74665	107.9215969	106.1374751	104.393044	102.687108	101.0185187	99.3861722	97.78900713	96.22600253
110824A00006	8/24/2011	2.69	8/24/2026	8/24/2011	123.81159	119.4663372	115.3296936	111.3897397	107.6353274	104.0560246	100.6420646	97.38429929	94.27415564
111007A00007	10/7/2011	3.92	10/7/2031	10/7/2011	163.11433	150.6783255	139.4407462	129.2741726	120.0656354	111.714892	104.1329177	97.24058236	90.96749171
111128A00006	11/28/2011	3.03	11/28/2031	11/28/2011	140.04254	132.052817	124.7028129	117.9331593	111.690557	105.9271073	100.5997225	95.66960511	91.1017865
120119A00015	1/19/2012	2.27	1/19/2024	1/19/2012	116.14109	113.1675968	110.2978654	107.5275734	104.8526051	102.26904	99.77314304	97.361354	95.03027874
120210A00004	2/10/2012	1.98	2/10/2022	2/10/2012	107.81716	106.3867672	104.9836463	103.60707	102.2563395	100.9307799	99.62973976	98.35258973	97.0987217
120210A00005	2/10/2012	1.64	2/10/2022	2/10/2012	105.43765	104.3867664	103.3539613	102.338779	101.3407802	100.3595402	99.39464855	98.44570825	97.51233533
070518A00023	5/18/2007	5.46	5/18/2027	5/18/2007	135.75369	130.8428033	126.185238	121.7652836	117.5683398	113.5808256	109.7901003	106.1843914	102.752729
080220A00035	2/20/2008	4.65	2/22/2022	2/20/2008	108.59267	107.5099932	106.4463868	105.4013544	104.3744198	103.3651235	102.3730216	101.3976855	100.4387007
080423A00066	4/23/2008	4.41	4/24/2023	4/23/2008	114.16264	112.270803	110.4277191	108.6316966	106.8811186	105.1744381	103.5101744	101.8869098	100.303286
081226A00013	12/26/2008	3.99	12/26/2023	12/26/2008	114.46685	112.362172	110.3199969	108.3379636	106.4138156	104.5453974	102.7306485	100.9675989	99.25436445
110223A00003	2/23/2011	3.41	2/23/2021	2/23/2011	103.52184	103.000954	102.4852017	101.9745036	101.4687856	100.9679753	100.4720015	99.98079453	99.4942859
110414A00007	4/14/2011	3.95	1/21/2025	4/14/2011	120.81642	117.6414521	114.5856866	111.6436057	108.8099906	106.0799002	103.448655	100.9118214	98.46519661
190805A00031	8/5/2020	1.77	8/4/2023	8/5/2020	116.28672	112.9613172	109.7485092	106.6438658	103.6431568	100.7423415	97.93755955	95.22512178	92.60150139
190830A00020	8/31/2020	1.67	8/31/2023	8/31/2020	116.37169	112.9587913	109.6642592	106.4833182	103.4114146	100.4442044	97.57754299	94.80747412	92.13022042
061013A00024	10/13/2006	5.53	10/15/2021	10/13/2006	110.6849	109.4207855	108.1857429	106.9787718	105.7989205	104.64528	103.5169815	102.4131943	101.3331238

Classification | Public

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
081219A00006	12/19/2008	3.88	12/22/2023	12/19/2008	126.66346	122.6918338	118.8680043	115.1856366	111.6387015	108.2214631	104.9284618	101.7545	98.69462736
110609A00010	6/9/2011	3.83	6/9/2021	6/9/2011	105.95221	105.1163023	104.2935991	103.4837874	102.6865655	101.9016413	101.1287312	100.3675608	99.6178637
110706A00009	7/6/2011	3.93	7/6/2021	7/6/2011	106.61186	105.6899119	104.783925	103.8934886	103.0182043	102.1576875	101.3115663	100.4794813	99.66108491
191002A00046	2/14/2020	1.75	2/14/2023	2/14/2020	113.62629	110.8811683	108.2167509	105.6301911	103.1187623	100.6798505	98.31094911	96.00965382	93.77365756
200131A00029	1/31/2020	1.78	10/31/2024	1/31/2020	123.19308	118.2501654	113.5330215	109.0300648	104.7303782	100.6236665	96.70021656	92.95086112	89.36694444
200131A00031	1/31/2020	1.74	1/31/2024	1/31/2020	118.89093	114.9438449	111.1488561	107.4992993	103.988836	100.6114389	97.36137438	94.23318662	91.22168279
190917A00033	1/10/2020	2.03	1/10/2023	1/10/2020	113.7807	111.1471826	108.588088	106.1008973	103.6831917	101.3326483	99.04703519	96.82420789	94.66210502
191002A00038	1/13/2020	1.76	1/13/2023	1/13/2020	113.1505	110.5155971	107.9554489	105.4675148	103.0493571	100.698635	98.41309978	96.19059101	94.02903237
191002A00042	1/13/2020	1.76	1/13/2023	1/13/2020	113.1505	110.5155971	107.9554489	105.4675148	103.0493571	100.698635	98.41309978	96.19059101	94.02903237
191002A00043	2/3/2020	1.75	2/3/2023	2/3/2020	113.4469	110.7420378	108.1156733	105.5650744	103.0876234	100.6808095	98.34222331	96.06955215	93.86057579
191002A00044	2/3/2020	1.75	2/3/2023	2/3/2020	113.4469	110.7420378	108.1156733	105.5650744	103.0876234	100.6808095	98.34222331	96.06955215	93.86057579
191002A00045	2/14/2020	1.75	2/14/2023	2/14/2020	113.62629	110.8811683	108.2167509	105.6301911	103.1187623	100.6798505	98.31094911	96.00965382	93.77365756
190904A00036	9/4/2019	1.74	6/8/2022	9/4/2019	109.76798	107.840004	105.9557599	104.1138738	102.3130332	100.5519796	98.82950533	97.14445143	95.49570476
190904A00037	9/4/2019	1.73	6/15/2022	9/4/2019	109.83864	107.88906	105.9839406	104.1219216	102.3016993	100.5220208	98.78168214	97.07952548	95.41443701
190904A00040	9/4/2019	1.73	6/22/2022	9/4/2019	109.94782	107.9758824	106.0491647	104.1663188	102.3260483	100.5271051	98.76828753	97.04843767	95.36643988
190904A00043	9/4/2019	1.72	12/15/2022	9/4/2019	112.61537	110.0756705	107.6062384	105.2046578	102.8686146	100.5958918	98.38436398	96.23199323	94.13682445
190904A00044	9/4/2019	1.72	12/30/2022	9/4/2019	112.83956	110.2518328	107.7364564	105.291002	102.9131397	100.6006309	98.35132432	96.163152	94.0341256
190917A00030	1/10/2020	2.03	1/10/2023	1/10/2020	113.7807	111.1471826	108.588088	106.1008973	103.6831917	101.3326483	99.04703519	96.82420789	94.66210502
190829A00073	8/29/2019	1.81	3/15/2023	8/29/2019	114.2407	111.3931981	108.6317436	105.9532067	103.3545933	100.8330375	98.38579542	96.01023909	93.7038507
190829A00075	8/29/2019	1.8	6/15/2023	8/29/2019	115.61967	112.4633199	109.4095694	106.4544609	103.594213	100.8252151	98.14401837	95.5473271	93.03199104
190829A00076	8/29/2019	1.81	6/30/2023	8/29/2019	115.88088	112.6727689	109.5699531	106.5684209	103.6643347	100.8540231	98.1339732	95.50082245	92.95135164
190829A00078	8/29/2019	1.8	12/15/2023	8/29/2019	118.40338	114.6159184	110.969721	107.4587013	104.0770747	100.8193404	97.68026599	94.65487205	91.73841848
190829A00080	8/29/2019	1.8	12/29/2023	8/29/2019	118.61329	114.7779268	111.0867469	107.5335725	104.1125265	100.8180138	97.64470604	94.58752766	91.64164223
190904A00034	9/4/2019	1.74	6/1/2022	9/4/2019	109.65845	107.7528052	105.8901394	104.0690766	102.2882962	100.5465339	98.84257882	97.17527088	95.54349776
190826A00046	8/26/2019	1.77	8/26/2024	8/26/2019	122.15691	117.4562122	112.9625015	108.6655592	104.5557296	100.6238837	96.86138672	93.2600694	89.81219977
190829A00013	8/29/2019	1.78	8/29/2024	8/29/2019	122.24548	117.5329326	113.0282816	108.7212491	104.6021187	100.6617048	96.89132056	93.28274819	89.82821076
190829A00016	8/29/2019	1.82	8/29/2022	8/29/2019	111.1807	108.9894446	106.8529675	104.7695409	102.7375061	100.7552684	98.82129382	96.93410672	95.09228688
190829A00017	8/29/2019	1.8	8/29/2023	8/29/2019	116.75929	113.3466557	110.0521157	106.8709179	103.7985275	100.8306184	97.96306234	95.19191853	92.51342392
190829A00028	8/29/2019	1.78	8/29/2024	8/29/2019	122.24548	117.5329326	113.0282816	108.7212491	104.6021187	100.6617048	96.89132056	93.28274819	89.82821076
190829A00072	8/29/2019	1.81	12/15/2022	8/29/2019	112.83354	110.2911756	107.8191398	105.415012	103.0764763	100.801314	98.58739824	96.43268944	94.33523108
190722A00054	12/19/2019	2.02	12/20/2021	12/19/2019	107.56956	106.1549259	104.7696975	103.4129732	102.0838857	100.7816028	99.50532634	98.25428991	97.02775748
190722A00056	12/19/2019	2.02	12/20/2021	12/19/2019	107.56956	106.1549259	104.7696975	103.4129732	102.0838857	100.7816028	99.50532634	98.25428991	97.02775748
190726A00014	7/26/2019	2.23	7/24/2024	7/26/2019	123.61328	118.9927666	114.5709052	110.3381154	106.285332	102.4039722	98.68590717	95.12343565	91.70925936

Classification | Public

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
190807A00043	8/7/2019	1.8	8/7/2023	8/7/2019	116.42607	113.0889372	109.865087	106.7500485	103.7395544	100.8295294	98.01608046	95.29548776	92.66419568
190815A00040	8/15/2019	1.86	8/15/2023	8/15/2019	116.73711	113.3695884	110.1171629	106.9752606	103.9395152	101.005759	98.17001184	95.42847224	92.77750771
190815A00041	8/15/2019	1.86	8/15/2024	8/15/2019	122.37995	117.7113076	113.2466786	108.9760664	104.8900224	100.9796088	97.23636822	93.65229553	90.21981085
190621A00034	6/21/2019	2.17	6/15/2023	6/21/2019	116.72143	113.5488332	110.4792445	107.5086869	104.6333663	101.8496598	99.15410645	96.54339948	94.01437765
190621A00035	6/21/2019	2.19	12/15/2023	6/21/2019	119.78532	115.9739504	112.3045084	108.7708866	105.3672772	102.0881574	98.92827363	95.8826262	92.94645567
190621A00037	6/21/2019	2.21	5/15/2024	6/21/2019	122.37476	118.012254	113.8296809	109.8185495	105.9708224	102.2788918	98.73555278	95.33397963	92.067703
190621A00039	6/21/2019	2.21	6/17/2024	6/21/2019	122.91897	118.4361828	114.1418385	110.0269742	106.0831068	102.3022035	98.67665497	95.19925058	91.86315484
190722A00047	11/22/2019	2.03	11/22/2021	11/22/2019	107.22975	105.865931	104.5366433	103.2405853	101.9765232	100.7432836	99.53974993	98.3648588	97.21759718
190722A00051	11/22/2019	2.03	11/22/2021	11/22/2019	107.22975	105.865931	104.5366433	103.2405853	101.9765232	100.7432836	99.53974993	98.3648588	97.21759718
190530A00066	5/30/2019	2.44	5/30/2023	5/30/2019	117.24809	114.1190717	111.090501	108.1584482	105.3191738	102.5691133	99.90486793	97.32319506	94.8209998
190531A00051	6/3/2019	2.27	6/3/2021	6/3/2019	104.60839	103.7967235	102.9976186	102.2107831	101.4359361	100.6728051	99.92112609	99.18064273	98.45110634
190604A00019	6/4/2019	2.27	6/4/2024	6/4/2019	122.94779	118.5080766	114.2536643	110.1757231	106.2658979	102.5162837	98.91939746	95.46815333	92.15583823
190607A00040	6/7/2019	2.12	6/7/2022	6/7/2019	110.45653	108.5250198	106.6372608	104.7918772	102.9875516	101.2230213	99.49707482	97.8085498	96.15633016
190607A00041	6/7/2019	2.12	6/7/2022	6/7/2019	110.45653	108.5250198	106.6372608	104.7918772	102.9875516	101.2230213	99.49707482	97.8085498	96.15633016
190614A00007	6/14/2019	2.22	6/15/2021	6/14/2019	104.7638	103.9149631	103.0798487	102.258128	101.4494805	100.653596	99.87017397	99.09892316	98.33956145
190529A00078	5/29/2019	2.39	11/30/2020	5/29/2019	101.53371	101.2763573	101.0202978	100.7655263	100.5120332	100.259809	100.0088443	99.75912953	99.51065559
190530A00018	5/30/2019	2.36	5/28/2021	5/30/2019	104.57445	103.7811626	102.9998753	102.2303208	101.4722363	100.7253669	99.989465	99.26429055	98.54961026
190530A00028	5/30/2019	2.35	5/28/2021	5/30/2019	104.56684	103.7735799	102.9923246	102.2228018	101.4647486	100.7179101	99.98203892	99.25689482	98.54224456
190530A00040	5/30/2019	2.32	11/30/2021	5/30/2019	107.73975	106.3466959	104.9895105	103.6668264	102.3773414	101.1198178	99.89307911	98.69600564	97.52753154
190530A00048	5/30/2019	2.41	5/31/2022	5/30/2019	110.87052	108.9564531	107.0854847	105.2562284	103.4673557	101.7175955	100.0057309	98.33059578	96.69107268
190530A00049	5/30/2019	2.44	5/30/2023	5/30/2019	117.24809	114.1190717	111.090501	108.1584482	105.3191738	102.5691133	99.90486793	97.32319506	94.8209998
190514A00017	5/14/2019	2.43	5/17/2021	5/14/2019	104.43458	103.6751481	102.9267478	102.1891387	101.4620883	100.7453711	100.0387676	99.34206474	98.65505528
190515A00030	5/15/2019	2.49	5/15/2024	5/15/2019	123.50041	119.1160203	114.9122376	110.8805382	107.01286	103.3015714	99.73944497	96.31963361	93.03564738
190515A00032	5/15/2019	2.49	5/15/2024	5/15/2019	123.50041	119.1160203	114.9122376	110.8805382	107.01286	103.3015714	99.73944497	96.31963361	93.03564738
190517A00023	5/17/2019	2.51	5/17/2024	5/17/2019	123.61539	119.2221682	115.0101253	110.9707022	107.0958015	103.3777583	99.80931471	96.38359508	93.09408305
190520A00048	5/20/2019	2.53	5/20/2024	5/20/2019	123.74799	119.3422765	115.1185874	111.0683019	107.1832699	103.4557779	99.87852262	96.44458623	93.14741334
190523A00035	5/23/2019	2.34	11/23/2021	5/23/2019	107.64256	106.2727041	104.9375811	103.6358868	102.3663778	101.1278716	99.91924296	98.73942062	97.58738392
190405A00040	4/3/2020	3.12	4/5/2030	4/3/2020	164.9142	150.9973956	138.387725	126.9548416	116.5820547	107.1648331	98.60948001	90.831958	83.75684746
190422A00030	4/22/2019	2.93	12/22/2025	4/22/2019	136.09147	129.3732099	123.0305058	117.0403653	111.3813228	106.0333315	100.9776613	96.19680589	91.67439623
190426A00023	4/26/2019	2.91	6/24/2026	4/26/2019	139.18801	131.705035	124.6751369	118.0684901	111.8573822	106.0160555	100.5205587	95.34861121	90.47947879
190501A00014	5/1/2019	2.62	5/1/2024	5/1/2019	123.7762	119.432693	115.2664227	111.2691113	107.43292	103.7504237	100.2145864	96.81873782	93.55655243
190501A00024	5/1/2019	2.62	5/1/2024	5/1/2019	123.7762	119.432693	115.2664227	111.2691113	107.43292	103.7504237	100.2145864	96.81873782	93.55655243
190514A00006	5/14/2019	2.43	5/17/2021	5/14/2019	104.43458	103.6751481	102.9267478	102.1891387	101.4620883	100.7453711	100.0387676	99.34206474	98.65505528

Classification | Public

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
190318A00017	3/19/2019	2.7	3/18/2022	3/19/2019	110.04981	108.3660027	106.7169089	105.1015337	103.518918	101.9681386	100.4483067	98.95856616	97.49809217
190322A00024	3/22/2019	2.55	3/22/2021	3/22/2019	103.52392	102.935659	102.3540821	101.7790728	101.2105202	100.6483159	100.0923539	99.54253062	98.99874461
190325A00022	3/25/2019	2.55	11/25/2022	3/25/2019	114.27626	111.7777551	109.3471762	106.9821459	104.6803885	102.4397285	100.2580848	98.13346631	96.06396656
190327A00027	3/27/2019	2.66	1/15/2025	3/27/2019	128.55713	123.2363893	118.1675169	113.3372814	108.7332159	104.3435681	100.1572565	96.16382823	92.35342032
190328A00077	3/28/2019	2.46	9/28/2021	3/28/2019	106.80541	105.6197031	104.4602403	103.3261557	102.2166231	101.1308519	100.0680851	99.02759759	98.00869431
190329A00012	3/29/2019	2.61	3/29/2024	3/29/2019	123.14538	118.9251005	114.8734934	110.9828598	107.2458947	103.6556689	100.2056067	96.88946599	93.70131897
190311A00069	3/25/2019	2.78	3/27/2023	3/25/2019	117.07357	114.1507244	111.316759	108.5684112	105.9025595	103.316218	100.8065296	98.3707594	96.00628838
190311A00072	3/25/2019	2.79	9/25/2023	3/25/2019	120.43215	116.8729699	113.4388594	110.1246802	106.92554	103.8367778	100.8539505	97.97282186	95.18935123
190311A00073	3/14/2019	2.81	3/14/2024	3/14/2019	123.64734	119.4664654	115.4510803	111.5937035	107.8872343	104.324933	100.9004	97.60755687	94.44062801
190311A00076	3/14/2019	2.88	9/16/2024	3/14/2019	127.37398	122.4922346	117.8268125	113.3669333	109.1024137	105.0236325	101.1214963	97.38740736	93.81323371
190315A00039	3/15/2019	2.64	9/15/2021	3/15/2019	106.768	105.6235354	104.5035526	103.4072758	102.3339582	101.2828837	100.253366	99.24474667	98.25639383
190318A00016	3/19/2019	2.7	3/18/2022	3/19/2019	110.04981	108.3660027	106.7169089	105.1015337	103.518918	101.9681386	100.4483067	98.95856616	97.49809217
190221A00011	2/21/2019	2.81	8/23/2021	2/21/2019	106.5196	105.4488438	104.3995833	103.3711733	102.3629967	101.3744605	100.4049946	99.45405085	98.52110202
190221A00012	2/21/2019	2.83	8/23/2022	2/21/2019	113.1901	110.9958339	108.8558953	106.7685847	104.7322706	102.7453836	100.8064139	98.91390838	97.06646824
190311A00030	3/11/2019	2.68	3/11/2021	3/11/2019	103.40487	102.8495025	102.3001006	101.7565689	101.2188137	100.6867428	100.1602665	99.63929674	99.12374722
190311A00031	3/11/2019	2.71	9/8/2021	3/11/2019	106.71387	105.5917899	104.4932634	103.4175518	102.3639499	101.3317808	100.3203953	99.32917012	98.35750672
190311A00061	3/25/2019	2.75	3/25/2022	3/25/2019	110.25739	108.5512382	106.8805174	105.244199	103.6412935	102.0708493	100.5319502	99.0237145	97.54529286
190311A00068	3/25/2019	2.76	9/26/2022	3/25/2019	113.6723	111.3670708	109.1209003	106.9318595	104.7981007	102.7178509	100.6894073	98.71113476	96.7814621
190122A00017	1/22/2019	2.94	5/2/2022	1/22/2019	111.29311	109.4620903	107.6708209	105.918079	104.2026884	102.5235206	100.879493	99.26956631	97.6927423
190122A00018	1/22/2019	2.98	12/1/2022	1/22/2019	115.40743	112.8764371	110.4145849	108.019442	105.6886841	103.4200895	101.2115334	99.06098293	96.96649193
190123A00059	1/23/2019	2.95	1/24/2022	1/23/2019	109.42915	107.9168185	106.43312	104.9773078	103.5486617	102.1464855	100.7701065	99.41887423	98.09215943
190206A00009	2/12/2019	2.84	2/11/2022	2/12/2019	109.61226	108.0412314	106.5009726	104.9906579	103.5094873	102.0566885	100.6315161	99.23325009	97.86119515
190206A00010	2/12/2019	2.84	2/11/2022	2/12/2019	109.61226	108.0412314	106.5009726	104.9906579	103.5094873	102.0566885	100.6315161	99.23325009	97.86119515
190221A00009	2/21/2019	2.81	2/22/2021	2/21/2019	103.16267	102.6581813	102.1586245	101.6639259	101.174015	100.6888224	100.2082802	99.73232172	99.26088158
181220A00076	12/20/2018	3.02	1/20/2023	12/20/2018	116.44809	113.7496016	111.127995	108.5806407	106.1050156	103.6986977	101.3593614	99.0847728	96.87278588
181220A00077	12/20/2018	3.06	12/20/2023	12/20/2018	122.9627	119.0802399	115.3422561	111.7425557	108.2752456	104.9347194	101.7156414	98.61293209	95.62175386
181220A00078	12/20/2018	3.17	12/20/2024	12/20/2018	130.50391	125.2278381	120.19743	115.3999059	110.8232243	106.4560324	102.2876231	98.30789487	94.50731343
181220A00079	12/20/2018	3.23	6/20/2025	12/20/2018	134.37747	128.3630086	122.656376	117.2401572	112.0980127	107.2146098	102.5755548	98.16733063	93.97723858
181227A00001	12/27/2018	2.92	12/27/2021	12/27/2018	108.88551	107.4532748	106.0483716	104.6700514	103.3175969	101.9903166	100.6875435	99.40863421	98.1529676
190110A00036	1/10/2019	2.88	10/9/2020	1/10/2019	100.7076	100.5984289	100.4895028	100.380825	100.2723947	100.164211	100.056273	99.94857978	99.84113058
181203A00039	12/3/2018	3.27	12/1/2023	12/3/2018	123.33836	119.5107166	115.8238872	112.2717866	108.8486355	105.5489443	102.3674963	99.29933207	96.33973464
181206A00018	12/6/2018	3.13	12/6/2023	12/6/2018	122.944	119.1069826	115.4115989	111.8517393	108.4215997	105.115665	101.9286923	98.8556951	95.8919293
181206A00021	12/6/2018	3.15	12/6/2023	12/6/2018	123.01431	119.176083	115.4795253	111.9185238	108.4872735	105.1802581	101.9922337	98.91821271	95.9534501

Classification | Public

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
181210A00066	12/10/2018	3.13	12/11/2023	12/10/2018	123.03964	119.1848526	115.4727586	111.8972116	108.4523748	105.1326994	101.9329083	98.84798086	95.87313858
181210A00068	12/10/2018	3.34	12/10/2025	12/10/2018	138.28839	131.5518168	125.1890595	119.1772927	113.4952106	108.1229186	103.0418321	98.23458237	93.68493019
181220A00041	12/20/2018	3.36	12/18/2026	12/20/2018	145.3656	137.0318658	129.2375337	121.9447361	115.1184628	108.7263286	102.7383629	97.12681726	91.86598938
181015A00034	4/15/2019	3.25	4/15/2021	4/15/2019	104.39782	103.7349223	103.0804433	102.434226	101.7961146	101.165957	100.543605	99.92891395	99.32174284
181016A00019	10/18/2018	3.32	10/16/2023	10/18/2018	122.59277	118.9303555	115.3982737	111.9910843	108.7036149	105.5309417	102.4683763	99.51145211	96.65591276
181029A00051	2/5/2019	3.69	2/5/2029	2/5/2019	163.01978	150.9438429	139.8745314	129.7221247	120.4053539	111.8505626	103.9909574	96.76593553	90.12048229
181031A00070	3/1/2019	3.77	3/1/2029	3/1/2019	164.31204	152.0724578	140.8603018	130.583311	121.157984	112.5087017	104.5669449	97.27059339	90.56329743
181113A00073	11/13/2018	3.17	11/13/2020	11/13/2018	101.40591	101.1970939	100.9891468	100.7820662	100.5758465	100.3704824	100.1659685	99.96229952	99.7594701
181119A00020	11/19/2018	3.06	11/19/2020	11/19/2018	101.49781	101.2717741	101.0467588	100.8227539	100.5997528	100.3777486	100.1567346	99.93670409	99.71765055
180912A00017	9/12/2018	3.13	9/12/2023	9/12/2018	121.29842	117.7680672	114.3605149	111.0707762	107.8940954	104.8259382	101.8619803	98.99809614	96.23034833
180919A00012	9/19/2018	3	9/18/2020	9/19/2018	100.33136	100.2811584	100.2310243	100.1809555	100.130952	100.0810135	100.0311401	99.98133148	99.93158762
180919A00013	9/19/2018	3.14	9/19/2022	9/19/2018	114.36456	112.0735641	109.8408466	107.6645197	105.5427751	103.4738766	101.4561563	99.48801196	97.56790316
180925A00033	9/25/2018	3.26	9/25/2023	9/25/2018	121.97936	118.395162	114.9366993	111.5988077	108.3765731	105.2653129	102.2605639	99.35807052	96.55377329
181001A00031	10/1/2018	3.23	9/29/2023	10/1/2018	121.9597	118.3626102	114.8920658	111.5428533	108.3100123	105.1888175	102.1747653	99.2635624	96.45111426
181003A00023	10/3/2018	3.17	4/4/2022	10/3/2018	111.13948	109.3957836	107.6886895	106.0171142	104.3800197	102.7764085	101.2053211	99.6658348	98.15706126
180821A00040	8/21/2018	2.99	8/21/2023	8/21/2018	120.4268	116.9822396	113.6555583	110.4420482	107.3372223	104.336798	101.4366872	98.63298572	95.92196391
180821A00041	8/21/2018	3	9/21/2023	8/21/2018	121.0472	117.4912449	114.0598036	110.7477836	107.5503303	104.4628168	101.4808323	98.60017051	95.81681842
180823A00043	8/23/2018	2.83	9/23/2020	8/23/2018	100.41257	100.3484029	100.2843331	100.2203558	100.1564706	100.0926775	100.0289762	99.96536651	99.90184829
180910A00037	9/10/2018	3.03	9/9/2022	9/10/2018	113.93358	111.6785733	109.4804143	107.3372905	105.247458	103.2092417	101.2210314	99.28127885	97.38849526
180910A00039	9/10/2018	3.03	9/9/2022	9/10/2018	113.93358	111.6785733	109.4804143	107.3372905	105.247458	103.2092417	101.2210314	99.28127885	97.38849526
180911A00007	9/11/2018	3.12	9/8/2023	9/11/2018	121.18822	117.6728004	114.2793322	111.0028771	107.8387259	104.7823883	101.8295808	98.97621615	96.21839294
180713A00024	7/13/2018	2.96	7/13/2021	7/13/2018	105.89822	104.9580586	104.0345825	103.1273458	102.2359226	101.3599018	100.4988862	99.65249258	98.82035036
180726A00045	7/26/2018	3.1	7/26/2022	7/26/2018	113.20953	111.1012914	109.0433318	107.0341425	105.0722685	103.1563081	101.2849105	99.45677354	97.67064184
180726A00046	7/26/2018	3.2	12/26/2023	7/26/2018	123.57712	119.6645915	115.8980742	112.2713186	108.7783821	105.4136085	102.1716121	99.04726313	96.03567469
180727A00017	7/27/2018	3.16	7/27/2023	7/27/2018	120.4847	117.1204187	113.8687079	110.7251823	107.6856497	104.7461043	101.9027177	99.15182952	96.48993921
180821A00029	8/21/2018	3.01	8/21/2023	8/21/2018	120.49047	117.0449172	113.7172635	110.5028059	107.3970566	104.3957323	101.494744	98.6901868	95.97833034
180821A00039	8/21/2018	2.99	7/21/2023	8/21/2018	119.84368	116.5085734	113.2845504	110.1672991	107.152703	104.2368276	101.4159115	98.68635744	96.04472476
180621A00031	6/21/2018	3.07	6/21/2023	6/21/2018	119.51712	116.2838463	113.1556446	110.1284899	107.1985338	104.3620989	101.6156697	98.95588482	96.37952873
180621A00068	6/21/2018	3.32	6/23/2025	6/21/2018	134.91502	128.8763198	123.1469382	117.7093705	112.5471984	107.6450135	102.98835	98.56362179	94.35806458
180625A00012	6/25/2018	3.07	6/23/2023	6/25/2018	119.55572	116.315375	113.180475	110.1469798	107.2110333	104.3689499	101.6172052	98.95242885	96.37139591
180626A00026	6/26/2018	2.92	6/25/2021	6/26/2018	105.52185	104.638968	103.7708387	102.9170956	102.0773833	101.2513578	100.4386864	99.63904721	98.8521284
180627A00065	6/27/2018	2.9	6/25/2021	6/27/2018	105.50502	104.6222133	103.7541614	102.9004948	102.0608581	101.2349074	100.4223099	99.62274379	98.83589724
180709A00081	7/9/2018	3.05	7/7/2023	7/9/2018	119.76313	116.4744135	113.2938662	110.2173501	107.2409045	104.3607418	101.5732385	98.87492733	96.26248985

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
180529A00072	5/29/2018	3	5/30/2023	5/29/2018	118.88813	115.7353121	112.6835211	109.7288128	106.867429	104.0957876	101.4104726	98.80822501	96.2859343
180612A00031	6/12/2018	3.04	6/13/2022	6/12/2018	112.27849	110.3111116	108.3884533	106.509137	104.6718433	102.875305	101.1183048	99.39967272	97.71828396
180613A00046	6/13/2018	3	1/13/2022	6/13/2018	109.29524	107.8166802	106.3655714	104.9412083	103.5429131	102.1700305	100.8219267	99.49798815	98.19762143
180613A00047	6/13/2018	3.17	1/12/2024	6/13/2018	123.79894	119.8266303	116.0043422	112.3256098	108.7842824	105.3745061	102.0907076	98.92757941	95.88006555
180615A00039	6/15/2018	3.49	6/15/2028	6/15/2018	156.59747	145.736579	135.7219352	126.482813	117.9547581	110.0790029	102.8019362	96.07462564	89.852386
180618A00036	6/18/2018	3.89	6/18/2048	6/18/2018	305.06998	243.7694494	196.5256768	159.9553451	131.5128879	109.2786961	91.80179769	77.98278472	66.98652871
180518A00041	5/25/2018	3.32	5/20/2024	5/25/2018	126.93638	122.4684791	118.184502	114.0757576	110.1340249	106.3515227	102.7208836	99.23512817	95.8876425
180518A00042	5/25/2018	3.42	5/19/2025	5/25/2018	134.73978	128.8299933	123.2179273	117.8868657	112.8211309	108.0060135	103.4277058	99.07324129	94.93043809
180518A00046	5/25/2018	3.62	5/18/2027	5/25/2018	150.12422	141.048357	132.5928899	124.7118676	117.3629961	110.5073232	104.1089573	98.13480925	92.55435953
180518A00048	5/25/2018	3.65	5/18/2028	5/25/2018	157.48775	146.701973	136.7484297	127.5580852	119.0679981	111.220751	103.9639366	97.24969505	91.03429545
180518A00071	5/25/2018	3.56	5/18/2026	5/25/2018	142.71517	135.2625529	128.2526939	121.6567706	115.4480003	109.6014828	104.0940575	98.90417165	94.01176001
180524A00003	5/24/2018	2.91	5/24/2021	5/24/2018	104.91753	104.1349095	103.3639501	102.6043957	101.8559945	101.118502	100.3916809	99.67530055	98.96913716
180403A00024	4/3/2018	2.96	4/3/2023	4/3/2018	117.69712	114.7436356	111.8804169	109.104126	106.4115739	103.799711	101.2656206	98.80651134	96.41971141
180404A00018	4/4/2018	2.89	4/4/2022	4/4/2018	110.67353	108.933881	107.2307513	105.5630675	103.9297939	102.3299348	100.7625328	99.22666677	97.72145036
180417A00028	4/17/2018	2.88	4/16/2021	4/17/2018	104.18021	103.5151085	102.8584935	102.2102068	101.5700905	100.9379907	100.3137572	99.69724375	99.08830754
180424A00028	4/24/2018	2.98	4/23/2021	4/24/2018	104.37775	103.690927	103.0131392	102.3442062	101.683955	101.0322176	100.3888297	99.75363166	99.12646769
180515A00022	5/15/2018	3.19	5/15/2023	5/15/2018	119.15379	116.044753	113.0340526	110.1179023	107.292693	104.5549818	101.901483	99.32905942	96.8347144
180518A00025	5/18/2018	2.96	5/18/2021	5/18/2018	104.8406	104.0764719	103.3234833	102.581387	101.8499476	101.1289365	100.4181317	99.71731728	99.02628348
180205A00047	2/5/2018	2.56	2/5/2021	2/5/2018	102.74252	102.2890298	101.8395395	101.3939954	100.9523456	100.5145392	100.0805261	99.65025725	99.22368428
180302A00011	3/2/2018	2.68	3/2/2021	3/2/2018	103.24198	102.7137561	102.1909216	101.6733988	101.161107	100.6539674	100.1519025	99.65483643	99.16269486
180312A00014	3/12/2018	3	3/13/2023	3/12/2018	117.41227	114.5283159	111.7310761	109.0174112	106.3843128	103.8289016	101.34842	98.9402268	96.60179127
180316A00031	3/16/2018	2.96	12/16/2022	3/16/2018	115.63991	113.0602466	110.5517956	108.1121131	105.7388602	103.4297954	101.1827698	98.99572236	96.86667544
180328A00015	3/28/2018	2.93	3/28/2023	3/28/2018	117.50211	114.5703128	111.7277028	108.9709977	106.2970634	103.702902	101.1856452	98.74254706	96.37097871
180328A00042	3/28/2018	2.95	3/28/2023	3/28/2018	117.55683	114.6242918	111.7809532	109.0235365	106.348907	103.7540663	101.2361456	98.79239854	96.42019574
180125A00038	2/1/2018	2.91	2/3/2025	2/1/2018	130.11308	124.6899341	119.526017	114.6075688	109.9216296	105.4559915	101.1991509	97.14026407	93.26910605
180130A00062	1/30/2018	2.51	2/1/2021	1/30/2018	102.65101	102.2094708	101.771719	101.337706	100.9073841	100.4807063	100.0576268	99.63810002	99.22208157
180130A00063	1/30/2018	2.63	1/31/2022	1/30/2018	109.0865	107.5559938	106.0548281	104.5822255	103.1374396	101.7197496	100.3284588	98.96289412	97.62240471
180130A00064	1/30/2018	2.75	1/30/2023	1/30/2018	115.94596	113.2224584	110.5774238	108.0081415	105.5120093	103.0865306	100.7293091	98.43804422	96.21052676
180131A00022	1/31/2018	2.96	1/30/2025	1/31/2018	130.27779	124.8657683	119.7117346	114.8020251	110.123775	105.6648638	101.4138683	97.36001913	93.4931594
180201A00022	2/1/2018	2.99	2/3/2025	2/1/2018	130.50209	125.0699361	119.897332	114.9704995	110.2764655	105.8030096	101.5386164	97.47243096	93.59421767
180105A00021	1/5/2018	2.33	1/5/2021	1/5/2018	102.12055	101.7586257	101.3992628	101.0424378	100.6881241	100.336295	99.98692444	99.63998677	99.29545657
180110A00011	1/10/2018	2.38	1/11/2021	1/10/2018	102.23971	101.8601318	101.4833756	101.1094127	100.7382121	100.3697431	100.0039756	99.64087977	99.28042638
180110A00012	1/10/2018	2.38	1/11/2021	1/10/2018	102.23971	101.8601318	101.4833756	101.1094127	100.7382121	100.3697431	100.0039756	99.64087977	99.28042638

Classification | Public

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
180118A00008	1/18/2018	2.44	1/19/2021	1/18/2018	102.39865	101.9954968	101.595526	101.1986983	100.8049765	100.4143243	100.0267057	99.64208544	99.26042867
180123A00067	1/23/2018	2.67	1/23/2023	1/23/2018	115.61538	112.9180637	110.2979079	107.7522641	105.2785915	102.8744514	100.5375024	98.26549613	96.05627257
180124A00073	1/24/2018	2.46	1/25/2021	1/24/2018	102.50937	102.0885372	101.6711594	101.2571938	100.8465986	100.4393327	100.0353557	99.63462793	99.23711018
171219A00032	12/19/2017	2.42	12/20/2021	12/19/2017	108.11215	106.6935845	105.3044998	103.9439875	102.6111779	101.3052372	100.0253654	98.77079417	97.54078596
171222A00037	12/22/2017	2.71	12/29/2023	12/22/2017	121.87752	117.9850489	114.2383606	110.6312254	107.1577103	103.8121665	100.5892144	97.48372956	94.49082858
171228A00023	12/28/2017	2.69	3/29/2024	12/28/2017	123.45515	119.2290508	115.171801	111.2756908	107.533409	103.9380204	100.4829435	97.16193083	93.96904935
171228A00024	12/28/2017	2.71	6/28/2024	12/28/2017	125.18165	120.616564	116.2440339	112.0549292	108.0406016	104.1928562	100.503925	96.96644266	93.57342316
171229A00031	12/29/2017	2.36	12/29/2020	12/29/2017	102.01341	101.6719393	101.3327487	100.9958161	100.6611192	100.3286357	99.99834389	99.67022209	99.34424903
180104A00016	1/4/2018	2.56	1/4/2023	1/4/2018	115.00158	112.3714841	109.8151374	107.330062	104.9138775	102.5642967	100.2791216	98.05623974	95.89361977
171110A00007	11/10/2017	2.38	11/10/2022	11/10/2017	113.61349	111.1703818	108.7927066	106.4782092	104.2247342	102.0302188	99.8926886	97.81025204	95.78109676
171110A00008	11/10/2017	2.65	11/12/2024	11/10/2017	127.37445	122.2984792	117.454902	112.8317359	108.4176908	104.2021239	100.1749988	96.32684643	92.64872992
171110A00019	5/4/2018	2.46	5/4/2023	5/4/2018	116.86081	113.8191675	110.8730616	108.0188471	105.253049	102.5723501	99.97358316	97.45372223	95.00987549
171219A00022	12/19/2017	2.26	12/18/2020	12/19/2017	101.79796	101.4885135	101.1809533	100.8752668	100.571437	100.2694469	99.96927968	99.67091886	99.37434806
171219A00024	12/19/2017	2.26	12/18/2020	12/19/2017	101.79796	101.4885135	101.1809533	100.8752668	100.571437	100.2694469	99.96927968	99.67091886	99.37434806
171219A00031	12/19/2017	2.42	12/20/2021	12/19/2017	108.11215	106.6935845	105.3044998	103.9439875	102.6111779	101.3052372	100.0253654	98.77079417	97.54078596
170816A00030	8/16/2017	1.95	8/16/2021	8/16/2017	105.53633	104.4927724	103.4697791	102.4667458	101.4830925	100.5182617	99.57171684	98.64294174	97.73143946
170822A00023	8/23/2017	3.95	8/23/2028	8/23/2017	162.15056	150.7856986	140.3217057	130.6819399	121.7966738	113.6024347	106.0414137	99.0609319	92.61296128
170908A00021	9/8/2017	1.96	9/8/2022	9/8/2017	111.63542	109.408449	107.2376868	105.1213402	103.0576861	101.045069	99.08189764	97.16664193	95.29783026
170918A00051	12/18/2017	2.24	12/19/2022	12/18/2017	113.94193	111.3739073	108.8770435	106.4489097	104.0871779	101.7896158	99.55408219	97.37852227	95.26096377
171016A00016	10/16/2017	2.23	10/17/2022	10/16/2017	112.86427	110.5039821	108.2054478	105.9665986	103.7854546	101.6601181	99.58876967	97.56966409	95.60112651
171110A00006	11/10/2017	2.11	11/10/2020	11/10/2017	101.13868	100.9387704	100.7396632	100.5413518	100.3438312	100.1470968	99.95114382	99.75596754	99.5615633
170628A00044	10/9/2018	2.12	10/8/2021	10/9/2018	106.59517	105.3790221	104.1905135	103.028712	101.8927254	100.7817004	99.69482122	98.63130721	97.59041104
170703A00022	7/3/2017	2.86	7/3/2026	7/3/2017	139.01393	131.5032325	124.4490764	117.8213312	111.5920078	105.7350917	100.2263943	95.0434157	90.16521906
170703A00024	7/3/2017	2.95	7/6/2027	7/3/2017	145.84198	136.7302256	128.2552036	120.3690437	113.0277117	106.1906811	99.82063702	93.88320658	88.34671297
170726A00025	7/26/2017	2.14	7/26/2022	7/26/2017	111.29096	109.202347	107.1636256	105.1732963	103.2299151	101.3320907	99.47848269	97.66779863	95.89879247
170727A00020	7/27/2017	1.94	7/27/2021	7/27/2017	105.21289	104.2329551	103.2712037	102.3271316	101.4002547	100.4901068	99.59623803	98.71821488	97.8556189
170814A00034	8/14/2017	2.1	8/15/2022	8/14/2017	111.53908	109.3868205	107.2873655	105.2390799	103.2403938	101.2897967	99.38583465	97.52710772	95.71226754
170519A00019	5/19/2017	2	11/19/2021	5/19/2017	107.1417	105.7881177	104.4685765	103.1818039	101.9265911	100.701788	99.50629993	98.33908417	97.1991469
170531A00055	5/31/2017	2.13	5/31/2022	5/31/2017	110.35745	108.448231	106.5820201	104.7574308	102.9731376	101.2278718	99.52041874	97.84961487	96.21434482
170609A00052	6/11/2018	2.9	6/9/2027	6/11/2018	144.9972	136.0178014	127.6604632	119.8786849	112.6296862	105.8740894	99.57563145	93.70090095	88.21909939
170614A00019	6/14/2017	2.48	6/13/2025	6/14/2017	130.27668	124.3896858	118.80442	113.5037782	108.4717196	103.6931965	99.15408657	94.84113114	90.74187703
170622A00044	6/22/2017	2.38	6/21/2024	6/22/2017	123.68883	119.1772505	114.8555719	110.7147696	106.7463024	102.9420801	99.29443729	95.79610854	92.44020508
170622A00045	6/22/2017	2.76	6/22/2027	6/22/2017	144.13191	135.133786	126.7624192	118.9708203	111.7157608	104.9574509	98.65924844	92.78739506	87.31077484

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
170331A00032	3/31/2017	2.03	3/31/2021	3/31/2017	103.37342	102.7590108	102.1518757	101.5518882	100.9589227	100.3728567	99.79357047	99.22094701	98.654872
170404A00002	4/4/2017	2.42	4/4/2023	4/4/2017	116.22704	113.2905054	110.4439368	107.6840013	105.0075154	102.4114349	99.89284856	97.44897038	95.07713388
170404A00003	4/4/2017	2.74	4/4/2025	4/4/2017	130.33211	124.6901963	119.327186	114.2277551	109.3775106	104.7629255	100.3712823	96.19061924	92.20968157
170405A00031	4/5/2017	2.22	4/4/2022	4/5/2017	109.5586	107.8286139	106.1349705	104.4765988	102.8524679	101.2615871	99.70300351	98.17580043	96.6790957
170412A00019	4/12/2017	2.56	4/12/2024	4/12/2017	123.19992	118.9315848	114.8353914	110.9034028	107.1280961	103.5023395	100.0193695	96.67276912	93.45644838
170518A00008	5/18/2018	3.06	5/18/2028	5/18/2018	152.24268	141.6672001	131.9120764	122.9090614	114.5959464	106.9159921	99.81741978	93.25295195	87.1793982
161221A00053	12/23/2016	3.05	12/23/2021	12/23/2016	109.00862	107.5801062	106.1802201	104.8081245	103.4630129	102.1441103	100.8506715	99.58197968	98.33734519
170327A00077	3/27/2019	2.74	3/27/2024	3/27/2019	123.61286	119.39031	115.33623	111.4429411	107.7031577	104.1099683	100.6568136	97.33746613	94.14601201
170327A00078	3/27/2019	3.04	3/27/2026	3/27/2019	138.46777	131.3314668	124.61147	118.2812286	112.3160244	106.6928378	101.3902217	96.38818596	91.66809062
170327A00079	3/27/2019	3.19	3/29/2027	3/27/2019	145.95725	137.2165542	129.0647167	121.4588313	114.3593408	107.7297585	101.5364142	95.7482227	90.33647164
170327A00080	3/27/2019	3.43	3/27/2029	3/27/2019	161.4287	149.2131077	138.0334136	127.7958015	118.4154325	109.8155396	101.9266209	94.68571601	88.03575922
170331A00031	3/31/2017	2.03	3/31/2021	3/31/2017	103.37342	102.7590108	102.1518757	101.5518882	100.9589227	100.3728567	99.79357047	99.22094701	98.654872
161031A00028	10/31/2016	1.51	10/30/2020	10/31/2016	100.8617	100.6933286	100.5255181	100.3582647	100.1915657	100.0254183	99.85981997	99.6947679	99.53025946
161115A00021	11/15/2016	2.02	11/15/2021	11/15/2016	107.10041	105.7599442	104.4528838	103.1779886	101.9340826	100.7200465	99.53481417	98.37736999	97.2467454
161118A00026	12/20/2016	3.03	12/21/2026	12/20/2016	143.06709	134.7977955	127.0656171	119.8327871	113.0643822	106.7280991	100.7940449	95.23454437	90.0239652
161123A00035	11/23/2016	2.16	11/23/2021	11/23/2016	107.41255	106.0442725	104.7107	103.4105294	102.1425178	100.9054836	99.69830234	98.51990335	97.36926667
161123A00037	11/23/2016	2.16	11/23/2021	11/23/2016	107.41255	106.0442725	104.7107	103.4105294	102.1425178	100.9054836	99.69830234	98.51990335	97.36926667
161125A00002	11/25/2016	2.62	11/27/2023	11/25/2016	120.99201	117.2176869	113.5821893	110.0795198	106.7039844	103.4501747	100.312951	97.28742661	94.36895398
160830A00068	11/30/2016	1.95	11/30/2023	11/30/2016	118.70316	114.9579569	111.3511815	107.8768304	104.5292061	101.3028972	98.19276275	95.19391565	92.3017086
161005A00007	10/5/2016	1.51	10/5/2020	10/5/2016	100.50027	100.4025365	100.3049998	100.20766	100.1105165	100.0135687	99.91681601	99.82025777	99.72389341
161005A00008	10/5/2016	1.51	10/5/2020	10/5/2016	100.50027	100.4025365	100.3049998	100.20766	100.1105165	100.0135687	99.91681601	99.82025777	99.72389341
161017A00007	10/17/2016	1.99	10/18/2023	10/17/2016	118.15922	114.5634544	111.0964658	107.7528637	104.5275179	101.4155456	98.41229813	95.51334753	92.7144748
161017A00015	10/17/2016	1.68	10/18/2021	10/17/2016	106.2482	105.0024735	103.7858052	102.5971862	101.4356554	100.3002951	99.19022885	98.10461861	97.04266323
161031A00027	10/31/2016	1.51	10/30/2020	10/31/2016	100.8617	100.6933286	100.5255181	100.3582647	100.1915657	100.0254183	99.85981997	99.6947679	99.53025946
160712A00019	7/12/2017	2.32	7/12/2027	7/12/2017	141.01763	132.055462	123.724301	115.9764715	108.7681324	102.0589491	95.81179575	89.99248554	84.56952392
160714A00018	9/6/2016	2.28	9/4/2026	9/6/2016	136.14036	128.4892879	121.3180326	114.5939867	108.2869242	102.3688149	96.81365392	91.59730508	86.69735722
160714A00024	9/20/2016	2.5	9/20/2028	9/20/2016	149.20763	138.2704763	128.2195186	118.9781847	110.4768995	102.6524112	95.44718564	88.80886208	82.68976334
160729A00017	7/31/2017	2.47	7/31/2029	7/31/2017	153.77047	141.3979233	130.1220281	119.8396924	110.4580111	101.8932129	94.06972084	86.91931258	80.3803713
160801A00007	8/1/2016	1.47	8/2/2021	8/1/2016	104.86299	103.8663331	102.8885196	101.9290177	100.9873173	100.0629268	99.15537269	98.26419858	97.38896441
160819A00015	10/12/2016	2.3	10/13/2026	10/12/2016	136.85233	129.037211	121.7195021	114.864899	108.4416397	102.4203057	96.77363726	91.47636326	86.50504592
160527A00021	5/27/2016	1.68	5/27/2021	5/27/2016	104.04121	103.2531991	102.4770826	101.7125893	100.9594597	100.217442	99.48629174	98.76577161	98.05565112
160601A00021	6/1/2016	1.71	6/1/2021	6/1/2016	104.14146	103.3378988	102.5466878	101.7675404	101.0001825	100.2443484	99.49978004	98.76622729	98.04344722
160627A00068	6/27/2016	1.4	6/28/2021	6/27/2016	104.28618	103.3999118	102.5286274	101.6719513	100.8295188	100.0009773	99.18598551	98.38421352	97.59534192

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
160711A00016	7/11/2016	1.42	7/12/2021	7/11/2016	104.50787	103.577621	102.6638589	101.7661485	100.8840698	100.0172172	99.16519906	98.32763705	97.50416564
160711A00020	8/24/2017	1.59	8/24/2022	8/24/2017	110.62332	108.4532622	106.3371289	104.273228	102.2599371	100.2956957	98.37900277	96.50841347	94.6825371
160711A00022	1/10/2018	1.91	1/10/2025	1/10/2018	124.87964	119.6599626	114.6876761	109.9497967	105.434089	101.1290179	97.0237052	93.10788875	89.37188451
160406A00009	4/6/2016	1.62	4/6/2021	4/6/2016	103.21998	102.5881988	101.9641329	101.3476379	100.7385767	100.1368154	99.54222339	98.95467305	98.37403983
160406A00012	4/6/2016	1.62	4/6/2021	4/6/2016	103.21998	102.5881988	101.9641329	101.3476379	100.7385767	100.1368154	99.54222339	98.95467305	98.37403983
160422A00019	4/22/2016	1.69	4/22/2021	4/22/2016	103.50888	102.8283004	102.1566504	101.4937506	100.8394308	100.1935253	99.55587231	98.92631456	98.30469854
160520A00017	9/20/2017	2.34	9/20/2024	9/20/2017	125.0587	120.2123404	115.5818016	111.1562826	106.9255893	102.880092	99.01069116	95.30878477	91.76623853
160520A00018	9/20/2017	2.34	9/20/2024	9/20/2017	125.0587	120.2123404	115.5818016	111.1562826	106.9255893	102.880092	99.01069116	95.30878477	91.76623853
160524A00015	11/25/2016	2.71	11/25/2026	11/25/2016	140.37307	132.2866395	124.7219597	117.6424863	111.0144332	104.8065507	98.98992062	93.53776946	88.42529758
160315A00003	3/15/2016	1.88	3/15/2021	3/15/2016	103.03669	102.4706561	101.9108344	101.3571246	100.8094269	100.2676437	99.73167928	99.20144024	98.67683501
160316A00009	3/16/2016	1.95	3/16/2021	3/16/2016	103.08549	102.5164163	101.9536183	101.3969947	100.8464443	100.3018679	99.7631684	99.23025105	98.70302295
160323A00030	3/23/2016	2.22	3/22/2023	3/23/2016	115.46103	112.5755475	109.7776219	107.0640493	104.4317657	101.8778396	99.39946538	96.99395669	94.65874062
160331A00088	3/31/2016	1.69	3/30/2021	3/31/2016	103.15545	102.5447381	101.9412314	101.3448005	100.7553217	100.1726742	99.5967397	99.02740299	98.46455125
160404A00040	4/4/2016	1.65	4/5/2021	4/4/2016	103.22312	102.594316	101.9731471	101.3594775	100.7531721	100.1540989	99.56212906	98.97713684	98.3989994
160405A00018	4/5/2016	1.61	4/5/2021	4/5/2016	103.19871	102.5699861	101.9489017	101.3353158	100.7290934	100.1301024	99.53821419	98.95330285	98.37524562
160307A00029	3/7/2016	3.21	3/7/2031	3/7/2016	171.87693	156.1825407	142.084404	129.4106401	118.0087405	107.7432948	98.49399341	90.15387267	82.62777194
160308A00011	3/8/2016	1.81	2/16/2021	3/8/2016	102.5792	102.0939602	101.6133099	101.137182	100.6655128	100.1982399	99.7353018	99.27663842	98.82219066
160309A00008	3/9/2016	1.83	3/3/2021	3/9/2016	102.82089	102.2909691	101.7664977	101.2473897	100.7335631	100.2249377	99.72143492	99.22297757	98.72949016
160309A00014	3/9/2016	1.84	3/9/2021	3/9/2016	102.92034	102.3723983	101.8302852	101.2939066	100.7631717	100.2379915	99.71827926	99.20394969	98.69491942
160309A00015	3/9/2016	1.84	3/9/2021	3/9/2016	102.92034	102.3723983	101.8302852	101.2939066	100.7631717	100.2379915	99.71827926	99.20394969	98.69491942
160311A00005	3/11/2016	1.91	3/11/2021	3/11/2016	102.98953	102.4354682	101.8873594	101.3451109	100.808629	100.2778218	99.75259962	99.23287447	98.71856027
160229A00028	2/29/2016	1.74	3/1/2021	2/29/2016	102.74353	102.2197494	101.7012863	101.1880634	100.6800015	100.1770232	99.67905262	99.1860153	98.6978383
160301A00006	3/1/2016	1.69	3/1/2021	3/1/2016	102.71798	102.1942745	101.6758871	101.1627392	100.6547518	100.1518475	99.65395035	99.16098594	98.67288133
160302A00013	3/2/2016	1.63	3/2/2021	3/2/2016	102.77232	102.2446403	101.7223667	101.2054141	100.6937015	100.1871495	99.68568045	99.18921803	98.69768761
160303A00020	3/3/2016	2.97	3/3/2031	3/3/2016	171.93807	156.0902965	141.8612373	129.0760961	117.5798213	107.2347848	97.91874218	89.52304189	81.95105013
160304A00015	3/4/2016	1.82	3/4/2021	3/4/2016	102.83138	102.2984728	101.7710804	101.2491126	100.7324862	100.2211193	99.71493203	99.21384596	98.71778427
160304A00016	3/4/2016	1.82	3/4/2021	3/4/2016	102.83138	102.2984728	101.7710804	101.2491126	100.7324862	100.2211193	99.71493203	99.21384596	98.71778427
160222A00005	2/22/2016	2.79	2/22/2028	2/22/2016	148.41695	138.3254856	128.997912	120.3722822	112.3919804	105.0052374	98.1646928	91.82699821	85.95245819
160222A00018	2/22/2016	2.59	2/23/2026	2/22/2016	135.14412	128.2189146	121.6935581	115.5428474	109.7432984	104.2730195	99.11159509	94.23997894	89.64039509
160222A00019	2/22/2016	3.09	2/21/2031	2/22/2016	170.12512	154.5874863	140.6270949	128.0745437	116.7794724	106.6083302	97.4424183	89.17616929	81.71563332
160223A00012	2/23/2016	1.89	2/23/2023	2/23/2016	114.66236	111.8613858	109.1437702	106.5065313	103.9468172	101.4618957	99.04914844	96.70606551	94.43024001
160225A00024	2/25/2016	2.22	2/26/2024	2/25/2016	121.1107	117.0325084	113.1144463	109.3493479	105.730408	102.251163	98.90547163	95.68749686	92.59168925
160229A00027	2/29/2016	1.74	3/1/2021	2/29/2016	102.74353	102.2197494	101.7012863	101.1880634	100.6800015	100.1770232	99.67905262	99.1860153	98.6978383

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
160212A00037	2/12/2016	3.03	2/12/2031	2/12/2016	169.21195	153.7653958	139.8842456	127.4007064	116.1658038	106.0471823	96.92717398	88.70110134	81.27578262
160216A00007	2/16/2016	1.68	2/16/2021	2/16/2016	102.51755	102.0324819	101.5520043	101.0760478	100.604549	100.1374451	99.67467502	99.21617849	98.76189647
160216A00040	2/16/2016	1.49	2/16/2021	2/16/2016	102.49152	102.0057541	101.5245927	101.0479691	100.5758191	100.1080798	99.64468949	99.18558766	98.73071485
160216A00051	2/16/2016	1.49	2/16/2021	2/16/2016	102.49152	102.0057541	101.5245927	101.0479691	100.5758191	100.1080798	99.64468949	99.18558766	98.73071485
160217A00004	2/17/2016	1.54	2/17/2021	2/17/2016	102.53026	102.0414599	101.557314	101.0777602	100.6027335	100.1321697	99.66600618	99.20418121	98.74663436
160218A00014	2/18/2016	1.57	2/18/2021	2/18/2016	102.55969	102.0678737	101.5807685	101.0983101	100.6204319	100.1470691	99.67815756	99.21363475	98.75343914
160211A00093	2/16/2016	2.62	2/16/2021	2/16/2016	102.96334	102.477017	101.9952911	101.5180949	101.0453647	100.577038	100.1130533	99.65335026	99.19786985
160212A00002	2/12/2016	1.58	11/17/2020	2/12/2016	101.13782	100.9180278	100.699206	100.4813444	100.2644367	100.0484765	99.83345767	99.61937391	99.40621911
160212A00005	2/12/2016	1.42	2/16/2021	2/12/2016	102.45831	101.9726382	101.49157	101.0150388	100.5429806	100.0753326	99.61203288	99.15302105	98.69823763
160212A00014	2/12/2016	1.61	2/12/2021	2/12/2016	102.42514	101.9520276	101.4832857	101.0188505	100.5586629	100.1026647	99.65079868	99.20300893	98.75924036
160212A00017	2/12/2016	1.57	2/12/2021	2/12/2016	102.40662	101.9335617	101.4648706	101.0004859	100.5403483	100.0843999	99.63258336	99.18484275	98.74112299
160212A00027	2/12/2016	2.53	2/12/2026	2/12/2016	134.58525	127.7194124	121.2479039	115.1460063	109.3906796	103.9604372	98.83523288	93.9963569	89.42634043
160211A00034	2/11/2016	1.82	2/10/2023	2/11/2016	113.74279	111.0099592	108.3570765	105.7813399	103.2800609	100.8506617	98.49066983	96.19771308	93.96951476
160211A00036	2/11/2016	2.41	2/11/2026	2/11/2016	133.83808	126.9974175	120.5497502	114.4704535	108.7365673	103.3266786	98.22080958	93.40031404	88.84778206
160211A00056	2/11/2016	1.82	2/10/2023	2/11/2016	113.74279	111.0099592	108.3570765	105.7813399	103.2800609	100.8506617	98.49066983	96.19771308	93.96951476
160211A00086	2/16/2016	2.8	2/16/2022	2/16/2016	109.64907	108.0611837	106.5047017	104.978772	103.4825702	102.0153009	100.5761967	99.16451679	97.77954571
160211A00089	2/16/2016	3.91	2/16/2024	2/16/2016	127.25919	123.1042798	119.1100722	115.2694581	111.5756827	108.0223269	104.6032879	101.3127626	98.14523062
160211A00091	2/16/2016	3.55	2/16/2023	2/16/2016	118.36535	115.5513475	112.8198618	110.1679794	107.5929109	105.0919823	102.6626299	100.3023948	98.00891753
160210A00041	2/10/2016	1.97	2/10/2023	2/10/2016	114.13226	111.3943695	108.7365414	106.1559709	103.649966	101.2159457	98.85143427	96.55405634	94.32153232
160210A00042	2/10/2016	2.57	2/10/2026	2/10/2016	134.79354	127.9296792	121.4595167	115.3584021	109.6033584	104.1729554	99.04719795	94.2074226	89.6362021
160210A00050	2/10/2016	1.64	2/10/2021	2/10/2016	102.40926	101.9420361	101.4790763	101.0203176	100.5657029	100.1151763	99.66868261	99.22616788	98.78757902
160210A00052	2/10/2016	1.64	2/10/2021	2/10/2016	102.40926	101.9420361	101.4790763	101.0203176	100.5657029	100.1151763	99.66868261	99.22616788	98.78757902
160210A00053	2/10/2016	1.99	2/10/2023	2/10/2016	114.18419	111.4456242	108.7871367	106.2059216	103.6992867	101.2646503	98.89953619	96.60156877	94.36846799
160211A00005	2/11/2016	1.3	2/11/2021	2/11/2016	102.32967	101.8589993	101.3926584	100.9305858	100.4727232	100.0190129	99.56939858	99.12382488	98.68223739
160209A00010	2/9/2016	1.57	2/9/2021	2/9/2016	102.36256	101.8983921	101.4384278	100.9826113	100.5308867	100.0831989	99.63949398	99.19971892	98.76382162
160209A00019	2/9/2016	2.52	2/9/2026	2/9/2016	134.47226	127.6214684	121.1635506	115.0739211	109.3296581	103.9093824	98.79314589	93.96232811	89.39954171
160209A00026	2/9/2016	1.57	2/8/2021	2/9/2016	102.34788	101.88667	101.4296139	100.9766532	100.5277328	100.0827989	99.64179841	99.2046794	98.7713907
160209A00049	2/9/2016	1.92	2/9/2023	2/9/2016	113.98561	111.253081	108.6003737	106.024696	103.5233671	101.0938165	98.7335783	96.44028662	94.21167075
160210A00021	2/10/2016	1.97	2/10/2023	2/10/2016	114.13226	111.3943695	108.7365414	106.1559709	103.649966	101.2159457	98.85143427	96.55405634	94.32153231
160210A00036	2/10/2016	1.77	2/10/2023	2/10/2016	114.12346	111.3748412	108.7068227	106.1165664	103.6013558	101.1585866	98.78576127	96.4804837	94.24045471
160201A00024	2/1/2016	2.16	2/1/2023	2/1/2016	114.46765	111.7565531	109.1238579	106.5668475	104.0829146	101.6695579	99.32437691	97.0450675	94.82941704
160203A00012	2/3/2016	1.54	2/3/2021	2/3/2016	102.32002	101.8727908	101.4294655	100.9899907	100.5543167	100.1223941	99.69417472	99.26961104	98.84865638
160205A00004	2/5/2016	1.7	2/5/2021	2/5/2016	102.36144	101.9089593	101.4604741	101.0159286	100.5752709	100.1384504	99.70541693	99.27612148	98.85051579

Classification | Public

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
160208A00004	2/8/2016	1.46	2/8/2021	2/8/2016	102.35894	101.8969727	101.4391738	100.985486	100.535854	100.0902235	99.64854121	99.21075471	98.77681254
160208A00024	2/8/2016	1.64	2/8/2021	2/8/2016	102.37949	101.9181971	101.4610563	101.0080112	100.5590071	100.11399	99.67290684	99.2357057	98.8023354
160209A00007	2/9/2016	1.53	2/9/2021	2/9/2016	102.34438	101.880264	101.4203487	100.964581	100.5129048	100.0652651	99.62160797	99.18188039	98.74603026
151211A00037	12/11/2017	2.69	1/11/2023	12/11/2017	115.45039	112.7927688	110.2102046	107.7001581	105.2601887	102.8879521	100.5811965	98.33775807	96.15555703
151211A00040	12/11/2017	2.7	2/13/2023	12/11/2017	116.08527	113.3115475	110.6190593	108.0049503	105.4664814	103.0010269	100.6060685	98.27919059	96.01807507
151211A00041	12/11/2017	2.71	3/13/2023	12/11/2017	116.63199	113.7585125	110.9715053	108.2678371	105.6445071	103.0986429	100.627494	98.22842575	95.89891371
151214A00051	12/14/2015	2.92	12/15/2025	12/14/2015	135.9095	129.2208363	122.9050713	116.9393928	111.3025056	105.9745242	100.9368718	96.17218698	91.66423751
151215A00010	12/15/2015	2.16	12/15/2020	12/15/2015	101.71874	101.4180461	101.1191433	100.8220127	100.5266385	100.2330051	99.94109707	99.65089913	99.36239621
151215A00027	12/15/2015	2.09	12/15/2020	12/15/2015	101.69798	101.3973298	101.098467	100.8013762	100.5060417	100.2124478	99.92057902	99.63042021	99.34195623
151013A00007	10/13/2015	1.75	10/13/2020	10/13/2015	100.64478	100.5244392	100.4044049	100.2846722	100.1652398	100.0461067	99.92727174	99.80873367	99.69049139
151013A00012	10/13/2015	1.58	10/13/2020	10/13/2015	100.64294	100.5224175	100.4021992	100.2822851	100.1626738	100.0433643	99.92435527	99.80564558	99.68723405
151027A00020	10/27/2015	1.75	10/27/2020	10/27/2015	100.85671	100.6967803	100.5373637	100.3784559	100.2200546	100.0621573	99.90476169	99.74786534	99.59146591
151027A00021	10/27/2015	2.02	10/27/2021	10/27/2015	106.79695	105.519122	104.2717294	103.0536954	101.8639934	100.7016438	99.56571201	98.45530551	97.36957151
151030A00001	10/30/2015	1.9	10/30/2020	10/30/2015	100.927	100.758546	100.590653	100.4233174	100.2565364	100.0903073	99.92462735	99.75949395	99.5949044
151030A00022	10/30/2015	1.8	10/30/2020	10/30/2015	100.91026	100.7418236	100.5739517	100.4066372	100.2398772	100.0736691	99.90801007	99.74289753	99.57832877
151002A00011	10/2/2015	1.65	10/2/2020	10/2/2015	100.46984	100.3805445	100.291411	100.2024378	100.1136246	100.0249709	99.9364762	99.84814018	99.75996238
151002A00014	10/2/2015	1.65	10/2/2020	10/2/2015	100.46984	100.3805445	100.291411	100.2024378	100.1136246	100.0249709	99.9364762	99.84814018	99.75996238
151002A00038	10/2/2015	2.81	10/2/2025	10/2/2015	133.96074	127.5885424	121.5603201	115.8556283	110.4553521	105.3416093	100.4976643	95.90784814	91.55748484
151002A00053	10/2/2017	2.17	10/4/2021	10/2/2017	106.58413	105.3807538	104.2044441	103.0542946	101.9294404	100.829054	99.75234397	98.69855243	97.66695368
151002A00091	10/2/2015	1.65	10/2/2020	10/2/2015	100.46984	100.3805445	100.291411	100.2024378	100.1136246	100.0249709	99.9364762	99.84814018	99.75996238
151008A00025	10/8/2015	2.91	10/8/2025	10/8/2015	134.63256	128.22146	122.1571482	116.4189632	110.98759	105.8449633	100.974179	96.35941355	91.98584867
150909A00017	9/9/2015	2.02	9/9/2020	9/9/2015	100.14132	100.1162602	100.0912249	100.0662159	100.0412334	100.0162772	99.99134723	99.96644355	99.94156608
150929A00024	9/29/2015	1.81	9/29/2020	9/29/2015	100.4387	100.3578159	100.2770657	100.1964455	100.1159549	100.0355937	99.95536161	99.87525828	99.79528346
150929A00031	9/29/2015	1.81	9/29/2020	9/29/2015	100.4387	100.3578159	100.2770657	100.1964455	100.1159549	100.0355937	99.95536161	99.87525828	99.79528346
150929A00085	9/29/2015	1.81	9/29/2020	9/29/2015	100.4387	100.3578159	100.2770657	100.1964455	100.1159549	100.0355937	99.95536161	99.87525828	99.79528346
150930A00059	9/30/2015	1.78	9/30/2020	9/30/2015	100.45132	100.3676459	100.2841126	100.200716	100.1174559	100.0343318	99.95134362	99.86849093	99.78577343
151002A00007	10/2/2015	1.65	10/2/2020	10/2/2015	100.46984	100.3805445	100.291411	100.2024378	100.1136246	100.0249709	99.9364762	99.84814018	99.75996238
150630A00097	6/30/2015	3.05	7/1/2024	6/30/2015	126.65339	122.0486097	117.6380811	113.4125952	109.3634303	105.4823208	101.7614312	98.19333129	94.77097324
150731A00016	7/31/2015	3.04	7/31/2025	7/31/2015	134.07743	127.9270454	122.0982622	116.5725639	111.3325975	106.362092	101.645786	97.16935984	92.91937235
150731A00020	7/31/2015	2.47	7/29/2022	7/31/2015	112.00314	109.8980902	107.8434929	105.8378281	103.87963	101.9674866	100.1000376	98.27597167	96.49402485
150812A00040	8/12/2015	2.94	8/12/2025	8/12/2015	133.75416	127.5694507	121.7103553	116.1580029	110.8947132	105.9039164	101.1700778	96.6786276	92.41589597
150824A00031	8/24/2015	1.93	2/25/2021	8/24/2015	102.77754	102.2653872	101.7583199	101.2562674	100.7591554	100.2669116	99.77946452	99.2967445	98.81868304
150909A00003	9/9/2015	3.11	9/9/2025	9/9/2015	135.21712	128.8943289	122.9087084	117.240445	111.8709988	106.7830115	101.9602248	97.38740489	93.0502722

Classification | Public

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
150601A00677	6/1/2015	2.39	1/30/2025	6/1/2015	128.35253	122.9550331	117.8162121	112.9223224	108.2604178	103.8183036	99.58448908	95.54814308	91.69905281
150601A00682	6/1/2015	2.3	2/9/2022	6/1/2015	108.71061	107.153335	105.6264589	104.1291619	102.6606568	101.2201841	99.80701001	98.42042625	97.05974831
150601A00713	6/1/2015	2.2	4/1/2022	6/1/2015	109.42246	107.7027866	106.0191154	104.3703848	102.7555787	101.1737203	99.62387016	98.10512403	96.6166116
150601A00775	6/1/2015	2.28	11/12/2021	6/1/2015	107.34657	106.0138626	104.7141219	103.4461355	102.2087504	101.000869	99.82144554	98.66948311	97.544031
150601A00998	6/1/2015	5.37	10/25/2034	6/1/2015	231.56401	205.8272755	183.3887112	163.7990158	146.6727402	131.6788868	118.5329402	106.9901019	96.83954112
150630A00091	6/30/2015	2.31	6/30/2021	6/30/2015	105.0942	104.1980302	103.3170907	102.4509971	101.5993767	100.7618694	99.93812667	99.1278115	98.33059778
150601A00355	6/1/2015	2.86	9/24/2020	6/1/2015	100.42939	100.362429	100.2955706	100.2288105	100.1621485	100.0955844	100.0291179	99.9627488	99.89647699
150601A00356	6/1/2015	3.66	9/22/2023	6/1/2015	123.06484	119.4730029	116.0067514	112.6609442	109.4306863	106.3113127	103.2983761	100.3876356	97.57504524
150601A00406	6/1/2015	3.71	1/17/2024	6/1/2015	125.6758	121.6535422	117.7834601	114.0589777	110.4738386	107.0220894	103.6980632	100.4963642	97.41185331
150601A00625	6/1/2015	3.96	12/9/2044	6/1/2015	279.3302	228.9209052	188.8664986	156.9339325	131.3861789	110.8695482	94.32709994	80.93199716	70.03613046
150601A00656	6/1/2015	2.59	12/17/2021	6/1/2015	108.25465	106.8384776	105.4527712	104.0965504	102.7688792	101.4688615	100.1956392	98.94838976	97.72632456
150601A00672	6/1/2015	1.96	1/28/2022	6/1/2015	108.00689	106.4936726	105.0093215	103.5530767	102.1242078	100.7220091	99.34579864	97.99491726	96.66872745
150115A00022	1/17/2017	2.56	1/16/2024	1/17/2017	121.65418	117.7066921	113.9091079	110.2549399	106.7380179	103.3524702	100.0927077	96.95340906	93.92950593
150120A00025	1/20/2015	2.54	1/21/2025	1/20/2015	128.08493	122.7544147	117.6772678	112.8401333	108.2304244	103.8362789	99.64651398	95.65058371	91.83853943
150211A00005	2/11/2015	2.35	2/15/2022	2/11/2015	108.94424	107.3653073	105.817558	104.3001406	102.8122381	101.3530628	99.92185399	98.51787768	97.14042485
150601A00188	6/1/2015	2.06	8/24/2021	6/1/2015	105.74715	104.6775292	103.6294684	102.6023173	101.5954549	100.6082848	99.64023356	98.69074982	97.7593033
150601A00333	6/1/2015	3.06	8/9/2021	6/1/2015	106.4673	105.4404146	104.4333215	103.4454508	102.4762556	101.5252097	100.5918065	99.67555801	98.77599422
150601A00334	6/1/2015	3.33	8/9/2022	6/1/2015	113.85406	111.6959953	109.5903501	107.5355147	105.5299439	103.5721505	101.660702	99.79421923	97.97137298
140923A00070	9/23/2014	2.88	9/23/2022	9/23/2014	113.87772	111.5795891	109.3401549	107.1575129	105.0298331	102.9553587	100.9324026	98.95934416	97.03462606
140930A00104	9/30/2016	3.23	9/30/2021	9/30/2016	107.70424	106.5067802	105.3359218	104.1907829	103.0705229	101.9743374	100.9014565	99.85114261	98.82268916
141117A00011	11/17/2014	3.81	11/17/2034	11/17/2014	206.01123	182.035383	161.2025332	143.0781631	127.2901855	113.519674	101.4930113	90.97523241	81.7643765
141215A00062	12/15/2014	2.65	12/16/2024	12/15/2014	128.96141	123.7048826	118.6938386	113.9154597	109.3576731	105.009101	100.8590163	96.89730172	93.11441125
141218A00039	12/18/2014	2.29	12/18/2020	12/18/2014	101.80711	101.4976442	101.1900659	100.8843616	100.5805139	100.278506	99.97832114	99.67994272	99.3833544
150115A00021	1/17/2017	2.26	1/18/2022	1/17/2017	108.32282	106.8368021	105.3786245	103.947571	102.5429487	101.1640876	99.81034013	98.48107949	97.17569944
130827A00012	8/27/2013	3.66	7/31/2023	8/27/2013	122.12155	118.719159	115.4308211	112.252074	109.1786592	106.2065084	103.3317338	100.5506189	97.85961016
140314A00003	3/14/2014	3.32	3/14/2024	3/14/2014	125.59807	121.3809797	117.3304464	113.438947	109.6993424	106.1048561	102.6490536	99.32582287	96.12935632
140605A00058	6/6/2016	3.29	6/7/2021	6/6/2016	105.4825	104.6548	103.8400835	103.0380488	102.2484013	101.4708554	100.7051343	99.95096948	99.20810058
140625A00021	6/27/2016	3.2	6/25/2021	6/27/2016	105.75751	104.8735339	104.0043208	103.1495065	102.3087354	101.4816633	100.6679572	99.86729497	99.07936463
140811A00047	8/11/2016	3.13	8/11/2021	8/11/2016	106.6181	105.5841679	104.5702806	103.5758571	102.6003402	101.6431942	100.7039034	99.78197099	98.87691878
140923A00069	9/23/2014	2.63	9/23/2021	9/23/2014	106.90353	105.7330192	104.5880788	103.4678801	102.3716273	101.2985586	100.2479441	99.21908456	98.21130914
120531A00008	5/31/2012	2.27	5/31/2022	5/31/2012	110.61399	108.7023421	106.8337524	105.0068296	103.2202466	101.4727336	99.7630748	98.09010532	96.45270875
120614A00005	6/14/2012	2.22	6/15/2022	6/14/2012	111.12315	109.1545332	107.2308778	105.3508088	103.5130048	101.7161965	99.95916403	98.24073435	96.55977932
130211A00016	2/11/2013	2.27	2/15/2023	2/11/2013	115.00066	112.2341343	109.5489186	106.9421445	104.411063	101.9530388	99.56554516	97.24615833	94.99255288

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
130211A00026	2/11/2013	2.27	2/15/2023	2/11/2013	115.00066	112.2341343	109.5489186	106.9421445	104.411063	101.9530388	99.56554516	97.24615833	94.99255288
130211A00035	2/11/2013	2.27	2/15/2023	2/11/2013	115.00066	112.2341343	109.5489186	106.9421445	104.411063	101.9530388	99.56554516	97.24615833	94.99255288
130501A00021	5/1/2013	2.27	5/1/2023	5/1/2013	116.26981	113.2459432	110.3168653	107.4789731	104.7288272	102.0631441	99.47878786	96.97276224	94.54220327
110706A00010	7/6/2011	3.93	7/6/2021	7/6/2011	106.61186	105.6899119	104.783925	103.8934886	103.0182043	102.1576875	101.3115663	100.4794813	99.66108491
110805A00021	8/5/2011	3.36	8/5/2021	8/5/2011	106.72092	105.7052138	104.7088366	103.7312392	102.7718941	101.8302933	100.9059475	99.99838533	99.10715241
110927A00009	9/27/2011	3.07	9/27/2021	9/27/2011	107.46618	106.2796475	105.1192869	103.9842347	102.8736694	101.7868046	100.7228877	99.68119706	98.66104153
111024A00013	10/24/2011	3.24	10/25/2021	10/24/2011	108.21983	106.9392098	105.6888812	104.4677777	103.274883	102.1092274	100.9698852	99.85597231	98.76664376
111213A00004	12/13/2011	2.96	12/13/2021	12/13/2011	108.74871	107.3336099	105.9503234	104.5977773	103.2749463	101.9808511	100.7145554	99.47516397	98.26181998
120419A00009	4/19/2012	2.76	4/19/2022	4/19/2012	110.73682	108.9505722	107.2025175	105.4914982	103.8164054	102.1761745	100.5697832	98.99624885	97.4546271
070906A00048	9/10/2007	3.79	9/12/2022	9/10/2020	115.61856	113.326705	111.1025069	108.9419738	106.8266315	104.7653184	102.794661	101.1072695	100.1062798
081028A00036	10/30/2008	4.22	10/30/2023		125.92874	122.1648752	118.5370276	115.0383113	111.6626103	108.4054545	105.2619668	102.2275045	99.29764079
180404A00037	4/6/2018	2.51	4/6/2028	4/6/2022	148.74332	138.3866432	128.8418871	120.2110643	112.7754852	106.8435083	102.5539691	99.65665476	97.60780155
180406A00015	4/10/2018	2.61	4/10/2028	4/10/2023	149.69262	139.2818818	129.6859979	120.9927729	113.4663096	107.3747332	102.7178081	99.1544587	96.25705114
180925A00059	9/25/2018	3.01	9/25/2028	9/25/2023	156.29449	144.9443004	134.5222968	125.0844379	116.8544792	110.0546827	104.6695121	100.4118224	96.90847499
181004A00034	10/4/2018	2.58	10/5/2020		100.60466	100.5065896	100.4091892	100.31175	100.2145072	100.1174603	100.0206085	99.92395145	99.82748841
181004A00037	10/4/2018	2.48	10/5/2020		100.5949	100.496843	100.3994519	100.3020219	100.2047884	100.1077508	100.0109083	99.91426042	99.81780658
181031A00046	11/2/2018	3.05	10/29/2021	11/2/2020	108.0274	106.718018	105.4909522	104.2857311	103.0826387	101.9075192	100.7937354	100.031911	99.75362054
181203A00046	12/4/2018	2.8	12/4/2023	12/4/2020	121.74722	117.9367612	114.2677896	110.7335196	107.3359215	104.174883	101.5975265	100.1010185	99.57981705
181210A00035	12/12/2018	2.65	1/16/2024	1/15/2021	121.98159	118.0279021	114.2250643	110.5660134	107.0571258	103.832651	101.2982215	99.90759369	99.34357093
190104A00032	1/4/2019	2.33	1/4/2024	9/4/2020	120.6144	116.7242376	112.9812845	109.3790045	105.9334862	102.8456414	100.6465876	99.90017067	99.79617923
190426A00017	4/26/2019	2.31	4/26/2022	10/26/2020	110.08896	108.2830497	106.5201977	104.798999	103.1103675	101.4841689	100.2274279	99.83283968	99.6771639
190426A00018	4/26/2019	2.14	4/26/2024	10/26/2020	121.78535	117.4965236	113.3831552	109.4379499	105.7002865	102.4709193	100.3784534	99.80694217	99.64927173
190426A00024	4/26/2019	2.24	4/26/2022	10/26/2020	109.96795	108.1631287	106.4013318	104.6811702	102.993625	101.3737931	100.1654171	99.82086175	99.66633344
190509A00033	5/9/2019	2.41	5/9/2022	5/10/2021	110.48835	108.6382874	106.8342333	105.0747582	103.3477948	101.6799397	100.2874093	99.36070341	98.65784406
190509A00063	5/9/2019	2.11	5/9/2024	11/9/2020	121.8762	117.5427308	113.3880155	109.4047868	105.6370956	102.403838	100.3516047	99.74634286	99.54383475
190510A00019	5/10/2019	2.39	5/10/2022	5/10/2021	110.47029	108.6172917	106.8105247	105.0485556	103.3191051	101.6499772	100.2623375	99.33840342	98.63073796
190513A00033	5/13/2019	2.35	5/15/2023	5/13/2022	116.73185	113.6571158	110.6805747	107.7978287	105.011057	102.4103218	100.1916704	98.33505557	96.67148625
190513A00065	5/13/2019	2.01	5/13/2022	11/13/2020	110.17151	108.3061948	106.4879047	104.7152793	102.9755805	101.3157058	100.1274778	99.74953173	99.54425178
190516A00018	5/16/2019	2.03	5/16/2024	11/16/2020	121.66652	117.3142073	113.142266	109.1437627	105.3711077	102.174736	100.2350633	99.70486658	99.48832265
190516A00028	5/16/2019	2.03	5/16/2024	11/16/2020	121.66652	117.3142073	113.142266	109.1437627	105.3711077	102.174736	100.2350633	99.70486658	99.48832265
190522A00029	5/22/2019	2.41	5/22/2024	5/22/2023	123.29718	118.8933153	114.6724242	110.6255469	106.766014	103.2280929	100.1272517	97.36865553	94.81389133
190523A00048	5/23/2019	2.32	5/23/2024	5/23/2023	122.95008	118.549726	114.3323571	110.2891474	106.4372711	102.9225895	99.85145799	97.1134517	94.56929015
190523A00050	5/23/2019	2.3	5/23/2023	5/23/2022	116.721	113.6212963	110.6212294	107.7162994	104.9055813	102.2751265	100.0538445	98.20566121	96.5363323

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
190529A00115	5/29/2019	1.92	5/29/2024	11/30/2020	121.4246	117.0345009	112.8278948	108.7984783	105.0128528	101.8706897	100.0928922	99.64109712	99.39884992
190530A00057	5/30/2019	1.71	5/30/2024	11/30/2020	121.4088	116.9934944	112.7633541	108.7123536	104.9123212	101.7815151	100.0553273	99.62105116	99.37090842
190530A00092	5/30/2019	1.69	5/30/2024	11/30/2020	121.32715	116.9134613	112.6848779	108.6355524	104.8400122	101.7256434	100.0354472	99.61568844	99.36588874
190530A00108	5/30/2019	1.88	5/30/2024	11/30/2020	121.27733	116.8868709	112.6800507	108.6508917	104.8712986	101.759063	100.0490285	99.62032652	99.37077161
190603A00067	6/3/2019	1.72	6/3/2024	9/3/2020	120.68656	116.2945006	112.0866565	108.0587811	104.3090306	101.3399156	100.0039379	99.96436005	99.95628363
190605A00032	6/5/2019	1.92	6/3/2022	9/3/2020	110.02084	108.0976135	106.2257807	104.4040378	102.6157098	100.9491386	100.0065267	99.96682849	99.9587426
190606A00030	6/6/2019	1.48	6/6/2024	9/8/2020	120.57461	116.1523961	111.9164922	107.8638673	104.1078875	101.1913234	99.98342259	99.9724236	99.96143399
190606A00032	6/6/2019	1.75	6/6/2024	9/8/2020	120.85446	116.4491073	112.2287985	108.1889594	104.4233252	101.4200288	100.0199195	99.96089054	99.9500439
190606A00054	6/6/2019	1.8	6/6/2024	9/8/2020	121.05894	116.6495366	112.4253192	108.381148	104.6027452	101.5535627	100.0501576	99.96144458	99.95059749
190607A00016	6/7/2019	1.75	6/7/2024	9/8/2020	120.86963	116.4606492	112.2369633	108.1940099	104.42575	101.4204462	100.0174366	99.94972561	99.93056798
190607A00022	6/7/2019	1.5	6/7/2024	9/8/2020	120.67178	116.2442785	112.0034014	107.945814	104.1812122	101.2410108	99.98757139	99.9594016	99.94010157
190607A00025	6/7/2019	1.48	6/7/2024	9/8/2020	120.58962	116.163755	111.9244548	107.8686939	104.1100152	101.1911634	99.97833228	99.95901378	99.93971409
190610A00069	6/10/2019	2.04	6/10/2022	9/10/2020	110.35754	108.4092107	106.5134954	104.6695061	102.8586364	101.1511995	100.058746	99.94740917	99.9199315
190613A00024	6/13/2019	2.18	6/13/2024	6/13/2023	122.72867	118.2627649	113.9848563	109.8862698	105.9934945	102.469579	99.3960025	96.63931431	94.06398339
190702A00051	7/2/2019	1.46	7/2/2024	10/2/2020	120.88075	116.3652777	112.0427353	107.9109285	104.0941046	101.1599716	99.96077202	99.83600703	99.74780013
190702A00079	7/2/2019	1.69	7/2/2024	7/5/2022	121.84386	117.308927	112.9675803	108.8144535	104.9319152	101.6853035	99.24830944	97.29631263	95.53595779
190702A00082	7/2/2019	1.63	6/30/2022	9/30/2020	110.25231	108.2360041	106.2757551	104.3720863	102.5033641	100.7967434	99.95190631	99.86892405	99.78607857
190703A00023	7/3/2019	1.9	6/30/2022	9/30/2020	110.39891	108.3880131	106.4329515	104.5341681	102.6695086	100.9422376	99.98353378	99.87685115	99.79414265
190712A00038	7/12/2019	1.87	7/12/2021	10/13/2020	105.03595	104.0865177	103.1832167	102.2938203	101.4073704	100.545518	99.97641939	99.83800019	99.72235492
190712A00044	7/12/2019	1.73	7/12/2022	10/13/2020	110.6359	108.5784519	106.5798221	104.6396708	102.7351717	100.9765379	99.98757136	99.82172329	99.7060955
190712A00047	7/12/2019	1.54	7/12/2024	10/13/2020	121.36505	116.8064366	112.4438266	108.2738001	104.40788	101.3701503	99.9812312	99.79963322	99.68402914
190725A00018	7/25/2019	1.78	7/25/2024	10/26/2020	121.71917	117.1337582	112.7466022	108.5532271	104.6542044	101.5400252	100.0008798	99.75816948	99.6127949
190725A00022	7/25/2019	1.7	7/25/2022	10/26/2020	110.78319	108.6837642	106.6461013	104.6689537	102.7288321	100.9444422	99.9645542	99.77539058	99.62969749
190731A00008	7/31/2019	1.53	7/31/2024	11/2/2020	121.60616	116.9791998	112.5536672	108.3262695	104.4136631	101.3485241	99.94828963	99.71993562	99.5551719
190801A00025	8/1/2019	1.68	8/1/2024	11/2/2020	121.39765	116.7956593	112.3936253	108.1887288	104.3029086	101.2814903	99.93610999	99.71589201	99.55143493
190805A00014	8/5/2019	1.49	8/5/2024	8/5/2022	121.50883	116.8671121	112.4281767	108.1898671	104.2776947	101.1063024	98.7291843	96.75865333	94.93865458
190807A00035	8/7/2019	1.45	8/7/2024	11/9/2020	120.50006	115.8966723	111.4943197	107.295662	103.4804942	100.7401372	99.82224145	99.62137964	99.43827281
190807A00056	8/7/2019	1.49	8/7/2024	11/9/2020	120.67151	116.0645736	111.6587919	107.4556513	103.623764	100.8285434	99.83596861	99.62878932	99.44567235
190808A00013	8/8/2019	1.23	8/8/2024	11/9/2020	120.43367	115.8041805	111.3776117	107.1586413	103.344043	100.6575231	99.82006861	99.62397682	99.44041614
190809A00026	8/9/2019	1.52	8/9/2024	11/9/2020	120.82848	116.211674	111.7966872	107.5842461	103.7355147	100.8967809	99.84213699	99.62107826	99.42983081
190812A00020	8/12/2019	1.47	8/12/2024	11/12/2020	120.65597	116.0327982	111.6121737	107.3962959	103.5607913	100.7839395	99.81762603	99.59773076	99.39838089
190812A00026	8/12/2019	1.48	8/12/2024	11/12/2020	120.69899	116.0749263	111.6534383	107.4364325	103.5967442	100.8062282	99.82124998	99.59974839	99.40039557
190812A00027	8/12/2019	1.71	8/12/2024	8/12/2022	121.68844	117.0438722	112.6025527	108.3612333	104.4354817	101.2282246	98.8150234	96.82184016	94.98751803

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
190814A00019	8/14/2019	1.46	8/14/2024	11/16/2020	120.64097	116.0114819	111.5850989	107.364375	103.5283525	100.7622959	99.81226868	99.59113415	99.38908444
190816A00028	8/16/2019	1.33	8/16/2022	11/16/2020	110.36694	108.204752	106.1077083	104.072927	102.0854348	100.4139299	99.81031899	99.59305436	99.38241424
190816A00029	8/16/2019	1.11	8/16/2024	11/16/2020	120.0255	115.3778217	110.9350965	106.7070856	102.933054	100.4242462	99.7618754	99.54623063	99.33566189
190820A00068	8/20/2019	1.39	8/20/2024	11/20/2020	120.42212	115.7773196	111.3371814	107.1068045	103.2883444	100.6127667	99.77581086	99.54340114	99.32246051
190821A00024	8/21/2019	1.65	8/21/2024	8/22/2022	121.56187	116.8899915	112.4238229	108.1613165	104.2319192	101.0527216	98.66428453	96.67375039	94.82985149
190821A00046	8/21/2019	1.44	8/21/2024	11/23/2020	120.65244	115.9995291	111.55171	107.3123842	103.4686048	100.7188079	99.79192437	99.5545977	99.33364166
190823A00023	8/23/2019	1.37	8/23/2024	11/23/2020	120.37676	115.7229775	111.2746826	107.0378516	103.2220489	100.5719193	99.76351676	99.52445193	99.29542241
190828A00011	8/28/2019	1.1	8/28/2024	11/30/2020	120.14471	115.4545245	110.9728233	106.7101949	102.9130357	100.4007122	99.72799376	99.48283514	99.24259491
190828A00021	8/28/2019	1.36	8/28/2024	11/30/2020	120.4019	115.7310395	111.2671147	107.0167156	103.1944424	100.5521242	99.75195118	99.50274291	99.2629333
190830A00028	8/30/2019	1.39	8/30/2024	11/30/2020	120.56007	115.879279	111.4060896	107.1460123	103.3045068	100.6129064	99.75529987	99.49573418	99.24782502
190909A00021	9/9/2019	1.2	9/9/2024	9/9/2020	120.74984	116.0065222	111.4753768	107.1636504	103.2902454	100.6084605	99.96795498	99.94309874	99.91826836
190911A00012	9/11/2019	1.27	9/11/2024	9/11/2020	121.08701	116.3297855	111.7854922	107.4587077	103.5466053	100.7571622	99.96514795	99.93474907	99.9043837
190917A00040	9/17/2019	1.63	9/17/2024	9/17/2020	121.87141	117.1025971	112.547128	108.2039733	104.2196042	101.1862285	99.95379279	99.90691763	99.86010097
190924A00014	9/24/2019	1.54	9/24/2024	9/24/2020	121.57516	116.789111	112.2181042	107.8636651	103.8969626	100.9650795	99.93887975	99.8726418	99.80650033
191008A00020	10/8/2019	1.58	10/8/2024	10/11/2022	121.954	117.1134262	112.4919677	108.0904839	104.067581	100.8425125	98.37968788	96.28322911	94.32662991
191008A00028	10/11/2019	1.08	10/8/2024	10/8/2020	120.61467	115.7769736	111.1593867	106.777106	102.9062733	100.3925591	99.87345026	99.76861231	99.66400684
191011A00020	10/11/2019	1.53	10/11/2024	10/13/2020	121.77201	116.9255075	112.2988199	107.8944078	103.8928997	100.9562987	99.90662989	99.78262658	99.67555835
191017A00012	10/17/2019	1.43	10/17/2022	10/19/2020	111.50347	109.1475318	106.8560699	104.6268055	102.4626574	100.6082335	99.9007648	99.76826877	99.6417411
191029A00020	10/29/2019	1.51	10/31/2022	11/2/2020	111.89386	109.4932072	107.1568853	104.8823137	102.6753946	100.7450573	99.89663076	99.71661563	99.55185603
191121A00031	11/21/2019	1.54	11/21/2024	11/21/2022	123.34482	118.2988166	113.4874567	108.9094449	104.7069609	101.2746754	98.61725302	96.36625373	94.28198959
191209A00045	12/9/2019	1.56	12/9/2024	12/9/2022	123.70796	118.5927987	113.7177263	109.0817245	104.8285974	101.344887	98.63070666	96.32697603	94.19659768
191211A00013	12/11/2019	1.57	12/11/2024	12/12/2022	123.78455	118.6610328	113.7781999	109.1348084	104.8730706	101.3791742	98.65768338	96.35059392	94.21894151
200128A00045	1/28/2020	1.45	1/28/2025	1/28/2021	122.92683	117.6910653	112.7074923	107.9876907	103.7785325	100.8152462	99.63968331	99.18823231	98.78376106
200130A00029	1/30/2020	1.3	1/30/2023	2/1/2021	112.72941	110.0364512	107.4219294	104.8830118	102.4436357	100.4727752	99.6221512	99.19274638	98.78505862
200131A00023	1/31/2020	1.56	1/31/2025	1/31/2023	123.50209	118.2429391	113.2373198	108.4916271	104.2013509	100.7570276	98.04118535	95.67282524	93.45048232
200207A00008	2/7/2020	1.35	2/7/2025	2/7/2023	123.57868	118.2617109	113.2030544	108.4118969	104.0983359	100.6476194	97.91656748	95.52540992	93.27923842
200221A00040	2/21/2020	1.28	2/21/2025	2/22/2021	122.44792	117.1350961	112.0826535	107.3157037	103.1594367	100.4514102	99.47108641	98.98285057	98.52151051
200221A00041	2/21/2020	1.53	2/21/2025	2/21/2023	123.67805	118.3363818	113.2558207	108.4454672	104.1150321	100.6442781	97.88808565	95.47030579	93.19821066
200221A00045	2/21/2020	1.03	2/21/2025	2/22/2021	122.2143	116.8766188	111.801594	107.0215546	102.8984426	100.3172246	99.43113277	98.95042162	98.48828968
200227A00018	2/27/2020	0.99	2/27/2025	2/28/2022	122.10268	116.7451162	111.6523886	106.8613763	102.7500847	99.96940005	98.1944722	96.72583253	95.3265324
200227A00024	2/27/2020	0.85	2/27/2025	3/1/2021	121.40806	116.0669081	110.9905277	106.2327515	102.2518535	100.0206359	99.31034251	98.82167044	98.34163198
200227A00025	2/27/2020	1.09	2/27/2025	2/27/2023	122.59884	117.2295572	112.1252826	107.3128664	103.0846107	99.79636437	97.14940894	94.76262916	92.48901503
200228A00090	2/28/2020	1	2/28/2025	3/1/2021	121.16544	115.8568157	110.8109176	106.0848128	102.1485148	99.9824637	99.29641265	98.80962483	98.33064245

	Parallel-Shift Sensitivity Analysis												
8/31/2020					Price								
REFERENCE	DATE	Rate	DATE	Call/Put	-400	-300	-200	-100	Base	100	200	300	400
200228A00095	2/28/2020	1.15	2/28/2023	3/1/2021	112.2639	109.4883485	106.7962011	104.1854033	101.7244827	100.0301879	99.37054368	98.88347943	98.40428417
200228A00096	2/28/2020	1.28	2/28/2022	3/1/2021	107.50937	105.897455	104.3209606	102.7761789	101.2685369	100.0506756	99.43903042	98.9522597	98.47281234
200303A00035	3/3/2020	0.81	3/3/2025	3/3/2023	121.25995	115.9086693	110.8235707	106.0646353	102.0205069	98.945943	96.39830234	94.03991557	91.77265517
200306A00069	3/6/2020	0.58	3/6/2025	3/7/2022	120.15019	114.8153703	109.7486404	105.0570594	101.3422276	99.08393579	97.50572807	96.06064412	94.65289407
061128A00049	11/30/2006	3.84	11/30/2021	2/28/2007	109.89958	108.4686367	107.1321462	105.8210887	104.5136033	103.2384748	101.9945124	100.7925075	99.76952732
070727A00036	7/31/2007	4.23	8/1/2022	10/31/2007	115.60378	113.4338798	111.3348051	109.3037575	107.3026271	105.3485893	103.4416844	101.6425204	100.2216092