Collateral Loan-to-Value Discounts

Rethinking the Appropriate LTV Discounts for Contingent Liquidity Stress Tests

MEMBER STRATEGIES

The Federal Home Loan Bank of Des Moines (the Bank) plays a critical role in providing secured liquidity to its member institutions through advances collateralized by loans and securities. The dollar amount the Bank can advance to a member is determined by the member's Advance Equivalent (AE) value, which is the lendable value of the eligible collateral pledged by a member after all applicable Discounts.

A key component of this framework is the Loan-to-Value (LTV) Discount, which reflects reductions applied to collateral values under adverse market conditions. These Discounts are central to both the Bank's risk management framework and members' contingent liquidity planning. A review of historical LTV behavior reveals that:

- **Adjustments are gradual, even during stress periods**
- **Changes are reversible as market conditions stabilize**
- **LTVs respond to interest rates with a lag, not immediately**

For members, these dynamics are highly relevant when developing contingent liquidity plans.

THE ROLE OF LTV DISCOUNTS IN MEMBER BORROWING CAPACITY

LTV Discounts are designed to protect the Bank from credit and market risks. Therefore, LTV Discounts are not static. The Bank reviews LTV Discounts at least annually, implementing changes higher and lower, as current credit and market conditions dictate. The Bank's goal is to maintain stable and prudent LTV Discounts for members. The historical changes of LTVs could also be used by member institutions in their contingent liquidity plan stress testing, helping members determine the appropriate amount of available liquidity.

PLEDGED UPB		ADJUSTED EF		LTV DISCOUNT		AE AMOUNT
Pledged Unpaid Principal Balance by the member	x	An Adjusted Eligibility Factor is established during the MCV	x	Loan-to-Value Discount as derived by the Bank	=	Advance Equivalent Amount is the final lending value
example: **$1,000,000**		example: **90%**		example: **82%**		example: **$738,000**

LTV GOVERNANCE AND REVIEW FRAMEWORK

The Bank's approach to LTV management is designed to balance **prudence with stability**, ensuring that members can rely on consistent liquidity access while the Bank maintains strong risk protections.

KEY FEATURES OF THE REVIEW PROCESS

- **LTV Discounts are reviewed at least annually, but could be more frequent if market conditions dictate**
- **Decisions are informed by a comprehensive set of factors, including:**
  - » Interest rate levels and trends
  - » Market volatility
  - » Credit performance indicators
  - » Liquidity and liquidation assumptions
  - » Broader macroeconomic conditions
- **Adjustments are:**
  - » Measured and deliberate
  - » Based on sustained market developments
  - » Designed to avoid unnecessary volatility in member borrowing capacity

This disciplined framework supports the Bank's objective of being a stable and dependable source of liquidity across all market cycles.

HISTORICAL LTV TRENDS AND INTEREST RATE MOVEMENTS

The tables below and on the next page compare LTV changes with movements in U.S. Treasury yields across key collateral categories. Yield changes are presented in both basis points (bps) and percentage (%) terms to facilitate comparison with LTV movements.

The LTV Discount tables below only apply to members who pledge collateral using Borrowing Base Certificates (BBCs). Members with Specific or Delivery Agreements receive portfolio-specific LTV Discounts and will not be discussed here.

1-4 Family First Mortgages (collateral type code 1101)

Year	Collateral Code	LTV (%)	LTV YOY % Change	Avg. 10Y TSY Yield	bps change	10Y TSY YOY % Change
2016	1101	85		1.84%		
2017	1101	81	-4.7%	2.33%	49	27%
2018	1101	82	1.2%	2.91%	58	25%
2019	1101	82	0.0%	2.14%	-77	-26%
2020	1101	80	-2.4%	0.89%	-125	-59%
2021	1101	81	1.3%	1.45%	56	63%
2022	1101	78	-3.7%	2.95%	150	104%
2023	1101	72	-7.7%	3.96%	101	34%
2024	1101	66	-8.3%	4.21%	25	6%
2025	1101	74	12.1%	4.29%	9	2%
2026	1101	79	6.8%	4.30%	0	0%

Multi-Family First Mortgages (collateral type code 1109)

Year	Collateral Code	LTV (%)	LTV YOY % Change	Avg. 5Y TSY Yield	bps change	5Y TSY YOY % Change
2016	1109	69		1.34%		
2017	1109	63	-8.7%	1.91%	57	43%
2018	1109	65	3.2%	2.75%	84	44%
2019	1109	67	3.1%	1.95%	-80	-29%
2020	1109	67	0.0%	0.53%	-142	-73%
2021	1109	70	4.5%	0.86%	33	61%
2022	1109	75	7.1%	3.00%	214	249%
2023	1109	70	-6.7%	4.06%	106	35%
2024	1109	60	-14.3%	4.13%	7	2%
2025	1109	69	15.0%	3.92%	-21	-5%
2026	1109	66	-4.3%	3.89%	-3	-1%

Commercial Real Estate First Mortgages (collateral type code 1402)

Year	Collateral Code	LTV (%)	LTV YOY % Change	Avg. 5Y TSY Yield	bps change	5Y TSY YOY % Change
2016	1402	73		1.34%		
2017	1402	71	-2.7%	1.91%	57	43%
2018	1402	69	-2.8%	2.75%	84	44%
2019	1402	67	-2.9%	1.95%	-80	-29%
2020	1402	67	0.0%	0.53%	-142	-73%
2021	1402	70	4.5%	0.86%	33	61%
2022	1402	75	7.1%	3.00%	214	249%
2023	1402	70	-6.7%	4.06%	106	35%
2024	1402	64	-8.6%	4.13%	7	2%
2025	1402	70	9.4%	3.92%	-21	-5%
2026	1402	69	-1.4%	3.89%	-3	-1%

Across all categories, LTV Discounts demonstrate controlled, incremental adjustments, even during periods of stress. While negative LTV adjustments can be meaningful and may unfold over one or several years, most notably during the 2022 to 2024 period, historical patterns show that these declines are typically followed by recoveries as market conditions stabilize. Over time, LTVs have tended to move back toward more normalized levels, reinforcing the Bank's objective of maintaining stable and prudent LTV Discounts for members.

INFLUENCE OF U.S. TREASURY YIELDS ON LTV DISCOUNTS

A key external driver of LTV Discount adjustments is the market yield on U.S. Treasury securities. This benchmark is closely tied to mortgage rates, Discount rates, and broader asset valuations.

When longer-term Treasury yields rise, several effects influence the Bank's collateral valuation:

- **Higher discount rates reduce the present value of future cash flows from mortgage and Commercial Real Estate (CRE) assets.**
- **Market price volatility increases, particularly for longer-duration assets.**
- **Refinancing risk declines but extension risk rises, affecting asset liquidity.**

In response, the Bank may lower LTV Discounts to maintain appropriate risk coverage. This dynamic is evident in the 2022–2024 period, where rapidly rising Treasury yields coincided with:

- **1-4 Family First Mortgages LTVs falling from 78% to 66%**
- **Multi-Family First Mortgages LTVs dropping from 75% to 60%**
- **CRE First Mortgages LTVs declining from 75% to 64%**

Conversely, when Treasury yields stabilize or decline, asset valuation uncertainty diminishes, allowing the Bank to restore higher LTV Discounts, as seen in 2025–2026.

This relationship highlights that Bank LTVs are not arbitrary but are systematically linked to interest rate conditions and capital market pricing fundamentals.

USAGE IN MEMBERS' CONTINGENT LIQUIDITY STRESS ASSUMPTIONS

As members assess and prepare to make changes to their contingent liquidity plans and stress test scenarios, consider applying the historical LTV Discounts provided in the tables above. While it makes sense to include conservative stress scenarios, reflecting realistic LTV Discount stress scenarios will most accurately represent the liquidity you have access to.

PRACTICAL IMPLICATIONS FOR LIQUIDITY MANAGEMENT

This divergence has several implications:

- **Liquidity Buffer Calibration:** Institutions may be underestimating available contingent liquidity if relying solely on stressed internal LTV Discount assumptions
- **Collateral Optimization:** Recognizing the Bank's relatively stable LTV framework can support more efficient collateral allocation strategies
- **Stress Testing Alignment:** While conservatism remains prudent, aligning stress scenarios with historically observed Bank behavior can improve practicality and decision-making

CONCLUSION

The Bank's LTV Discounts serve as a critical risk control mechanism, and historical trends demonstrate that these Discounts adjust in a measured and responsive manner as conditions evolve. The data shows a consistent pattern: while LTV Discounts decline during periods of stress, these adjustments are implemented gradually through the Bank's regular review process. As market conditions stabilize, LTVs are typically reassessed and increased over time, reinforcing the Bank's objective of maintaining stable and prudent borrowing capacity for members.

For member institutions, this underscores the importance of balancing prudence with empirical evidence when designing liquidity contingency plans, assessing available liquidity needs, and leveraging funding capacity.

QUESTIONS | CONTACT

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