The Bank's Collateral Valuation Model and Member Borrowing Capacity

By Joan O'Brien

COLLATERAL VALUATION OF PLEDGED ONE- to four-family residential collateral significantly affects members' borrowing capacity. The Federal Home Loan Bank of Boston's valuations are determined by a nationally recognized model and incorporate estimates of market, credit, and operational risk. They are based on rigorous analysis of relevant risk factors and designed to protect members' investment in the Bank.

Members in Category 1 status that do not provide loan-level data for their collateral receive the Bank's standard weighted average valuations. These standard valuations are set by running a representative sample of pledged collateral for a given category of loans through the model. Category 1 members may be able to increase their valuations above the standard valuation by providing loan-level details — also known as 'listing' — on a quarterly basis. Category 2 and 3 members are *required* to list their collateral and the data is input to the model to determine valuation. The model is also used in onsite field reviews of member data in which information for a sample of loans is input to the model to estimate the appropriate collateral valuation.

To aid members in collateral and liquidity planning, it's important to review how various loan characteristics affect collateral valuations, specifically the credit-risk component. The model estimates a valuation of 80 percent for a typical high-quality[1] prime loan. The table below shows how varying characteristics could affect the valuation. For example, changing the type of loan from 30-year fixed to a 3-1 adjustable-rate mortgage would reduce the valuation on average by 4 percent to 76 percent. An interest-only ARM would typically carry a 10 percent lower valuation.

Valuations would be lower for loans with the following characteristics:

- Purpose – cash-out refinance
- Underwritten based on lower documentation
- Used to purchase or refinance non-single-family residences
- Higher loan-to-value ratios[2]
- Lower borrower FICOs

The table above gives indications for how much lower the valuation would be and which characteristics are likely to have the

Loan Characteristic	Average Impact on Valuation By Loan Characteristic**	Total Valuation**
3-1 ARM	-4%	76%
IO ARM	-10%	70%
Cash-Out Refinance	-4%	76%
Last 11 Months Doc	-3%	77%
Stated Income & Assets	-5%	75%
No Documentation*	-16%	64%
2 Family Or Condo	-2%	78%
3-4 Family	-8%	72%
LTV (10% Increase)	-5%	75%
FICO (100 Point Decrease)	-5%	75%

* Not eligible in Category 1.

** These are indications only. Actual results would vary depending on other loan characteristics not specified here.

largest adverse effect on valuations. Interest-only ARMS, no documentation loans, and loans for three- and four-family properties are expected to have the largest reduction in valuation compared with the 'test' loan.

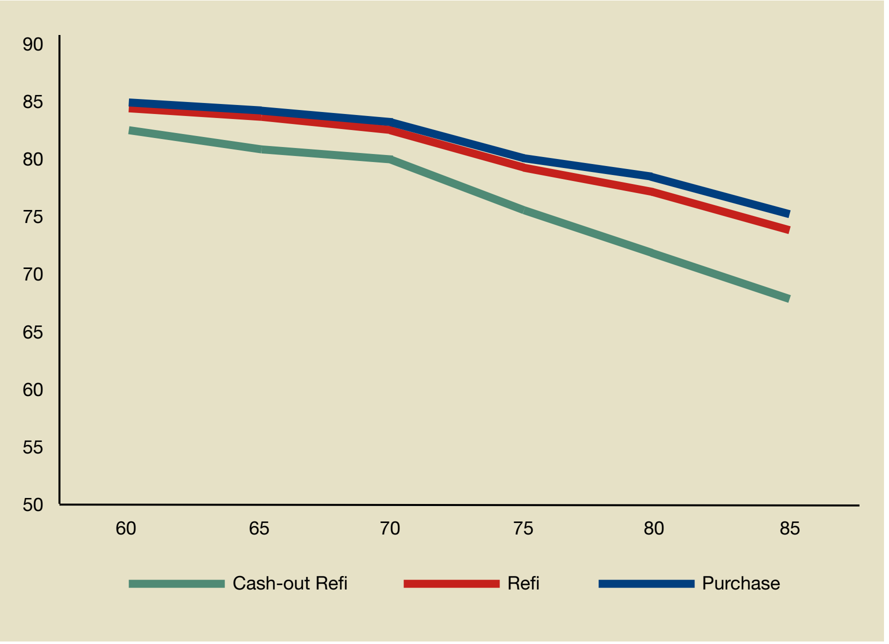
The model is more sophisticated and complex than can be shown in a table. Interactions between loan characteristics are taken into account in the calculations. Loan-to-value in particular affects how large a reduction in valuation results from a change in a loan characteristic that adversely affects credit risk. The top solid line in the graph below shows the percentage vala-

1 The loan was a fixed-rate 30-year mortgage used to purchase a single-family primary residence. Key characteristics included a loan-to-value of 70 percent and 24 months of documentation with asset verification.

2 For a new loan, higher original LTV will result in a lower valuation. For seasoned loans, the model takes into account the impact of home-price changes, which can affect the LTV, and the model's estimate of collateral valuation.

tion for a high-quality prime loan when the LTV varies between 60 and 85 percent. The bottom line shows the percentage valuation for a cash-out refinance loan with similar characteristics. The cash-out refinance loan has a slightly lower valuation when the LTV is low and the overall credit quality of the loan is strong. However, the penalty or valuation reduction for the cash-out refinance loan increases markedly as LTV increases. LTV interacts similarly with other credit characteristics.

Percent Valuation by LTV and Loan Purpose



In summary, the Bank uses a sophisticated model to estimate collateral valuation to protect against possible declines in the value of pledged collateral. The model has been carefully tested to ensure the results are reasonable and conservative. The Bank is currently reviewing alternative models to see if the process can be improved. Category 1 members may be able to increase the valuation on their collateral by listing detailed loan characteristics that can be run through the model. Contact your relationship manager if you have any questions. Please direct any questions regarding the Bank's collateral requirements to the Collateral Department at 617-292-9729 or collateral@fhlbboston.com. For more information on the Bank's collateral policies see the collateral tutorial series at www.fhlbboston.com. ■

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An Expanding Role for the Bank's Member Advisory Panel

WHEN THE FEDERAL HOME LOAN Bank of Boston's Member Advisory Panel met in April for its annual spring meeting, a high point of the day's events was a presentation by Bank staff on the models used to determine collateral valuations.

In recent months, the Bank has been undertaking a comprehensive review of collateral policies for members and a key step in the process has been collecting member feedback on collateral issues. MAP members expressed great interest in the collateral model because it provided them with fresh insight into a potentially effective strategy to reduce members' collateral valuations by listing individual loans with the Bank (see story on page 7).

"The MAP has become a key agent for change at the Bank," notes Stephen McHugh, vice president/sales and business development, and MAP coordinator. "It has become a very important user-level committee of the Bank."

Mr. McHugh says Bank staff often refer to the MAP's perspective on issues when product and policy changes are under consideration. "The Bank's collateral project team and business committee are outgrowths of the MAP," Mr. McHugh says. "The ideas that come out of the MAP are more detail-oriented than what would generally be discussed at the board level."

Launched in 2008 to strengthen communication between the Bank and its members, the MAP was designed to collect member feedback on Bank processes and products as well as provide input into products members would like to see developed at the Bank.

The growing importance of the MAP has coincided with a growth in the panel's membership, which went from 12 members when it was launched to as many as 20 members today. Mr. McHugh says membership grew in part to ensure that diverse member institutions and staff were represented on the panel and also in response to member interest in serving on the panel. "I was often approached by enthusiastic members who learned about the work of the panel and were interested in participating," Mr. McHugh says.

The panel meets twice a year — typically on the day of the Bank's annual