

# The Challenges Of Pricing And Valuing Nonconforming Products

**Nonconforming products are taking a larger share of pipelines, but individual loans may be priced differently when sold in bulk. Here's advice on how to handle that unnerving pricing disconnect.**

As production has trended toward nonconforming products, such as jumbo, Alt-A and subprime, many originators have found better execution in selling that kind of production in closed loan, mandatory bulks (pools of \$5 million or greater of similar mortgages), as opposed to individual mandatory or best efforts loan sales.

Although this execution strategy has resulted in superior delivery for most originators, secondary marketing managers (SMMs) have found it increasingly difficult to value and price individual loans to their expected bulk execution. For example, while an SMM can accurately price an individual loan to a specific investor and program by using a published base price and loan feature price or yield adjustments, the same loan may be valued significantly different if delivered within a bulk pool, even if sold to the same investor.

This pricing disconnect can be-

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come particularly unnerving as pipelines become more concentrated with nonconforming bulk product.



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The objective of this article is to identify the challenges this pricing disconnect poses to SMMs, provide color on why the pricing mismatch exists in the first place and pose possible solutions to more closely match expected and actual bulk execution valuations.

Most SMMs are formulaic in their approach to the rate sheet pricing they distribute daily. They establish the total value a given loan represents to their firm, back out their desired product or channel profit margin and publish base prices, along with investor loan-feature price adds and subtracts. If the loan is being hedged, SMMs usually make assumptions about hedge cost and expected profit margins net of assumed hedge cost. Table A shows a detailed example of how SMMs might price a loan with a 30-day rate lock.

Assuming locks are priced and sold in this fashion and reasonable hedge performance is achieved, SMMs can assure profitable production and forecast future gains on sale.

If SMMs are not confident about the total economic value of any given product or loan on the lock date, they suffer a commensurate loss in confidence in what, if any, profit margin they are pricing into their rate sheet, as well as what, if any, mandatory/best effort spread exists. Consequently, as they evaluate their hedge performance retroactively, they have limited confidence in attributing gains or losses into the margin or hedge performance categories.

## **Why the pricing disconnect exists**

In order to understand why this pricing disconnect exists, it is important to understand the ultimate disposition of nonconforming product. Most nonconforming product is securitized into collateralized mortgage obligations (CMOs) or pass-through securities.

Table B shows a fictional securitization of \$10 million of underlying loans structured into three pieces, or tranches, each with its own principal balance, credit rating, expected (average) life and par yield.

In the example of a sequential CMO, prepayments pay down the AAA piece first. After the AAA piece has been reduced to zero principal, subsequent prepayments pay down the BBB piece. As nonconforming loans are uninsured, default losses are passed through to the investor,

eroding the principal of the unrated, residual piece first, then the principal of the neighboring senior (BBB) piece.

Based on the priority and direction of payments, prepayment and default assumptions, the expected life of each tranche may be calculated. The yield at average life is the current Treasury or swap yield at the point of its curve equal to the average life of the tranche - for example, 2.25 years for tranche one.

The credit spread is the extra yield investors require for the security, given its credit rating or its absence of one. In this fictional pool, \$9.5 million would be sold as two liquid securities and the \$500,000 residual would be retained or sold by the originator.

Using back-of-the-envelope calculations, the \$10 million pool of loans would need to have a weighted average coupon (WAC) or note rate of 6.29% in order for the pool to trade at par, or 100% of \$10 million, excluding any servicing value. The 6.29% was calculated by deriving a weighted yield (6.04%) from the securitization's three tranches and adding a 25 basis point (bps) servicing fee.

Note that the fictional securitization has no explicit consideration for the loan product type, loan amount, underwriting guidelines or features of the underlying loans that comprise the pool. Instead, variables that SMMs are familiar with in valuing and pricing mortgages have been incorporated into the credit rating and prepayment and default assumptions.

For example, FICO, loan to value, property type, documentation type and occupancy have all been wrapped into how much of the pool is granted AAA (and lower) credit rating by the credit rating agencies. Other variables, such as loan type, payment informa-

tion and prepayment penalties, manifest themselves in prepayment rates that impact average life of each tranche and, therefore, required yield.

Finally, other loan variables and external variables, including applicable local economies and real estate markets, impact credit ratings and investor default assumptions, which in turn influence how quickly the principal erodes from the residual and possibly more senior pieces, as well as prepayment rates.

Similar variables also directly impact the value of servicing of the loans. To put into context the impact that credit rating has on price, if the loan features of our sample pool changed or if the rating agencies' evaluation of the loan features changed, and the changes prompted a downgrade of 5% of the AAA piece to the unrated piece, the required WAC would increase by 50 bps. Or, using a rate-to-price multiple of 3:1,

the price would decrease by 150 bps (ignoring the likely change to servicing value).

This example, though grossly simplified, describes in concept how bulks are valued and purchased by bulk investors. Investors receive a spreadsheet or data feed of applicable data, push the data to a rating agency credit model and, employing loan and credit data, engineer the most applicable securitization structure.

The cash flows and ultimate valuation of the securitization structure are generated by looking at the current yield curve, credit spreads and the weighted average life of each tranche, which is based on their prepayment and default models that are in turn based on loan-level data. In released transactions, servicing values are derived by using servicing valuation models employing similar prepayment and default assumptions. A whole-loan bulk bid then becomes the sum of the securitization and servicing values.

Returning to the pricing disconnect problem SMMs face, the question remains that if investors have access to these same models and assumptions, why would they buy an individual loan using an adjusted price when that price is different from what they would pay for the loan if delivered within a bulk.

One possible answer is the limited transparency of how credit rating models work. For instance, what loan-level features or combinations of features - and in what markets - individually impact the credit rating? In other words, investors may not have sufficient credit grade granularity to pass along to originators.

Another possible answer lies in the complexity investors face in how they communicate price adjustments based on multiple variables that don't necessarily add up if applied

## Table A: Pricing A Loan Lock

*Here's an example of how secondary marketing managers may price a 30-day rate lock for a 30-year, 7.25% fixed-rate, no ratio, Alt-A loan. The purchase money loan is for a nonowner-occupied, two-unit property with a 75% loan to value. The loan amount is \$475,000, and the borrower has a 740 FICO score.*

<b>Investor Rate Sheet Price</b>		<b>100.977</b>
<b>SRP (Feature Adjusted)</b>		<b>1.350</b>
<b>Loan Feature Price Adjustments</b>		<b>-2.125</b>
<b>NOO/LTV</b>	<b>-0.875</b>	
<b>Units/LTV</b>	<b>-0.500</b>	
<b>FICO/LTV</b>	<b>-0.250</b>	
<b>Loan Amount/LTV</b>	<b>-0.125</b>	
<b>No Ratio Documentation Type</b>	<b>-0.375</b>	
<b>Best Efforts/Mandatory Pickup</b>		<b>0.400</b>
<b>Investor Mandatory Pickup</b>	<b>0.250</b>	
<b>Anticipated Bulk Premium</b>	<b>0.150</b>	
<b>Lender Economic Value</b>		<b>100.602</b>
<b>Rate Sheet Adjustments</b>		<b>-0.550</b>
<b>Budgeted Hedge Cost</b>	<b>-0.100</b>	
<b>Targeted Profit Margin</b>	<b>-0.450</b>	
<b>Lock Price</b>		<b>100.052</b>

SOURCE: Compass Analytics

sequentially. For example, the five loan feature adjustments from Table A may sum to a 2.125% hit in price, but when considered in connection with each other and other variables in a multidimensional model, may only represent a 1% hit in price.

Finally, the properties of any individual loan may often be mitigated by other loans in the pool. In other words, the value of an individual loan depends on other loans in its pool.

### Possible solutions

For many SMMs, the first response to mitigate this pricing disconnect is to go back to selling loans on an individual, mandatory basis. With this strategy, SMMs have reasonable faith that the feature adjustments will stay the same, and that they can anticipate realizing the investor mandatory/best efforts pick-up less a more transparent hedge cost. Unfortunately, this strategy can be costly over time, as bulk execution often results in substantial premiums relative to individual investor, single-loan mandatory sales.

A hybrid of this strategy is to evaluate what applicable investors would pay for each individual loan, deriving a weighted price across the pool of mortgages, and comparing that weighted price to the best bulk bid. Although this strategy may indeed represent a sound best execution strategy, SMMs have to be careful that they evaluate which investors

will bid on loans both individually and in bulk. They must also consider, what, if any, investor underwriting guideline differences may exist between individual and bulk loan sales.

A solution for SMMs who continue to sell bulk is to price to an average of top investors' prices and feature adjustments, then calibrate these ad-

nect as much as possible by employing the same models and data available to the larger investors.

This entails utilizing loan-level credit rating data that is now available, albeit expensive, from some of the rating agencies and tying that data into cash flow and securitization models, kept current with market lev-

## Table B: A Sample Securitization Structure

*A simplified securitization shows how a collateralized mortgage obligation is structured.*

Tranche	Principal (\$M)	Credit Rating	Average Life (Years)	Yield at Average Life (%)	Credit Spread (bps)	Par (Required) Yield
1	8.5	AAA	2.25	4.85	50	5.35
2	1	BBB	7.85	4.92	250	7.42
3	0.5	Unrated	N/A		1500	15.00

SOURCE: Compass Analytics

justments over time with each bulk sale. Although this approach can provide better valuations and confidence in performance, pricing disconnects may still exist, as the calibration process reacts to market conditions, changing pipeline composition and changing credit agency fundamentals.

The ultimate solution - one that is beginning to emerge in the marketplace - is for SMMs to employ the same models investors employ when SMMs price locks and value pipelines. If they adopt these models, SMM can narrow the pricing discon-

nects and contemporary securitization structures in order to derive truer loan and servicing values.

Similar models and data also enable SMMs to measure individual loan prices against modeled pools of loans in order to calibrate any difference between the value of a loan pool and the weighted price of the individual loans. With these types of models and increasing transparency from rating agencies, SMMs can begin to mitigate this troubling price disconnect that applies to ever-growing portions of their pipelines.

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