Improving the valuation process for structured finance products

by Dave Lukach, Christopher Merchant and Frank Serravalli

PricewaterhouseCoopers

Background

For nearly three decades, the structured finance industry enjoyed growth and success driven by steady improvements and innovative developments. But in mid-2007, everything changed, and we are now witnessing an unprecedented period for the industry.

Low global financing rates, relaxed underwriting, an increase in new market entrants, and an increase in demand by investors combined to fuel US mortgage origination growth from 2005 to 2007.

During that two-year period, the mortgage market expanded rapidly in response to consumer demand for financing and the opportunity to sell the product through the securitization markets to investors. Historically low mortgage rates and government support provided an opportunity for a wide range of new borrowers and increased home ownership in the United States to a record level of nearly 70 percent of households.

The lending and borrowing euphoria was driven by an expectation of the continued rise in home prices combined with historically low interest rates. In addition, a wide range of new mortgage products offering various payment schedules provided borrowers with a menu of financing alternatives to match their financing needs. The products were premised on a combination of refinancing at a later date combined with the expectation of rising home prices.

As the mortgage market grew, the discipline around underwriting and credit evaluation weakened based on an assumption that the housing market's momentum would continue. Worst case, borrowers would refinance their debt or sell the property. The notion was the collateral appreciation would compensate for increased borrower risk.

The industry demand for new mortgage products resulted in alternatives to the traditional origination process performed by mortgage lenders and banks. The independent broker network expanded, and market participants aligned themselves with broker networks to capitalize on the opportunities to originate and package securities. A significant portion of the new activity in the mortgage market was subject to little or no regulation. The increased activity led to several niche service providers and functional specialists. The traditional process of credit assessment and underwriting, origination, and servicing a portfolio by a bank or mortgage company grew by leveraging third-party specialists.

Originators and investors expanded their appetite for product and ventured down the credit curve. In contrast to the positive and predictable behavior of mortgage borrowers, the industry entered a period with very different fundamentals. The end result was a change in the underlying credit risk leading to dramatically different payment performance.

While these fundamental changes were occurring, originators, investors, guarantors, rating agencies, and regulators continued to rely on historical payment default and delinquency patterns to predict future performance even though the fundamental credit evaluation process was dramatically different from historical practice.

The mortgage security markets were driven largely by Fannie Mae, Freddie Mac, and Ginnie Mae from the early 1980s to late 1990s. From 2000 to 2007, their share of the market decreased as issuers explored other sources for credit support and/or enhanced the structures to incorporate credit support in the form of subordination and prioritizing cash flows. The private transaction market grew as investors became more comfortable with structural credit enhancements and an expectation that credit risk could be reliably forecasted.

Over time the trend continued with more complex structures and increased leverage. Securities with lower investment grade ratings were used to issue higher-grade investment securities. Pricing and structuring models relied on historical credit and housing data and did not fully contemplate the impact of macroeconomic trends on consumer behavior.

The market frenzy led to an inadequate assessment and pricing of credit risk. The softening of the housing market shed light on the weaknesses in the process. The housing downturn has exacerbated the rate and severity of losses, and they have quickly exceeded the historical expectations used to structure and price the securities. The effects were first observed in the US subprime mortgage market and have migrated into a wider range of mortgage products. Now, those effects are impacting the consumer credit and the global fixed income markets.

Higher levels of defaults and increasing levels of loss severity have resulted in numerous high-profile events in the global marketplace, including the failure of numerous capital market participants, historic government intervention in the global financial markets, the failure of investment funds and vehicles due to liquidity pressures, dramatic tightening of credit and lower levels of lending activity, severe strain on leveraged entities, and a flight to high-quality fixed income investments.

Impact of illiquidity

As of October 2008, the global markets remained in a severe credit and liquidity crunch.

What is driving the liquidity crunch? Global financial institutions and investors have lost faith in the fixed-income markets. The lack of confidence in data and performance has resulted in unprecedented levels of volatility. The lack of functional markets precludes normal purchase and sale activity. Everyone is building cash reserves and seeking only high-quality investments.

In the past, investors in fixed-income products relied heavily on external information to make investment decisions such as research reports and credit ratings. In many cases, investors did not independently perform detailed quantitative assessments of their investments.

When the performance of structured products started to deteriorate, a lack of transparency in underlying deal data led to generalizations about performance. In general, pre-2005 deals continue to perform as expected, while mortgage-backed deals originated in 2006 and 2007 are broadly labeled as higher risk.

The lack of timely and detailed loan level data to evaluate performance and risk combined with little to no trading activity has left the market in a frozen state. Currently, levels of trading remain low, and the only significant transactions have involved entities that needed to access cash and reduce their credit risk exposure.

The absence of trading activity has forced investors to seek alternative information to price many of their structured product investments. Current market conditions have added a new level of complexity and uncertainty to the valuation process.

Market contagion

What started as strain primarily in the mortgage product space has spread to the global credit markets. Credit has tightened on a global scale as evidenced by historic rises in overnight bank lending rates and a reluctance of institutions to lend to consumers and one another.

The tightening of credit has led to a rising home inventory, and home prices continue to fall. The good news is that the rate of change in home prices has started to slow. The effect on household wealth and homeowner equity is impacting consumer spending, triggering a negative feedback loop.

Deleveraging in the financial segment has resulted in major changes to notable players in the financial industry. The Lehman Brothers' bankruptcy, Bank of America's purchase of Merrill Lynch, JP Morgan's purchase of Bear Stearns and Well's Fargo's acquisition of Wachovia are the most prominent examples. Experts believe there will be further consolidation in the banking sector as it goes through structural change in response to the effects of the credit crisis. It is clear the financial services landscape will be radically different.

The credit assessment process

Low borrowing costs seen from 2000 to 2007 and readily available credit provided originators with increased leverage to expand their lending businesses, and the securitization markets provided an expedient outlet for transferring assets while maintaining little or no exposure to the underlying assets.

As the exit market tightened, investors initially required substantially higher yields and shortly thereafter exited the market for structured product. Since the later half of 2007, the securitization markets have contracted, and there is virtually no new mortgage issuance with the exception of government-sponsored enterprise products.

The prominence of "reduced" and "no-doc" loans, piggyback loans for down payments, and a frenzied market for investment properties has resulted in many highly leveraged homeowners. Dramatic house price depreciation on a national scale has left many homeowners with minimal equity.

So where does this take us? The origination and underwriting processes need an overhaul with an emphasis on the basics. The tightening in credit standards since summer 2007 has led to an improvement in the underwriting process.

Investors need more information to reduce the uncertainty that has driven up the market yields on securities. While some of the spread widening is clearly attributable to credit issues, many highly rated securities are trading at very high yields. Consistent and reliable pool information will permit an assessment of the current performance of the investment pools and a more rational assessment of the inherent risks.

The information used to originate product generally is not updated, and some have questioned the predictive value of FICO scores and other credit measures.

FICO scores reflect the history of borrower repayment behavior and do not include any forward-looking information. In addition, some believe that the scores can be managed. Pool performance is driven by several factors, including occupancy type, geographic concentrations, and house price appreciation. These are widely considered important factors in assessing and estimating the pool cash flows.

Underwriting guidelines should consider all of the factors that will affect borrower behavior. The market has responded by reducing or eliminating low- and no-documentation loans and requiring an assessment of the borrower's ability to meet the most onerous terms. Critical borrower information may need to be updated and made available to investors, rating agencies and regulators.

As an expanded information data set is distributed by underwriters and servicers to the investor community, uniform standards for data content and transmission will be needed to make the process efficient. Automated data sets will facilitate data mining and stratification to better evaluate and measure risk.

Although there is significant information in the markets around economic factors, an industry effort is needed to centralize and make available key macroeconomic information such as housing price appreciation and unemployment rates, which will facilitate the analysis of longer-term performance.

Lenders also should clearly explain their underwriting, surveillance, and loss mitigation processes. Strengthening such processes and making it known to the investor community will reduce the information gap.

The whole loan market

Historically, loans remained on balance sheets for a short period resulting in institutional exposure to the most recent originations. As the market shifted away from an originate-to-sell model, institutions have been left with larger whole loan portfolios.

Many originators also act as the servicer so they have the granular loan performance data necessary for evaluating risk. In addition, the ability to service the loans and implement risk mitigation strategies is not constrained by off-balance-sheet accounting requirements.

Transaction surveillance

Investors need access to current, reliable information to assess risk. Periodic investor reports generally provide high-level information on asset performance and trends and the current capital structure.

Advances in the credit markets have resulted in simple to complex capital structures. As structural complexity increases, the types and level of information required expand extensively. Credit and performance analysis is grounded in the same principles:

1. Loan level performance
2. Current credit status of the borrower
3. The current pay status and aging profile of borrowers
4. Current collateral values
5. Home price appreciation levels
6. Structural credit support (initial and current)
7. External credit support
8. Macroeconomic conditions

The market's ability to assess risk and derive values will be efficient only when sufficient data is available to drill down to the loan level. That level of detail is known to a limited segment of the market. Until we achieve more balanced distribution of information to the marketplace, there will continue to be a wide range of values and a premium demanded for the information uncertainty. Timely and consistent reporting of borrower and deal performance is essential. Consistent data formats and templates will allow efficient analysis and comparison of deals.

On the front end, enhanced communication of deal structure and attributes should be considered. The key question is: How can the process be simplified to enable investors to better understand the risks and incorporate changes into their estimates on a timely basis?

In addition, market participants should enhance their quantitative and qualitative assessments. Investors need to be able to independently assess their deal performance and evaluate information provided by market makers and pricing services for reasonableness. In addition to deal level data, investors need to understand the governing documents and deal attributes to ensure the model appropriately reflects the transactions terms.

A model can be used in a variety of ways to understand a structured product. The most common way is to run sensitivity analyses using a range of inputs for key variables. The model provides a level of independence to the investor by allowing them to derive values using data from multiple sources.

In light of the recent market events it is important to consider how scenario analyses are developed and the probability and effect of outlier events.

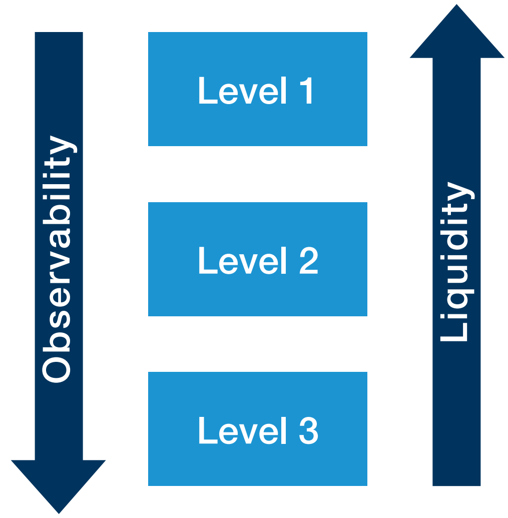
Fair value

The recent market conditions have caused nearly everyone to step back and assess the concept of fair value. In liquid and transparent markets, the concept is neither complicated nor controversial. In illiquid, inactive, and nontransparent markets the process is complicated.

The accounting standards define fair value as an exit price in an orderly market between a willing buyer and a willing seller. The guidance focuses on the price received to sell an asset or transfer a liability, not the price paid to acquire an asset. When markets are functioning properly, observable trades for identical assets provide the best estimate of fair value. Recently, illiquidity and a decrease in trading levels have resulted in a lack of transactions and a decrease in observable data points.

The accounting framework prioritizes the process used to determine and report fair value with a focus on market-based measurements. Specifically, fair value should be based on assumptions and information market participants would utilize in pricing an asset or liability. Hence, the current dilemma: What do you do when there is limited or no market activity?

It has become apparent that participants have different access points to the market and different levels of information. The result is an information imbalance with pricing levels that often reflect a wide disparity of valuations. If transparency increases, the market should migrate to a narrower range of values, which in turn should decrease the current liquidity premium as investors become more confident in the pricing process.



In response to current market conditions, the SEC and FASB recently released additional guidance providing clarification on application of the fair value standard in illiquid markets. The guidance clarifies how quotes should be used when markets are illiquid. If quotes are not current or are based on nonobservable data points, they are deemed to be a level 3 input or valuation.

In addition, market participants should seek out relevant market data to make their own estimates when quotes or pricing services are not deemed to be representative of market values or are classified as level 3. The FASB Staff Position discusses the notion of weighing the relevant information to determine the best estimate of value.

Valuation considerations

Many lessons can be learned from the unprecedented market events. First, historical data needs to be monitored to assess its predictive value based on current market conditions. As market conditions evolve, historical data and relationships may no longer be relevant.

The anxiety in the markets has highlighted the need to assess liquidity and its short- and long-term impact on values. As liquidity concerns increase, the market demands a premium. We attribute this to two concerns.

The first concern is an inability to compare risks across deals (information uncertainty), and the second concern is that the ability to exit a position will be constrained by a lack of buyers at a price they believe is reasonable.

The following highlights specific factors to be incorporated into fundamental credit analysis. We focused on three areas, origination and borrower data, transaction surveillance, and entity level strategies.

Origination and borrower	Transaction surveillance	Entity level
Full documentation loans	Asset level performance data	Alternative exit strategies (whole loan sales, loan investments)
Underwriting standards and standard documentation	Benchmark industry data	Formalized policies and procedures
Current FICO or similar credit scores	Pool level due diligence	Identify and implement controls over valuation
Servicer performance	Static pool data	Periodic portfolio surveillance
Back testing the underwriting and origination process	Stratify and assess risk based on vintage, collateral type, layered risk factors	Outlier and variance analysis
Detailed borrower performance data	Governing documents and amendments	Servicer due diligence
Impact of macroeconomic events on historical trends and data		Evaluate macroeconomic factors into models
Loan modifications		Benchmark investment and underwriting against deal performance
Updated appraisals		

Government intervention

In response to the unprecedented activity in the markets, the US government has undertaken numerous actions to quell the credit crunch, encourage lending, and improve confidence in the financial markets. The Troubled Asset Relief Program, direct investments and loans to troubled institutions, and increased FDIC deposit insurance limits have been put in place to stabilize the markets.

The coming weeks and months are likely to see additional action by the US government, US Central bank, and the central banks of other nations in response to the financial crisis. It will take time before the full impact of these measures can be assessed.

Summary

Recent credit events have significantly changed the securitization and fixed income landscape. We are in a transition period that will take us into a new environment. Investors have been reminded that yield is driven by risk. The market also has been reminded of the risks of using leverage.

The investor community has moved toward more granular, credit-based valuation processes with a keen focus on drivers of fundamental cash flows. Increasing the volume, quality, and timeliness of data available to market participants will facilitate a more rational capital allocation process.

In addition, market standards for data and electronic formatting will increase the efficiency of the data transfer process, which will improve the market pricing process. Rational, informed decisions are based on access to detailed and relevant information on a timely basis. The market has already started to implement some of these suggestions. The positive momentum must continue with the longer-term goals of making the markets transparent.

The securitization market has a longstanding reputation as an important and integral part of the global financial markets. Reducing market uncertainty and calming investors' concerns will allow the securitization market to regain its role in the global economy as a distributor of risk and capital.

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