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What's It Worth?

A Background Primer on RMBS Valuation & Basic Valuation Accounting

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Today's Fair Value Environment

Over the course of the last two years, investment in and ownership of residential mortgage-backed securities (RMBS) has produced a return on investment that has generally resulted in far less recurring income and gain-on-sale revenue than was desired at acquisition by most investors.

Whether the return has been affected by liquidation in the market at a loss or through the receipt of diminished cash flows during the holding period, private-label RMBS investments have resulted in a constant stream of disappointment, from periodic principal writedowns to total write-off of entire investment positions.

In an effort to bring greater transparency to direct security owners and third-party investors of these instruments, the financial accounting standards board has sought to enact rules that require SEC-reporting entities to provide clarity in their financial statements about the fair market value of each investment security they own. The pronouncement is called FAS 157 and has been a required part of the GAAP-auditing process since early 2008. The statement has been modified several times since its inception in an effort to explain the intent of the rules and clarify the process by which an auditing firm should apply the standard. The result is that while the practical application of the statement has trended toward being applied with sameness, the auditors also appear to have stepped up the rigor with which they review and "sign-off" on the related accounting entries caused by these valuations.

What has exacerbated the difficulty of applying the new accounting rules is the lack of observable liquidity (read: active trading of the securities) in the marketplace. The number of dealers who historically traded residential mortgage bonds and thereby directly supported the market has shrunk from as many as twenty active participants to a small handful of names that are less willing to commit capital to the sector than they had in past. If RMBS were trading freely between deals and investor portfolios, finding the current "fair market value" of a security would be relatively easy and the related credit pricing spreads would be apparent.

So, in the absence of a market wherein the assets are actively trading between the buy and sell sides, how can an owner of RMBS gain comfort about the real value of what it owns?

The Proliferation of Pricing Services

Within the past year a growing number of vendors have sprung up to fill the void created by the accounting requirements in the absence of accurate indications of dealer-traded value. (Since Clayton Independent Service is now in its 5th year, we are comparatively old times.) A casual stroll through the exhibit space at any of the major industry conferences reveals an increasing number of vendors who are ready and willing to price assets based on the supposed superiority of their in-house developed black-box models and the stated depth of their background and expertise. These firms offer their services to provide an "independent" valuation of the various securities owned by hedge funds, regulated savings and banking institutions and credit unions, and other investment vehicles.

While the output produced by these services does represent, in general, a realistic idea of value (within the context of the accounting requirements) the underlying processes that the various vendors go through to determine value is relatively standard. Even as one firm may believe that their model is better than the next competitor's model, the real proof of the tool's output are the inputs used to

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derive value, coupled with the consistency, expertise, and accuracy of the pricing service itself and its analysts who are tuning the dials to determine the values.

What Is Required?

The accounting literature provides specific—yet sometimes unclear—guidance about the approved ways of determining value to satisfy the fair value requirements. Further, the accounting statement defines fair value as: "the price that would be received to sell an asset in an orderly transaction between market participants at the measurement date". It should be noted, however, that the term "mark-to-market" has been widely used as being synonymous with "fair value"; however, "mark-to-market" may not always strictly equal "fair value" (under this definition) due to the currently distressed nature of the market.

The pronouncement establishes a three-level hierarchy for measuring fair value (called "Levels"):

- **Level 1** uses quoted, unadjusted prices in active markets for identical assets.

- **Level 2** uses other than quoted prices that are observable for the asset (either directly or indirectly).

  Per the accounting statement these include:
  - Quoted prices for similar assets in active markets
  - Quoted prices for identical or similar assets in markets that are not active
  - Inputs other than quoted prices that are observable for the asset or liability (for example, interest rates and yield curves observable at commonly quoted intervals, volatilities, prepayment speeds, loss severities, credit risks, and default rates)
  - Inputs that are derived principally from or corroborated by observable market data by correlation or other means (market-corroborated inputs)

- **Level 3** uses unobservable inputs for the determining fair value of the asset.

  When the valuation is performed using Level 3 inputs the literature states:
  - Unobservable inputs shall be used to measure fair value to the extent that observable inputs are not available, thereby allowing for situations in which there is little, if any, market activity for the asset at the measurement date
  - However, the fair value measurement objective remains the same, that is, an exit price from the perspective of a market participant that holds the asset
  - Therefore, unobservable inputs shall reflect accurate projections about the assumptions that market participants would use in pricing the asset (including forecasts about risk)
  - Unobservable inputs shall be developed based on the best information available in the circumstances, which might include the reporting entity's own data
  - In developing unobservable inputs, the reporting entity need not undertake all possible efforts to obtain information about market participant assumptions
  - However, the reporting entity shall not ignore information about market participant assumptions that is reasonably available without undue cost and effort (therefore, the reporting entity's own data used to develop unobservable inputs shall be adjusted if information is reasonably available without undue cost and effort that indicates that market participants would use different assumptions)

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Pretty Clear?

Marks for a Level 1 value are unmistakably real indications of the current market price of a security. For example, if an investor owns part of security *ABC* and another piece of that same issue trades at a price of "*x*", then the value of the *ABC* portion being price-evaluated should presumed to be "*x*" and in this instance its "fair market" value is easy to observe. **However**, valuing securities based on actual trading levels does not take into consideration prices at which assets have been sold due to forced sale, fire sale, or "odd-lot" discounts.

A Level 2 valuation is a bit less crisply defined and typically involves a matrix-based substitution-type approach that looks for actual trades of assets whose underlying collateral and/or bond characteristics are seemingly similar enough to justify using an observed trade as a proxy price for the security being valued.

Another way to produce a Level 2 valuation is when each of the underlying pricing inputs to a model can be observed and properly correlated and thereby used when generating the security's price. These inputs can be found by looking in the market for cash-flow performance metrics and trading levels of other assets (whether actively traded or not) that are similar to the security being valued.

It is a Level 3 valuation, where things get a bit more difficult (although this is one of the predominant and primary forms of valuation being produced today). Level 3, more commonly referred to as a "mark-to-model" approach, uses mostly unobservable inputs as projections of the factors that directly impact the cash flows to a security; most models use these unobservable inputs, then, to determine the measured fair value of the asset.

A pricing service producing Level 3 values must rely on its ability to properly assess and project each of factors that will impact cash flow to the security; these include such things as prepayments, defaults, loss severities, geographic concentrations (coupled with value declines to the housing stock). To do this, many services develop sophisticated models to project how the underlying loans can be expected to perform over the near– and intermediate-term. Further, they need to have access to readily available information about the proper rate at which to discount the cash flows as the model is assimilating the inputs and calculating the value.

To accurately and efficiently do these things, the pricing service will need two consistent sources of information in place:

(i) direct access to a deep historical database of mortgage instruments and underlying loan detail to evaluate and shape the projections (called vectors); and

(ii) a flow of detailed market color from the Street.

How Are These Valuations Applied?

In general, the application of the fair market values is, on the surface, the same for all investors: a security's current fair market value is compared to its carrying value and then an entry is made to properly adjust for the change in value.

It is how the securities are classified by the investing entity at the time of acquisition that determines where the changes in value are realized in the financial statements. To satisfy GAAP, an additional accounting standard (FAS 115) requires an investor to categorize the assets they purchase into one of three categories:

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- Trading;
- Available-for-Sale; or
- Held-to-Maturity (also called Held-for-Investment)

Assets classified in a Trading portfolio realize the increase or decrease in value through the current period's income statement as the individual securities are either marked up or down as the fair market value changes.

Assets held in an Available for Sale portfolio are generally described as securities that the investing institution does not wish to immediately trade, nor do they have the ability or intent to hold the assets on their books until they mature. The valuation marks for these investments are unrealized gains or losses that are set aside until realized and then go against equity.

The third classification category is clearly defined to hold investments for which the acquirer can demonstrate that they have a real and positive intent to hold the assets to maturity and not trade or reclassify the assets during the investment's life. These assets are measured on the investor's books at amortized cost, and the unrealized mark is recorded in an entry called "other comprehensive income", designed to show transparency about the theoretical price decline that would impact the investor's available capital if the security instruments were liquidated at the current price.

What complicates the simple application of the valuations of both available-for-sale and held-to-maturity assets is the accounting concept of "other than temporary impairment", which is also covered under FAS 115.

Impairment means that an institution must determine whether a decline in fair value below amortized cost for an individual security is other than temporary. And, the investor must fully document the rationale used to judge a security as being other than temporarily impaired or not.

If the impairment is deemed to be other than temporary, the cost basis of the individual security must be written down to its fair value, thereby establishing a new cost basis for the security, and the amount of the write-down must be included in earnings as a realized loss (this was the GAAP requirement prior to the additional guidance provided in FAS 115-2 and FAS 124-2).

Further, the accounting rules require that after such a write-down, "the new cost basis shall not be changed for subsequent recoveries in fair value." Any recovery of fair value, both for an available-for-sale security or a held-to-maturity security, cannot be recognized in earnings until the security is sold or matures.

Has Anything Changed and Why?

The financial crisis that has gripped the country has been well documented throughout the media. What is not as clearly understood is how and to what extent the "Fair Market Valuation" requirement has amplified the situation.

Acting under a mandate from Congress to either suspend the valuation requirement altogether or at least modify the applied treatment of the accounting valuation rules (and thereby lessen the destructive impact that sustained asset writedown was having on U.S. mortgage and world investor markets), the accounting board has sought to explain and refine the practical use of the rules.

Prior to any clarification from the accounting world, what developed was the classical economic scenario of increased supply and diminished demand negatively impacting price, augmented by record poor collateral performance. As RMBS assets initially began their free-fall in price, many investors quickly hurried to sell their holdings to limit loss and exposure to the sector. The increased supply

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caused prices to plummet simply because there were few willing buyers to participate in and support what the accounting literature calls an "orderly market." And, prices continued to erode further with each passing month as collateral performance turned in one dismal result after another; consequently a shrinking number of buyers came to the front willing to purchase and invest in mortgage-backed bonds.

What ensued was a market dynamic in which the preponderance of observable values readily available to investors were "distressed" prices – and this is what was so troubling to lawmakers. Under the existing associated accounting standards, measurements using these illiquid, deeply distressed prices were causing an on-going erosion of capital among market participants as asset values were written down to comply with the rules.

To help rectify the detrimental effect that the rules were causing (and satisfy the wishes of Congress) several things have occurred, chief among them:

- The intent and application of the fair value requirement has undergone clarification and revision. While the basic definition of "fair value" has not changed, how a reporting entity determines price and interprets the value within the context of its assets and related financial statements has become more clear and reasonable:
  - The initial Fair Value Measurements statement has been enhanced to permit a more realistic understanding and application of value, and have it not solely based on prices that could reflect a significant decrease in the volume and level of trading and observable activity;
  - Under FAS 157-4, a reporting entity is permitted to evaluate a variety of market factors as it makes a determination about illiquid and inactive markets, and use these factors to make reasonable (and documented) adjustments to inputs underlying the fair value measurements

- Another significant change to the process now more fairly requires a reporting entity to recognize only the projected credit-loss portion of a forecasted impairment and not realize a loss associated with a reduction in price caused solely by market illiquidity (under FAS 115-a, FAS 124-a, and EITF 99-20-b):
  - As covered earlier in this article, the concept of "impairment" and how it is generally applied were briefly discussed. New guidance was issued in April 2009 that shifts the focus of the impairment model from an entity's intent to hold an asset until recovery to the entity's intent to sell the asset:
    - If an asset is intended to be sold and its fair value is underwater versus its cost basis, it will continue to be written down to fair value through earnings;
    - For an asset not intended for sale (meaning it is either categorized on the books as available-for-sale or held-to-maturity), if it is probable that the entity will not be able to collect all of the amounts contractually due (based on the probable associated cash flows from the asset) the reporting entity can bifurcate the potential writedown: the impairment portion caused by a credit loss is recognized in earnings, whereas the "non-credit" share of the impairment is recognized in other comprehensive income

The combination of these revisions ensure that the intended purpose of fair value transparency is still in place, but now the results bring greater accuracy about an asset's true worth in terms of how an investor intends to manage and own its portfolio holdings.

So, What Does This All Mean?

While the auditing community will strive to apply the fair market value accounting rules consistently for every investor under GAAP, the type of entity (or investor) receiving the values will likely have a different motivation about and use for the prices.

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A hedge fund, for example, will commonly calculate a current "liquidation" value of its portfolio at each month-end in order to post the fund's cumulative net asset value and thereby establish the price at which an investor in the fund may cash-out his or her investment.

Conversely, a regulated savings institution may own an investment portfolio to leverage its capital and increase its earnings. Many plan to hold each investment asset until pay-off or maturity (and generally match-fund the asset with a liability equal in duration). Setting aside the transparency intent of the fair value standard, this type of an entity may be less interested in the liquidation value of its holdings and be more concerned about an accurate forecast of the cash flows it will receive during the lives of its investments. (Mathematically, the present value of the cash flows translates to price.)

To service both camps, a pricing service needs to have a fundamental and practical working knowledge of the accounting rules and also understand what they will mean for each client, how the different clients may use the values supplied, and be prepared to support the prices provided to each client with the documentation and rationale needed to satisfy its auditors and/or regulators. Further, it is essential that the pricing service is able to provide accurate analysis to support the bifurcation of credit losses and non-credit losses for impairment purposes as per the revised guidance.

Lastly, and perhaps most importantly, the pricing service needs to be technically adept at understanding the performance and market trends of the collateral underlying the securities being valued and translating this knowledge into correct and consistent projections about performance.

Finding the right pricing service that can do all of this–incorporate the optimal blend of market and credit research, utilize appropriate internal and external pricing models, and ultimately exercise skilled judgment to determine and verify the correct set of performance assumptions—is key to better understanding and managing asset portfolios.

For More Information

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