# THE CASE FOR AGENCY MBS IN A DIVERSIFIED PORTFOLIO

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During the financial crisis, some residential mortgage-backed securities and other securitized debt experienced losses in underlying collateral. Fear and skepticism about the stability of securitized products lingers for some investors. However, it is important to recognize that *all securitized products are not created equal*. As with most fixed income sectors, securitized products consist of many different levels of risk. In this piece, we take a closer look at agency mortgage-backed securities (MBS). We explain the structural characteristics of agency MBS that help to mitigate risk, including the following:

- Conventional agency MBS (Fannie Mae and Freddie Mac) have the *implicit* backing of the full faith and credit of the federal government; Ginnie Mae is *explicitly* guaranteed
- Agency mortgage loans, the collateral that underlies agency MBS, can act as a strong diversifier in multi-sector portfolios
- The volatility profile of agency MBS is compelling
- The overall agency MBS market offers strong liquidity

## AGENCY MBS HAVE HIGH CREDIT QUALITY

The backing of agency MBS by the federal government provides a strong credit factor for bondholders. Given that mortgage loans purchased by government-sponsored entities (GSEs) are then guaranteed by the GSEs, investors are protected from defaults on the underlying mortgage loans. In the event of default on an underlying loan, the GSE will step in and make the investor whole. That said, the conventional (or conforming) mortgages[1] purchased by Fannie and Freddie have the strongest credit profiles among mortgage borrowers. The question is not *if* you will get your principal back, but *when*.

This credit strong point highlights a significant difference between agency MBS and non-agency MBS, which do not have the same credit protections in place. It is important to note that during the financial crisis, no agency MBS investors experienced any principal losses on their holdings.

## MORTGAGES OFFER DIVERSIFICATION BENEFITS

Agency MBS excess returns have had lower correlations compared to other fixed income sectors. This is a key benefit of holding agency MBS in multisector portfolios.

The table below (Figure 1) shows that agency MBS have had a low correlation with other fixed income sectors.

### FIGURE 1: MBS CAN BE A STRONG DIVERSIFIER AGAINST OTHER SEGMENTS OF THE MARKET

| | Global AGG | USD EMD | US HY | US IG | US MBS |
|---|---|---|---|---|---|
| Global Aggregate | | | | | |
| U.S. Dollar Emerging Market Debt | 0.4506 | | | | |
| U.S. High Yield | 0.6040 | 0.6407 | | | |
| U.S. Investment Grade | 0.6884 | 0.5922 | 0.8271 | | |
| U.S. Mortgage-Backed Securities | 0.4362 | 0.3967 | 0.4643 | 0.4191 | |

Source: Bloomberg Barclays, Monthly Excess Returns (1/29/1993-3/29/2019).

## AGENCY MBS HAS BEEN A LOW-VOLATILITY SECTOR

Agency MBS have offered low standard deviation relative to other investment grade fixed income sectors, as well as being higher-rated on average. (Figure 2).

### FIGURE 2: SECURITIZED RETURNS VERSUS OTHER FIXED INCOME SECTOR RETURNS

| | Average Ratings | Average Monthly Excess Returns (bps) | Standard Deviation of Excess Returns (bps) | Risk-Adjusted Excess Returns (bps) |
|---|---|---|---|---|
| Global Aggregate | N/A | 1.3 | 34 | 3.84 |
| U.S. Dollar Emerging Market Debt | Baa2/Baa3 | 40.3 | 335 | 12.03 |
| U.S. High Yield | B1/B2 | 21.1 | 267 | 7.93 |
| U.S. Investment Grade | A3/Baa1 | 6.4 | 81 | 7.88 |
| U.S. Mortgage-Backed Securities | AAA/AAA | 2.8 | 35 | 8.00 |

Source: Bloomberg Barclays, Monthly Excess Returns (1/29/1993 – 3/29/2019).
Ratings source is Bloomberg Barclays Indices. Ratings data is represented by average ratings for each index.
Excess returns are based on the excess over U.S. Treasury returns.

## THE AGENCY MBS MARKET HAS HIGH LIQUIDITY

The agency MBS market now has approximately $8.4 trillion outstanding, making MBS the third largest bond market after U.S. Treasury and corporate bonds.[2] The sector generates more than a quarter of U.S. bond market trading volume in any given year—second only to U.S Treasury trading volume.[3]

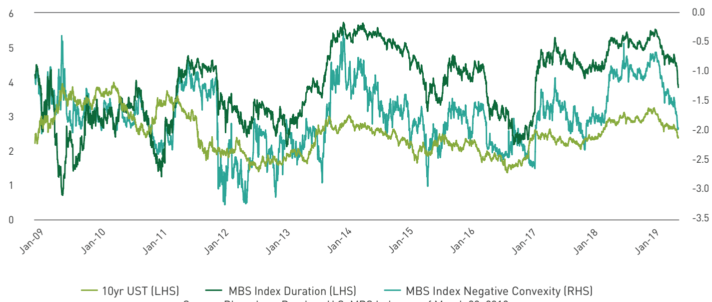
## RISKS REQUIRE ATTENTIVE MANAGEMENT

The main risk with agency MBS is that the timing of mortgage prepayments on the underlying collateral is uncertain. If interest rates fall and homeowners prepay their mortgages to refinance at lower interest rates, then the duration of the agency MBS will shorten. This tends to occur at the exact time when investors would want a longer duration to take advantage of falling rates.

The opposite occurs in a rising rate environment. Homeowners become "locked-in," unable to refinance or less likely to move due to higher mortgages rates. In this environment, the duration of the agency MBS typically extends as interest rates rise. This is known as negative convexity, or the rate of change of duration with respect to changing interest rates. Figure 3 shows how convexity has become more negative since the beginning of 2019 and duration has fallen; with the 10-year Treasury note still trading near 2.5 percent, there is a higher probability that mortgage borrowers would refinance.

However, duration risk can be managed by MBS investment teams. Figure 4 shows how a team can put together cash flows that potentially protect the portfolio from increases or decreases in duration as rates move. We constructed two hypothetical pools of Fannie Mae conventional 30-year bonds: one with cash-flow protected features and another with no special distinguishing features. When we applied various changes in interest rates, we see differences in duration between the two pools. For example, for a 100 basis point (bp) increase in interest rates, duration jumps only 20bps to 6.10 percent in the cash-flow protected pool, but jumps 337bps to 7.12 percent in the generic MBS pool. With "pass through" agency MBS, cash flows for bondholders are paid by "passing through" prorated mortgage principal and interest payments on the underlying collateral.

### FIGURE 3: MBS DURATION, CONVEXITY AND THE 10-YR TREASURY




Source: Bloomberg Barclays U.S. MBS Index, as of March 28, 2019.

### FIGURE 4: MBS INVESTMENT TEAMS CAN HELP MANAGE DURATION RISK

*Duration of Hypothetical Fannie Mae Conventional 30-Year Pools*

| Change in Interest Rate: | | +300 | +200 | +100 | 0 | -100 | -200 | -300 |
|---|---|---|---|---|---|---|---|---|
| Change in Duration: | Cash-Flow-Protected Pool* | 6.77 | 6.52 | 6.10 | 5.90 | 5.08 | 3.97 | 3.35 |
| | Generic MBS** | 8.89 | 8.37 | 7.12 | 3.75 | 3.00 | 2.51 | 2.09 |

Source: Bloomberg, as of March 31, 2019.

* Specified pool with cash-flow-protected characteristics.

** "Generic MBS" describes a mega pool of Fannie Mae securities with no special distinguishing features. Fannie Mae mega pools, or "Megas," are pass-through securities in which the underlying collateral consists of groups of existing Fannie Mae MBS or other Fannie Mae-issued Megas. Source: Fannie Mae.

For modeling, the source is the Bloomberg Agency MBS Index Prepayment Model (https://www.bloomberg.com/professional/product/mortgage-solutions). We use this model to calculate the modified duration drift in a range of interest rate scenarios.

Per Barclays, total projected prepayments from the model are the sum of rate/term refinancing, housing turnover, cash-out refinancing and delinquency buyouts. For each mortgage holder, economic incentive is defined as the percentage change in monthly payment assuming the borrower refinances into another loan with similar maturity at prevailing mortgage rates. Barclays uses a piece-wise linear function of economic incentive and considers factors such as spread at origination (SATO), loan size and updated loan-to-value ratios (ULTV).

The hypothetical example has been provided for illustrative purposes only; it does not represent actual results or trading of any Breckinridge strategy or portfolio. No representation is being made that the results are indicative of Breckinridge's skill or that Breckinridge will achieve comparable results. Hypothetical results are often materially different than actual ones due to inherent limitations of hypothetical data. For example, the data does not reflect other material economic or market factors that could impact decision-making.

## CONCLUSION

The securitized market has many complexities not present in corporate or municipal bond markets. One of the most important considerations is prepayment risk among borrowers in the collateral pools and whether current spread levels compensate investors for the negative convexity they are taking on. However, these considerations can be managed through an in-depth understanding of the nuances of securitized products, as well as through diligent monitoring of economic trends and of ongoing regulatory changes in the securitized market (see *Five Key Themes in the Securitized Market*). The higher average ratings relative to certain other fixed income securities, and the low correlation of agency MBS, could benefit investors seeking to preserve capital while finding ways to increase yield.

In general, agency MBS can benefit investors when managed by experienced analysts and traders who understand prepayment risks and the complexity of the asset class. With an experienced investment management team, agency MBS can help investors preserve capital while minimizing the volatility of returns.

As with any investment, the appropriateness of agency MBS securities within a portfolio requires consideration of the specific investor's overall financial profile. Risk tolerance levels and financial objectives and needs are just a few of the items to evaluate before making any investment decisions.

FOOTNOTES:

1. Conventional mortgages must meet stricter criteria for loan size, credit quality , loan-to-value ratio and income.
2. SIFMA, as of 4Q18, per data from Bloomberg, Thomson, Fannie Mae, Freddie Mac and Ginnie Mae.
3. SIFMA, as of March 2019, based on average daily trading volume for U.S. bond markets.