Benefits of Investing in Mortgage-Backed Securities

By Henry Song, CFA and Douglas Gimple
August 2020
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Mortgage-backed securities (MBS) can play an important role as a fixed income asset class that offers several benefits. In addition to historically attractive yields compared to Treasuries and low volatility, these highly liquid assets provide diversification, which can lower portfolio risk. While MBS have historically been viewed by some as risky, stricter lending standards were put in place post-Financial Crisis to make the market safer.

Today, the MBS market continues to evolve as new types of securities are created to meet increasingly specific client needs, causing market complexities and nuances that skilled, active portfolio managers can leverage to generate alpha.

Why Invest in MBS?
Many fixed income investment managers, including Diamond Hill, make significant allocations to agency and non-agency MBS for the variety of benefits they offer.

1. **Historically attractive yields relative to Treasuries.**
   Agency MBS may improve the risk-return profile of fixed income portfolios, as they are similar in credit quality to Treasuries but with a higher historical yield. Over the last 10 years, MBS yields have averaged 2.17% over Treasury bills (see Figure 1 below).

2. **Generally high risk-adjusted returns.**
   MBS have historically experienced low volatility compared to other fixed income asset classes (see Figure 2 on next page), while the Sharpe ratio has been historically high compared to most other fixed income asset classes.

**FIGURE 1: COMPARATIVE YIELDS: MORTGAGE-BACKED SECURITIES VS. TREASURIES**

Source: Bloomberg Barclays Live.

**Agency MBS credit quality is similar to Treasuries and can aid in portfolio diversification.**

**2. Generally high risk-adjusted returns.**
Agency MBS have the lowest volatility among major fixed income asset classes.
3. **Diversification due to low correlation to other asset classes.**

Since their returns move inversely to other fixed income asset classes, MBS may also serve to lower the risk of portfolios. For most fixed income securities, as interest rates rise, prices decline, and as interest rates fall, prices increase. However, borrowers’ prepayments, and changes in the level and speed of repayment, can affect MBS valuation. The prices of agency MBS tend to rise as interest rates rise, when prepayment levels are low, and decline when interest rates drop and prepayments are higher. As seen in Figure 3 below, agency MBS also have a lower correlation to equity returns than most other fixed income asset classes.

4. **The liquidity of the market.**

The agency MBS market is large and highly liquid, with $7.8 trillion in assets outstanding and an average daily trading volume of $333 billion (Source: Securities Industry and Financial Markets Association. As of March 31, 2020). This liquidity makes it relatively easy for buyers to find sellers and vice versa, and transaction costs tend to be lower.
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Broad Offerings
There are two basic categories of MBS: pass-through securities and collateralized mortgage obligations (CMOs), with pass-through securities being the most common. They employ a structure through which a pool of mortgages flows to a mortgage servicer who collects a fee then passes along principal and interest payment streams to investors on a pro-rata basis. CMOs use a more complex tranche structure, in which a dealer purchases a pool of mortgages and dissects them into various cash flow streams with different time horizons and risk return profiles.

When it comes to the MBS market, active, skilled portfolio managers can generate alpha for their clients.

<table>
<thead>
<tr>
<th>TYPE OF MBS</th>
<th>DESCRIPTION</th>
<th>BENEFITS</th>
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<tbody>
<tr>
<td><strong>PASS-THROUGH SECURITIES</strong></td>
<td></td>
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<tr>
<td>To Be Announced (TBAs)</td>
<td>Seller agrees on a sale price without specifying which individual mortgages will be agreed upon on date of settlement.</td>
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<tr>
<td>Specified Pools</td>
<td>Securities associated with specific mortgage pools.</td>
<td>Allow for more granular detail on the underlying mortgages and the opportunity to focus on specific attributes of the mortgage loan.</td>
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<tr>
<td><strong>CMOs</strong></td>
<td></td>
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<tr>
<td>Planned Amortization Class (PAC) Bonds</td>
<td>Specified principal payment schedule, given priority for principal paydowns over other bonds in the pool.</td>
<td>Designed to have a better-defined weighted average life profile if prepayments and extensions remain within a preordained range.</td>
</tr>
<tr>
<td>Sequential</td>
<td>Tranches are established in a specific order with a single tranche receiving all principal payments before all other tranches until it is paid off in full.</td>
<td>Creates a series of bonds that range in maturity to meet specific investor needs and allows insurer to meet different maturity requirements.</td>
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<tr>
<td>Principal Only/ Interest Only</td>
<td>Focus solely on the principal and interest cash flows from a pool of mortgages.</td>
<td>Allows investors to take advantage of different prepayment and interest rate scenarios.</td>
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<td>Target Amortization Class (TAC) Bonds</td>
<td>Similar to PAC bonds, with schedule determined using prepayment speed assumptions.</td>
<td>Provide protection from increasing prepayment speeds. Reverse TACs provide protection from a slowdown in speeds (extension).</td>
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<tr>
<td>Floater</td>
<td>Coupon resets on a regular basis (usually monthly) following a specific index plus a spread, often subject to cap and floor.</td>
<td>Used to hedge interest rate risk.</td>
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<tr>
<td>Inverse Floater</td>
<td>Similar to Floater, but with coupon that moves in the opposite direction of predetermined index.</td>
<td>Used to hedge against reinvestment risk.</td>
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Our Unique Approach to MBS

Diamond Hill is an active manager focused on identifying the mortgage-backed securities that represent the best opportunities in the market, regardless of their weight in the benchmark. Our focus on bottom-up security selection and strict capacity discipline enhance our ability to exploit inefficiencies in fixed income markets.

Our approach to investing in MBS has historically led to a significant overweight to CMOs, which can mitigate prepayment, extension and convexity risk, when compared to the traditional MBS held by the benchmark. Additionally, strict capacity discipline enhances our ability to exploit inefficiencies and outperform in the mortgage market.

All MBS are susceptible to prepayment, extension, and convexity risk. CMOs can mitigate some of this risk, as their cash flow structures differ greatly from traditional mortgage-backed pass-throughs.

Key definitions:
- **Agency MBS**: are issued or guaranteed by an agency of the U.S. government such as Ginnie Mae, or by government sponsored-enterprise (GSEs), including Fannie Mae and Freddie Mac.
- **Non-Agency MBS**: are issued by private firms, such as subsidiaries of investment banks, financial institutions, and homebuilders.
- **Sharpe Ratio**: uses a strategy’s standard deviation and average excess return over the risk-free rate to determine reward per unit of risk.
- **Standard Deviation**: measures the volatility of a strategy’s returns.
- **Alpha**: measures excess return relative to the market that is attributable to active portfolio management.
- **Convexity**: is an estimate of the approximate change in a strategy’s effective duration resulting from a one percentage point change in interest rates.

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The S&P 500 Index is a market capitalization-weighted index focused on the large-cap segment of the market. The index is comprised of 500 of the top companies in leading industries in the U.S. economy. The Bloomberg Barclays U.S. Mortgage-Backed Securities Index tracks fixed-rate agency mortgage backed pass-through securities guaranteed by Ginnie Mae (GNMA), Fannie Mae (FNMA), and Freddie Mac (FHLMC). The Bloomberg Barclays Treasury Bond Index measures U.S. dollar-denominated, fixed-rate, nominal debt issued by the US Treasury. The Bloomberg Barclays Treasury Bill Index measures the market for treasury bills issued by the U.S. Government. The JP Morgan EMBI Global Diversified Index measures total returns for international government and corporate bonds issued by emerging market countries with an outstanding face value of at least $500 million. The Diversified index limits the weights of countries with larger debt by including only a portion of those countries face amounts in the debt outstanding. The Bloomberg Barclays Global Aggregate Index measures global investment grade debt from twenty-four local currency markets. Includes treasury, government-related, corporate, and securitized fixed-rate bonds from both developed and emerging markets issuers. The Bloomberg Barclays U.S. Aggregate Index is an unmanaged index representing the U.S. investment grade fixed rate bond market, with index components for government and corporate securities, mortgage pass-through, and asset-backed securities. The Bloomberg Barclays U.S. Corporate Bond Index is an unmanaged index representing the investment grade fixed rate taxable corporate bond market including USD-denominated securities publicly issued by U.S. and non-U.S. industrial, utility, and financial issuers. The ICE BofA U.S. High Yield Index tracks the performance of the U.S. dollar denominated below investment grade corporate debt publicly issued in the U.S. domestic market. Index data source: Bloomberg Index Services Limited and ICE Data Indices, LLC. See diamond-hill.com/disclosures for a full copy of the disclaimer. The ICE index data referenced herein is the property of ICE Data Indices, LLC, its affiliates (“ICE Data”) and/or its third party suppliers and has been licensed for use by Diamond Hill Capital Management, Inc. ICE Data and its third party suppliers accept no liability in connection with its use. ICE Data was not involved in the creation of the blended indexes. These indices do not incur fees and expenses (which would lower the return) and are not available for direct investment.