DoubleLine®

The Advantages of Mortgage Backed Securities in Today's Environment

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Introduction

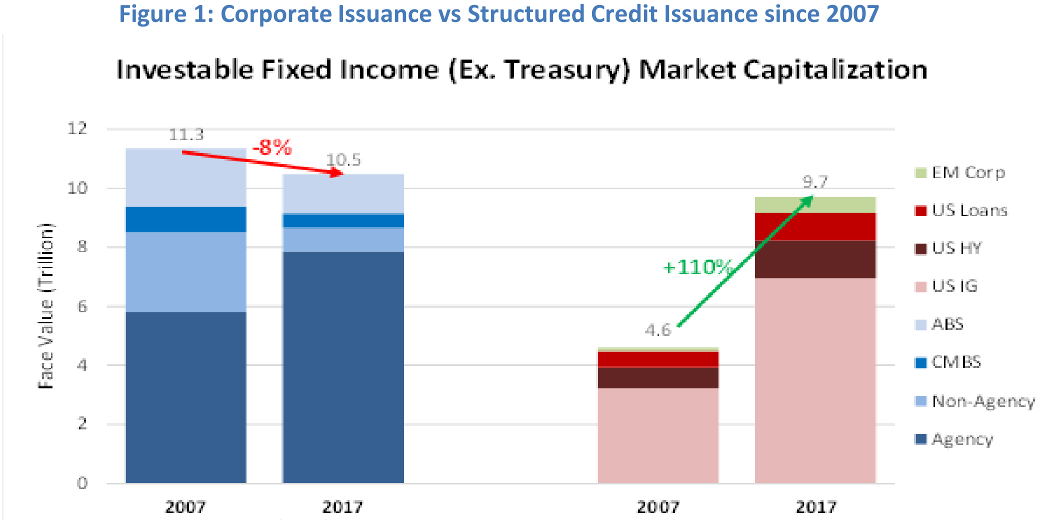
The U.S. Federal Reserve's transition from quantitative easing towards quantitative tightening, or "policy normalization", has provided a pause for investors while they rethink their fixed income allocations. Concerns that were once focused on providing yield or income for clients are beginning to be replaced by concerns around principal losses due to rising interest rates. At DoubleLine, we believe that an area to consider while the market transitions are Mortgage-Backed Securities (MBS). Historically, MBS have experienced the following:

- Lower duration than other investment grade bond sectors
- Lower volatility than other investment grade bond sectors
- Higher yields than US Treasuries
- Better relative performance during periods of rising rates than other investment grade bond sectors
- Lower correlations to equities than corporate credit

Current State of Corporate Debt

One area of the fixed income market that has benefitted from low interest rates has been the corporate bond sector. Corporate CFOs have taken advantage of the market opportunity and increased their leverage by issuing long dated debt at low rates. Yield starved investors flocked to the asset class and welcomed the issuance. There have been a fair share of headlines regarding a possible oversupply of MBS going forward as the Fed goes thru with Quantitative Tightening but less discussed is the fact that Corporate Bond issuance has more than doubled since 2007 while structured credit (Agency, Non-Agency, CMBS and ABS) issuance has actually fallen (See Figure 1). Unfortunately, buyers of this corporate bond issuance may now find themselves with unintended interest rate risk on top of the inherent credit risk. The duration of the Bloomberg Barclays U.S. Corporate Index was above 7.4 years as of April 23, 2018. In a rising rate environment, one would need significant yield to make up for principal loss on these corporate bonds.

Figure 1: Corporate Issuance vs Structured Credit Issuance since 2007

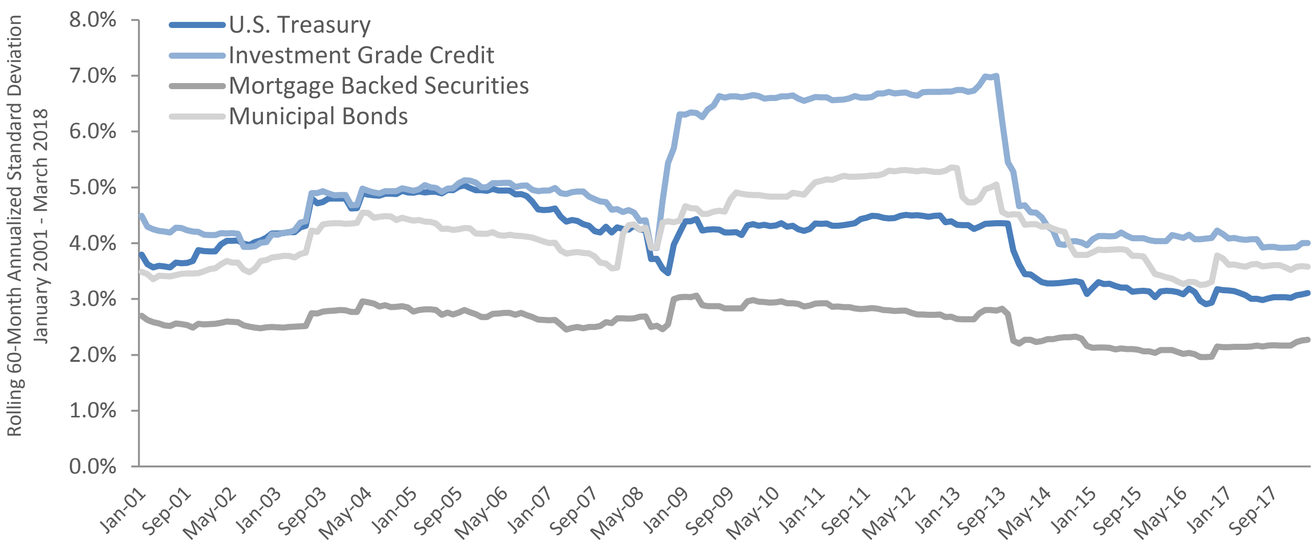


Source: Agency, Non-Agency, CMBS, ABS - SIFMA; U.S. IG, U.S. HY – BofA Merrill Lynch; U.S. Loans – S&P LCD; EM Corp – JP Morgan Benchmark

Advantages of MBS

Given the precarious backdrop for corporate credit in today's marketplace, one alternative to consider is MBS. MBS can offer lower volatility relative to Investment Grade Corporate Bonds, Treasuries and Municipal Bonds (See Figure 2).

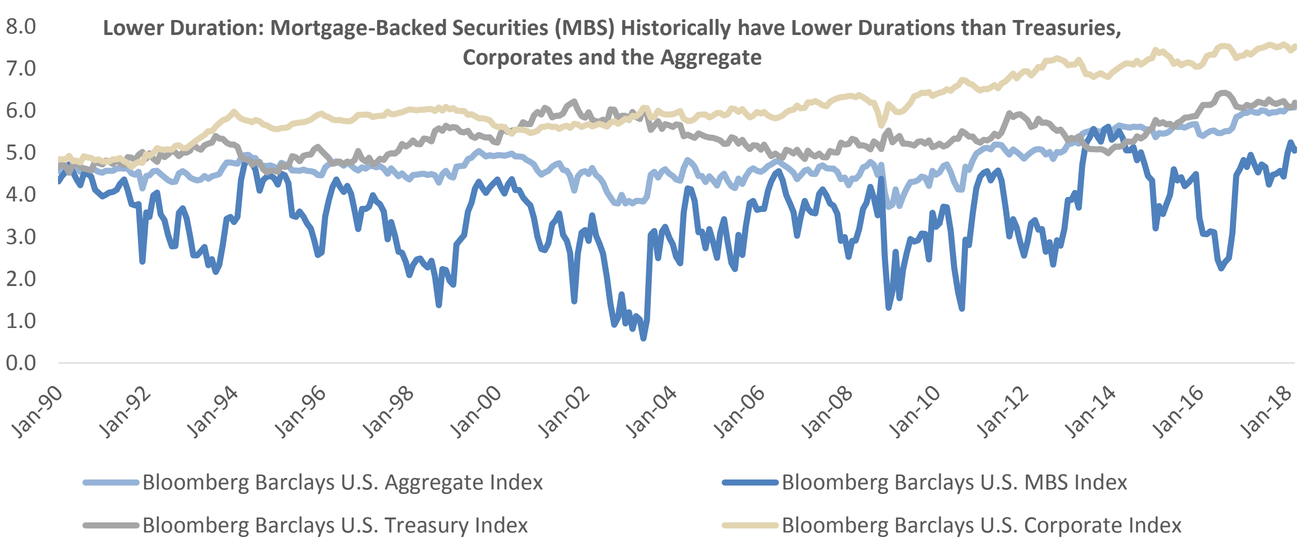
Figure 2: Investment Grade Bond Sectors: Rolling 5-Year Annualized Standard Deviation of Returns



Source: DoubleLine, Bloomberg
U.S. Treasury as measured by the Bloomberg Barclays Capital U.S. Aggregate Government Index; Investment Grade Credit as measured by the Bloomberg Barclays Capital U.S. Credit Index; Mortgage Backed Securities as measured by Bloomberg Barclays Capital U.S. MBS Index; Municipal Bonds as measured by the Bloomberg Barclays Capital Municipal Bond Index
An investment cannot be made directly in an index.

This lower volatility is largely because MBS tend to have a lower duration than other intermediate term investment grade options (See Figure 3) and less credit risk than investment grade corporates because they are backed by government agencies.

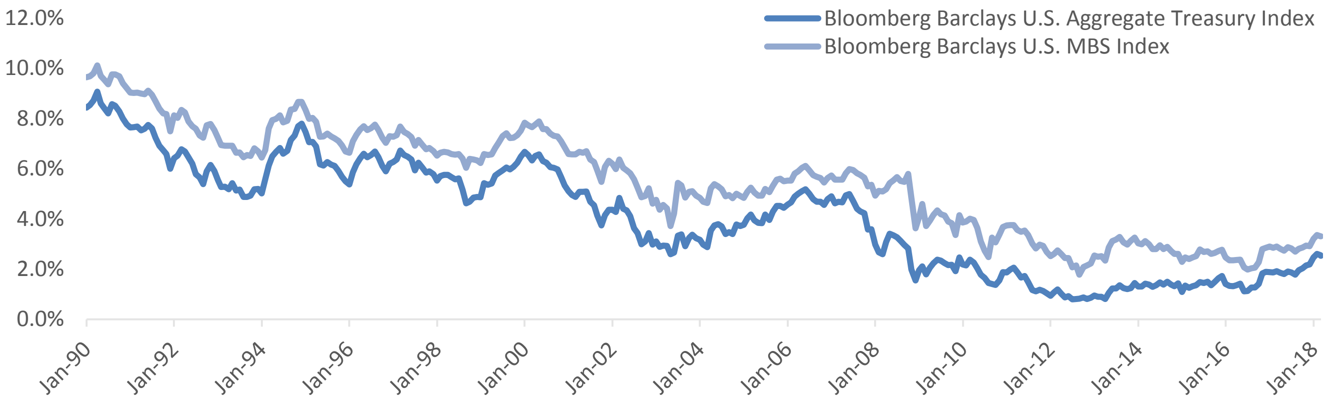
Figure 3: Historical Duration



Source: DoubleLine, Bloomberg
An investment cannot be made directly in an index.

In addition to historically lower volatility and lower duration, Agency MBS typically experience a higher yield than other AAA rated credits (See Figure 4).

Figure 4: Historical yields of MBS vs Treasuries



MBS During Periods of Rising Rates

Too often investors come to a false conclusion when it comes to fixed income investing: rising rates must mean losses. This thinking disregards one piece of the total return equation, which is income. The equation for total return is as follows: Total Return = Price Change + Income. Hence, the more income generated, the more it will offset negative price change. Historically, the Bloomberg Barclays MBS Index provides a higher yield, while exhibiting similar or shorter duration than the Bloomberg Barclays U.S. Treasury Index.

Let's take a look at the performance of the Bloomberg Barclays U.S. Aggregate Index (the Agg), the conventional benchmark for core fixed income portfolios, and its constituents during periods of rising rates. We will define a rising rate environment as a period of time where the U.S. 10-Year Treasury rises by more than 100 basis points from trough to peak. Since August 1986, the U.S. 10-year Treasury has staged 12 episodes where yields rose more than 100 basis points. In four of those episodes, the securities comprising the Bloomberg Barclays U.S. Aggregate generated enough income to offset the price depreciation and generated positive returns in a rising rate environment. Figure 5 shows that during these same 12 episodes MBS fared much better than the Agg, providing positive returns in 6 of the 12 time periods and also shows the following:

- MBS outperformed Treasuries 12 out of 12 times
- MBS outperformed the Agg 12 out of 12 times
- MBS outperformed Corporates 9 out of 12 times

How could MBS outperform other sectors of the Bloomberg Barclays U.S. Aggregate Index during these rising rate environments? Let's recall the aforementioned total return equation: Total Return = Price Change + Income. To calculate the price change one needs to look at the duration of the security, or in this case Index, and multiply that by the rate move, so Price Change = -1*Duration*Interest Rate Change. Thus, the lower the duration of the Index, the smaller the price change given an interest rate move. MBS have historically had lower durations than treasuries (See Figure 4). For the income component of the total return equation, the higher the income, the more it offsets negative price change from rising rates. MBS have historically offered more income than treasuries (See Figure 5). Add it together and MBS offer advantages in rising rate environments relative to treasuries: higher yields and lower duration.

Source: DoubleLine, Bloomberg

Figure 5: Rising Rate Performance

10-Year U.S. Treasury Yield			Rising-Rate Periods		Domestic Fixed Income Sectors, Cumulative Total Return			
Trough (Percent)	Peak (Percent)	Δ in Basis Pts	Trough	Peak	Bloomberg Barclays U.S. MBS Index	Bloomberg Barclays U.S. Treasury Total Return	Bloomberg Barclays Aggregate U.S. Bond Index	Bloomberg Barclays U.S. Corporate Index
6.92	9.59*	267	8/29/1986	9/30/1987	2.51%	-2.55%	-0.72%	0.01%
8.15*	9.28*	113	2/29/1988	3/31/1989	4.77%	3.56%	4.17%	4.93%
7.80*	9.02*	122	7/31/1989	4/30/1990	2.59%	0.11%	0.95%	0.52%
5.47*	8.03	256	10/29/1993	11/7/1994	-2.51%	-5.33%	-4.59%	-6.22%
5.53	7.06	154	1/18/1996	6/12/1996	-1.91%	-4.09%	-3.54%	-4.83%
4.16	6.79	263	10/5/1998	1/20/2000	1.37%	-4.57%	-2.35%	-3.86%
4.18	5.43	125	11/7/2001	4/1/2002	-0.53%	-4.85%	-2.44%	-2.78%
3.11	5.30	218	6/13/2003	6/12/2007	14.56%	5.51%	10.06%	9.20%
2.06	3.99	193	12/30/2008	4/5/2010	6.87%	-3.95%	6.79%	19.97%
2.39	3.74	135	10/7/2010	2/8/2011	-1.56%	-4.64%	-3.02%	-3.37%
1.39	3.03	164	7/24/2012	12/31/2013	-1.27%	-3.62%	-1.71%	0.53%
1.36	2.63	127	7/8/2016	3/13/2017	-2.35%	-5.44%	-3.78%	-3.18%

*Using month end data due to Bloomberg data set pre 1994. Peak to Trough using daily closes all time periods had 100bps+ increase
Source: DoubleLine, Bloomberg

DoubleLine believes its mortgage strategies should outperform its benchmarks in 2 of 3 rate environments. If rates are stable or rising, MBS tend to outperform. If rates go down, DoubleLine would not be surprised to see underperformance in MBS relative to higher duration fixed income sectors. Given the current yield to duration profiles of corporate bonds, significant corporate bond issuance and incredibly tight corporate bond spreads, DoubleLine believes MBS currently offer a more attractive risk-reward profile than corporate bonds.

Lower Correlation to Equities

MBS have historically exhibited lower correlations to equities than investment grade corporate credit. In a traditional balanced portfolio the advantage to owning both fixed income and equities is that they have low correlation and provide a barbell approach: one goes up while the other goes down. DoubleLine believes that the next recession may see higher correlation between U.S. equities and U.S. corporate credit than its historical experience. If that is the case, it may be advantageous to own MBS which historically have less correlation to equities (represented by the S&P 500) than investment grade corporate credit (See Figure 6).

Figure 6: Lower Correlations to Equities

Correlation Matrix: Returns vs. Bloomberg Barclays U.S. Corporate Investment Grade (January 1978 - July 2017)			
	1	2	3
1) S&P 500 Index	**1**		
2) Bloomberg Barclays U.S. MBS Index	0.19	**1**	
3) Bloomberg Barclays U.S. Corporate Investment Grade Index	0.30	0.86	**1**

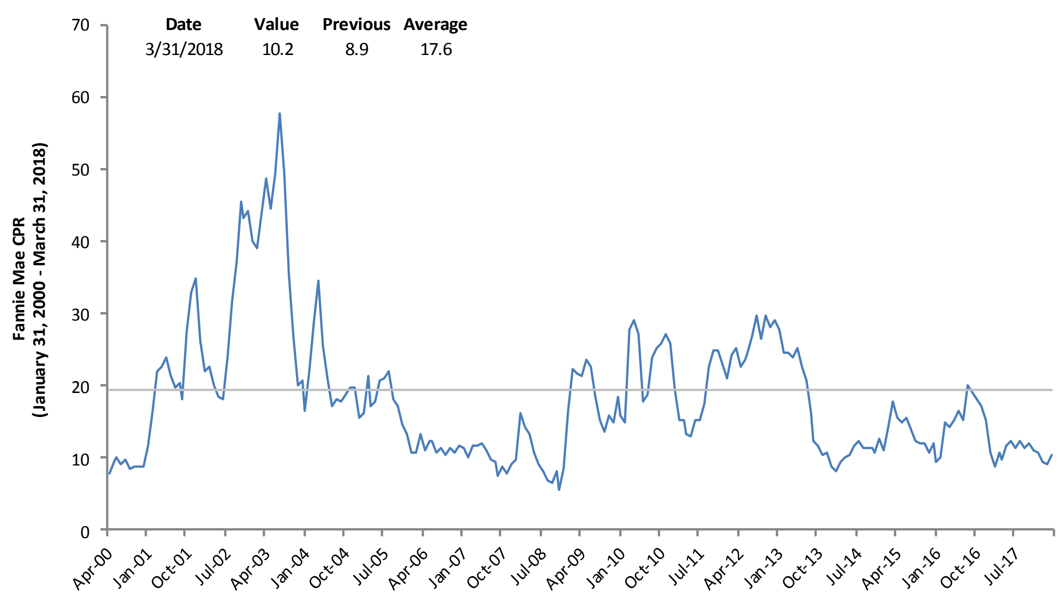
Source: DoubleLine, Bloomberg

Extension risk in MBS

The counterargument to MBS outperforming other similarly rated securities in a rising rate environment is extension risk. Extension risk is the risk that prepayment speeds will slow down as rates go up, and as a result, mortgages will extend their duration. While at DoubleLine we acknowledge this is a real risk within mortgages we also realize that every environment is different. When analyzing extension risk it is important to look at two factors: prepayment speeds and duration. DoubleLine believes the current levels of prepayment speeds and duration within the Bloomberg Barclays MBS Index provides far less extension risk than previous rising rate environments.

- Prepayment speeds: An investor should be concerned about extension risk when prepayment speeds are high. If rates rise when prepayment speeds are high, it would be wise to believe prepayment speeds could slow dramatically. This would be adverse for MBS as their durations could extend in this scenario. Today's prepayment speeds are low relative to historic average (See Figure 7). DoubleLine believes since prepayment speeds are already slow, if rates were to rise, prepayments could slow down but not to a significant degree.

Figure 7: Historical Fannie Mae Conditional Prepayment Rate



- Duration of MBS Index: An investor should be concerned about extension risk in MBS at lower durations. The current duration of the MBS index is 5.3 with an all-time high of 5.8 years (See Figure 3). At DoubleLine, we believe this reads as MBS investors having far less extension risk than if the duration of the MBS Index were to be far lower.

Hopefully, this report has illustrated some of the advantages of MBS investing. DoubleLine has a large, robust MBS team where the portfolio managers have managed MBS portfolios for over 25 years and have worked together on average for more than 15 years. If you would like to discuss DoubleLine Capital's mortgage strategies or any other fund offerings please contact fundinfo@doubleline.com or call the Product Specialist Team at 213-633-8446.

Source: eMBS, DoubleLine

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DoubleLine is an active manager and will adjust the composition of client's portfolios consistent with our investment team's judgment concerning market conditions and any particular sector or security. The construction of DoubleLine portfolios may differ substantially from the construction of any of a variety of market indices. As such, a DoubleLine portfolio has the potential to underperform or outperform a bond market index. Since markets can remain inefficiently priced for long periods, DoubleLine's performance is properly assessed over a full multi-year market cycle.

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