The Potential Advantages of Mortgage Backed Securities in Today's Environment

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Introduction

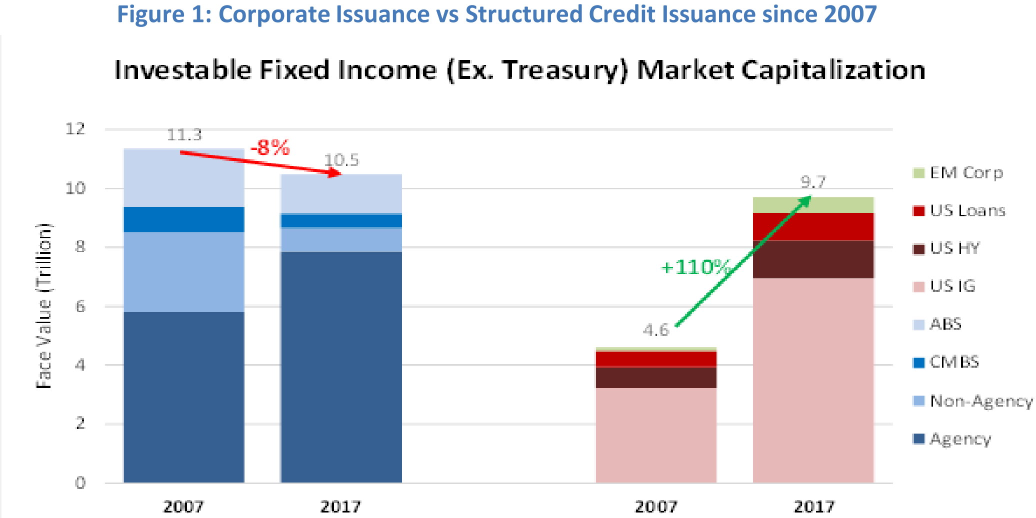
The U.S. Federal Reserve's transition from quantitative easing towards quantitative tightening, or "policy normalization", has provided a pause for investors while they rethink their fixed income allocations. Concerns that were once focused on providing yield or income for clients are beginning to be 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 (Figure 3)
- Lower volatility than other investment grade bond sectors (Figure 2)
- Higher yields than US Treasuries (Figure 4)
- Better relative performance during periods of rising rates than other investment grade bond sectors (Figure 5)
- Lower correlations to equities than corporate credit (Figure 6)

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, Commercial Mortgage Backed Securities (CMBS) and Asset-Backed Securities (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



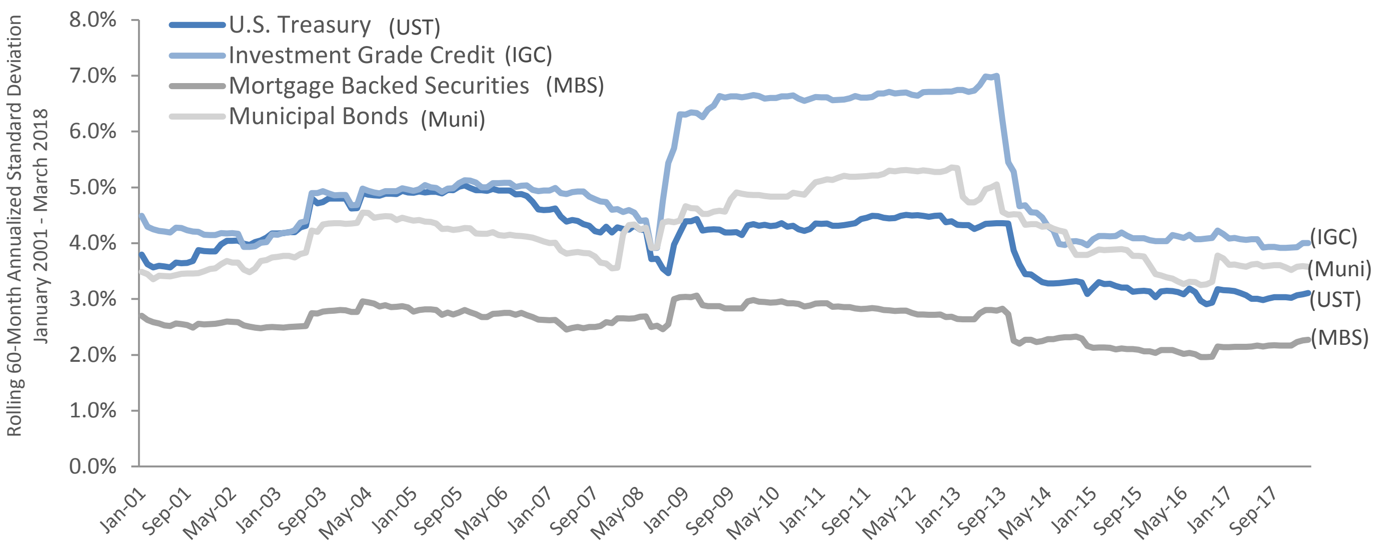
Source: Agency, Non-Agency, CMBS, ABS - SIFMA; U.S. IG, U.S. HY – BofA Merrill Lynch; U.S. Loans – S&P LCD; EM Corp – JP Morgan Benchmark

Definitions: p.7

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).

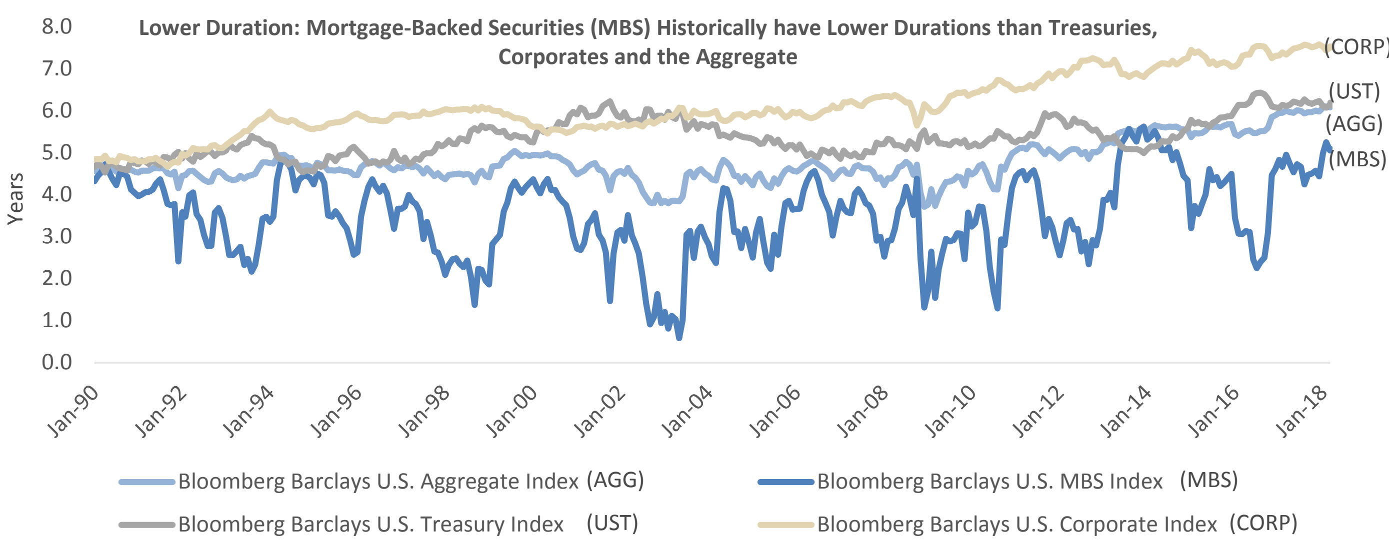
Figure 2: Investment Grade Bond Sectors: Rolling 5-Year Annualized Standard Deviation of Returns



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.

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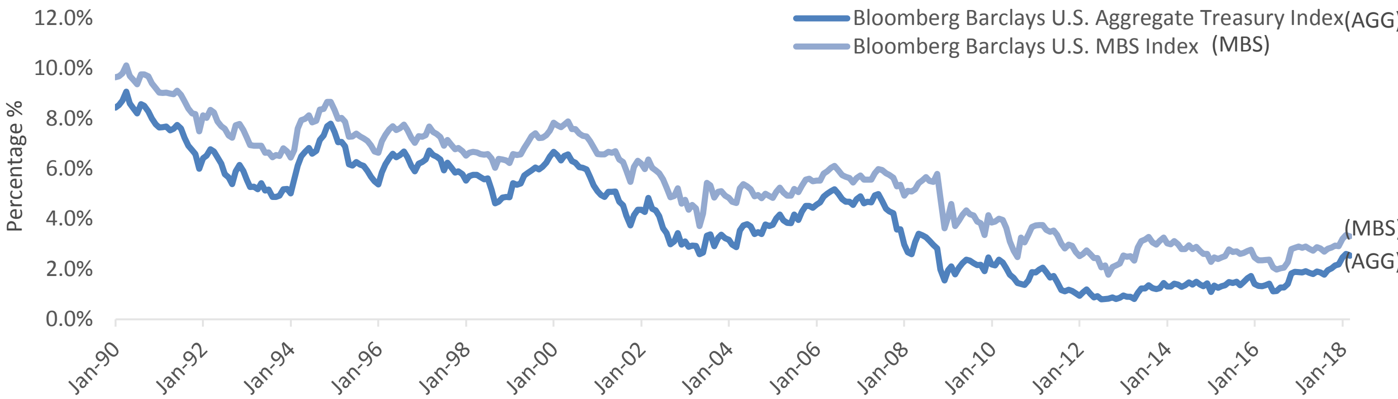
In addition to historically lower volatility and lower duration, Agency MBS typically experience a higher yield than other AAA rated credits (See Figure 4).

Figure 4: Historical yields of MBS vs Treasuries



Source: DoubleLine, Bloomberg

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 3). 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 4). Add it together and MBS offer advantages in rising rate environments relative to treasuries: higher yields and lower duration.

Definitions: p.7

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

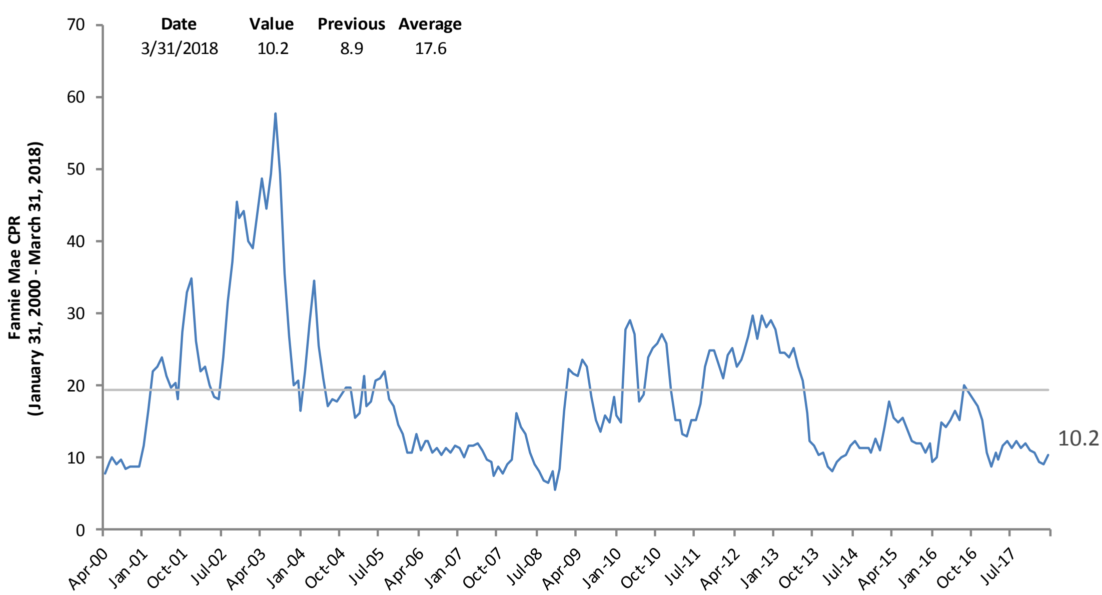
Definitions: p.7

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

Definitions: p.7

The BofA Merrill Lynch US High Yield Index tracks the performance of US dollar denominated below investment grade corporate debt publicly issued in the US domestic market.

Basis Point (BPS) refer to a common unit of measure for interest rates and other percentages in finance. One *basis point* is equal to 1/100th of 1%, or 0.01% (0.0001), and is used to denote the percentage change in a financial instrument.

Duration is a commonly used measure of the potential volatility of the price of a debt security, or the aggregate market value of a portfolio of debt securities, prior to maturity. Securities with a longer duration generally have more volatile prices than securities of comparable quality with a shorter duration.

Correlation A statistical measurement of the relationship between two variables. Possible correlations range from +1 to -1. A zero correlation indicates that there is no relationship between the variables. A correlation of -1 indicates a perfect negative correlation and +1 indicates a perfect positive correlation.

Standard Deviation is a measure of the dispersion of a set of data from its mean. The more spread apart the data, the higher the deviation. Calculated by the square-root of the variance.

Index Definitions

Bloomberg Barclays Capital U.S. Aggregate Government Index An index that measures the performance of all public U.S. government obligations with remaining maturities of one year or more.

Bloomberg Barclays Capital U.S. Credit Index The US Credit component of the U.S. Government/Credit Index. This index consists of publically-issued U.S. corporate and specified foreign debentures and secured notes that meet the specified maturity, liquidity, and quality requirements. To qualify, bonds must be SEC-registered. The US Credit Index is the same as the former US Corporate Investment Grade Index.

Bloomberg Barclays Capital U.S. High Yield Index An index that covers the universe of fixed rate, non-investment grade debt. Eurobonds and debt issuer from countries designated as emerging markets (e.g. Argentina, Brazil, Venezuela, etc.) are excluded, but Canadian and global bonds (SEC registered) of issuers in non-EMG countries are included. Original issue zeros, step-up coupon structures, 144-As and pay-in-kind (PIK, as of October 1, 2009) are also included.

Bloomberg Barclays Capital U.S. MBS Index An index that measures the performance of investment grade fixed-rate mortgage-backed pass-through securities of the Government-Sponsored Enterprises (GSEs): Ginnie Mae (GNMA), Fannie Mae (FNMA), and Freddie Mac (FHLMC).

Bloomberg Barclays Capital Municipal Bond Total Return Index An index that is representative of the broad market for investment grade, tax-exempt bonds with a maturity of at least one year.

Bloomberg Barclays Capital U.S. Treasury Index The U.S. Treasury component of the U.S. Government index. This index includes public obligations of the U.S. Treasury with a remaining maturity of one year or more.

Bloomberg Barclays U.S. Corporate Index measures the investment grade, fixed-rate, taxable corporate bond market. It includes USD-denominated securities publicly issued by US and non-US industrial, utility and financial issuers.

ICE BofAML 0-3 Year US Mortgage Backed Securities Index Is a subset of The Bank of America Merrill Lynch US Mortgage Backed Securities Index including all securities with an average life less than 3 years.

J.P. Morgan Emerging Markets Bond Index Global tracks total returns for U.S. dollar-denominated debt instruments issued by emerging market sovereign and quasi-sovereign entities: Brady bonds, loans, eurobonds. The performance of the index does not reflect the deduction of expenses associated with a fund, such as investment management fees. By contrast, the performance of the fund reflects the deduction of the fund expenses, including sales charges if applicable. Indexes are unmanaged and cannot be invested in directly.

The **SIFMA (Security Industry/Financial Market Association)** Municipal Swap index is a 7-day high-grade market index comprised of tax-exempt VRDOs reset rates that are reported to the Municipal Securities Rule Making Board's (MSRB's) SHORT reporting system. The index is calculated on an actual/actual basis and is published every Wednesday by 4 p.m. Eastern Time.

S&P/LSTA Leveraged Loan Index An index designed to track the market-weighted performance of the largest institutional leveraged loans based on the market weightings, spreads and interest payments.

Important Information Regarding This Report

Issue selection processes and tools illustrated throughout this presentation are samples and may be modified periodically. Such charts are not the only tools used by the investment teams, are extremely sophisticated, may not always produce the intended results and are not intended for use by non-professionals.

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A Stock may trade with more or less liquidity than a bond depending on the number of shares and bonds outstanding, the size of the company, and the demand for the securities.

Treasury notes are guaranteed by the U.S. government and thus they are considered to be safer than other asset classes.

Tax features may vary based on an individual circumstances. Consult a tax professional for additional information.

Fund holdings are subject to change and should not be considered a recommendation to buy or sell any security.

Percentage of Fannie Mae held by each DoubleLine Fund:

	DBLTX	DBLFX	DBLEX	DMLIX	DBLSX	DBFRX	DSEEX	DFLEX	DBLLX	DBLDX	DBCMX	DBLGX	BILDX	DBULX	DSEUX
Fannie Mae	23.50%	8.00%	0.00%	0.94%	0.42%	0.00%	0.59%	0.09%	0.00%	34.78%	0.00%	0.00%	0.00%	0.00%	0.22%

Past performance is no guarantee of future results. All investments involve risk. Principal loss is possible. Index performance is not illustrative of fund performance. One cannot invest directly in an index. Please call 1.213.633.8200 for fund performance.

Important Information Regarding DoubleLine

To receive a complimentary copy of DoubleLine Capital's current Form ADV (which contains important additional disclosure information, including risk disclosures), a copy of the DoubleLine's proxy voting policies and procedures, or to obtain additional information on DoubleLine's proxy voting decisions, please contact DoubleLine's Client Services.

Important Information Regarding DoubleLine's Investment Style

DoubleLine seeks to maximize investment results consistent with our interpretation of client guidelines and investment mandate. While DoubleLine seeks to maximize returns for our clients consistent with guidelines, DoubleLine cannot guarantee that DoubleLine will outperform a client's specified benchmark or the market or that DoubleLine's risk management techniques will successfully mitigate losses. Additionally, the nature of portfolio diversification implies that certain holdings and sectors in a client's portfolio may be rising in price while others are falling; or, that some issues and sectors are outperforming while others are underperforming. Such out or underperformance can be the result of many factors, such as but not limited to duration/interest rate exposure, yield curve exposure, bond sector exposure, or news or rumors specific to a single name.

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.

Important Information Regarding Client Responsibilities

Clients are requested to carefully review all portfolio holdings and strategies, including by comparing the custodial statement to any statements received from DoubleLine. Clients should promptly inform DoubleLine of any potential or perceived policy or guideline inconsistencies. In particular, DoubleLine understands that guideline enabling language is subject to interpretation and DoubleLine strongly encourages clients to express any contrasting interpretation as soon as practical. Clients are also requested to notify DoubleLine of any updates to Client's organization, such as (but not limited to) adding affiliates (including broker dealer affiliates), issuing additional securities, name changes, mergers or other alterations to Client's legal structure.

*The Funds' investment objectives, risks, charges and expenses must be considered carefully before investing. The statutory prospectus and summary prospectus contain this and other important information about the investment company and may be obtained by calling 1 (877) 354-6311/1 (877) DLINE11, or visiting **www.doublelinefunds.com**. Read it carefully before investing.*

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All investments involve risk. Principal loss is possible. High yield bonds and other asset classes have different risk-return profiles, which should be considered when investing.

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