TAKE 5 VIEWS

We're asking our money managers the questions you're asking us.

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What's in store for **fixed income investors?**

With the U.S. Federal Reserve's recent indication it will continue a strategy of "normalizing" U.S. interest rates by reducing its own hefty balance sheet, we asked portfolio managers what's in store for fixed income investors. Since rising interest rates bring the risk of falling bond values, several of our portfolio managers remind us of the importance of active management and credit fundamentals. In addition, analysts point to overlooked sectors of the fixed income market that may provide a haven if and when U.S. government bond prices come under pressure.

1 "What are the benefits of an active strategy (vs. passive) in the high yield sector?"

Pepper Whitbeck, CFA, Head of US High Yield
AXA Investment Managers

Active management can provide investors with several potential benefits as compared to passive management within the U.S. high yield bond market. The potential benefits provided by a good active U.S. high yield manager include the possibility of higher total returns, lower volatility of returns and greater downside protection over long-term periods as compared to passive strategies.

Investors seeking to invest passively in the U.S. high yield bond market can do so through the use of one of several available ETFs. While high yield ETFs have experienced significant growth over the last several years, their long-term return and volatility profile demonstrate that it is very difficult to successfully invest in the high yield market using a passive strategy.

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While ETFs do provide an efficient way for investors to gain exposure to the U.S. high yield bond market and can be useful tools for short-term trading strategies, we believe that investors with an intermediate- to longer-term time horizon can potentially benefit from active management.

As an active manager within the U.S. high yield bond market, our investment philosophy states that the key to superior long-term returns in the U.S. high yield market is compounding current income and avoiding principal loss through fundamental credit analysis. ETF portfolio construction is focused on providing trading liquidity, which leads them to buy many of the highest beta names in the market and to be exposed to issuers that have very large amounts of total debt outstanding, without regard for the higher levels of default risk inherent in many of these names. Recent performance demonstrates that ETFs can afford to be credit agnostic during periods of strong high yield market returns. However, when volatility is introduced to the market, the risky nature of ETF portfolios has caused them to suffer more significant drawdowns as compared to many active managers.

It is important to note that unlike many equity ETFs, it is nearly impossible for ETFs to exactly replicate most U.S. high yield indices since most indices consist of many unique securities, some of which have lower trading liquidity and therefore at times are difficult to buy or sell. Transaction costs are a significant drag on the performance of ETFs. ETFs tend to attract “hot money” that quickly moves in and out and, therefore, the ETFs must sell and buy according to these flows. Investors must also remember that like an actively managed product, the expense ratio of an ETF detracts from an investor’s return.

In conclusion, we believe that active management provides several potential advantages as compared to passive management in the U.S. high yield asset class.

2 “What is the case for active fixed income management during a rising rate environment?”

Matthew Baca and Ted Hospodar
DoubleLine Capital, LP

DoubleLine®

The Bloomberg Barclays U.S. Aggregate Bond Index (“Agg”) is a widely considered benchmark for an investor’s core fixed income allocation. Over the last five years, investors have continued to become increasingly comfortable with selling out of their actively managed strategies and into passive investment vehicles that attempt to track the Agg. At DoubleLine, we believe this type of investing presents challenges in the current low yield environment. Since U.S. Treasuries (UST) are the lowest yielding sector of the U.S. fixed income market and make up the largest portion of the Agg, the yield has diminished significantly. Simultaneously, the duration of the Agg has lengthened more than a year to around six years. This puts the yield-to-duration ratio near its lowest level since inception of the Agg and lowers an investor’s ability to offset interest rate risk. For example, from the recent low in UST yields on July 8, 2016 to December 15, 2016 the 10-Year UST yield rose 124 basis points (bps). During that period the Agg was down 4.28% (see Figure 1, Rising Rates–Cumulative Return).

This is not the type of risk-adjusted performance we believe investors are willing to stomach in their core bond allocation. We believe actively managed bond strategies as a core component of fixed income exposure may be beneficial. However, investors should also review the credit risks within these active portfolios.

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The investment management team at DoubleLine favors portfolios that are positioned defensively with lower interest rate risk, measured by duration and a higher credit quality bias. As such, “nontraditional” sectors such as non-Agency Residential Mortgage-Backed Securities (RMBS), and other Asset-Backed Securities (ABS) such as collateralized loan obligations (CLO), bank loans, high yield corporate credit and emerging market debt (EMD) are critical sectors that may offer attractive yields that can help provide a defense in a rising rate environment (see Figure 2, Yield by Sector). Active managers that have a proven ability to balance these risks are likely to capture risk-adjusted returns, provide an offset to equity risk and increase the risk-adjusted returns of their portfolios.

Figure 1. Rising Rates–Cumulative Return

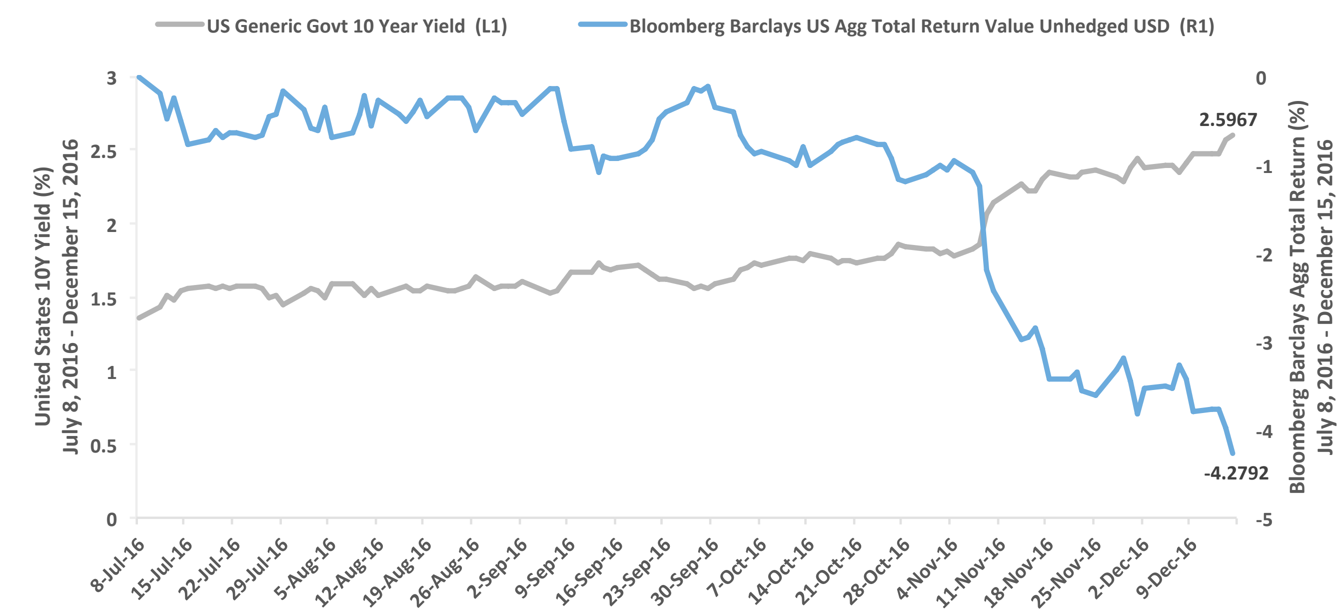

Figure 2. Yield by Sector

Sector	Yield	
U.S. Government Securities	1.92%	“Traditional Bond Sectors” (Bloomberg Barclays Aggregate Index sectors)
International Sovereign Debt	0.37%	
Agency Residential Mortgage-Backed Securities	2.81%	
Commercial Mortgage-Backed Securities	3.01%	
U.S. Investment Grade Corporates	3.35%	
Emerging Markets Sovereign Debt	5.41%	“Non-Traditional Bond Sectors”
Emerging Markets Corporate Debt	5.22%	
Non-Agency Residential Mortgage-Backed Securities*	4.25%	
Bank Loans	5.03%	
Global High Yield Corporate Debt	5.83%	
Collateralized Loan Obligations**	3.60%	

Source: DoubleLine, Barclays Capital Index Data, S&P/LSTA Leveraged Loan Index Data, JP Morgan Research U.S.
*Non-Agency RMBS—Calculated by DoubleLine
**Collateralized Loan Obligations—JP Morgan Research CLO AA Post-Crisis Yield (JCLOAAYD Index).
See page 8 for index definitions.

3 "How can global/emerging bonds offer protection against rising rates?"

Anisha Goodly, Managing Director, Portfolio Specialist
Penny Foley, Group Managing Director, Senior Portfolio Manager
Alex Stanojevic, Managing Director, Senior Portfolio Manager
David Robbins, Group Managing Director, Senior Portfolio Manager
TCW Group, Inc.

We see emerging markets (EM) as one of the more attractive opportunities in global fixed income at the moment. First, the pickup in global growth is supportive of global trade, and thus emerging markets. EM growth is increasing, and for the first time in five years, the spread between EM and developed market (DM) growth is widening, which historically has been positive for both flows and EM currencies. A number of EM countries, like Argentina and Brazil, have also pursued important reforms over the last few years. And EM currencies have depreciated significantly since the onset of the taper tantrum, leading to a substantial improvement in current account balances.

The opportunities within the asset class range from sovereign-dollar debt, corporate debt and local currency debt. With yields averaging 5-6%, and potential to capture higher carry in select markets, we believe emerging markets valuations are attractive relative to other fixed income opportunities, especially considering close to 60% of global fixed income trades with yields below 2%. Higher yields also offer protection against rising rates.

We are constructive on EM sovereign-dollar debt, given cyclical and structural tailwinds. In addition, EM corporates trade 50 to 70 bps wide to similarly rated U.S. corporates for every major ratings category. We've seen significant spread compression in dollar-denominated assets, so returns for the balance of the year are likely to be driven largely by carry, in our view. Still, when compared to developed markets opportunities, we see value given the spread differential and improving fundamentals.

We believe that EM local currency debt offers the potential to capture both high carry and potential EMFX gains going forward.[1] Local currency debt yields are around 100 bps higher than before the taper tantrum, and nearly 80% of the index is rated investment grade. Plus, EM currencies are still down over 25% on average since mid-2013 and the dollar appears to be peaking. Furthermore, that local currency debt has lagged sovereign dollar debt for the last five years so there is potential for catch-up.

We believe the monetary policy backdrop will remain benign. Rising U.S. rates are less of a concern in our view, given the gradual and well-communicated path of Fed policy. We also believe the European Central Bank remains very deliberate with its exit strategy, and the Bank of Japan will continue with yield curve targeting, at least for the foreseeable future.

The risk – which does not represent our base case – is if DM inflation picks up significantly and central banks are perceived to be behind the curve. In that case, central banks will need to be more aggressive with their hiking cycle and the market will likely become more negative on fixed income overall.

As such, we prefer higher yielding markets in countries that are undergoing structural reforms. These investments provide spread cushion in a rising rates environment and the ability to capitalize on improving fundamentals.

1 Please see "Opportunities in Local Currency Debt" for more information. https://www.tcw.com/Insights/Viewpoints/06-26-17_Opportunities_in_Local_Currency_Debt.

4 "How do different types of bonds react in a rising rate environment?"

PIMCO

Matthew Schwarz, Vice President
Pacific Investment Management Company, LLC

Conventional wisdom suggests that bonds perform poorly in periods of rising rates. After all, when interest rates rise, the price of existing bonds must fall for investors to accept lower yields on fixed income securities they already own. But is there anything else to the story that investors need to consider as they evaluate their fixed income allocations? We at PIMCO believe there is.

Looking back at the last four rate hike cycles in the U.S., we see a more complicated story—and an opportunity for informed investors to capitalize. As we illustrate in the chart below, fixed income returns varied widely during the last four rate hike cycles, reflecting important differences in the sectors that make up the global bond market. The divergence in returns highlights a number of important realities that investors should remember when preparing for rising rates.

First, the global bond market is large and heterogeneous. Just as different sectors of the economy (like Utilities and Technology) respond differently to changes in economic conditions, different sectors of the bond market (such as Investment Grade Credit and Emerging Markets) respond differently to changes in financial conditions.

Second, when short-term rates are rising, it generally means that the economy is performing well – which is a positive for many areas of the global bond market. In environments where growth is improving, certain sectors, such as High Yield, tend to outperform more defensive sectors, like U.S. Treasuries.

Third – and most important – in periods of rising rates, active management of fixed income portfolios becomes even more important. Investors need to be able to navigate the bond market, avoiding unattractive risk factors and focusing instead on those segments poised to deliver superior returns.

Experienced active managers have the tools and resources to make these adjustments and capitalize on the best opportunities in any environment.

	Performance during past periods of Fed tightening								
Date range	Rate hike (basis points)	U.S. Treasuries	MBS	Investment grade credit	Munis	High yield	Non-U.S. developed	Emerging markets	Senior floating rate
29 March 1988 to 24 Feb 1989	325	3.92%	5.27%	5.21%	7.44%	n/a	4.83%	n/a	n/a
4 February 1994 to 1 Feb 1995	300	-2.69%	-0.49%	-3.93%	-3.56%	-1.74%	-3.55%	-21.70%	n/a
30 June 1999 to 16 May 2000	175	3.27%	2.27%	0.10%	-0.16%	-2.27%	5.07%	14.92%	n/a
30 June 2004 to 29 Jun 2006	425	5.41%	6.80%	5.85%	9.30%	14.88%	9.49%	25.44%	12.38%

As of 30 September 2016.
Source: BofA Merrill Lynch U.S. Treasury Master; U.S. Agency Fixed Rate MBS Index; Barclays U.S. Credit Index; Barclays Municipal Index; Barclays U.S. High Yield 1% Issuer Cap Index; JP Morgan GBI Global Ex-U.S. USD Hedged Index; JP Morgan EMBI Global Index (measures external debt); Credit Suisse Institutional Leveraged Load Index. The high yield, EM and senior floating rate indexes did not exist during periods marked n/a. Non-U.S. developed data is through the nearest month end.

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5 "How can convertible securities add value in a rising rate environment?"

Bill Lee, Senior Portfolio Manager
Mitchell Leung, CFA, Associate Portfolio Manager
Palisade Capital Management

Post-Financial Crisis, investors benefited from a protracted period of unusually low interest rates that drove the value of their fixed income investments higher. With recent moves by the Federal Reserve to normalize interest rate policy, investors need to address the interest rate sensitivity of their portfolios and the implications for their portfolio allocations. Rising interest rates generally erode the value of fixed income securities as the present value of their expected cash flows are worth less as rates rise. Investors concerned about the impact of rising rates on their portfolios should consider convertible bonds as an alternative to traditional fixed income instruments. While convertible securities, as a hybrid debt and equity instrument, are also impacted by rising interest rates, the impact is a little more complex than it is for a normal fixed income security. This more complex behavior, derived from the structure of the convertible itself, can actually be a source of positive incremental value under market conditions that are normally adverse to more traditional fixed income assets.

How does the convertible structure help investors in rising interest rate environments? Rising interest rates are usually indicative of improving economic fundamentals, which in turn generally drive increasing equity prices. This benefits the equity optionality of convertibles. Even in rising interest rate environments, the equity performance of convertibles tend to dominate the fixed income performance. As such, convertible securities have historically fared quite well as interest rates rise. In the table below, we can see the historical performance of the BofA Merrill Lynch All U.S. Convertibles Index[1] compared to the Bloomberg Barclays U.S. Capital Aggregate Bond Index[2] and the BofA Merrill Lynch U.S. High Yield Index[3] during past periods of rising interest rates. In almost all periods observed, convertibles outperformed other fixed income instruments as measured by these indices.

	12/1995 to 08/1996	09/1998 to 01/2000	10/2001 to 03/2002	05/2003 to 06/2006	12/2008 to 12/2009	08/2010 to 03/2011	07/2012 to 12/2013	07/2016 to 01/2017
Yield Increase (bps)	137	225	116	177	162	100	156	100
BofA Merrill Lynch All U.S. Convertibles Index[1]	9.03	40.51	5.99	10.18	51.74	17.68	21.98	11.14
Bloomberg Barclays U.S. Capital Aggregate Bond Index[2]	0.28	1.06	0.14	2.47	9.09	0.50	-0.17	-2.34
BofA Merrill Lynch U.S. High Yield Index (USD Unhedged)[3]	6.57	3.65	7.82	9.35	62.57	10.44	10.37	8.92

Source: Bloomberg, FactSet
Please see important information at the end of this presentation.

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In the table below, we can also see that convertibles have historically had stronger correlation to equity performance than to fixed income performance, especially when compared to short-term or investment-grade exposure where the correlation has been small to negative. This benefit is important in situations where investors want uncorrelated exposure to other elements of their fixed income portfolios. In general, the ability of convertibles to participate in equity-related gains helps minimize the negative effects of increasing rates on the bond component of the convertible.

Correlation Matrix

20 Years Ending March 31, 2017

	BofA Merrill Lynch All U.S. Convertibles Index[1]	Bloomberg Barclays U.S. Capital Aggregate Bond Index[2]	Citigroup Treasury Bill 3-Month[4]	S&P 500® Total Return Index[5]	Bloomberg Barclays Capital Corporate BAA Index[6]	Bloomberg Barclays Capital Corporate High Yield Index[7]
BofA Merrill Lynch All U.S. Convertibles Index[1]	1.00					
Bloomberg Barclays U.S. Capital Aggregate Bond Index[2]	0.04	1.00				
Citigroup Treasury Bill 3-Month[4]	-0.03	0.13	1.00			
S&P 500® Total Return Index[5]	0.83	-0.05	-0.02	1.00		
Bloomberg Barclays Capital Corporate BAA Index[6]	0.45	0.77	-0.03	0.29	1.00	
Bloomberg Barclays Capital Corporate High Yield Index[7]	0.75	0.17	-0.11	0.62	0.66	1.00

Please see important information at the end of this presentation.

Given the prospect of continued gradual rate tightening, investors concerned about the interest rate sensitivity of their portfolio should consider convertible securities as an alternative to other fixed income instruments. Convertibles provide investors with a way to generate current income while historically providing resilient performance even in the face of rising rates.

1. The BofA Merrill Lynch All U.S. Convertibles Index (VXA0) is a capitalization-weighted index consisting of convertible securities designed to represent the universe of U.S. corporate convertible securities.

2.The Bloomberg Barclays U.S. Capital Aggregate Bond Index covers the USD-denominated, investment-grade, fixed-rate, taxable bond market of SEC-registered securities.

3. The BofA Merrill Lynch U.S. High Yield Index (H0A0) tracks the performance of U.S. dollar-denominated below-investment-grade corporate debt publicly issued in the U.S. domestic market. Index data presented herein uses the most recent estimates available. Index performance is shown strictly for the purpose of comparison between the Strategy and the BofA U.S. High Yield Index. It is not possible to invest directly in the BofA U.S. High Yield Index. The performance and volatility of the Strategy will be different than those of the BofA U.S. High Yield Index.

4. The Citigroup 3-Month T-Bill Index is an unmanaged index of three-month Treasury bills.

5. The S&P 500® Index is an unmanaged index that is widely recognized as an indicator of general market performance. The S&P 500® does not have a defined investment objective nor does it charge fees and expenses.

6. The Bloomberg Barclays Capital Corporate BAA Index covers USD-denominated, investment-grade, fixed-rate, taxable securities sold by industrial, utility and financial issuers.

7. The Bloomberg Barclays Capital Corporate High Yield Index covers the USD-denominated, non-investment grade, fixed-rate, taxable corporate bond market.

INDEX DEFINITIONS

BofA Merrill Lynch U.S. Government Index (GOAO) – An index that tracks the performance of U.S. government (i.e. securities in the Treasury and Agency indices).

BofA Merrill Lynch International Government Index (NOGO) – An index that tracks the performance of Australia, Canadian, French, German, Japan, Dutch, Swiss and UK investment grade sovereign debt publicly issued and denominated in the issuer's own domestic market and currency. Qualifying securities must have at least one year remaining term to final maturity, a fixed coupon schedule and a minimum amount outstanding.

BofA Merrill Lynch Mortgage-Backed Securities Index (MOAO) – An index that tracks the performance of U.S. dollar denominated fixed rate and hybrid residential mortgage pass-through securities publicly issued by U.S. agencies in the U.S. domestic market. 30-year, 20-year, 15-year and interest only fixed rate mortgage pools are included in the Index provided they have at least one year remaining term to final maturity and a minimum amount outstanding of at least $5 billion per generic coupon and $250MM per production year within each generic coupon.

Barclays Capital Commercial Mortgage-Backed Securities (CMBS) Index – An index that measures the performance of investment grade commercial mortgage-backed securities, which are classes of securities that represent interests in pools of commercial mortgages.

BofA Merrill Lynch U.S. Corporate Index (COAO) "Investment Grade" – An index that tracks the performance of U.S. dollar denominated investment grade corporate debt publicly issued in the U.S. domestic market. Qualifying securities must have an investment grade rating (based on an average of Moody's, S&P and Fitch) and an investment grade rated country of risk (based on an average of Moody's, S&P and Fitch foreign currency long term sovereign debt ratings). Securities must have at least one year remaining term to final maturity, a fixed coupon schedule and a minimum amount outstanding of $250MM.

BofA Merrill Lynch U.S. Dollar Emerging Markets Sovereign PIU.S. Index (IGOV) – An index that tracks the performance of U.S. dollar denominated emerging market and cross-over sovereign debt publicly issued in the eurobond or U.S. domestic market. Qualifying countries must have a BB1 or lower foreign currency long-term sovereign debt rating (based on an average of Moody's, S&P, and Fitch).

JP Morgan Corporate Emerging Markets Bond Index Broad Diversifed (CEMBI BD) – A market capitalization weighted index consisting of US-denominated Emerging Market corporate bonds. It is a liquid global corporate benchmark representing Asia, Latin America, Europe and the Middle East/Africa. This index also includes two subindices.

S&P LSTA Leveraged Loan Index - A capitalization-weighted syndicated loan index based on market weightings, spreads and interest payments. This index is calculated on a daily basis.

BofA Merrill Lynch U.S. High Yield Cash Pay Index (J0A0) "Below Investment Grade" – An index that tracks the performance of U.S. dollar denominated below investment grade corporate debt, currently in a coupon paying period, that is publicly issued in the U.S. domestic market. Qualifying securities must have a below investment grade rating (based on an average of Moody's, S&P and Firth foreign currency long term sovereign debt ratings). Must have one year remaining to final maturity and a minimum outstanding amount of $100MM.

"Collateralized Loan Obligations" JP Morgan Research CLO AA Post-Crisis Yield (JCLOAAYD Index) – An index that captures over 3000 floating rate instruments in the U.S. Dollar-denominated CLO market.

IMPORTANT INFORMATION

GE-127963 (7/17) (Exp. 7/19)