

June 2017

Michael P. Wands, CFA
Senior Investment Director

Robert J. Costello, CFA
Investment Director

Stay unconstrained in fixed-income markets

An unconstrained fixed-income strategy that incorporates diversified sources of return offers performance potential for an environment of normalizing interest rates.

As the Federal Reserve begins to raise interest rates, it may be an opportune time for investors to incorporate an unconstrained bond strategy into their portfolios.

It's important to differentiate unconstrained strategies, since many focus on either macro-oriented or corporate-credit risks, while a few are more diversified.

In today's atypical environment, we believe the ideal way to structure an unconstrained bond strategy is to include sub-sectors of the mortgage market, in addition to macro-oriented and corporate-credit strategies.

With central banks beginning to withdraw from experimental monetary policies, timing may be right for unconstrained bond strategies.

Investor interest in non-traditional fixed-income strategies — often referred to as “unconstrained” bond strategies — has ebbed and flowed in recent years. These strategies garnered significant positive attention in 2013 and 2014, particularly as interest rates moved dramatically higher during the “taper tantrum” of mid-2013, when the Federal Reserve announced the cutback on its bond-purchasing program, known as “quantitative easing.”

Subsequently, activity slowed down, as investors felt more comfortable staying with benchmark-oriented fixed-income strategies. This was due in part to the delay in rate hikes from the Federal Open Market Committee (FOMC), and interest rates actually declined throughout 2014 and into 2015. Furthermore, in our consultations with plan sponsors, financial advisers, and industry consultants, we learned that the general consensus had become that unconstrained strategies did not perform up to most investors' expectations.

Yet giving up on an unconstrained fixed-income allocation might not be well advised. In fact, now may be an excellent time to consider moving forward with such a strategy, given that the Federal Reserve has formally begun the process of “normalizing” interest rates and as the European Central Bank is considering steps to begin tapering its quantitative easing program. In addition, we believe spreads in various fixed-income sectors continue to be attractive and can meaningfully contribute to return in an unconstrained bond portfolio.

Unconstrained strategies are unique

It has been said that non-traditional fixed-income strategies are like snowflakes — each one is different. Even the nomenclature referring to these strategies contains differences: “unconstrained bonds,” “absolute return,” “strategic income/alpha,” “opportunistic fixed income,” and “total return” are used to name fixed-income strategies with similar objectives. What’s more, each strategy seems to fall into different categories among those investment managers who attempt to put them into a particular style box.

Unconstrained fixed-income strategies are generally not benchmarked to broad fixed-income indexes, such as the Bloomberg (BBG) Barclays U.S. Aggregate or BBG Barclays Global Aggregate. They also have much wider mandates regarding both duration positioning and sectors allowed for investment within the fixed-income universe. This type of mandate is often managed to a cash, T-bill, or LIBOR-based benchmark, which has a duration of roughly zero.

Duration targets across different managers’ strategies also tend to be highly variable, ranging from very tight (0 years, plus or minus 2) to very wide (0 to 10 years, -2 to 5 years, or -3 to 8 years).

Regarding eligible investments, most strategies invest in both domestic and international bonds, with the ability to utilize both of those sectors included in the traditional broad investment-grade benchmarks, as well as those that are considered the traditional “Plus” sectors of a Core Plus mandate. Plus sectors include high yield, bank loans, and emerging-market (EM) debt.

“ It might be an excellent time to move forward with — or enhance — an unconstrained strategy. ”

Many managers also use various types of mortgage-backed securities that may fall outside traditional benchmarks, such as U.S. non-agency residential mortgage-backed securities (RMBS), lower-rated commercial mortgage-backed securities (CMBS), and collateralized mortgage obligations (CMOs). A handful of managers use convertible securities and equities, to a limited extent, to potentially enhance returns.

Investors can implement unconstrained fixed-income strategies in many different ways. The strategies can be used as yield/return enhancers, as vehicles intended to help reduce interest-rate risk, or as a complement to a Core or Core Plus fixed-income allocation. Part of the frustration over the lackluster performance, however, stems from the fact that interest rates have not materially moved higher over the past few years, despite expectations that the Fed would begin unwinding its accommodative monetary policy stance.

A period of underperformance as yields declined

From the beginning of 2014 to the summer of 2016, yields generally drifted lower as the Fed continued to push out the timing of its first rate hike, until finally moving rates up 0.25% following the FOMC meeting held in December 2015. Because the direction of rates had been flat to slightly lower, the BBG Barclays U.S. Aggregate Index performed quite well, to the surprise of those concerned about rising interest rates. For the three years ending June 30, 2016, the Agg generated an annualized return of over 4%, a return far better than many had feared if rates had moved higher. The BBG Barclays Global Aggregate Index in the same three-year period posted an annualized return of nearly 2.8%, modestly lower than its U.S. counterpart — due in part to the strengthening dollar — but still above many investor’s expectations.

Why managers have failed to deliver returns

Investment philosophies played a big role in this disappointing performance result. In analyzing the competitive universe in the unconstrained bond space, we have found that managers tend to fall into two investment styles:

Macro-oriented: The first category is macro-oriented — with primary alpha drivers being interest rates and currency. (At Putnam, we refer to these drivers as “term structure” risk.)

Credit risk-focused: The second category de-emphasizes interest-rate risk, concentrating instead on credit risk, particularly corporate credit risk.

For macro-oriented managers who focus on duration, many were caught by surprise when rates sold off during the taper tantrum. Subsequently, they positioned themselves for short duration going into 2014 in anticipation of rates continuing to move higher. However, interest rates fell in 2014 as the Fed continued to keep the federal funds rate near zero, while central banks in other regions continued to remain generally accommodative. Therefore, having a negative duration stance ended up being a drag on performance.

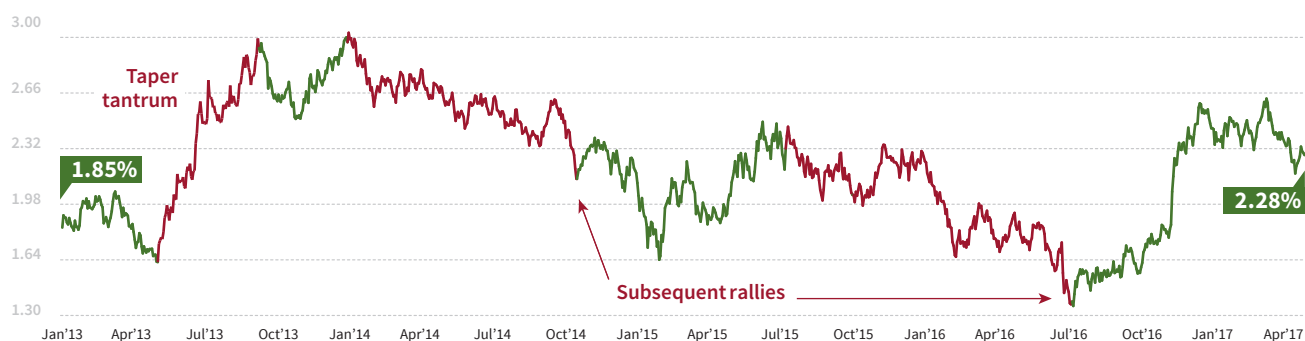
Another type of strategy we see relies less heavily on macro-oriented strategies, but instead carries higher credit risk, particularly high yield, bank loans, and EM debt. The high-yield market, in particular, had difficulty in late 2014 and again in late 2015/early 2016, as spreads widened dramatically due to falling oil prices, concerns about market liquidity, and fears about a slowdown in global growth.

The high-yield market, as measured by the JPMorgan Chase Developed High Yield Index, returned -4.53% in 2015 alone, with certain sub-sectors of the market — energy, metals and mining, and CCC-rated debt — posting double-digit losses. Bank loans fared somewhat better, as did U.S. dollar-denominated EM debt, but local currency EM debt also suffered dramatically as these currencies fell versus the U.S. dollar.

During this period, none of these sectors posted what would be considered outstanding returns. While several outperformed the BBG Barclays Global Aggregate Index, the BBG Barclays U.S. Aggregate Index has been a more formidable competitor. Depending on the exposure to these three sectors within an unconstrained strategy, it is likely that any manager would have struggled to achieve his or her alpha target, or even outperform a more traditional benchmark.

Many macro-oriented managers were surprised by persistently low rates

Yield on the U.S. 10-year Treasury Note (2013 through April 2017)



Source: Bloomberg.

Performance in an atypical, rising-rate environment

What kind of performance should an unconstrained bond investor expect in an environment in which the Fed is hiking interest rates?

Historically, when the Fed has raised rates, U.S. Treasury rates also moved higher, with short-term rates often leading the way as the pace of the Fed's future moves were priced in advance. However, intermediate-term Treasuries often react as well, albeit less directly, to shifts in the policy rate. The 10-year Treasury yield bottomed out at 1.37% in July 2016, and trended higher in the following months leading up to the Fed's resumption of rate hikes in December 2016. Fueled by Donald Trump's presidential victory, investors pondered the potential for upside growth and expansionary fiscal policy. This backdrop benefited risky assets, including less interest-rate-sensitive sectors such as high yield, non-agency RMBS, and agency credit risk transfer securities. Indeed, high-yield corporate credit posted strong returns for calendar year 2016 and easily outperformed both the BBG Barclays U.S. and Global Aggregate indexes (see below).

The FOMC stated in its June 2017 release that the pace of increases will be "gradual" and that the federal funds rate is "likely to remain, for some time, below levels that are expected to prevail in the longer run." The FOMC's

economic projections, also released during its June meeting, showed a median estimated federal funds rate of 2.1% by the end of 2018. That would imply a total of three rate hikes in 2017 and another three hikes in 2018.

Granted, it is too early in the current rate hike cycle to make conclusions about how interest-rate-sensitive bond portfolios would fare. However, if the past is a useful indicator of what to expect in the future — the higher rates and flattening yield curve of past FOMC hiking cycles — one might expect the BBG Barclays U.S. Aggregate Index to generate relatively lackluster returns during this time. One historical example is when the FOMC hiked rates six times in 1994, taking the federal funds rate from 3% to 6%. In that context, the BBG Barclays U.S. Aggregate Index returned -2.92%. In fact, 1994 was the last calendar year the U.S. Aggregate posted a negative return prior to 2013.

Likewise, spreads for other sectors of the fixed-income markets (MBS, investment grade, high-yield corporate debt, etc.) have generally tightened during Fed hiking regimes as a reflection of stronger economic fundamentals. As mentioned earlier, high-yield corporate credit returns were robust over much of 2016 into early 2017, concurrent with the shift in the Fed's stance toward additional hikes.

Fixed-income asset class returns by year (2013–2016)

	2013	2014	2015	2016	Annualized
BBG Barclays U.S. Aggregate Index	-2.02%	5.97%	0.55%	2.65	1.74%
BBG Barclays Global Aggregate Index	-2.60%	0.59%	-3.15%	2.09	-0.79%
JP Morgan Developed High Yield Index	8.42%	2.13%	-4.53%	18.21	5.74%
BBG Barclays U.S. High Yield Loan Index	5.39%	1.54%	-0.82%	8.37	3.56%
JP Morgan EMBI Global Diversified	-5.25%	7.43%	1.18%	10.15	3.20%

Sources: Barclays, JPMorgan. Indexes are unmanaged and do not incur expenses. You cannot invest directly in an index.

Based on history, expect lackluster “Agg” returns as rates rise

Historical performance of the BBG Barclays U.S. and Global Aggregate Indices during Fed hiking regimes

	Fed funds rate start to end of hiking cycle	BBG Barclays U.S. Aggregate Index annualized return	BBG Barclays Global Aggregate Index
Feb. 1994–Feb. 1995	3.00%–6.00%	0.01%	3.34%
June 1999–May 2000	4.75%–6.50%	2.11%	-2.38%
Feb. 2005–June 2006	2.25%–5.25%	0.74%	-0.89%

Sources: Bloomberg, Barclays. Indexes are unmanaged and do not incur expenses. You cannot invest directly in an index.

An important point to consider as the interest-rate “liftoff” has started is that yields in the fixed-income market are still significantly lower than they were during any of the previous hiking regimes. Coupled with the fact that the duration of the bond market is also longer than it has been historically, this leaves many bond portfolios more exposed to a potential increase in interest rates than ever before.

Mortgage exposure may help to diversify risk

As mentioned in previous white papers (see “Revisiting ‘Thinking Outside the Index,’” May 2017), we believe the ideal way to structure a non-benchmark-oriented fixed-income strategy is to utilize those subsectors of the mortgage market that introduce other less-correlated risks — in addition to macro-oriented and corporate-credit-related strategies.

In particular, we believe that adding mortgage credit risk (in the form of both non-agency residential MBS and commercial MBS) as well as prepayment risk (in the form of various types of CMO structures, including IOs and other IO-like securities) allows investors to build better balanced and more diversified portfolios from a risk perspective.

Between February 2016 and April 30, 2017, spreads in high yield compressed from over 900 bps to under 500 bps, using the JP Morgan Developed Market Index as a proxy. Much of this, we believe, was justified given the benign macro backdrop, the recovery of oil prices, and a declining high-yield default rate. Nonetheless, it could be argued that this sector consequently became fair in terms of relative value, as spreads reattained levels that were below the longer term pre-crisis tight (see figure below).

When comparing spreads across the various sectors of the fixed-income market, non-agency RMBS, CMBS, and agency IOs exhibit attractive characteristics. The return potential of these sectors is derived from either the mortgage credit or prepayment risk premium — or both, depending on the type of security. In the case of prepayment risk — that is, the risk that homeowners will refinance their mortgages, causing interest-only bondholders to receive less in interest payments than anticipated — the market generally allows a risk premium for securities that exhibit various degrees of cash-flow uncertainty.

In particular, the agency IO market provides an opportunity to capitalize on these inefficiencies. Additionally, across the securitized sectors, investors can earn a liquidity risk premium that has been more elevated in recent years due to regulatory changes.

“ Many bond portfolios are more exposed to a potential increase in interest rates than ever before. ”

We believe potentially large diversification benefits may be achieved by adding various types of mortgage-related securities to a portfolio. Non-agency RMBS, CMBS, and various prepayment strategies that are available in the agency CMO market have proven over time to have a low correlation to both corporate credit-related securities (investment grade and high yield) and EM debt, as well as equities. Unlike the various subsectors of the credit markets that have been shown to have a relatively high correlation to equities (i.e., 0.40 to 0.70), the subsectors of the mortgage market have much lower correlations (i.e., 0.00 to 0.30).

Moreover, these different types of mortgage strategies (RMBS, CMBS, and IOs) all have historically had low correlations to each other (i.e., 0.30 or less). This indicates that investors may benefit by including all three mortgage-backed security types as part of a broad fixed-income portfolio.

We continue to favor fixed-income portfolios that include a broad mix of risks: term structure (macro), corporate credit, mortgage credit (RMBS and CMBS), and prepayment. We believe the risks in these sectors look

attractive not only from a relative value perspective, but also for building a more diversified portfolio intended to exhibit lower correlation to the equity-related portion of a portfolio.

Although the past few years have been challenging for unconstrained bond funds, we believe that today’s environment presents opportunities for these strategies as the Fed and ECB shift policy. That said, it is important for investors to understand the full range of unconstrained bond strategies available — and what role they can play in their portfolios. Among these types of strategies, some employ only macro-oriented and term-structure strategies, while others invest primarily in high yield corporate debt, both of which underperformed in 2014 and 2015.

At Putnam, we believe that investors should consider the advantages of a broadly diversified, unconstrained bond strategy that includes securitized mortgages, in addition to macro-oriented, term-structure, and corporate-credit risks.

Adding mortgage-related securities can help diversify risk

Correlation of monthly hedged excess returns since 2009

	IG	HY	Bank loans	EM	S&P	MSCI World	NA RMBS	Agency IO	CMBS	Agency MBS
IG	1.00									
HY	0.90	1.00								
Bank loans	0.83	0.88	1.00							
EM USD	0.85	0.89	0.74	1.00						
S&P	0.53	0.64	0.39	0.64	1.00					
MSCI World	0.62	0.70	0.46	0.73	0.97	1.00				
NA RMBS	0.42	0.33	0.34	0.31	0.14	0.20	1.00			
Agency IO	0.37	0.45	0.50	0.40	0.25	0.28	0.21	1.00		
CMBS	0.58	0.47	0.49	0.39	0.24	0.30	0.39	0.00	1.00	
Agency MBS	0.24	0.25	0.25	0.29	0.07	0.12	0.20	0.17	0.29	1.00

A note about this data: We favor analyzing the correlation of excess returns (i.e., returns net of the impact of interest-rate movements) instead of total returns based on the assumption that when investors allocate to these sectors, they are looking to exploit the risk premiums available in them rather than the interest-rate risk embedded in them.

Sources: Bloomberg, Putnam, as of 3/31/17. For illustrative purposes only. Indexes used in the above calculation include the BBG Barclays U.S. Corporate Index, BBG Barclays U.S. High Yield Index, S&P/LSTA Leveraged Loan Index, and the BBG Barclays EM USD Sovereign Indices. Where there is no available representative index, data is based on a universe of securities selected by Putnam that are representative of various fixed income sectors and subsectors within the mortgage market. Diversification does not assure a profit or protect against loss. It is possible to lose money in a diversified portfolio.

This material is for informational and educational purposes only. It is not a recommendation of any specific investment product, strategy, or decision, and is not intended to suggest taking or refraining from any course of action. It is not intended to address the needs, circumstances, and objectives of any specific investor. Putnam, which earns fees when clients select its products and services, is not offering impartial advice in a fiduciary capacity in providing this sales and marketing material. This information is not meant as tax or legal advice. Investors should consult a professional advisor before making investment and financial decisions and for more information on tax rules and other laws, which are complex and subject to change.

The views and opinions expressed are those of Michael P. Wands, CFA, and Robert J. Costello, CFA Putnam Investments, are subject to change with market conditions, and are not meant as investment advice.

Consider these risks before investing: Our allocation of assets among permitted asset categories may hurt performance. The prices of stocks and bonds in the funds' portfolio may fall or fail to rise over extended periods of time for a variety of reasons, including both general financial market conditions and factors related to a specific issuer or industry. Our active trading strategy may lose money or not earn a return sufficient to cover associated trading and other costs. Our use of leverage obtained through derivatives increases these risks by increasing investment exposure. Bond investments are subject to interest-rate risk (the risk of bond prices falling if interest rates rise) and credit risk (the risk of an issuer defaulting on interest or principal payments). Interest-rate risk is greater for longer-term bonds, and credit risk is greater for below-investment-grade bonds. Unlike bonds, funds that invest in bonds have ongoing fees and expenses. Lower-rated bonds may offer

higher yields in return for more risk. Funds that invest in government securities are not guaranteed. Mortgage-backed securities are subject to prepayment risk. International investing involves certain risks, such as currency fluctuations, economic instability, and political developments. Additional risks may be associated with emerging-market securities, including illiquidity and volatility. Our use of derivatives may increase these risks by increasing investment exposure (which may be considered leverage) or, in the case of many over-the-counter instruments, because of the potential inability to terminate or sell derivatives positions and the potential failure of the other party to the instrument to meet its obligations. The funds may not achieve their goal, and they are not intended to be a complete investment program. The funds' effort to produce lower-volatility returns may not be successful and may make it more difficult at times for the fund to achieve their targeted return. In addition, under certain market conditions, the funds may accept greater volatility than would typically be the case, in order to seek their targeted return. REITs involve the risks of real estate investing, including declining property values. Commodities involve the risks of changes in market, political, regulatory, and natural conditions. The funds are not intended to outperform stocks and bonds during strong market rallies. Additional risks are listed in the funds' prospectus. You can lose money by investing in the funds.

You and your clients should carefully consider the investment objectives, risks, charges, and expenses of a fund before investing. For a prospectus, or a summary prospectus if available, containing this and other information for any Putnam fund or product, call Putnam Dealer Marketing Services at 1-800-354-4000 or RIA Services at 1-888-788-6262. Your clients should read the prospectus carefully before investing.

A world of investing.®



For investment professionals only. Not for public distribution.

Putnam Investments | One Post Office Square | Boston, MA 02109 | putnam.com

Putnam Retail Management

SU851 307076 6/17