



Michael Collins, CFA
 Managing Director,
 Senior Investment Officer
 PGIM Fixed Income

The Return of Absolute Return Fixed Income

After a three-decade bull market in bonds, changes in U.S. interest rates going forward will likely be more symmetrical. With the Federal Reserve in the midst of a rate hiking cycle, some fixed income investors may now be looking for strategies that can provide higher yields than cash and also guard against a rise in rates. One alternative, an 'absolute return' fixed income strategy, may meet both of these objectives.

In the following Q&A, Michael Collins, Senior Investment Officer, PGIM Fixed Income, discusses different types of absolute return fixed income portfolios and how a well-diversified, duration-constrained portfolio can take advantage of alpha-generating opportunities while avoiding systematic exposure to rising interest rates.

Q) What is an absolute return fixed income strategy?

Absolute return fixed income strategies go by a number of different names: absolute return, unconstrained, real return, strategic alpha, opportunistic, strategic income, non-traditional, and even 'go-anywhere' or 'GA' fixed income.

Regardless of the name, these strategies generally share two common traits:

- 1) They strive to deliver positive absolute returns over a specified period regardless of the direction of interest rates, and
- 2) Unlike traditional fixed income strategies, they are not typically managed against a market-capitalization weighted bond index. Rather, they are often managed against a cash-based benchmark such as 3-month LIBOR, 3-month Treasury bill, or any country's money market ('risk-free') rate.

The defining feature of these types of strategies is that they are opportunistic. In most cases, they can select from a broad array of security types and 'go-anywhere' within the fixed income market in search of attractive returns.

	Traditional Fixed Income	Absolute Return Fixed Income
OBJECTIVE	<ul style="list-style-type: none"> Seeks to maximize risk-adjusted excess returns over a market index 	<ul style="list-style-type: none"> Seeks to maximize risk-adjusted absolute returns over a cash-based benchmark
BENCHMARK	<ul style="list-style-type: none"> Market-based 	<ul style="list-style-type: none"> Cash-based
PERFORMANCE GOAL	<ul style="list-style-type: none"> Maximize information ratio <i>(excess return over benchmark/tracking error)</i> 	<ul style="list-style-type: none"> Maximize Sharpe ratio <i>(excess return over cash/volatility)</i>
LEVERAGE	<ul style="list-style-type: none"> None 	<ul style="list-style-type: none"> Modest leverage may be utilized
DERIVATIVES	<ul style="list-style-type: none"> None to extensive 	<ul style="list-style-type: none"> Must have capability and can be multiples of the portfolio

Source: PGIM Fixed Income.

Beyond these two traits, absolute return strategies can vary widely in terms of eligible sectors and security types, alpha objectives, risk parameters, and manager styles. Asset managers, in large part, each have their own concept of ‘absolute return’. Some may limit exposure to non-investment grade securities or to the credit and ‘spread’ sectors, some may aggressively adjust duration or use modest leverage, and others may invest heavily in privately-issued (vs. publicly-issued) securities. There are global multi-sector absolute return portfolios, single-sector absolute return portfolios, and even regionally-based portfolios.

In addition, while traditional long-only fixed income strategies have the luxury of being able to underweight positions versus their benchmarks, many absolute return fixed income strategies need to tactically ‘short’ specific bonds or sectors of the market—often through the use of derivatives—to implement a negative view. Accordingly, these strategies can at times have a negative duration (e.g., go ‘short’ interest rates) which can directly benefit investors when interest rates rise.

A key point to note is that absolute return fixed income strategies are not typically hedge funds. These strategies may be levered as a result of their interest rate hedging techniques, but they are not always economically levered. In addition, the vehicle and fee structures for most absolute return strategies are similar to other institutional and retail fixed income portfolios. For example, there are typically no lock-up periods or gates.

Q) How would you categorize the different types of absolute return fixed income strategies?

Broadly speaking, we view absolute return fixed income strategies as falling into three categories:

- 1) A **macro-based approach** that expresses top-down views on interest rate, currency, country, and sector exposures.
- 2) A **concentrated approach**, investing either across the broad fixed income market or specializing in a single sector or region. These portfolios tend to hold larger positions in a fewer number of issues, sectors, currencies, and/or countries.
- 3) A **blended macro and micro approach** that uses both top-down and bottom-up investment styles. These portfolios are generally well diversified and invest in the full spectrum of global fixed income sectors, rate markets, and currencies.

Variety of Styles and Approaches		
REGION	US	↔ Global
STYLE	Top-down	↔ Bottom-up
DURATION	-5	↔ +8
CURRENCY	-100	↔ +100
SECTOR	Single	↔ Multi
# OF ISSUERS	10	↔ 300
POSITION SIZE	1%	↔ 20%
LEVERAGE	0%	↔ 1-2x

Source: PGIM Fixed Income.

In our view, a blended approach that actively manages duration within a modest, specified band represents the best approach to keeping the alpha associated with fixed income security selection while limiting the structural interest rate beta.

Actively managing this type of a diversified portfolio across the fixed income and currency markets in both developed and emerging countries provides the strongest base to consistently generate alpha, respond to changing market conditions, limit idiosyncratic risk, and manage overall portfolio risk.

Low Correlation to Traditional Fixed Income

Another benefit of absolute return fixed income portfolios is they tend to have a low correlation to traditional fixed income, as is illustrated in the chart below. In fact, during periods of rising government bond yields, an absolute return portfolio with a

near zero duration has the potential to post positive returns as the interest rate hedge—created via interest rate futures or swaps—may generate a positive return on a mark-to-market basis.

However, absolute return strategies may be strongly correlated to risk assets, such as high yield bonds and equities. In other words, a balanced portfolio of stocks and bonds, with a large portion of the bonds invested in absolute return strategies, may be suboptimal. That's because during 'risk-off' periods both the stocks and absolute return portions of the total portfolio may decline in value.

ABSOLUTE RETURN HAS LOW CORRELATION TO GLOBAL FIXED INCOME BUT HIGH CORRELATION TO RISK ASSETS

Market Index	5-Year Correlation to Absolute Return Fixed Income
U.S. Aggregate Bond Index	-0.15
Global Aggregate Bond Index	-0.14
U.S. Treasury	-0.28
Global Treasury Index	-0.19
Global High Yield Bond Index	0.77
S&P 500® Index	0.53
MSCI World Index	0.64

As of March 31, 2017. Source: Historical correlations of Morningstar Non-Traditional Bond Category average versus market indices. Source: Calculated by PGIM Investments using data presented in Morningstar software products. All rights reserved. Used with permission. Correlations are based on daily returns for the trailing 5-year period. See Appendix for index descriptions.

Q) In a time when managers are seeking incremental flexibility, why does a duration constrained approach make sense?

The duration constraint, achieved by limiting interest rate risk relative to a near zero duration cash benchmark (e.g., +/- 2 years), not only reduces interest rate risk, but focuses a portfolio's risk allocations on those areas that can provide the greatest value per unit of risk: country, sector, industry, and issue selection. Portfolios constructed in such a manner are likely to offer higher information ratios and more consistent returns. By comparison, portfolios with wider duration bands (e.g., +/- 5-8 years) can present challenges that may result in a portfolio that is not consistent with an investor's objectives.

Most apparent among these challenges is potential style drift. For example, an investor seeking low interest rate risk may find that the portfolio manager has extended the portfolio's duration to an intermediate or long duration 'style box'. Such a drift could heighten interest rate sensitivity precisely at a time when the investor is looking to reduce exposure. Furthermore, strategies with significant *negative* duration can lead to subpar returns in many scenarios.

Finally, an absolute return strategy with some duration constraints may complement an investor's overall asset allocation expectations given that interest rate moves are not a primary driver of returns. Conversely, ultra-flexible strategies with wider duration bands can make it difficult to anticipate, or model, how the strategy might contribute—or detract from—an investor's overall portfolio.

Q) What is an appropriate alpha target and expected volatility for an absolute return fixed income strategy?

Depending on an investor's risk appetite, we believe an **alpha target** in the range of +100 bps to +500 bps over 3-month LIBOR or a government cash-equivalent rate is reasonable over a full market cycle, assuming the portfolio focuses largely on fixed income securities. The appropriate alpha target is a function of a client's return objective and risk constraints, with a key driver being the extent to which they are willing to invest in the 'plus' sectors of the fixed income market (below investment grade securities, emerging markets debt, and foreign currencies) and to utilize leverage. A universe that is

limited to high-quality bonds and allows for only limited FX and interest rate risk would naturally have a lower alpha objective, while those with the greatest flexibility have the potential to achieve a higher alpha target.

Volatility expectations, or bands, are a defining feature that differentiate the variety of styles employed by asset managers in this space. Naturally, lower return seeking portfolios should experience lower volatility, say in the 1-3% range. More aggressive versions with return expectations of 4-6% above cash may exhibit volatility of 6-10%.

We would expect a Sharpe ratio generally between 0.5 and 1.0, given the expected Sharpe ratios and correlations of the underlying alpha-generating activities. For example, a portfolio with an alpha target of +300 bps over LIBOR and an expected Sharpe ratio of 0.67 (or 2/3) would have an expected volatility of 450 bps. The expansion of the investment opportunity set as alpha targets increase may allow the portfolio's Sharpe ratio to remain consistent, or decline only modestly, even as the risk budget expands.

	Alpha Target Over Cash Benchmark (Annualized Over Full Market Cycle)	Volatility Expectations	Investment Criteria
SAMPLE ABSOLUTE RETURN FIXED INCOME PORTFOLIOS	+100 bps	1-3%	• Investment grade quality with only modest allocation to 'plus' sectors
	+ 300 bps	4-6%	• Broadly diversified with up to 50% in 'plus' sectors
	+500 bps	6-10%	• Significant (as much as 100%) exposure to 'plus' sectors and/or modest leverage

There is no guarantee these objectives will be achieved.

Q) How is the alpha generated in an absolute return fixed income strategy?

Alpha is generated primarily by identifying fundamentally undervalued fixed income sectors and securities across the global markets, and by capitalizing on temporary mispricings and relative value trading. Portfolios should be actively managed with both strategic and tactical allocations.

Global credit sectors: Both investment grade and non-investment grade credit can offer significant long-term value, especially given the current low level of default risk and the asynchronous nature of the credit cycle whereby different industries are moving through the cycle at different paces.

Government rates and yield curves: Evaluating the economic cycles across countries helps to identify mispricings—whether interest rates truly reflect the fundamentals of a specific country or if they are unduly influenced by technical factors.

Currencies: There will always be currencies that are appreciating and others that are depreciating. As such, currencies can provide a range of opportunities at any given time. Capitalizing on those changes can create macro trading opportunities where alpha can be added in a risk-controlled manner.

Structured product: The broad variety of asset-backed securities—CMBS, CLOs, RMBS, securitized consumer loans, etc.—and the flexibility to invest across the “capital stack” (e.g., senior, subordinated, mezzanine) can provide diversified sources of alpha.

Emerging markets debt: The idiosyncratic fundamental and political trends across more than 60 emerging market countries can create numerous opportunities. Many emerging market sovereign bonds offer higher yields than developed country sovereigns, and the stronger economic growth in emerging countries and accompanying rise in productivity should

make their currencies appreciate over time. In addition, emerging market contagion has declined in recent years and the quasi-sovereign and corporate bond markets in emerging countries are growing rapidly, providing both strategic and tactical opportunities.

Q) How have absolute return fixed income strategies mitigated interest rate risk?

A primary attraction of absolute return fixed income strategies is their ability to limit downside risk in a rising interest rate environment. As is illustrated below, during periods of rising rates (from December 2008 to March 2017), absolute return strategies have, on average, posted positive total returns and consistently generated positive excess returns relative to the aggregate bond indices.

Period	Change in US Treasury Yield (bps)	Absolute Return Category Avg ¹ (%)	Bloomberg Barclays U.S. Aggregate Bond Index (%)	Outperformance of Absolute Return vs. Bloomberg Barclays U.S. Aggregate Bond Index (%)
Dec 18, 2008 – Feb 27, 2009	+97	2.0	-1.2	+3.2
Mar 18, 2009 – Jun 10, 2009	+141	8.0	-0.2	+8.2
Oct 7, 2009 – Dec 28, 2009	+67	1.9	-0.5	+2.4
Feb 5, 2010 – Apr 5, 2010	+44	1.5	-0.7	+2.2
Oct 8, 2010 – Dec 15, 2010	+114	0.3	-3.1	+3.4
Sep 22, 2011 – Oct 27, 2011	+67	0.3	-1.7	+2.0
Jan 31, 2012 – Mar 19, 2012	+58	1.5	-1.2	+2.7
Jul 24, 2012 – Sep 14, 2012	+47	1.6	-0.7	+2.3
Nov 16, 2012 – Jan 30, 2013	+44	1.8	-1.0	+2.8
May 2, 2013 – Sep 5, 2013	+135	-2.7	-4.9	+2.2
Oct 23, 2013 – Dec 31, 2013	+55	0.5	-1.1	+1.6
Jan 30, 2015 – Mar 6, 2015	+57	1.0	-1.9	+2.9
Apr 17, 2015 – Jun 10, 2015	+63	-0.1	-2.8	+2.7
Jul 5, 2016 – Mar 13, 2017	+125	3.8	-3.7	+7.5

ABSOLUTE RETURN STRATEGIES CAN OUTPERFORM DURING PERIODS OF RISING RATES
December 2008 to March 2017

Source: Morningstar, Bloomberg, Barclays, and PGIM Fixed Income. Past performance is not a guarantee or a reliable indicator of future results.

¹Represents the average return of the Morningstar Non-Traditional Bond Category. The table illustrates the Morningstar Non-Traditional Bond Category average and Bloomberg Barclays US Aggregate Bond Index performance during periods where interest rates rose by 40+ bps from 12/18/2008 through 3/31/2017. Rising interest rate periods as measured by the daily business day movements of the 10-year Treasury bond yield, which is a commonly used reference point for the purposes of tracking the general movement of interest rates for the US fixed income market. The decision to use 40+ bps threshold was done so that an investor could see multiple instances of rate rising periods over the last 5+ years to better assess how Non-Traditional Bond Investments have performed during these types of periods.

Q) What are the downside risks and how are they managed?

As in traditional fixed income strategies, the key risks in an absolute return fixed income portfolio are interest rate risk, credit risk, and currency risk. And just like traditional fixed income strategies, each of these risks must be actively monitored and managed.

At the portfolio level, risk budgets with thresholds on systematic risk (yield curve, currency, sector, quality) and tail risk (country, industry, issuer, liquidity) can provide a framework for determining risk allocations and proactive monitoring. In addition, individual issuer exposure must be actively monitored to identify improving and deteriorating credits, especially in portfolios with spread exposure to investment grade corporate bonds, high yield corporate bonds, emerging markets debt, sovereign debt, and asset-backed securities.

Active risk and sector allocation, including tactical shifts along the credit spread curves, selling bonds and going to cash, and moving up and down an issuer's capital structure, are other ways an asset manager can tactically increase or decrease overall credit risk. Finally, tail-risk hedging/mitigation strategies that utilize interest rates, currencies, and credit derivatives can allow asset managers to quickly reduce overall portfolio systematic risk.

No investment strategy or risk management technique can guarantee returns or eliminate risk in any market environment.

Q) How is interest rate risk hedged and what is the 'cost' of hedging?

The interest rate hedging process uses a combination of U.S. and other global (e.g., German, Japanese) interest rate futures contracts and interest rate swaps to hedge the interest rate risk of the underlying bonds in a portfolio. Futures and swaps can also be used to implement active duration and yield curve positions within specified bands and to capitalize on relative value opportunities across the rate markets.

The 'cost' of the hedge in yield terms—assuming static interest rates—is essentially the difference between the yields on the hedging instrument and cash. For example, to hedge the duration of a 5-year corporate bond using U.S. interest rate swaps, the cost is the yield of the 5-year swap minus 3-month LIBOR. In mid-2017, the cost of this hedge would have been 0.68% (1.88% yield on 5-year U.S. interest rate swap less 1.20% for 3-month LIBOR)*. In practice, however, interest rate risk is hedged at the portfolio level, rather than on a bond-by-bond basis. This overall portfolio interest rate hedge decreases portfolio yield when the yield curve is positively sloped.

Investing in a portfolio with essentially a zero target duration is also subject to other potential opportunity costs relative to longer duration portfolios. For example, when interest rates fall dramatically, absolute return portfolios may lag longer duration portfolios on a total return basis.

** Data as of May 25, 2017. Source of data: Bloomberg.*

Conclusion

Although the majority of the developed country government bond rally is likely behind us, we believe fixed income still provides plenty of alpha opportunities for investors. An absolute return fixed income strategy managed against a cash-based benchmark is one option for investors seeking to reduce interest rate exposure and generate higher returns than cash. Among the array of absolute return strategies available, we believe a diversified, blended approach that utilizes both top-down and bottom-up investment strategies while constraining duration within a modest, specified band is the best strategy to generate a consistent alpha stream with limited structural interest rate exposure.

Appendix

Bloomberg Barclays US Aggregate Index: Covers the USD-denominated, investment-grade, fixed-rate or step up, taxable bond market of SEC-registered securities and includes bonds from the Treasury, Government-Related, Corporate, MBS (agency fixed-rate and hybrid ARM passthroughs), ABS, and CMBS sectors. Securities included in the index must have at least 1 year until final maturity and be rated investment-grade (Baa3/ BBB-/BBB-) or better using the middle rating of Moody's, S&P, and Fitch.

Bloomberg Barclays Global Aggregate Index: Provides a broad-based measure of the global investment-grade fixed income markets. The three major components of this index are the U.S. Aggregate, the Pan-European Aggregate, and the Asian-Pacific Aggregate Indices. The index also includes Eurodollar and Euro-Yen corporate bonds, Canadian government, agency and corporate securities, and USD investment-grade 144A securities. Securities included in the index must have at least 1 year until final maturity and be rated investment-grade (Baa3/ BBB-/BBB) or better using the middle rating of Moody's, S&P, and Fitch.

Bloomberg Barclays Global Treasury Index: Tracks fixed-rate, local currency government debt of investment grade countries, including both developed and emerging markets. The index represents the treasury sector of the Global Aggregate Index and contains issues from 37 countries denominated in 24 currencies. The three major components of this index are the US Treasury Index, the Pan-European Treasury Index and the Asian Pacific Treasury Index, in addition to Canadian, Chilean, Israeli, Mexican, South Africa and Turkish government bonds.

Bloomberg Barclays US Treasury Index: Measures US dollar-denominated, fixed-rate, nominal debt issued by the US Treasury. Treasury bills are excluded by the maturity constraint, but are part of a separate Short Treasury Index. STRIPS are excluded from the index because their inclusion would result in double-counting. The US Treasury Index is a component of the US Aggregate, US Universal, Global Aggregate and Global Treasury Indices. The US Treasury Index was launched on January 1, 1973.

Bloomberg Barclays Global High Yield Bond Index: Provides a broad-based measure of the global high-yield fixed income markets. The Index represents that union of the U.S. High-Yield, Pan-European High-Yield, CMBS High-Yield, and Pan-European Emerging Markets High-Yield Indices. Securities must have at least 1 year until final maturity and be rated high-yield (Ba1/BB+/or lower) using the middle rating of Moody's, S&P, and Fitch.

The S&P 500® Index is a commonly recognized, market capitalization weighted index of 500 widely-held equity securities, designed to measure broad U.S. equity performance. A benchmark index is not professionally managed, does not have a defined investment objective, and does not incur fees or expenses. Index performance includes the reinvestment of all dividends. You cannot invest directly in this index. S&P 500 is a registered trademark and service mark of the McGraw-Hill Companies.

The **MSCI World Index** is a broad global developed markets equity benchmark designed to support: Asset allocation: Consistent, broad representation of the performance of developed equity markets worldwide, without home bias. The MSCI World Index captures large and mid-cap representation across 23 Developed Markets (DM) countries

NOTICE: IMPORTANT INFORMATION

Source(s) of data (unless otherwise noted): PGIM Fixed Income as of June 12, 2017

PGIM Fixed Income operates primarily through PGIM, Inc., a registered investment adviser under the U.S. Investment Advisers Act of 1940, as amended, and a Prudential Financial, Inc. ("PFI") company. PGIM Fixed Income is headquartered in Newark, New Jersey and also includes the following businesses globally: (i) the public fixed income unit within PGIM Limited, located in London; (ii) Prudential Investment Management Japan Co., Ltd ("PIMJ"), located in Tokyo; and (iii) the public fixed income unit within PGIM (Singapore) Pte. Ltd., located in Singapore. Prudential Financial, Inc. of the United States is not affiliated with Prudential plc, which is headquartered in the United Kingdom. Prudential, PGIM, their respective logos, and the Rock symbol are service marks of PFI and its related entities, registered in many jurisdictions worldwide.

These materials are for informational or educational purposes only. The information is not intended as investment advice and is not a recommendation about managing or investing assets. In providing these materials, PGIM is not acting as your fiduciary as defined by the Department of Labor.

These materials represent the views, opinions and recommendations of the author(s) regarding the economic conditions, asset classes, securities, issuers or financial instruments referenced herein. Distribution of this information to any person other than the person to whom it was originally delivered and to such person's advisers is unauthorized, and any reproduction of these materials, in whole or in part, or the divulgence of any of the contents hereof, without prior consent of PGIM Fixed Income is prohibited. Certain information contained herein has been obtained from sources that PGIM Fixed Income believes to be reliable as of the date presented; however, PGIM Fixed Income cannot guarantee the accuracy of such information, assure its completeness, or warrant such information will not be changed. The information contained herein is current as of the date of issuance (or such earlier date as referenced herein) and is subject to change without notice. PGIM Fixed Income has no obligation to update any or all of such information; nor do we make any express or implied warranties or representations as to the completeness or accuracy or accept responsibility for errors. **These materials are not intended as an offer or solicitation with respect to the purchase or sale of any security or other financial instrument or any investment management services and should not be used as the basis for any investment decision. No risk management technique can guarantee the mitigation or elimination of risk in any market environment. Past performance is not a guarantee or a reliable indicator of future results and an investment could lose value. No liability whatsoever is accepted for any loss (whether direct, indirect, or consequential) that may arise from any use of the information contained in or derived from this report. PGIM Fixed Income and its affiliates may make investment decisions that are inconsistent with the recommendations or views expressed herein, including for proprietary accounts of PGIM Fixed Income or its affiliates.**

The opinions and recommendations herein do not take into account individual client circumstances, objectives, or needs and are not intended as recommendations of particular securities, financial instruments or strategies to particular clients or prospects. No determination has been made regarding the suitability of any securities, financial instruments or strategies for particular clients or prospects. For any securities or financial instruments mentioned herein, the recipient(s) of this report must make its own independent decisions.

Conflicts of Interest: PGIM Fixed Income and its affiliates may have investment advisory or other business relationships with the issuers of securities referenced herein. PGIM Fixed Income and its affiliates, officers, directors and employees may from time to time have long or short positions in and buy or sell securities or financial instruments referenced herein. PGIM Fixed Income and its affiliates may develop and publish research that is independent of, and different than, the recommendations contained herein. PGIM Fixed Income's personnel other than the author(s), such as sales, marketing and trading personnel, may provide oral or written market commentary or ideas to PGIM Fixed Income's clients or prospects or proprietary investment ideas that differ from the views expressed herein. Additional information regarding actual and potential conflicts of interest is available in Part 2A of PGIM Fixed Income's Form ADV.

In the United Kingdom, information is presented by PGIM Limited, an indirect subsidiary of PGIM, Inc. PGIM Limited is authorised and regulated by the Financial Conduct Authority of the United Kingdom (registration number 193418) and duly passported in various jurisdictions in the European Economic Area. These materials are issued by PGIM Limited to persons who are professional clients or eligible counterparties for the purposes of the Financial Conduct Authority's Conduct of Business Sourcebook. In certain countries in Asia, information is presented by PGIM Singapore, a Singapore investment manager registered with and licensed by the Monetary Authority of Singapore. In Japan, information is presented by PIMJ, registered investment adviser with the Japanese Financial Services Agency. In South Korea, information is presented by PGIM, Inc., which is licensed to provide discretionary investment management services directly to South Korean investors. In Hong Kong, information is presented by representatives of PGIM (Hong Kong) Limited, a regulated entity with the Securities and Futures Commission in Hong Kong to professional investors as defined in Part 1 of Schedule 1 of the Securities and Futures Ordinance.

© 2017 PFI and its related entities.

2017-2909

