

**Insight Paper**

The Benefits of an Active Approach to Global Fixed Income

MARCH 2020

Key Takeaways

- The global fixed income universe provides significant opportunities for discerning investors to generate returns and diversify their portfolios.
- A passive global index-tracking approach exposes investors to meaningful and unnecessary interest rate and currency risk, especially in today's low-yield environment.
- A flexible, active approach provides greater opportunity for managers to invest in more attractively priced segments of the market, mitigate risk, and generate alpha.
- Dodge & Cox offers a differentiated approach to global fixed income, featuring a total return mindset, a focus on credit, and a long-term investment horizon.

The \$100 trillion global bond universe offers active investors a large and diverse investment opportunity set. Experienced and skilled managers with a flexible approach are well positioned to find inefficiencies by looking across credit, currency, and rates markets to identify issuers with the most attractive risk-reward profiles. Variations in interest rates and economic cycles across countries create a fertile ground for country and security selection and offer meaningful diversification benefits.

Investing solely in one's home bond market restricts access to this wider range of opportunities. An investor constrained to only the U.S. bond market has access to approximately one-

third of the number of issuers relative to a global bond investor. An investor in the United Kingdom has access to approximately one-tenth of the number of issuers. In addition, domestic bond strategies typically only have exposure to home-market interest rates and no currency exposure, while global strategies typically include exposure to a wide array of interest rates and currencies. While all asset allocation decisions must be guided by the specific risk and return objectives of the investor, we believe global bonds are a good complement to a domestic bond strategy and can provide compelling risk and return benefits.

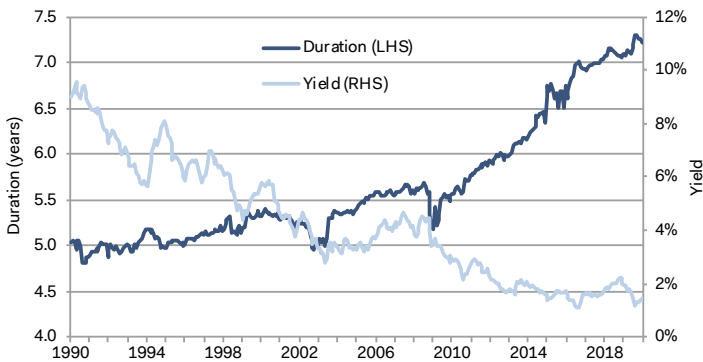
Passive Investing Entails Heightened Risks

Taking a passive, benchmark-driven approach, or focusing on minimizing index tracking error, imposes significant risks because global bond indices have inherent flaws in our view.

Low/Negative Interest Rates

For passive global bond funds, interest rate exposures are determined by how much debt is outstanding and the maturity of the underlying bonds. This means the largest interest rate exposures are to the largest and most indebted countries. Today, these countries face common challenges: slow growth, worsening demographics, and low and even negative yields. At the same time, as government and corporate issuers have taken advantage of the low-yield environment by issuing more long-dated bonds, the duration,^a or interest rate risk, embedded in the benchmarks has increased significantly. Furthermore, the low yield levels shown in Figure 1 may not compensate the investor sufficiently for the heightened interest rate risk.

Figure 1: Global Benchmark^b Yields Are at Lows, While Interest Rate Risk Is at Highs

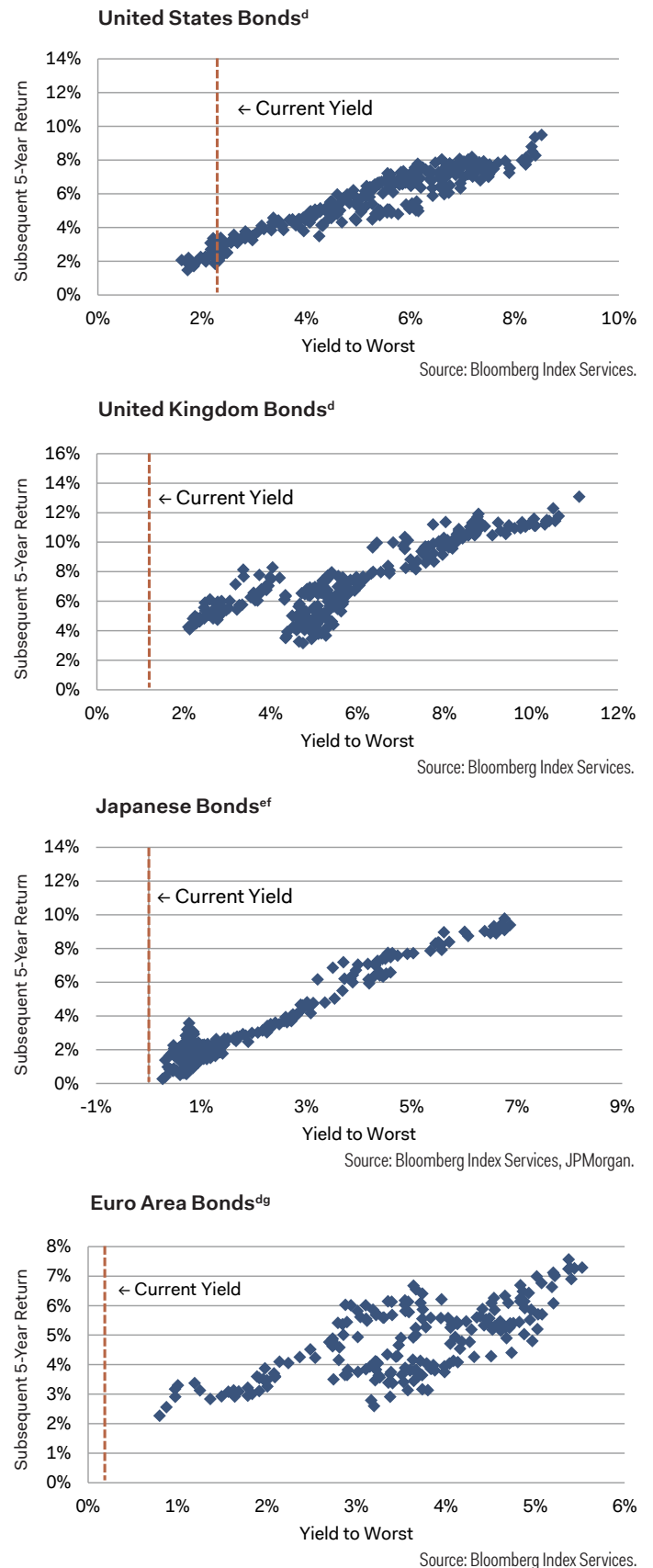


Source: Bloomberg Index Services.

For example, Japanese Government Bonds represent 16%^c of the Bloomberg Barclays Global Aggregate Bond Index (Bloomberg Barclays Global Agg). Over two-thirds of those are more than five years in duration. The average nominal and real (inflation-adjusted) yields on these bonds are 0.02% and -1.00%, respectively, assuming long-term inflation of approximately 1%. These yield levels make long-term return prospects challenging.

Figure 2 plots historical starting yield levels against the five-year subsequent return for bond indexes across the four major developed market currencies, and highlights the strong relationship between the two. Given current yield levels (highlighted in orange), intermediate-term return expectations should be low.

Figure 2: Low Yields, Low Returns: Starting Yields and Subsequent Five-Year Returns Across the Globe
Returns Measured in Local Currency



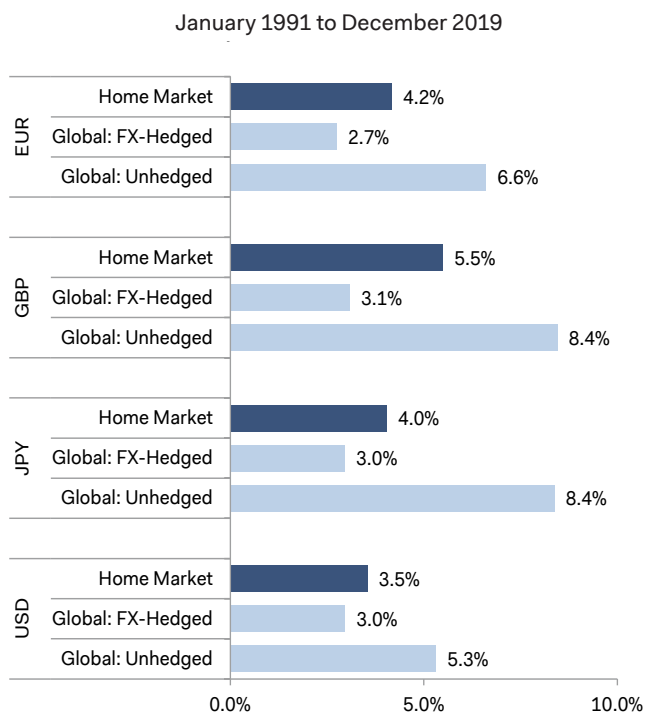
Furthermore, global bond benchmarks' large allocations to developed market government bonds come at the expense of allocations to more interesting and attractively priced areas of the market. For example, credit markets and emerging local markets comprise relatively small portions of the benchmarks, but offer significant excess return opportunities to active investors who are willing and able to research fundamental outlook and value within these markets.

Global Bonds and Currency Risk

Unhedged global bond indices have large, passive exposures to currencies (e.g., over 50% of the Bloomberg Barclays Global Agg is non-U.S. dollar) whose large swings in value can overwhelm any returns being generated by the underlying bonds.

An analysis of historical data suggests that hedged benchmark returns provide superior risk-adjusted returns to unhedged benchmark returns. Figures 3 and 4 show comparisons of volatility and Sharpe ratio^h (a measure of risk-adjusted returns) for home market bond benchmarks versus global hedged and unhedged benchmarks. These figures illustrate that, of the three benchmarks, over the long run, global hedged benchmarks have produced the lowest volatility and the highest Sharpe ratios, an indication of stronger risk-adjusted returns. Global unhedged benchmarks have provided low risk-adjusted returns.

Figure 3: Bond Market Volatility by Base Currency, Annualized^{fi}



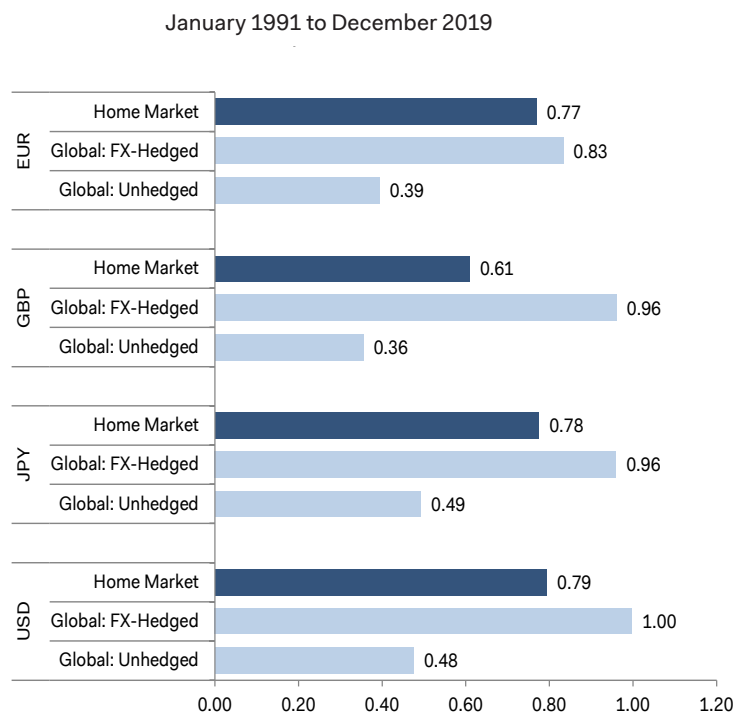
Source: Bloomberg Index Services, JPMorgan.
 Note: EUR bond data starts in February 1999.
 EUR = euro. GBP = British pound. JPY = Japanese yen. USD = U.S. dollar.

These statistics create a compelling case that passive currency exposure is not attractive because it adds volatility, regardless of an expectation for positive returns. However, an analysis of this data alone overlooks the opportunities for active currency management. An active and disciplined approach to currency management offers numerous ways to enhance and diversify the long-term return prospects of a global bond portfolio.

Levers of Active Global Bond Investing

Investors who take an active approach to finding opportunities across the vast and diverse global universe are significantly advantaged relative to investors who are limited to their home market or benchmark-driven strategies. Even in a low-yield environment, skilled managers using an investment approach that is flexible, selective, and focused on the long term can construct a diversified portfolio with compelling total return prospects. We see value in focusing on areas of the market that offer significant differentiation and where we can benefit from market inefficiencies, such as corporate bonds, emerging market local debt, and structured products (e.g., mortgage-backed, asset-backed securities). Credit, rates, and currency exposures should be carefully selected and rigorously managed.

Figure 4: Bond Market Sharpe Ratios by Base Currency, Annualized^{fi}



Source: Bloomberg Index Services, JPMorgan.
 Note: EUR bond returns start in February 1999.

1) Managed, Active Credit Approach

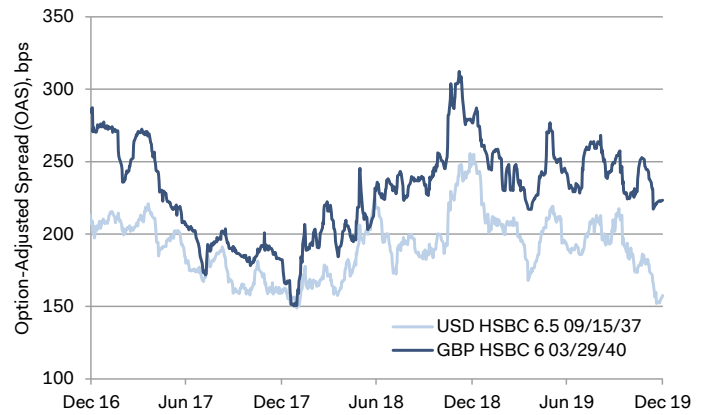
While credit is a small part of bond benchmarks, it is a big source of opportunity for active investors. Yet many global bond managers focus primarily on top-down portfolio construction and emphasize rate and currency views. Credit securities offer incremental income relative to government bonds and, when selected carefully and held over the long term, this income compounds and generates a durable source of returns. For example, since 1990, the Bloomberg Barclays U.S. Corporate Bond Index (investment-grade corporate bonds) has produced positive excess returns (i.e., returns higher than duration-matched U.S. Treasuries) in over 70% of rolling three-year periods.

Active investors with expertise in credit have many other tools to add value. The Bloomberg Barclays Global Agg contains over 2,100 credit issuers, which provides significant scope for bottom-up research and issuer selection. Managers with an experienced credit research and trading team and emphasis on intensive fundamental analysis can isolate opportunities from within this wide selection. Careful research of each investment mitigates default risk and can provide the conviction needed to maintain holdings through periods of market stress.

Global investors can also capitalize on credit market inefficiencies in ways that their local market counterparts cannot. For example, bonds of the same issuer may trade at different valuations in different countries/markets, and global investors can choose the best market in which to invest. Figure 5 shows an example of this phenomenon in which HSBC's bonds denominated in British pounds traded with a wider credit spread than its bonds denominated in dollars. An investor able to buy the British pound bonds—and aware of this divergence—would have been able to obtain higher compensation for effectively taking the same credit risk.

There are many unique investment opportunities across different markets, issuers, and capital structures. And the universe will grow as the global capital markets continue to evolve and globalize. Overall, we believe credit plays a vital role in a global bond portfolio.

Figure 5: HSBC's British Pound Subordinated Bonds Had Higher Spreads than its U.S. Dollar Bonds¹



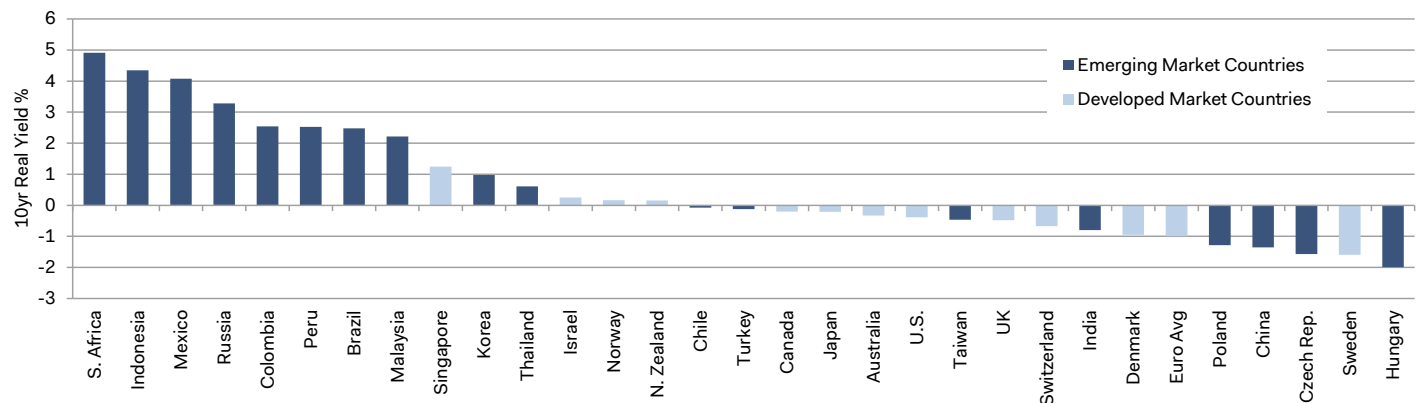
Source: Bloomberg.

2) Emerging Market Local Bond Opportunities

Emerging market local bond markets have grown rapidly in the last few decades, but are still underrepresented in global bond benchmarks. The Bloomberg Barclays Global Agg has only a 7% allocation to these markets. However, relative to developed markets, emerging markets generally offer more attractive valuations and, in many cases, have stronger fundamental outlooks.

Nominal and real (inflation-adjusted) rates for 10-year bonds from a variety of emerging market and developed markets are shown in Figure 6 below. While positive real yields in the developed markets are almost non-existent, there are many emerging markets with high real yields. Our research indicates that, over the long term, higher real-yield bonds and currencies have consistently outperformed those with lower yields. For example, a portfolio started in 1991 (comprised of the five highest-yielding currencies, adjusted annually) produced strongly positive excess returns, while a similarly constructed portfolio of the lowest-yielding currencies produced a negative excess return.

Figure 6: Real Inflation-Adjusted Rates Are Higher in Emerging Markets



Source: Bloomberg Index Services. Data is as of December 31, 2019.

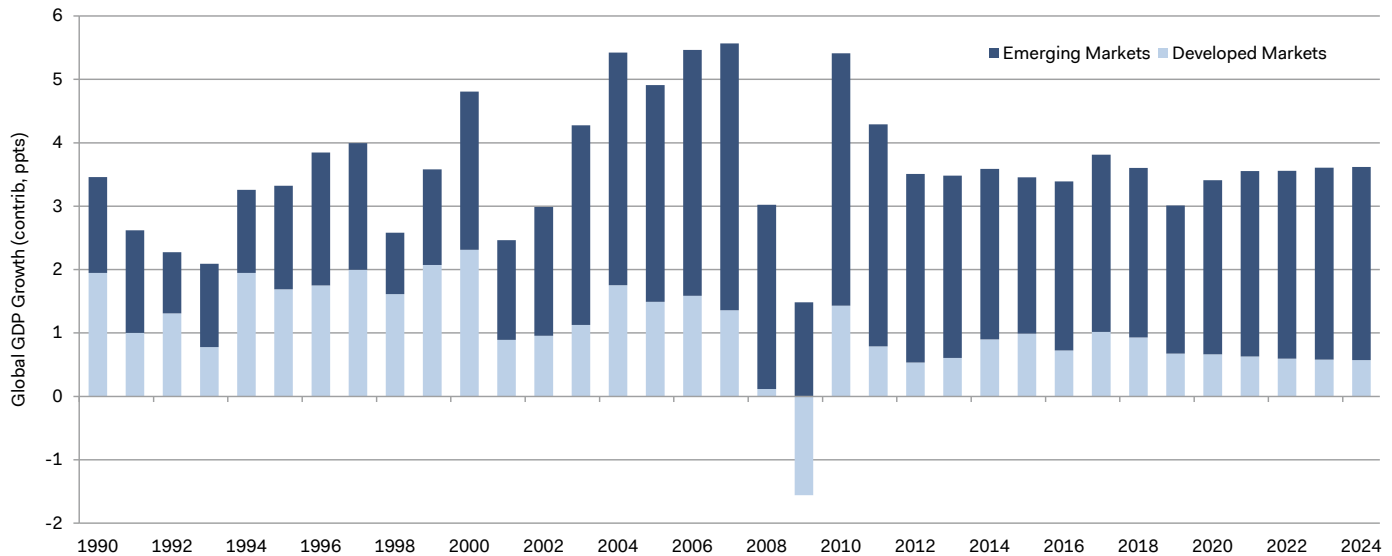
To highlight some of the positive fundamentals of emerging market countries, Figures 7 and 8 show the contribution to global real GDP growth and the gross government debt levels across a selection of developed and emerging market countries.

Many emerging markets have higher growth and lower debt levels than their developed market counterparts.

We believe investing selectively in individual emerging markets via a flexible global bond strategy has advantages

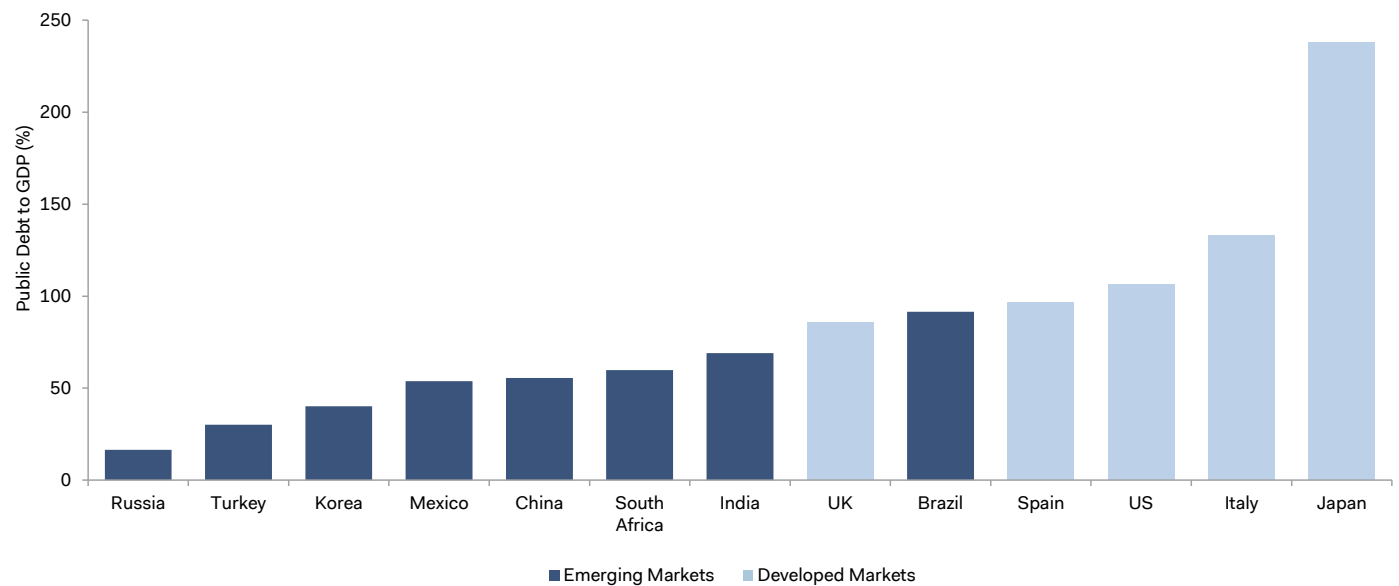
relative to achieving exposure via a pure emerging market bond fund. Divergences in cyclical, structural, and political factors across countries create significant opportunities for country and currency selection. Importantly, a flexible strategy enables the manager to appropriately size positions based on relative valuation and risk-return profiles.

Figure 7: Emerging Markets Contribute the Majority of Global Growth



Source: Haver Analytics, IMF World Economic Outlook.

Figure 8: Debt Levels Are Generally Lower in Emerging Markets



Source: Haver Analytics, IMF International Financial Statistics.

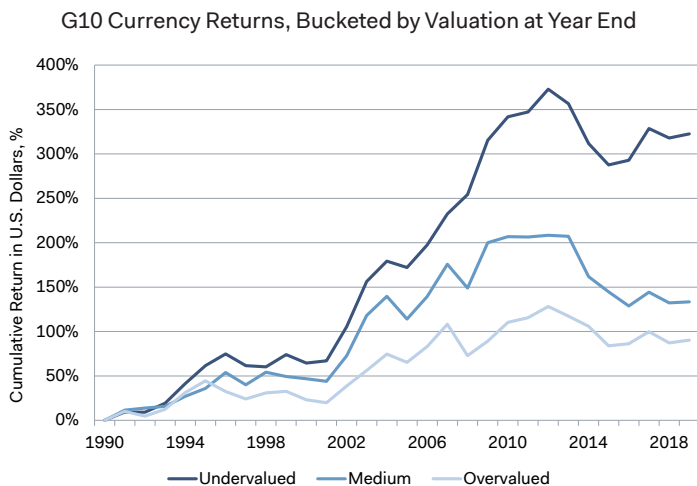
3) The Importance of an Active and Disciplined Currency Approach

Managing currency risk is an integral part of an active global bond strategy. Because currencies tend to be more volatile than bonds, managers need to be highly selective in adding exposure. But, selective currency exposure to markets with attractive valuations and/or fundamentals is an important lever that can offer significant return potential.

For example, a simple strategy of buying currencies with relatively low valuations has proven to be consistently successful over time. Currency valuations are often measured using purchasing power parity, which measures the relative costs of the same goods and services in various countries. These valuation estimates can be useful in forecasting currencies. For example, an undervalued currency may increase export competitiveness, which in turn has tended to drive up currency value over time.

Figure 9 compares how total returns differ when a U.S.-dollar-based investor holds undervalued currencies rather than overvalued ones. In this chart, we have assumed that the investor rebalances his or her portfolio at the end of every year to hold either the top three most overvalued, middle three, or bottom three (undervalued) G10 currencies, excluding the U.S. dollar.^k

Figure 9: Undervalued Currencies Have Produced Higher Total Returns^l



Source: Haver Analytics, OECD.

An investor sticking to the most undervalued currencies at every rebalance would have realized a total return of 5% annualized, while the investor buying the most expensive currencies would have realized a return of only 2% annualized.^m

While this simple currency valuation strategy produced good results, we believe a strategy that also incorporates analysis of a broader array of long-term economic and financial variables is superior. Structural and cyclical factors, fiscal and monetary policies, and political developments can all drive currency movements. Overall, a selective, fundamentals-based, and long-term approach to currency can add significant value to global bond portfolios.

Conclusion

An active approach is essential for investing in the vast and complex global bond universe. At Dodge & Cox, we employ a flexible and opportunistic approach to investing in global fixed income that relies on the core tenets of all of our investment strategies: a focus on bottom-up security selection, a long-term investment horizon, strict valuation discipline, and team-based portfolio decision-making. This approach enables us to focus on the segments we deem to be most attractive and diversify exposures across credit, currency, and interest rate markets. We believe it also enhances the risk-return profile of a broader fixed income portfolio.

Drawing on our large and experienced investment team, we emphasize areas of the market, such as credit and emerging markets, which we believe offer a more attractive investment opportunity set and tend to provide higher income. We believe currency is an important lever for return, but are highly selective in adding currency exposure and require a high risk-adjusted return outlook to merit a place in the Dodge & Cox Global Bond Fund. Using this approach, we are able to build a diverse global bond portfolio with a risk-return profile that we believe is significantly more attractive than that of global bond benchmarks.

The Dodge & Cox Approach to Global Fixed Income Investing

Flexible, opportunistic approach to portfolio construction: Identify attractive investments across global credit, currency, and rate markets through fundamental research.

Long-term investment horizon and strict valuation discipline: Ride out short-term volatility and invest when others may be wary.

Emphasis on diversification and risk management: Utilize sophisticated risk analytic tools and focus on avoiding permanent loss of capital rather than minimizing tracking error.

Rigorous multi-step, committee-driven decision-making process: Evaluate each investment decision thoroughly and build a diversified, credit-focused portfolio.

Our experienced and integrated research team—comprised of global industry analysts (whose research serves both fixed income and equity portfolios), dedicated credit analysts, and macroeconomic analysts—is responsible for the credit research underpinning all of our credit investments and covers the entire capital structure of over 600 companies worldwide. The fixed income team also provides primary research on countries, rates, currencies, and structured products.

The Dodge & Cox Global Bond Fund's Successful Track Record Objectives

- The Fund seeks a high rate of total return consistent with long-term preservation of capital.

Strategy

- The Fund invests in bonds and other debt instruments of issuers from at least three different countries, including emerging market countries. The Fund invests in both U.S. dollar-denominated and non-U.S.-currency-denominated debt instruments, including, but not limited to, government and government-related obligations, mortgage- and asset-backed securities, corporate and municipal bonds, and other debt securities.
- The proportions of the Fund's assets held in various debt instruments will be revised in light of Dodge & Cox's appraisal of the global economy, the relative yields of securities in the various market sectors and countries, the potential for a currency's appreciation, the investment prospects for issuers, the countries' domestic and political conditions, and other factors. In selecting securities, Dodge & Cox considers many factors, including, without limitation, yield, structure, covenants, credit quality, liquidity, call risk, duration, and capital appreciation potential.
- The Fund may enter into currency or interest rate-related derivatives, including forwards, futures, swaps, and options.

Risks

- The yields and market values of the instruments in which the Fund invests may fluctuate. Accordingly, your investment may be worth more or less than its original cost. Debt securities are subject to interest rate risk, credit risk, and prepayment and call risk, all of which could have adverse effects on the value of the Fund. Investing in non-U.S. securities may entail risk due to foreign economic and political developments; this risk may be higher when investing in emerging markets. The Fund's use of derivatives involves risks different from, and possibly greater than, the risks associated with investing directly in securities and other more traditional investments. Please read the prospectus for specific details regarding the Fund's risk profile.

The Dodge & Cox Global Bond Fund has generated solid results since inception.

Average Annual Total Returns

For periods ended December 31, 2019	1 Year	3 Years	5 Years	Since Inception (December 5, 2012)
Dodge & Cox Global Bond Fund	12.23%	6.20%	4.07%	3.51%
Bloomberg Barclays Global Agg Index	6.84	4.27	2.31	1.23

Before investing in any Dodge & Cox Fund, you should carefully consider the Fund's investment objectives, risks, and charges and expenses. To obtain a Fund's prospectus and summary prospectus, which contain this and other important information, visit dodgeandcox.com or call 800-621-3979. Please read the prospectus and summary prospectus carefully before investing. The Global Bond Fund's Net Expense Ratio is 0.45% and its 2019 Gross Expense Ratio was 0.83%.

Dodge & Cox has contractually agreed to reimburse the Fund for all ordinary expenses to the extent necessary to maintain total annual fund operating expenses at 0.45% through April 30, 2020. The term of the agreement renews annually thereafter unless terminated with 30 days' written notice by either party prior to the end of the term. The Global Bond Fund's total returns include the reinvestment of dividend and capital gain distributions, but have not been adjusted for any income taxes payable by shareholders on these distributions or on Fund share redemptions. Index returns include interest income but, unlike Fund returns, do not reflect fees or expenses. The Bloomberg Barclays Global Aggregate Bond Index is a widely recognized, unmanaged index of multi-currency, investment-grade debt securities. All returns are stated in U.S. dollars, unless otherwise noted. A private fund managed and funded by Dodge & Cox (the "Private Fund") was reorganized into the Fund and the Fund commenced operations on May 1, 2014. The Private Fund commenced operations on December 5, 2012, and had an investment objective, policies, and strategies that were, in all material respects, the same as those of the Fund, and was managed in a manner that, in all material respects, complied with the investment guidelines and restrictions of the Fund. However, the Private Fund was not registered as an investment company under the Investment Company Act of 1940 (the "1940 Act"), and therefore was not subject to certain investment limitations, diversification requirements, liquidity requirements, and other restrictions imposed by the 1940 Act and the Internal Revenue Code, which, if applicable, may have adversely affected its performance. Expense reimbursements have been in effect for the Fund since its inception. Without the expense reimbursements, returns for the Fund would have been lower. Returns represent past performance and do not guarantee future results. Investment return and share price will fluctuate with market conditions, and investors may have a gain or loss when shares are sold. Fund performance changes over time and currently may be significantly lower than stated above. Performance is updated and published monthly. Visit the Fund's website at dodgeandcox.com or call 800-621-3979 for current month-end performance figures.

Before investing in any Dodge & Cox Fund, you should carefully consider the Fund's investment objectives, risks, and charges and expenses. To obtain a Fund's prospectus and summary prospectus, which contain this and other important information, visit dodgeandcox.com or call 800-621-3979. Please read the prospectus and summary prospectus carefully before investing.

The above information is not a complete analysis of every material fact concerning any market, industry, or investment. Data has been obtained from sources considered reliable, but Dodge & Cox makes no representations as to the completeness or accuracy of such information. Opinions expressed are subject to change without notice.

The information provided is historical and does not predict future results or profitability. This is not a recommendation to buy, sell, or hold any security and is not indicative of Dodge & Cox's current or future trading activity. Any securities identified are subject to change without notice and do not represent a Fund's entire holdings.

Source: Bloomberg Index Services Limited. BLOOMBERG® is a trademark and service mark of Bloomberg Finance, L.P. and its affiliates (collectively "Bloomberg"). BARCLAYS® is a trademark and service mark of Barclays Bank Plc (collectively with its affiliates, "Barclays"), used under license. Bloomberg or Bloomberg's licensors, including Barclays, own all proprietary rights in the Bloomberg Barclays Indices. Neither Bloomberg nor Barclays approves or endorses this material, or guarantees the accuracy or completeness of any information herein or makes any warranty, express or implied, as to the results to be obtained therefrom and, to the maximum extent allowed by law, neither shall have any liability or responsibility for injury or damages arising in connection therewith. The Bloomberg Barclays Global Aggregate Index is a flagship measure of global investment grade debt from twenty-four local currency markets. This multi-currency benchmark includes treasury, government-related, corporate, and securitized fixed-rate bonds from both developed and emerging markets issuers. The Bloomberg Barclays U.S. Corporate Bond Index measures the investment grade, fixed-rate, taxable corporate bond market. It includes U.S. dollar-denominated securities publicly issued by U.S. and non-U.S. industrial, utility, and financial issuers. The U.S. Corporate Index is a component of the U.S. Credit and U.S. Aggregate Indices, and provided the necessary inclusion rules are met, U.S. Corporate Index securities also contribute to the multi-currency Global Aggregate Index.

- a Duration is a measure of a bond's (or a bond portfolio's) price sensitivity to changes in interest rates.
- b Bloomberg Barclays Global Aggregate Bond Index data.
- c Unless otherwise specified, all weightings and characteristics are as of December 31, 2019.
- d Monthly data from December 31, 1990 to December 31, 2019. Local currency-denominated returns of local currency bonds. United Kingdom bonds: sourced from the Bloomberg Barclays Sterling Aggregate Bond Index. United States bonds: sourced from the Bloomberg Barclays U.S. Aggregate Bond Index.
- e JPMorgan GBI Global Country Index—Japan government bond monthly data from December 31, 1990 to December 31, 1998. Bloomberg Barclays Global Aggregate Bond Index—Japan government bond monthly data from January 31, 1999 to December 31, 2019. Local currency-denominated returns of local currency bonds.
- f Information has been obtained from sources believed to be reliable but J.P. Morgan does not warrant its completeness or accuracy. The Index is used with permission. The Index may not be copied, used, or distributed without J.P. Morgan's prior written approval. Copyright 2020, JPMorgan Chase & Co. All rights reserved.
- g Monthly data from December 31, 1998 to December 31, 2019. Local currency-denominated returns of local currency bonds. Euro Area bonds: sourced from the EUR component of the Bloomberg Barclays Global Agg.
- h The Sharpe ratio is a measure for calculating risk-adjusted return; the average return minus the risk-free return divided by the standard deviation of return on an investment.
- i Euro local market returns: from 1999, market-value-weighted average of returns on bonds denominated in euro and pre-euro currencies that are components of the Bloomberg Barclays Global Agg. British pound local returns: sourced from the Bloomberg Barclays Sterling Aggregate Bond Index. Japanese yen local market returns: pre-1999, JPMorgan GBI Global Country Index—Japan government bond returns. From January 1999 onward, Japanese yen component of the Bloomberg Barclays Global Agg. U.S. dollar local market returns: sourced from the Bloomberg Barclays U.S. Aggregate Bond Index. Global FX-Hedged: sourced from the Bloomberg Barclays Global Agg (Hedged). Global Unhedged: sourced from the Bloomberg Barclays Global Agg (Unhedged), converted using month-end FX rates from Bloomberg.
- j OAS (option-adjusted spread) is the option-adjusted yield differential between stated index and comparable U.S. Treasuries. OAS does not translate into a return. One basis point is equal to 1/100th of 1%.
- k The G10 currencies include the Australian dollar (AUD), British pound (GBP), Canadian dollar (CAD), euro (EUR), Japanese yen (JPY), New Zealand dollar (NZD), Norwegian krone (NOK), Swedish krona (SEK), Swiss franc (CHF), and U.S. dollar (USD).
- l Year ends between 1990 and 2018 are used as portfolio formation dates; thus, returns are calculated for portfolios for years 1991 through 2019. Exchange rates are sourced from Haver Analytics, end-of-period values, all versus U.S. dollar. Interest rates are sourced from Haver Analytics. PPP Fair Values are sourced from OECD and were downloaded on January 14, 2020. The real exchange rates were calculated as $Q = (\text{fair value PPP FX rate} / \text{spot FX rate})$, with both FX rates expressed in units per dollar, expressed as a percent of average Q over the previous observations. Portfolios are formed at the end of each year using December 31 closing spot FX rates to sort currencies by valuation; also, we assume that the OECD PPP fair value for a year is known at the end of that year. Each portfolio holds 3 of the 9 non-USD G10 currencies, versus the U.S. dollar. Portfolios are formed using DEM instead of EUR up through year-end 1998; during the year 1999, the holding period return is the return on DEM assuming conversion to Euros at the FX rate set at accession. The graph plots the cumulative return, assuming annual reinvestment of profits, on the three sets of currencies.
- m Annualized returns reflect the growth rate that, when compounded annually, yields the cumulative total return over the period depicted in Figure 9.