TAKE 5 VIEWS

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Fixed Income Toolkit

While most investors equate fixed income strategies with different types of bonds, they need to consider more than just products in assembling a diversified and efficient portfolio. In this issue we explore how to determine valuations in the global fixed income market, how the yield curve can help investors understand the relationship between different bonds, where currency fits in an overall portfolio, and duration strategies for a rising interest rate environment. We also look at the importance of the quality of the credit markets.

1 How can investors determine which areas within the global fixed income market offer compelling valuations?

Brandywine GLOBAL
A LEGG MASON COMPANY

Jonathan Cordo, Senior Relationship Manager
Brandywine Global

Interest rates and exchange rates, in their simplest form, are governors of economic activity and have the ability to impact consumer and investor behavior. As a result, they exhibit mean reverting tendencies over time, meaning they tend to move toward an average over time. As fixed income investors, we must look across various yield curves, market sectors, quality bands and currencies to discern what areas within the global fixed income market offer compelling valuations and positive catalysts for change. Likewise, it is equally important to identify areas that are overvalued and likely to correct. The good news is that the fundamental underpinnings for various sectors and geographies do not move in lock step. Different countries, currencies and sectors all have idiosyncratic drivers that make investing in them more or less compelling at any given point of time. This is perhaps best witnessed by the simplistic graphs on the next page, which show a sampling of countries and currencies ranked from most to least compelling on a real yield and Purchasing Power Parity (PPP) basis. PPP is an economic theory that compares currency values after accounting for relative inflation rates and the cost of living.

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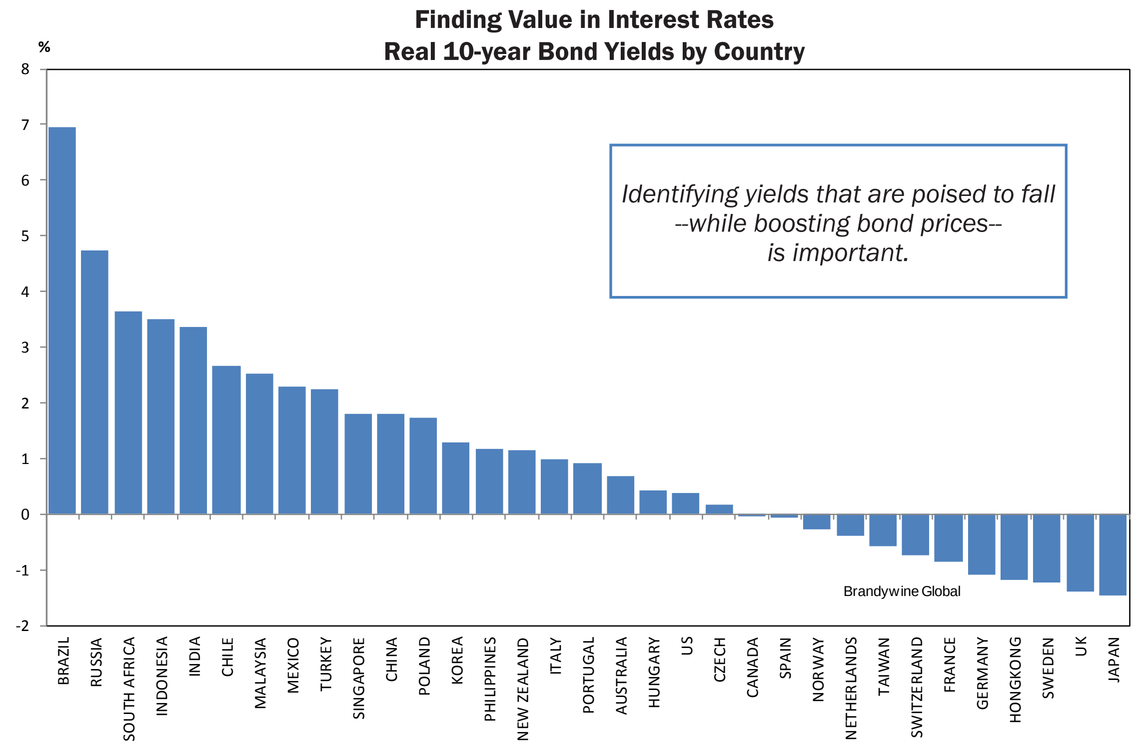
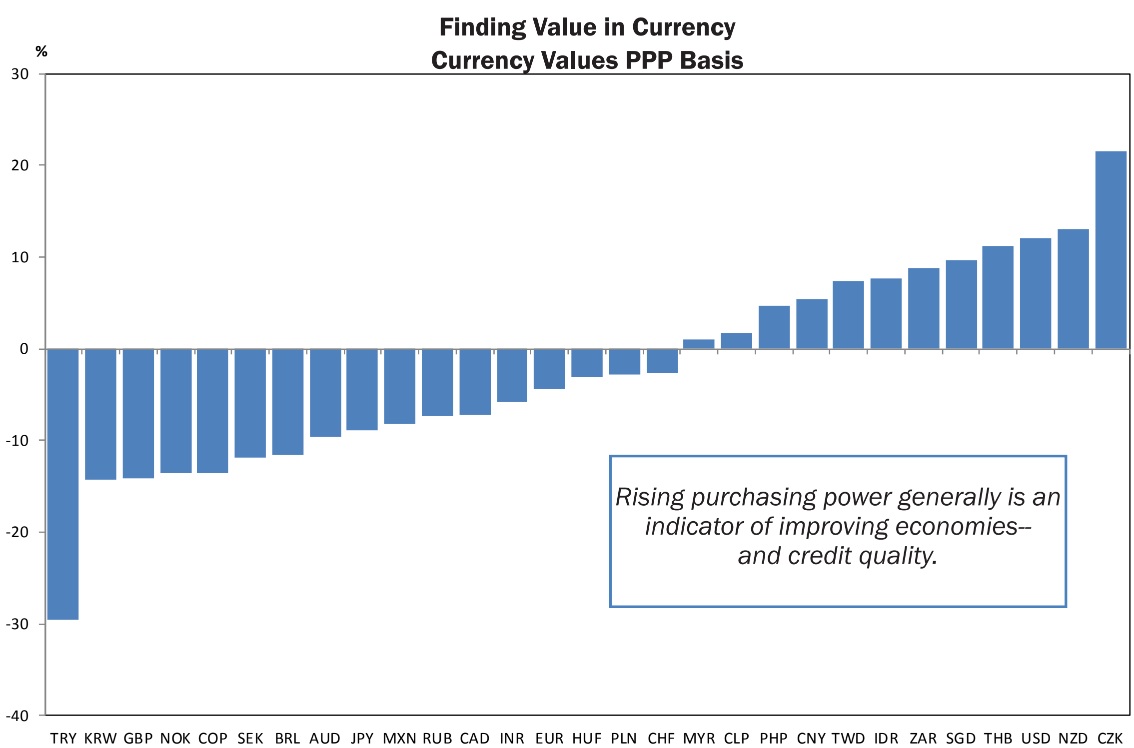


Past performance is no indication of future results. Source: Brandywine Global, as of 3/31/2018. 10-yr bond yields after accounting for the inflation rate, as measured by the 12-month change in the local headline consumer price index.



Past performance is no indication of future results. Source: Brandywine Global, as of 3/31/2018. Percentage deviation from purchasing power parity, by currency.

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Similar analytics could easily be run to show similar valuation gaps between sectors, quality ranges, etc. The point, though, is that simultaneous opportunities and risks exist across fixed income markets, and good portfolio management starts with assessing these discrepancies and concentrating portfolio positioning in areas that have a higher degree of value and, ideally, offer attractive risk/return dynamics.

When isolating a single variable — real yields for example (as shown on previous page) — it appears relatively easy to see which countries might offer value and which countries might not be worthy of investment (i.e., all things being equal, an investment in higher real yields should be preferred). And while generally we believe that to be true, the devil is often times in the details. Portfolio managers may use these valuation screens as a starting point, but it is important to look beyond the headline figures to understand what is driving the valuation anomalies, and to assess if the fundamental underpinnings that caused the relative valuation mismatch are improving or worsening. Ideally, this fundamental work will lead to pockets of attractive valuations that coincide with marginal improvements in the underlying market that can catalyze a move back towards fair value, unlocking return.

What can become tricky from a portfolio management standpoint is looking across multiple variables and making comparative judgements about which valuation anomalies are the "most" attractive, as it is not always an apples-to-apples comparison. Additionally, incorporating those conclusions with the need for well-balanced and diversified portfolios is an added consideration. Some of this can be done through observations about probability of positive outcomes and the potential magnitude of the risk and returns associated with making a given investment. Some of that relative-judgement call is more subjective in nature. But one thing that is really important is the ability to determine what macro trends and market environments are likely to drive an investment's return, and then attempting not to over allocate to a single driver or thematic exposure.

Ultimately, for things like currencies, duration, yield curve positioning and credit quality (all of which will be discussed specifically in articles below), investors should think about these areas as tools that prudent portfolio management teams can use as they strive to offer diversified portfolios that are positioned in attractive segments of the global fixed income universe. While each of these tools comes with varying degrees of volatility and return potential, the secret to potentially attractive performance in fixed income may lie in effectively utilizing all of tools in a manager's tool box to make prudent investment allocations across sectors that exhibit complementary return profiles, coupled with some degree of safety.

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2 How can investors use the yield curve to select fixed income investments?

BLACKROCK®

Jeff Puckette, Fixed Income Strategy, Blackrock

For a fixed income investor, one of the most important metrics to gauge the efficacy of a potential investment may be the **yield** associated with it. In theory, bonds are simply a promised set of future payments with principal returned at maturity. Generally, the percentage per annum that can be earned from the investment is dependent on the length of time that the money is invested. This relationship can be plotted on a **yield curve**, or a line that plots the interest rates at a set point in time of bonds having equal credit quality, but differing maturity dates. The curve shows the relationship between the cost of borrowing and the time to maturity of the debt for a given borrower (which issues the original bond) in a given currency. The most commonly tracked yield curves are those of the U.S. Treasury and the German government (shown the next page), but there are curves for many other types of debt in the market, such as mortgages and bank credit.

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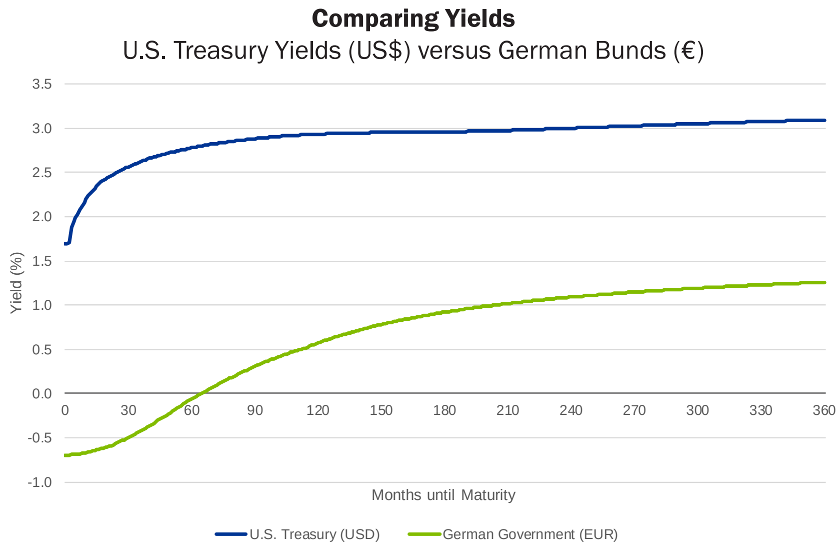

Past performance is no indication of future results. Source: BlackrRock and Bloomberg, LP, as of 5/9/2018.

Yield curves help investors understand the relationship between various bonds of differing time horizons to maturity and allow them to easily compare and understand their return on investment. Investors can then make investment decisions based upon these future payouts, taking into account how various factors such as inflation or creditworthiness may affect them.

Types of Yield Curves: Normal, Flat, Inverted

Normal Yield Curve

A normal or up-sloped yield curve indicates a positive relationship between yield and time of investment. In other words, the longer an individual keeps money invested in the bond, the higher the received compensation is for the investor. A normal yield curve generally corresponds with periods of economic expansion as investors will require more money for keeping their money invested for longer, to counteract the effects of inflation or rising interest rates.

Flat Yield Curve

A flat yield curve is observed when all maturity points of the plotted security have similar yields. When the economy is transitioning from economic expansion to slower development, yields of longer-dated bonds tend to fall from their points on the normal curve to be in line with bonds with shorter maturities and closer in on the curve.

Inverted Yield Curve

An inverted or down-sloped yield curve indicates that yields for longer-dated bonds are lower than those of shorter-dated bonds. An inverted curve can be an indicator of an economic recession as investors settle for declining yields at longer maturity points if they think the economy will continue to slow or even decline in the future.

Yield Curve: Types of Strategies

Bond investors are constantly evaluating the risk-return profile of similar securities with various maturity dates. If the investor believes that the compensation for a 5-year bond is attractive relative to a similar bond maturing in 3 years, then investing further out the yield curve may be appropriate. There are also ways to take advantage of anticipated yield curve twists. If an investor believes shorter-dated bonds are cheap and will rise in price, then he or she can employ a “bull steepener” to take advantage of this price action as yields at the front of the curve fall (creating a "rally") more than those of bonds further out the curve. Similarly, if longer-dated bonds are believed to be cheap relative to shorter-dated bonds,

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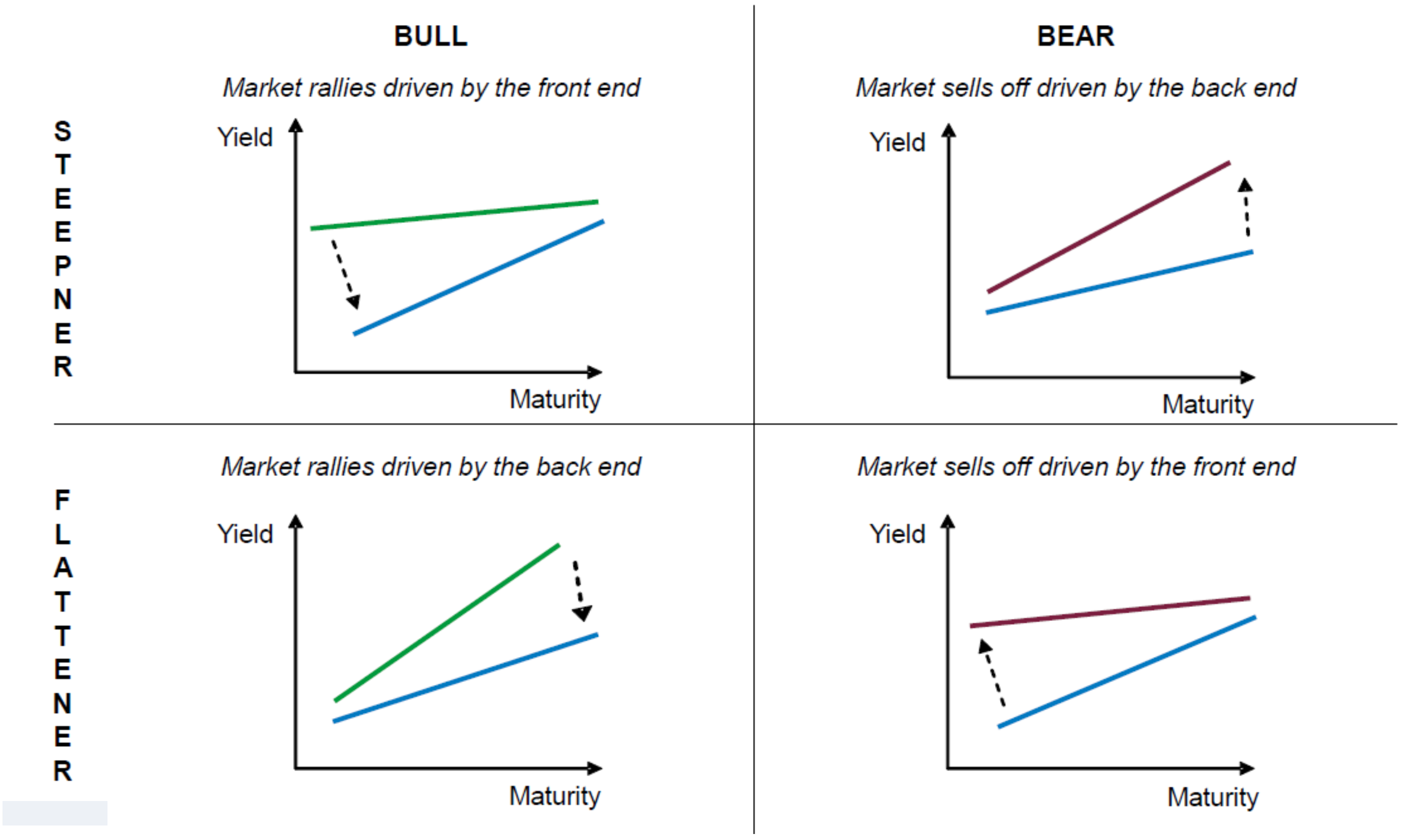
an investor can employ a "bull flattener" to capture the richening of longer-maturity bonds. Conversely, if valuations on the front (short maturities) or back (long maturities) of the curve are assumed to be too rich (yields too low), then an investor can implement either a "bear steepener" or a "bear flattener" to capitalize on these curve moves, as shown below.



Source: BlackRock. Provided for illustrative purposes only. Not intended to represent the return of any specific security or market.

3 Where do currency investments fit into an overall portfolio?

PIMCO

Tom Nguyen, Senior Vice President, Account Manager, PIMCO

Just as stocks and bonds play a critical role in investment strategies, so too do foreign currencies, as they offer unique investment characteristics and opportunities for portfolios.

The foreign exchange (FX) market is the largest market in the world, with average daily trade volumes in excess of $5 trillion[1]. In addition, the market for currencies is different than other asset markets, in that a large amount of FX traded is by central banks, corporations hedging their business operations against the impact of fluctuating exchange rates and international tourists, all of which transact currencies without regard to profit on the trade.

Active currency management is paramount in portfolios because structural market opportunities can make currencies an attractive means of managing risk and seeking excess return.

1 Bank for International Settlements, June 2016

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Role of global currencies in investment portfolios:

Investors can use currencies in a variety of ways to gain/reduce foreign exposures or express an investment strategy:

Reduce portfolio volatility or hedge inflation risk:

- To reduce volatility in a portfolio, investors can hedge the foreign currency risk while still maintaining the foreign investment exposure.
- Alternatively, through active currency management, investing in foreign currencies can help to preserve purchasing power as well as provide opportunity for both upside capture and downside protection in the event of exchange rate movements.

Express a macro view on foreign short-term rates and FX:

- For example, in an unhedged position or outright long position in a foreign currency, the investor has the potential to profit from exposure to the local short-term interest rate (carry) as well as the exchange rate.
- In addition, global currencies have historically low correlations to traditional assets. By prudently implementing exposure to currencies, an investor can enhance the overall diversification of the portfolio, and thus the potential to improve risk-adjusted returns.

Obtaining portfolio currency exposure:

Foreign currency exposure can be obtained in several ways, though the two most common methods are:

Owning foreign-denominated securities without hedging domestic currency exposure: By owning unhedged or partially hedged foreign-denominated securities such as a bond, an investor can obtain exposure to the local currency's exchange rate, the local country's credit risk, and the local country's short-term exchange rate.

Entering into currency forward or derivative contract to gain or hedge currency exposure: Forward FX and currency derivatives allow an investor to gain or hedge FX through customized terms and without having to own a physical security. Thus, an investor can almost perfectly hedge their FX liability and isolate currency risk.

Managing risks within FX investing

Macroeconomic factors as well as market technicals have a large impact on foreign exchange movements and FX rates may fluctuate significantly over short periods. As a result, secular economic trends, country fundamentals and trade execution are all critical considerations for FX investment in fixed income portfolios. In addition, employing the use of currency derivatives calls for careful counterparty risk management when transacting over the counter or through central counterparties.

Altogether, we view that by carefully integrating this into an investment, risk, and counterparty management process, we believe currencies offer investment opportunities that may help portfolios achieve improved risk-adjusted returns.

4 How can duration management strategies help investors navigate a rising rate environment?

AllianceBernstein, LP

Interest rates are rising, credit spreads are tight, and inflation expectations in the U.S. and other developed markets are increasing. This has pushed U.S. Treasury yields higher and has some economists—including ours—pricing in as many as three more U.S. Federal Reserve interest rate hikes this year.

Naturally, investors are concerned about duration risk—the sensitivity of bond prices to changing interest rates. But it is important to remember that duration exposure plays an important role in portfolios as an offset to market volatility. Therefore, before dumping duration, we recommend taking a closer look at strategies that may preserve the benefits of duration exposure, while also helping to mitigate interest-rate sensitivity.

Look to nongovernment debt. Stated duration is simply the mathematical calculation of a bond's interest-rate sensitivity based on its maturity, coupon, yield and how often the coupon is paid. Nongovernment debt typically exhibits less sensitivity to rate movement than government debt. This is because corporate bonds are exposed to credit factors, and are therefore not driven exclusively by changes in interest rates. Experienced duration is a bond's actual sensitivity to interest-rate changes. The larger the yield spread above that of a comparable government bond, the lower a bond's experienced duration is, and the less sensitive to movements in government interest rates it will be. In fact, when a bond's spread is higher than 500 basis points, or 5%, that bond demonstrates negligible levels of interest-rate sensitivity.

Diversify interest-rate risk globally. When U.S. interest rates rise, U.S. Treasuries have generally suffered. For example, the Bloomberg Barclays Global Aggregate Bond Index (hedged) outperformed U.S. Treasuries in 2004, 2005 and 2006, when the U.S. Federal Reserve raised interest rates by 1.25%, 2.00% and 1.00%, respectively. It is important to note that global bonds carry much lower levels of volatility when hedged back into U.S. dollars. And because the foreign exchange markets are highly liquid, the transaction cost of executing a hedge is low—on the order of a few basis points to initiate a hedge from a developed-market currency into U.S. dollars, and then even less to roll it forward as needed. Thinking globally can potentially maintain earnings power while reducing portfolio sensitivity to a single country's interest-rate environment.

Adopt a barbell approach. After an interest-rate hike, the yield curve typically flattens, with the belly of the curve seeing the most volatility. The barbell strategy, which avoids intermediate maturities in favor of the short and long ends, will tend to outperform in such an environment. Conversely, when yield curves steepen, bullet and ladder strategies outperform.

It's important to look carefully at the source of duration in a portfolio to get a true sense of its vulnerability to rising rates. We think that taking a global hedged approach to duration risk, while keeping an eye toward diversification, is the wisest course. It can help investors retain the benefit of duration exposure as a hedge against market volatility, while also mitigating the potential pain of rising rates. And don't forget that over time, higher yields mean higher returns—for both interest-rate–sensitive and credit assets.

5 What do investors need to know about the quality of the credit market?

Gregory Venizelos, Senior Credit Strategist, AXA Investment Managers

AXA Investment Managers

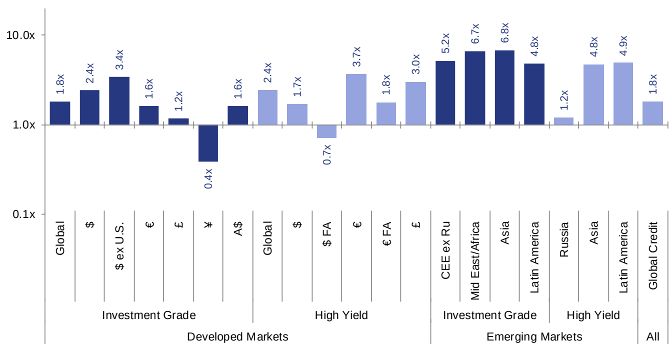
Capital markets can be divided into two categories: equity markets and credit markets. While investors typically think of credit markets as simply bonds, the credit market is a broader one through which companies and governments issue debt to investors, and can include investments such as investment-grade bonds, junk bonds and short-term commercial paper.

Credit markets have seen considerable growth since the global financial crisis, underpinned by incessant investor demand, amid very low if not negative government debt yields and unprecedented liquidity injections by central banks globally. Corporate borrowers justifiably took advantage of this demand to term out their debt, choosing to refinance relatively costly bank lending through the capital markets, and potentially enhance shareholder returns by issuing debt at record low yields to enhance dividends or buying back shares. To illustrate the growth in credit markets, since March 2009 the global investment grade index has almost doubled in size, growing by 83%, and the global high yield index has more than doubled in size, growing by 144%. Credit growth has been even more stellar in emerging markets, where investment-grade indices have grown between fivefold and sevenfold across regions.

At the same time the credit markets have grown materially, their quality has also declined, posing a key concern for investors. The share of BBB-rated credits within U.S. dollar investment-grade sector, for example, has risen from 35% to 50% with their notional almost quadrupling from $800 billion to $3 trillion since the global financial crisis. Even more notably, in euro-denominated investment-grade credit markets, the share of BBBs has risen from just over 20% to 50% with their notional value growing fivefold from €200 billion to €1 trillion over the same period. As a result, the average rating of the investment-grade index has deteriorated by half a notches to A-minus in dollar credit and one and a half notch to A-minus in euro credit.

Typical measures of credit fundamentals also reflect the decline in credit quality or, in other words, the rise in corporate leverage. The average net-debt-to-earnings ratio of the U.S. corporations that is prevalent in credit indices is at levels comparable to the dot.com bubble or the market of the late 1990s, which preceded the peak in the runup to the Global Financial Crisis of 2007-09. This, however, has to be viewed in the context of the prevailing rate environment. Indeed, while debt-to-earnings ratios are at peak levels, interest coverage ratios appear healthy, suggesting that companies are able to service their debt without trouble. Furthermore, our simulations suggest that even a rise in 10-year U.S. treasury yields to 4% is unlikely to impair the debt-servicing capacity of U.S. corporates unless it is accompanied by a repricing of credit spreads significantly wider—an indication of economic risk in the economy. Healthy global growth and strong earnings are also supportive, in that respect.

Credit Index growth since the global financial crisis



Past performance is no indication of future results.
Source: AXA Investment Managers and ICE Bank of America/Merrill Lynch. Capitalization by country/currency, as measured by the ICE/BofAML Global Broad Market Index, for the period from March 2009 to May 2018.
Provided for illustrative purposes only. Individuals cannot invest directly in an index.

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