WELLS FARGO The Private Bank

The following information and opinions are provided courtesy of Wells Fargo Bank, N.A.

The Race to Zero

Making the Case for Fixed Income Investments in a Historically Low Interest Rate Environment

AUGUST 2020

Carol M. Schleif, CFA®
Deputy Chief Investment Officer
Abbot Downing

George E. Rusnak, CFA®
Managing Director
Head of Investment Management
Abbot Downing I Wells Fargo Private Bank

Sean McCarthy, CFA®
Managing Director
Regional Chief Investment Officer
Wells Fargo Private Bank

In this paper:

- Background
- Bond basics
- Decades of declining rates
- Interest rates amidst a global pandemic
- Buffering bonds
- Conclusion

Investment and Insurance Products:

- **Not Insured by the FDIC or Any Federal Government Agency**
- **Not a Deposit or Other Obligation of, or Guaranteed by, the Bank or Any Bank Affiliate**
- **Subject to Investment Risks, Including Possible Loss of the Principal Amount Invested**

Executive summary

- As yields on global debt continue to slide, some into negative territory, many investors are asking why they should own bonds at all, when they are paying a premium over the return they are likely to receive.
- In spite of the low-yield environment, we believe that fixed income investments have a variety of potential advantages that support their inclusion in a diversified portfolio.
- This white paper will outline the background to the low-rate environment and the risks, considerations, and potential benefits of including fixed income securities in your portfolio at this time.

"A Lower interest rate doesn't make a debt go away."

-Dave Ramsey, Financial Radio Show Host and Author

Background[1]

As an asset class, fixed income investments can serve many important purposes within a diversified portfolio: adding attributes to the overall blended mix that can provide cash flow. Fixed income can be used to help support cash flow requirements, allow you to match maturing funds to a specific future spending need, and/or provide a smoother ride over the long haul than a portfolio exposed solely to a single asset class.[2]

Nonetheless, in light of the decades' long slide in U.S. Treasury bond and note yields which from our experience tend to drive the yields and prices of other fixed income assets (see Chart A), and the growing horde of global fixed income trading with negative yields (see Chart B), an increasingly frequent question we hear is "Why own bonds at all?" This paper will discuss the current situation for fixed income markets; how it evolved (including key factors that we believe may have contributed to it); and why we believe that despite low yields the fixed income asset class has a variety of potential advantages, in addition to other risks and considerations, that supports its inclusion in a diversified portfolio.

Bond basics

To help frame the discussion, it is important to understand core fixed income attributes and how they apply to the current situation.

Size and ownership of market. Fixed income capital markets are used to finance cash needs by everyone from the neighborhood school district or a large corporate manufacturer to the U.S. and other sovereign nations. Stepping in as the "underwriter" or creditor of that obligation are a similarly wide array of investors— individuals buying new issues for their own portfolios, pension funds matching specific retirement obligations, and even nations buying each other's debt. The size of the global debt market ($237 trillion)[3] dwarfs that of global stock markets ($85+ trillion).[4] More recently (as will be discussed in greater detail below), central banks such as the U.S. Federal Reserve have also been large buyers of a broadening variety of bonds including Treasuries, agencies, mortgage backed securities (MBS), and even some corporates (see Chart C). Understanding the size and nature of the holders of fixed income assets is important to help frame the magnitude of the issues at play.

Rates down/prices up. A basic fact of bond mechanics is that prices and yields move in inverse directions. When a central bank is lowering interest rates in an attempt to stimulate borrowing and prop up economic activity, the prices of outstanding bonds have to rise in order to keep the relative yields consistent with newly issued instruments. Theoretically, much of the total return that investors have received in recent years (arguably, for over a decade in the wake of the Great Recession) has been induced by policy versus investment fundamentals.

How bonds are owned matters. Bonds can be held in two primary ways, each with advantages and disadvantages: 1) a diversified portfolio of individual bonds or 2) via bond pooled investment vehicles.

Individual bond portfolios can provide the ability to manage tax exposures by controlling the timing and amount of realized gains/losses; sync time horizons and match cash flows to specific liquidity needs; and/or tailor potential risk mitigation to meet an individual portfolio holder's unique sensitivities to various credit and interest-rate dynamics. Another potential advantage is that holding bonds to maturity affords a return of the original investment (presuming no default). On the flip side, large portfolios of individual securities can be unwieldy to scale up or down quickly when tactical rebalancing or repositioning is desired.

Pooled vehicles such as bond funds and Exchange Traded Funds (ETFs) can provide diversification, especially for those portfolios that do not or cannot take a large enough position in the asset class to be sufficiently diversified. Further, they can allow for an ability to toggle allocation to the class up or down in a more efficient manner than unwinding or adding individual bonds. Unlike owning individual bonds, pooled vehicle investors are not necessarily assured of getting original principal back (as there is no formal "contract" between creditor and lender). If interest rates were to move up markedly, principal loss is one potential outcome for those that want or need to sell.

Investment returns of Mutual Funds and Exchange Traded Funds (ETFs) may fluctuate and are subject to market volatility, so that an investor's shares, when redeemed, or sold, may be worth more or less than their original cost. ETFs may yield investment results that, before expenses, generally correspond to the price and yield of a particular index. There is no assurance that the price and yield performance of the index can be fully matched.

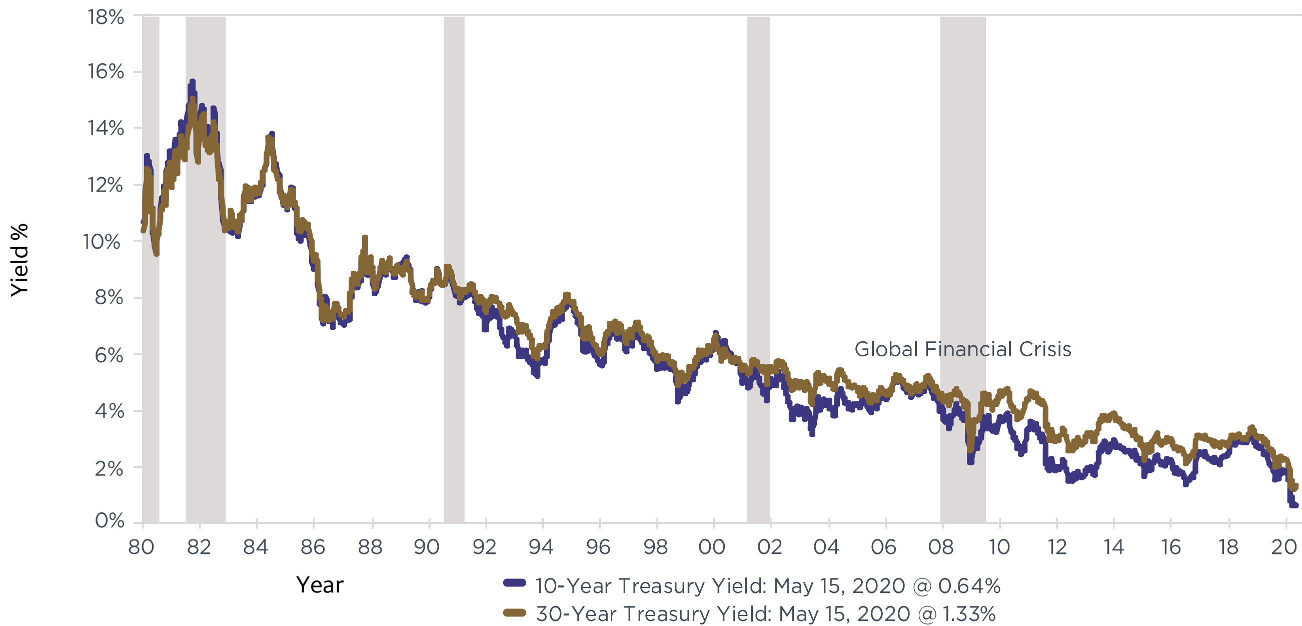
Asset allocation and diversification are investment methods used to help manage risk. They do not guarantee investment returns or eliminate risk of loss including in a declining market.

Where bonds are owned matters. Bonds have varying tax consequences, meaning it is necessary to convert quoted face yields into after-tax yields applicable to particular owners (high versus low marginal tax bracket, high versus low/no tax state) and types of accounts (IRA or charitable account versus trust versus agency). "Crossover" strategies allow taxable investors to focus on net after-tax return and shift between taxable and non-taxable debt as current rates dictate.

Please note that there are a number of key variables that comprise the risk profile of a bond: its price, interest rate, yield, maturity, redemption features, default history, credit ratings, and tax status. Together, these factors may contribute in determining the value of a particular asset and whether it might be an appropriate investment for you. As an investor, you should be aware of how bond prices and yields are linked to economic cycles and concerns about inflation and deflation. As a general rule, the bond market, much like the economy itself, benefits from steady, sustainable growth rates.

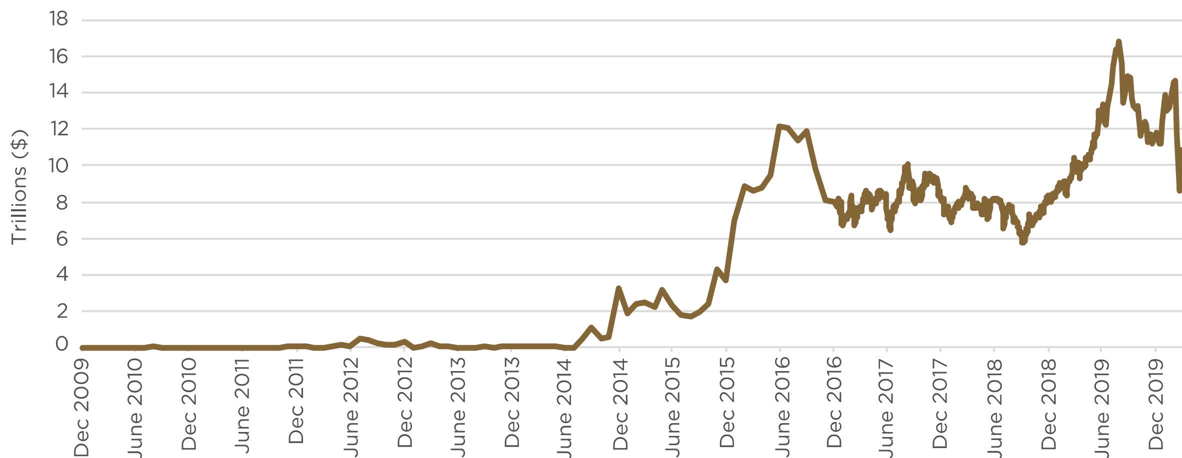
On one hand, rising interest rates will tend to push bond prices down. News reports of strong, and potentially inflationary, levels of economic growth indicated by stronger than expected economic statistics have historically driven interest rates higher. On the other hand the opposite can also be true: weaker than expected economic statistics may indicate lower inflation and expected interest rate cuts and, therefore, may be positive for fixed income asset prices.

Chart A: Long-term 10-year maturity U.S. government bond yields and recessionary periods



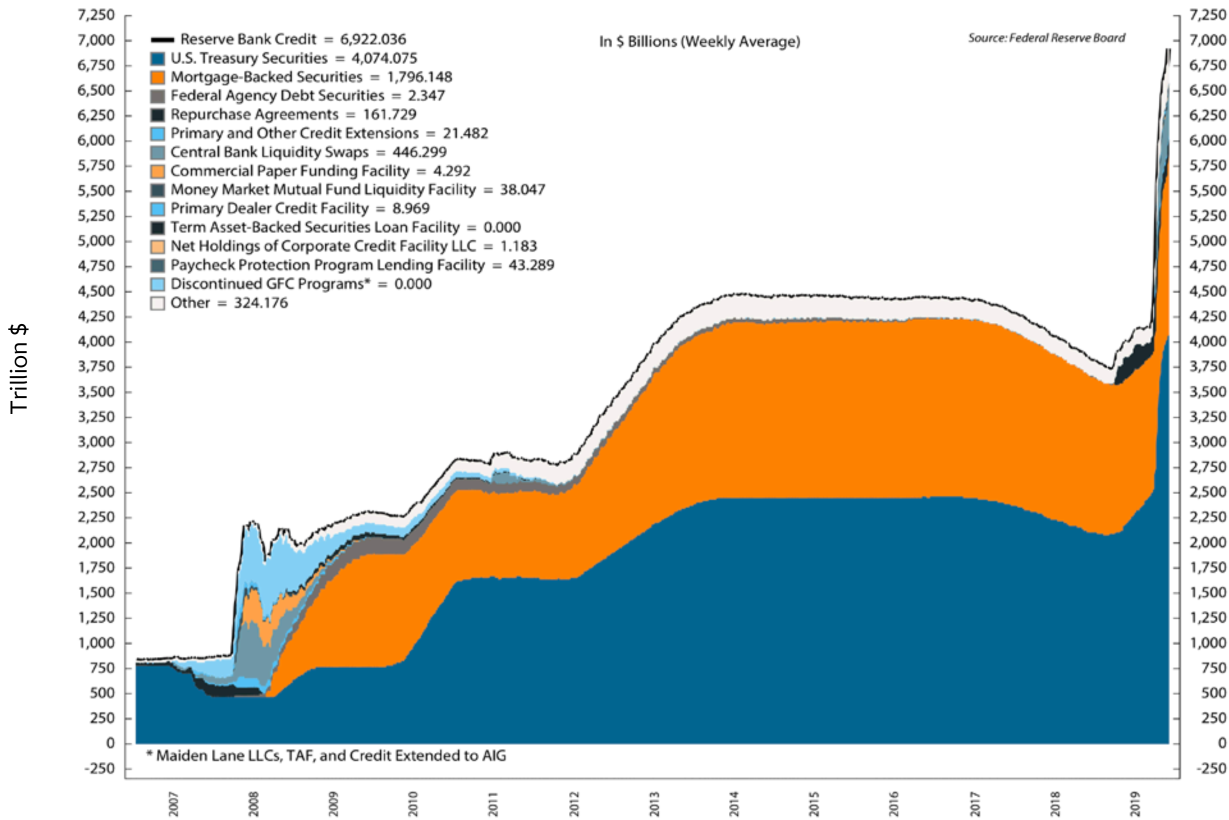
Source: Board of Governors of the Federal Reserve System (US), 10-Year Treasury Constant Maturity Rate [DGS10] and 30-Year Treasury Constant Maturity Rate [DGS30], retrieved from FRED, Federal Reserve Bank of St. Louis; https://fred.stlo1uis6fed.org/series/DGS10, 4/15/20.

Chart B: Global aggregate negative yielding debt



Source: Bloomberg, LLC, The total face value of negative yielding corporate and sovereign debt in the Bloomberg Barclays Global Aggregate Index of investment grade bonds (BNYDMVU Index), 4/20/20.

Chart C: Composition of the U.S. Federal Reserve balance sheet assets



Source: Ned Davis Research, Inc. © Copyright 2020 Ned Davis Research, Inc. Used with permission. Further distribution prohibited without prior permission. All Rights Reserved. See NDR Disclaimer at www.ndr.com/copyright.html. For data vendor disclaimers refer to ***www.ndr.com/vendorinfo/***.

Decades of declining rates

As previously shown in Chart A, long-term U.S. Treasury interest rates have been declining for more than 40 years which also means that fixed income has been in an extended bull market. Based on our experience and given the unprecedented length, pundits began calling for an end to the bull run of falling rates, rising bond prices, and a return of inflation long *before* the Great Recession hit in 2008. While there have been innumerable attempts to tease apart precisely what set of factors were involved in setting off the chain of events that became the Great Recession, it is relatively clear to us that a reliance on short-term funding exacerbated the issue. Investment banks such as Lehman Brothers and Bear Stearns had no-long term debt but relied instead on an array of industry relationships to provide short-term funding. When the counterparties decided against further lending, operations became stressed literally overnight. Credit markets seized, risks skyrocketed as investors of all types ran for the sidelines, and a crisis of confidence of epic proportions erupted almost instantaneously. We believe that developed market central bankers realistically had few choices. Key global financial behemoths were deemed to be too systemically important to allow their failure, so governments absorbed their financial obligations, thus shifting the debt burden to sovereign balance sheets.

In the years since the credit crisis, global regulators have been struggling to put policies and rules in place that may help prevent such events from recurring. Central banks, on the other hand, demonstrably continue to purchase debt in an attempt to push cash into the system and prop up economies (see Chart C). One of the primary results has been a substantial increase in debt on sovereign balance sheets even as corporations and individuals deleveraged.

For much of the period since the Great Recession, and despite global efforts to revive economies and massive monetary stimulus, global growth has remained far below that of prior recovery periods. With little- to no-fiscal stimulus forthcoming from governments, central banks seemed compelled to retain their low- to negative-interest rate policies. Correspondingly, negative yields on bonds have become a normal market environment in places like Europe and Japan.

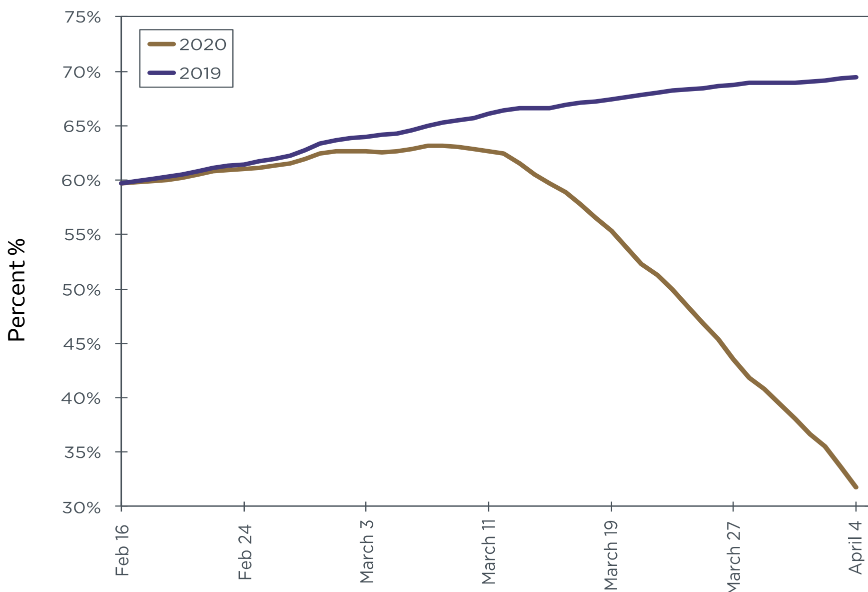
Central banks in these countries have used negative policy rates in an attempt to foster mild inflation and economic growth. In the U.S., the Federal Reserve has resisted targeting a negative policy rate preferring to stop at the zero bound and emphasizing deployment of other monetary tools when more are needed. Though the Fed Funds rate has a zero floor, market rates can and have turned negative at shorter maturities for Treasuries. This occurred in September 2015 when the Fed delayed a rate increase after an economic slowdown in China threatened the global economy. This happened again in late March 2020 as investors demanded cash and safer dollar assets resulting from the stock market rout induced by the advent of the COVID-19 pandemic.

Interest rates amidst a global pandemic

By year-end 2019, global growth prospects appeared to be brightening somewhat with easing of geopolitical tensions that had preoccupied investors for several years (Brexit; trade wars; hostilities in regions such as Syria, Iran, North Korea, etc.). Hopes were starting to blossom for improved manufacturing and consumer activity in developed markets and the U.S. Then the previously obscure “novel coronavirus” moved from back page news to front page, “above the fold” importance.

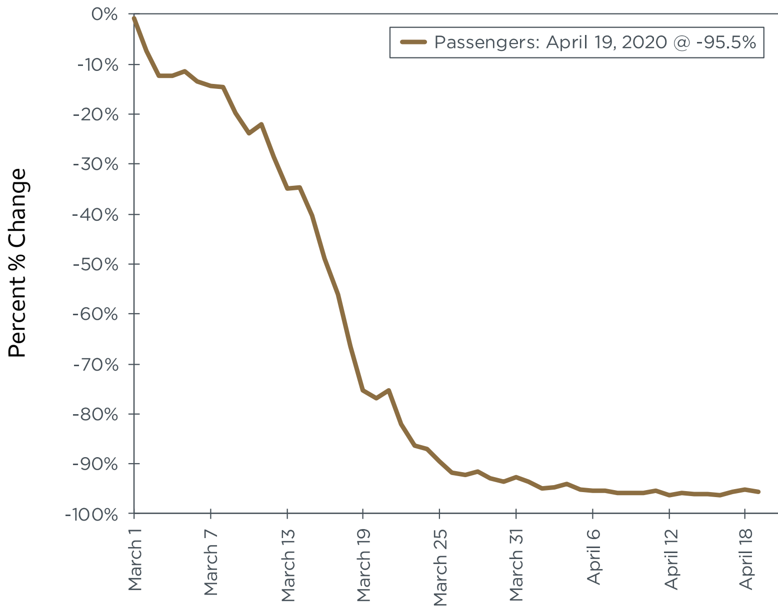
In less than a month, the U.S. went from record low unemployment and few, if any, strategists calling for recession until sometime in 2021 or beyond to printing some of the worst economic statistics on record. States and businesses were unexpectedly forced to close their doors and the vast majority of the population was asked to “shelter in place.” As shown in Charts D, E, and F the impact was historic and immediate.

Chart D: Hotel occupancy 2019 vs. 2020



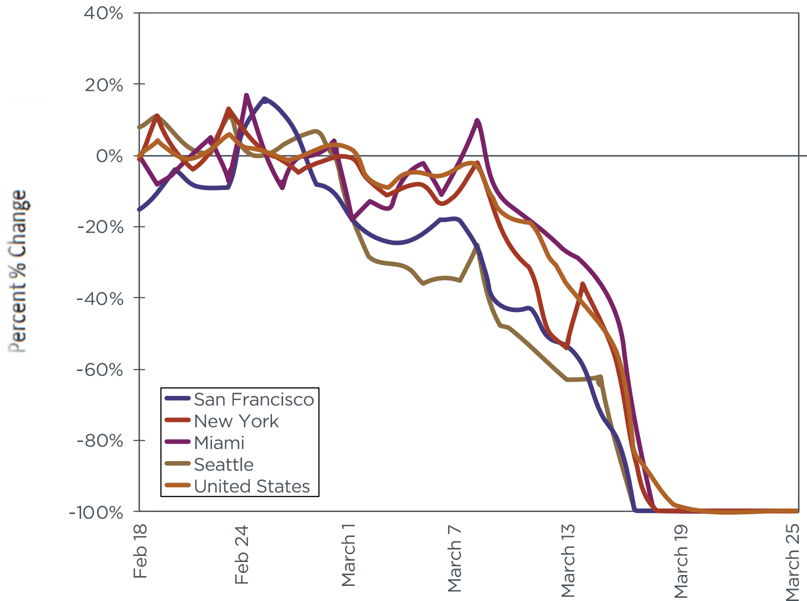
Source: Transportation Security Administration, STR, and Wells Fargo Securities report "Home Economics", 4/8/20.

Chart E: Number of people passing through airline security March to mid-April 2020



Source: Transportation Security Administration, STR, and Wells Fargo Securities report "Home Economics", 4/8/20.

Chart F: OpenTable dinner reservations percentage change from February to March 2020



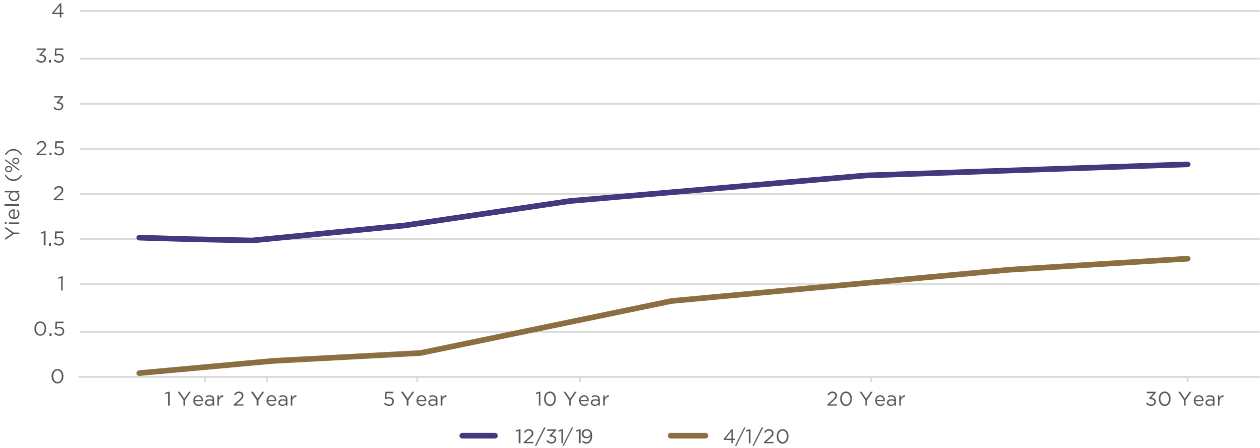
Source: OpenTable, U.S. Department of Commerce, and Wells Fargo Securities report "Home Economics", 4/8/20.

In response, the federal government has rushed several aid packages through and Jerome Powell, Chairman of the U.S. Federal Reserve, has promised to do "whatever it takes" to keep markets and the capital system functioning. The Fed has substantially stepped up its purchases of a variety of fixed income securities while the U.S. Treasury has announced vastly expanded auctions of T-bills, notes, and bonds in order to pay for the $7 trillion in fiscal policy stimulus newly on the books.

As a result of the crisis, the Fed has responded with unprecedented support including growing their balance sheet by $2.5 trillion over the first two months of the pandemic and then planning to add another $4.5 trillion by year-end based on announced programs. The Fed will be buying roughly the equivalent of all Treasury debt issuance this year. Their goal is to flood the market with cash to ensure proper liquidity within the fixed income markets and enough currency in circulation for loans and purchases. The Fed is concerned about the deflationary forces and lack of liquidity caused by the economic shutdown due to the COVID-19 pandemic and are seeking to combat these concerns with more than ample liquidity. Traditionally, this much liquidity injected into the market would cause a huge spike and/or concern of a dramatic pick-up in inflation; however, money velocity has decreased and savings rates have increased to offset this challenge. One thing that remains fairly certain is that the Fed is in no hurry to reverse course on low interest rates or quantitative easing until either growth or inflation pick up dramatically.

As the extent of the economic impact began to emerge, stock markets around the globe repriced the new risk into the system—pushing bond prices up and stocks down. We believe the wide range of uncertainty regarding how deep and how long the potential impact of containment will be has created a strong preference for lower-risk assets even as stock markets around the globe reacted to the unforeseen risk by resetting downward close to 35% in less than a month. The entire U.S. government yield curve shifted downward sharply—with every plot on it below 1%—as frightened investors piled into Treasuries (see Chart G).

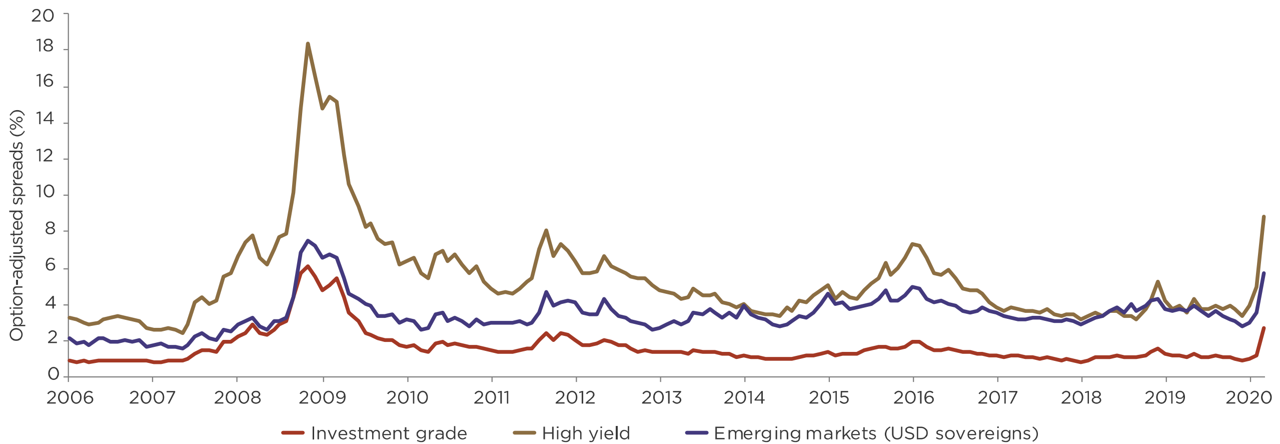
Chart G: U.S. Treasury yield curve comparison



Source: U.S. Department of the Treasury, 4/1/20.

Interestingly, amidst the fear, a variety of anomalies and dislocations occurred in the fixed income markets, opening a window of investable opportunities for those with a long-term horizon and sufficient financial wherewithal to be able to participate. For example, for the week ending April 24, 2020, $70.5 billion rushed into certain money-market funds that are only allowed to invest in short-term Treasuries and mainly buy T-bills with maturities of three months or less.[5] This push for what the public typically perceives as "safe havens" such as liquid Treasury assets created an opportunity in other investment grade fixed income classes including investment grade corporate and municipal bonds. As even these higher quality investments were sold to raise cash, we feel that it resulted in compelling spread differentials (the difference in yields of two investments) to Treasuries (see Chart H). Furthermore, the yield on many corporate and municipal bonds may be positioned more favorably to inflation that is likely to drop into the low to mid 1% range, an interesting opportunity for those funds and investors capable of participating in those crossover trades. Given compression all along the Treasury curve, only the longest of Treasury maturities with the greatest interest rate risk and yields recently at 1.33% (see Chart A) would come close to compensating investors for expected inflation.

Chart H: U.S. widened credit spreads



Sources: Bloomberg and Wells Fargo Investment Institute, as of March 31, 2020. For illustrative purposes only. Option-adjusted spread is the difference in yield over equivalent-duration Treasuries. USD=U.S. dollar. Investment grade represented by Bloomberg Barclays U.S. Aggregate Bond Index. High yield represented by Bloomberg Barclays U.S. Corporate High Yield Bond Index. Emerging markets represented by J.P. Morgan Emerging Markets Bond Index Global (USD). The benchmark performance shown is for illustrative purposes only and is not reflective of any investment. Index returns do not represent investment returns or the results of actual trading nor are they forecasts of expected gains or losses a portfolio might experience. Index returns reflect general market results, assume the reinvestment of dividends and other distributions, and do not reflect deduction for fees, expenses or taxes applicable to an actual investment. Comparisons to benchmarks have limitations because benchmarks have volatility and other material characteristics that may differ from those of the portfolio. Because of these differences, benchmarks should not be relied upon as an accurate measure of comparison. There is no guarantee that any of the securities invested in the portfolio are included in the Index. Past performance does not guarantee future results.

Wells Fargo Investment Institute, Inc. is a registered investment adviser and wholly-owned subsidiary of Wells Fargo Bank, N.A., a bank affiliate of Wells Fargo & Company.

Extremely low or negative yields may make it more difficult for some investors to see the value of bonds in a portfolio, particularly the value of Treasury securities, when the crisis abates. There are market conditions that make investment grade fixed income holdings useful even when observable yield-based returns are less compelling. Market environments characterized by high volatility and/or the need for liquidity are settings where we feel that the diversification benefits become more apparent. In fact, the presence of both these conditions in the latter part of the first quarter this year have dominated the behavior of market participants.

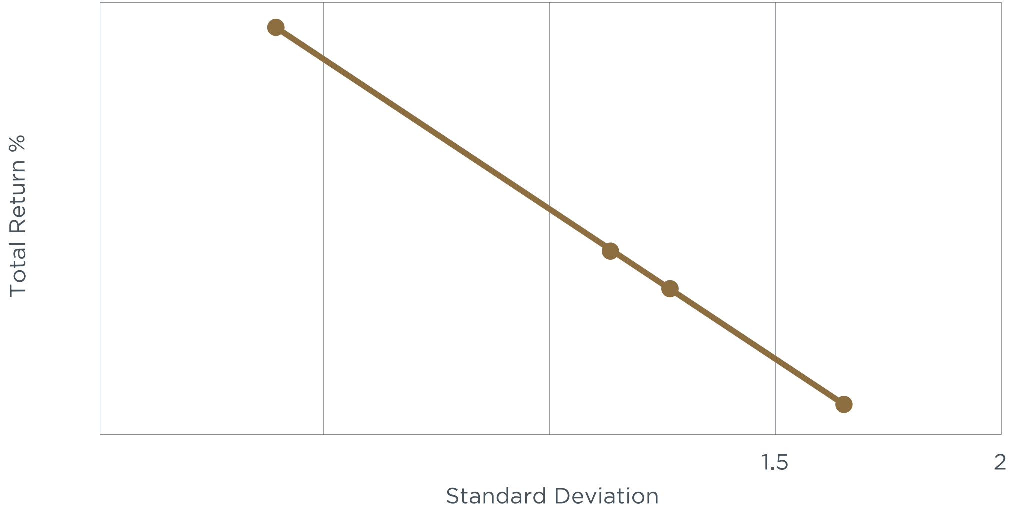
As circumstances begin working back toward normal and markets are not as stressed, zero interest rate policy will likely define the landscape for a longer period. The Federal Open Market Committee's own projections from June 10, 2020 showed the FOMC expects the Fed Funds Rate near zero through 2021.

Buffering bonds

We believe that U.S. bonds will continue to offer some diversification benefits, despite facing historically low yields. A good example of why we believe this can be found in Germany where negative rates have existed for an extended time and continue even further out along the yield curve. Germany, like the U.S., has experienced a significant "risk off" trade in the first quarter as concerns of the negative impacts associated with COVID-19 are playing throughout the global economy. Specifically, over the first quarter, the Deutsche Boerse AG German equity index (DAX) was down -27.3% while the 10-year German Treasury (Bund) was up +2.95% over the same

time frame. Consider the following example of a 60/40 or 70/30 stocks with bonds (as represented by German Dax equity index and 10-year German Treasury (Bund). The addition of bonds in the portfolio helps mitigate some of the negative effects of stocks from this quarter. (see Chart I). The combination of both bond performance during the past quarter (despite having negative yields) and their ability to help smooth some of the volatility (as measured by standard deviation) is one reason we believe bonds can play an important role in diversifying a portfolio.

Chart I: Comparing risk and returns



The above chart represents the total return of the German Dax equity index and the German 10 yr. Bund from 12/30/19 through 3/31/2o. The points along the line represent a blended portfolio combining a 60/40 or 70/30% mixture of the two asset classes.

Source: Bloomberg Index total Returns from 12/30/19-3/31/20. Standard Deviation: Standard Deviation is a statistical measure of the volatility of the investment's return. The higher the standard deviation, the greater its volatility has been.

Conclusion

Despite diminished yields, it is our opinion fixed income assets can still play an important role in diversified portfolios as the asset class provides the ballast that can help generate more consistency. In our view, consistent returns are likely to better preserve and increase wealth over time than portfolios that produce more volatile returns. Also, fixed income can help to make sure that stock market downturns do not create a performance hole too deep to climb out of within a reasonable recovery period. Related to deep corrections, fixed income may also help to keep investors from experiencing risk above their tolerance levels that could cause them to abandon their long-term strategy during shorter periods of market stress.

Index and Benchmark Disclosures

Bloomberg Barclays US Aggregate Bond Index is a broad-based measure of the investment grade, US dollar-denominated, fixed-rate taxable bond market.

The Bloomberg Barclays High Yield Bond Index is an unmanaged index that includes all fixed income securities having a maximum quality rating of Ba1, a minimum amount outstanding of $100 million, and at least one year to maturity.

JP Morgan Emerging Markets Bond Index is a U.S. dollar-denominated, investible, market cap-weighted index representing a broad universe of emerging market sovereign and quasi-sovereign debt. While products in the asset class have become more diverse, focusing on both local currency and corporate issuance, there is currently no widely accepted aggregate index reflecting the broader opportunity set available, although the asset class is evolving. By using the same index provider as the one used in the developed-market bonds asset class, there is consistent categorization of countries among developed international bonds (ex. U.S.) and emerging market bonds.

Emerging Markets Bond Index is a U.S. dollar-denominated, investible, market cap-weighted index representing a broad universe of emerging market sovereign and quasi-sovereign debt. While products in the asset class have become more diverse, focusing on both local currency and corporate issuance, there is currently no widely accepted aggregate index reflecting the broader opportunity set available, although the asset class is evolving. By using the same index provider as the one used in the developed-market bonds asset class, there is consistent categorization of countries among developed international bonds (ex. U.S.) and emerging market bonds. An index is unmanaged and unavailable for direct investment.

Deutscher Boerse AG German Stock Index is a total return index of 30 selected German blue chip stocks traded on the Frankfurt Stock Exchange. The equities use free float shares in the index calculation.

10-year German Treasury Bond (Bund) is a government bond is issued by a national government and is denominated in the country`s own currency. Bonds issued by national governments in foreign currencies are normally referred to as sovereign bonds. The yield required by investors to loan funds to governments reflects inflation expectations and the likelihood that the debt will be repaid.

An index is unmanaged and unavailable for direct investment.

The benchmark performance shown is for illustrative purposes only and is not reflective of any investment. Index returns do not represent investment returns or the results of actual trading nor are they forecasts of expected gains or losses a portfolio might experience. Index returns reflect general market results, assume the reinvestment of dividends and other distributions, and do not reflect deduction for fees, expenses or taxes applicable to an actual investment. Comparisons to benchmarks have limitations because benchmarks have volatility and other material characteristics that may differ from those of the portfolio. Because of these differences, benchmarks should not be relied upon as an accurate measure of comparison. There is no guarantee that any of the securities invested in the portfolio are included in the Index. Past performance does not guarantee future results.

Risk Disclosures

All investing involves some degree of risk, whether it is associated with market volatility, purchasing power or a specific security. There is no assurance any investment strategy will be successful. Asset allocation does not guarantee a profit or protect against loss.

Investments in fixed-income securities are subject to market, interest rate, credit and other risks. Bond prices fluctuate inversely to changes in interest rates. Therefore, a general rise in interest rates can result in the decline in the bond's price. Credit risk is the risk that an issuer will default on payments of interest and/or principal. This risk is heightened in lower rated bonds. If sold prior to maturity, fixed income securities are subject to market risk. All fixed income investments may be worth less than their original cost upon redemption or maturity.

High-yield bonds, also known as junk bonds, are subject to greater risk of loss of principal and interest, including default risk, than higher-rated bonds. Investors should not place undue reliance on yield as a factor to be considered in selecting a high yield investment.

In addition to the risks associated with investing in debt securities, international and emerging markets, sovereign debt involves the risk that the issuing entity may not be able or willing to repay principal and/or interest when due in accordance with the terms of the debt agreement.

Foreign investing entails special risks such as currency, political, economic, and market risks. These risks are heightened in emerging markets. The stability of the issuing government is an important factor to consider, when assessing the risk of investing in sovereign debt.

Disclosures

Wells Fargo Private Bank and Abbot Downing, a Wells Fargo business, provide products and services through Wells Fargo Bank, N.A. and its various affiliates and subsidiaries. Wells Fargo Bank, N.A. is a bank affiliate of Wells Fargo & Company.

Wells Fargo affiliates may be paid a referral fee in relation to clients referred to Wells Fargo Bank, N.A. Wells Fargo Bank, N.A. (the "Bank") offers various advisory and fiduciary products and services including discretionary portfolio management. Financial Advisors of Wells Fargo Advisors may refer clients to the bank for an ongoing or one-time fee. The role of the Financial Advisor with respect to bank products and services is limited to referral and relationship management services. The Bank is responsible for the day-to-day management of non-brokerage accounts and for providing investment advice, investment management services and wealth management services to clients. The Financial Advisor does not provide investment advice or brokerage services to Bank accounts, but does offer, as applicable, brokerage services and investment advice to brokerage accounts held at Wells Fargo Advisors.

Brokerage services are offered through Wells Fargo Advisors. Wells Fargo Advisors is a trade name used by Wells Fargo Clearing Services, LLC and Wells Fargo Advisors Financial Network, LLC, Members SIPC, separate registered broker-dealers and non-bank affiliates of Wells Fargo & Company.

Wells Fargo & Company and its affiliates do not provide legal or tax advice. Please consult your legal and/or tax advisors to determine how this information may apply to your own situation. Whether any planned tax result is realized by you depends on the specific facts of your own situation at the time your tax return is filed.

CAR-0620-03484

© 2020 Wells Fargo. All Rights Reserved. Member FDIC. NMLSR ID 399801

---

[1] The quote above was originally intended as a comment regarding personal debt obligations such as credit card balances or a loan to purchase a car. Yet this thought also rings true for other forms of non-personal debt such as corporate or sovereign debt obligations, municipal bonds, and other forms of institutional debt. Clearly, owning a bond is still an obligation between a creditor (the person or entity that buys the asset) and a borrower. While a lower or zero rate of interest on a debt obligation may make it easier to service the debt via the required interest and principal payments, as alluded to in the quote above, low interest rates don't magically make the underlying debt disappear.

[2] The Value of Diversification, Wells Fargo Investment Institute, October 11, 2018.

[3] Global debt surged to a record $250 trillion in the first half of 2019, led by the US and China: International Institute of Finance (IIF), November 15, 2019.

[4] Global stock markets gained $17 trillion in value in 2019: CNBC.com, December 26, 2019.

[5] Lipper U.S. Weekly FundFlows Insight Report: Money Market Funds Continue To Dominate Net Inflows, While the Other Asset Classes Appear to Have Stabilized: seekingalpha.com, April 27, 2020.