



GUGGENHEIM

Portfolio Strategy Research

The Core Conundrum

Introduction

Extraordinary monetary easing following the 2008 financial crisis drove yields on U.S. Treasury and Agency securities to historic lows, and yields have risen only modestly since the Federal Reserve began to tighten policy in 2015. The dominance of low-yielding government-related securities in the Bloomberg Barclays U.S. Aggregate Bond index presents an investment conundrum: How can core fixed-income investors meet their total return objectives without taking on undue credit or duration risk?

In our view, the answer lies in a more diversified, multi-sector approach to core fixed-income management. Specifically, investors may find better value in fixed-income sectors that are not represented in the Bloomberg Barclays U.S. Aggregate Bond index, such as commercial asset-backed securities and collateralized loan obligations. Searching for value outside the benchmark requires additional resources and differentiated expertise, but can uncover investments that offer attractive returns, low correlations, and limited duration and credit risk. We believe the Guggenheim approach to core fixed-income investment represents a more sustainable way to generate income and enhance risk-adjusted returns in today's low-rate environment.

Report Highlights

- Low interest rates and a benign credit environment have encouraged some investors to reach for yield by increasing duration risk, credit risk, or both. Investors may be underestimating the risks posed by these investment shortcuts, particularly as U.S. monetary policy tightens and the end of the credit cycle approaches.
- Most core investors benchmark to the Bloomberg Barclays U.S. Aggregate Bond index, which is dominated by low-yielding government-related securities. At \$19 trillion, the Bloomberg Barclays U.S. Aggregate Bond index represents less than half of the total U.S. fixed-income universe, leaving out \$21 trillion of non-indexed securities.
- The group of securities not included or underrepresented in the benchmark index includes commercial asset-backed securities and collateralized loan obligations, which may offer comparable or higher yields and lower durations than similarly rated corporate bonds. Investors concerned about liquidity in these sectors should bear in mind that structural changes in the corporate bond market may cause liquidity to vanish when it is needed most, undermining the perceived liquidity benefit of corporate bonds over structured credit.
- For investors with longer duration targets, a barbell approach that combines short-maturity, floating-rate credit, and long-duration, fixed-rate bonds may offer some protection against rising rates while meeting their yield and duration targets.

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Section 1

The Core Conundrum

With the Bloomberg Barclays U.S. Aggregate Bond index (Agg) heavily concentrated in low-yielding Treasury and Agency securities¹, remaining closely aligned to the benchmark and achieving historical rates of total return have become contradictory objectives. Recent fiscal and monetary policy developments have helped create this conundrum for core fixed-income investors.

Fiscal Policy Has Altered the Composition of the Agg

Since its creation in 1986, the Bloomberg Barclays Agg (formerly known as the Lehman Agg and then the Barclays Agg) has become the most widely used proxy for the U.S. bond market. Inclusion in the Agg requires that securities be U.S. dollar-denominated, investment-grade rated, fixed rate, taxable, and have above a minimum par amount outstanding. In 1986, the Agg was a useful proxy for the broad universe of fixed-income assets, which at the time primarily consisted of Treasuries, Agency bonds, Agency mortgage-backed securities (MBS), and investment-grade corporate bonds—all of which met the inclusion criteria. However, the fixed-income universe has evolved over the past 30-plus years with the growth of sectors such as asset-backed securities (ABS), non-Agency residential MBS (RMBS), high-yield corporate bonds, leveraged loans, and municipal bonds. While the fixed-income universe has become more diversified in structure and quality, the composition of the Agg has not kept pace with these changes. In fact, the Agg has become increasingly concentrated in Treasuries due to the massive volume of net issuance since the financial crisis.

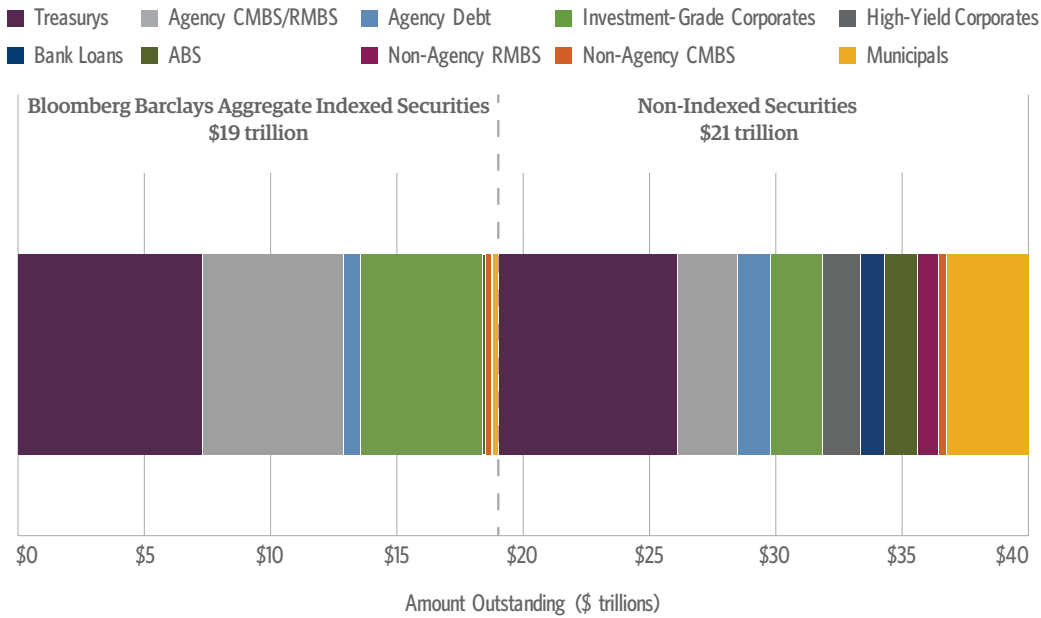
The sheer glut of Treasuries and their dominant representation in the Agg is unlikely to reverse anytime soon. The need to fund government deficits—present and future—is astonishing. Marketable U.S. Treasury securities outstanding totaled \$4.5 trillion in 2007. By the end of 2017, the figure had skyrocketed to \$14.7 trillion, a compound annual growth rate of 12.5 percent. That figure is projected to reach \$28.7 trillion by the end of 2028 with the deficit growing to \$1.5 trillion, according to the Congressional Budget Office's (CBO) April 2018 baseline projections, even before factoring in a likely recession over that horizon.

As Treasuries climbed from 23 percent of the core U.S. fixed-income universe in 2007 to 44 percent in 2017, the market capitalization-weighted Agg followed suit. Treasuries today comprise approximately 37 percent of the Agg, which, when combined with Agency securities, brings the weighting of low-yielding U.S. government-related debt to nearly 70 percent of the Agg.² By the end of May 2018, the average yield of the Treasury, Agency debt, and Agency MBS components of the Agg were just 2.7 percent, 3.1 percent, and 3.4 percent, respectively, making it difficult for core fixed-income investors to achieve any meaningful yield target.

1. Despite low yields, U.S. Treasury and Agency securities may be appropriate for some investors seeking safety of principal, as there is minimal risk of default. 2. For purposes of this discussion, government-related securities include U.S. Treasury securities, Agency debt, and Agency MBS.

Fixed-Income Markets Are Underrepresented by the Agg

The Bloomberg Barclays Aggregate Represents Less than Half of the Fixed-Income Universe

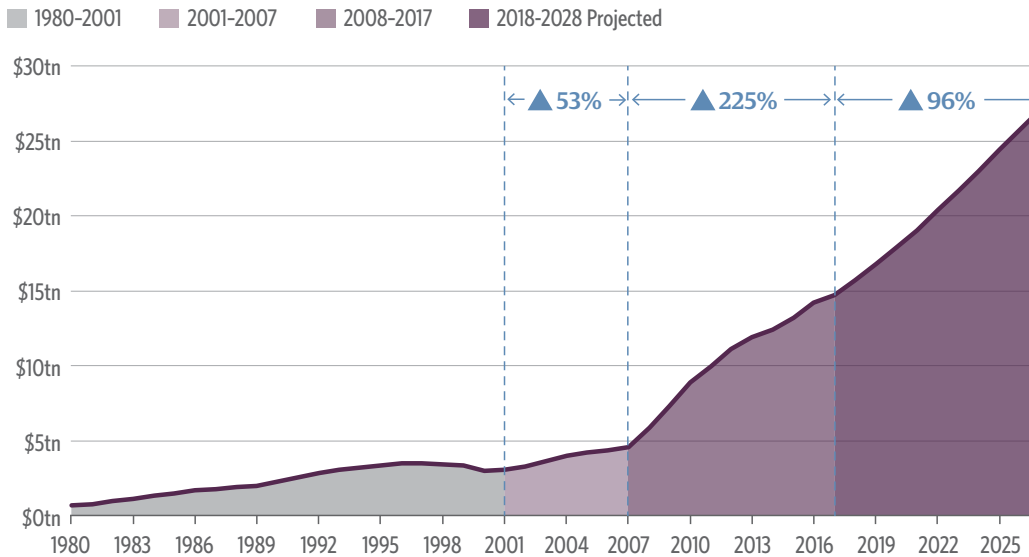


Source: SIFMA, Wells Fargo, S&P LCD, Bloomberg Barclays. Excludes sovereigns, supranationals, and covered bonds. Data as of 12.31.2017.

The Bloomberg Barclays Aggregate represents less than half of the U.S. bond market, and excludes bank loans, high-yield corporate bonds, and non-Agency RMBS, as well as the majority of the ABS and municipal bond sectors. These are sectors in which we have found attractive relative value, and that also tend to have lower duration.

Treasury Securities Outstanding Surged Post-Crisis and Will Continue to Rise

Treasury Securities Outstanding in \$trillions



Source: SIFMA, Congressional Budget Office, Guggenheim Investments. From the CBO Budget and Economic Outlook: 2018 to 2028. Data as of April 2018.

U.S. deficit spending in response to the financial crisis resulted in a significant rise in net Treasury issuance. Marketable Treasury securities outstanding more than tripled from \$4.5 trillion in 2007 to \$14.7 trillion by the end of 2017. The CBO projects that the deficit will increase to \$1.5 trillion by 2028, and as a result, Treasury debt outstanding is projected to increase by approximately 96 percent to \$28.7 trillion, likely further skewing the profile of the Agg toward lower-yielding U.S. government debt.

Monetary Policy Has Distorted Government and Agency Markets

In 2008, the Federal Reserve (Fed) reached the limit of conventional monetary policy tools when it lowered the federal funds target rate to a range of 0–0.25 percent for the first time in history. With the U.S. economy contracting and credit markets frozen, the Fed expanded its toolkit to include unconventional policy tools. It introduced more explicit forward rate guidance and launched quantitative easing (QE) programs to directly purchase Treasuries, Agency debentures, and Agency MBS in an effort to reduce long-term interest rates and stimulate growth. Three rounds of QE and a maturity extension program were ultimately needed before the Fed deemed the economic recovery in the United States to be sustainable.

As a result of these efforts, the Fed's balance sheet grew from \$869 billion in 2007 to \$4.5 trillion by October 2014, when QE3 purchases ended. Former Fed Vice Chairman Stanley Fischer summarized research on the impact of these programs in 2015, estimating that the Fed had reduced the 10-year U.S. Treasury term premium (the premium for holding a longer-maturity bond over a series of shorter-term bonds) by 110 basis points.³

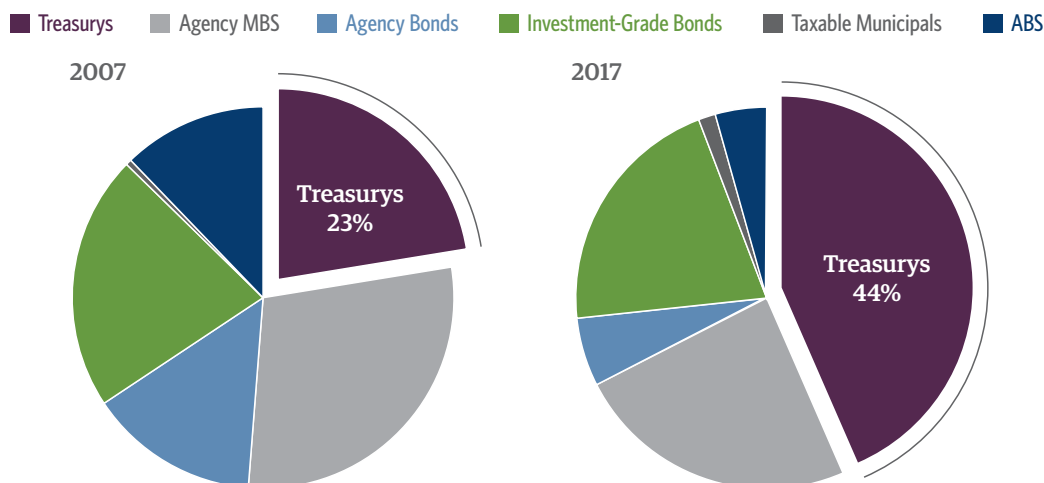
In other words, QE substantially reduced investors' expected compensation for taking on duration risk. From the start of the first round of QE until the end of the last round of QE, 10-year Treasury yields averaged only 2.7 percent and fell to as low as 1.4 percent.

As of June 6, 2018, the Fed owned \$2.4 trillion of Treasury securities and \$1.7 trillion of Agency MBS, making it a sizable investor in each market. Although QE ended in 2014, these markets remain distorted by the Fed's reinvestment program, which rolls over some portion of maturing Treasury securities at auction and MBS principal repayments from its portfolio. In 2017, reinvestments totaled \$171 billion in Treasuries and \$304 billion in Agency MBS.

In October 2017, the Fed began the process of normalizing the size of its balance sheet by allowing a combined maximum of \$10 billion in Treasury and Agency MBS to mature and roll off the portfolio on a monthly basis. The cap rises each quarter until a combined maximum of \$50 billion is allowed to roll off the balance sheet.⁴ We expect some moderate upward pressure on U.S. Treasury yields over the course of the next several years as the size of the Fed balance sheet shrinks. Since the Fed began allowing some maturities to roll off the balance sheet, 10-year

Fiscal Deficits Have Reshaped the Traditional Core Universe Toward Government-Related Securities

Core Fixed-Income Universe, by Sector



Source: SIFMA, Guggenheim Investments. Data as of 12.31.2017.

The massive increase in Treasury debt since the financial crisis has reshaped the core fixed-income universe. Since bottoming in 2007 at 23 percent of core U.S. bonds outstanding, the weighting of Treasuries has almost doubled to 44 percent of the fixed-income universe in 2017.

3. One basis point is equal to 0.01 percent. 4. During most months the amount of actual portfolio runoff is likely to be less than the fully phased-in caps.

U.S. Treasury yields have averaged only 2.5 percent. The Fed's balance sheet is unlikely to ever return to pre-crisis levels.

The Fed is not the only central bank whose market intervention depressed long-term interest rates. The Bank of Japan (BoJ) has engaged in a series of QE programs, repeatedly expanding the size and scope of its QE asset purchases in an effort to boost inflation and inflation expectations. In September 2016, the BoJ introduced a "yield curve control" strategy that aims to maintain the yield on a 10-year Japanese government bond (JGB) around 0 percent. This policy commits the BoJ to purchase any amount of JGBs necessary to achieve its yield target. Since the introduction of this strategy, the average yield on a 10-year JGB has been 0.05 percent.

In March 2015, the European Central Bank (ECB) initiated the Public Sector Purchase Programme, which entailed large-scale purchases of euro zone sovereign debt securities and eventually expanded to include corporate debt. European economic activity improved in 2017, and euro area inflation moved from 0.2 percent in December 2016 to 1.1 percent in December 2017, an encouraging rebound that allowed the ECB to reduce monthly purchase volumes from €80 billion to €60 billion in April 2017, and later to €30 billion per month from January 2018 through September 2018. We expect monthly purchases will taper during the fourth quarter of 2018, with the first deposit rate increase from the current level of -0.4 percent to follow in 2019. Since the introduction of the ECB's QE program in 2015, 10-year German bund yields have averaged 0.7 percent.

The ECB and BoJ actions caused a scarcity of high-quality securities and pushed sovereign yields in Japan and Europe close to zero. Investors in these markets have turned to U.S. Treasuries and Agency debt, and most recently to investment-grade corporate debt, thereby depressing yields below levels that might otherwise prevail.

Asymmetric Risks to Rates

With annual net Treasury issuance set to rise further in coming years, the Agg will continue to be heavily skewed towards government-related assets. A large allocation to Treasuries will not only continue to depress the Agg's yield, but it will also expose investors to risk of capital losses if rates move higher.

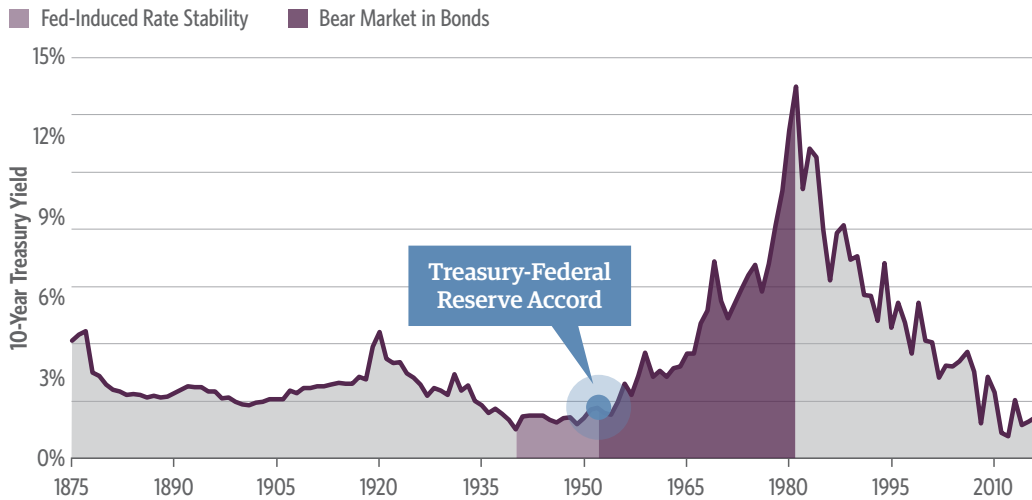
We are mindful of this risk given the multi-decade bear market that followed the end of the Fed's efforts to suppress Treasury yields during the 1940s. In 1942, the Fed, acting in coordination with the U.S. Treasury Department, agreed to fix Treasury bill yields at three-eighths of a percent and cap yields on long-term Treasury bonds at 2.50 percent in order to keep debt service costs low during World War II. The Treasury-Federal Reserve Accord of 1951 ended this arrangement, setting the stage for 30 years of rising interest rates. The bear market in bonds was finally halted in the early 1980s by former Fed Chairman Paul Volcker's successful efforts to rein in double-digit inflation by raising the fed funds rate to 20 percent.

Today, the Fed seeks to limit bond market volatility through forward guidance, though this has not always been effective. For example, in May 2013, Fed Chair Ben Bernanke signaled the possibility that the Fed might soon taper its purchases of Treasuries and Agency MBS as it wound down its third QE program. While this early indication involved no immediate action by the Fed, nevertheless bond markets sold off dramatically. The 10-year Treasury yield spiked to 3.0 percent from 1.7 percent over the course of 20 weeks in what is now referred to as the "taper tantrum." The clarity of the Fed's communications has improved since then, but Janet Yellen's term ended in February 2018, and the confirmation of Jerome Powell as the new Fed chair still carries some uncertainty about future communications. Other factors that could pressure rates higher include increased Treasury issuance, a labor market that is on track to move further beyond full employment, and the potential for a trade war that could raise inflation.

Even modest increases in rates would be sufficient for core fixed-income investors to incur losses. Ignoring the rolldown effect (the positive return earned when a bond's yield falls as its maturity approaches because the yield curve is sloping upward), a mere 34 basis-point increase in yields would wipe out one year of coupon income on a 10-year Treasury note issued in May 2018.

Historically, the End of Fed Intervention Is Bad News for Bonds

U.S. 10-Year Treasury Yields Since 1875

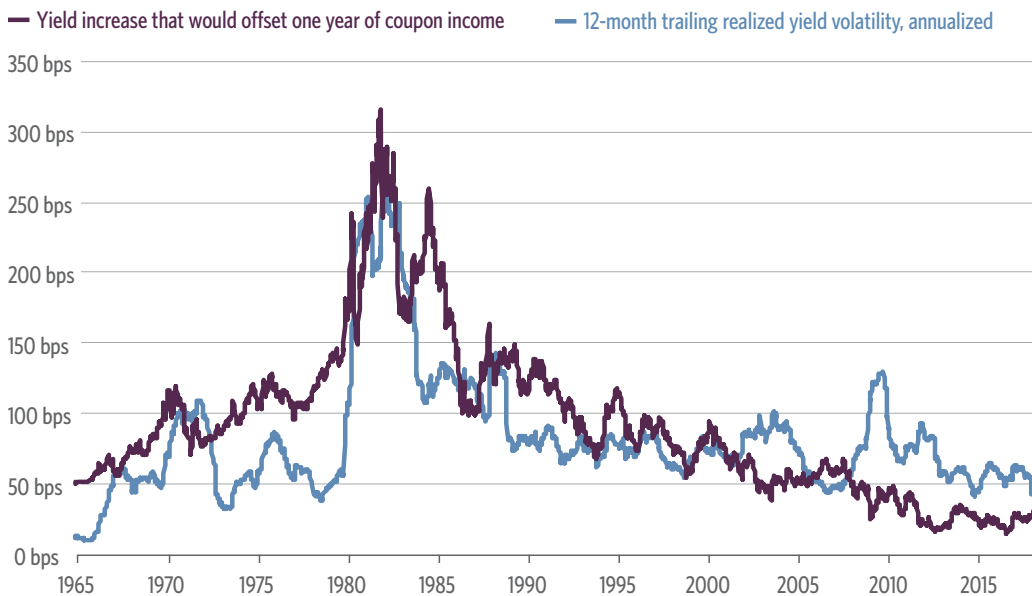


Source: Bloomberg, Robert Shiller, Guggenheim Investments. Data as of 12.31.2017.

The Fed intervened in the Treasury market during the 1940s and early 1950s in order to suppress long-term interest rates. The removal of Fed support of long-term bond prices prompted by the Treasury-Fed Accord of 1951 ushered in a bear market in bonds that lasted 30 years. Could history repeat itself once the current period of low rates ends? If it does, portfolios that extended durations to pick up yield in the present environment may be left painfully exposed.

Treasury Investors Are Vulnerable to Rising Yields and Volatility

10-Year Treasury Yield Volatility vs. "Breakeven" Increase in Yields



Source: Haver Analytics, Federal Reserve Board, Guggenheim Investments. Data as of 6.8.2018. Note: based on constant-maturity 10-year Treasury yield.

Even modest increases in yields would be sufficient for core fixed-income investors to incur losses. Ignoring the rolldown effect (the positive return earned when a bond's yield falls as its maturity approaches because the yield curve is sloping upward), a mere 34-basis point increase in yields would wipe out the coupon income on the current 10-year Treasury note issued in May 2018. This represents a low bar in realized yield volatility observed over the past year.

Section 2

Coping with Distorted Market Realities

Traditional yield-enhancement techniques, such as increasing duration and lowering credit quality, may boost total returns in the short term, but at what cost? Today's benign credit conditions may be masking the potentially damaging long-term effects of increased exposure to duration and credit risk.

Risks to the Conventional Approach

Achieving return targets is of utmost importance to core fixed-income investors, such as insurance companies, pension funds, and endowments, that may incorrectly believe their only choice is to stay benchmarked to the Agg. These investors face a tradeoff between accepting lower returns offered by the Agg or taking more credit or duration risk than the benchmark.

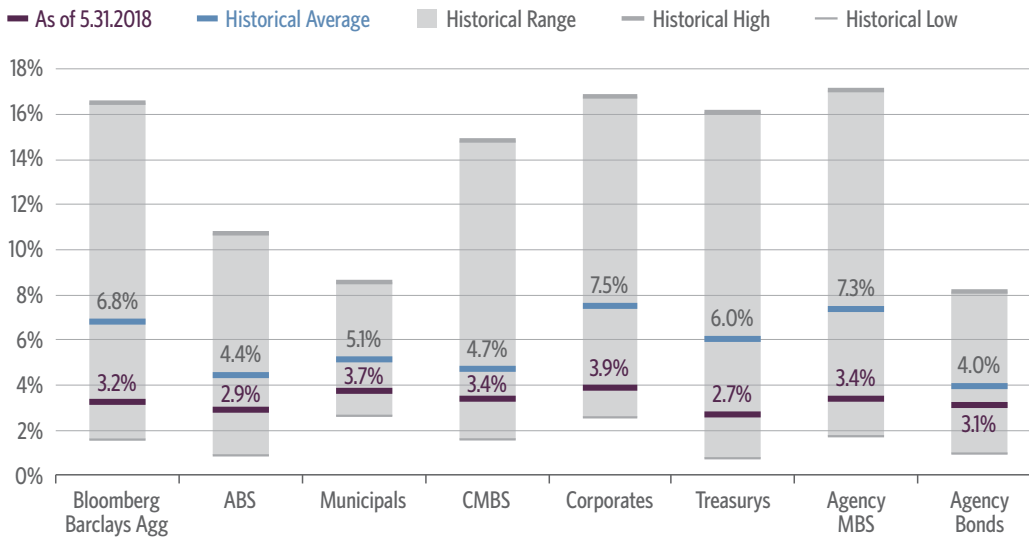
The weighted average yield of the Agg was just 3.2 percent at the end of May 2018, which is slightly less than half the historical average yield of 6.8 percent since inception, and far below the highest yield of 16.8 percent. Adjusted for inflation using the trailing 12-month change in the core personal consumption expenditures price index, the Agg offers a real yield of just 1.4 percent. To satisfy the pressing need for income, many investors have in recent years assumed additional credit risk, which has precipitated a market-wide relaxation in underwriting standards.

In addition to record levels of issuance in both investment-grade and high-yield bond markets following the financial crisis, the market has witnessed high levels of debt issued by lower-rated, first-time issuers, and a significant increase in deals lacking covenant protection. The negative long-term impact of these trends is currently being obscured by the benign credit environment, which itself is a byproduct of the Fed's unprecedented monetary accommodation. Ultimately, however, the reach for yield into greater credit risk may culminate in losses from corporate defaults. The last three recessions saw 12-month high-yield default rates rise above 10 percent.

Another strategy some investors have employed to generate extra yield is extending duration, though this exposes them to greater losses when interest rates rise. As we demonstrate later, longer-duration securities have a place in portfolio construction, but in today's environment they should be complemented by shorter-maturity floating-rate securities.

The Scarcity of Yield Across the U.S. Fixed-Income Landscape

Yields in Traditional Core Sectors

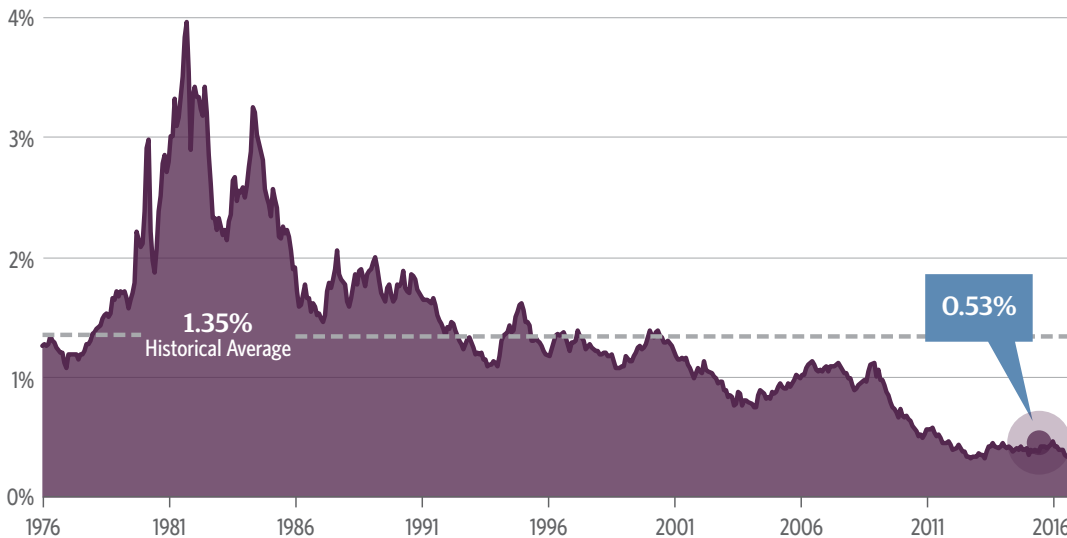


Source: Bloomberg Barclays Indexes, Guggenheim Investments. Data as of 5.31.2018. Sectors represent subsectors of the Bloomberg Barclays U.S. Aggregate Bond index. Historical average based on available Bloomberg and Barclays data: for Bloomberg Barclays Agg and Agency MBS since January 1976; Treasurys and corporates since January 1973; ABS since December 1991; municipal and Agency bonds since January 1994; and CMBS since July 1999.

The Bloomberg Barclays Agg yielded 3.2 percent at the end of May 2018, well below its historical average yield of 6.8 percent. With each index subsector yielding less than 4.0 percent, investors are faced with scarcity of yield across the fixed-income landscape. Extending duration or increasing credit risk to meet yield objectives may prove rewarding in the near term, but these investment shortcuts carry significant long-term risks.

Assessing the Relative Value of the Bloomberg Barclays Agg

Yield per Unit of Duration



Source: Bloomberg Barclays, Guggenheim Investments. Data as of 12.31.2017.

The Agg offers little value as measured by yield per unit of duration. As of May 31, 2018, investors closely tied to the Agg earned only 0.53 percent in yield for every year of duration risk.

Section 3

Guggenheim's Investment Blueprint

At \$19 trillion, the Agg represents less than half of the total U.S. fixed-income universe, leaving out \$21 trillion in securities that do not meet its requirements for inclusion, including bank loans, high-yield bonds, and non-Agency RMBS, as well as the majority of the ABS and municipal bond sectors. We believe there is a more sustainable strategy that relies on the ability to uncover value in investment-grade securities outside of the traditional benchmark-driven framework. This approach to portfolio construction may help generate higher yields without adding undue credit or duration risk.

Increasing Yield Without Adding Credit or Duration Risk

Shortening duration, maintaining an investment-grade portfolio, and generating attractive yields do not have to be competing investment objectives for core fixed-income investors. Investment-grade assets exist outside the traditional benchmark, and many of these offer attractive yields that are comparable to, or higher than, similarly rated corporate bonds with significantly less interest-rate risk. These are complex investments and not suitable for all investment strategies. In this section, we offer background and perspective on Guggenheim's approach to two of those asset classes: collateralized loan obligations (CLOs) and commercial ABS.

CLOs are investment vehicles that primarily buy a diversified pool of bank loans extended to both small and large businesses. Bank loans are typically rated below investment grade, but key features of the CLO, such as overcollateralization and cash flow triggers, allow the vehicle to issue investment-grade debt, below investment-grade debt, and equity. This sector is benefiting from over five years of low bank loan default rates, a trend that has historically continued for two years after the Fed begins raising interest rates, on average, according to Guggenheim research.

CLOs are typically backed by over 100 bank loans. Each of these must be reviewed to determine the extent to which junior CLO

tranches, which help protect senior tranches from losses, could experience principal loss in the event of widespread defaults. The heterogeneous nature of the underlying investments in a single CLO demands significant credit and legal expertise.

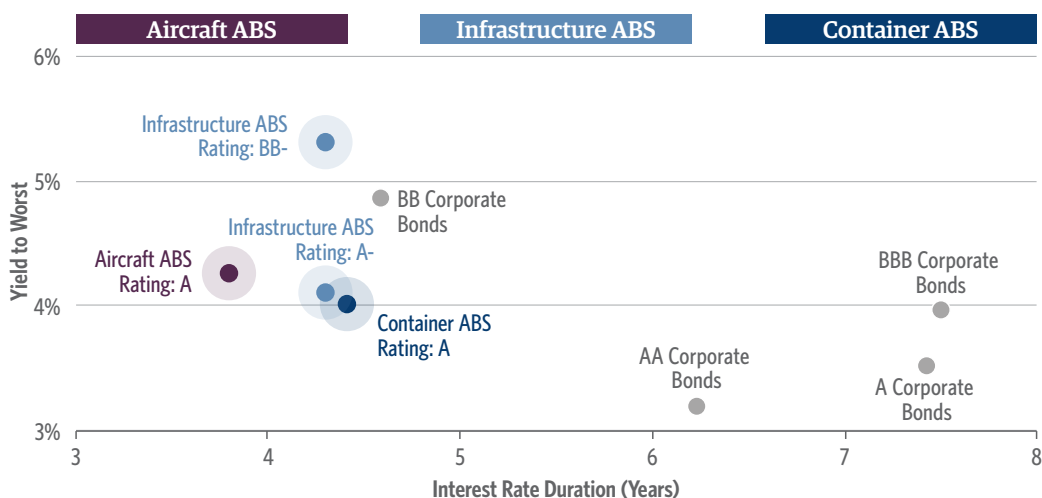
Our expertise in these areas has enabled us to take advantage of attractive spreads in this sector, particularly since the financial crisis. As of May 2018, AAA-rated, post-crisis CLO debt traded at spreads between 90-150 basis points over the three-month London Interbank Offered Rate (Libor), compared to an average spread of only 40 basis points for AAA-rated CLO debt issued before the financial crisis.

AA-rated, A-rated, and BBB-rated post-crisis CLO debt priced at average spreads of 166 basis points, 187 basis points, and 285 basis points over Libor at the end of May 2018, respectively, compared to pre-crisis averages of only 67 basis points, 118 basis points, and 218 basis points.

In today's environment, we continue to find value in CLOs but we no longer buy them in the primary market unless they are refinancing transactions. Newly issued CLOs have five-year reinvestment periods, which extend beyond our firm's view of when the next recession will occur. As we near the end of the credit cycle, we prefer amortizing securities that are naturally deleveraging. This reduces credit risk for the lender and is a key feature of commercial ABS.

ABS and CLOs Can Offer Higher Yields than Similarly Rated Corporate Bonds Without Extra Credit or Duration Risk

Yields vs. Interest Rate Duration



Source: Bloomberg Barclays Indexes, Guggenheim Investments. Index data as of 2.28.2018. Past performance does not guarantee future results. Structured product examples are for illustrative purposes to show opportunities that may exist. Other structured products may have different characteristics. **Asset-backed securities may not be suitable for all investors.** Investors in asset-backed securities generally receive payments that are part interest and part return of principal. These payments may vary based on the rate loans are repaid. Some asset-backed securities may have structures that make their reaction to interest rates and other factors difficult to predict, making their prices volatile, and they are subject to liquidity and valuation risk.

Commercial ABS are typically backed by cash flows from the receivables generated by businesses. Although less familiar to some investors, commercial ABS typically finance recognizable products such as cell towers, shipping containers, and aircraft. Commercial ABS may also finance well-known businesses, such as restaurant franchises and hotel time shares. Much like in the CLO market, commercial ABS benefit from a benign credit environment and strong profit growth in 2017 and 2018.

In addition to offering comparable—or even higher—yields and lower durations than similarly rated corporate bonds, there are other attractive features to investing in CLOs and ABS. While corporate bond investors are exposed to the credit risk of one specific issuer or entity, idiosyncratic risks may be mitigated in commercial ABS and CLOs through large, diversified collateral pools. These securities also seek to offer downside protection during stressed economic environments through overcollateralization, excess spread, reserve accounts, and triggers that cut off cash flows to subordinated tranches. The amortizing structures of many ABS reduce credit exposure over time as a portion of the principal is paid down with each cash flow payment. Principal payments made prior to

maturity also represent a source of liquidity for investors. Conversely, principal payments for corporate bonds are typically expected only at maturity, which makes the full principal amount vulnerable to financial deterioration of the borrower as the scheduled maturity date approaches. (For more information, read [The ABCs of Asset-Backed Securities](https://www.guggenheiminvestments.com/perspectives) at [guggenheiminvestments.com/perspectives](https://www.guggenheiminvestments.com/perspectives)).

The complexity of the deal structures and security-specific collateral of commercial ABS and CLOs require proactive and comprehensive credit and legal analysis. With over 80 investment analysts and a 16-person dedicated legal team, Guggenheim is well positioned to uncover value in these markets. Our deep level of due diligence has been highly effective in identifying attractive investment opportunities.

While we continue to find opportunities in ABS and CLOs, prudence and cycle analysis remain key. Avoiding new-issue CLOs is one approach to limiting the overall weighted-average life (WAL) of our credit portfolios, and by extension, restricting spread duration. Generally, a CLO with a longer WAL sees a greater price impact in a spread widening environment than a

This chart compares CLOs and a few commercial ABS transactions completed in the first quarter of 2018 against the average yield and duration of similarly rated Bloomberg Barclays bond indexes. These transactions offered higher or comparable yields, but typically with less duration exposure, making them more suitable investments to help protect against rising rates.

CLO with a shorter WAL. Given the current late stage of the credit cycle, we have also put in place formal purchase restrictions on any CLO, primary or secondary, that could become significantly impaired in a downturn as a result of a long WAL and its rating. As a result of the flattening yield curve environment, which we discuss in more detail later in this report, investors currently do not sacrifice much yield for staying in shorter-maturity and lower-spread-duration credits, which we perceive to be safer.

Addressing Liquidity Concerns

Generalizations about the ABS sector may cause investors to overlook their attractive value proposition. For example, some prospective investors assume that ABS securities are inherently illiquid due to their lack of inclusion in the Agg. For this reason, they forego attractive yields, floating coupons, and credit profiles comparable to corporate bonds, without recognizing that the amortizing profile of a typical ABS is an inherent source of liquidity. More importantly, when comparing historical ABS liquidity to corporate bonds, we believe investors should consider that structural changes since the financial crisis may severely limit corporate bond market liquidity in future times of distress.

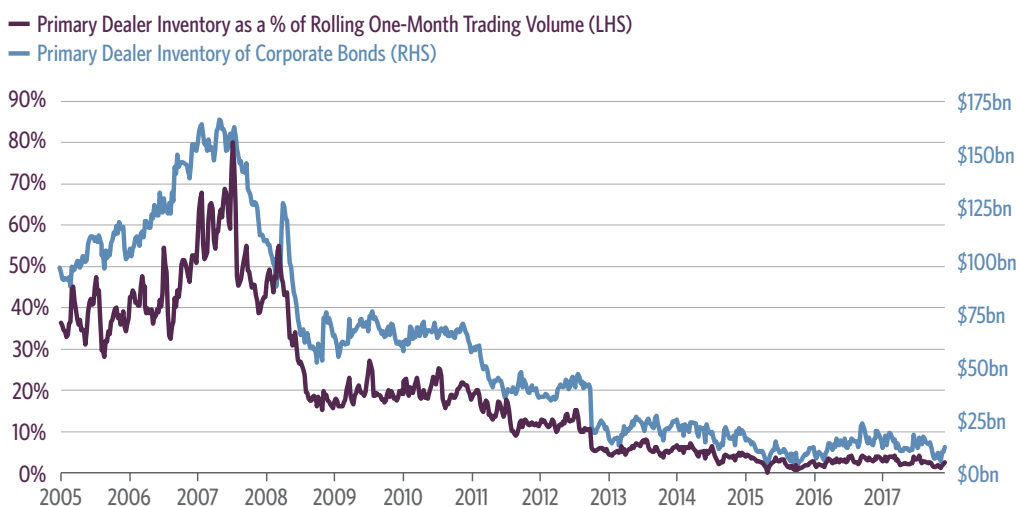
Post-crisis regulatory limits on proprietary trading and increases in bank capital requirements have reduced the capacity of dealers to provide liquidity in the corporate bond

market. Among those changes was the Volcker Rule, which prohibited banks from engaging in short-term proprietary trading. Specifically, the rule banned banks from engaging in trades held for fewer than 60 days unless the bank could prove it was not proprietary. This “guilty-unless-proven-innocent” approach was too cumbersome to combat and discouraged banks from engaging in market-making activities. Primary dealer net inventories of investment-grade and high-yield corporate bonds declined from a peak of \$165 billion in October 2007 to an average of \$15 billion in 2017. Prior to the financial crisis, dealer inventories were sufficient to cover 45 percent of one-month corporate bond trading volume, on average, but have since declined to less than 3 percent.

With less market-making activity by banks, turnover in the corporate bond market declined precipitously after 2007 and has not recovered. Turnover is defined as the ratio of bond trading volumes during a specified time period to the total market size. In the fourth quarter of 2017, just under \$950 billion of investment-grade bond trades were reported to Wall Street’s self-regulatory body Finra through the Trade Reporting and Compliance System (TRACE), representing approximately 17 percent of the investment-grade corporate bond market. In the five years preceding the emergence of post-crisis macroprudential policies (2005–2009), investment-grade corporate bond market quarterly turnover averaged 25 percent.

Liquidity from Traditional Providers Has Declined

Primary Dealer Net Inventories of Corporate Bonds



Source: Federal Reserve Bank of New York, Bloomberg, Guggenheim Investments. Data as of 5.31.2018. LHS = left hand side; RHS = right hand side.

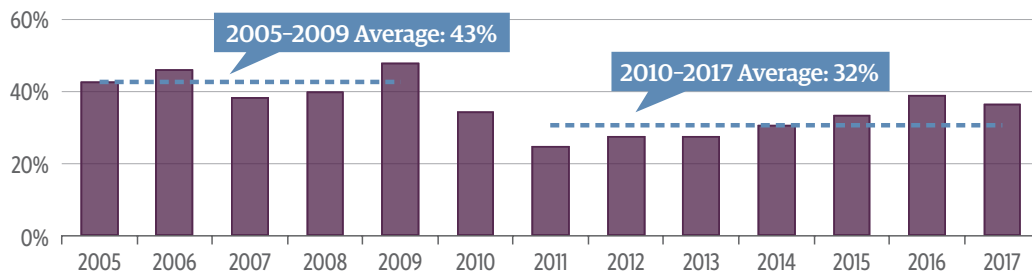
Primary dealer net inventories of corporate bonds (excluding commercial paper) have fallen more than 90 percent since peaking in October 2007. From 2006 to 2007, primary dealer net inventories averaged 45 percent of monthly trading volume in corporate bonds. Primary dealer net inventories currently represent less than 3 percent of corporate bond monthly trading volume.

Corporate Bond Market Turnover Has Declined

High-Yield and Investment-Grade Corporate Bond 90-Day Trading Volume as a Percentage of Market Size

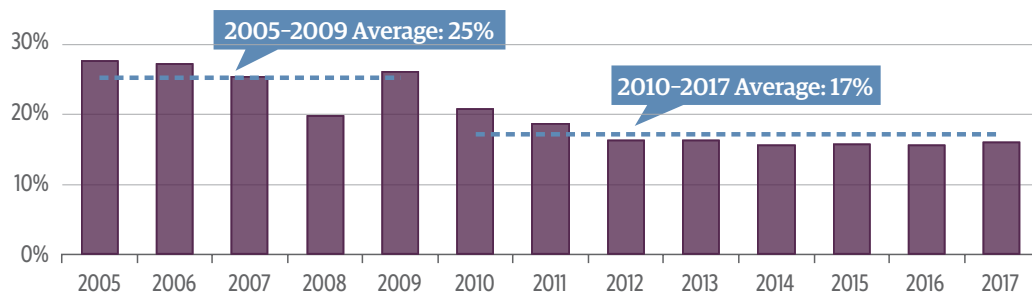
High-Yield Bonds

■ Quarterly Trading Volume as a % of High-Yield Market Size



Investment-Grade Bonds

■ Quarterly Trading Volume as a % of Investment-Grade Market Size



Source: Bloomberg, Bank of America Merrill Lynch, Guggenheim Investments. Data as of 12.31.2017.

Regulators dispute the concept that bond market liquidity has deteriorated. In June 2017, New York Fed researchers published an update to their Market Liquidity After the Financial Crisis report that reaffirmed their initial findings suggesting there is insufficient evidence to support the view of widespread deterioration in market liquidity. Bid-ask spreads, a price-based liquidity measure, remain low by historical standards according to their research. The Treasury Department and Finra have also echoed similar findings. Internally, we find that more trades are needed to transact large sizes today compared to before 2008. We have also lived through episodes where bid-ask spreads widen drastically without much forewarning.

In May 2018, the Fed put forth a proposal to change the Volcker Rule in an effort to clarify the law and ease unnecessary compliance burdens on banks that represent a small

Quarterly trading volume as a percentage of market size, also known as market turnover, has declined in both investment-grade and high-yield bond markets since the introduction of a slew of post-crisis regulations in 2010.

share of total trading volume. Among other changes, the aforementioned 60-day rule is eliminated, and an accounting treatment is applied, giving banks clarity on how regulators define proprietary trading. Banks would also have the ability to set their own internal risk limits that govern what is permissible market-making or underwriting activity. These simplified compliance standards would make trading less costly, which we believe could benefit liquidity in fixed-income markets, particularly in areas that are more profitable to dealers from a trading perspective.

Certain proposed changes may disproportionately benefit the ABS market. For example, the existing Volcker Rule has restrictions on banks' investment in covered funds, which include hedge funds, private equity funds, and certain CLOs. Positions in covered funds are subject to a 3 percent cap as a percent of Tier 1 capital. Under the proposed rule, this cap

would exclude positions held specifically for underwriting or market-making activity. The proposal also requested industry comments on whether the covered fund definition should be changed, for which we expect to see some recommendations that CLOs be exempted. While it is difficult to predict the final form of the revised rule, some changes may incentivize banks to hold more CLOs, improving demand and liquidity.

Easing regulatory burdens may enhance liquidity should they pass in the near term, but it is important to recognize that ample liquidity does not prevail in periods of market stress. Liquidity evaporates across many sectors as volatility rises, not just in ABS. For that reason, we believe the higher yields of ABS, which are available due to the perception that ABS are illiquid while other credit sectors are always liquid, makes them an attractive way to enhance portfolio returns.

Constructing a Barbell Strategy for Long-Duration Investors

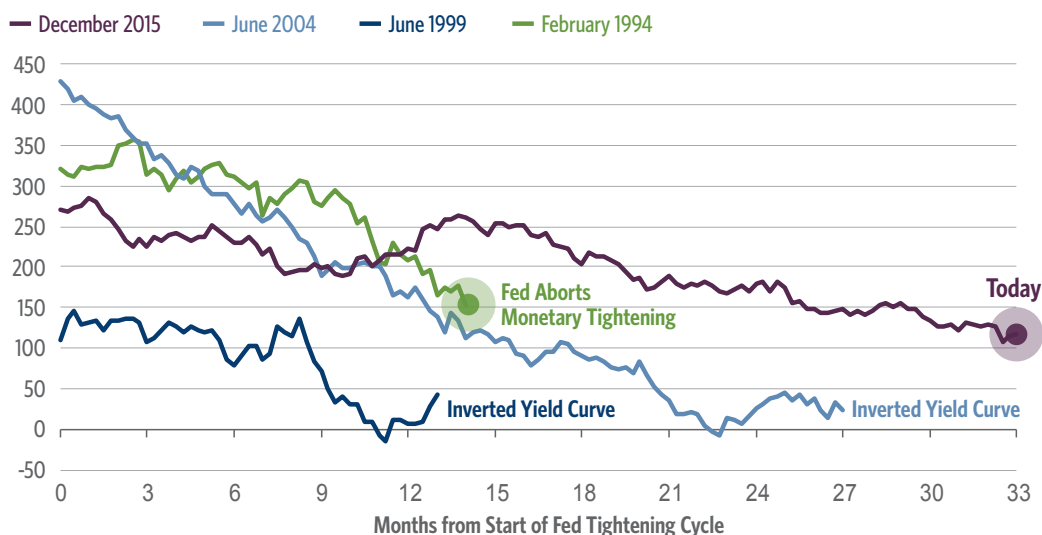
Many core fixed-income investors have longer duration needs than investments in CLOs and commercial ABS alone can satisfy. A barbell strategy can achieve a long duration target even as the Fed raises short-term interest rates. A barbell strategy structures a portfolio with both short- and long-duration securities. At the short end, we believe that investors

should allocate to short-duration, floating-rate credit. At the long end, investors should look for high-quality bonds with maturities greater than 10 years where we expect yields to remain largely unchanged over the course of the Fed tightening cycle.

Our barbell approach is based on an analysis of yield curve behavior during past Fed tightening cycles. From the first to last rate hike in the past three tightening cycles (1994-1995, 1999-2000, and 2004-2006), three-month Treasury bill yields rose by 242 basis points, on average, while 30-year Treasury yields rose by only 31 basis points. This relative move caused the three-month/30-year Treasury curve to flatten by 173 basis points from 1994-1995, by 111 basis points from 1999-2000, and 379 basis points from 2004-2006. At the end of the last two tightening cycles, short-term rates were above long-term rates. The same dynamic is playing out in the current tightening cycle.

In reality, the forward curve may already be pricing in some rise in bond yields in the future, and gains from rolling down the yield curve would offset some losses. Nevertheless, our hypothetical example demonstrates that yield curve positioning can be as impactful as duration positioning in an environment where the yield curve is flattening, as it is today.

Flattening Yield Curve Is on Course to Invert by Cycle End
3-Month / 30-Year Treasury Yield Curve, from Start of Fed Tightening Cycle



Source: Bloomberg, Guggenheim. Data as of 6.8.2018.

Historically, the yield curve flattens as the Fed tightens monetary policy by raising short-term interest rates. A flattening yield curve is associated with higher yield volatility in short- and intermediate-term fixed-rate bond yields compared to longer-term bonds. In light of our view that the yield curve will flatten, we believe a barbell strategy is the best approach for fixed-income investors who must maintain longer portfolio durations but also seek to limit downside risks in a rising rate environment.

In practice, we currently find long-dated Treasuries and Agency debentures to be attractive at the long end of a barbell strategy. Based on our expectation that long-end rates will be lower than the terminal rate of 3-3.5 percent, current yields on 20-30-year maturity securities in these sectors suggest they are fairly priced. These securities also do not introduce credit risk to the strategy. History indicates that we should experience less rate volatility at the long end of the curve as the Fed raises rates and the yield curve flattens. Investors can use these instruments to enhance the maturity profile of the portfolio to meet duration targets.

The Future of Core Fixed-Income Management

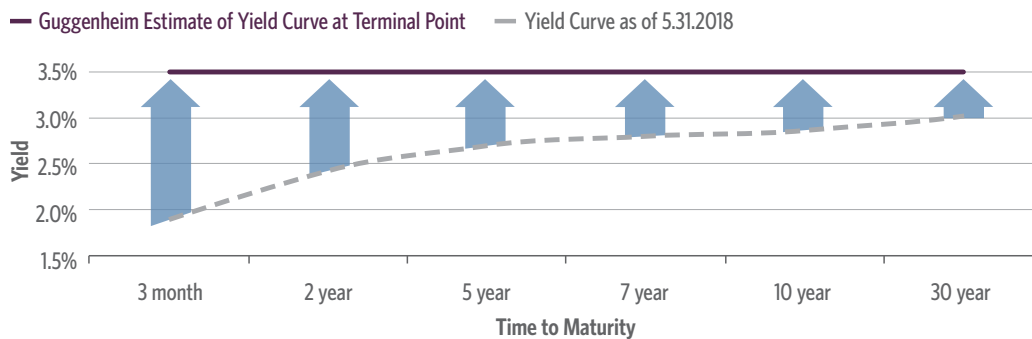
We believe that the surest path to underperformance is to remain anchored to outdated core fixed-income conventions. Traditional core strategies are overly confined to a benchmark that no longer accurately reflects all of the investment options that exist in today's fixed-income landscape. As such, they restrict portfolios from reallocating toward more attractive

opportunities that have emerged as a result of the evolution of U.S. capital markets.

Taking the easy path of bearing greater credit or interest-rate risk to generate incremental yield today may come at the expense of future returns. The accommodative policy stances of major central banks may continue to foster a benign credit environment in the near term, but we believe they are also likely fostering a general underappreciation of investment risks.

With the chasm between investors' income targets and benchmark yields likely to persist, traditional views of core fixed-income management need to evolve. Achieving yield targets while maintaining a high-quality portfolio is possible, but requires a willingness to look beyond the benchmark. In our view, investors must gravitate to sectors where value remains unexploited. This approach demands significantly more credit expertise and ongoing diligence, but we believe it offers the prospect of superior risk-adjusted returns over time.

Bloomberg Barclays U.S. Aggregate Index



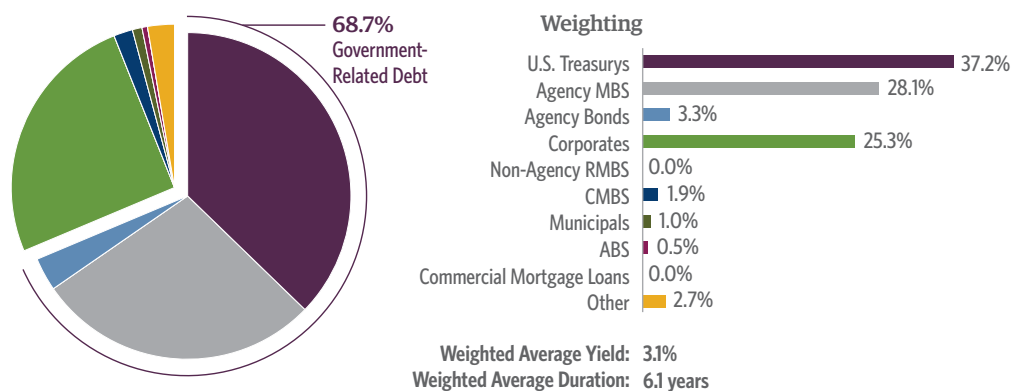
Our research suggests that the terminal rate in this tightening cycle will be in the range of 3.0-3.5 percent. If all points on the yield curve converge to 3.5 percent over the next 12 months, a portfolio of five-year Treasuries, which have a duration of 4.6 years, would lose approximately 1.0 percent on a total return basis. By contrast, a barbell strategy that allocates 75 percent to floating-rate assets earning 200 basis points over Libor and 25 percent to 30-year Treasuries would have a similar duration of 4.8 years but would generate a positive total return of 1.7 percent.

Hypothetical Portfolios	Portfolio A	Portfolio B	Portfolio C	Barbell 1	Barbell 2
Description	100% 5-Yr Treasuries	100% 10-Yr Treasuries	100% 30-Yr Treasuries	50% 30-Yr Treasuries/ 50% Floating	25% 30-Yr Treasuries/ 75% Floating
Duration	4.6 yrs	8.6 yrs	19.3 yrs	9.7 yrs	4.8 yrs
Yield, T ₀	2.70%	2.86%	3.03%	3.67%	4.00%
Yield, T ₁	3.50%	3.50%	3.50%	4.50%	5.00%
Price Return	(3.7%)	(5.5%)	(9.2%)	(4.6%)	(2.3%)
Total Return	(1.0%)	(2.6%)	(6.1%)	(0.9%)	1.7%

Source: U.S. Department of the Treasury, Guggenheim Investments. Current yield curve is based on the curve as of 5.31.2018. For illustration purposes only. The information provided here is intended to be general in nature and should not be construed as a recommendation of any specific security or strategy. Assumes a terminal level of interest rates across the yield curve of 3.5 percent based on internal research, and further ignores curve roll-down effect and assumes no tightening of credit spreads. Hypothetical floating-rate assets in this example are assumed to earn 200 basis points over Libor.

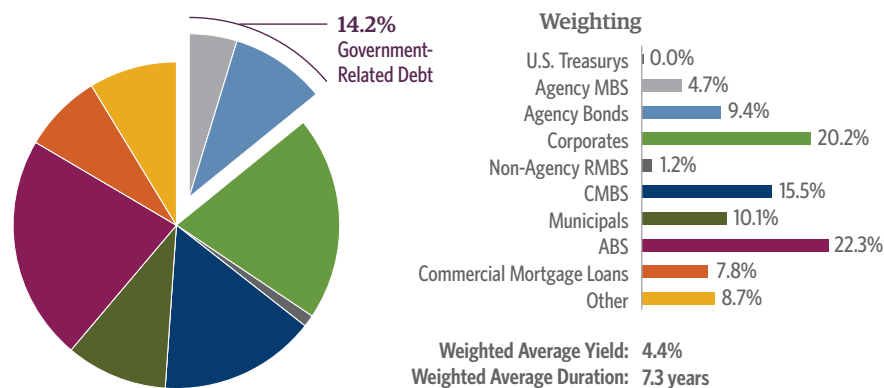
Guggenheim's Approach to Core Fixed Income Versus the Bloomberg Barclays U.S. Aggregate Index

Bloomberg Barclays U.S. Aggregate Index



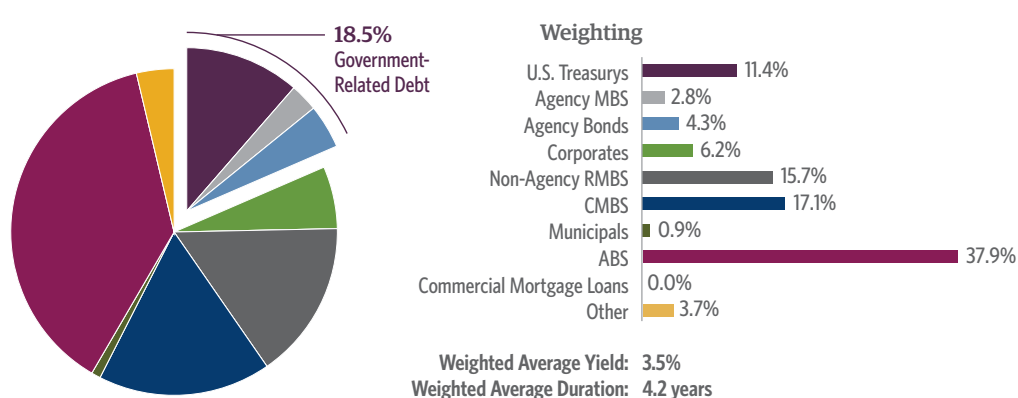
By remaining tightly aligned to the Bloomberg Barclays Agg, which is currently dominated by low-yielding government-related debt, investors are giving up the flexibility to take advantage of undervalued sectors and to limit exposure to unattractive ones.

Guggenheim Core Fixed Income¹



Even within the traditional confines of a core fixed-income mandate, Guggenheim differentiates its strategy from the Bloomberg Barclays Agg by underweighting low-yielding government-related securities (which account for under 15 percent of assets) in favor of municipals and structured credit, in particular ABS.

Guggenheim Core Plus Fixed Income¹



The greater flexibility of Core Plus mandates allows Guggenheim to further differentiate our strategy from the Bloomberg Barclays Agg, resulting in an even greater weighting of non-Agency RMBS and ABS.

Source: Bloomberg Barclays Indexes, Guggenheim Investments. Data as of 3.31.2018. Totals may not sum to 100 due to rounding. 1. Based on representative accounts in the Guggenheim Core Fixed-Income Composite and the Core Plus Fixed-Income Composite, respectively. The representative accounts were chosen since, in our view, they are the accounts within each composite which, generally and over time, most closely reflects the portfolio management style of their respective strategies. A composite is an aggregation of accounts managed according to a similar investment mandate. Yield characteristics are calculated using the weighted average yield to worst of each security in its respective account. Yield to worst is the minimum of all yields calculated for all call dates including yield to maturity. Updates to these allocation charts can be found at Guggenheim's quarterly Fixed-Income Outlook, at guggenheiminvestments.com/Perspectives/Portfolio-Strategy.

Important Notices and Disclosures

Past performance is not indicative of future results.

The Bloomberg Barclays U.S. Aggregate index represents securities that are SEC-registered, taxable, and dollar denominated. The index covers the U.S. investment grade fixed rate bond market, with index components for government and corporate securities, mortgage pass-through securities, and asset-backed securities. These major sectors are subdivided into more specific indexes that are calculated and reported on a regular basis.

The London Interbank Offered Rate (Libor) is a benchmark rate that a select group of banks charge each other for unsecured short-term funding.

The Bloomberg Barclays AA Corporate index, the Barclays A Corporate index and the Barclays BBB Corporate index are all subcomponents of a broader Barclays U.S. Corporate Investment Grade index, which is comprised of publicly issued and SEC-registered U.S. corporate and specified foreign debentures and secured notes that meet the specified maturity, liquidity, and quality requirements.

The Bloomberg Barclays BB Corporate index is a subcomponent of the Barclays U.S. High Yield index, which covers the universe of fixed-rate, noninvestment-grade debt. Original issue zeroes, step-up coupon structures, 144-As, and pay-in-kind bonds (PIKs, as of 10.1.2009) are also included.

Investing involves risk, including the possible loss of principal. Investments in fixed-income instruments are subject to the possibility that interest rates could rise, causing their values to decline. Investors in asset-backed securities, including collateralized loan obligations ("CLOs"), generally receive payments that are part interest and part return of principal. These payments may vary based on the rate loans are repaid. Some asset-backed securities may have structures that make their reaction to interest rates and other factors difficult to predict, making their prices volatile and they are subject to liquidity and valuation risk. CLOs bear similar risks to investing in loans directly, such as credit, interest rate, counterparty, prepayment, liquidity, and valuation risks. Loans are often below investment grade, may be unrated, and typically offer a fixed or floating interest rate. High yield and unrated debt securities are at a greater risk of default than investment grade bonds and may be less liquid, which may increase volatility.

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1. Guggenheim Investments total asset figure is as of 3.31.2018. The assets include leverage of \$12.2bn for assets under management. In April 2018, Guggenheim Investments closed the sale of the firm's Exchange Traded Fund ("ETF") business representing \$38.6bn in assets under management, which will be reflected in the 6.30.2018 assets under management. Guggenheim Investments represents the following affiliated investment management businesses of Guggenheim Partners, LLC: Guggenheim Partners Investment Management, LLC, Security Investors, LLC, Guggenheim Funds Investment Advisors, LLC, Guggenheim Funds Distributors, LLC, Guggenheim Real Estate, LLC, GS GAMMA Advisors, LLC, Guggenheim Partners Europe Limited, and Guggenheim Partners India Management.

2. Guggenheim Partners assets under management are as of 3.31.2018 and include consulting services for clients whose assets are valued at approximately \$66bn. In April 2018, Guggenheim Investments closed the sale of the firm's Exchange Traded Fund ("ETF") business representing \$38.6bn in assets under management, which will be reflected in the 6.30.2018 assets under management.

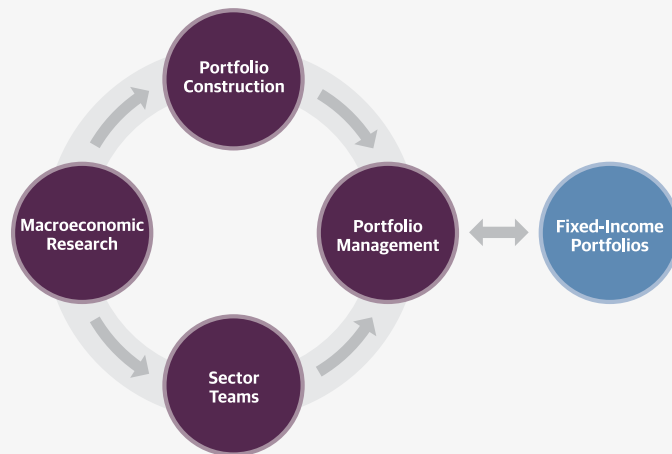
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Guggenheim's Investment Process

Guggenheim's fixed-income portfolios are managed by a systematic, disciplined investment process designed to mitigate behavioral biases and lead to better decision-making. Our investment process is structured to allow our best research and ideas across specialized teams to be brought together and expressed in actively managed portfolios. We disaggregated fixed-income investment management into four primary and independent functions—Macroeconomic Research, Sector Teams, Portfolio Construction, and Portfolio Management—that work together to deliver a predictable, scalable, and repeatable process. Our pursuit of compelling risk-adjusted return opportunities typically results in asset allocations that differ significantly from broadly followed benchmarks.



Guggenheim Investments

Guggenheim Investments is the global asset management and investment advisory division of Guggenheim Partners, with more than \$246 billion¹ in total assets across fixed income, equity, and alternative strategies. We focus on the return and risk needs of insurance companies, corporate and public pension funds, sovereign wealth funds, endowments and foundations, consultants, wealth managers, and high-net-worth investors. Our 300+ investment professionals perform rigorous research to understand market trends and identify undervalued opportunities in areas that are often complex and underfollowed. This approach to investment management has enabled us to deliver innovative strategies providing diversification opportunities and attractive long-term results.

Guggenheim Partners

Guggenheim Partners is a global investment and advisory firm with more than \$305 billion² in assets under management. Across our three primary businesses of investment management, investment banking, and insurance services, we have a track record of delivering results through innovative solutions. With 2,400 professionals based in more than 25 offices in six countries around the world, our commitment is to advance the strategic interests of our clients and to deliver long-term results with excellence and integrity. We invite you to learn more about our expertise and values by visiting GuggenheimPartners.com and following us on Twitter at twitter.com/guggenheimptnrs.

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