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September 2020

Yield, Stability, Liquidity, and Diversification: Are Fixed Income Allocations Still Up to the Task?

In an era of ultra-low interest rates, we re-examine the purpose and constitution of Core fixed income allocations.

By Joseph Graham, CFA

High quality fixed income allocations generally start with a simple premise—combine a broad cross-section of publicly traded debt that is investment grade, taking advantage of that diversity to build a portfolio anchor that offers the potential for:

- Yield
- Stability
- Liquidity
- Diversification benefits relative to equity holdings

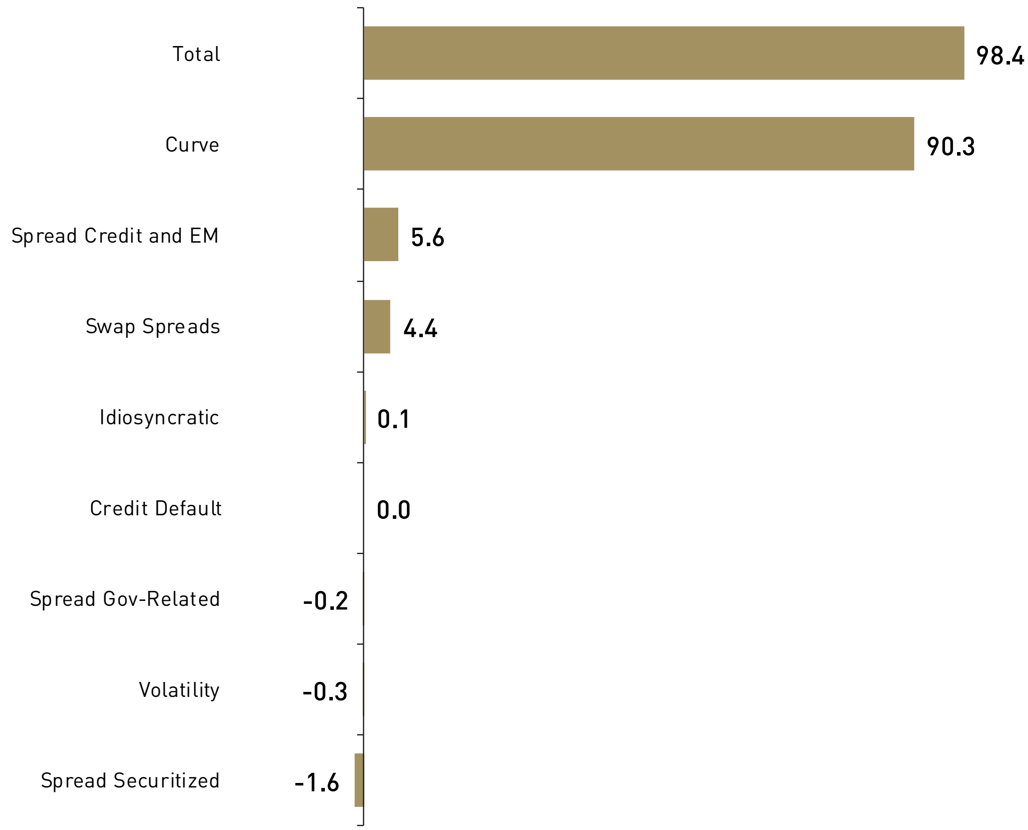
We have been reimagining fixed income allocations for the past several years as the most common approaches—Core and Core Plus—have become a concentrated bet on interest-rate moves while offering frustratingly low yields. After the market volatility of March 2020, the yield issue has become more acute and new concerns have surfaced. Few envisioned the economic stress brought about by the pandemic and the liquidity crunch that coincided with its almost immediate onset. Fewer still imagined the operating cash needs of institutions such as universities and hospitals would be so correlated to market events. We believe it's worth asking: *How did fixed income allocations hold up during the March turmoil—and is there anything we can do better now that the episode is behind us?*

How Did Core Hold Up?

Over the years, core fixed income portfolios have been increasingly dominated by government and agency debt, increasing interest rate risk while offering less and less yield. Heading into the pandemic crisis, rates represented the vast majority of risk in core fixed income portfolios, as shown in the projected variance model in Figure 1.

Figure 1. Duration Risk Dominates Other Risks in a Key Fixed-Income Benchmark

Sources of variation in returns for the Bloomberg Barclays U.S. Aggregate Bond Index, as of June 30, 2020



Source: Barclays POINT, Lord Abbett. Variation depicts performance of the Bloomberg Barclays U.S. Aggregate Bond Index versus cash.

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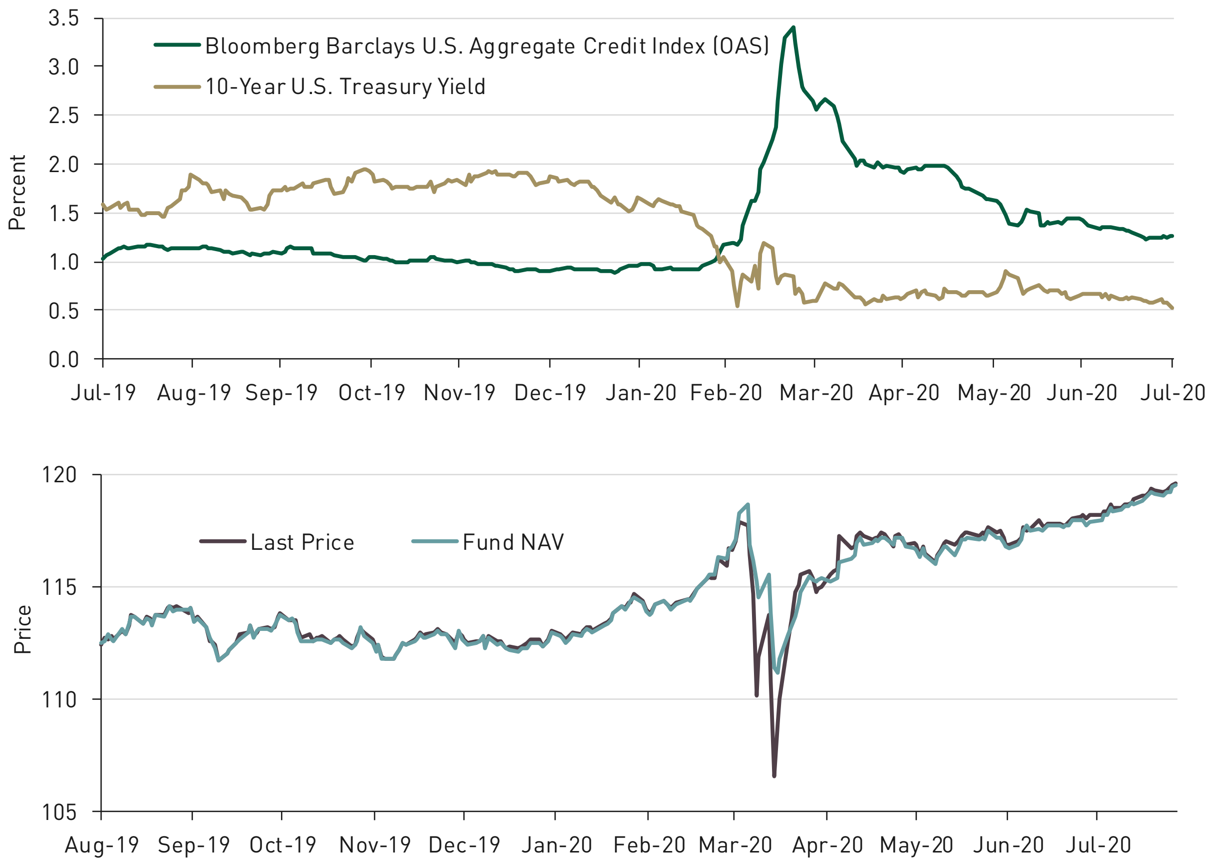
This rate exposure did fairly well to stabilize core portfolios as the 10-year U.S. Treasury yield fell from 1.75% to 0.64% during March 2020. However, spread widening in corporate bonds and negative convexity in mortgage-backed securities limited the impact of the rate move. Further, some common ways to access generic core fixed income like the iShares Core U.S. Aggregate Bond ETF (AGG; an exchange-traded fund tracking the Bloomberg Barclays U.S. Aggregate Bond Index) traded at substantial discounts to net asset value (NAV) on days when liquidity was needed the most, as shown in Figure 2.

Figure 2. "Agg"-Related Portfolios Struggled to Provide Stability and Liquidity during the March 2020 Market Turmoil



Source: Bloomberg. Data as of 07/31/2020. The upper panel represents the 10-year U.S. Treasury yield and the spread of the Bloomberg Barclays U.S. Aggregate Credit Index; the lower panel represents the iShares Core U.S. Aggregate Bond ETF (exchange-traded fund) price and net asset value (NAV). OAS=Option-adjusted spread.

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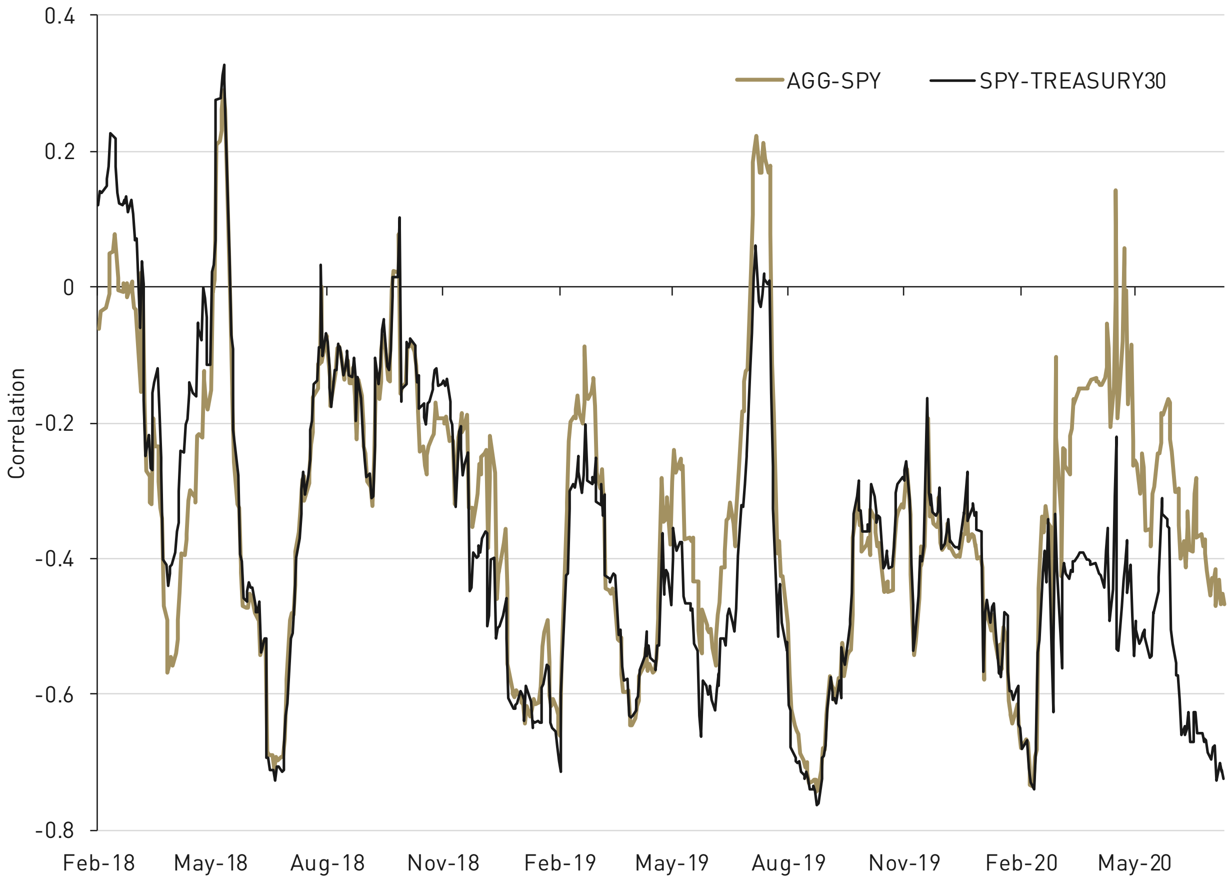
While rate volatility dampened as rates neared 0%, credit spreads widened, and liquidity deteriorated, the correlation of the aggregate index with equities briefly moved into positive territory. Long-dated U.S. Treasuries worked measurably better as diversifiers, maintaining negative correlations with equities for much of the crisis, and provided investors with a much-needed source of liquidity.

Figure 3. Aggregate Index's Correlation to Equities Spiked Positive in April 2020

Rolling 30-day correlation of the Bloomberg Barclays U.S. Aggregate Index (AGG) versus the (1) S&P 500 Index (SPY) and (2) the 30-year U.S. Treasury bond, February 14, 2018–July 23, 2020



Source: Bloomberg and Standard & Poor's. Data as of 07/31/2020.

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What did we learn from this experience? There's no substitute for cash and Treasuries in times of crisis. Meaningful allocations to those instruments during periods of market stress historically have pulled down portfolio yield and expected return in a dramatic way, however, and need to be offset.

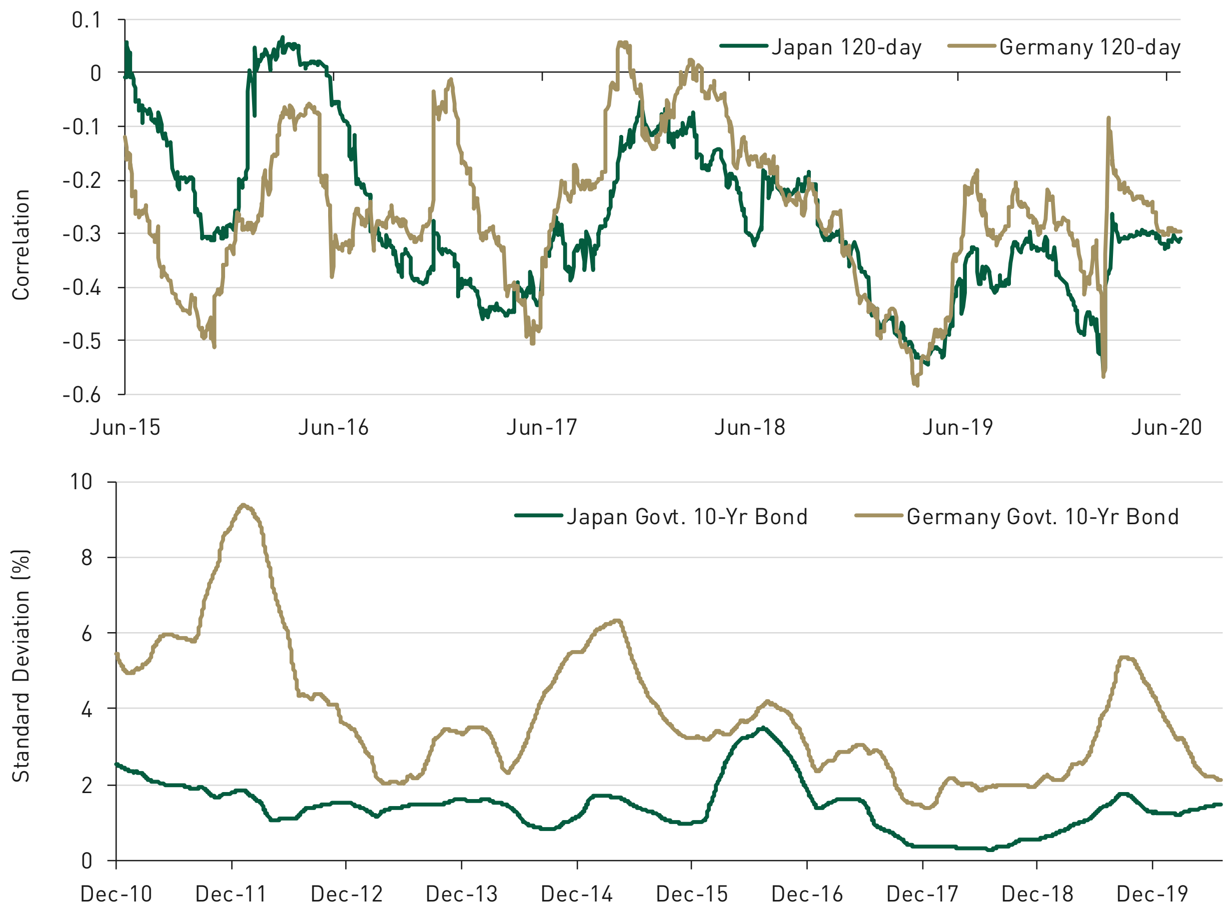
The Outlook for Core Portfolios Benefits Going Forward

Post COVID-19, the meager yield from standard core fixed income portfolios like the AGG has grown more problematic, with the Aggregate portfolio yielding 1.12% as of August 31, 2020. Essentially, investors are giving up the first goal of fixed income, yield, for the salutary effects of stability, liquidity and diversification—all of which were only partially realized during the downturn.

Now, with rates near the "zero bound" (i.e., 0%) in the United States, it's reasonable to ask if these characteristics are still worth paying for. Experience in other countries provides some support for the continued portfolio benefits of duration risk. Even as rates dipped into the negative in Europe and Japan, sovereign bonds in those markets continue to exhibit stability, liquidity, and even negative correlation to equity markets, as shown in Figure 4. Interest rate volatility has been dampened as rates slip below 0%, however, requiring higher hedge ratios, and thus more negative yielding debt is needed to keep a lid on equity volatility. Essentially the "cost" to the portfolio of including interest rate risk as a hedge continues to increase.

Figure 4. Can Government Bonds Keep a Negative Correlation versus Equities?

Correlation of government bond indexes versus home country equity index (120-day rolling basis[1]), June 29, 2015–July 22, 2020 (upper panel); rates volatility of government bonds, December 17, 2010–July 24, 2020 (lower panel)



Source: Bloomberg and Standard & Poor's. Data as of 07/31/2020.

[1]S&P Japan Government Bond Index vs. MSCI Japan Index; S&P Germany Sovereign Bond Index vs. MSCI Germany Index.

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A further complication to the use of rate risk as a hedging tool near the zero bound is that the environment in the United States may be different. There is good reason to believe negative rates won't be tolerated by U.S. policymakers, as U.S. Federal Reserve (Fed) governors have made many statements to this effect, noting the banking system's importance to the economy and the strategic advantages of the dollar's unique role as a reserve currency. If interest rates stay stubbornly positive even in the face of weakening equity markets, the diversification benefits of fixed income portfolios will be harder to achieve. With the Fed's self-imposed limitation on rate reduction below zero, fiscal policy and other measures may need to become the primary response to any dip in demand. Large-scale deficit spending could then cause asymmetric upside risk to inflation, especially when combined with pandemic and trade-related limits to production, threatening the stability characteristic of core fixed income portfolios with large amounts of interest rate risk.

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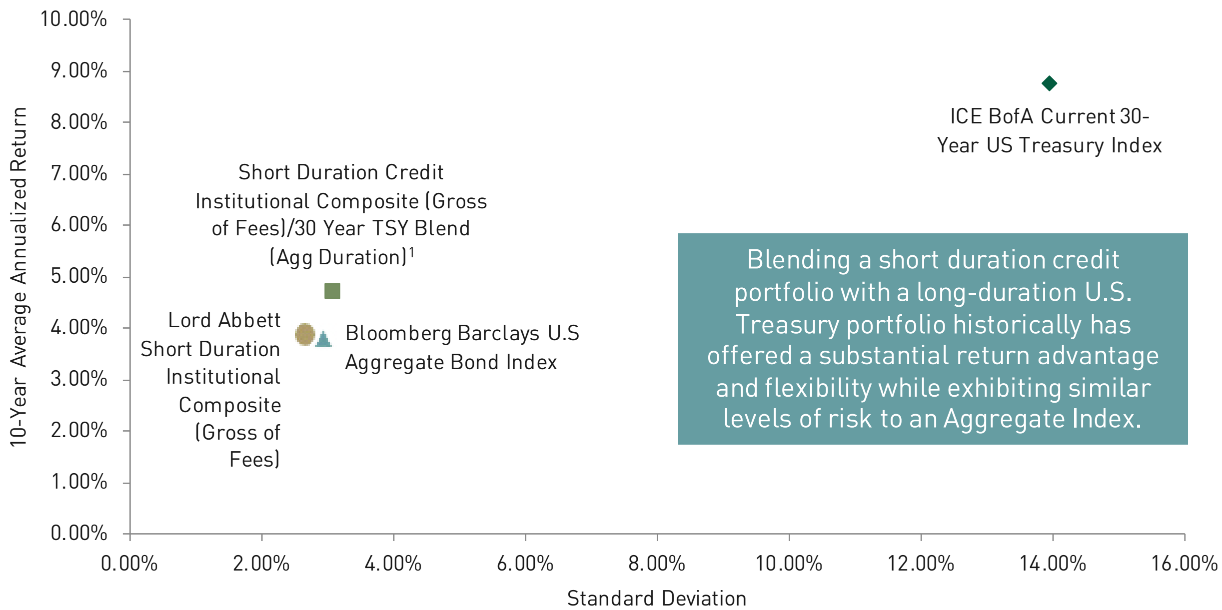
A More Purpose-Built Fixed Income Asset Allocation

Near the zero bound, investors are paying more than ever for rate risk and possibly setting themselves up to realize less utility from that risk. That's not to say that rate risk has no place in a portfolio. We can see the argument for long-term Treasuries as a source of opportunistic or tactical funds if correlations with equities remain negative and liquidity continues. Additionally, because of their relative stability, short term Treasuries can be useful investments for very risk-averse pools of capital - to meet an organization's near-term operational needs, for example.

One way to counter falling yields and increased risk of inflation for Treasuries in a portfolio is to pair these holdings with limited duration credit. These risks have combined well in the past, as credit risk has provided diversification benefits even in falling rate environments. Chart 5 shows that a blend of Short Duration Income and 30-year Treasuries that targets the duration of the Bloomberg Barclays Aggregate Index has provided significantly better returns with marginally higher volatility over the last 10 years.

Chart 5. Deconstructing Core Fixed Income

Ten-year risk/return for indicated investments, as of June 30, 2020



Short Duration Credit Institutional Composite	1 Year	3 Years	5 Years	10 Years
Gross of Fees	2.22%	3.14%	3.00%	3.56%
Net of Fees	2.02%	2.93%	2.78%	3.33%

Short Duration Credit Institutional Composite (Gross of Fees)/30 Year TSY Blend (Agg Duration) [1]	
Return	4.67%
Standard Deviation	3.10%

Bloomberg Barclays U.S. Aggregate Bond Index	
Return	3.82%
Standard Deviation	2.94%

Lord Abbett Short Duration Institutional Composite	
Return	3.83%
Standard Deviation	2.69%

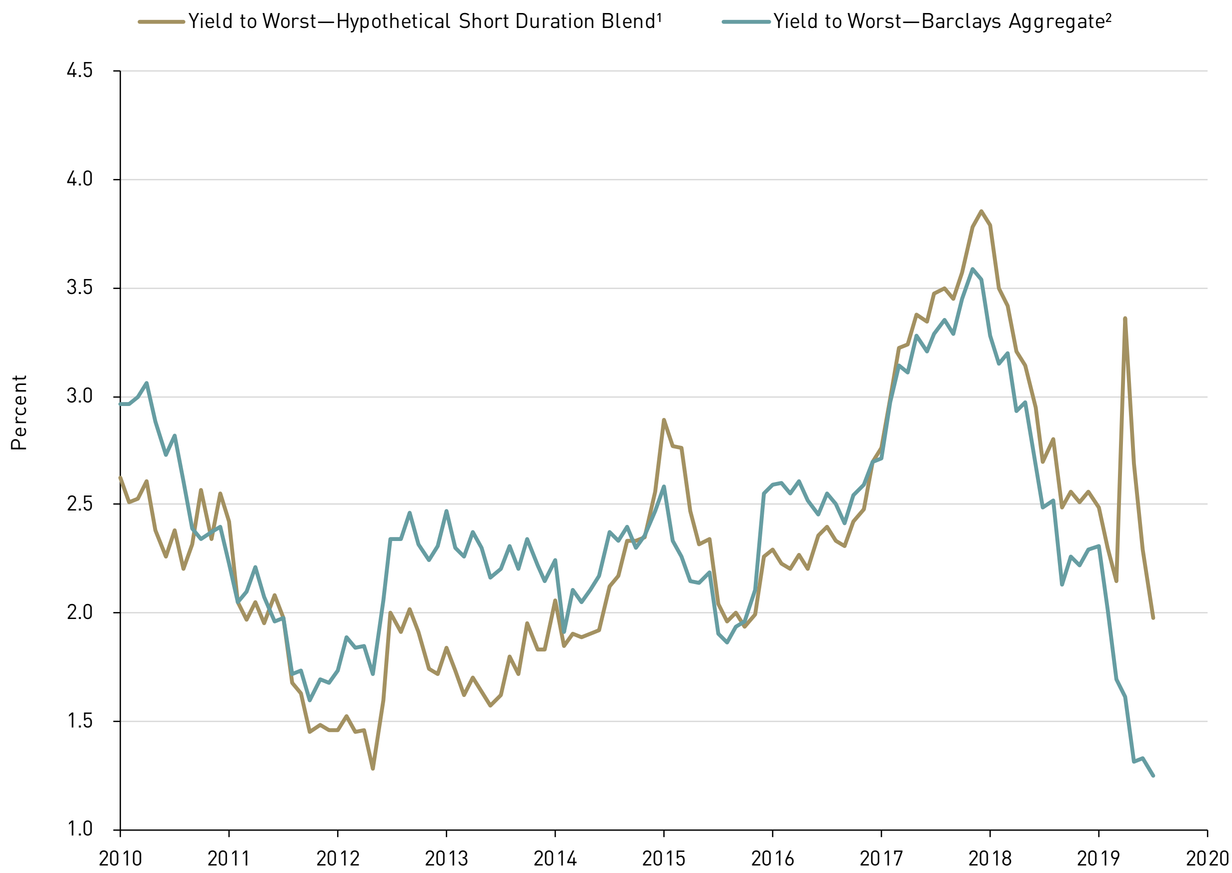
Source: Morningstar. 183.08% Short Duration Credit Institutional Composite/16.92% ICE BofA Current 30-Year US Treasury Index rebalanced daily.

Past performance is not a reliable indicator or guarantee of future results. The gross performance shown does not reflect the deduction of investment advisory fees but does reflect the deduction of any applicable transaction costs. Please refer to the End Notes to Performance for additional performance information, including the effect of fees on performance. Indexes are unmanaged, do not reflect the deduction of fees or expenses, and are not available for direct investment. Neither diversification nor asset allocation can guarantee a profit or protect against loss in declining markets.

We believe now is one of the most opportune times to add limited duration credit risk to fixed income portfolios that are usually dominated by rate risk. Though spreads vary widely by sector and quality, in general, credit spreads have not returned to pre-crisis levels and offer relatively high compensation relative to other risk factors.

Figure 6. Recent Yield Advantages in Short Credit

Short duration hypothetical blend yield to worst versus Bloomberg Barclays U.S. Aggregate Index yield, December 31, 2010–June 30, 2020



[1]Hypothetical Short Duration Blended Allocation (as of 6/30/20, not rebalanced) includes 30% ICE BofA 1-3 Year US Corporate Index, 30% Bloomberg Barclays 1–3.5 Year CMBS Index, 15% ICE BofA 0–3 Yea ABS Fixed Rate Index, 15% Bloomberg Barclays 1–3 High Yield Index,10% Bloomberg Barclays 1-3 Year US Govt/Credit Index.
[2]Bloomberg Barclays US Aggregate Total Return Value Unhedged USD.

Source: Lord Abbett and Bloomberg. Data as of 06/30/2020. YTW=Yield to worst. Short credit yield from 12/31/2010–6/30/2020.

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There's an important distinction between the credit risk in a typical Aggregate or core portfolio and the kind of credit risk in short credit. Credit spread is compensation for two primary risks, default risk and liquidity risk. Shorter maturity and higher quality bonds typically have very low default risk—their high credit rating indicates that they have a variety of options available, from business flexibility to financing option, which likely would take years to exhaust. So most of the risk in these kinds of bonds, both corporate and securitized, is liquidity risk—spreads may widen but the risk to principal is low. This "pull to par" in the absence of defaults has resulted in short, high quality credit (as represented by the ICE BofA 1-3 Year Corporate Index) returning principal in 96% of all rolling 12-month periods from January 1, 2008 to June 30, 2020, compared to 86% of periods for an aggregate portfolio.

The nature of the credit risk in short credit is important because while default risk has been elevated by the economic stress caused by the pandemic, liquidity risk is arguably as benign as it's ever been because of the actions by the Fed in response to the pandemic. On the back of the announcement of Fed facilities to support market liquidity in March, nearly $1 trillion in new issue corporate debt has further buttressed the liquidity position of a large swath of the investment grade market. In short, companies have rarely had more access to liquidity while investors are being paid well for liquidity risk.

We favor an active, multi-sector approach to short credit portfolios that can complement Treasury allocations. We believe the combination of these two portfolios can form a more "purpose-built" core fixed income portfolio, offering the potential to satisfy liquidity needs for investors while balancing income and stability.

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END NOTES TO PERFORMANCE

The Global Investment Performance Standards (GIPS®) compliant performance results shown represent the investment performance record for the Lord, Abbett & Co. LLC (Lord Abbett) **Short Duration Credit Institutional Composite**. Prior to April 1, 2013, the composite was named Short Duration Fixed Income Institutional Composite. This composite is comprised of all fully discretionary portfolios managed on behalf of institutional investors investing primarily in taxable short duration investment grade debt securities of various types. The portfolios may also invest in lower-rated debt securities, including non-U.S. debt securities denominated in foreign currencies and floating or adjustable rate senior loans. Effective November 2017, only accounts with a value of $40 million or more are included in the composite. Effective July 2014, only accounts with an initial value of $100 million or more are included in the composite. Effective January 2018, accounts funded on or before the 15th of the month will be included in the Composite effective the first day of the first following month. Accounts funded after the 15th of the month will be included effective on the first day of the second following month. Prior to January 2018, other than registered investment companies sponsored by Lord Abbett, accounts opened/funded on or before the 15th day of the month were included in the Composite effective the first day of the second following month and accounts opened/funded after 15th of the month were included effective on the first day of the third following month. Registered investment companies sponsored by Lord Abbett are included in the Composite in the first full month of management. Closed accounts are removed from the Composite after the last full month in which they were managed in accordance with applicable objectives, guidelines, and restrictions. Performance results are expressed in U.S. dollars and reflect reinvestment of any dividends and distributions. The Composite was created in 2008. A complete list of Lord Abbett composites and a description of their investment strategies is available on request. Policies for valuing portfolios, calculating performance, and preparing compliant presentations are available upon request.

For GIPS® purposes, the firm is defined as Lord, Abbett & Co. LLC ("Lord Abbett"). Total Firm Assets are the aggregate fair value of all discretionary and non-discretionary assets for which the Firm has investment management responsibility. Accordingly, Total Firm Assets include, but are not limited to, mutual funds (all classes of shares), privately placed investment funds, non-U.S. domiciled investment funds, separate/institutional portfolios, individual portfolios and separately managed accounts ("Wrap Fee/SMA Portfolios") managed by Lord Abbett. Total Firm Assets also include any collateralized, structured investment vehicle, such as a collateralized debt obligation or collateralized loan obligation, for which Lord Abbett has been appointed as the collateral manager. For the period prior to January 1, 2000, the definition of the Firm does not include any hedge fund or SMA program accounts where Lord, Abbett & Co. LLC did not have the records so long as it is impossible for Lord, Abbett & Co. LLC to have the records (within the meaning of relevant GIPS® standards interpretations). Total Firm Assets also exclude separately managed program accounts that involve model delivery.

The number of portfolios and total assets in the Composite, and the percentage of total "firm" assets represented by the Composite at the end of each calendar year for which performance information is provided are as follows:

Calendar Year Ended	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010
# of Portfolios	14	11	7	3	2	2	1	1	1	1
Total Assets ($M)	$63,124	$45,184	$43,387	$38,072	$34,127	$37,197	$33,783	$28,523	$16,733	$11,525
Percentage of Firm Assets	30.94%	28.06%	27.79%	28.29%	27.52%	27.36%	24.88%	22.30%	15.60%	10.80%
Total Firm Assets ($M)	$204,031	$161,055	$156,110	$134,565	$124,007	$135,945	$135,786	$127,753	$107,449	$106,528
Dispersion	0.03	0.03	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Lord Abbett Short Duration Credit Institutional Composite Gross (Annual)	6.05%	1.84%	2.91%	4.64%	1.03%	2.33%	2.23%	7.25%	3.77%	7.10%
Lord Abbett Short Duration Credit Institutional Composite Gross (3 year Annualized Return*)	3.59%	3.13%	2.85%	2.66%	1.86%	3.91%	4.40%	6.03%	9.42%	7.98%
Lord Abbett Short Duration Credit Institutional Composite Gross (3 year Annualized Ex-Post Standard Deviation*)	0.91%	1.06%	1.18%	1.33%	1.27%	1.49%	1.76%	1.77%	3.07%	4.70%
Lord Abbett Short Duration Credit Institutional Composite Net (Annual)	5.84%	1.64%	2.70%	4.39%	0.79%	2.08%	1.99%	7.00%	3.53%	6.84%
Lord Abbett Short Duration Credit Institutional Composite Net (3 year Annualized Return*)	3.38%	2.90%	2.61%	2.41%	1.62%	3.66%	4.15%	5.78%	9.15%	7.73%
ICE BofA 1-3 year U.S. Corporate Index (Annual)	5.43%	1.62%	1.91%	2.39%	1.01%	1.19%	1.78%	4.49%	1.76%	4.86%
ICE BofA 1-3 year U.S. Corporate Index (3 year Annualized Return*)	2.97%	1.97%	1.77%	1.53%	1.32%	2.47%	2.67%	3.69%	6.97%	5.39%
ICE BofA 1-3 year U.S. Corporate Index (3 year Annualized Ex-Post Standard Deviation*)	0.93%	0.87%	0.84%	0.88%	0.77%	0.98%	1.21%	1.43%	2.96%	4.91%

Dispersion is represented by the asset-weighted standard deviation, a measure that explains deviations of portfolio rates of return from the asset-weighted composite return. Only portfolios that have been managed within the Composite style for a full year are included in the asset-weighted standard deviation calculation. The measure may not be meaningful (N/A) for composites consisting of five or fewer portfolios or for periods of less than a full year.

The performance of the Composite is shown net and gross of advisory fees and reflects the deduction of transaction costs. The deduction of advisory fees and expenses (and the compounding effect thereof over time) will reduce the performance results and, correspondingly, the return to an investor. Net performance of the Composite as presented in the table on the previous page reflects the deduction of a "model" advisory fee, calculated as the highest advisory fee, borne by any account (without giving effect to any performance fee that may be applicable) in the Composite (an annual rate of 0.20% of assets from April 1, 2017 forward, prior to April 1, 2017 an annual rate of 0.24% of assets) and other expenses (including trade execution expenses). **For example, if $10 million were invested and experienced a 10% compounded annual return for 10 years, its ending dollar value, without giving effect to the deduction of the advisory fee, would be $25,937,425. If an advisory fee of 0.20% of average net assets per year for the 10-year period were deducted, the annual total return would be 9.78% and the ending dollar value would be $25,469,675. The management fee schedule is as follows: 0.20% on the first $50 million, 0.17% on the next $100 million, 0.15% on the next $100 million, and 0.13% on all assets over $250 million.** Net-of-fee performance reflects the deduction of the highest applicable institutional advisory fee that would be charged to a new institutional client account based on the current fee schedule for this strategy. The composite includes one or more registered investment companies sponsored by Lord Abbett ("Lord Abbett Funds") that are subject to fees and expenses that would be inapplicable to an institutional client account. Therefore, the actual performance of Lord Abbett Fund accounts included in the composite may be lower than the net-of-fee composite performance presented. Fees and expenses applicable to the Lord Abbett Funds are disclosed in each Fund's Prospectus, which is available upon request. Past performance does not guarantee future results. Certain securities held in portfolios contained in this composite may have valuations determined using both subjective observable and subjective unobservable inputs. The Firm's valuation hierarchy does not materially differ from the hierarchy in the GIPS Valuation Principles. Portfolios in this composite may be managed against an internal index that is constructed utilizing sectors and sub-sectors of publicly available indices. The weights of the sectors and sub-sectors of the internal index may vary over time and differ materially from the sectors and weightings of the benchmark Index.

Lord Abbett claims compliance with the Global Investment Performance Standards (GIPS®) and has prepared and presented this report in compliance with the GIPS standards. Lord, Abbett & Co. LLC has been independently verified for the periods 1993 through 2018. Verification assesses whether (1) the firm has complied with all the composite construction requirements of the GIPS standards on a firm-wide basis and (2) the firm's policies and procedures are designed to calculate and present performance in compliance with the GIPS standards. The Short Duration Credit Institutional composite has been examined for the periods 2008 through 2018. The verification and performance examination reports are available upon request.

The **ICE BofA 1-3 Year U.S. Corporate Index** is an unmanaged index comprised of U.S. dollar denominated investment grade corporate debt securities publicly issued in the U.S. domestic market with between one and three year remaining to final maturity. Prior to May 2013, the benchmark for the composite was the Bloomberg Barclays Capital 1-3 Year Government/Credit Bond Index. Lord Abbett believes the ICE BofA 1-3 Year U.S. Corporate Index is more representative of the investment strategy based on the strategy's higher allocation to corporate credit and reduced exposure to U.S. Government securities. The benchmarks have not been examined by Deloitte & Touche LLP.

Past performance is not a reliable indicator or a guarantee of future results. Differences in account size, timing of transactions, and market conditions prevailing at the time of investment may lead to different results among accounts. Differences in the methodology used to calculate performance also might lead to different performance results than those shown. Composite performance is compared to that of an unmanaged index, which does not incur management fees, transaction costs, or other expenses associated with a managed account.

A Note about Risk: The value of investments in fixed-income securities will change as interest rates fluctuate and in response to market movements. Generally, when interest rates rise, the prices of debt securities fall, and when interest rates fall, prices generally rise. High-yield securities, sometimes called junk bonds, carry increased risks of price volatility, illiquidity, and the possibility of default in the timely payment of interest and principal. Bonds may also be subject to other types of risk, such as call, credit, liquidity, interest-rate, and general market risks. Longer-term debt securities are usually more sensitive to interest-rate changes; the longer the maturity of a security, the greater the effect a change in interest rates is likely to have on its price. Lower-rated bonds may be subject to greater risk than higher-rated bonds. No investing strategy can overcome all market volatility or guarantee future results.

Statements concerning financial market trends are based on current market conditions, which will fluctuate. There is no guarantee that markets will perform in a similar manner under similar conditions in the future.

Forecasts and projections are based on current market conditions and are subject to change without notice. Projections should not be considered a guarantee.

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Glossary

Convexity is a measure of the curvature in the relationship between bond prices and bond yields. Convexity demonstrates how the duration of a bond changes as the interest rate changes. If a bond's duration increases as yields increase, the bond is said to have negative convexity.

Core bond strategies offer a diversified approach to fixed income via broad exposure to the investment-grade area of the bond market. They provide participation in several market segments, most notably U.S. Treasuries, mortgage-backed securities, and investment-grade corporate bonds. Core plus strategies add alternative investments such as high-yield, global, and emerging market debt to a core portfolio of investment-grade bonds.

Correlation is a statistic that measures the degree to which two securities move in relation to each other. A perfect positive correlation means that the correlation coefficient is exactly 1. This implies that as one security moves, either up or down, the other security moves in lockstep, in the same direction. A perfect negative correlation means that two assets move in opposite directions, while a zero correlation implies no relationship at all.

Exchange Traded Fund (ETF) is a security that tracks an index, a commodity or a basket of assets like an index fund, but trades like a stock on an exchange. ETFs experience price changes throughout the day as they are bought and sold.

Spread is the percentage difference in current yields of various classes of fixed-income securities versus Treasury bonds or another benchmark bond measure. A bond spread is often expressed as a difference in percentage points or basis points (which equal one-one hundredth of a percentage point). The **option-adjusted spread (OAS)** is the measurement of the spread of a fixed-income security rate and the risk-free rate of return, which is adjusted to take into account an embedded option. Typically, an analyst uses the Treasury securities yield for the risk-free rate.

Treasuries are debt securities issued by the U.S. government and secured by its full faith and credit. Income from Treasury securities is exempt from state and local taxes.

The **yield to worst (YTW)** is the lowest potential yield that can be received on a bond without the issuer actually defaulting.

The **Bloomberg Barclays U.S. Aggregate Bond Index** is an unmanaged index composed of investment-grade securities from the Bloomberg Barclays Government/Corporate Bond Index, Mortgage-Backed Securities Index and the Asset-Backed Securities Index.

The **Bloomberg Barclays U.S. Aggregate Credit Index** measures the investment grade, US dollar-denominated, fixed-rate, taxable corporate and government related bond markets. It is composed of the Bloomberg Barclays U.S. Corporate Index and a non-corporate component that includes foreign agencies, sovereigns, supranationals and local authorities.

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The **MSCI Japan Index** is designed to measure the performance of the large and mid cap segments of the Japanese market. With 320 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in Japan.

The **S&P 500® Index** is widely regarded as the standard for measuring large cap U.S. stock market performance and includes a representative sample of leading companies in leading industries.

The **S&P Germany Sovereign Bond Index** is a comprehensive, market-value-weighted index designed to track the performance of euro-denominated securities publicly issued by Germany for its domestic market.

The **S&P Japan Government Bond Index**, a subindex of the S&P Japan Bond Index, is designed to track the performance of local-currency denominated government bonds issued by Japanese issuers.

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