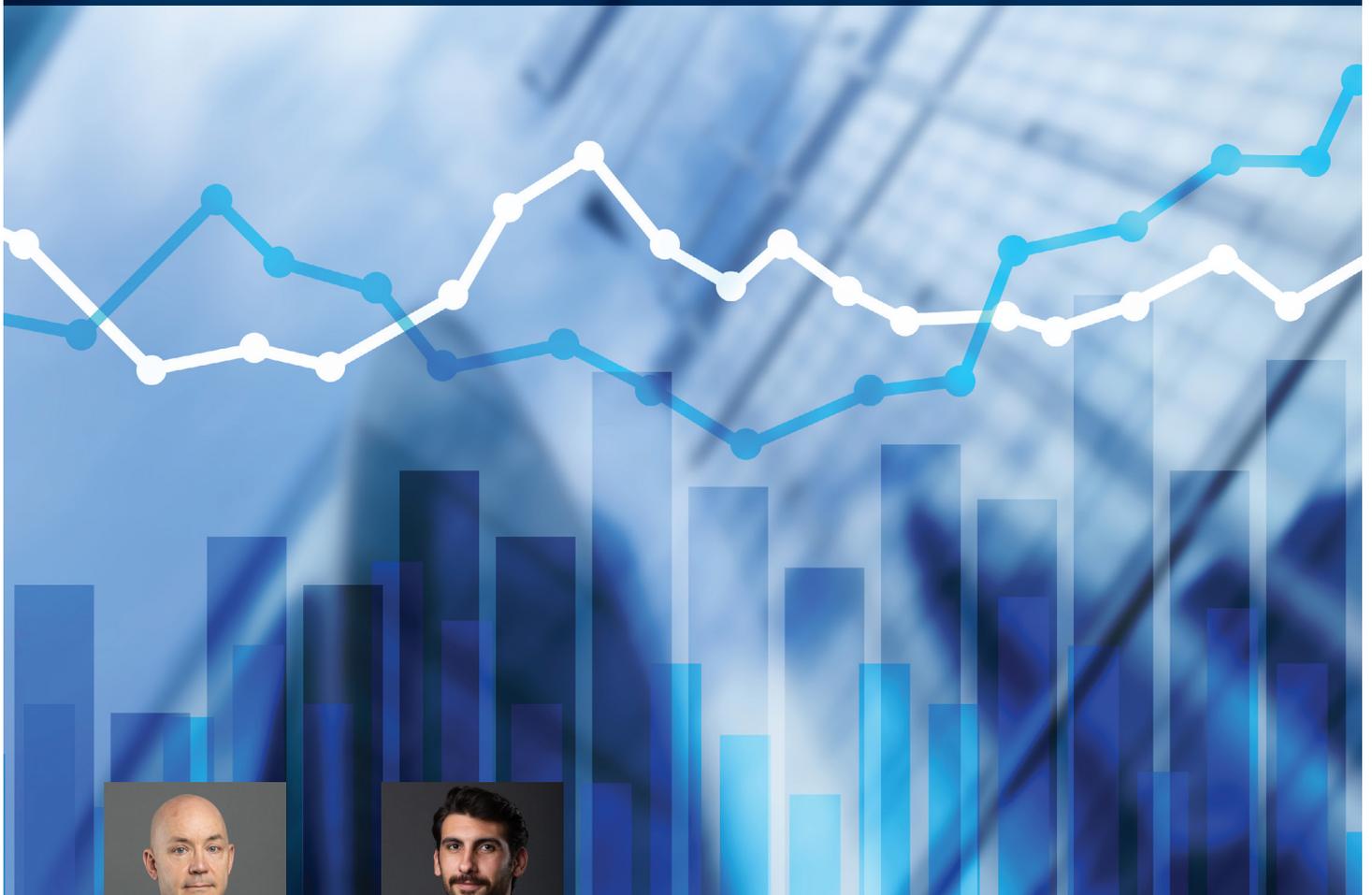


# EXPAND YOUR CORE:

## Constructing a Bond Portfolio to Prosper in Changing Environments



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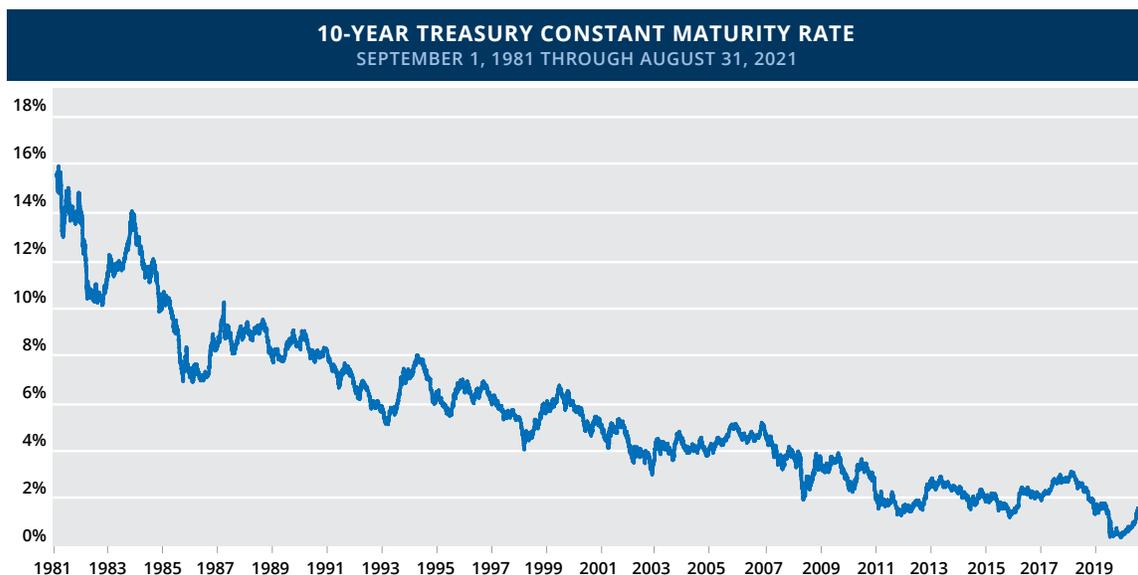


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# EXECUTIVE SUMMARY

- Just as the S&P 500 Index is the “go-to” benchmark for U.S. stocks, the Bloomberg Barclays U.S. Aggregate Bond Index (often called the “Agg”) acts as the go-to index for core U.S. bonds.
- U.S. 10-year Treasury rates have fallen for the past 40 years from a high of over 15% to 1.3% as of August 2021. While interest rates are currently very low, we have seen an improvement from 2020, when the 10-year Treasury rate dipped below 1% before rebounding.
- The multi-decade decline in interest rates boosted the returns of both government bonds and core fixed income indices such as the Agg.
- Low interest rates for core fixed asset classes have two effects on investors. First, they increase bonds’ duration, raising their sensitivity to changing interest rates. Second, low interest rates reduce investors’ income from core bonds, lowering the potential for future returns.
- And as we saw early in 2021, “safe” government and corporate bonds can have negative returns in periods of rising rates.
- The good news is that the Agg isn’t the only option for fixed income investors. The Agg is quite narrow in its scope, representing less than half the U.S. fixed income market while completely excluding non-U.S. fixed income markets.
- Some of the major fixed income asset classes left out of the Agg include high yield corporate bonds, high yield municipal bonds, preferred stocks, floating rate loans, developed and emerging market debt, and more.
- Investors who “Expand their Core” to include other fixed income asset classes may be able to increase their expected returns, while also increasing risks.
- Low interest rates and high bond duration presents challenges to fixed income investors. In our firm’s view, the key to successfully navigating the current environment is to expand beyond the typical core asset classes, while paying attention to and managing risk.
- At Sierra and Ocean Park we do this using our process of identifying positive trends, focusing on security selection, and using a sell discipline based on trailing stops. Our process was designed around those three steps. The result is an approach that reacts to changing market conditions, allowing investors to participate in rising parts of the bond market while reducing exposure in falling markets.



Source: FRED Federal Reserve Bank of St. Louis.

## Risks for the Agg are high while the prospects for return are below average

Over the long term, investors' returns from high quality bonds come primarily from the interest they pay. So, bonds' expected future returns increase when interest rates are high and fall when rates are low.

But the value of fixed coupon bonds, even government securities, fall when interest rates rise and vice-versa. Long-term bonds have more interest rate risk than short-term bonds. Investors can measure their bonds' level of interest rate risk by looking at a bond's duration. This is simply how long, on average, investors must wait to be repaid through interest payments and the return of principal.

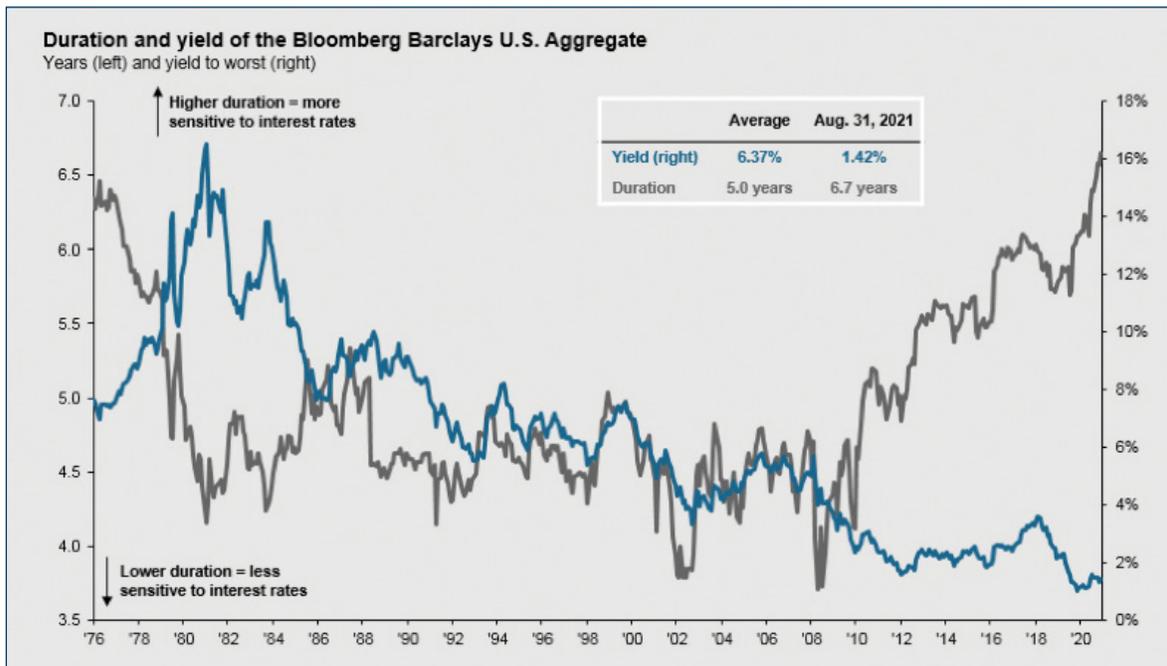
*The Agg sits near its lowest yields and highest duration risk in at least forty years.*

As seen in the chart below, *investors' returns from the Agg over the last several decades have been boosted as interest rates fell over time.* Treasury interest rates hit all-time lows early in August 2020 and are still historically low. At the

same time, the Agg's duration has risen over the past years for several reasons.

*In other words, lower yield and higher interest rate risk, as measured by duration, mean that Agg investors are getting paid less for their investment while taking on the highest amount of duration risk in the last forty years.*

First, government sales of Treasury bonds have skyrocketed after the 2008 financial crisis. And the government has focused more on the sale of long-term bonds. Second, corporations also increased their long-term borrowing while homeowner refinancing has increased the maturity of mortgages. This increase in the maturity of bonds in the Agg has boosted the index's duration. In addition, the interest payments that investors receive lower bonds' duration. So, today's interest rates, which are close to historical lows, have also increased the Agg's duration.



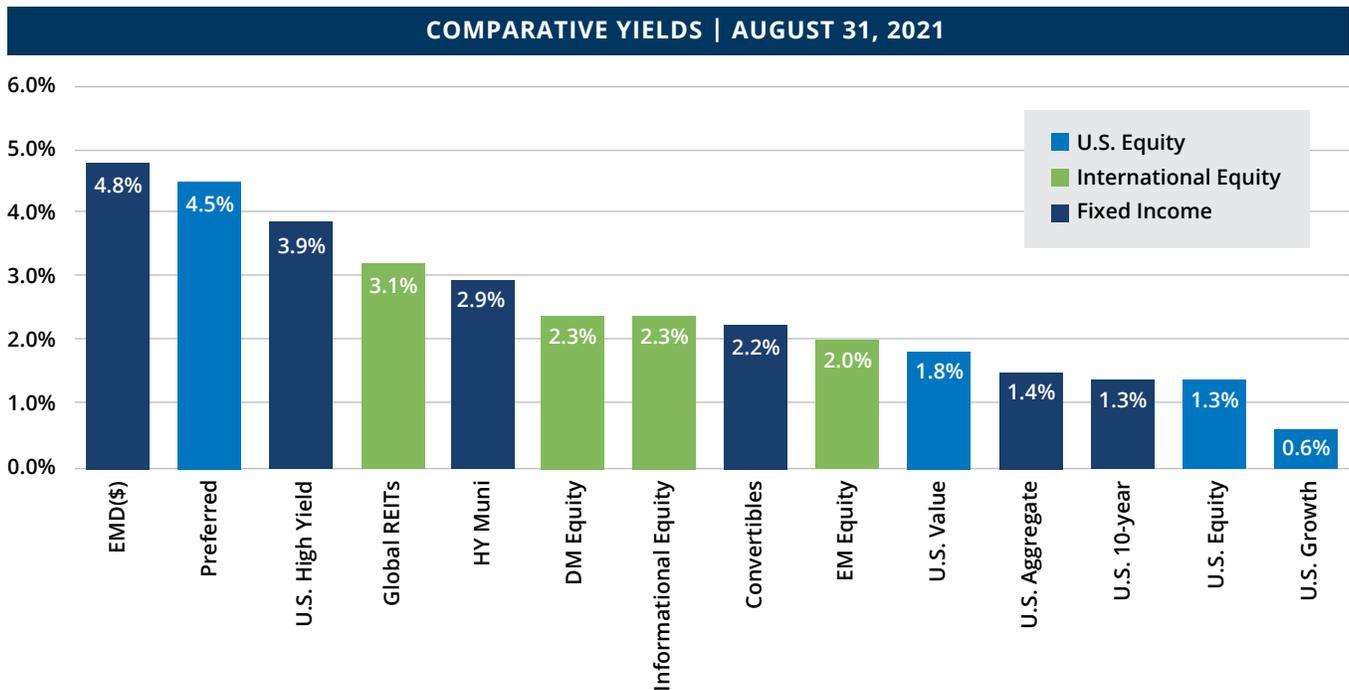
Source: Barclays, Bloomberg, FactSet, JP Morgan Asset Management. August 31, 2021

Duration measures the sensitivity of the price of a bond to a change in interest rates. The higher the duration the greater sensitivity of the bond is to movements in interest rates. Yield is yield to worst. Average yield and duration from the index inception beginning January 1976.

## This Could be a Good Time to Expand Your Core:

The Agg is often referred to as a “broad exposure to the bond market.” But this isn’t the case. The reality is that the Agg represents a narrower slice of the bond market than many investors believe. The S&P 500 Index, for example, represents about 80% of the value of U.S. equities. The Agg, on the other hand, represents less than half of the total U.S. bond market.

In addition, the major components of the Agg- Treasuries, mortgages, and high quality corporate bonds, tend to have lower yields than many other bond sectors. Investors who expand their fixed income portfolio can enhance income by adding asset classes such as emerging market debt, high yield corporate bonds, and preferred securities to a core portfolio.



Source: Barclays Live, J.P. Morgan Asset Management, Guide to the Markets, U.S. Data are as of August 31, 2021

In addition to improving portfolio yields, expanding beyond core fixed income can help diversify portfolio risk away from the Agg’s primary risk, which is changes in interest rate levels.

Credit-oriented fixed income classes such as Convertible Bonds and Senior Bank Loans have very low or even negative correlations to the Agg. And other sectors such as preferred stock and emerging market bonds have relatively low correlations.

## Many fixed income asset classes provide significant diversification with the Agg

5 YEAR CORRELATIONS ENDED 8/31/2021										
AGG	IEF	MBB	LQD	EMB	HYD	PFF	HYG	EMLC	CWB	BKLN
100%	86%	83%	82%	49%	45%	33%	23%	23%	14%	-3%
	100%	86%	44%	5%	4%	-9%	-23%	-7%	-23%	-43%
		100%	48%	19%	15%	9%	-5%	6%	-7%	-29%
			100%	83%	72%	69%	69%	55%	53%	46%
				100%	85%	77%	83%	81%	67%	71%
					100%	74%	73%	60%	55%	62%
						100%	86%	55%	71%	78%
Agg Bond	AGG	MBS	MBB				100%	64%	77%	87%
Int. Gov't	IEF	Inv Grade Corp.	LQD					100%	55%	59%
EMD (USD)	EMB	Preferred	PFF	EMD Local	EMLC				100%	79%
High Yield Muni	HYD	High Yield	HYG	Convertibles	CWB	Bank Loans	BKLN			100%

Sources: Investors FastTrack, R Studio

Asset classes in green are not included in the Agg, while those in black are. Correlations were calculated using monthly returns over the past 60 months.

Many fixed income asset classes, including high yield corporate bonds, municipal bonds, convertible bonds, preferred stocks, bank loans, and emerging market debt have lower correlations to the Agg than two of its constituent sectors: intermediate-term Treasury bonds (IEF) and high grade corporate bonds (LQD). However, investors in products benchmarked to the Agg may have no or low exposure to many of the diversifying bond asset classes.

Finally, the table clearly shows that the correlation between the Agg and intermediate-term Treasuries has been very high, at 86%. This means that the Agg and the price of U.S. Treasuries have moved virtually in lockstep, driven by changes in interest rates. These types of traditional fixed-income allocations are largely at the mercy of changes in interest rates since the Agg's price typically falls in periods of rising interest rates.

## Solution: Expand Your Core

Interest rates are very low. And at the same time the Agg's duration, or interest rate risk, is close to its highest level in more than four decades. Investors may be tempted to abandon bonds or shorten their duration. But both these options may be mistakes.

A better solution to the problem is to build upon the Agg by adding in additional fixed income asset classes- high yield corporate bonds, investment grade corporate bonds, developed markets, emerging markets, floating rate,

municipals, international bonds and preferred stocks – essentially the other 50% of the fixed income universe that is excluded from the Agg. Interest rate risk is less of a driver of total return for these categories than the Agg. Furthermore, the higher yields and lower correlations of these broad asset classes to the Agg provide the opportunity to construct a stronger and more diversified bond portfolio.

**The challenge remains:** when to get in and when to get out? There are 3 steps that our firm uses to manage portfolios in a way that is more diversified than the Agg. The example below details these steps using high yield corporate bonds:

### STEP 1

**Identify trends.** Unlike stocks, bond prices tend to move up or down at a slower pace, so identifying and acting upon up or down trends can be more effective.

**EXAMPLE:** U.S. high yield corporate bonds had negative returns in 2018 as oil prices fell late in the year, leading to fears of rising high yield issuer defaults. Long-term interest rates also increased during the year, despite falling back some at year-end. Oil prices quickly recovered in 2019 while long-term Treasury rates fell. As a result, high yield corporate bonds were in an uptrend for most of 2019.

### STEP 2

**Security selection.** Within an asset class, identify the consistent, persistent, alpha-producing managers.

**EXAMPLE:** Within the high yield bond category, not all areas of the market have the same risk and reward profile. In 2018, managers that avoided or underweighted their portfolio to companies exposed to energy excelled relative to those managers that overweighted this risk.

### STEP 3

**Trailing stops.** Use quantitative rules to identify a falling trend. A key to benefiting from a tactical strategy is a **clear sell discipline so that one can “never be wrong for long.”** By applying a trailing stop under each investment, a line in the sand is drawn to define when an investment is trending downward and should be sold.

**EXAMPLE:** Early in 2020 the market started to price in a slowing economy, as investors feared that U.S. growth was at or near to peak levels. High yield corporate bonds are sensitive to economic slowdowns since default risks for issuers rise as the economy slows. Investors who used a tactical, rules-based process likely de-risked their portfolios in early 2020. This limited losses as markets plunged in the first quarter when the economy started to shut down due to COVID-19.

## Summary

As investors that are particularly in tune with hidden risks in the market, it is important to highlight the fundamental risks now embedded in the Bloomberg Barclays U.S. Aggregate Bond Index. We've documented that interest rate risk in the Agg, as shown by its duration, is near the highest observed level in at least four decades. At the same time, the yield on this benchmark, which is the index for many intermediate-term bond funds, is historically low.

It would be a mistake to observe these signals and simply shorten the duration in an investment portfolio or abandon bonds completely. *The key shortcoming of the Agg, and most intermediate-term bond funds, is the exclusion of many productive bond asset classes.*

This problem can be fixed by expanding your core bond portfolio. High yield corporate bonds, floating-rate loans, preferred stocks, municipal bonds, and other bond asset

classes offer higher yields than the Agg. At the same time, they have lower correlations with the Agg than the Treasury, investment grade corporate and mortgage bonds included in the Agg. The challenge to this is how to manage the additional risk of value-added fixed income asset classes.

In our view, the key to successfully navigating the current environment is to expand beyond the typical core asset classes, while paying attention to and managing risk.

At Sierra and Ocean Park we do this using our process of identifying positive trends, focusing on security selection, and using a sell discipline based on trailing stops. Our process was designed around those three steps. The result is a different approach that can participate in rising parts of the bond market while reducing exposure in falling markets.

## Definitions:

The **S&P 500®** is widely regarded as the best single gauge of large-cap U.S. equities. There is over USD \$13.5 trillion benchmarked to the index, with index assets comprising approximately USD \$5.4 trillion of this total. The index includes 500 leading companies and captures approximately 80% coverage of available market capitalization.

The **Bloomberg Barclays U.S. Aggregate Bond Index** is a broad-based flagship benchmark that measures the investment grade, US dollar-denominated, fixed-rate taxable bond market. The index includes Treasuries, government-related and corporate securities, MBS (agency fixed-rate and hybrid ARM pass-throughs), ABS and CMBS (agency and non-agency).

The **iShares Core U.S. Aggregate Bond ETF (AGG)** seeks to track the investment results of an index composed of the total U.S. investment-grade bond market.

The **iShares 7-10 Year Treasury Bond ETF (IEF)** seeks to track the investment results of an index composed of U.S. Treasury bonds with remaining maturities between seven and ten years.

The **iShares iBoxx \$ Investment Grade Corporate Bond ETF (LQD)** seeks to track the investment results of an index composed of U.S. dollar-denominated, investment grade corporate bonds.

The **iShares MBS ETF (MBB)** seeks to track the investment results of an index composed of investment-grade mortgage-backed pass-through securities issued and/or guaranteed by U.S. government agencies.

The **iShares U.S. Preferred Stock ETF (PFF)** seeks to track the investment results of an index composed of U.S. preferred stocks.

The **iShares J.P. Morgan USD Emerging Markets Bond ETF (EMB)** seeks to track the investment results of an index composed of U.S. dollar-denominated, emerging market bonds.

The **VanEck Vectors® J.P. Morgan EM Local Currency Bond ETF (EMLC®)** seeks to replicate as closely as possible, before fees and expenses, the price and yield performance of the J.P. Morgan GBI-EM Global Core Index (GBIEMCOR), which is comprised of bonds issued by emerging market governments and denominated in the local currency of the issuer.

The **SPDR® Bloomberg Barclays Convertible Securities ETF (CWB)** seeks to provide investment results that, before fees and expenses, correspond generally to the price and yield performance of the Bloomberg Barclays U.S. Convertible Liquid Bond Index (the "Index").

The **Invesco Senior Loan ETF (BKLN)** is based on the S&P/LSTA U.S. Leveraged Loan 100 Index (Index). The Fund will normally invest at least 80% of its total assets in the component securities that comprise the Index. The Index is designed to track the market-weighted performance of the largest institutional leveraged loans based on market weightings, spreads and interest payments. The Fund does not purchase all of the securities in the Index; instead, the Fund utilizes a "sampling" methodology to seek to achieve its investment objective. The Fund and the Index are rebalanced and reconstituted bi-annually, in June and December.

The **iShares iBoxx \$ High Yield Corporate Bond ETF (HYG)** seeks to track the investment results of an index composed of U.S. dollar-denominated, high yield corporate bonds.

The **VanEck High Yield Muni ETF (HYD®)** seeks to replicate as closely as possible, before fees and expenses, the price and yield performance of the Bloomberg Barclays Municipal Custom High Yield Composite Index (LMEHTR), which is intended to track the overall performance of the U.S. dollar denominated high yield long-term tax-exempt bond market.

**Past performance does not guarantee future results and there is no guarantee that any investment strategy will achieve its objectives, generate profits or avoid losses.**

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