
2020 ETF Market Outlook: Threading the Needle

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So far the new century has been a tale of two decades. During the first decade, economic recession and market volatility caused investors nothing but indigestion. But for all the temporary tumult over the past ten years, we never experienced a recession. It's the first time that's happened in modern history. Fiscal and monetary policy solutions have served to quell financial market volatility and flattered returns of risk assets.

As another new decade dawns, 2019 is going out with a bang! Major US stock benchmarks are at all-time highs. Tight credit market spreads mean borrowing is easy and cheap. And measures of market volatility plumb low levels under sunny skies.

All that signals serenity ahead. However, in 2020 the margin for error — and opportunity — will likely be as small as it's been in a very long time.

Nothing but Blue Skies?

Looking beyond 2019's gratifying investment returns, it's tough to understand why investors are so optimistic. Populist anger is rising across the globe. Economic growth and corporate profits peaked more than 18 months ago, even as financial assets continued to reach new heights. With three Federal Reserve rate cuts bolstering future expectations, investors aggressively bid up shares. Further dissecting stock returns suggests that multiple expansion — investors' willingness to pay higher prices today for future growth — has driven all the returns.

Additionally, despite some signs of progress, so far US-China trade negotiations have been all talk and no action. Yet investors still have a tremendous amount of faith that a deal will be reached by the end of this year to reaccelerate global economic growth and corporate profits. Too much faith, perhaps. A watered down trade deal isn't likely to be the silver bullet that investors have banked on.

Like the trade negotiations, in many respects, the investment landscape is shifting from tell me something good to show me something good.

Eye of the Storm

Evaluating risks in 2020 also raises the question of whether the US consumer, the economy's engine of growth, can keep spending like it's 2019. With today's lower taxes, massive gains in financial assets, robust job market and falling interest rates, it's difficult to imagine a more pro-consumer environment. In fact, consumer strength is the primary reason that the US economy hasn't succumbed to recession.

Yet, while generally about two-thirds of the US economy is driven by personal consumption, a rare shift is under way. The Bureau of Economic Analysis reported that third quarter US GDP growth was driven *completely* by personal consumption. Of course, falling corporate profits, additional tariffs scheduled for mid-December and Fed rate cuts likely on hold for a little while may make it tough for the consumer to continue to shoulder this larger burden.

Job gains and wage growth have started to slow, too. And while consumer sentiment measures remain elevated, they are trending lower. The last bastion of American economic strength might be showing signs of fatigue.

The consumer's mood could also be soured by all the bluster surrounding the 2020 election. Public impeachment hearings have already started and politics have rarely been this divisive. Hard to believe. Notably, headlines trumpeting the misguided notion that this is a make or break election could keep some investors on the sidelines until the political outcomes are known.

Sharpen Your Focus

Investors will continue to wrestle with an uncertain environment with too little growth, benign inflation and low rates. However, because governments and central banks are firmly committed to keeping the party going, investors have little choice but to stay invested. The key here, as always, is to balance the risk-reward tradeoffs.

After such a great run, today's risks seem more heavily skewed to the downside. We would caution investors who may be attempting to squeeze out those last few points of return or incremental yield. It may not be worth the risk. As investors enter the new decade, we think it's prudent to position investment portfolios with these three themes in mind:

- 1** Stay invested, but limit downside risks
- 2** Actively balance risk in the hunt for yield
- 3** Position to temper the impact of macro volatility

1

Stay Invested, but Limit Downside Risk

Target equities that may be impacted less by volatility

The double-digit gains for global equities so far this year combined with 2018's negative 11% return represent the largest positive year-over-year return differential (+30%) since 2009, when the market was emerging from the financial crisis.¹ For US equities alone, 2019 ranks 13th of all-time² and is the greatest non-bear market bottom year-over-year rally since 1995 — another year that saw the Federal Reserve use rate cuts to calm fears of a slowdown.

Yet, although US equities continued to set new all-time highs throughout the year, investors have shunned the asset class. Investment in equity ETFs is currently 41% off 2018's pace, and at the lowest year-to-date total since 2016.³ It turns out that this tepid optimism has been a risk to portfolios, as the 60/40 portfolio has had its second-best year in a decade.⁴

As the fear of missing out on future gains creeps in, investors might consider altering their view on risk assets and then jump back in with both feet. However, blindly buying equities in 2020 could be a bigger risk than not owning them in 2019. Given the macro risks in today's marketplace, seeking to harness the equity risk premium in 2020 requires working overtime to limit the impact of any volatility.

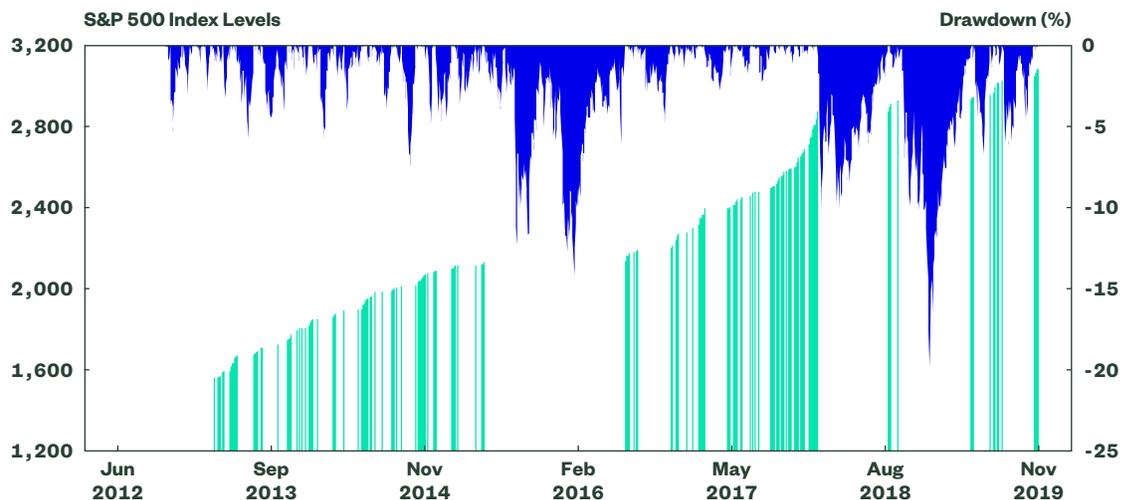
A Volatility Regime Change

While the headlines celebrate all-time highs, the path to the top hasn't been exactly linear. Microbursts of volatility have become more common over the past few years, as shown below, with drawdowns becoming more frequent and severe. This is a different volatility regime for investors than the one they endured during the earlier stages of this still lumbering bull market.

After the market spent just 10% of its days in a greater-than-3% drawdown from 2012 to 2014,⁵ 2018 and 2019 have seen 65% and 47% of days in a 3%-or-greater drawdown, respectively.⁶ This trend would have started in 2016, when Brexit and the devaluation of the renminbi ignited macro volatility, if it weren't for the anomalous 2017 when investors were gripped with the short-lived reflation euphoria and the expectation of a tax cuts sugar high.⁷

Figure 1
S&P 500 All-Time Highs versus Drawdowns

■ Drawdown (%) (S&P 500 Index)
■ All-Time Highs



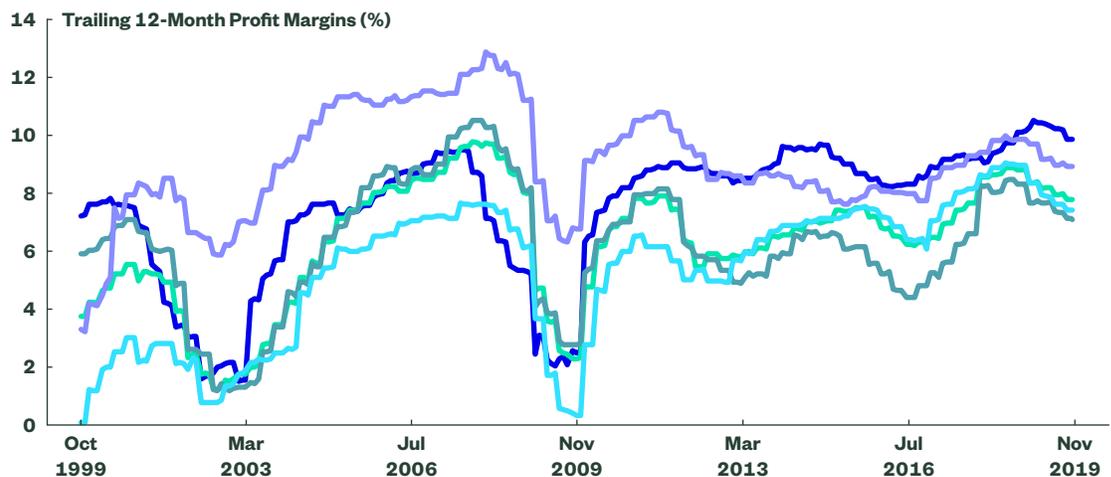
Source: Bloomberg Finance L.P., 11/07/2019, based on price returns and do not assume the reinvestment of dividends. Calculations by SPDR Americas Research. **Past performance is not a guarantee of future results.**

However, as evidenced by current all-time highs, any pain felt under this new regime has been short-lived. Violent selloffs have been followed by equally sharp rallies spurred by policy actions or the removal of macro risks that challenged investor sentiment. If we are at all-time highs though, why does it matter? Volatility drag is why. Lose 25% and you need 33% to get back to even, but lose 10%, and you only need 11%.

Born to Run?

The market's highway is jammed with broken rallies on a last chance power drive. And as 2020 nears, there are still plenty of macro risks that leave investors little place to hide. Yet, despite policy uncertainty, murky global economic data and manufacturing weighing on growth, global earnings seem set to rebound in 2020. But given how profit margins have declined (as shown below), that uptick won't be fueled by organic growth and looks strong only when compared with 2019's weakness.

Figure 2
Global Profit Margin Trends on the Decline



Source: Bloomberg Finance L.P., 11/07/2019. **Past performance is not a guarantee of future results.**

Broad-based data can obscure positivity beneath the surface sometimes, however. Unfortunately, that is not the case with margins today, as the sluggishness is not sector specific. Nine out of the 11 US sectors have witnessed a decrease in year-over-year profit margins.⁸ Outside the US, profit margins that hit a cyclical peak in 2019 have been falling for 10 straight months, as shown above. As a result, expect these lofty growth figures — 10.5%, 7.8%, and 13% for US, developed-ex US, and emerging market regions, respectively⁹ — to come down, consistent with historical trends. In fact, 2020 earnings-per-share growth for US, developed-ex US, and emerging market regions have already been revised down by 1.8, 1.7, and 1.1 percentage points over the past two months, respectively.¹⁰ And once again, weakness at the sector level persists. Ten out of the 11 US sectors have lower estimated 2020 growth today than they did three months ago.

The Risk of Finding Value

All this uncertainty surrounding US growth and broad-based valuations plotting in the top 86th percentile relative to history¹¹ mean that the fundamental safety net has a few holes in it. Positive growth, a yield curve in stasis, and overvalued portions of the market may set the stage for a revival for value strategies — a factor style that has been mired in below-market performance for six out of the past seven years. However, while the inkling of a value rally began in September after momentum sold off, downside growth revisions and the broad-based scarcity — and quality — of growth remain the key risks to a full-on value revival.

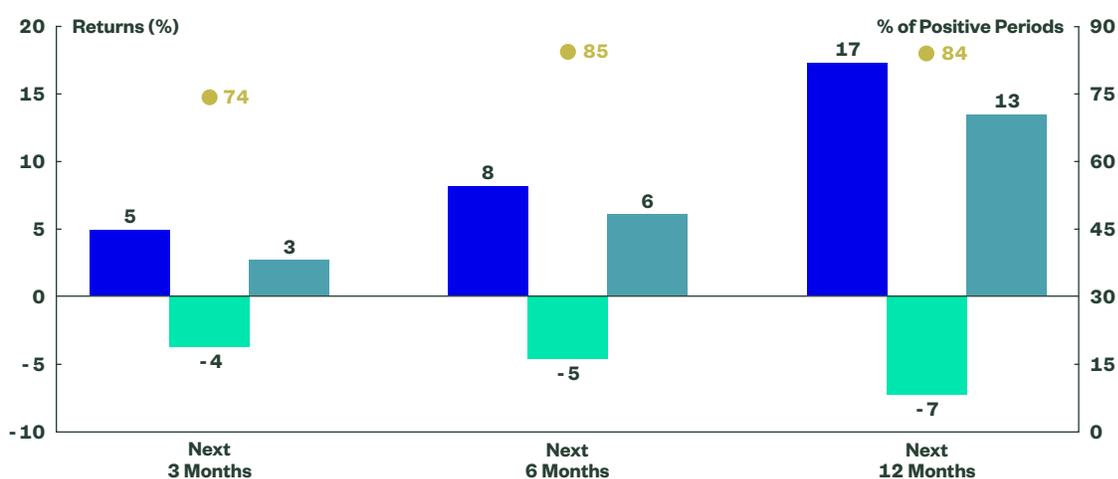
Constructive valuations outside the US continue to be a siren’s song tempting contrarian investors to look past the sizable geopolitical risk impairing fundamental and economic growth. Yet this risk premium may require investors to put up with some pain along the way, as uncertainty driven by protests, Brexit, and Middle East unrest continues to percolate with widespread effect. After all, on a relative basis, both developed ex-US and emerging market (EM) equities have looked cheap for the past few years, as the US has hit numerous all-time highs while those markets have yet to climb past their 2007 peaks. In EM, perhaps the pain may be worth the premium, given the region’s already small weight in the standard asset allocation mix. In developed ex-US, the pain should be soothed by seeking to smooth volatility.

Dealing with the Fear of Missing Out

Will these issues weigh on future US equity returns? Well, hindsight is 20/20. In 85% of the periods, returns on US equities were positive six months after hitting all-time highs. As shown below, there has been a positive skew to subsequent returns of prior all-time highs. But drawdowns can occur when idiosyncratic events come out of nowhere, with volatility acting as a “drag” on returns.

Figure 3
S&P 500 Index
Subsequent Returns
After All-Time High

■ Average Positive Return
■ Average Negative Return
■ Average Overall Return
● % of Positive Periods



Source: Bloomberg Finance L.P., 11/07/2019, based on price returns and do not assume the reinvestment of dividends. Calculations by SPDR Americas Research. **Past performance is not a guarantee of future results.**

Implementation Ideas

Until organic growth returns, investors are faced with balancing risk while attempting to not miss out on any future gains. Rather than rebalancing to cash or allocating just to beta, these strategies range the volatility spectrum and can help you limit the impact of volatility while you pursue returns:

- 1 Balance downside and upside with diversified multifactor strategies:
 - **SPDR MSCI USA StrategicFactorsSM ETF (QUS)** targets lower volatility than the broader US equity market while retaining upside potential by adding Quality and Value factor exposures; creates a low-volatility strategy that focuses on firms with healthy balance sheets that trade at inexpensive valuations.
 - **SPDR MSCI EAFE StrategicFactorsSM ETF (QEFA)** targets lower volatility than the broader developed equity market while retaining upside potential by adding Quality and Value factor exposures; creates a low-volatility strategy that focuses on firms with healthy balance sheets that trade at inexpensive valuations.

2 Add capital discipline with dividend growth strategies:

- **SPDR S&P Dividend ETF (SDY)** screens for companies that have consistently increased their dividend for at least 20 consecutive years, potentially providing an exposure to value-oriented, high-quality stocks that add resilience to a portfolio in an environment of uneven growth.

3 Minimize risk with pure low-volatility strategies:

- **SPDR SSGA US Large Cap Low Volatility Index ETF (LGLV)** seeks to deliver a high exposure to the low volatility factor while not having sizable sector biases. This is accomplished by selecting the least volatile stocks by sector and then weighting all stocks from that selection universe by the inverse of their variance.

Defensively Position
with Sectors

Consider these two approaches to position equity portfolios defensively:

Business Cycle Approach Our analysis of business cycle behavior of sectors based on changes in the Conference Board Leading Economic Indicator Index year-over-year declining since September 2018 indicates an economic slowdown. We found sectors that had performed well, on average, during past economic slowdowns since 1960 were Health Care and Consumer Staples, followed by Industrials.

Technical Volatility Approach Based on a sizable amount of academic literature on sector-rotation strategies and alternative weighted approaches seeking to minimize volatility,¹² a low volatility sector portfolio can be created by analyzing recent volatility and market sensitivity metrics. An ensemble of six volatility metrics (3-Year Beta to S&P 500 Index, 1-Year Beta to S&P 500 Index, 3-Year Standard Deviation of Returns, 1-Year Standard Deviation of Returns, and 1-Year Downside Deviation) results in Utilities, Consumer Staples, Real Estate, Insurance, and Health Care as the five market areas for defensive technical-based portfolio.

2

Actively Balance Risk in the Hunt for Yield

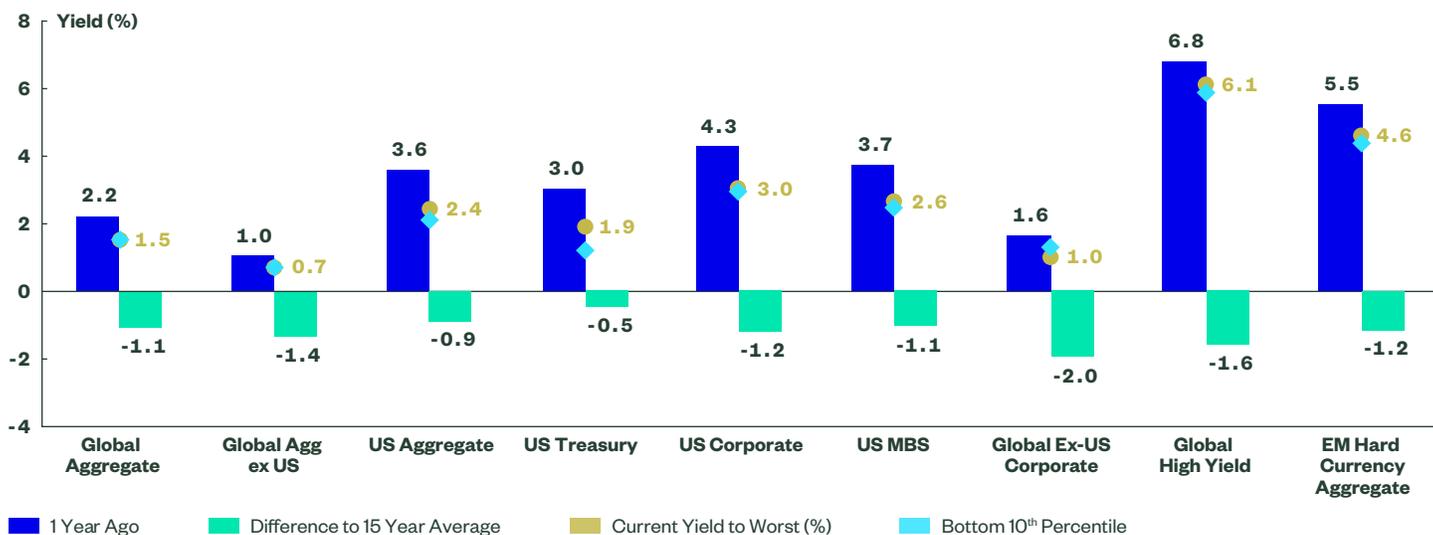
Seek a balance between income generation, credit risk, equity risk and macro volatility by employing active strategies

Bond market returns have rewarded patient investors so far this year, with US core aggregate bonds registering their best gain since 2011.¹³ However, the strong returns have come at the price of lower current income and yields, pushing interest rates below both their longer-term averages and levels from a year ago. This has forced investors to look elsewhere for yield, leading to a tightening of spreads for below-investment-grade credits — the major catalyst for high yield bonds' current double-digit gains.¹⁴

With rates low, credit spreads tight, and equity markets at all-time highs, navigating the global capital markets for sustainable income will be increasingly challenging as we head into 2020. Additionally, if geopolitical noise alters sentiment in either direction, volatility could infiltrate the part of a portfolio that is designed to provide stability and mitigate downside risk.

Therefore, for 2020, generating sufficient levels of income within bond portfolios should be more about balancing duration, credit and geopolitical risks and less about reaching for double-digit returns again. While diversification cannot remove risk, but only transform it, active strategies that have the ability to rotate and pick up yield across bond sectors that are lowly correlated to one another may help to balance these risks in today's "little room for error" environment.

Figure 4
Low Yields Across the World and Sectors



Source: Bloomberg Finance L.P., as of 11/08/2019. **Past performance is not a guarantee of future results.** Global Aggregate: Bloomberg Barclays Global Aggregate Bond Index; US Aggregate: Bloomberg Barclays U.S. Aggregate Bond Index; US Corporate: Bloomberg Barclays U.S. Corporate Bond Index; US Treasury: Bloomberg Barclays U.S. Treasury Bond Index; Global Agg ex-US: Bloomberg Barclays Global Aggregate Bond Ex-U.S. Index; Global ex-U.S. Corporate: Bloomberg Barclays Global Corporate Bond Ex-U.S. Index; Global High Yield: Bloomberg Barclays Global High Yield Bond Index; EM Hard Currency Aggregate: Bloomberg Barclays EM Hard Currency Aggregate Bond Index; US MBS: Bloomberg Barclays U.S. MBS Index.

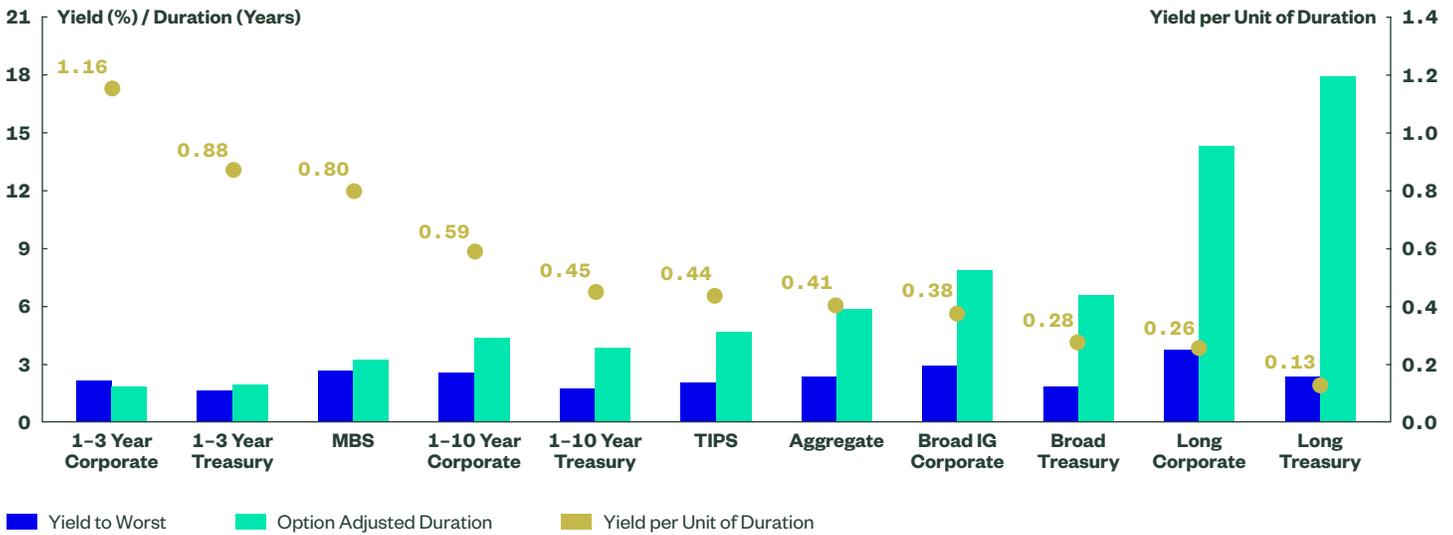
Mitigating the Risk in Duration

With the Federal Reserve (Fed) on hold¹⁶ and still-slow growth dynamics constraining the long end of the curve,¹⁶ the yield curve is likely to slope upward but stay flat in 2020. Trading well below the recent three- and five-year averages of 0.54% and 0.82%, respectively,¹⁷ it should continue to reside within the tight range it has traded in since June of 2018.¹⁸

With a yield curve in stasis, as the base case view, lengthening duration may seem like the ideal allocation. However, overextending on duration may present an uncompensated risk. Low yields (i.e., low carry) are unable to fully act as a buffer and offset any duration-induced price losses if growth surprises or macro risks abate and the curve steepens. The gain/loss profile is also asymmetrical after the double-digit returns from long US Treasuries in 2019. For long US Treasuries to post double-digit returns again in 2020, long-term rates would have to fall by 170 basis points. That would equate to a yield of just 60 basis points based on today's levels, and it would be the lowest long-term rate ever on record by 140 basis points.

As a result, long duration is a risk not worth taking — especially as some portions of the market provide a more balanced yield and duration profile. As shown below, the 1-10 year intermediate corporate market has a higher yield, but with much less duration than the Agg. Additionally, mortgage-backed securities (MBS) may present attractive opportunities given that with the Fed on hold, the pace of refinancing activity, which hit a three-year high this year, may now slow. With less refinancing activity, the recent underperformance relative to US Treasuries may reverse itself and allow investors to pick up 10% more yield, but with 45% less duration versus the Agg.

Figure 5
**Yield and Duration for US
 Rate-Sensitive Sectors**



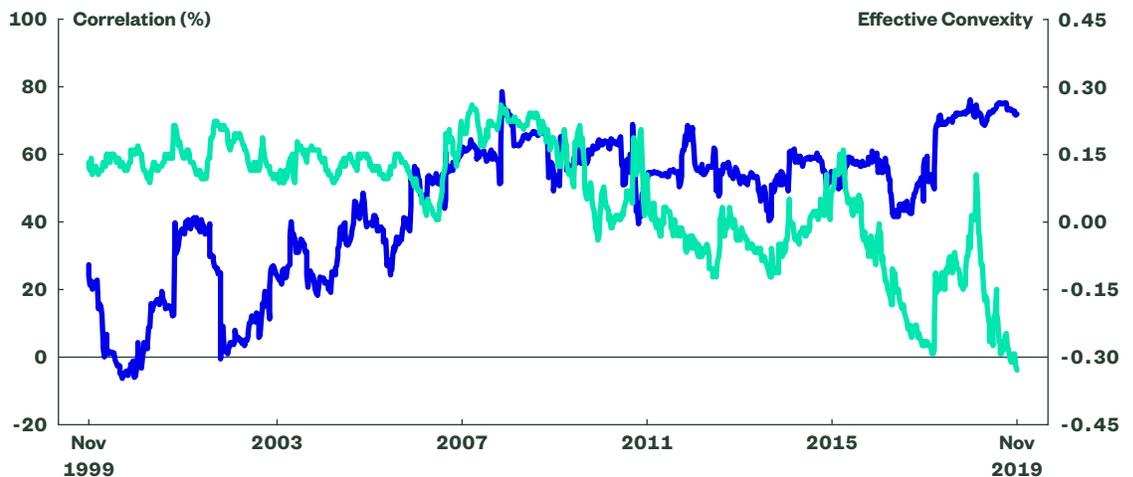
Source: Bloomberg Finance L.P., as of 11/08/2019. **Past performance is not a guarantee of future results.** 1-3 Year Corporate: Bloomberg Barclays U.S. Corporate 1-3 Yr Index; 1-3 Year Treasury: Bloomberg Barclays Treasury: 1-3 Year Index; MBS: Bloomberg Barclays U.S. MBS Index; 1-10 Year Corporate: Bloomberg Barclays Intermediate Corporate Index; 1-10 Year Treasury: Bloomberg Barclays U.S. Intermediate Treasury Index; TIPS: Bloomberg Barclays U.S. Treasury Inflation Notes Index; Aggregate: Bloomberg Barclays U.S. Agg Index; Broad Investment Grade (IG) Corporate: Bloomberg Barclays U.S. Corporate Index; Broad Treasury: Bloomberg Barclays U.S. Treasury Index; Long Corporate: Bloomberg Barclays Long Corporate Index; Long Treasury: Bloomberg Barclays U.S. Long Treasury Index.

The Risk of Hunting
 Just for Yield

While default rates¹⁹ have ticked up as a result of weakness in certain sectors, the spread compression in 2019 has put broad-based US corporate high yield spreads 30% below their long-term averages. While not at extremes, spreads remain expensive and indicate below-coupon returns based on historical trends.²⁰ Also, the runup in values has led to a notable increase in high yield's correlation to equities, as shown below, making it more susceptible to equity drawdowns.

Figure 6
**High Yield Bond
 Risk / Return Profile**

■ High Yield Correlation to S&P 500 Index
 ■ Convexity



Source: Bloomberg Finance L.P., as of 11/08/2019. **Past performance is not a guarantee of future results.** Correlation based on rolling 52-week returns (weekly frequency).

Moreover, broad-based high yield bonds, as shown above, are also the most negatively convex they have ever been, indicating that there is less upside relative to downside. Further, in years after high yield produced double-digit returns, the subsequent year saw an average 60% decline in returns.²¹

High yield has a place in the portfolio, given the carry, but there are ways to generate similar levels of income while also transforming the risk profile. One option is to allocate a portion of high yield to senior loans, seeking to position a bit more defensively by moving up the capital structure. Another option is to target emerging market debt (EMD).

With EMD, the risk profile is transformed from credit to currency, as the major determinant of short-term EMD risk and return fluctuations typically forms as a result of currency trends.²² However, EMD is more susceptible to geopolitical macro shocks than other bond sectors. Depending on the outcome of one of the larger macro risks — trade — that risk may manifest itself in offsetting performance. A US-China trade deal would likely benefit EM, as it would reverse some of the US dollar's strength built up over the past 18 months and ease currency pressures for several countries around the globe. Conversely, rate-sensitive sectors may be negatively impacted by a steepening yield curve, as a risk overhang has been removed from the market.

Implementation Ideas: Seek Income Through Diversification

On the hunt for yield in 2020, balancing the sources of risk may be the most beneficial strategy for the portion of portfolios that is meant to provide income, stability, and diversification.

To create a bundled solution that leverages active management in the core, income, and liquidity sleeves of a portfolio, consider these three types of mandates:

- 1** A core strategy that allocates across a multitude of bond sub-sectors aims to generate a higher yield than the Agg, but with a lower standard deviation of returns as a result of the potential sector diversification.
 - **SPDR DoubleLine Total Return Tactical ETF (TOTL)** combines traditional and non-traditional fixed income asset classes with the goal of maximizing total return over a full market cycle through active sector allocation and security selection.
- 2** A tactical income-focused strategy that rotates among high-income asset classes to potentially pick up cross-asset diversification benefits and seek higher-income opportunities based on market conditions.
 - **SPDR SSGA Income Allocation ETF (INKM)** employs tactical allocations across asset classes that produce current income, including US government and corporate bonds; US convertible and preferred securities; global REITs; and domestic and international equities with a focus on dividends.
- 3** An ultrashort-duration active strategy that can potentially take advantage of the flat curve and aims to generate a yield in excess of cash by allocating to more than just basic high-grade corporates and US Treasuries.
 - **SPDR SSGA Ultra Short Term Bond ETF (ULST)** seeks to provide current income consistent with preservation of capital and daily liquidity through short duration high quality investments that may also be slightly longer-term securities than traditional cash vehicles as the fund seeks to generate a better total return.

Actively Customize Portfolios with Specific Tilts

Being active can take many forms, and with the advent of specific bond subsector ETF exposures, investors have the ability to precisely tailor bond portfolios for the year ahead and, based on their risk profile, create customized and flexible active tilts to broad-based Aggregate bonds.

To selectively alter portfolio profiles by modestly overweighting the sectors we feel represent attractive opportunities, consider these exposures:

- **SPDR Portfolio Intermediate Term Corporate Bond ETF (SPIB)**
Intermediate Corporates
- **SPDR Portfolio Mortgage Backed Securities ETF (SPMB)**
Mortgage Backed Securities
- **SPDR Blackstone / GSO Senior Loan ETF (SRLN)**
Senior Loans
- **SPDR Bloomberg Barclays Emerging Markets Local Bond ETF (EBND)**
Emerging Market Debt

3

Position to Temper the Impact of Macro Volatility

With stocks and bonds expensive, as well as susceptible to macro-induced volatility shocks, focus on strategies with low correlations to traditional markets

Stocks get all the press. Daily financial news programs cover the bull market reaching new all-time highs, and an avalanche of articles follows, proclaiming that either there is more room to run or that it's a sign of a market top. The 24/7 news cycle churns out the story and presidential tweets keep the hoopla going.

By mid-November, the S&P 500 Index, NASDAQ Composite Index, and Dow Jones Industrial Average Index had each just hit all-time highs,²³ and the MSCI ACWI IMI Index was only 2% below its own all-time high.²⁴ Lost in all the commotion is that as stocks have hit multiple all-time highs in 2019, so have bonds. In fact, bonds have broken more records than stocks in 2019. The Bloomberg Barclays U.S. Aggregate Bond Index (Agg) has already registered 51 all-time highs this year, after just five new highs over the past two years.

With broad-based stocks and bonds at all-time highs — and an ever-evolving macro backdrop also experiencing all-time high policy uncertainty²⁵ — having an alternative solution with low correlations to traditional markets as part of the asset allocation mix may be beneficial in 2020.

Icarus Level Valuations Lead to a Smaller Safety Net

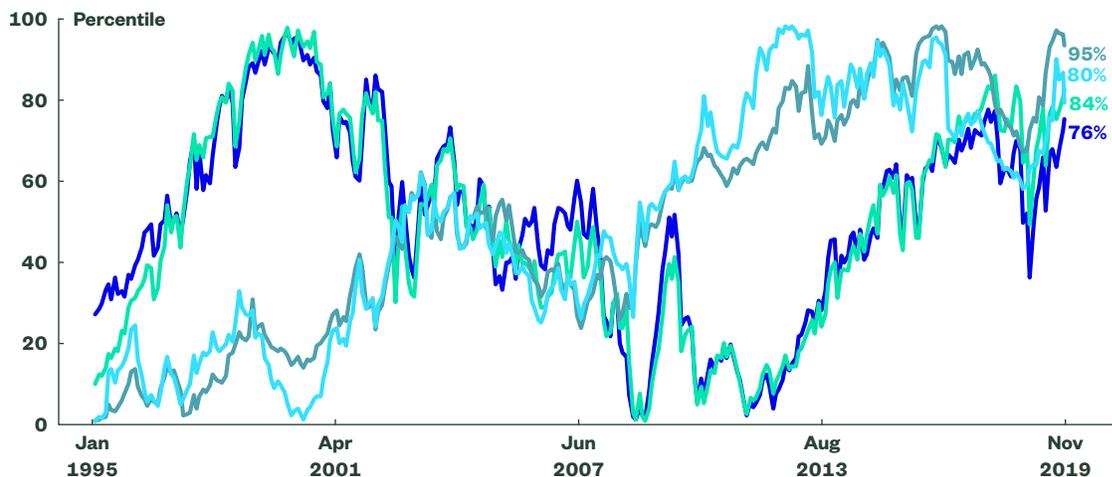
Valuations are now becoming a concern due to all of these recent all-time highs. Certain analysis will point to the Fed model, a system introduced in the early 1990s that compares the stock earnings yield to the yield on bonds. If the stocks' yield is above that of bonds, stocks are attractive, and vice versa. Today, the Fed model reveals that stocks are attractive, given that the earnings yield is 4.87% for US equities, versus a yield-to-worst of 2.4% for the Agg.²⁶ A global view reveals the same conclusion — there is a 3.6 percentage point difference between global stocks and the global Agg.²⁷

Of course, by comparing two equally expensive segments relative to their own history, the Fed model obscures the larger point: stocks and bonds are both rich today versus their own history. And that matters more for portfolio construction. As shown below, the percentile ranking for a five-factor ensemble valuation metric²⁸ for both US and global stocks plotted against the percentile ranking for the yields on bonds (for bonds, a high ranking equals low yields) shows that both have elevated valuations.

High valuations indicate that there is less room to maneuver if volatility strikes, as fundamentals are unable to act as a backstop, or safety net. They create an inability to fully offset duration-induced price declines or to reduce the risk of investors no longer willing to pay high multiples for declining earnings growth.

Figure 7
**Stock and Bond
Historical Valuations**

- Global Stocks
- US Stocks
- Global Bonds
- US Bonds



Source: Bloomberg Finance L.P., Calculations by SPDR Americas Research as of 11/08/2019. **Past performance is not a guarantee of future results.**

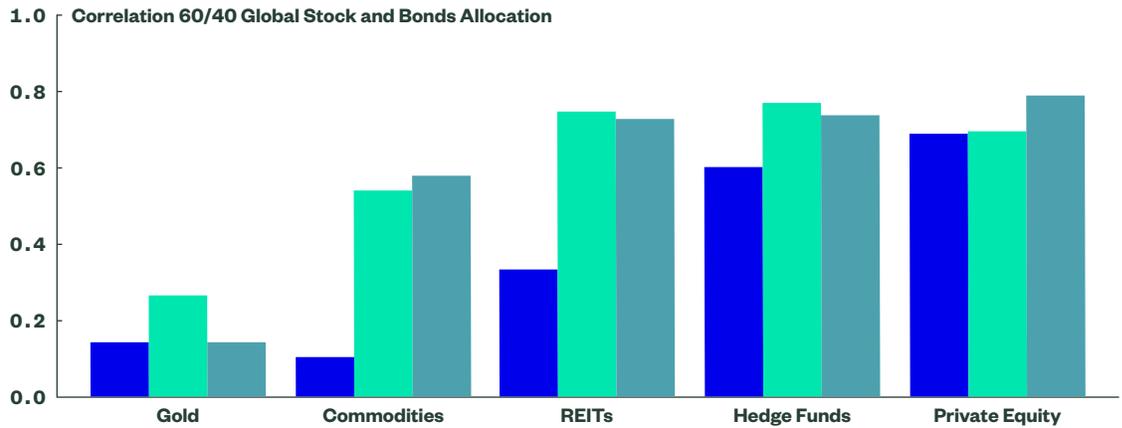
Navigating Macro Risk Surprises

The larger risk to valuations is the confluence of risks that are difficult to model or prepare for. Geopolitical events have ignited macro risk surprises, upending sentiment and briefly knocking the market off its course. In fact, the Citi Macro Risk Index has oscillated between near five-year highs and lows over the past 18 months.²⁹ The future is unlikely to be any less unpredictable, with another UK election, a new European Central Bank (ECB) president advocating more fiscal change rather than monetary change, a contentious US election during an impeachment inquiry, renewed unrest in the Middle East, and populist angst sweeping across the world.

“Form ever follows function” is a popular phrase coined by architect Louis Sullivan, but it applies to the construction of portfolios as well as skyscrapers. With bonds expensive and stocks susceptible to volatility shocks, investors may need to consider low-correlating strategies to traditional markets. Yet, it is important to note that the “form” of these nontraditional strategies does not need to be complex to achieve the “function” of enhanced portfolio efficiency, asymmetric return capture and risk reduction.

Figure 8
**Gold Spot Price
 Correlation Trends
 versus Other
 Alternatives**

■ 1999–2007
 ■ 2008
 ■ 2009–Today



Source: Bloomberg Finance L.P., Calculations by SPDR Americas Research. Data from January 1, 1999–October 31, 2019. Gold = gold spot price. Commodities = S&P GSCI Total Return Index, REITs = FTSE NAREIT All Equity REITs Total Return Index, Hedge Funds = HFRI FOF Diversified Index, Private Equity = LPX50 Listed Private Equity Total Return Index. Correlations based on monthly returns against a 60/40% allocation of the MSCI All-Country World Index Total Return Net Index and the Bloomberg Barclays Global Aggregate Bond Index, rebalanced monthly. **Past performance is not a guarantee of future results.**

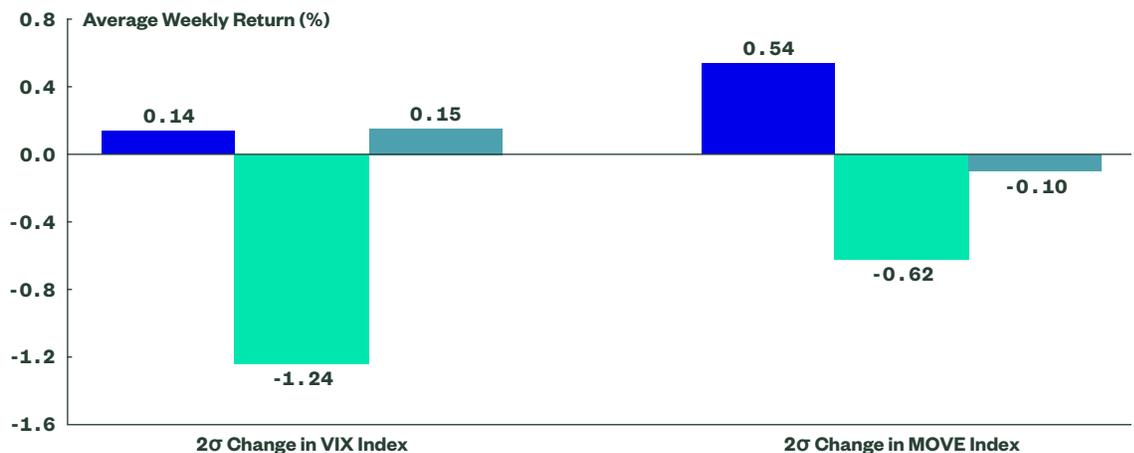
Golden Threads

Gold is a simple, transparent and relatively liquid option among the opportunity set of alternative assets. This is particularly true given the shifting correlations for many proposed diversifying assets and liquid alternatives. Since the 2008 financial crisis, gold has provided a source of low correlation to a balanced stock and bond portfolio, and it has seen a decrease from its correlation compared with before and during the crisis.³⁰ This has not been the case for other alternatives, such as commodities and REITs, which have seen a dramatic extension in their correlations since 2008.³¹

The historical low-correlation structure of gold to stocks and bonds³² has manifested itself in positive average returns during bouts of volatility for each market. During trading weeks when the CBOE VIX Index experienced a two standard deviation move from its mean, gold’s average weekly return was +0.14%, versus the S&P 500 return of -1.24%, on average. And as shown below, gold has averaged a weekly return of 0.54%, on average, when rate volatility, as measured by the MOVE Index, has spiked alongside a decline in equities.

Figure 9
**Gold Historical
 Performance During
 Bond and Stock
 Volatility**

■ Gold Spot Price
 ■ S&P 500 Index
 ■ The Agg



Source: Bloomberg Finance L.P., Calculations by SPDR Americas Research Data from 01/01/1990–11/08/2019. **Past performance is not a guarantee of future results.**

In 2020, gold may provide a robust and multi-faceted source of diversification, as evidenced by its historical correlation structure and performance during prior tumultuous risk-on events. Investors seeking to mitigate the impact of idiosyncratic macro shocks on portfolios amid elevated valuations for traditional assets may consider the SPDR® Gold Family:

- **SPDR® Gold Shares® (GLD®)** seeks to reflect the performance of the price of gold bullion, less the Trust's expenses. GLD allows investors to place a higher emphasis on liquidity and trading costs.
- **SPDR® Gold MiniSharesSM (GLDMSM)** seeks to reflect the performance of the price of gold bullion less the Trust's expenses. GLDM enables investors to place a higher emphasis on share price and management fees.

Endnotes

- 1 Bloomberg Finance L.P., as of 11/07/2019. **Past performance is not a guarantee of future results.**
- 2 Bloomberg Finance L.P., as of 11/07/2019, calculations by SPDR Americas Research. Data back to 1926.
- 3 Bloomberg Finance L.P., as of 11/07/2019, calculations by SPDR Americas Research.
- 4 Bloomberg Finance L.P., as of 11/07/2019 based on a 60% MSCI ACWI IMI Index/40% Bloomberg Barclays U.S. Aggregate Bond Index mix, rebalanced annually. In 2019, the 60/40 mix is up 15.0%. **Past performance is not a guarantee of future results.**
- 5 Bloomberg Finance L.P., as of 11/07/2019, calculations by SPDR Americas Research.
- 6 Bloomberg Finance L.P., as of 11/07/2019, calculations by SPDR Americas Research.
- 7 On December 22, 2017, the most sweeping tax legislation since the Tax Reform Act of 1986 was signed into law. The Tax Cuts and Jobs Act of 2017 (TCJA).
- 8 Real Estate and Materials have had an increase per FactSet as of 10/31/2019.
- 9 Source: FactSet as of 11/07/2019 for firms in the S&P 500, MSCI EAFE, and MSCI Emerging Market Indexes.
- 10 Source: FactSet as of 11/07/2019 for firms in the S&P 500, MSCI EAFE, and MSCI Emerging Market Indexes.
- 11 Source: Bloomberg Finance L.P., as of 11/07/2019 based on a five factor ensemble of Price-to-Earnings, Price-to-Next-Twelve-Month-Earnings, Enterprise Value-to-EBITDA, Price-to-Book, and Price-to-Sales for the S&P 500 Index using data since 1990.
- 12 Frank Leclerc, CFA, Jean-François L'Her, CFA, Tamam Mouakhar, CFA, and Patrick Savaria, CFA. 2013. "Industry-Based Alternative Equity Indices" Financial Analysts Journal, vol. 69, no. 2.
- 13 Bloomberg Finance L.P., as of 11/08/2019 based on the performance of the Bloomberg Barclays U.S. Aggregate Bond Index.
- 14 Bloomberg Finance L.P., as of 11/08/2019 based on the performance of the ICE BofAML U.S. High Yield Index.
- 15 "Fed's Powell says interest rates will be on hold absent a material deterioration in economy", MarketWatch November 13, 2019.
- 16 Adrian Crump & Moench 10-Year Treasury Term Premium Index is negative.
- 17 Bloomberg Finance L.P., as of 11/08/2019.
- 18 With the exception of the drop in August to September, the yield curve has hovered around 20 basis points.
- 19 Default rates are 2.9%, compared with 1.9% at the start of the year, BAML High Yield Research 11/04/2019.
- 20 High yield spreads as of 11/08/2019 were 371 basis points. Per Bloomberg Finance L.P., data and SPDR Americas Research calculations, based on return and spread information dating back to 1999, when high yield spreads are within 350 to 400 basis points, the price return over the subsequent 12 months, on average, has been -2.5% with more than 100% of the return then coming from the coupon as the total return has been 4.4%.
- 21 Bloomberg Finance L.P., as of 11/08/2019 per SPDR Americas Research Calculations. **Past performance is not a guarantee of future results.**
- 22 Bloomberg Finance L.P., as of 10/31/2019 there is a 94% correlation between the monthly returns of the Bloomberg Barclays Emerging Markets Local Currency Liquid Government Index and the MSCI EM Local Currency Index Monthly Returns from 10/2009 to 10/2019.
- 23 Bloomberg Finance L.P., as of 11/13/2019.
- 24 Bloomberg Finance L.P., as of 11/13/2019.
- 25 Source: Bloomberg Finance L.P., based on data from Boom, Baker, Davis As of September 30, 2019.
- 26 Bloomberg Finance L.P., as of 11/13/2019 based on the S&P 500 Index and Bloomberg Barclays U.S. Aggregate Bond Index.
- 27 Bloomberg Finance L.P., as of 11/13/2019 based on the MSCI World Index and Bloomberg Barclays Global Aggregate Bond Index.
- 28 The five metrics are Price-to-Book, Price-to-Earnings, Price-to-Next-Twelve-Month-Earnings, Price-to-Sales, and Enterprise Value-to-EBITDA.
- 29 Bloomberg Finance L.P., as of 11/13/2019.
- 30 Bloomberg Finance L.P., Calculations by SPDR Americas Research. Data from January 1, 1999–October 31, 2019.
- 31 Bloomberg Finance L.P., Calculations by SPDR Americas Research. Data from January 1, 1999–October 31, 2019.
- 32 The spot price of gold has a historical correlation to the MSCI World Index of 0.06 and the Bloomberg Barclays U.S. Aggregate Bond Index of 0.21 from 10/1989 to 10/2019 based on monthly returns per Bloomberg Finance L.P., as of 10/31/2019.

Glossary

Basis Point (bps) A unit of measure for interest rates, investment performance, pricing of investment services and other percentages in finance. One basis point is equal to one-hundredth of 1 percent, or 0.01%.

Bloomberg Barclays EM Hard Currency Aggregate Bond Index The Bloomberg Barclays Emerging Markets Hard Currency Aggregate Index is a flagship hard currency Emerging Markets debt benchmark that includes USD, EUR, and GBP-denominated debt from sovereign, quasi-sovereign, and corporate EM issuers.

Bloomberg Barclays Global Aggregate Bond Ex-USD Index The Bloomberg Barclays Global Aggregate ex USD Index is a measure of investment grade debt from 24 local currency markets. This multi-currency benchmark includes treasury, government-related, corporate and securitized fixed-rate bonds from both developed and emerging markets issuers. Bonds issued in USD are excluded.

Bloomberg Barclays Global Aggregate Bond Index A benchmark that provides a broad-based measure of the global investment-grade fixed income markets. The three major components of this index are the US Aggregate, the Pan-European Aggregate, and the Asian-Pacific Aggregate Indices. The index also includes Eurodollar and Euro-Yen corporate bonds, Canadian government, agency and corporate securities, and USD investment-grade 144A securities.

Bloomberg Barclays Global High Yield Bond Index The Bloomberg Barclays Global High Yield Index is a multi-currency flagship measure of the global high yield debt market. The index represents the union of the US High Yield, the Pan-European High Yield, and Emerging Markets (EM) Hard Currency High Yield Indices. The high yield and emerging markets sub-components are mutually exclusive.

Bloomberg Barclays Intermediate U.S. Corporate Index A benchmark designed to measure the performance of US corporate bonds that have a maturity of greater than or equal to one year and less than 10 years.

Bloomberg Barclays Intermediate U.S. Treasury Index A benchmark designed to measure the performance of public obligations of the US Treasury that have a remaining maturity of greater than or equal to 1 year and less than 10 years.

Bloomberg Barclays Long U.S. Corporate Index A benchmark designed to measure the

performance of US corporate bonds that have a maturity of greater than or equal to 10 years.

Bloomberg Barclays Long U.S. Treasury Index A benchmark that includes dollar-denominated publicly issued US Treasury securities that have remaining maturity of 10 or more years. They must be rated investment-grade, have \$250 million or more of outstanding face value and be fixed rate and non-convertible.

Bloomberg Barclays Treasury 1-3 Year Index The Bloomberg Barclays US Treasury 1-3 Year Index measures US dollar-denominated, fixed-rate, nominal debt issued by the US Treasury with 1-2.999 years to maturity. Treasury bills are excluded by the maturity constraint, but are part of a separate Short Treasury Index. STRIPS are excluded from the index because their inclusion would result in double-counting.

Bloomberg Barclays U.S. Aggregate Bond Index A benchmark that provides a measure of the performance of the US dollar denominated investment grade bond market. The "Agg" includes investment-grade government bonds, investment-grade corporate bonds, mortgage pass through securities, commercial mortgage backed securities and asset backed securities that are publicly for sale in the US.

Bloomberg Barclays U.S. Corporate Bond Index A fixed-income benchmark that measures the investment-grade, fixed-rate, taxable corporate bond market. It includes USD denominated securities publicly issued by US and non-US industrial, utility and financial issuers.

Bloomberg Barclays U.S. MBS Index A benchmark designed to measure the performance of the US agency mortgage pass-through segment of the US investment grade bond market. The term "US agency mortgage pass-through security" refers to a category of pass-through securities backed by pools of mortgages and issued by US government-sponsored agencies.

Bloomberg Barclays U.S. Treasury Bond Index A benchmark of US dollar-denominated, fixed-rate, nominal debt issued by the US Treasury. Treasury bills are excluded by the maturity constraint, but are part of a separate Short Treasury Index.

Bloomberg Barclays U.S. Treasury Inflation Notes Index The Bloomberg Barclays U.S. Treasury Inflation-Linked Bond Index (Series-L) measures the performance of the US Treasury Inflation Protected Securities (TIPS) market. Federal Reserve holdings of US TIPS are not index eligible and are excluded from the face amount outstanding of each bond in the index.

Bloomberg Barclays U.S. 1-3 Year Corporate Bond Index A benchmark designed to measure the performance of the short-term US corporate bond market. It includes publicly issued US dollar-denominated and investment-grade corporate issues that have a remaining maturity of greater than or equal to one year and less than three years.

CBOE VIX Index A measure of market expectations of near-term volatility conveyed by S&P 500 stock index option prices.

Citi Macro Risk Index The Citi Macro Risk Index measures risk aversion in global financial markets. It is an equally weighted index of emerging market sovereign spreads, US credit spreads, US swap spreads and implied FX, equity and swap rate volatility.

Dow Jones Industrial Average Index A price-weighted benchmark of 20 "blue-chip" US stocks that, at 100-plus years, is the oldest continuing US market index. Price weighting means stocks in "the Dow" with higher share prices are given a greater weight in the index. Launched in 1896, the Dow was named for its inventor Charles Dow and his partner Edward Jones.

Drawdown A specific decline in the stock market during a specific time period that is measured in percentage terms as a peak-to-trough move.

FTSE NAREIT All Equity REITs Total Return Index A free-floated adjusted, market capitalization-weighted index of US equity REITs. Constituents of the index include all tax-qualified REITs with more than 50 percent of total assets in qualifying real estate assets other than mortgages secured by real property.

Gross Domestic Product (GDP) The total monetary or market value of all the finished goods and services produced within a country's borders in a specific time period. As a broad measure of overall domestic production, it functions as a comprehensive scorecard of the country's economic health.

HFRI FOF Diversified Index FOFs classified as "Diversified" exhibit one or more of the following characteristics: invests in a variety of strategies among multiple managers; historical annual return and/or a standard deviation generally similar to the HFRI Fund of Fund Composite Index; demonstrates generally close performance and returns distribution correlation to the HFRI Fund of Fund Composite Index. A fund in the HFRI FOF Diversified Index tends to show minimal loss in down markets while achieving superior returns in up markets.

LPX50 Listed Private Equity Total Return Index Designed and calculated by LPX Group, index contains the largest private equity companies listed on global stock exchanges. The index composition is well diversified across listed private equity categories, styles, regions and vintage years.

MOVE Index A well-recognized measure of US interest rate volatility that tracks the movement in US Treasury yield volatility implied by current prices of one-month over-the-counter options on 2-year, 5-year, 10-year and 30-year Treasuries.

MSCI ACWI IMI Index A free-float weighted global equity index that includes companies in 23 emerging market countries and 23 developed market countries and is designed to be a proxy for most of the investable equities universe around the world.

NASDAQ Composite Index The market capitalization-weighted index of over 3,300 common equities listed on the Nasdaq stock exchange. The index includes all Nasdaq-listed stocks that are not derivatives, preferred shares, funds, exchange-traded funds (ETFs) or debenture securities.

Standard Deviation A statistical measure of volatility that quantifies the historical dispersion of a security, fund or index around an average. Investors use standard deviation to measure expected risk or volatility, and a higher standard deviation means the security has tended to show higher volatility or price swings in the past. As an example, for a normally distributed return series, about two-thirds of the time returns will be within 1 standard deviation of the average return.

S&P GSCI Total Return Index A composite index of commodities that measures the performance of the commodity market. The index is designed to be investable, and there are ETF products designed to track its performance. The S&P GSCI automatically rolls futures contracts, which may not be an optimal investment strategy.

S&P 500® Index A popular benchmark for US large-cap equities that includes 500 companies from leading industries and captures approximately 80% coverage of available market capitalization.

Yield Curve A graph or line that plots the interest rates or yields of bonds with similar credit quality but different durations, typically from shortest to longest duration. When the yield curve is said to be "flat," it means the difference in yields between bonds with shorter and longer durations is relatively narrow. When the yield curve is said to be "steep," it means the difference in yields between bonds with shorter and longer durations is relatively wide.

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