Past performance does not guarantee future results, which may vary. Diversification does not protect an investor from market risks and does not ensure a profit. Please see additional disclosures at the end of this document.
Easy Does It

The continued economic expansion, the fluidity of global politics, and the shifting tectonics of monetary policy: All are reasons we think staying invested, but staying focused on alpha and on risk, is the appropriate path. Markets strike us as lacking extremes on either end of the valuation continuum, though they are subject to rising risks, including the potential for recession, flareups of volatility, and political shocks. Easy Does It, in our view, is the appropriate mindset in a climate that calls for a risk-aware adherence to strategic investment allocations.

We see current conditions as largely benign as long as investors understand that risk may no longer be linear. Political shocks and policy-related risks are the variables to watch, whereas we see recession risk as still moderate.

Investors who believe in risk assets but think they offer limited upside from this point forward may revisit strategies with the potential to offer equity-like returns, but with less equity-like beta. In our view this means examining a range of possibilities in income-oriented investing and alternatives. It may, in short, mean adopting an Easy Does It philosophy—seeking to optimize risk in the tenth year of an equity bull market.

Consequently we would emphasize:

- Sticking to the plan, by maintaining strategic asset allocation weights
- Alpha-oriented, bottoms-up strategies over pure equity beta
- Income-oriented investing and alternatives as a response to moderating returns.
Macro

The global expansion continues, albeit at a moderating pace. In conjunction with subdued inflation, G10 central banks have adopted a renewed dovishness that points toward further easing.

GROWTH

While global growth remains around trend, it is unevenly composed. Manufacturing activity has begun to flat-line—particularly in developed markets—whereas service sector activity has continued to expand at a reasonable pace. We still do not expect a US or global recession anytime soon.

INFLATION

Inflation globally has been moderating since the start of the year, as have medium-term inflation expectations in most major economies other than the Brexit-affected UK markets. We believe this benign outlook provides central banks with near-term breathing space if the growth trajectory lowers further.

MONETARY POLICY

Subdued growth and weaker inflation have given the Federal Reserve the latitude to execute a U-turn on its forward guidance: the committee is now clearly biased toward policy easing. The European Central Bank has also reverted to thinking about further easing measures, while Bank of England strategy remains heavily conditioned by Brexit developments.

POLITICS & POPULISM

While the campaign for the US Presidential election of 2020 is yet to get fully underway, early maneuvering has already displayed disruptive potential. In Europe, the immediate political uncertainty surrounds the latest Brexit deadline of October 31st.

RISK

Developments around global trade tensions should remain pivotal for macro and market dynamics, having a material impact on the outlook for monetary policy, inflation, investment, business sentiment, and earnings. Additional risks may include escalating tensions in the Middle East, Brexit uncertainty, turbulent tweets, and potential technical dislocations in markets.

Left Section Notes: ‘G10’ refers to the 11 industrial countries (Belgium, Canada, France, Germany, Italy, Japan, the Netherlands, Sweden, Switzerland, the United Kingdom, and the United States) which consult and cooperate on economic, monetary, and financial matters. Please see additional disclosures at the end of this document.
Uneven global deceleration...

The recent slowdown in activity and growth has had at least two remarkable features: 1) its protracted length, and 2) the manufacturing sector’s weakness, whose signal should not be over-emphasized as its share of US GDP is only 10%. Other parts of the global economy—notably the services sector—have been much more resilient in the face of uncertainty over trade policy and the associated disruption to supply chains.

has lowered inflation expectations...

The slowdown in global growth—and the downside risks associated with a possible further intensification of trade conflict—has been accompanied by a moderation in market inflation expectations, which are now at multi-year lows. Additionally, currently low inflation may still overstate consumer prices due to the mismeasurement of quality enhancements, particularly in healthcare and communication services.

and provided flexibility for renewed central bank easing.

The easing of inflationary pressures and the perceived predominance of downside risks to growth have created leeway for central banks to ease monetary policy if they so desire. In the case of the Fed, while policy interest rates have remained low by historical standards, the aggregate amount of tightening injected by the FOMC over the prior three years has provided ample room to ease aggressively, if required.

Top Section Notes: As of July 31, 2019. ‘Global manufacturing PMI’ refers to Purchasing Managers’ Index, an index measuring prevailing direction of economic trends in the manufacturing sector. Middle Section Notes: As of July 31, 2019. ‘Breakeven inflation’ refers to the market-based measure of expected inflation. Chart shows the 10-year breakeven inflation rate, represented by the difference between the yield of a nominal bond and an inflation-linked bond. ‘Target inflation’ represents the long-run inflation rate of the following central banks: European Central Bank, Federal Reserve, and Bank of Japan. The target annual inflation rate is 2%. Bottom Section Notes: As of July 31, 2019. ‘FOMC’ refers to the Federal Open Market Committee. ‘Asset-purchase unwind’ refers to the reversal of quantitative easing whereby a central bank shrinks its balance sheet by engaging in large-scale asset sales.
Markets

The shift in global monetary policy and the continued economic expansion should support capital markets, but mixed signals from equity and fixed income underscore persistent growth concerns.

EQUITIES

The 1H 2019 equity bull run’s bearish tinge included outperformance by high-quality and defensive sectors. Moderate return expectations today underline a focus on alpha and bottoms-up security selection, particularly in European equities. While the expansion decelerates, we expect earnings growth to remain modestly positive.

RATES

We believe that global sovereign rates have approached the lower end of their range, but are unlikely to move meaningfully higher without a more globalized inflationary push. Additionally, we believe low rates on the German Bund are likely to limit US rates from moving significantly higher.

CREDIT

Increased leverage, rising levels of corporate debt, and tight spreads reflect late-cycle conditions. Central banks’ dovish pivot adds attractiveness to carry opportunities as fundamentals remain stable. Beta-caution is warranted, as we prefer idiosyncratic deployment in credit.

CURRENCY

We expect the euro to appreciate versus the US dollar, as the Federal Reserve enjoys more room for accommodative policy. The sterling remains prone to Brexit-related volatility.

VOLATILITY

Markets remain vulnerable to exogenous shocks potentially driven by escalating trade tensions, heightened geopolitical risks, and stressed liquidity. We think central bank policy will feature prominently for the remainder of 2019. We expect overall volatility to be contained but see ongoing risks to sharp, episodic events where strategic preparedness is warranted.

Right Section Notes: ‘Carry’ refers to the return obtained from holding an asset.
Seemingly divergent signals from stocks and bonds...

On the surface, exceptionally strong 1H 2019 equity market returns appear to contrast with the cautious signal of falling fixed income yields. The message may not be so mixed. Part of equities’ strength reflected a rebound from 4Q 2018 oversold conditions, while low to negative rates reflect expectations for continued loose monetary policy.

may simply reflect maturity in the economic cycle...

A moderating but resilient expansion undergirds the current mature point in the economic cycle. While the US corporate earnings growth rate has likely peaked, earnings levels are set to reach new highs this year and next. Historically a peak in earnings growth has not represented the beginning of the end for investors. Strong returns have often followed, including positive two-year S&P 500 returns 91% of the time since 1947.

and the impact of an extraordinarily low rate environment.

The impact of unprecedented accommodative global monetary policy may be a key explanatory factor for seemingly dissimilar messages across equities and bonds. Based on the latest impulses from central banks, we believe that long-term rates are likely to be range-bound, with ultra-low and negative yields in Europe and Japan limiting US Treasuries’ normalization. In this environment, maximizing flexibility and dynamism is key.

Top Section Notes: As of July 31, 2019. Middle Section Notes: As of July 31, 2019. Chart shows the probability and magnitude of subsequent S&P 500 index returns after earnings growth peak across three periods: next six months, next year, and next two years. ‘Earnings growth peak’ is determined as the local peak in growth in the 3-year period prior and post the peak date for non-recessionary periods. For conservatism, data does not include earnings growth peak in a recessionary window, which is defined as a peak that occurs during recession or within 12 months following a recession. Bottom Section Notes: As of July 31, 2019. Past performance does not guarantee future results, which may vary.
Macro and Markets Recap

Macro: Easing conditions, converging growth, and policy risks

Markets: Supportive for risk assets despite emergent late-cycle vulnerabilities

Know-How

**Municipal Bonds:** Muni magnetism

**Liquidity:** Putting cash to work

**Income:** In search of cash flow enhancers

**European Equity:** The rise of alpha

**Big Data:** When human meets machine

**Mobility:** A decade of disruption

Views and opinions are current as of August 2019, and may be subject to change, they should not be construed as investment advice.

Economic and market forecasts presented herein reflect our judgment as of the date of this document and are subject to change without notice. These forecasts do not take into account the specific investment objectives, restrictions, tax and financial situation or other needs of any specific client. Actual data will vary and may not be reflected here. These forecasts are subject to high levels of uncertainty that may affect actual performance. Accordingly, these forecasts should be viewed as merely representative of a broad range of possible outcomes. These forecasts are estimated, based on assumptions, and are subject to significant revision and may change materially as economic and market conditions change. Goldman Sachs Asset Management has no obligation to provide updates or changes to these forecasts. Examples are for illustrative purposes only.
Muni magnetism. The first half of 2019 saw especially high inflows into municipal bonds, which we expect to persist.

The first six months of 2019 saw municipal bond inflows of almost $21 billion, surpassing the average five-year same-period figure by 2.4x. We believe that this voracious demand will persist for the remainder of the year and likely beyond, as the impact of the Tax Cut and Jobs Act continues to drive demand for tax-free income.

Look beyond the benchmark. A diversified muni portfolio may match benchmark returns and may offer higher yield or lower duration.

While the municipal bond aggregate benchmark makes for a solid starting point, diversification is key in muni portfolios. An illustrative portfolio that matches the Muni Agg benchmark duration may yield nearly 100 basis points more, while one that matches the yield may offer lower interest rate risk. In an environment of low interest rates, broadening term structure and credit quality may provide additional yield or less rate risk.

Potential Benefits of Muni Diversification

<table>
<thead>
<tr>
<th>Illustrative Muni Portfolio</th>
<th>Muni Short</th>
<th>Muni HY</th>
<th>Muni Agg</th>
<th>Yield Match</th>
<th>Duration Match</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allocation (%)</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>Match</td>
<td>4.1 Match</td>
</tr>
<tr>
<td>Tax-Equivalent Yield (%)</td>
<td>2.1</td>
<td>7.3</td>
<td>3.2</td>
<td>Match</td>
<td>4.7 Match</td>
</tr>
<tr>
<td>Duration (Years)</td>
<td>2.6</td>
<td>8.0</td>
<td>5.5</td>
<td>Match</td>
<td>A Match</td>
</tr>
<tr>
<td>Average Credit Rating</td>
<td>AA</td>
<td>BB-</td>
<td>AA-</td>
<td>Lower Duration</td>
<td>Higher Yield</td>
</tr>
</tbody>
</table>

Source: Bloomberg Barclays and GSAM.

Top Section Notes: As of June 30, 2019, latest available. Chart shows the municipal fund inflows averaged over the past five years (2014–2018) and for 2019 year-to-date. ‘Municipal fund inflows’ are based on ‘net new flows’ as defined by Morningstar’s ‘Muni National Intermediate’ category group. Bottom Section Notes: As of July 31, 2019. ‘Muni Short’ refers to the Bloomberg Barclays 3-Year Municipal Bond Index. ‘Muni HY’ refers to the Bloomberg Barclays High Yield Municipal Bond Index. ‘Muni Agg’ refers to the Bloomberg Barclays Municipal Bond Index. Chart shows several illustrative municipal bond portfolios that match the historical tax-equivalent yield and duration of the Bloomberg Barclays Muni Index respectively. ‘Tax-equivalent yield’ is used to compare the yield of a taxable bond to that of a tax-exempt bond. ‘Duration’ is a measure of the sensitivity of the price of a fixed income investment to a change in interest rates. Average credit rating refers to ratings provided through Bloomberg Barclays. Tax-equivalent yield, duration, and average credit rating are portfolio-weighted averages of index data. These illustrative results do not reflect any GSAM product and are being shown for informational purposes only. No representation made that an investor will achieve results similar to those shown. The performance results are based on historical performance of the indices used. The results will vary based on market conditions and your allocation. Diversification does not protect an investor from market risk and does not ensure a profit. Please see page 16 for additional definitions on both the top and bottom chart. Past performance does not guarantee future results, which may vary.
**Liquid tension.** Liquidity is an essential part of investment strategy, yet the opportunity for cash to work is often underappreciated.

Identifying goals for cash can enable investors to better align short-term investments with particular liquidity needs. We think that a differentiation between daily liquidity and on-demand liquidity is important. Both allow for preservation of capital, but strategic investments for on-demand liquidity may further unlock incremental return without sacrificing access to cash.

**Identifying goals for cash can enable investors to better align short-term investments with particular liquidity needs.**

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**Don’t Let Your Cash Drag**

**Illustrative Daily Cash Balance**

- **Primary Liquidity**
- **Secondary Liquidity**
- **Tertiary Liquidity**

**Source:** GSAM.

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**Get short.** Late-cycle flattening makes the front end of the curve attractive on an absolute and risk-adjusted basis.

The front end of the yield curve offers a sweet spot for investors from a yield and duration perspective, in our view. We see advantages for investors residing on both ends of the maturity spectrum. In light of a more accommodative central bank posture, portfolios with longer durations may find more attractive yield towards the shorter end of the curve. At the same time, the US average savings account rate of 1.2% may have daily liquidity investors leaving money on the table.

**Find Your Sweet Spot**

**Source:** Bloomberg and GSAM.

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Top Section Notes: As of July 31, 2019. ‘Liquidity’ refers to short duration securities that can be quickly bought or sold in the market at a price reflecting its intrinsic value. ‘Primary liquidity’ refers to investments with an investment horizon of less than 12 months, an objective of preservation of capital and liquidity, and that uses traditional money market or short-term conservative income strategies. ‘Secondary liquidity’ refers to investments with an investment horizon on 12 months or longer, an objective of enhanced return and preservation of capital, and that uses short duration strategies. ‘Tertiary liquidity’ refers to investments with an indefinite investment horizon, an objective with greater emphasis on maximizing return potential, and that uses broad fixed income strategies. ‘Daily liquidity’ refers to a subset of primary liquidity with an investment horizon of less than 6 months. ‘On-demand liquidity’ refers to a subset of primary liquidity with an investment horizon of 6–12 months. For illustrative purposes only. Bottom Section Notes: As of July 31, 2019. ‘US average savings account rate’ is from the Bankrate survey of large lenders in all 50 states. Chart shows the current yield and risk-adjusted yield for different tenors of on-the-run US Treasuries. ‘On-the-run’ refers to the most recently issued Treasuries of a particular maturity. ‘Risk-adjusted yield’ is measured by the yield per unit of risk, where risk is defined as the standard deviation of monthly total returns over the last 10 years. ‘Yield’ refers to the end of day yield to maturity. **Past performance does not guarantee future results, which may vary.**
At what price? Low rates and high equity valuations have presaged lower long-term returns.

Current equity valuations have historically corresponded to mid-single-digit returns in the subsequent decade. At the same time, the aging proportion of the population has steadily marched higher, and by 2020 we expect the number of people aged 65 and older to exceed those aged five and younger. Both developments suggest that in an environment of normalizing equity returns and lower interest rates, investors must look beyond traditional asset classes in pursuit of sustainable cash flow.

Go with the Flow

In today’s environment, we believe income generation will be an increasingly important consideration in portfolio construction. With US equities yielding just under 2%, investors may need to look outside of traditional core assets to achieve a 4% or greater annual distribution. Additionally, incorporating cash flow enhancers may help investors capture the majority of equity returns through income rather than relying upon capital appreciation, which is more risky in nature.

Top Section Notes: As of July 31, 2019. 'CAPE ratio' refers to the cyclically adjusted price-to-earnings ratio, which is a valuation measure using real earnings per share (EPS). '10-year Avg. Sub. Return' references monthly returns of the S&P 500 Total Return Index. Table shows the CAPE ratio in deciles, from lowest to highest, and its respective average returns over the next 10 years. Past performance does not guarantee future results, which may vary. The economic and market forecasts presented herein are for informational purposes as of the date of this document. There can be no assurance that the forecasts will be achieved. Please see additional disclosures at the end of this document. Bottom Section Notes: As of July 31, 2019. 'Global Infra. and MLPs' refers to Global Infrastructure and MLPs. With the exception of the US 10-Year Treasury, distribution yield assumptions represent the asset-weighted median 12-month distribution of Institutional or No-Load Shares of mutual funds in the representative Morningstar category, excluding those funds with 12-b(1) fees greater than 0.25%. In an effort to distinguish funds by what they own, as well as by their prospectus objectives and styles, Morningstar developed the Morningstar Categories. While the prospectus objective identifies a fund’s investment goals based on the wording in the fund prospectus, the Morningstar Category identifies funds based on their actual investment styles as measured by their underlying portfolio holdings (portfolio and other statistics over the past three years). Please see additional disclosures at the end of the document.
Less macro. Idiosyncratic factors have grown in importance as drivers of European equity returns.

European equity returns have dislocated from traditional growth drivers; political uncertainty and weak corporate profitability explain virtually all of Europe’s underperformance. Europe’s highly cyclical and mature sector composition amplifies these issues. While we expect episodic outperformance during periods of growth acceleration, rising rates, higher US inflation, aggressive US tech regulation, and/or favorable political momentum, we believe the best opportunities in Europe are micro, not macro.

More micro. High-performing European firms have seen higher returns.

Since 2009, European companies with outperforming stocks have exhibited significantly greater earnings growth, profit margins, and annual returns than those with weak share-price returns. These fundamental differences are particularly large relative to the US, which is why we see a strong case for active management in European equities. While European beta may have diminished macro momentum, we see alpha opportunities as plentiful—and may be best captured through bottoms-up analysis and more concentrated positioning.

Bigger Needles in Smaller Haystacks
Average Difference Between Outperforming and Underperforming Stocks (pp)

<table>
<thead>
<tr>
<th></th>
<th>S&amp;P 500</th>
<th>Euro Stoxx 600</th>
<th>Over the last 10 years, European companies have had</th>
</tr>
</thead>
<tbody>
<tr>
<td>EPS Growth</td>
<td>7</td>
<td>12</td>
<td>~2x greater EPS growth dispersion</td>
</tr>
<tr>
<td>Profit Margin</td>
<td>1</td>
<td>4</td>
<td>4x wider profit margin dispersion</td>
</tr>
<tr>
<td>Annual Return</td>
<td>19</td>
<td>36</td>
<td>~2x more annual return dispersion</td>
</tr>
</tbody>
</table>

Source: Bloomberg and GSAM.

Top Section Notes: As of July 31, 2019. ‘Relative strength ratio’ refers to the relationship between Europe and the US based on equity and economic ratios. The equity ratio is calculated by taking the ratio of the Euro Stoxx 600 Index cumulative daily performance over a denominator of S&P 500 Index cumulative daily performance. The economic ratio is calculated by taking the ratio of monthly Euro area Markit Manufacturing Purchasing Managers Index (PMI) over a denominator of monthly US ISM manufacturing PMI. ‘Info Tech’ refers to Information Technology. ‘Fin.’ refers to Financials. ‘Comm. Service’ refers to Communication Services. ‘Cons. Disc.’ refers to Consumer Discretionary. ‘Indus.’ refers to Industrials. ‘Cons. Stap.’ refers to Consumer Staples. ‘Util.’ refers to Utilities. Bottom Section Notes: As of December 31, 2018, latest available. Analysis is done on an annual basis from 2009 to 2018. Each data point represents the 10-year average difference between the median of outperforming and underperforming stocks for each respective measure. ‘Outperforming stocks’ refers to securities with an annual return that exceeds the index, and ‘underperforming stocks’ refers to securities with an annual return less than the index. ‘EPS growth’ refers to earnings per share growth. ‘Profit margin’ refers to profit as a percentage of revenue. ‘Return dispersion’ refers to the difference between annual returns of outperforming and underperforming securities. Past performance does not guarantee future results, which may vary.
At the cutting edge. Investment managers’ information advantages are hard to sustain as data analysis is constantly evolving.

The value of data-derived insight varies according to the amount and quality of information. In the initial stage (Zone 1), not enough data is available and the incremental value of data-derived insight remains small. Once sufficient data is available (Zone 2), managers with interpretive processing capabilities have an edge, which may provide an opportunity for alpha generation. However, as data becomes broadly accessible to the public (Zone 3), there is declining incremental value in acquiring “more.” On the whole, managers must consistently evolve and adapt to maintain their information advantage.

Source: Goldman Sachs Global Markets Institute (GMI) and GSAM.

Human and machine. Artificial intelligence may help innovative managers stay ahead of the pack.

Artificial intelligence can be defined as a set of computer algorithms performing tasks once perceived to require human intelligence, but which can now be done rapidly, independent of human intervention. Machines can now consistently learn and improve their knowledge and performance at a speed well beyond human cognition, potentially empowering investors with informational advantages.

Source: GSAM.

Continuous Evolution of Artificial Intelligence

Origins of Artificial Intelligence (AI)
- A set of computer algorithms that perform tasks perceived to require human intelligence

Machine Learning
- A subset of computer algorithms that learn and improve by performing tasks

Deep Learning
- Machine learning algorithms that process multi-layered neural networks to optimize performance for a given task

Source: GSAM.

Top Section Notes: As of July 31, 2019. For illustrative purposes only. ‘Information advantage’ refers to unique knowledge that gives a firm or an individual a competitive advantage. Bottom Section Notes: As of July 31, 2019. For illustrative purposes only. ‘Algorithm’ refers to a step-by-step procedure designed to perform an operation.
The next 10 years of mobility will revolutionize the way people and products move. Emergent technologies such as ride-hailing, autonomous vehicles, micro-mobility, and even eVTOL (electric vertical takeoff and landing, a.k.a. flying cars), stand to disrupt a $7 trillion global mobility market, impacting more than $700 billion of profits in the space. The new mobility market will create opportunities for investments as new businesses are established, existing transportation concepts disrupted, and cities transformed.

The global mobility market is about to change as pay-as-you-go models disentangle usage and ownership.

The evolution of ride-hailing stands to spawn broader technological and social transformation. Cloud mobility is utilizing data to alter how cities move, through transportation services including smart shuttle buses and various types of car-sharing. This pay-as-you-go mobility market could potentially expand four-fold to $409 billion by 2030. In the US, we expect vehicles per licensed driver to begin declining in 2028, while in Japan, cars in operation are expected to begin declining as early as 2024.

### Should You Ride or Own?

<table>
<thead>
<tr>
<th>Distance Driven per Year (Miles)</th>
<th>Savings for Owning a Car ($ per year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>100</td>
<td>-15,000</td>
</tr>
<tr>
<td>1,300</td>
<td>-10,000</td>
</tr>
<tr>
<td>2,500</td>
<td>-5,000</td>
</tr>
<tr>
<td>3,700</td>
<td>0</td>
</tr>
<tr>
<td>4,900</td>
<td>5,000</td>
</tr>
<tr>
<td>6,100</td>
<td>10,000</td>
</tr>
<tr>
<td>7,300</td>
<td>15,000</td>
</tr>
<tr>
<td>8,500</td>
<td>20,000</td>
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<tr>
<td>9,700</td>
<td></td>
</tr>
<tr>
<td>10,900</td>
<td></td>
</tr>
<tr>
<td>12,100</td>
<td></td>
</tr>
<tr>
<td>13,300</td>
<td></td>
</tr>
</tbody>
</table>

**An American who on average drives less than ~6,000 miles per year is better off ride-sharing than owning a car.**

Source: AAA, EPA, Experian, FHWA, Goldman Sachs Global Investment Research, and GSAM.
Our Contributors

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John leads the Market Strategy team, focusing on global capital markets, macro strategy, and implementation. He specializes in developing tactical and strategic investment insights within a risk-aware framework.

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Vice President, Senior Market Strategist
Maria is responsible for analyzing macroeconomic trends and financial market data to develop strategic asset class views. She delivers market insights to clients, guiding effective and informed investment decisions.
Risk Disclosures

Buy-write strategies are subject to market risk, which means that the value of the securities in which it invests may go up or down in response to the prospects of individual companies, particular sectors and/or general economic conditions. They are also subject to the risks associated with writing (selling) call options, which limits the opportunity to profit from an increase in the market value of stocks in exchange for up-front cash at the time of selling the call option. In a rising market, the strategy could significantly underperform the market, and the strategies may not fully protect it against declines in the value of the market.

Equity securities are more volatile than fixed income securities and subject to greater risks. Small and mid-sized company stocks involve greater risks than those customarily associated with larger companies.

International securities entail special risks such as currency, political, economic, and market risks.

Emerging markets securities may be less liquid and more volatile and are subject to a number of additional risks, including but not limited to currency fluctuations and political instability.

An investment in real estate securities is subject to greater price volatility and the special risks associated with direct ownership of real estate.

Investments in fixed-income securities are subject to credit and interest rate risks. Bond prices fluctuate inversely to changes in interest rates. Therefore, a general rise in interest rates can result in the decline in the bond’s price. Credit risk is the risk that an issuer will default on payments of interest and principal. This risk is higher when investing in high yield bonds, also known as junk bonds, which have lower ratings and are subject to greater volatility. All fixed income investments may be worth less than their original cost upon redemption or maturity.

Although Treasuries are considered free from credit risk, they are subject to interest rate risk, which may cause the underlying value of the security to fluctuate.

Income from municipal securities is generally free from federal taxes and state taxes for residents of the issuing state. While the interest income is tax-free, capital gains, if any, will be subject to taxes. Income for some investors may be subject to the federal Alternative Minimum Tax (AMT).

There may be additional risks that are not currently foreseen or considered.

General Disclosures

Page 11: 'Buy/Write Equity' yield assumptions are provided by GSAM SAS Portfolio Strategy. ‘Emerging Market Debt’ refers to a 50%/50% blend of Emerging market (EM) debt USD and EM local currency debt. EM Debt USD is represented by Emerging Markets Bond Morningstar category. EM local currency debt is represented by EM Local-Currency Bond Morningstar category. ‘Global REITs’ refer to a 54%/46% blend of US real estate investment trusts (REITs) and international REITs. US REITs is represented by Real Estate Morningstar category. International REITs is represented by Global Real Estate Morningstar category. 'US equity' is represented by a blend of: 71.0% US Large Cap Equity (12-month asset weighted median yield across the following Morningstar Categories: Large Blend), 23.0% US Mid Cap Equity (12-month asset weighted median yield across the following Morningstar Categories: Mid-Cap Blend), 6.0% US Small Cap Equity (12-month asset weighted median yield across the following Morningstar Categories: Small Blend). '10-Year Treasury' refers to the yield to worst of the Bloomberg Barclays US 10-Year Treasury Index as of 7/31/2019.

Page 2 Relative Asset Class Calendar-Year Performance Notes: ‘Bank Loans’ are represented by the Credit Suisse Leveraged Loan Index. ‘Commodities’ are represented by the S&P GSCI Commodity Index. ‘Emerging Market (EM) Debt’ is represented by the JPM EMBI Global Composite Index. ‘Emerging Market (EM) Equity’ is represented by the MSCI Emerging Markets Index. ‘Hedge Funds’ are represented by the HFRI Fund of Funds Index. ‘High Yield’ is represented by the Bloomberg Barclays Global High Yield Index. ‘International Equity’ is represented by the MSCI EAFE Index. ‘International Real Estate’ is represented by the S&P Developed ex-US Property Index. ‘International Small Cap’ is represented by the S&P Developed ex-US Small Cap Index. ‘US Aggregate Bonds’ are represented by the Bloomberg Barclays Aggregate Bond Index. ‘US Large Cap’ is represented by the S&P 500 Index. ‘US Municipal’ is represented by the Bloomberg Barclays Municipal Bond Index. ‘US Real Estate’ is represented by the Dow Jones US Select Real Estate Securities Index. ‘US Small Cap’ is represented by the Russell 2000 Index.

Page 9 Bottom Section Notes: Yield Match Muni Portfolio allocation (an illustrative muni portfolio): 35% Bloomberg Barclays 3 Year Municipal Bond Index, 50% Bloomberg Barclays Municipal High Yield Bond Index. Duration Match Muni Portfolio allocation (an illustrative muni portfolio): 20% Bloomberg Barclays 3 Year Municipal Bond Index, 55% Bloomberg Barclays Municipal Aggregate Bond Index, and 25% Bloomberg Barclays Municipal High Yield Bond Index. ‘Yield Match’ and ‘Duration Match’ refers to a portfolio with either tax-equivalent yield or duration set equal to the Bloomberg Barclays Municipal Bond Index (Muni Agg) by combining various weights of the Bloomberg Barclays Municipal Bond Index, the Bloomberg Barclays 3 Year Municipal Bond Index, and the Bloomberg Barclays Municipal High Yield Bond Index.

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Date of first use: September 1, 2019. 174834-OTU-1033430.
Glossary

Equities
The Dow Jones US REIT tracks companies that are both equity owners and operators of real estate in the US.
The unmanaged MSCI EAFE Index (unhedged) is a market capitalization weighted composite of securities in 21 developed markets.
The MSCI Emerging Markets Equity Index is a free float-adjusted market capitalization index that is designed to measure equity market performance of emerging markets.
The Russell 2000 Index measures the performance of the small-cap segment of the U.S. equity universe. The Russell 2000 Index is a subset of the Russell 3000 Index representing approximately 10% of the total market capitalization of that index. It includes approximately 2000 of the smallest securities based on a combination of their market cap and current index membership.
The S&P 500 Index is the Standard & Poor's 500 Stock Prices Index of 500 stocks, an unmanaged index of common stock prices. The index figures do not reflect any deduction for fees, expenses or taxes. It is not possible to invest directly in an unmanaged index.
The S&P 500 Growth Index is the Standard & Poor’s Style Index derived from constituents included within the S&P 500 Index that exhibit strong growth characteristics.
The S&P 500 Value Index is the Standard & Poor’s Style Index derived from constituents included within the S&P 500 Index that exhibit strong value characteristics.
The S&P Developed ex-US Property Index measures the performance of real estate companies domiciled in countries outside the United States.
The S&P Developed ex-US Small Cap Index covers the smallest 15% of companies from developed countries (excluding the US) ranked by total market capitalization.
The STOXX Europe 600 Index is derived from the STOXX Europe Total Market Index (TMI) and is a subset of the STOXX Global 1800 Index. With a fixed number of 600 components, the STOXX Europe 600 Index represents large, mid and small capitalization companies across 17 countries of the European region: Austria, Belgium, Denmark, Finland, France, Germany, Ireland, Italy, Luxembourg, the Netherlands, Norway, Poland, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

Fixed Income
The Bloomberg Barclays 3 Year Municipal Bond Index consists of a broad selection of investment grade obligation and revenue bonds of maturities ranging from two to four years. An investment cannot be made directly in an index.
The Bloomberg Barclays Aggregate Bond Index represents an unmanaged diversified portfolio of fixed income securities, including U.S. Treasuries, investment-grade corporate bonds, and mortgage backed and asset-backed securities.
The Bloomberg Barclays Emerging Markets Local Currency Government Index is designed to provide a broad measure of the performance of local currency emerging markets (EM) debt.
The Bloomberg Barclays EM USD Aggregate Index is a flagship hard currency Emerging Markets debt benchmark that includes USD denominated debt from sovereign, quasi-sovereign, and corporate EM issuers.
The Bloomberg Barclays Global High Yield Index provides a broad-based measure of the global high-yield fixed income market.
The Bloomberg Barclays High Yield Municipal Bond Index covers the high yield portion of the USD-denominated long-term tax exempt bond market. The index has four main sectors: state and local general obligation bonds, revenue bonds, insured bonds, and pre-refunded bonds.
The Bloomberg Barclays Municipal Bond Index is an unmanaged index that is considered representative of the broad market for investment grade, tax-exempt bonds with a maturity of at least one year.
The Bloomberg Barclays Pan-European High Yield Index covers the universe of fixed-rate, sub-investment-grade debt denominated in euros or other European currencies (except Swiss francs).
The Bloomberg Barclays U.S. High Yield Index covers the universe of fixed rate, non-investment grade debt.
The Credit Suisse Leveraged Loan Index tracks the investable leveraged loan market by representing tradable, senior-secured, US-dollar denominated, non-investment-grade loans.
The J.P. Morgan 1-Month Cash Index measures the total return of a rolling investment in a short-term fixed income instrument with a one-month maturity.
The J.P. Morgan EMBI Global Composite Index is an unmanaged index tracking dollar-denominated debt instruments issued in emerging markets.
The Fed Funds Rate is the interest rate that banks charge other banks for lending them money from their reserve balances on an overnight basis.
The German Bund is a long-term debt obligation backed by Germany’s federal government.
The US 10-Year Treasury is a debt obligation backed by the United States government and its interest payments are exempt from state and local taxes. However, interest payments are not exempt from federal taxes.

Other
Alpha refers to returns in excess of the benchmark return.
Basis points (bps) refers to a unit represented by one hundredth of one percent.
Bearish refers to negative investor sentiment.
Beta refers to the tendency of a security’s returns to respond to swings in the market.
Brexit refers to the process of the United Kingdom seeking to exit the European Union.
Buy-write strategy is an option trading strategy where an investor buys a security with options available on it and simultaneously sells a call option on that security in an effort to generate income from option premiums.
Dovish describes the stance of a central bank guarding against deflation.
Equity-like beta refers to volatility that is similar to a stock’s volatility.
Equity-like return refers to returns that are similar to a stock’s returns.
The Gross Domestic Product (GDP) is the value of finished goods and services produced within a country’s borders over one year.
The HFRI Fund of Funds Composite Index is an equal weighted, net of fee, index composed of approximately 800 fund-of-funds which report to HFRI.
High quality sector is evaluated through the quality factor, which is a combination of profitability and balance sheet ratios, including leverage, return on equity, and earnings growth.
Income-oriented investing refers to investments where returns are primarily realized through fixed payments such as coupons.
Populism is a political ideology in which there is a perceived belief in the control of the government by “the common man.”
A recession is defined by the NBER as a significant decline in economic activity spread across the economy, lasting more than a few months, normally visible in real GDP, real income, employment, industrial production, and wholesale-retail sales.
Risk assets refers to assets that carry a degree of price volatility.
The S&P GSCI Commodity Index is a composite index of commodity sector returns, representing an unleveraged, long-only investment in commodity futures that is broadly diversified across the spectrum of commodities.
Spread is the difference between two prices or interest rates.
Standard deviation is defined as a measure of the dispersion of a set of data from its mean.
Volatility is a measure of variation of a financial instrument’s price.
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