### State Street Global Advisors SPDR® ETFs Chart Pack

**April 2018 Edition** 

**For Public Use** 

Please see Appendix C for more information on investment terms used in this Chart Pack.

STATE STREET\_\_\_\_\_ GLOBAL ADVISORS. SPDR\*



#### **Chart Pack Table of Contents**

#### I. Market Environment

- Performance
- Investor Confidence
- Equity Drawdowns
- Volatility
- Active Environment
   Barometer
- State Street Current
   Positioning

# II. Global Flows & Fundamentals, US Factors

- Asset Class Flows
- Global Valuations
- Economic Growth
- Global Earnings
- US Factor Trends

#### III. Sectors

- · Flows & Returns
- Valuations
- Sector Growth
- Earnings Sentiment

#### IV. Fixed Income

- Yield Curve
- Bond Market
- Rates Trend
- Treasury Markets
- Credit Trends
- EM Debt



### **Market Environment**



# **Asset Class Performance** — US large caps had their worst quarterly performance since Q3 2015, while small caps held strong despite increasing volatility

#### **Major Asset Class Performance (%)**



Source: Bloomberg Finance, L.P. As of March 31, 2018. Past performance is not a guarantee of future results. Index returns are unmanaged and do not reflect the deduction of any fees or expenses. Index returns reflect all items of income, gain and loss and the reinvestment of dividends and other income. Performance returns for periods of less than one year are not annualized.



# **State Street Investor Confidence** — Investors re-embraced risk in March, but a potential trade war may negatively impact confidence going forward

#### **State Street Investor Confidence Index**



State Street Investor Confidence Index ——1 Year Moving Average

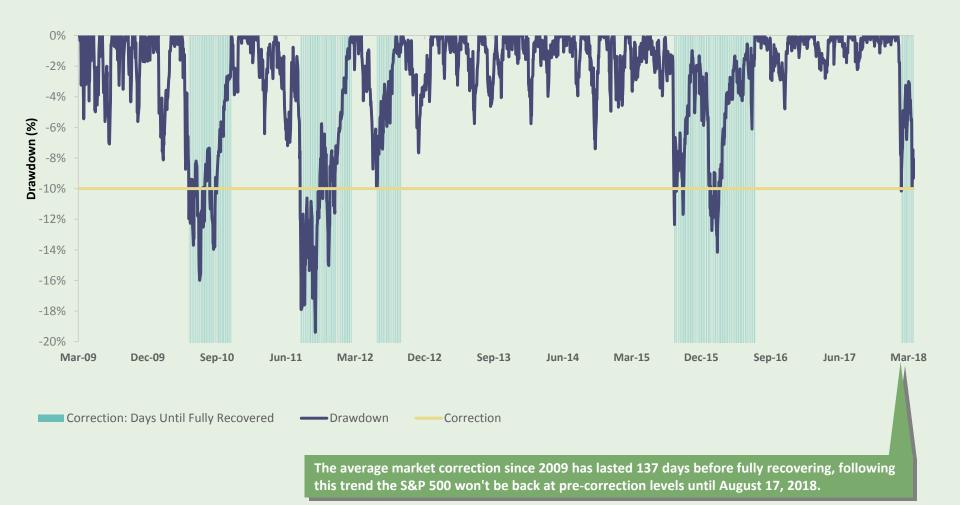
Source: Bloomberg Finance, L.P. As of March 31, 2018.

State Street Confidence Indexes Measures investor confidence or risk appetite quantitatively by analyzing the actual buying and selling patterns of institutional investors. The index assigns a precise meaning to changes in investor risk appetite: the greater the percentage allocation to equities, the higher risk appetite or confidence. A reading of 100 is neutral; it is the level at which investors are neither increasing nor decreasing their long-term allocations to risky assets. The results shown represent current results generated by State Street Investor Confidence Index. The results shown were achieved by means of a mathematical formula in addition to transactional market data, and are not indicative of actual future results which could differ substantially.



**Equity Drawdowns** — Monetary tightening, decelerating earnings revisions and a potential trade war may lead to a bumpy recovery from the recent correction

#### Drawdown of the S&P 500 Index

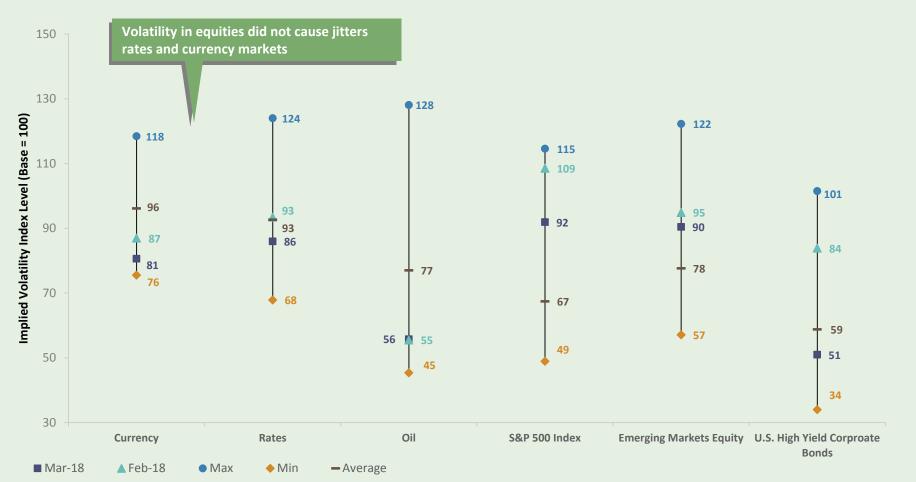


Source: Bloomberg Finance, L.P. As of March 31, 2018. Past performance is not a guarantee of future results. Index returns are unmanaged and do not reflect the deduction of any fees or expenses.



**Cross-Asset Volatility** — Implied volatility came down across a majority of asset classes in March, while equity volatility remains above their historical averages

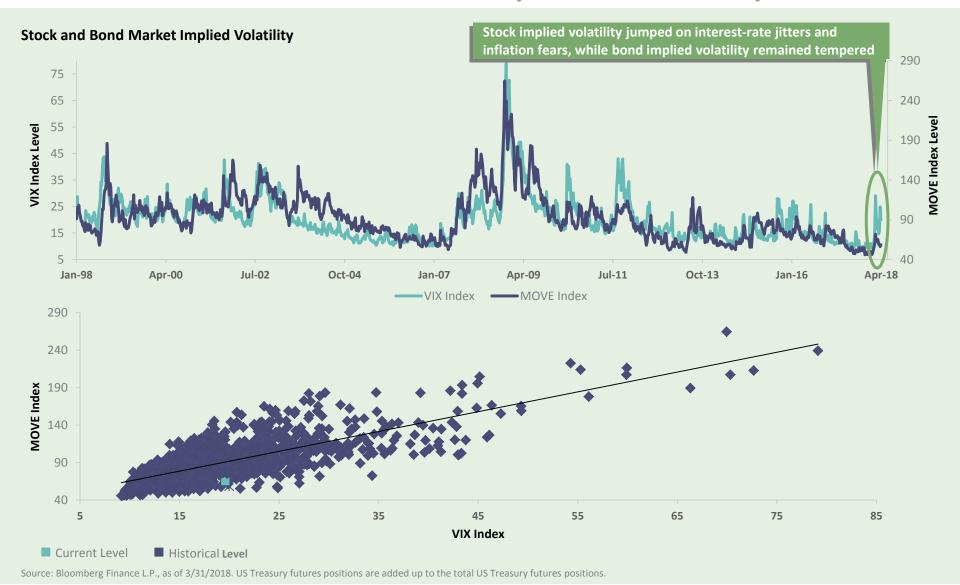
#### **Cross-Asset Implied Volatility (Monthly, Since January 2016)**



Source: Bloomberg Finance, L.P. As of March 29, 2018. Past performance is not a guarantee of future results. Index returns are unmanaged and do not reflect the deduction of any fees or expenses. Standard deviation is a historical measure of the volatility of returns. If a portfolio has a high standard deviation, its returns have been volatile; a low standard deviation indicates returns have been less volatile. Currency implied volatility is measured by the J.P. Morgan Global FX Volatility Index. Rates implied volatility is measured by the MOVE Index. Oil implied volatility is derived from oil future contracts. Emerging markets implied volatility is measured by the CBOE Emerging Markets ETF Volatility Index. High Yield bond implied volatility is measured by the CBOE High Yield Corporate Bond ETF Volatility Index.

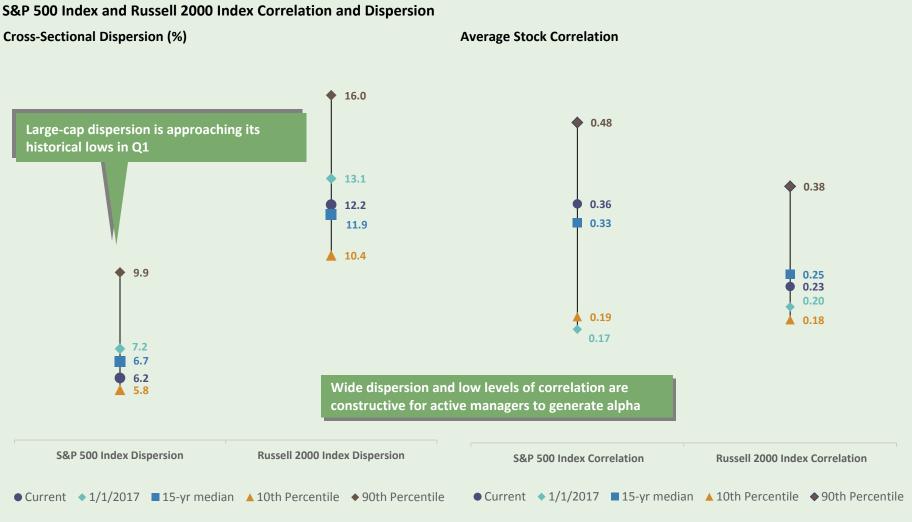


### **Volatility** — The divergence between stock and bond implied volatility may indicate either the stock market overreacted or bonds may witness more volatility ahead





# **Active Environment Barometer** — The market environment for large cap managers has deteriorated as large-cap dispersion narrows and correlations increase



Source: FactSet, as of 3/31/2018.

The Cross-Sectional Dispersion is calculated as the standard deviation of daily returns of index constituents for one month. Average stock correlation is calculated as the average correlation of each pair of constituents in the index over one month. Characteristics are as of the date indicated and should not be relied upon as current thereafter.



**State Street Current Positioning** — State Street favored EM over Developed ex-US equities, as the former exhibit better earnings growth and stronger economic sentiment

#### SPDR SSGA Global Allocation ETF [GAL] Current and Strategic Exposures (%)



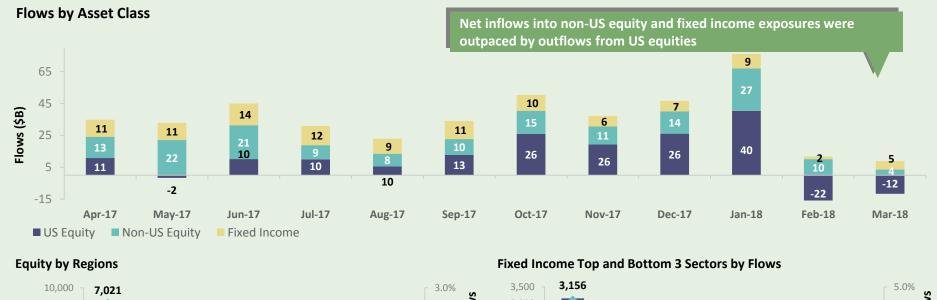
Source: State Street Global Advisors. As of March 31, 2018. Exposures are as of the date indicated, are subject to change, and should not be relied upon as current thereafter. This information should not be considered a recommendation to invest in a particular sector. It is not known whether the sectors shown will be profitable in the future. The information above is rounded to the nearest whole number.



# Global Flows & Fundamentals, US Factors



### Flow Trends — US-listed ETF's posted consecutive monthly outflows for the first time since 2008, but flows are still the second best Q1 on record





Investors allocated to rate sensitive sectors to temper the balance of equity risks

-238

Inflation

Linked

Bottom 3

Source: State Street Global Advisors, Bloomberg Finance, L.P. As of March 31, 2018. Sectors, asset classes and flows are as of the date indicated, are subject to change, and should not be relied upon as current thereafter.



-399

**High Yield** 

Corp.

4.0%

3.0%

2.0%

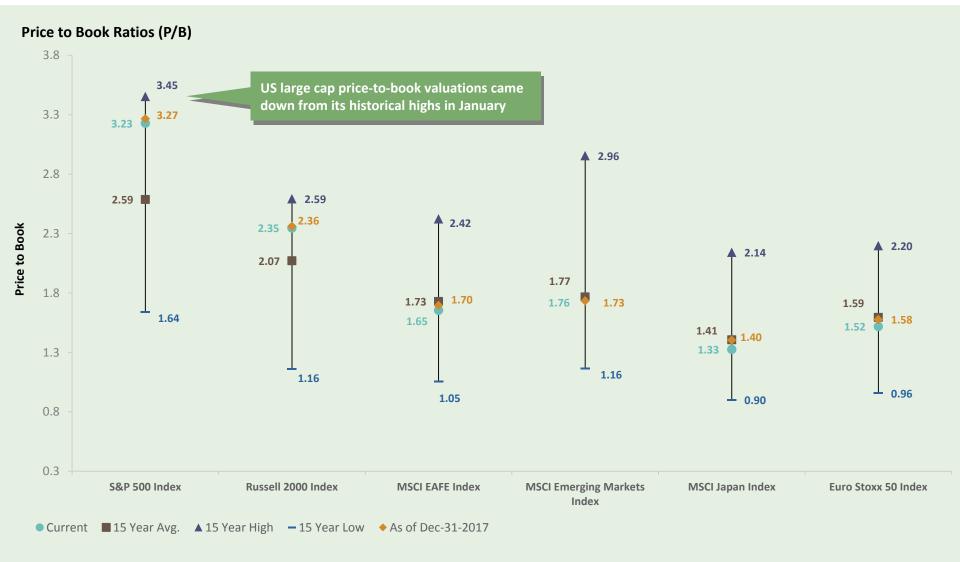
1.0%

0.0%

-1.0%

-2.0% 💸

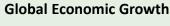
# **Global Valuations** — Valuations outside the US remain near or below their 15-year averages and look attractive relative to US large caps



Source: Bloomberg Finance, L.P., State Street Global Advisors. As of March 31, 2018. Characteristics are as of the date indicated and should not be relied upon as current thereafter.



# **Global Economy** — Both Emerging and Developed economies are expected to maintain momentum and show stable GDP growth in 2018 and 2019



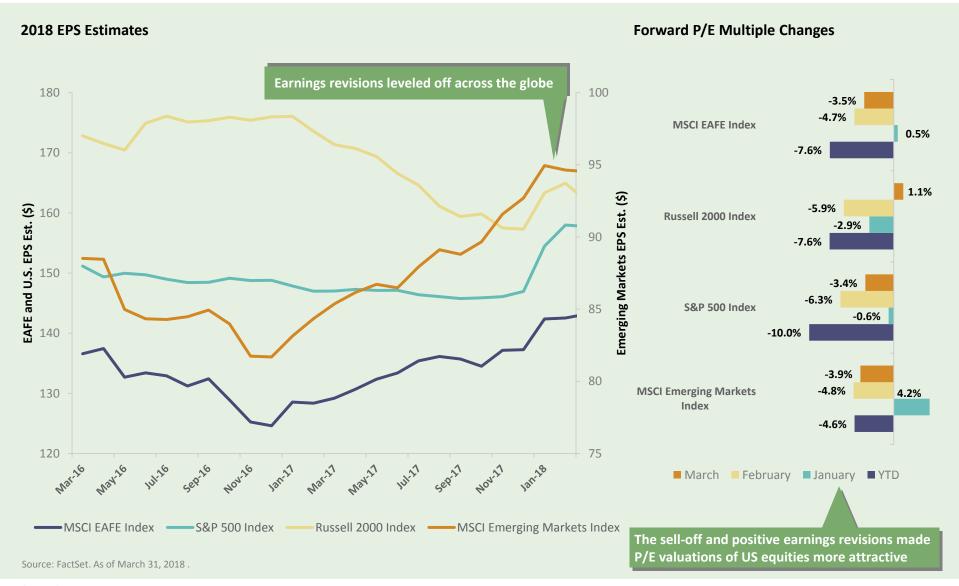


Source: Bloomberg Finance, L.P., State Street Global Advisors. As of March 31, 2018. GDP growth projections are based on Bloomberg Contributor Composite estimates.

Almost all economies are projected to see positive GDP growth in 2018



**Global Earnings** — After some upside revisions at the beginning of Q1, global earnings estimates were flat in March, but P/E valuations came down amid the sell-off





### **US Factor Trends** — Momentum was under pressure amid the Tech sell-off, while min. vol. rebounded as investors looked to reduce risk



Source: Bloomberg Finance, L.P. As of March 31, 2018.

Past performance is not a guarantee of future results. MSCI USA Minimum Volatility Index, MSCI USA Equal Weighted Index, MSCI USA High Dividend Yield Index, and MSCI USA Momentum Index were used above compared to the MSCI USA Index. Index returns are unmanaged and do not reflect the deduction of any fees or expenses.



### **Sectors**



### **Sector Flow and Returns Heat Map** — Financials took in the most flows amid rising rates and regulatory relief, while Tech was favored despite the recent sell-off

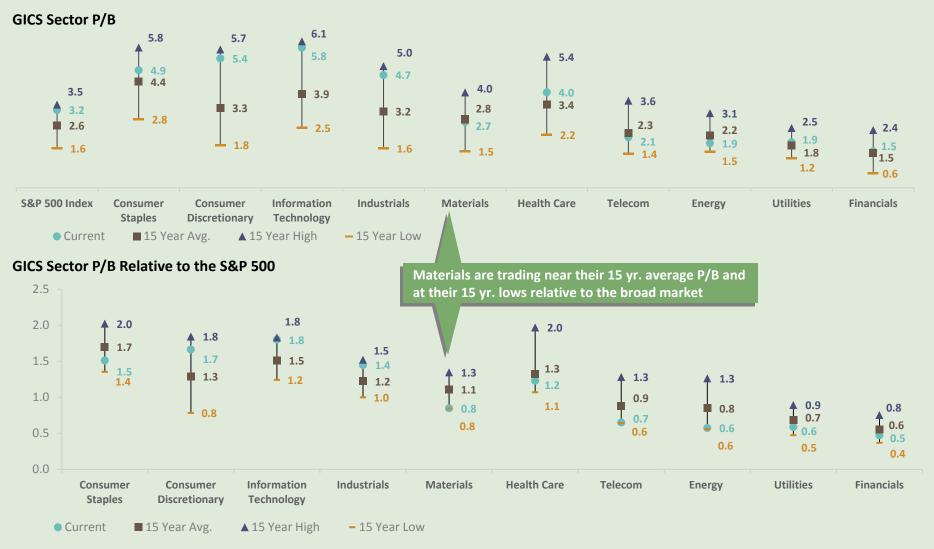
	Positioning			Returns			
	Prior Month Flow (\$M)	Trailing 12M Flow (\$M)	Current Short Interest (%)	1M Prior Short Interest (%)	Prior Month Return (%)	3-Month Return (%)	Momentum Factor Rank <sup>1</sup>
Consumer Discretionary	(93)	(734)	12.6%	11.8%	-2.3	3.1	2
Consumer Staples	1,575	67	15.0%	15.9%	-0.9	-7.1	10
Energy	(741)	1,139	11.4%	9.7%	1.7	-5.9	9
Financial	1,790	11,201	5.1%	4.9%	-4.3	-1.0	3
Health Care	400	(884)	11.7%	10.9%	-3.1	-1.2	5
Industrials	(77)	4,272	10.1%	9.6%	-2.7	-1.6	4
Materials	881	552	7.4%	8.3%	-4.2	-5.5	6
Real Estate	(489)	(319)	6.4%	5.6%	3.8	-5.0	8
Technology	1,596	16,846	5.3%	6.1%	-3.9	3.5	1
Telecommunications	(75)	(312)	3.8%	3.5%	-1.0	-7.5	11
Utilities	183	(1,046)	31.6%	29.1%	3.8	-3.3	7
Most Flows in Period Highest Momentum Sector	Least Flows in Period Lowest Momentum Sector			Utilities and Real Estate outperformed as the volatility in equity markets spiked			tility

Source: State Street Global Advisors, Bloomberg Finance, L.P., as of March 31, 2018.

<sup>1</sup> Momentum rank is based on a composite momentum z-score. Smaller number indicates higher momentum. The composite z-score is calculated as the average z-score of the 3, 6, and 12 month relative sector performance versus the S&P 500 minus the most recent months performance. Z-score indicates how many standard deviations an element is from the mean. A z-score can be calculated from the following formula. z = (X - μ) / σ where z is the z-score, X is the sector relative performance. μ is the mean of the eleven sector relative performance, and σ is the standard deviation of sectors' relative performance. Asset classes and flows are as of the date indicated, are subject to change, and should not be relied upon as current thereafter. **Past performance** is **not** a **guarantee** of **future results**. Index returns are unmanaged and do not reflect the deduction of any fees or expensess. Performance returns for periodos of less than one year are not annualized. Sector Returns are based on the following sector indices: Financials = S&P 500 Industrials = S&P 500 Index, Consumer Discretionary = S&P 500 Real Estate Sector Index, Consumer Staples = S&P 500 Real Estate Sector Index, Technology = S&P 500 Consumer Staples Sector Flows, Utilities = S&P 500 Utilities Sector Index, Telecom = S&P 500 Telecommunication Sector Flows include global and U.S. focused sector ETFs.



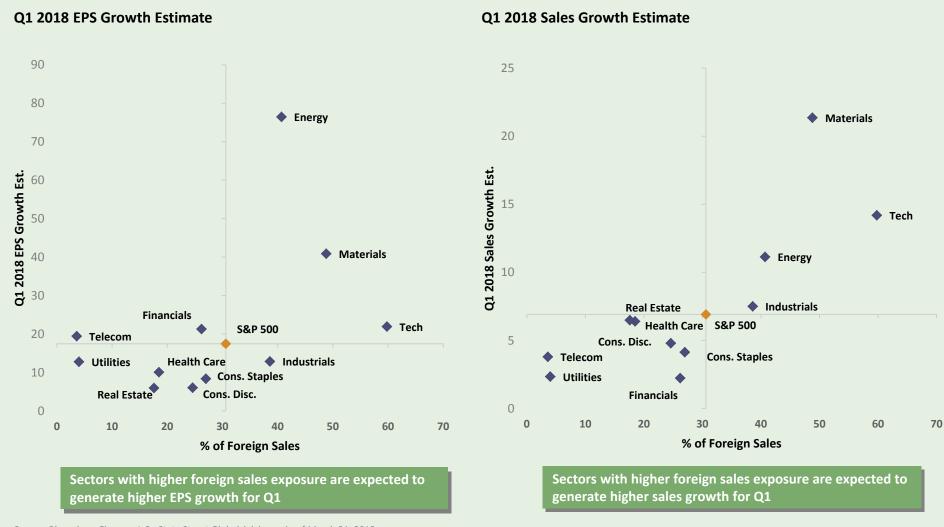
### **US Sector Valuations** — A majority of sectors are trading below or near their historical valuations relative to the broad market based on price-to-book



Source: Bloomberg Finance LP, as of March 31, 2018. Characteristics are as of the date given and should not be relied upon as current thereafter.



### **Sector Growth** — A weakening dollar and solid global growth may support earnings and sales growth of sectors with higher foreign sales exposure



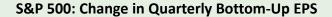
Source: Bloomberg Finance, L.P., State Street Global Advisors. As of March 31, 2018.

Based on Consensus Analyst Estimates compiled by FactSet. Characteristics are as of the date indicated and should not be relied upon as current thereafter. There is no guarantee that the estimates will be achieved.

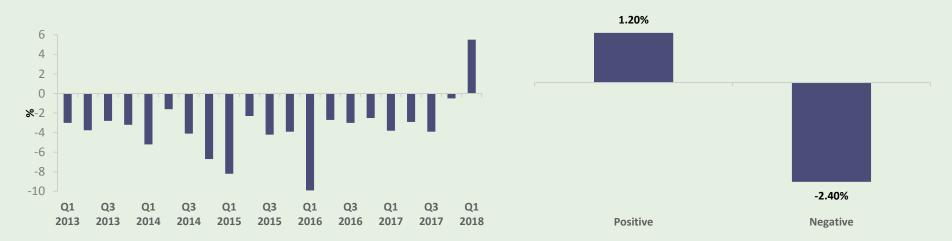


20

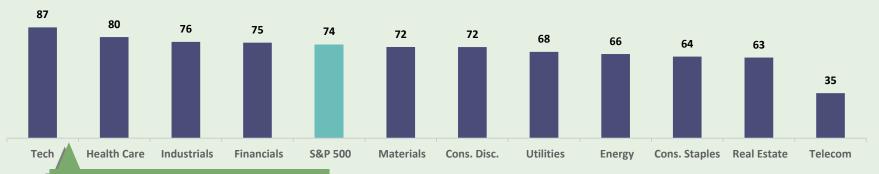
**Earnings Sentiment** — Wide spread positive earnings surprises may be harder to achieve with a higher bar being set, limiting performance potential



#### S&P 500 EPS Surprise Price Change (+/- 2 Days) : 5-Year Average



#### Historical 4-Quarter Average % of Companies with Earnings Beats



While earnings misses get punished, there are sectors with consistent EPS beats

Source: Bloomberg Finance, L.P., State Street Global Advisors. As of March 31, 2018.

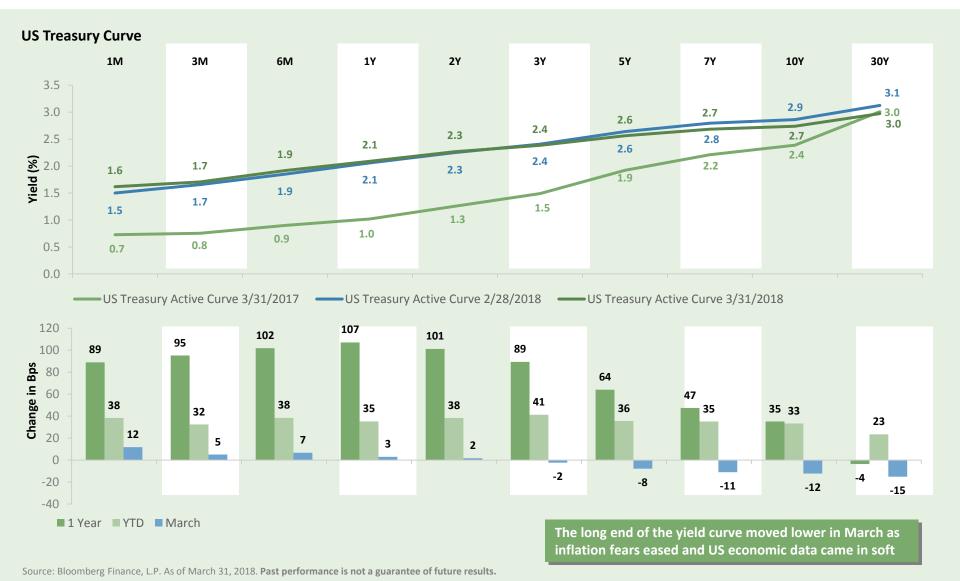
Based on Consensus Analyst Estimates compiled by FactSet. Characteristics are as of the date indicated and should not be relied upon as current thereafter. There is no guarantee that the estimates will be achieved.



### **Fixed Income**



# **Yield Curve** — The yield curve has flattened as expectations for growth and inflation were tempered, with the 10-year Treasury yield retreating from its highs in February



STATE STREET GLOBAL ADVISORS

23

# **Bond Market** — As yields remain suppressed amid elevated duration risk, investors have to consider other bond asset classes when building portfolios

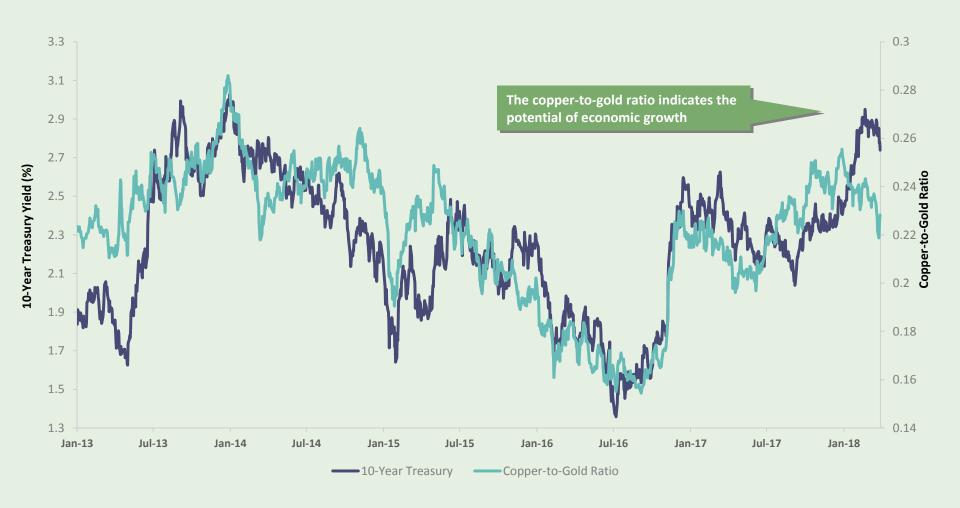


Source: Bloomberg Finance, L.P. As of March 31, 2018. Past performance is not a guarantee of future results. Index returns are unmanaged and do not reflect the deduction of any fees or expenses. \*Yield to maturity is used for the S&P/LSTA Leveraged Loan 100 Index. Yield to worst is used for other indices.



**Rates Trend** — After decoupling, the copper-to-gold ratio and 10-year yields are moving in the same direction. However, a gap still exists even as rates started falling

#### **Copper-to-Gold Ratio and 10-Year Treasury Yields**



Source: Bloomberg Finance L.P. As of 03/31/2018.



**Treasury Markets** — The LIBOR-OIS spread widening is technically driven, fueled by the surging supply of Treasury bills since Congress suspended the debt ceiling

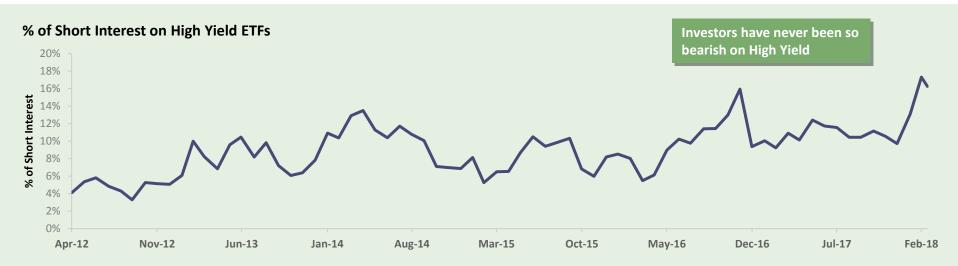
#### Treasury Bill Issuance Drove the Widening of LIBOR-OIS (Overnight Index Swap rate) Spreads



Source: US Treasury, Bloomberg, Barclays Research, as of March 22, 2018.



# **Credit Trends** — Given the current yield levels for the broad high yield market, the recent bearish sentiment may be overextended



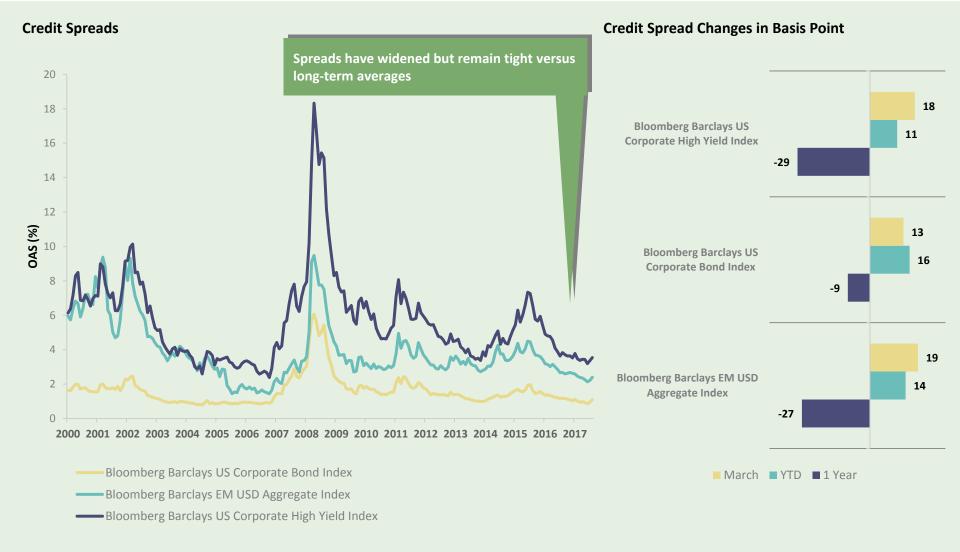
#### **High Yield ETF Cumulative Fund Flows**



Source: Bloomberg Finance, L.P. As of March 31, 2018.



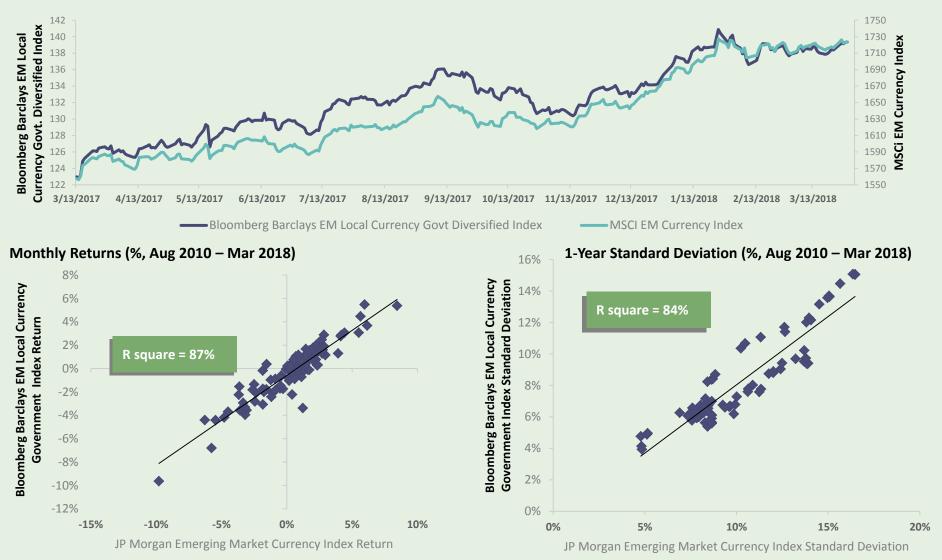
# **Credit Trends** — Spreads of EM hard currency debt and US corporate bonds continue to widen, increasing their relative attractiveness for income generation



Source: Bloomberg Finance, L.P. As of March 31, 2018.



### **EM Debt** — Emerging Market (EM) currencies have driven returns and risks of EM local debt as of late, while the elevated coupon is the main contributor to long-term returns



Source: Bloomberg Finance L.P. as of 3/31/2018. Past performance is not a guarantee of future results. Index returns are unmanaged and do not reflect the deduction of any fees or expenses.



### **Appendix A: Flow Summary**



### **Fund Flow Summary**

Asset Category			
	Prior Month (\$M)	Year to Date (\$M)	Trailing 12 Month (\$M)
Equity	-8,083	46,477	285,816
Fixed Income	5,375	16,243	110,109
Commodity	874	2,070	2,798
Specialty	-127	786	591
Mixed Allocation	166	457	1,982
Alternative	55	237	569
Equity Region			
U.S.	-11,653	6,275	120,308
Global	1,630	8,336	18,213
International-Developed	7,021	20,072	88,999
International-Emerging Markets	1,568	13,036	40,826
International-Region	-3,326	-719	16,516
International-Single Country	-1,790	4,608	8,821
Currency Hedged	-1,533	-5,129	-7,868
Fixed Income Sectors			
Aggregate	1,107	9,580	39,153
Government	3,156	8,140	19,153
Inflation Protected	-238	1,978	6,276
Mortgage-Backed	596	1,248	4,488
IG Corporate	-7	-1,913	23,040
High Yield Corp.	-399	-5,075	428
Bank Loans	358	416	640
EM Bond	112	1,771	7,356
Preferred	364	-646	3,421
Convertible	92	12	600
Municipals	233	732	5,554
Government ETF Maturity Focus			
Ultra Short	2,837	5,239	9,281
Short Term	732	1,695	5,351
Intermediate	-30	1,376	3,658
Long Term (>10 yr)	-437	-346	728

Source: State Street Global Advisors, Bloomberg Finance, L.P. As of March 31, 2018. Sectors, asset classes and flows are as of the date indicated, are subject to change, and should not be relied upon as current thereafter.



31

### **Appendix B: Asset Class Forecast**



#### **SSGA Asset Class Forecasts**



Source: State Street Global Advisors (SSGA) Investment Solutions Group. The forecasted returns are based on SSGA's Investment Solutions Group's December 31, 2017 forecasted returns and long-term standard deviations. The forecasted performance data is reported on a gross of fees basis. Additional fees, such as the advisory fee, would reduce the return. For example, if an annualized gross return of 10% was achieved over a 5-year period and a management fee of 1% per year was charged and deducted annually, then the resulting return would be reduced from 61% to 54%. The performance includes the reinvestment of dividends and other corporate earnings and is calculated in the local (or regional) currency presented. It does not take into consideration currency effects. The forecasted performance is not necessarily indicative of future performance, which could differ substantially. Please reference Appendix B for the assumptions used by SSGA Investment Solutions Group to create asset class forecasts.



33

### **Asset Class Forecast Assumptions**

#### **Forecast Assumptions**

#### For Fixed Income:

Our return forecasts for fixed income derive from current yield conditions together with expectations as to how real and nominal yield curves could evolve relative to historical averages. For corporate bonds, we also analyze credit spreads and their term structures, with separate assessments of investment-grade and high-yield bonds.

#### For Equities:

Our long-term equity forecasts begin with expectations for developed market large capitalization stocks. The foundation for these forecasts are estimates of real return potential, derived from current dividend yields, forecast real earnings growth rates, and potential for expansion or contraction of valuation multiples. Our forecasting method incorporates long run estimates of potential economic growth based on forecast labor and capital inputs to estimate real earning growth.

#### For Factor Returns:

Over a one to three-year forecast horizon, we look to see how cheap each factor is relative to its own history. Specifically, we focus on book/price spreads for each factor and relate that to their subsequent returns. We find that valuation ratios are useful for forecasting market returns.

#### For Commodities:

Our long-term commodity forecast is based on the level of world GDP, as a proxy for consumption demand, as well as on our inflation outlook. Additional factors affecting the returns to a commodities investor include how commodities are held (e.g., physically, synthetically, or via futures) and the various construction methodologies of different commodity benchmarks.



### **Appendix C: Definitions**



#### **Definitions**

**S&P500 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.

**CBOE VIX Index:** The Chicago Board Options Exchange (CBOE) Volatility Index shows the market's expectation of 30-day volatility. It is constructed using the implied volatilities of a wide range of S&P 500 index options.

CBOE 3-Month Volatility Index: The Index is designed to be a constant measure of 3-month implied volatility of the S&P 500® (SPX) Index options.

**Implied Volatility:** A way of estimating volatility of a security's price based on a number of predictive variables. Implied volatility rises when the market is falling when investors believe that the asset's price will decline over time, and it falls when the market is rising when investors believe that the security's price will rise over time. This is due to the common belief that bearish markets are riskier than bullish markets.

MSCI Emerging Market Index: The MSCI Emerging Markets Index captures large and mid-cap representation across 23 emerging markets countries. With 834 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in each country.

Russell 2000 Index: A benchmark that measures the performance of the small-cap segment of the US equity universe.

MSCI EAFE Index: An equities benchmark that captures large- and mid-cap representation across developed market countries around the world, excluding the US and Canada.

**Bloomberg US High Yield Index:** The Bloomberg USD High Yield Corporate Bond Index is a rules-based, market-value weighted index engineered to measure publicly issued non-investment grade USD fixed-rate, taxable, corporate bonds. To be included in the index a security must have a minimum par amount of 250MM.

**Bloomberg Barclays US Aggregate Index:** A benchmark that provides a measure of the performance of the US dollar denominated investment grade bond market, which 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 US Treasury Index:** The Bloomberg US Treasury Bond Index is a rules-based, market-value weighted index engineered to measure the performance and characteristics of fixed rate coupon US Treasuries which have a maturity greater than 12 months. To be included in the index a security must have a minimum par amount of 1,000MM.

**Bloomberg Commodity Index**: Bloomberg Commodity Index (BCOM) is calculated on an excess return basis and reflects commodity futures price movements. The index rebalances annually weighted 2/3 by trading volume and 1/3 by world production and weight-caps are applied at the commodity, sector and group level for diversification.

MSCI Europe Index: The MSCI Europe Index is a free-float weighted equity index designed to measure the equity market performance of the developed markets in Europe.

Euro STOXX 50 Index: Europe's leading blue-chip index for the Eurozone, provides a blue-chip representation of super-sector leaders in the Eurozone. The index covers 50 stocks from 12 Eurozone countries.

MSCI Japan Index: The MSCI Europe Index is a free-float weighted equity index designed to measure the equity market performance of the developed markets in Japan.

**Bloomberg Dollar Spot Index:** The Bloomberg Dollar Spot Index tracks the performance of a basket of ten leading global currencies versus the U.S. Dollar. Each currency in the basket and their weight is determined annually based on their share of international trade and FX liquidity.

**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 U.S. 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.

State Street Confidence Indexes: Measures investor confidence or risk appetite quantitatively by analyzing the actual buying and selling patterns of institutional investors. The index assigns a precise meaning to changes in investor risk appetite: the greater the percentage allocation to equities, the higher risk appetite or confidence. A reading of 100 is neutral; it is the level at which investors are neither increasing nor decreasing their long-term allocations to risky assets. The results shown represent current results generated by State Street Investor Confidence Index. The results shown were achieved by means of a mathematical formula in addition to transactional market data, and are not indicative of actual future results which could differ substantially.

**BofA Merrill Lynch US High Yield Master II Index:** The BofA Merrill Lynch US High Yield Index tracks the performance of US dollar denominated below investment grade corporate debt publicly issued in the US domestic market. Qualifying securities must have a below investment grade rating (based on an average of Moody's, S&P and Fitch).

Yield to worst: Yield to worst is an estimate of the lowest yield that you can expect to earn from a bond when holding to maturity, absent a default. It is a measure that is used in place of yield to maturity with callable bonds.

Overnight Index Swap (OIS) rate: The overnight Index Swap rate is calculated from contracts in which investors swap fixed-and floating-rate cash flows. It's commonly used as proxies for where market see U.S. central bank policy headed at various points in the future



#### **Definitions**

MSCI USA Index: The MSCI World Index, which is part of The Modern Index Strategy, is a broad global equity benchmark that represents large and mid-cap equity performance across 23 developed markets countries. It covers approximately 85% of the free float-adjusted market capitalization in each country and MSCI World benchmark does not offer exposure to emerging markets.

MSCI USA Minimum Volatility Index: The MSCI USA Minimum Volatility (USD) Index aims to reflect the performance characteristics of a minimum variance strategy applied to the MSCI large and mid cap equity universe. The index is calculated by optimizing the MSCI USA Index, its parent index, for the lowest absolute risk (within a given set of constraints). Historically, the index has shown lower beta and volatility characteristics relative to the MSCI World Index.

MSCI USA Enhanced Value Weighted Index: The MSCI USA Enhanced Value Weighted Index captures large and mid-cap representation across the US equity markets exhibiting overall value style characteristics. The index is designed to represent the performance of securities that exhibit higher value characteristics relative to their peers within the corresponding GICS® sector.

MSCI USA Quality Index: The MSCI USA Quality Index is based on MSCI USA, its parent index. The index aims to capture the performance of quality growth stocks by identifying stocks with high quality scores based on three main fundamental variables: high return on equity (ROE), stable year-over-year earnings growth and low financial leverage.

MSCI USA Equal Weighted Index: The MSCI USA Equal Weighted Index represents an alternative weighting scheme to its market cap weighted parent index, the MSCI USA Index. At each quarterly rebalance date, all index constituents are weighted equally, effectively removing the influence of each constituent's current price (high or low).

MSCI USA High Dividend Yield Index: The MSCI World High Dividend Yield Index is based on the MSCI USA Index, its parent index, and includes large and mid cap stocks. The index is designed to reflect the performance of equities in the parent index (excluding REITs) with higher dividend income and quality characteristics than average dividend yields that are both sustainable and persistent. The index also applies quality screens and reviews 12-month past performance to omit stocks with potentially deteriorating fundamentals that could force them to cut or reduce dividends.

**Price-to-book ratio (P/B Ratio):** The price-to-book ratio (P/B Ratio) is a ratio used to compare a stock's market value to its book value. It is calculated by dividing the current closing price of the stock by the latest quarter's book value per share. Also known as the "price-equity ratio."

**Price-earnings ratio (P/E Ratio):** The price-earnings ratio (P/E Ratio) is the ratio for valuing a company that measures its current share price relative to its per-share earnings. The price-earnings ratio can be calculated as: Market Value per Share/Earnings per Share.

**S&P 500 Pure Growth Index:** The S&P 500® Pure Growth index is a style-concentrated index designed to track the performance of stocks that exhibit the strongest growth characteristics by using a style-attractiveness-weighting scheme.

**S&P 500 Pure Value Index:** The S&P 500® Pure Value index is a style-concentrated index designed to track the performance of stocks that exhibit the strongest value characteristics by using a style-attractiveness-weighting scheme.

**S&P 500 High Beta Index:** The S&P 500® High Beta Index measures the performance of 100 constituents in the S&P 500 that are most sensitive to changes in market returns. The index is designed for investors initiating a bullish strategy or making a directional bet on current markets.

**S&P Low Beta United States Index:** The S&P Low Beta United States Index is a rules-based, float-adjusted market cap weighted index that contains the 70% of the S&P United States BMI (by market capitalization) with the lowest beta.

**Z-score:** It indicates how many standard deviations an element is from the mean. A z-score can be calculated from the following formula.  $z = (X - \mu) / \sigma$  where z is the z-score, X is the sector relative performance.  $\mu$  is the mean of the eleven sector relative performance, and  $\sigma$  is the standard deviation of sectors' relative performance.

**Implied Volatility:** The estimated volatility of a security's price. In general, implied volatility increases when the market is bearish and decreases when the market is bullish. This is due to the common belief that bearish markets are more risky than bullish markets.

Minimum Volatility Factor: A category of stocks that are characterized by relatively less movement in share price than many other equities.

**Quality Factor:** One of the six widely recognized, research-based smart beta factors that refers to "quality" equities. Companies whose stocks qualify exhibit consistent profitability, stability of earnings, low financial leverage and other characteristics consistent with long-term reliability such as ethical corporate governance.

Size Factor: A smart beta factor based on the tendency of small-cap stocks to outperform their large-cap peers over long time periods.

Yield Factor: A factor which screens for companies with a higher than average dividend yield relative to the broad market, and which have demonstrated dividend sustainability and persistence.

Momentum Factor: The tendency for a security to maintain a certain direction of price trajectory. This tendency is well documented in academic research, which has made "momentum" one of the six smart beta factors that are systematically being isolated in new-generation strategic indexes.

Value Factor: One of the basic elements of "style"-focused investing that focuses on companies that may be priced below intrinsic value. The most commonly used methodology to assess value is by examining price-to-book (P/B) ratios, which compare a company's total market value with its assessed book value.



#### **Definitions**

**Standard Deviation:** Measures 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.

Excess Returns: A security's return minus the return from another security in the same time period.

Current Short Interest (%): The percentage of tradable outstanding shares which have been shorted. Used as a measure of investor sentiment.

Yield: The income produced by an investment, typically calculated as the interest received annually divided by the investment's price.

Basis Point: One hundredth of one percent, or 0.01%.

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 steepened, it means the difference in yields between short term and long term bonds increases.

Spread Changes: Changes in the spread between Treasury securities and non-Treasury securities that are identical in all respects except for quality rating.

**Bloomberg Barclays Global Aggregate Bond Index:** The Bloomberg Barclays Global Aggregate Index is a flagship measure of global investment grade debt from twenty-four local currency markets. This multicurrency benchmark includes treasury, government-related, corporate and securitized fixed-rate bonds from both developed and emerging markets issuers.

Bloomberg Barclays US Corporate High Yield Index: The index consists of fixed rate, high yield, USD-denominated, taxable securities issued by US corporate issuers.

**Bloomberg Barclays USD Liquid Investment Grade Corporate Index:** The Bloomberg Barclays USD Liquid Investment Grade Corporate Index consists of fixed rate, investment grade, taxable, USD-denominated securities issued by US corporate issuers, with time since issuance of less than two years, that meet certain liquidity requirements.

**Bloomberg Barclays EM Hard Currency Aggregate Index:** The index is a hard currency emerging markets debt benchmark that includes US dollar-denominated debt from sovereign, quasi-sovereign, and corporate issuers in the developing markets.

**BofA Merrill Lynch US High Yield CCC or Below Index:** The BofA Merrill Lynch US High Yield CCC or Below Index tracks the performance of US dollar denominated, CCC or below rating corporate debt publicly issued in the US domestic market. Qualifying securities must have a CCC or Below rating (based on an average of Moody's, S&P and Fitch).

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

**The Global Industry Classification Standard (GICS):** An industry taxonomy developed in 1999 by MSCI and Standard & Poor's (S&P) for use by the global financial community. The GICS structure consists of 10 sectors, 24 industry groups, 67 industries and 156 sub-industries [1] into which S&P has categorized all major public companies.

Credit Spread: A credit spread is the difference in yield between a US Treasury bond and a debt security with the same maturity but of lesser quality.

S&P 500 Health Care Sector Index: The Index comprises of those companies included in the S&P 500 that are classified as members of the GICS® health care sector.

**S&P 500 Consumer Discretionary Index:** The Index comprises of those companies included in the S&P 500 that are classified as members of the GICS® consumer discretionary sector.

**S&P 500 Consumer Staples Index:** The Index comprises of those companies included in the S&P 500 that are classified as members of the GICS® consumer staples sector.

S&P 500 Financial Sector Index: The Index comprises of those companies included in the S&P 500 that are classified as members of the GICS® financial sector.

S&P 500 Utilities Index: The Index comprises of those companies included in the S&P 500 that are classified as members of the GICS® utilities sector.

**S&P500 Information Technology Sector Index:** The Index comprises of those companies included in the S&P 500 that are classified as members of the GICS® information technology sector.

S&P 500 Industrial Sector Index: The Index comprises of those companies included in the S&P 500 that are classified as members of the GICS® industrial sector.

S&P 500 Materials Sector Index: The Index comprises of those companies included in the S&P 500 that are classified as members of the GICS® materials sector.

S&P 500 Real Estate Sector Index: The Index comprises of those companies included in the S&P 500 that are classified as members of the GICS® real estate sector.

S&P 500 Telecommunication Sector Index: The Index comprises of those companies included in the S&P 500 that are classified as members of the GICS® telecommunication services sector.

Breakeven Inflation Rate: It is a market based measure of expected inflation. It is the difference between the yield of a nominal bond and an inflation linked bond of the same maturity.



### Appendix D: Important Disclosures



### **Important Disclosures**

The views expressed in this material are the views of SPDR Americas Research Team and are subject to change based on market and other conditions. This document contains certain statements that may be deemed forward-looking statements. Please note that any such statements are not guarantees of any future performance and actual results or developments may differ materially from those projected.

The information provided does not constitute investment advice and it should not be relied on as such. It should not be considered a solicitation to buy or an offer to sell a security. It does not take into account any investor's particular investment objectives, strategies, tax status or investment horizon. You should consult your tax and financial advisor.

All material has been obtained from sources believed to be reliable. There is no representation or warranty as to the accuracy of the information and State Street shall have no liability for decisions based on such information.

All the index performance results referred to are provided exclusively for comparison purposes only. It should not be assumed that they represent the performance of any particular investment.

**Bonds** generally present less short-term risk and volatility than stocks, but contain interest rate risk (as interest rates rise, bond prices usually fall); issuer default risk; issuer credit risk; liquidity risk; and inflation risk. These effects are usually pronounced for longer-term securities. Any fixed income security sold or redeemed prior to maturity may be subject to a substantial gain or loss.

The values of **debt securities** may decrease as a result of many factors, including, by way of example, general market fluctuations; increases in interest rates; actual or perceived inability or unwillingness of issuers, guarantors or liquidity providers to make scheduled principal or interest payments; illiquidity in debt securities markets; and prepayments of principal, which often must be reinvested in obligations paying interest at lower rates.

Equity securities may fluctuate in value in response to the activities of individual companies and general market and economic conditions.

Investments in small-sized companies may involve greater risks than in those of larger, better known companies.

Investments in mid-sized companies may involve greater risks than in those of larger, better known companies, but may be less volatile than investments in smaller companies.

Companies with large market capitalizations go in and out of favor based on market and economic conditions. Larger companies tend to be less volatile than companies with smaller market capitalizations. In exchange for this potentially lower risk, the value of the security may not rise as much as companies with smaller market capitalizations.

Value stocks can perform differently from the market as a whole. They can remain undervalued by the market for long periods of time.

Foreign investments involve greater risks than US investments, including political and economic risks and the risk of currency fluctuations, all of which may be magnified in emerging markets.

Because of their narrow focus, sector funds tend to be more volatile.

**Commodities** investing entail significant risk as commodity prices can be extremely volatile due to wide range of factors Bond funds contain interest rate risk (as interest rates rise bond prices usually fall); the risk of issuer default; issuer credit risk; liquidity risk; and inflation risk.

**Asset Allocation** is a method of diversification which positions assets among major investment categories. Asset Allocation may be used in an effort to manage risk and enhance returns. It does not, however, guarantee a profit or protect against loss.



### **Important Disclosures (continued)**

The trademarks and service marks referenced herein are the property of their respective owners. Third party data providers make no warranties or representations of any kind relating to the accuracy, completeness or timeliness of the data and have no liability for damages of any kind relating to the use of such data.

Standard & Poor's, S&P and SPDR are registered trademarks of Standard & Poor/s Financial Services LLC (S&P); Dow Jones is a registered trademark of Dow Jones Trademark Holdings LLC (Dow Jones); and these trademarks have been licensed for use by S&P Dow Jones Indices LLC (SPDJI) and sublicensed for certain purposes by State Street Corporation. State Street Corporation's financial products are not sponsored, endorsed, sold or promoted by SPDJI, Dow Jones, S&P, their respective affiliates and third party licensors and none of such parties make any representation regarding the advisability of investing in such product(s) nor do they have any liability in relation thereto, including for any errors, omissions, or interruptions of any index.

Distributor: State Street Global Advisors Funds Distributors LLC, member FINRA, SIPC, an indirect wholly owned subsidiary of State Street Corporation. References to State Street may include State Street Corporation and its affiliates. Certain State Street affiliates provide services and receive fees from the SPDR ETFs.

Before investing, consider the funds' investment objectives, risks, charges and expenses. To obtain a prospectus or summary prospectus which contains this and other information, call 1-866-787-2257 or visit www.spdrs.com. Read it carefully.

State Street Global Advisors, One Iron Street, Boston MA 02210.

© 2018 State Street Corporation — All Rights Reserved.

Tracking Code: 1984314.5.1.NA.RTL

Expiration Date: July 31, 2018

Not FDIC Insured — No Bank Guarantee — May Lose Value.

