Second Quarter 2018



**AllianceBernstein**°

# **CAPITAL MARKETS OUTLOOK**

The information herein reflects prevailing market conditions and our judgments, which are subject to change, as of the date of this document. In preparing this document, we have relied upon and assumed, without independent verification, the accuracy and completeness of all information available from public sources. Opinions and estimates may be changed without notice and involve a number of assumptions that may not prove valid. There is no guarantee that any forecasts or opinions in this material will be realized. Information should not be construed as investment advice. Investment Products Offered:

Are Not FDIC Insured
May Lose Value
Are Not Bank Guaranteed

# 1Q 2018 Returns Recap: Goldilocks Challenged?

### Returns in US Dollars



As of March 31, 2018

#### Past performance does not guarantee future results.

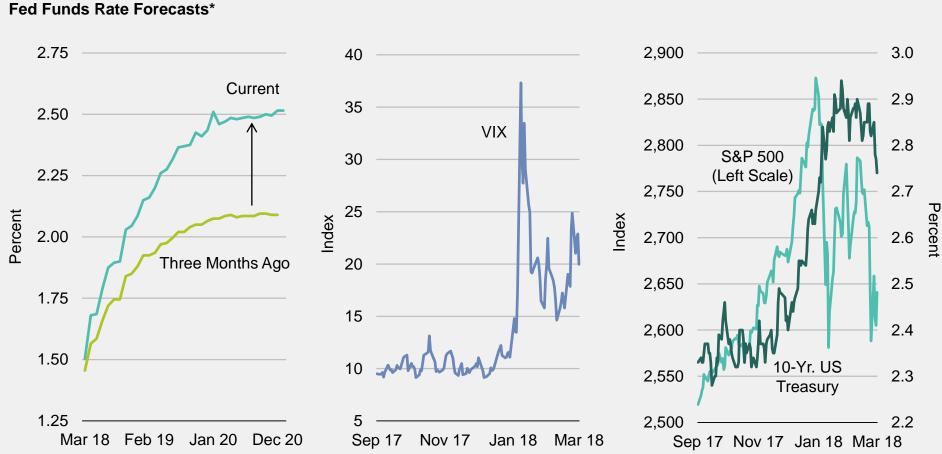
Global corporates, and Japan and euro-area government bonds in hedged USD terms. All other non-US returns in unhedged USD terms. An investor cannot invest directly in an index, and its performance does not reflect the performance of any AllianceBernstein (AB) portfolio. The unmanaged index does not reflect the fees and expenses associated with the active management of a portfolio.

\*Europe, Australasia and the Far East

†Returns reflect Morningstar US open-end fund category averages. Source: Bloomberg Barclays, Morningstar, MSCI, S&P and AB

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### When Markets Adjust to the Fed's Way of Thinking



As of March 31, 2018

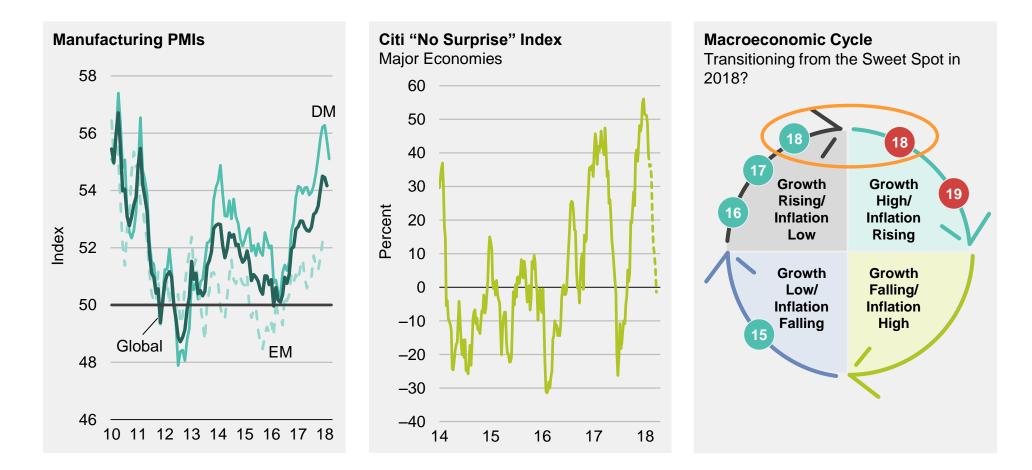
Current analysis does not guarantee future results.

\*Forecasts per fed funds futures market

Source: Bloomberg, Chicago Board Options Exchange, Federal Reserve Bank of St. Louis, S&P, US Federal Reserve and AB



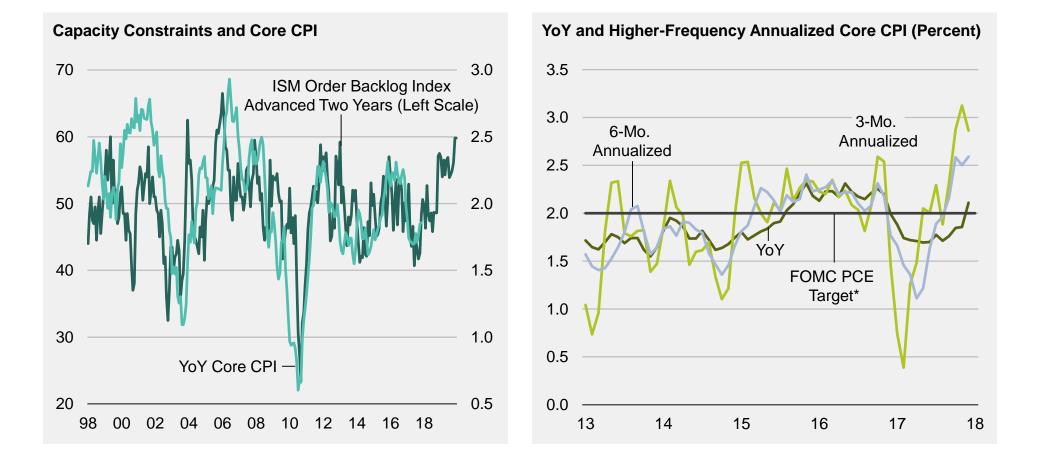
# Growth Strong (if Peaking), but Also Consensus; Inflation Is the Variable



Left and right displays as of March 31, 2018; middle display as of March 23, 2018 **Historical analysis and current forecasts do not guarantee future results.** DM: developed markets. EM: emerging markets Source: Citigroup, Haver Analytics, IHS Markit and AB



### Inflation Remains Low Today, but Is Rising...



#### As of March 31, 2018

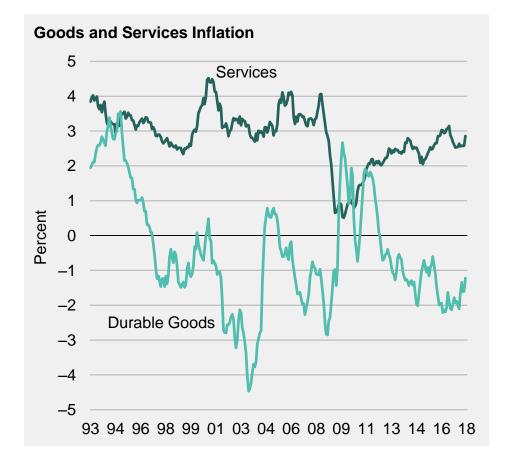
Historical analysis and current forecasts do not guarantee future results.

\*FOMC: Federal Open Market Committee; PCE: personal consumption expenditures

Source: Haver Analytics, IHS Markit, Institute for Supply Management, Thomson Reuters Datastream, US Federal Reserve and AB



### ...and Geopolitical/Structural Forces Are Present



Inflation Backdrop	Rearview Mirror Past 5–10 Years	Strategic Horizon Next 2–5 Years	Secular Horizon 5+ Years
Demographics	$\checkmark$	1	1
Globalization/ Populism	$\checkmark$	1	11
Debt Overhang	$\checkmark$	$\leftrightarrow$	1
Technology	$\checkmark$		
Monetary Regime	$\leftrightarrow$	1	11
Net Impact		1	11

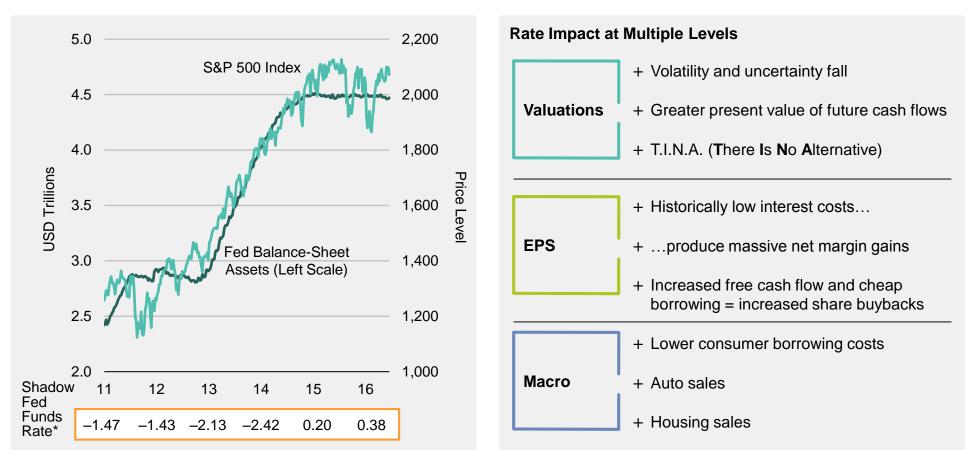
As of March 31, 2018

**Historical analysis and current forecasts do not guarantee future results.** Source: Haver Analytics, IHS Markit, Thomson Reuters Datastream and AB

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# Great Beta Trade Was Dominated by Rates...

...and the Asset Purchases Used to Create Them



Left display from October 1, 2011 through June 15, 2016; right display as of March 31, 2018

Past performance and historical analysis does not guarantee future results. For illustrative purposes only

\*Shadow fed funds rate as of year-end

Source: Bloomberg, Federal Reserve Bank of Atlanta, Federal Reserve Bank of St. Louis and S&P

# Equity Gains Driven by Beta Trade, Not Top-Line or Economic Growth

**Average Annualized Growth Rate Rising Profit Margins** March 31, 2009–December 31, 2017 Breakdown of Cumulative Price Change of S&P 500 Since Mar 09 250 18.2% 225 200 175 150 Percent 125 9.2% 100 75 50 Nominal 3.8% 3.1% 25 Real 2.2% 0 09 10 11 12 13 14 15 16 17 GDP Sales EPS S&P Total Profit Margin P/E Growth Growth Return

As of December 31, 2017

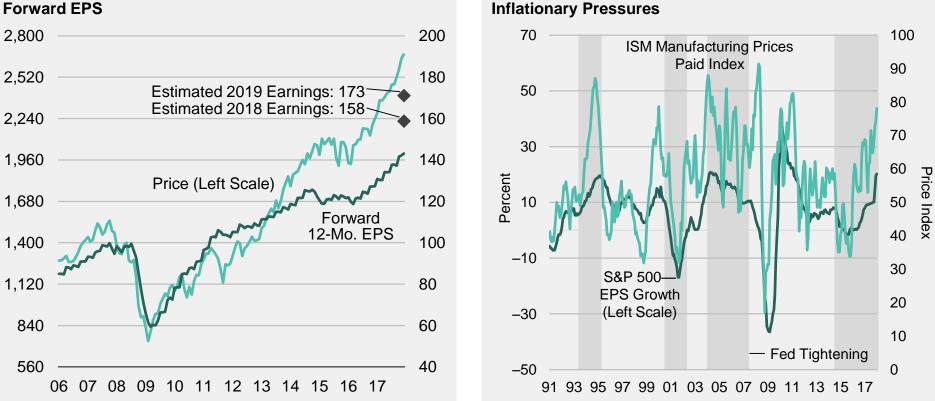
Current analysis does not guarantee future results.

Source: Bloomberg, Bureau of Economic Analysis, FactSet, Federal Reserve Bank of St. Louis, S&P, Wall Street Journal and AB



# Lower Equity Prices/Higher Earnings Estimates Have Improved Valuations...

S&P 500 Change in Price vs. Change in 12-Month



#### Strong Earnings Growth Historically Linked to Rising Inflationary Pressures

#### As of December 31, 2017

Past performance, historical analysis and current forecasts do not guarantee future results. Not all sectors perform the same.

An investor cannot invest directly in an index, and its performance does not reflect the performance of any AB portfolio. The unmanaged index does not reflect the fees and expenses associated with the active management of a portfolio.

Source: Bloomberg, Cornerstone Macro, FactSet, Goldman Sachs, Institute for Supply Management, Robert J. Shiller, S&P and AB



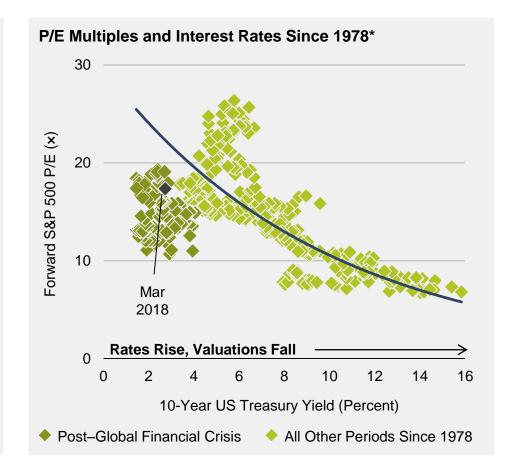
### ...but Rising Rates Have Historically Reduced Valuations

**Rising Inflationary Pressures Have Led to Fed Tightening** and P/E Contraction

Period	1/31/94– 2/28/95	5/31/99– 5/31/00	5/31/00– 7/31/06	12/16/15– 3/31/18
Begin	14.9×	23.5×	16.5×	17.6×
End	12.6×	22.2×	14.0×	16.9×
Change	-2.3	-1.3	-2.5	-0.7

Average change in P/E over the last four Fed tightening cycles: **1.7 P/E Points** 

P/Es have actually declined in <u>8 of the past 8</u> Fed tightening cycles



As of March 31, 2018

Past performance, historical analysis and current forecasts do not guarantee future results.

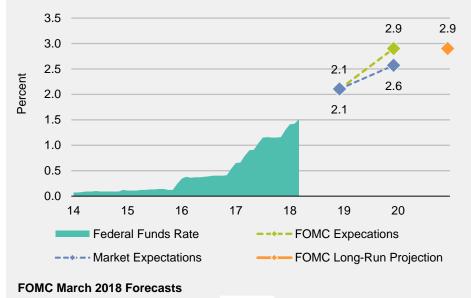
\*Forward P/E multiples represent earnings estimates for the next 12 months. Display trend line is for January 1, 1978 through December 31, 2007. Source: Bloomberg, Cornerstone Macro, FactSet, MSCI, S&P and AB



### 2018–2019 DM Macro View: Reduced Growth and Higher Inflation/Rates

#### Federal Funds Rate Expectations

FOMC and Market Expectations for the Fed Funds Rate\*



#### 2019 2018 Long Run 2020 Change in real GDP, 4Q to 4Q 2.7 2.4 2.0 1.8 Unemployment rate, 4Q 3.8 3.6 3.6 4.5 PCE Inflation, 4Q to 4Q<sup>†</sup> 1.9 2.0 2.1 2.0

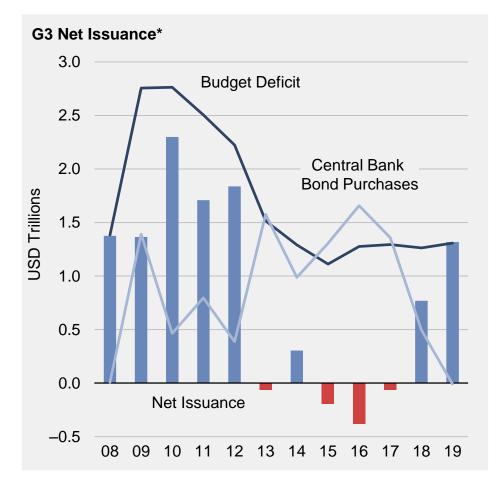
#### AB Global Economic Forecast: April 2018

	Real Growth (%)		Inflation (%)		Official Rates (%)		Long Rates (%)	
	18F	19F	18F	19F	18F	19F	18F	19F
Global	3.3	3.1	2.6	2.7	2.5	2.8	3.5	3.8
Industrial Countries	2.4	2.0	1.9	2.0	1.3	1.7	2.3	2.7
Emerging Countries	4.9	4.8	3.9	3.8	4.8	4.9	5.8	5.8
US	2.3	1.8	2.3	2.3	2.4	2.9	3.3	3.5
Euro Area	2.8	2.5	1.4	1.8	0.0	0.5	1.5	2.3
UK	1.8	1.5	2.3	2.0	1.0	1.3	2.3	2.8
Japan	1.6	1.4	1.4	1.8	-0.1	0.0	0.1	0.3
China	6.5	6.3	2.3	2.6	3.1	3.2	4.0	4.2

#### As of March 31, 2018

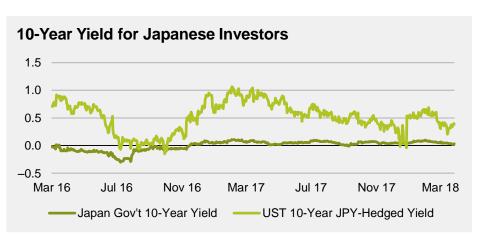
Historical analysis and current forecasts do not guarantee future results. Expectations for federal funds rate are for December 2018 and December 2019. The projections for the federal funds rate are the value of the midpoint of the projected appropriate target range for the federal funds rate or the projected appropriate target level for the federal funds rate at the end of the specific calendar year or over the longer run. Long-run rates are 10-year yields unless otherwise noted. \*FOMC: Federal Open Market Committee; market expectations are the federal funds rate priced into the Fed futures market as of March 21, 2018 FOMC meeting date. †PCE: personal consumption expenditures Source: Bloomberg, US Federal Reserve and AB

### **Supply/Demand Factors Also Affecting US Treasury Yield**

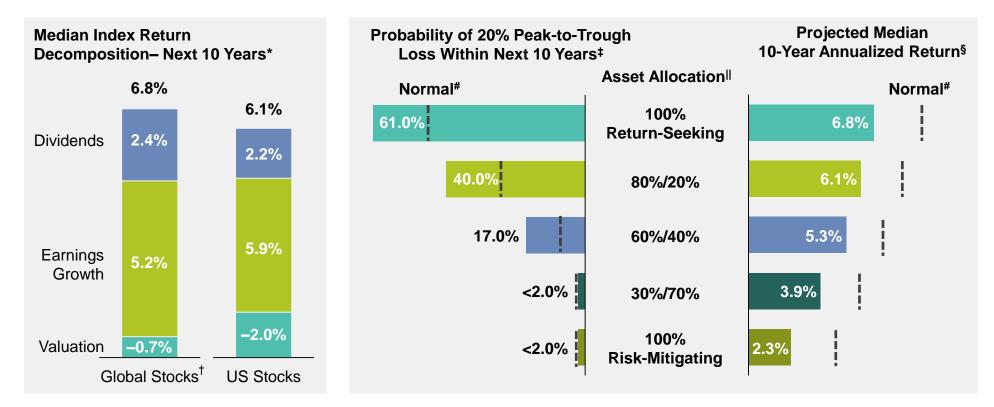


Left display as of December 31, 2017; right displays as of March 31, 2018 **Historical analysis and current forecasts do not guarantee future results.** Cost of the dollar hedge is the annualized cost of rolling three-month forward FX rates. \*G3 is the US, euro area and Japan. Net issuance is proxied by the general government budget balance. Source: Bloomberg, Haver Analytics, International Monetary Fund, OECD and AB





### The Risk/Return Trade-Off Is More Important than Ever

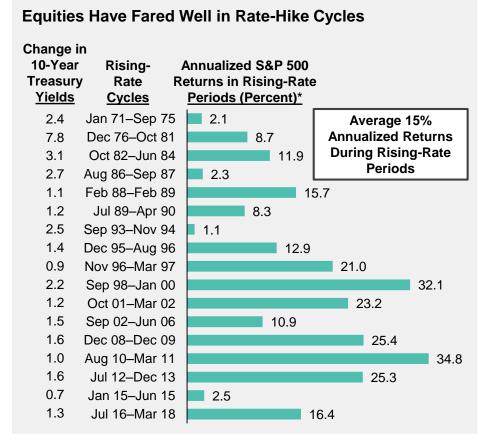


#### Past performance is not necessarily indicative of future results. There is no guarantee that any estimates or forecasts will be realized.

Left display as of December 31, 2017; right display as of June 30, 2017. Based on AB's estimates of the range of returns for the applicable capital markets. The forecasted figures in the left display utilize book-value growth and price-to-book valuations as representations of earnings growth and valuation. Data do not represent past performance and are not a promise of actual future results or a range of future results. Based on proprietary AB forecasting system. \*Represents projected median compound annual growth rates over the next 10 years. †Global stocks are modeled as 18% US diversified, 18% US value, 18% US growth, 6% US small-/mid-cap, 30% developed international, and 10% emerging markets. ‡Probability of a 20% peak-to-trough decline in pretax, pre-cash-flow cumulative returns within the next 10 years. Because the AB system uses annual capital-market returns, the probability of peak-to-trough losses measured on a more frequent basis (such as daily or monthly) may be understated. The probabilities depicted above include an upward adjustment intended to account for the incidence of peak-to-trough losses that do not last an exact number of years. §Represents projected median compound annual growth rates over the next 10 years. ||100% risk-mitigating allocation is all bonds; 30%/70% allocation is 30% stocks/70% bonds; 60%/40% allocation is 60% stocks/40% bonds; 80%/20% allocation is 80% stocks/20% bonds; and 100% return-seeking allocation is all stocks. #Normal conditions reflect AB's estimates of equilibrium capital-market conditions, which are typically close to a very long-term historical average.



### **Rising Rates Often Do Not Derail Equities, but Sectors Can Matter**



#### Sector Relative Performance During Past Three Rising-Rate Tantrums (Percent)<sup>†</sup>

Sector	Taper Tantrum	Tightening Tantrum	Tax-Cut Tantrum
Financials	6.2	23.5	6.6
Cons. Disc.	5.5	(2.1)	5.3
Technology	3.7	11.6	6.1
Industrials	9.3	2.2	1.2
Telecom	-19.7	-18.4	-6.7
Cons. Staples	-10.1	-12.4	-11.1
Real Estate	-24.7	-20.2	-11.5
Utilities	-20.6	-15.6	-13.5
10-Year UST Note Yield Change	+138 b.p.	+125 b.p.	+70 b.p.

#### As of March 31, 2018

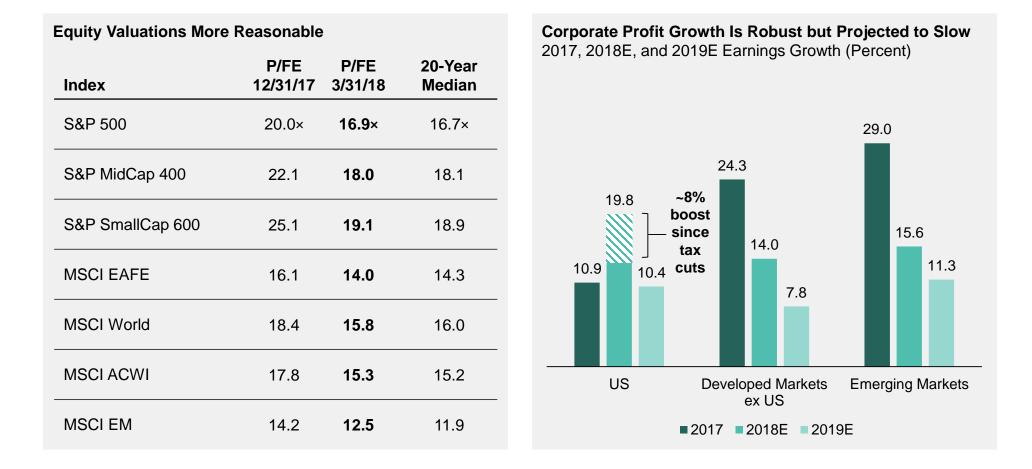
#### Past performance and historical analysis do not guarantee future results.

\*Based on peak-to-trough rate cycles for the corresponding periods of S&P 500. Rising-rate environments are defined as periods during which the 10-year US Treasury yield rose by more than 70 basis points.

†Taper tantrum is from May 1, 2013, to December 31, 2013; tightening tantrum is from July 5, 2016, to March 13, 2017; tax-cut tantrum is from September 7, 2017 to March 31, 2018. Source: Bloomberg, Bloomberg, Barclays, Ned Davis Research, S&P and AB



### **Improved 2018 Earnings Outlook Supports Near-Term Valuation Picture**



Left display as of March 31, 2018; right display as of December 31, 2017

An investor cannot invest directly in an index, and its performance does not reflect the performance of any AB portfolio. The unmanaged index does not reflect the fees and expenses associated with the active management of a portfolio.

Source: Bloomberg, FactSet, MSCI, S&P and AB



# High Profitability and Revenue Growth Scarce, but Likely to Be Rewarding

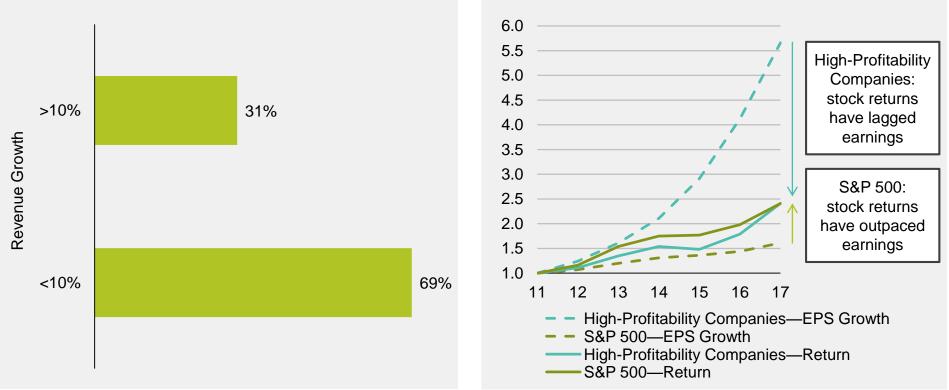
Lagged Earnings

...yet the Returns of Highly Profitable US Stocks Have

Earnings per Share Growth and Total Return Differential

More than Half of the Index Has Single-Digit Revenue Growth...

S&P 500 (Percent of Companies Reporting)\*



As of December 31, 2017. **Historical analysis does not guarantee future results.** High-profitability companies are the 20% of stocks in the S&P 500 Index with the highest return on assets. Calendar-year-end earnings per share growth indexed to 1 at January 2011. Forecast sales per share based on Bloomberg reported consensus. Calendar-year total return indexed to 1 at January 2011

\*Based on 471 of 505 companies reporting earnings for the fourth quarter of 2017 Source: S&P and AB



### **Dispersions Are Rising, Which Bodes Well for Active Managers**

**US Market Return Dispersion\*** Benchmarks vs. US Market Dispersion (1990–2017) 16 90 20 80 14 Correlation: 0.49 18 Return Dispersion (Percent) 70 12 16 60 14 10 50 12 8 Average 40 Since 1990 10 6 30 8 4 20 6 2 10 4 0 Average Since 2010 90 92 94 96 98 00 02 04 06 08 10 12 14 16 2 Return Dispersion (Left Scale) n —Share of US Active Funds Outperforming 90 92 94 96 98 00 02 04 06 08 10 12 14 16 18

**Dispersions Are Rising, Especially Above Post-2010 Average** ... That Could Support Active Management Outperformance Percent of Active US Large-Cap Funds Outperforming

#### Through December 31, 2017

Past performance, historical analysis and current forecasts do not guarantee future results. Not all sectors perform the same.

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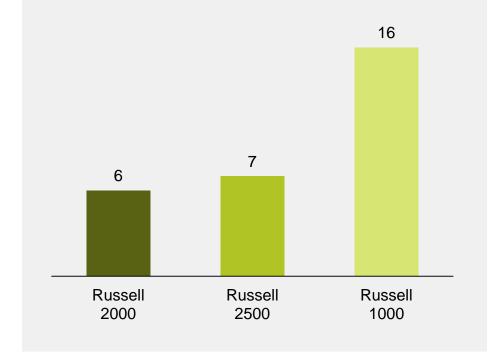
\*Three-month trailing average historical monthly return dispersion; S&P 500 Stock Universe (1990–2017) Source: S&P and AB



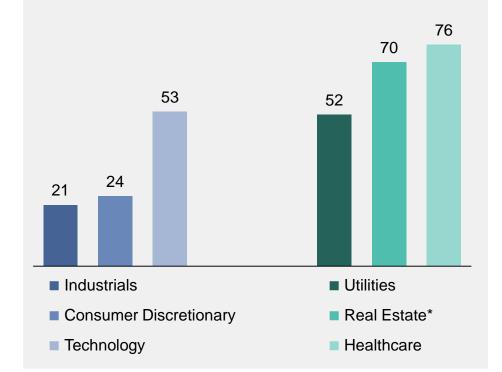
### **Small-Caps: Information Advantage and Be Active**

Scant Research Coverage for Smaller Companies Creates Inefficiencies

Average Number of Analysts Covering Stock



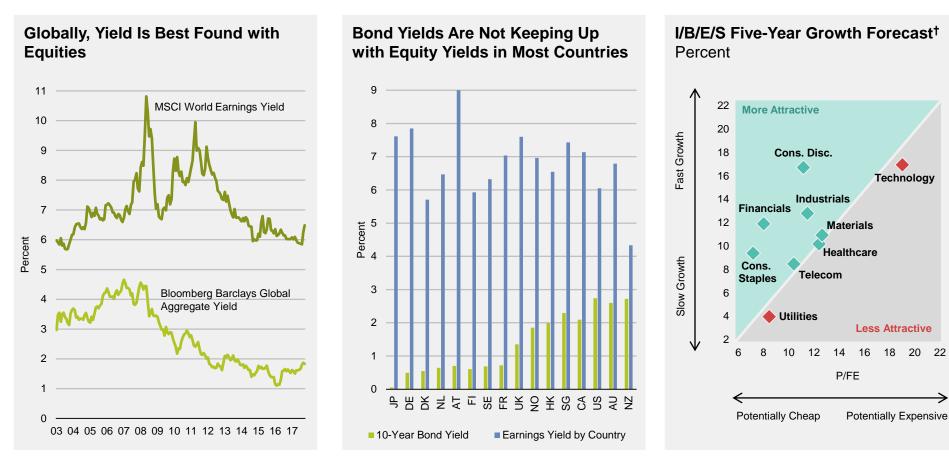
**Historical Percentiles** P/FE Multiple Relative to Russell 2000



Left display as of December 31, 2017; right display as of March 31, 2018 Historical analysis does not guarantee future results. \*Real estate sector adjusted for mortgage REITs post–GICS sector reconstitution to make it comparable with historical data.

Source: Bloomberg, FactSet, Russell Investments and AB

### Large Gap Between Stock and Bond Yields Persists Globally; Be Selective



#### As of March 31, 2018

Past performance and historical analysis do not guarantee future results.

\*MSCI World earnings yield calculated using reciprocal of the price/earnings ratio for the next 12 months. Indices are used for comparison purposes only. An investor generally cannot invest in an index.

*†*Excludes energy

Source: Bloomberg Barclays, FactSet, MSCI, S&P Compustat, Thomson Reuters I/B/E/S, Worldscope and AB



Technology

# **Putting Rising Rates in the Right Context**

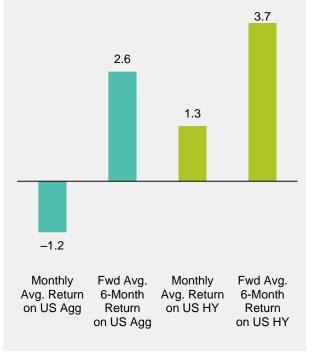
Treasury Yield (Percent) 40 35 Historically, yield increases of 30 more than 30 b.p. 25 occurred only 11% of the time 20 15 10 5 0 1101825 20-30 D.P. Increase 30.40 b.P. Increase 10-20 b.P. Increase 010 D.P. Increase 7 40 D.P. Decine 0-10 b.P. Dedine 710 D.P.

**Big Spikes in Rates Are Rare...** 

Frequency of Changes in the 10-Yr. US

### ...and They Don't Have to Be Detrimental to Fixed Income

Returns When 10-Yr. UST Yield Rose 30 b.p. per Month (or More)



# Rising Rates Don't Always Have to Derail Bonds\*

Expected Total Returns (Percent)

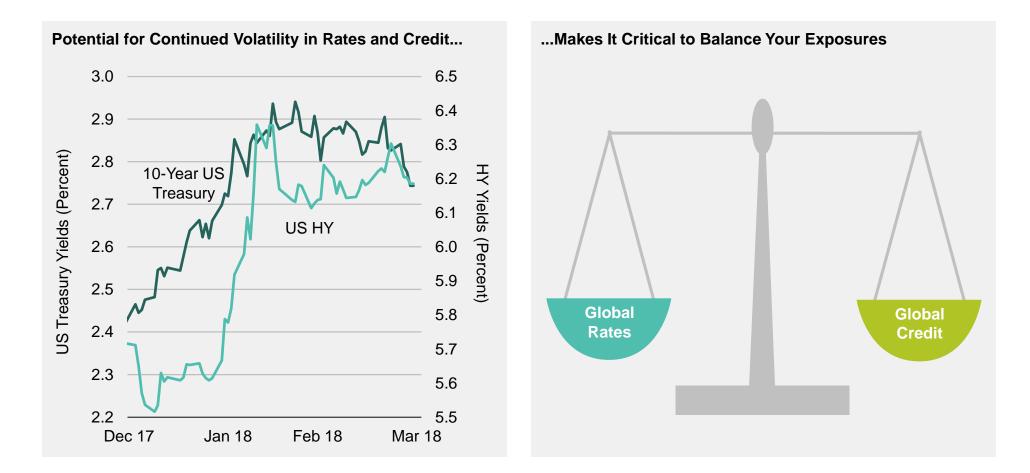
US Aggregate		Change in US High-Yield Spreads (b.p.)				
		-50	0	50	100	
ge in asury (b.p.)	100	-1.3	-1.6	-2.0	-2.3	
anç Tre ds	50	1.1	0.8	0.5	0.2	
Ch US <sup>.</sup> Yiel	0	3.6	3.2	2.9	2.6	

US High Yield		Change in US High-Yield Spreads (b.p.)				
		-50	0	50	100	
in sury .p.)	100	5.5	3.9	2.3	0.7	
Change in IS Treasury ields (b.p.)	50	6.7	5.2	3.6	2.0	
Chang US Tre Yields	0	8.0	6.4	4.9	3.3	

#### As of March 31, 2018

Past performance does not guarantee future results. \*The scenario analysis assesses the potential impact of instantaneous changes in US high-yield spreads and a parallel shift in the US Treasury yield curve on the Bloomberg Barclays US Aggregate and US High Yield indices. Expected returns incorporate the impact of roll and carry over the subsequent 12 months. An investor cannot invest directly in an index, and its performance does not reflect the performance of any AB portfolio. The unmanaged index does not reflect fees and expenses associated with the active management of a portfolio. Source: Bloomberg Barclays and AB

### **Cloudy Outlook Warrants Balance Between Rates and Credit Risks**



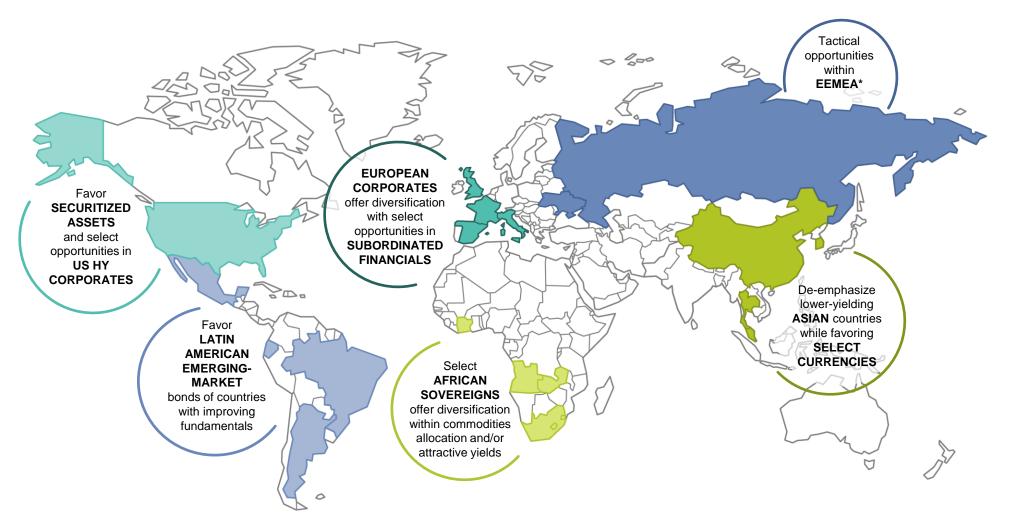
Through March 31, 2018

#### Current analysis does not guarantee future results.

10-year US Treasury is represented by Bloomberg Barclays 10-Year US Treasury Bellwether; US HY by the Bloomberg Barclays US Corporate High-Yield. Source: AB

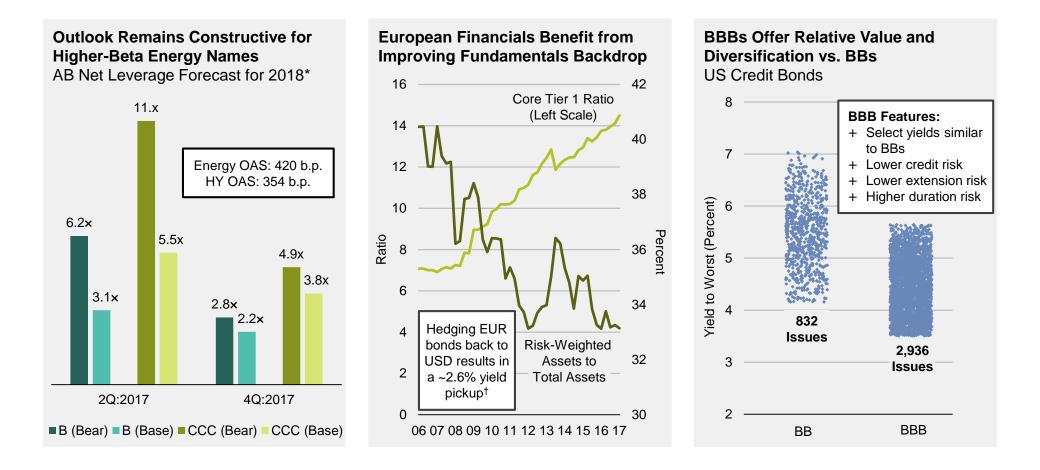


### **Globalize Credit for Maximum Access to Opportunities**



As of March 31, 2018 **Current analysis does not guarantee future results.** \*Eastern Europe, the Middle East and Africa Source: AB

# **Selectivity Within Corporate Credit Remains Critical**

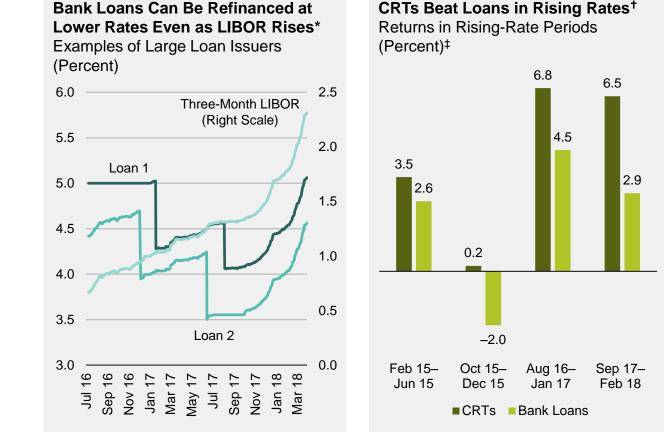


Left and right displays as of March 31, 2018; middle display through September 30, 2017 (except for yield pickup)

Historical analysis does not guarantee future results. Core Tier 1 ratios provided by Morgan Stanley European credit strategy research on western European banks. \*AB bearand base-case December 31, 2018 forecasts for energy issuers' net leverage ratios. †Annualized hedging benefit uses one-month currency forwards. Source: Bloomberg Barclays, Morgan Stanley and AB



# Floating-Rate Exposure? Try Credit Risk–Transfer Securities (CRTs)



**CRTs Have More Attractive Features** than Loans...

- Both have a *floating-rate* structure but CRTs offer:
  - **Better liquidity** +
  - Better fundamentals
  - Better portfolio diversification

#### ...and Comparable Yields

Asset	Approximate Loss-Adjusted Yield (Percent)
CRTs	2.5–6.0
Bank Loans	4.6–12.7

#### As of March 31, 2018

#### Historical analysis does not guarantee future results.

Bank Loans Can Be Refinanced at

\*Bank loans are represented by the Credit Suisse Leveraged Loan Index. Loan 1 is represented by Albertsons Companies and Loan 2 by First Data. †Rising-rate periods defined as time periods when the 10-Year US Treasury rate increased by 20 b.p. or more.

‡There is no CRT index. Therefore, CRT returns in this display are represented by the CRT holding in the AB Mortgage Income Portfolio. Source: Bloomberg, Credit Suisse, Fannie Mae, Freddie Mac and AB



# Amid Potential for Near-Term Volatility, EM Opportunities Exist

#### EM Outlook Warrants Caution Despite Improved Long-Term Fundamentals

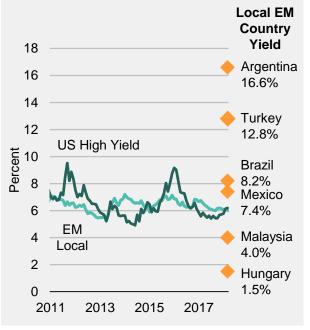
#### EM should be supported by:

- + Solid global growth
- + Improved EM fundamentals
- + Relative value vs. other asset classes

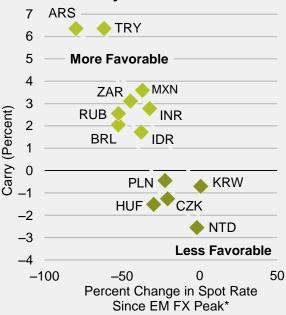
But there are reasons to be cautious and selective:

- + Tighter valuations
- + Rising rates in developed markets
- Increased political risk in select countries

#### Select Local-Currency EM Yields Offer Income Potential...



#### ...and Some EM Currencies Offer Attractive Carry



#### As of March 31, 2018

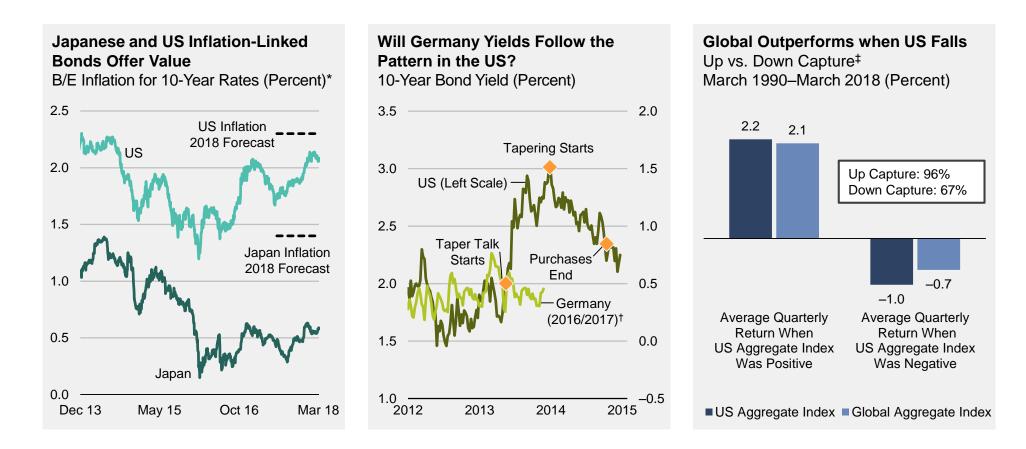
#### Historical analysis does not guarantee future results.

EM local is represented by J.P. Morgan Government Bond–Emerging Markets Global Diversified, and yields are sourced from the index's sub-components. An investor cannot invest directly in an index, and its performance does not reflect the performance of any AB portfolio. The unmanaged index does not reflect fees and expenses associated with the active management of a portfolio.

\*EM FX valuations generally peaked on April 29, 2011. Source: Bloomberg, J.P. Morgan and AB



### Take a World View on Interest-Rate Exposure, Too



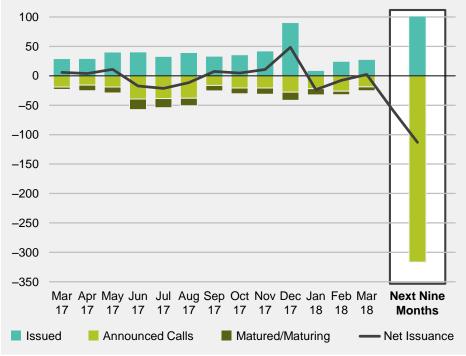
#### As of March 31, 2018

#### Past performance does not guarantee future results.

\*B/E: break-even. †German yield is rebased so that Mario Draghi's Sintra speech (June 27, 2017) is aligned with Ben Bernanke's May 2013 speech in which he first mentioned tapering the Fed's bond purchases. ‡Bar height might differ due to rounding. Global bonds hedged is represented by Bloomberg Barclays Global Aggregate Hedged to USD and US bonds by Bloomberg Barclays US Aggregate. An investor cannot invest directly in an index, and its performance does not reflect the performance of any AB portfolio. The unmanaged index does not reflect fees and expenses associated with the active management of a portfolio. Source: Bloomberg Barclays and AB

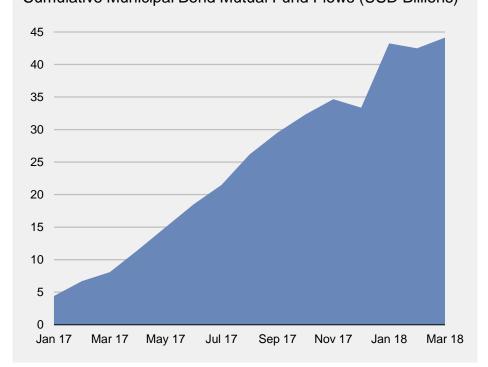


# **Municipal Technicals Remain Supportive**



#### Net Negative Supply Expected for 2018: -\$113 Billion USD Billions

#### **Steady Investor Demand Supported Municipals** Cumulative Municipal Bond Mutual Fund Flows (USD Billions)



As of March 31, 2018 **Past performance does not guarantee future results.** Source: Bloomberg Barclays, Municipal Market Data and AB

### Municipals: Balance Intermediate Quality with Longer-Maturity Credit

- + Shorter Bonds: Consider shortmaturity municipals vs. comparablematurity taxable bonds given the increase in short-term yield
- + Intermediate Bonds: Focus on roll and carry, but manage yield-curve structure due to flattening
- + Longer Bonds: Dip down in credit for an extra yield pickup—avoid longermaturity high-grades, which may remain volatile owing to possible changes to tax rates



#### As of March 31, 2018

#### Historical analysis does not guarantee future results.

Nominal yields. AA credit rating is a measure of the quality and safety of a bond or portfolio, based on the issuer's financial condition. AAA is highest (best) and D is lowest (worst). Ratings are subject to change. Bloomberg Barclays long indices are used for each respective rating category.

\*Roll is the natural price gain that a bond experiences as it ages, assuming interest rates are unchanged. Yield advantage shown is for 10-year municipal securities. Short taxable bonds are represented by Bloomberg Barclays US Aggregate 1–3 Year ex Government.

Source: Bloomberg Barclays, Investment Company Institute, J.P. Morgan, Municipal Market Data, US Federal Reserve and AB



### **A Word About Risk**

The information contained here reflects the views of AllianceBernstein L.P. or its affiliates and sources it believes are reliable as of the date of this publication. AllianceBernstein L.P. makes no representations or warranties concerning the accuracy of any data. There is no guarantee that any projection, forecast or opinion in this material will be realized. Past performance does not guarantee future results. The views expressed here may change at any time after the date of this publication. This document is for informational purposes only and does not constitute investment advice. AllianceBernstein L.P. does not provide tax, legal or accounting advice. It does not take an investor's personal investment objectives or financial situation into account; investors should discuss their individual circumstances with appropriate professionals before making any decisions. This information should not be construed as sales or marketing material or an offer or solicitation for the purchase or sale of any financial instrument, product or service sponsored by AllianceBernstein L.P. or its affiliates.

#### Important Risk Information Related to Investing in Equity and Short Strategies

All investments involve risk. Equity securities may rise and decline in value due to both real and perceived market and economic factors as well as general industry conditions.

A short strategy may not always be able to close out a short position on favorable terms. Short sales involve the risk of loss by subsequently buying a security at a higher price than the price at which it sold the security short. The amount of such loss is theoretically unlimited (since it is limited only by the increase in value of the security sold short). In contrast, the risk of loss from a long position is limited to the investment in the long position, since its value cannot fall below zero. Short selling is a form of leverage. To mitigate leverage risk, a strategy will always hold liquid assets (including its long positions) at least equal to its short position exposure, marked to market daily.

#### Important Risk Information Related to Investing in Emerging Markets and Foreign Currencies

Investing in emerging-market debt poses risks, including those generally associated with fixed-income investments. Fixed-income securities may lose value due to market fluctuations or changes in interest rates. Longer-maturity bonds are more vulnerable to rising interest rates. A bond issuer's credit rating may be lowered due to deteriorating financial condition; this may result in losses and potentially default, or failure to meet payment obligations. The default probability is higher in bonds with lower, noninvestment-grade ratings (commonly known as "junk bonds").

There are other potential risks when investing in emerging-market debt. Non-US securities may be more volatile because of the associated political, regulatory, market and economic uncertainties; these risks can be magnified in emerging-market securities. Emerging-market bonds may also be exposed to fluctuating currency values. If a bond's currency weakens against the US dollar, this can negatively affect its value when translated back into US-dollar terms.

#### **Bond Ratings Definition**

A measure of the quality and safety of a bond or portfolio, based on the issuer's financial condition, and not based on the financial condition of the fund itself. AAA is highest (best) and D is lowest (worst). Ratings are subject to change. Investment-grade securities are those rated BBB and above. If applicable, the Pre-Refunded category includes bonds which are secured by US government securities and therefore are deemed high-quality investment grade by the advisor.



### **Index Definitions**

Following are definitions of the indices referred to in this presentation. It is important to recognize that all indices are unmanaged and do not reflect fees and expenses associated with the active management of a mutual fund portfolio. Investors cannot invest directly in an index, and its performance does not reflect the performance of any AB mutual fund.

- + Bloomberg Barclays Global Aggregate Bond Index: Measure of global investment-grade debt from 24 local-currency markets; includes treasury, government-related, corporate and securitized fixed-rate bonds from both developed- and emerging-market issuers.
- + Bloomberg Barclays Global Aggregate Corporate Bond Index: Tracks the performance of investment-grade corporate bonds publicly issued in the global market and found in the Global Aggregate. (Represents global corporate on slide 1.)
- + Bloomberg Barclays Global High-Yield Bond Index: Provides a broad-based measure of the global high-yield fixed-income markets. It represents the union of the US High-Yield, Pan-European High Yield, US Emerging Markets High-Yield, CMBS High Yield and Pan-European Emerging Markets High-Yield indices.
- + Bloomberg Barclays Global High-Yield Corporate Index: A multi-currency measure of the global high-yield corporate debt market. The index represents the union of the US High-Yield, the Pan-European High-Yield, and the corporate sector of the Emerging Markets (EM) Hard-Currency High-Yield Indices. The high-yield and emerging-market sub-components are mutually exclusive. The Global High-Yield Corporate Index is a component of the Global High-Yield Index and subsequently a component of the Multiverse Index, along with the Global Aggregate, Euro Treasury High-Yield and EM Local Currency Government Indices.
- + Bloomberg Barclays Global Treasury: Euro Bond Index: Includes fixed-rate, local-currency sovereign debt that makes up the Euro Area Treasury sector of the Global Aggregate Index. (Represents euro-area government bonds on slide 1.)
- + Bloomberg Barclays Global Treasury: Japan Bond Index: Includes fixed-rate, local-currency sovereign debt that makes up the Japanese Treasury sector of the Global Aggregate Index. (Represents Japan government bonds on slide 1.)
- + Bloomberg Barclays Municipal Bond Index: A rules-based, market value-weighted index engineered for the long-term tax-exempt bond market. (Represents municipals on slide 1.)
- + Bloomberg Barclays US Aggregate Bond Index: A broad-based benchmark that measures the investment-grade, US dollar-denominated, fixed-rate, taxable bond market, including US Treasuries, government-related and corporate securities, mortgage-backed securities (MBS [agency fixed-rate and hybrid ARM pass-throughs]), asset-backed securities (ABS), and commercial mortgage-backed securities (CMBS).
- + Bloomberg Barclays US Corporate High-Yield Bond Index: Represents the corporate component of the Bloomberg Barclays US High-Yield Index. (Represents US high yield on slide 1.)
- + Bloomberg Barclays US Corporate Bond Index: Measures the investment-grade, fixed-rate, taxable corporate bond market and includes USD-denominated securities publicly issued by US and non-US industrial, utility and financial issuers.



# **Index Definitions (continued)**

- Bloomberg Barclays US Treasury Index: Includes fixed-rate, local-currency sovereign debt that makes up the US Treasury sector of the Global Aggregate Index. (Represents US government bonds on slide 1.)
- + Bloomberg Barclays US Treasury Inflation-Linked Bond Index: Measures the performance of the US Treasury Inflation-Protected Securities market.
- + J.P. Morgan Emerging Market Bond Index Global: A benchmark index for measuring the total return performance of government bonds issued by emerging-market countries that are considered sovereign (issued in something other than local currency) and that meet specific liquidity and structural requirements. In order to qualify for index membership, the debt must be more than one year to maturity, have more than \$500 million outstanding, and meet stringent trading guidelines to ensure that pricing inefficiencies don't affect the index. (Represents emerging-market debt on slide 1.)
- + J.P. Morgan Government Bond-Emerging Markets Global Diversified Index: A comprehensive global emerging-market index of local government bond debt. To qualify, a country's gross national income (GNI) per capita must be below the GNI per capita level that is adjusted yearly by the growth rate of the world GNI per capita, provided by the World Bank, for three consecutive years.
- + MSCI All Country World Index: A market capitalization-weighted index designed to provide a broad measure of equity-market performance throughout the world.
- + MSCI EAFE Index: A free float-adjusted, market capitalization-weighted index designed to measure developed-market equity performance, excluding the US and Canada. It consists of 22 developed-market country indices. (Represents EAFE on slide 1.)
- + MSCI Emerging Markets Index: A free float-adjusted, market capitalization-weighted index designed to measure equity market performance in the global emerging markets. It consists of 21 emerging-market country indices. (Represents emerging markets on slide 1.)
- + MSCI World Index: A market capitalization-weighted index that measures the performance of stock markets in 24 countries.
- + Russell 1000 Index: A stock market index that represents the highest-ranking 1,000 stocks in the Russell 3000 Index, representing about 90% of the total market capitalization of that index.
- + Russell 2000 Index: Measures the performance of the small-cap segment of the US equity universe. It is a subset of the Russell 3000 Index, representing approximately 8% of the total market capitalization of that index. It includes approximately 2,000 of the smallest securities based on a combination of their market cap and current index membership. (Represents US small-cap on slide 1.)
- + Russell 2500 Index: A broad index featuring 2,500 stocks that cover the small- and mid-cap market capitalizations. The Russell 2500 is a market cap-weighted index that includes the smallest 2,500 companies covered in the Russell 3000 universe of US-based listed equities.

# **Index Definitions (continued)**

- + S&P 500 Index: Includes a representative sample of 500 leading companies in leading industries of the US economy. (Represents US large-cap on slide 1.)
- + S&P MidCap 400 Index: Provides investors with a benchmark for mid-size companies. The index measures the performance of mid-size companies, reflecting the distinctive risk and return characteristics of this market segment.
- + S&P SmallCap 600 Index: Measures the small-cap segment of the U.S. equity market. The index is designed to track companies that meet specific inclusion criteria to ensure that they are liquid and financially viable.

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