

LEADERSHIP SERIES SECOND QUARTER 2018

Quarterly Market Update

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Crosscurrents Stoked Volatility at Start of 2018

U.S. tax cuts and fiscal stimulus helped firm inflation and growth expectations in the first few weeks of Q1, pushing up global equities and bond yields. Then market volatility surged, in part due to an accumulation of policy risks, including a sustained commitment to monetary tightening by the Federal Reserve, an aggressive trade posture by the U.S., and regulatory concerns around large technology companies.

MACRO

Q1 2018

- Solid global expansion and firming inflation

OUTLOOK

- Global activity has peaked, with China's industrial slowdown providing downside risk
- U.S. economy healthy but the cycle is becoming more mature as the Fed tightens
- Policy risks continue to accumulate: trade tensions and the shift toward global monetary policy normalization

ASSET MARKETS

- Rates rose, volatility spiked; broad-based weakness across asset markets

- Monetary shift to reduce liquidity growth, boost market volatility
- Smaller allocation tilts at this point in the cycle
- Prioritize diversification, including inflation-resistant assets

Fluctuations and Weak Start for Most Asset Categories

Asset prices bounced around during the first quarter, with most categories finishing in modestly negative territory. Emerging-market stocks added to their stellar gains over the past year, but most global equity categories finished lower during Q1. Solid U.S. growth and monetary tightening pushed bond yields higher and most fixed income sectors into the red, but gold held up well amid growing policy uncertainty.

	Q1 2018 (%)	1-Year (%)		Q1 2018 (%)	1-Year (%)
Gold	2.5	6.3	High-Yield Bonds	-0.9	3.7
Emerging-Market Stocks	1.3	25.2	Investment-Grade Bonds	-1.5	1.2
Non-U.S. Small-Cap Stocks	0.1	23.6	Non-U.S. Developed-Country Stocks	-1.6	15.1
U.S. Small-Cap Stocks	-0.1	11.8	Emerging-Market Bonds	-1.8	3.3
U.S. Mid-Cap Stocks	-0.5	12.2	U.S. Corporate Bonds	-2.1	2.6
U.S. Large-Cap Stocks	-0.8	14.0	Long Government & Credit Bonds	-3.6	5.1
Commodities	-0.8	2.5	Real Estate Stocks	-6.7	-1.1

20-Year U.S. Stock Returns Minus Bond Returns Since 1926

Return Difference (%)



Past performance is no guarantee of future results. It is not possible to invest directly in an index. See Appendix for important index information. Assets represented by: Commodities – Bloomberg Commodity Index; Emerging-Market Bonds – JP Morgan EMBI Global Index; Emerging-Market Stocks – MSCI EM Index; Gold – Gold Bullion, LBMA PM Fix; High-Yield Bonds – ICE BofAML High Yield Bond Index; Investment-Grade Bonds – Bloomberg Barclays U.S. Aggregate Bond Index; Non-U.S. Developed-Country Stocks – MSCI EAFE Index; Non-U.S. Small-Cap Stocks – MSCI EAFE Small Cap Index; Real Estate Stocks – FTSE NAREIT Equity Index; U.S. Corporate Bonds – Bloomberg Barclays U.S. Credit Index; U.S. Large-Cap Stocks – S&P 500 Index; U.S. Mid-Cap Stocks – Russell Midcap Index; U.S. Small-Cap Stocks – Russell 2000 Index; U.S. Treasury Bonds – Bloomberg Barclays U.S. Treasury Index. Source: Bloomberg Finance L.P., Haver Analytics, Fidelity Investments (AART), as of 3/31/18.

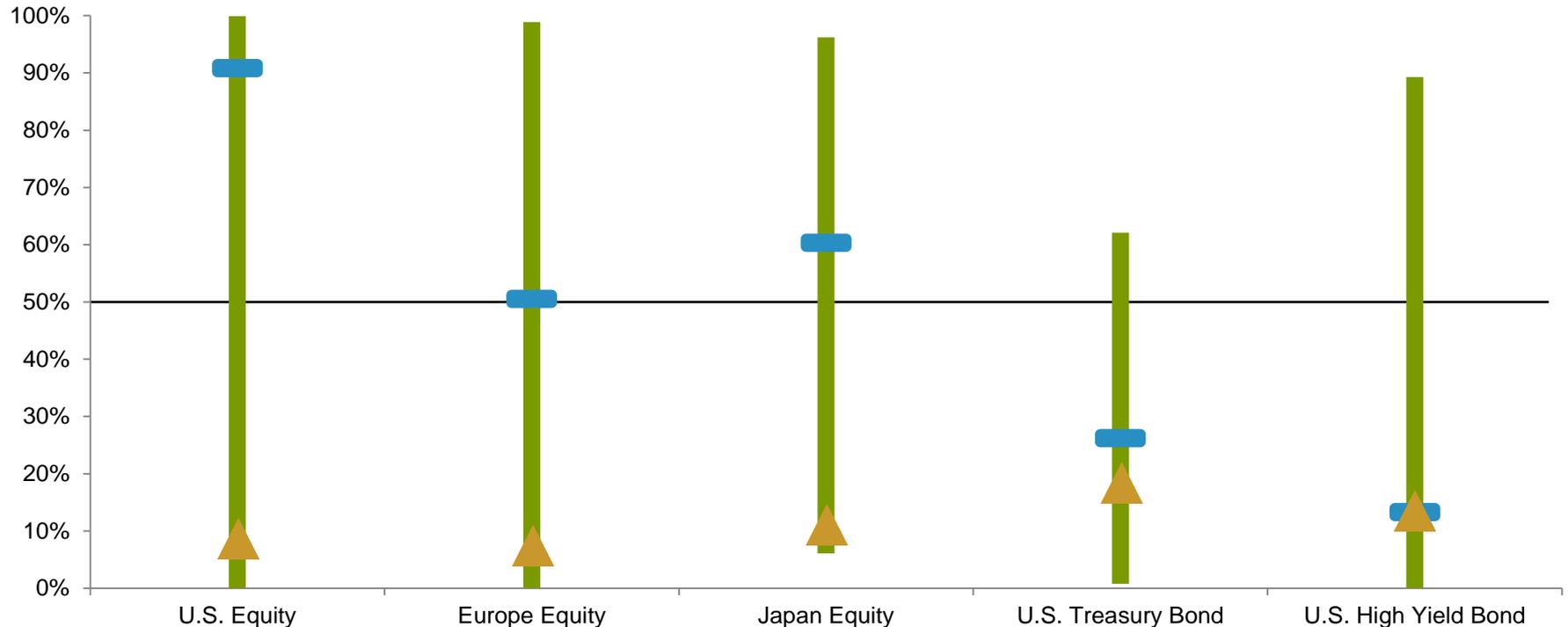
After Extended Lull, Volatility Resurfaces

Asset markets began the year the same way they ended 2017—exhibiting remarkably low levels of volatility. However, during Q1 a number of crosscurrents catalyzed an abrupt return of asset-price volatility, particularly in global equity markets.

Volatility Percentiles

■ Q1 2018 Range ■ Latest ▲ 2017 Average

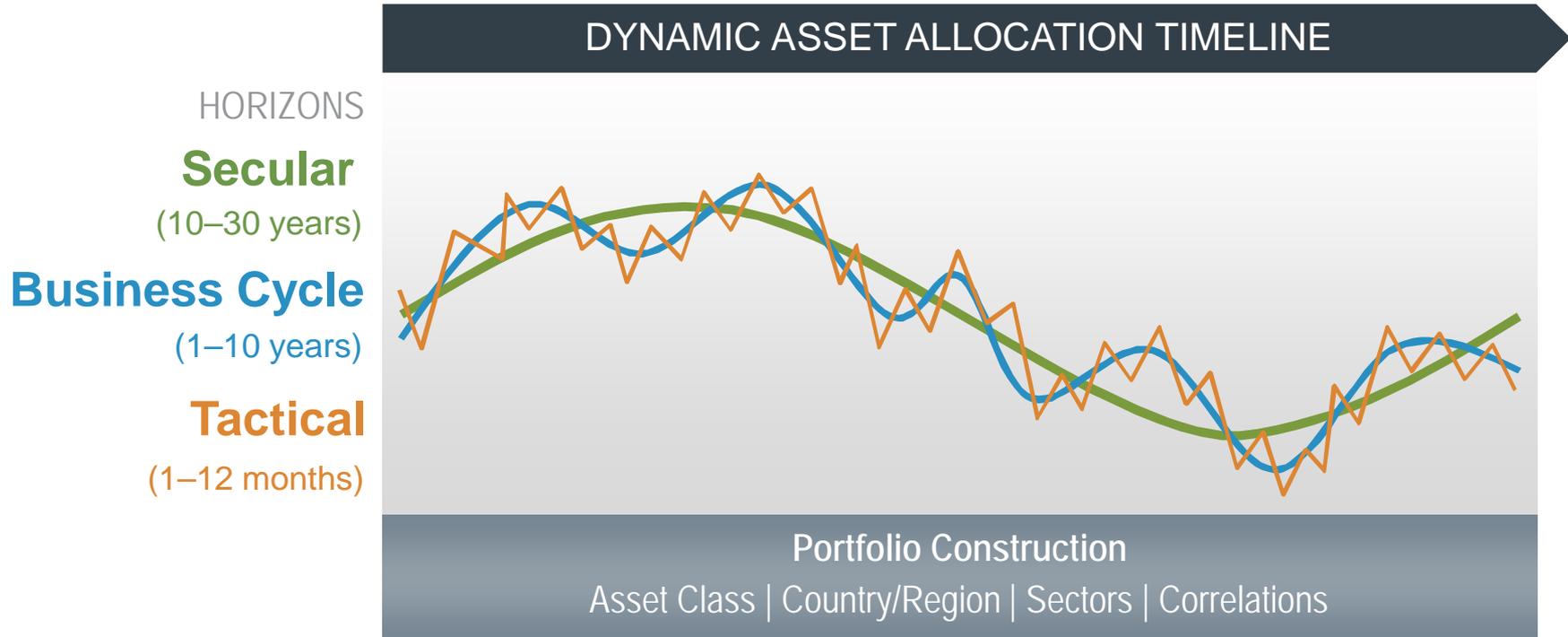
Percentile vs. 5-Year History



Source: Bloomberg Finance L.P., Fidelity Investments (AART), as of 3/31/18.

Multi-Time-Horizon Asset Allocation Framework

Fidelity's Asset Allocation Research Team (AART) believes that asset price fluctuations are driven by a confluence of various factors that evolve over different time horizons. As a result, we employ a framework that analyzes trends among three temporal segments: tactical (short term), business cycle (medium term), and secular (long term).

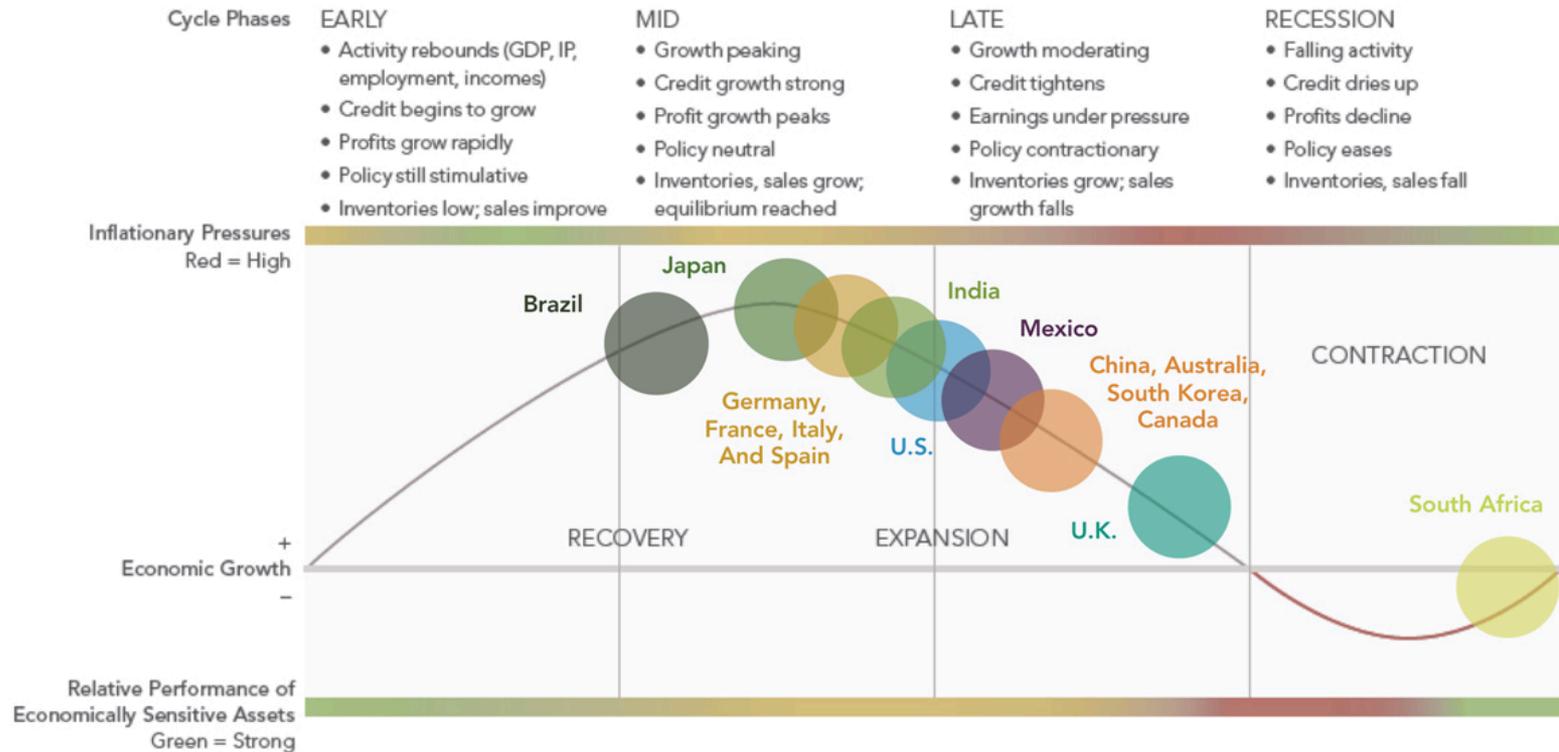


For illustrative purposes only. Source: Fidelity Investments (AART).

Global Economy in Expansion, but Cycle is Maturing

The global economy is experiencing a steady expansion, with low global recession risk. However, global activity may have peaked, as the expansion has generally matured and China's cycle phase has moved from early to late over the past two years. Broadly speaking, most developed economies are in more mature (mid-to-late) stages of the business cycle, with Japan and the eurozone not as far along as the United States.

Business Cycle Framework



Note: The diagram above is a hypothetical illustration of the business cycle. There is not always a chronological, linear progression among the phases of the business cycle, and there have been cycles when the economy has skipped a phase or retraced an earlier one. Source: Fidelity Investments (AART), as of 3/31/18.

Decelerating Chinese Activity Warrants Caution

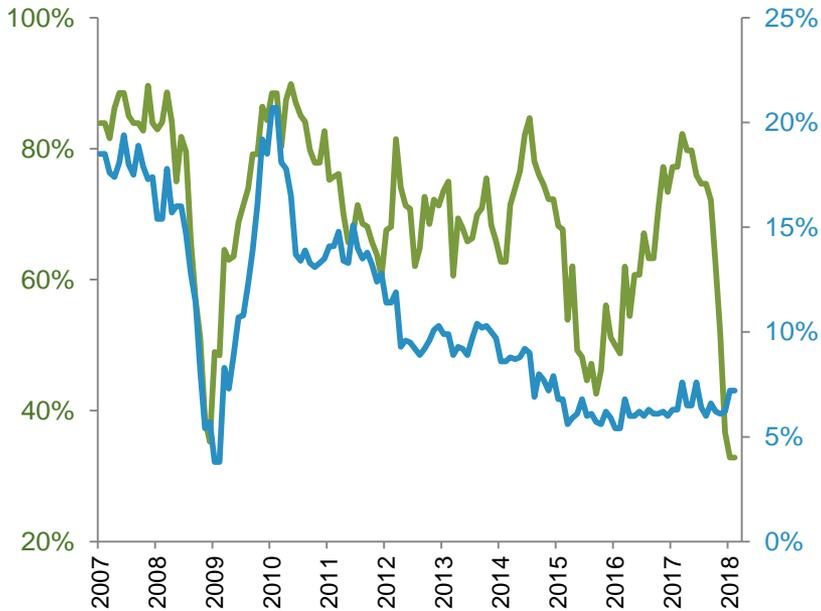
The Chinese economy appears to be decelerating, as policy-makers tighten financial conditions to address excess leverage and overcapacity in the industrial sector. Despite official data showing steady activity, our proprietary industrial production index is exhibiting significant weakness. However, relative to China's 2015 growth recession, housing activity and external conditions are more favorable and may be providing an offset.

China Industrial Activity

- AART Industrial Production Diffusion Index
- Industrial Production Growth (Official Data)

Share of Components Rising,
12M Basis

Year-over-Year



China Cyclical Outlook

- Worsening Trend
- Neutral Trend
- Improving Trend

Category	Indicator	Trend Q1 '15	Trend Q1 '18
Economy	Industrial Activity	●	●
	Housing Activity	●	●
Policy	Total Credit	●	●
Sentiment	Consumer	●	●
External Conditions	Global PMI	●	●
	Trade	●	●

For illustrative purposes only.

LEFT and RIGHT: Source: Bloomberg, China National Bureau of Statistics (official data), Fidelity Investments (AART), as of 3/31/18.



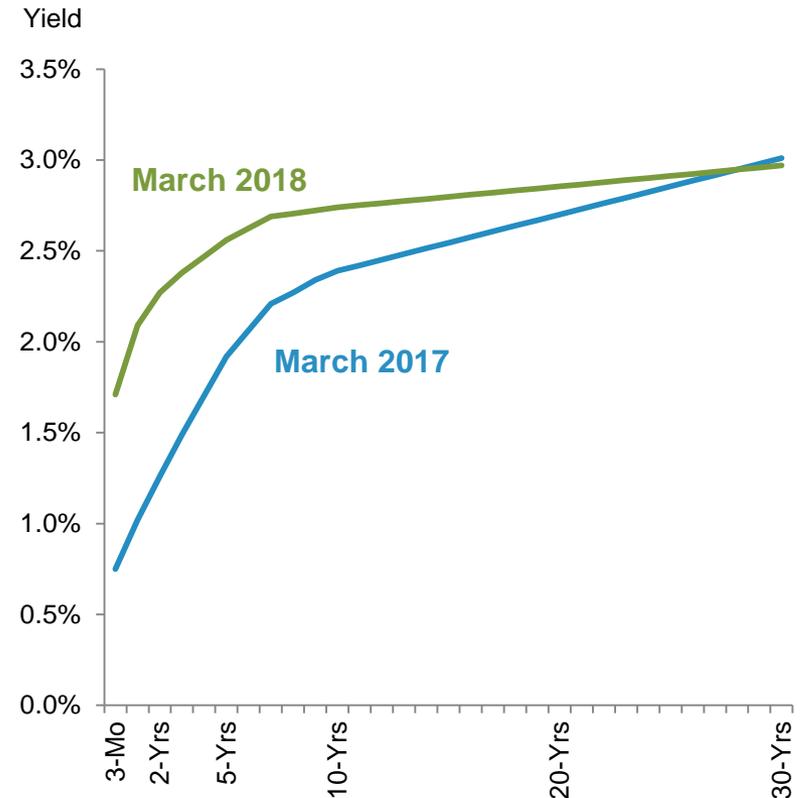
U.S. Economy a Mix of Mid- and Late-Cycle Dynamics

The U.S. has remained on a gradual progression through its business cycle, with mid-cycle dynamics remaining solid and a few hints of late-cycle trends. As is customary during a late-cycle phase, tighter employment markets have pushed up wages, caused the Federal Reserve to tighten monetary policy, and flattened the yield curve over the past year. However, credit conditions are not yet restrictive.

Mid- to Late-Cycle Phase Transition

Indicator	Typical Late-Cycle Trends	Current Dynamics	
		Mid-Cycle	Late-Cycle
Corporate Profits*	Margins decline	●	●
Inventories	Rise relative to orders	●	
Employment	Pace of hiring slows	●	
Wage Growth*	Accelerates	●	●
Monetary Policy	Fed tightens, yield curve flattens		●
Credit	Lending standards tighten	●	

U.S. Treasury Yield Curve



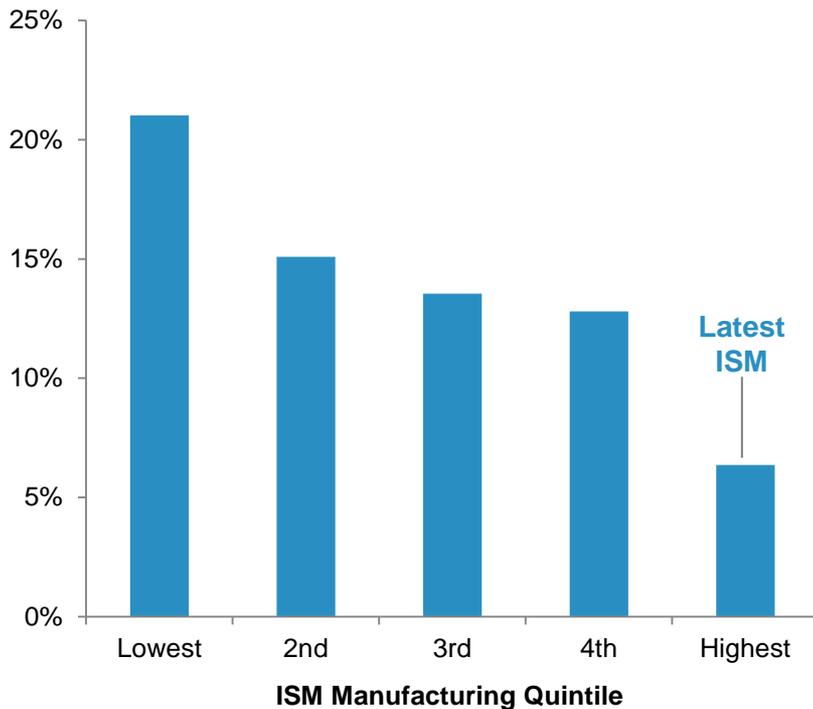
LEFT: * Listing of both blue and green circles indicates evidence of both mid- and late-cycle traits. Fed: Federal Reserve. Source: Fidelity Investments (AART), as of 3/31/18. RIGHT: Source: Bloomberg Financial L.P., Fidelity Investments (AART), as of 3/31/18.

Maturing Cycles Often Portend Caution, Not Disaster

A maturing business cycle does not automatically imply a risk-off market environment. However, late-cycle phases do tend to involve considerable uncertainty around the outlook, as prospects for both slower growth and higher inflation typically rise. Late-cycle expansions often coincide with a peak level of activity, which historically has implied less upside for risk assets and a generally less favorable risk-return profile than earlier in the cycle.

Median Next-12-Month Equity Return by ISM PMI Quintile

Median S&P 500 Total Return



What characterizes the late cycle?

- Heightened uncertainty about the direction of risk (downside growth, upside inflation)
- Less favorable risk-return profile
- Things seem fine but stop getting better

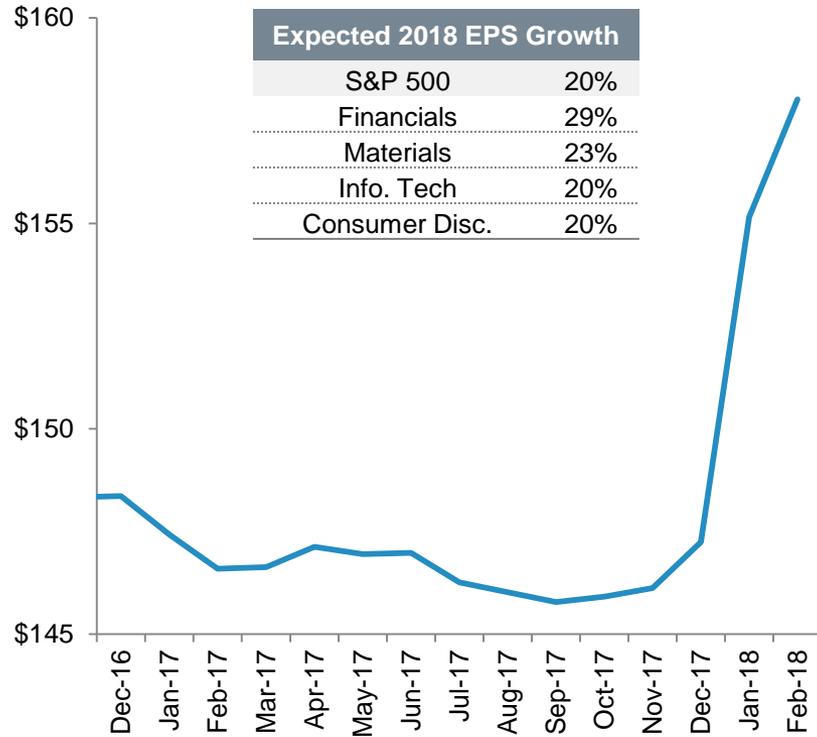
Quintiles refer to ISM Purchasing Manager Index survey. ISM: Institute of Supply Management. Past performance is no guarantee of future results. Source: Data since 1970. Standard & Poor's, ISM, Fidelity Investments (AART), as of 3/31/18.

U.S. Corporate Backdrop is Strong, Helped by Tax Cuts

Pro-business policies have helped boost earnings expectations, especially for sectors with higher effective tax rates such as financials. Lower tax burdens and access to offshore cash provide companies with additional spending capacity. We expect the windfall to be used for a wide variety of activities, including investor-friendly actions (buybacks, dividends, M&A) as well as some direct boosts to the real economy (wages, capex).

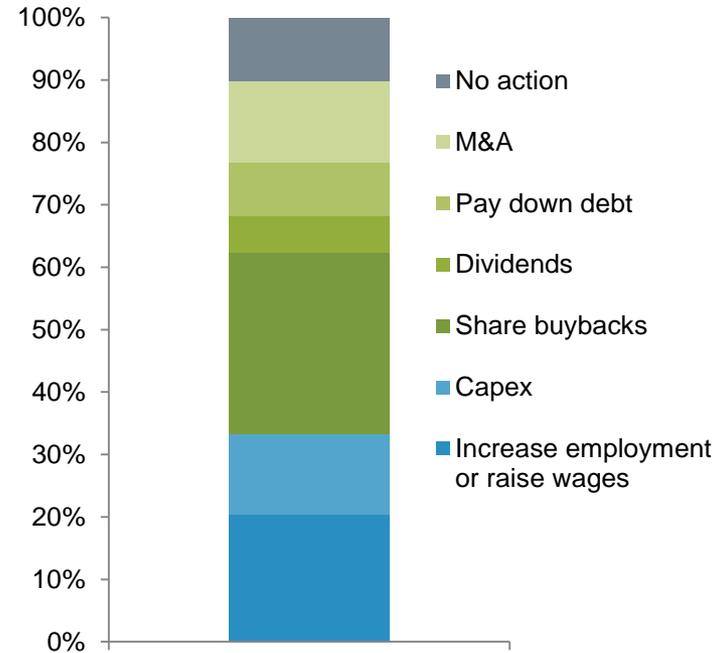
S&P 500 2018 EPS Growth Expectations

— Expected Earnings per Share



Fidelity Analyst Survey: Use of Corporate Cash

Share of Respondents



What do you expect companies will do with extra cash from tax cuts?

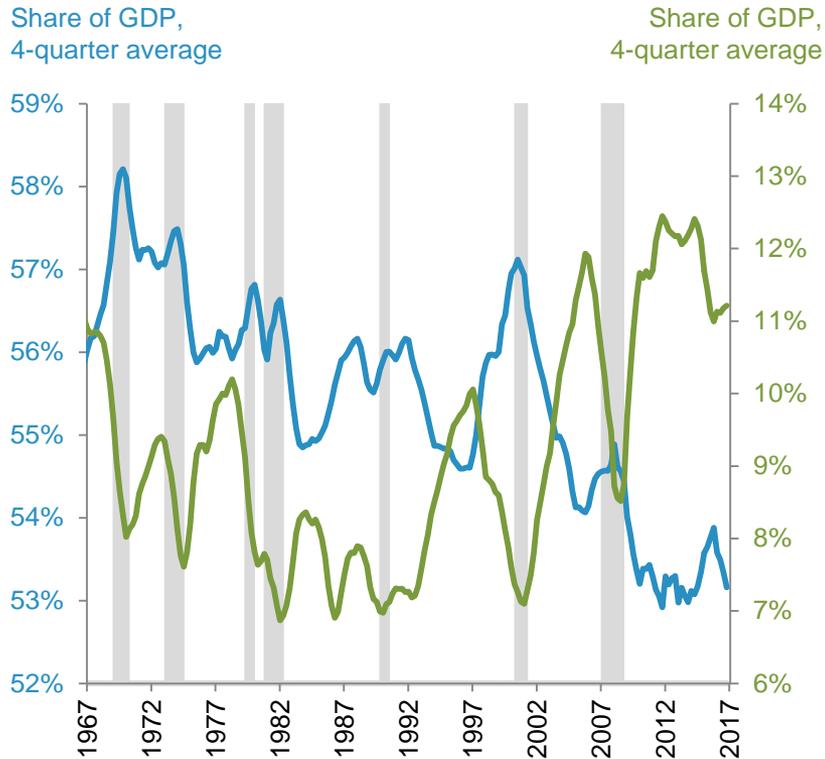
LEFT: Past performance is no guarantee of future results. Source: Standard & Poor's, Fidelity Investments (AART), as of 2/28/18. RIGHT: Source: Fidelity Investments (AART), as of 3/31/18.

Tighter Labor Markets Support Wages, Challenge Margins

The multi-decade trend favoring business profits over wages has topped out, with tighter employment markets leading to a pick-up in wages and peaking profit margins. The pace of wage growth has been restrained amid excess slack in the labor markets, but the labor-force participation rate has recently stabilized. We estimate that much of the decline was the result of an aging population, and that labor markets are nearing full employment.

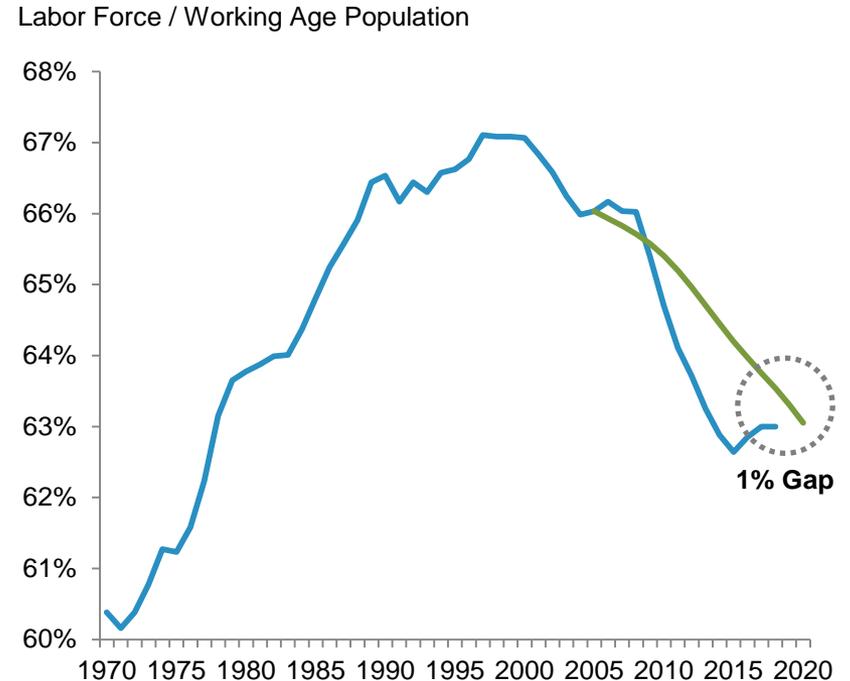
Wages and Profit Margins

— Employee Compensation — Profits



Labor Force Participation Rate

— Labor Force Participation Rate — Demographic Projection

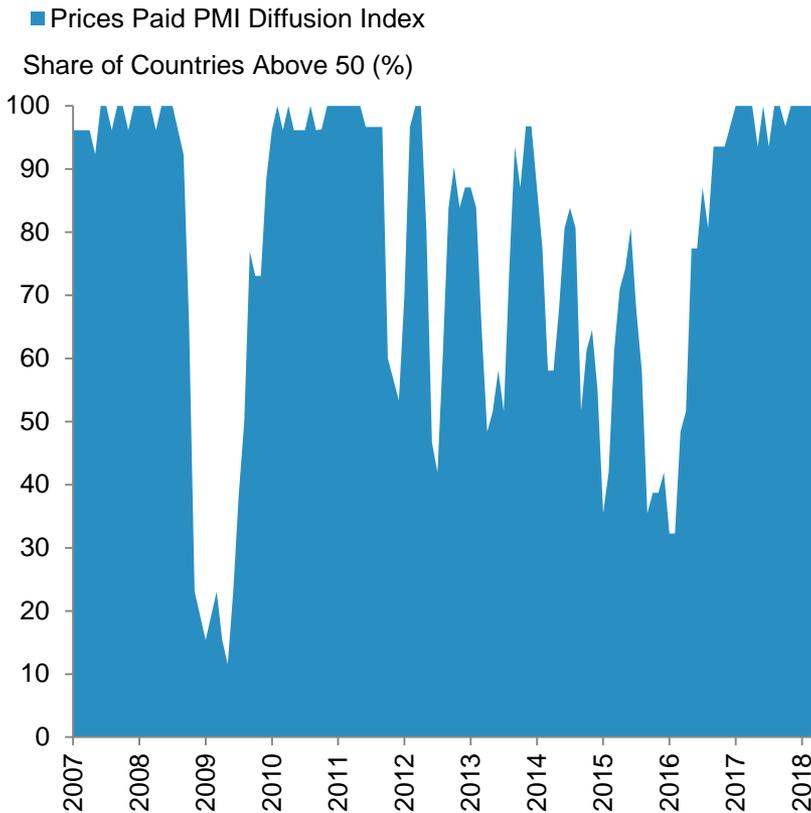


LEFT: Shading represents U.S. economic recession as defined by the National Bureau of Economic Research (NBER). Source: NBER, Haver Analytics, Fidelity Investments (AART), as of 12/31/17. **RIGHT:** Source: Demographic projection: Fidelity calculation. Labor Force: Census Bureau, Bureau of Labor Statistics, Haver Analytics, Fidelity Investments (AART), as of 2/28/18.

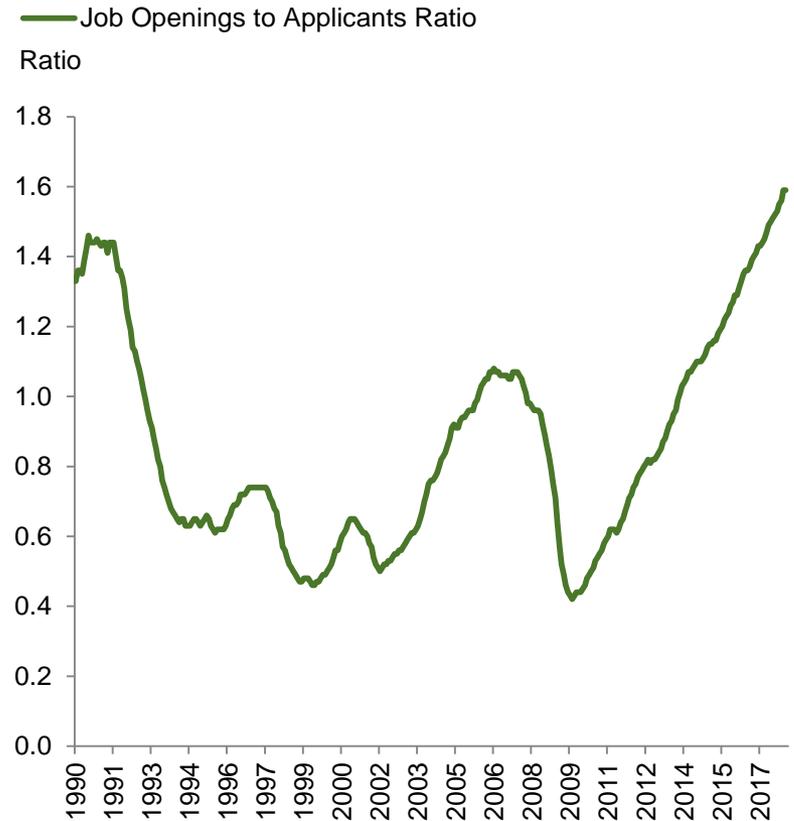
Global Inflation Pressures Continue to Firm

Inflation rates outside of the U.S. have remained tame, but evidence of price pressures continues to materialize. All major economies with PMI surveys have experienced rising prices on manufactured goods over the past year. Japanese inflation has been on a steady rise from extremely low levels amid the tightest labor market since the early 1990s, potentially setting the stage for long-awaited wage inflation.

Global Manufacturing Prices Paid



Japanese Labor Market

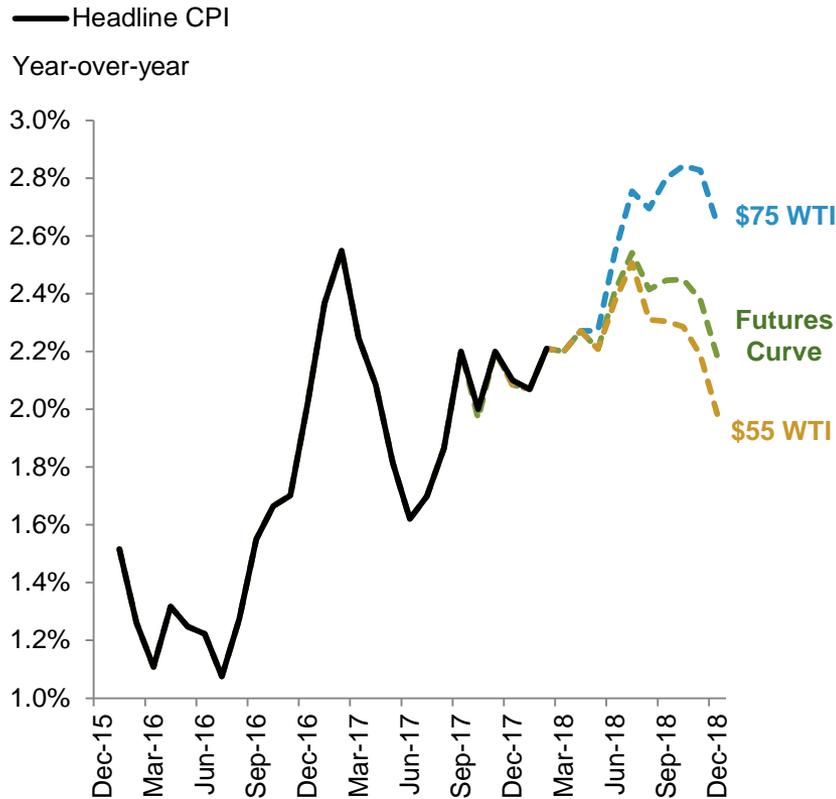


LEFT: Diffusion index includes roughly 30 countries. Source: Markit, Haver Analytics, Fidelity Investments (AART), as of 3/31/18. **RIGHT:** Source: Ministry of Health, Labour & Welfare, Haver Analytics, Fidelity Investments (AART), as of 1/31/18.

Cyclical and Secular Inflation: Risks on the Upside?

Headline inflation has steadily risen since the middle of last year and will likely remain firm over the near-term even if oil prices don't continue to rise. Over the long term, recent decades of disinflation have dragged down many investors' inflation expectations. We believe several factors, including policy changes and peak-globalization trends, could potentially cause inflation to accelerate faster than today's subdued expectations.

U.S. Inflation Under Various Oil Scenarios



Possible Secular Impact on Inflation

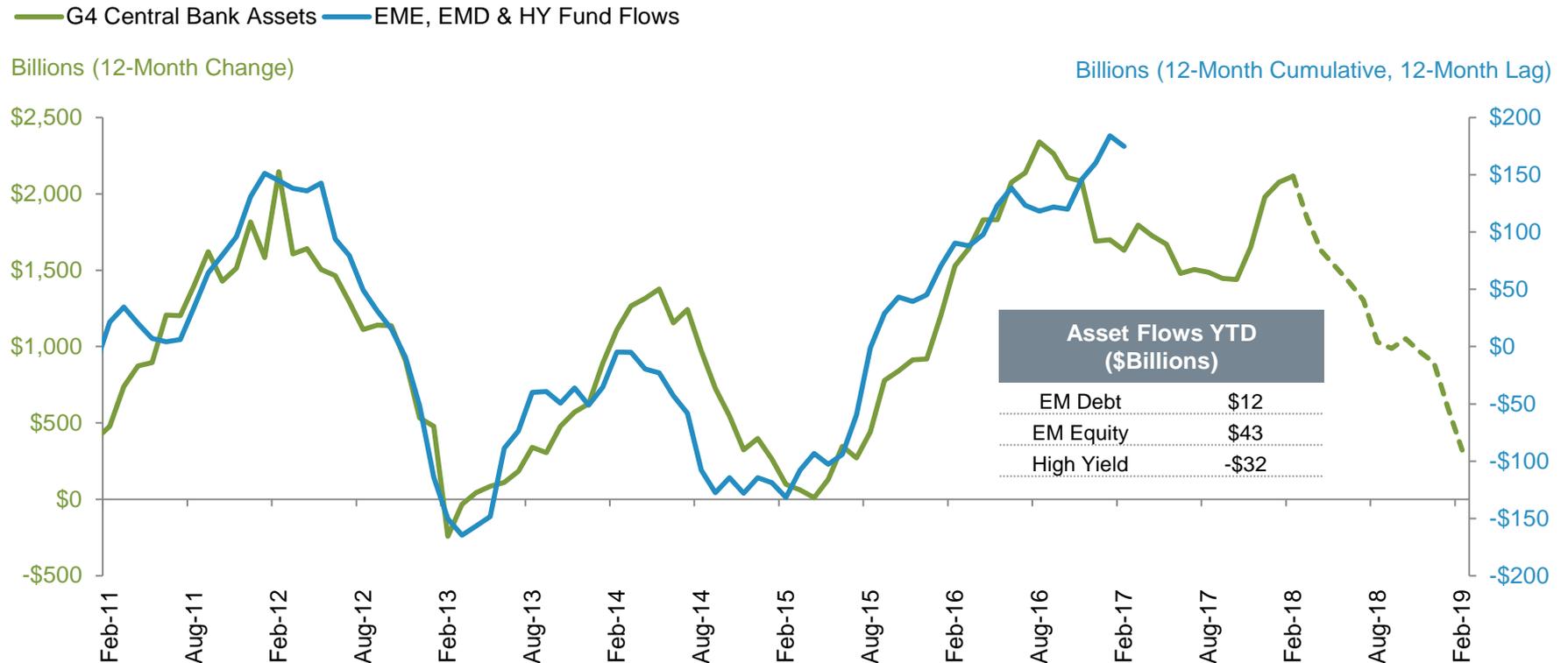
Secular Factors	Possible Developments	Risks to Inflation
Policy	Fed targets higher inflation	↑
	Higher deficits/unsustainable debt	↑
Aging Demographics	Elderly people:	
	<ul style="list-style-type: none"> • Spend less (reducing demand) • Work less (reducing supply) 	↓ ↑
Peak Globalization	More expensive goods/labor	↑
Technological Progress	More robots, Amazon effect	↓

WTI: West Texas Intermediate crude oil. Headline CPI: Consumer Price Index. **LEFT:** Scenarios assume AART core CPI and food cost growth rate forecasts under various oil price scenarios for 2018. Source: Bureau of Labor Statistics, Bloomberg Finance L.P., Fidelity Investments (AART), as of 2/28/18. **RIGHT:** Fed: Federal Reserve. Source: Fidelity Investments (AART), as of 3/31/18.

QE Unwind to Challenge Global Liquidity Growth

We believe global growth and inflation are firm enough to keep policy-makers moving toward tighter monetary policy. The growth in major central bank balance sheets is set to drop by almost \$2 trillion over the next 12 months as the Fed further winds down its balance sheet and the ECB tapers quantitative easing. The paring back of liquidity may challenge demand for less liquid asset classes and maintain elevated asset market volatility.

Fed, ECB, BOJ, BOE Balance Sheets and Asset Flows

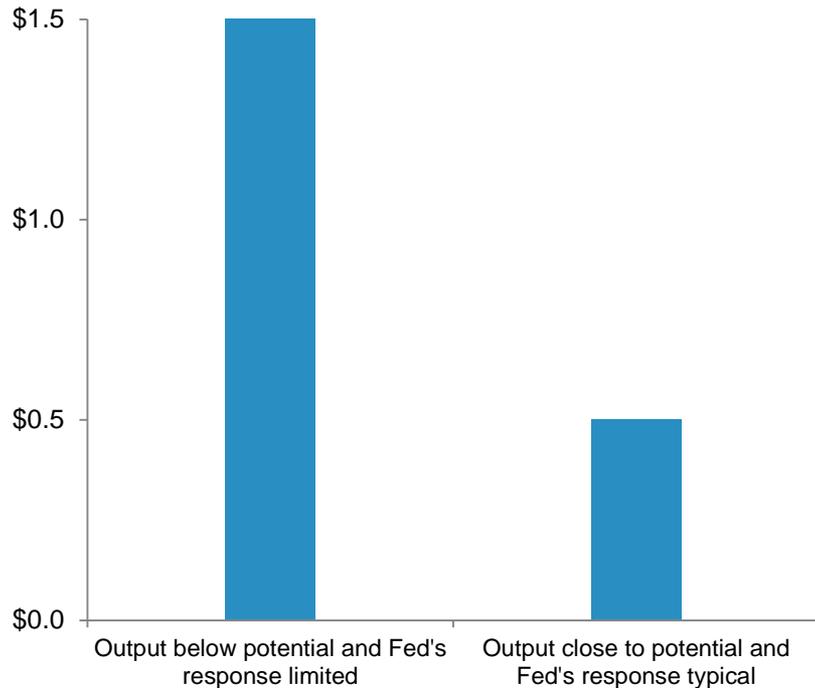


Fund Flows: Mutual funds and ETFs. EME: Emerging Market Equity. EMD: Emerging Market Debt. HY: High Yield. Dotted line estimates future central bank assets: Fed to roll-off balance sheet assets by lesser of stated caps or total bonds maturing each month; ECB to begin tapering in January 2018 to EUR30B of monthly purchases for nine months and EUR10B per month in Q4; BOJ to purchase at annualized rate of average purchases over last 12 months; BOE to keep balance sheet constant. Source: Federal Reserve (Fed), Bank of England (BOE), European Central Bank (ECB), Bank of Japan (BOJ), EPFR, Haver Analytics, Fidelity Investments (AART), as of 2/28/18. Table includes weekly flow data as of 3/29/18.

Pro-Cyclical Fiscal Easing Leads to Higher Deficits

The combination of tax cuts and higher spending are likely to provide a modest boost to GDP over the next couple of years. However, the growth multiplier from this fiscal stimulus is lower than it would have been earlier in the cycle because less slack remains in the economy and the Fed continues to tighten monetary policy. As a result, easier fiscal policy and rising deficits may also put upward pressure on inflation and bond yields.

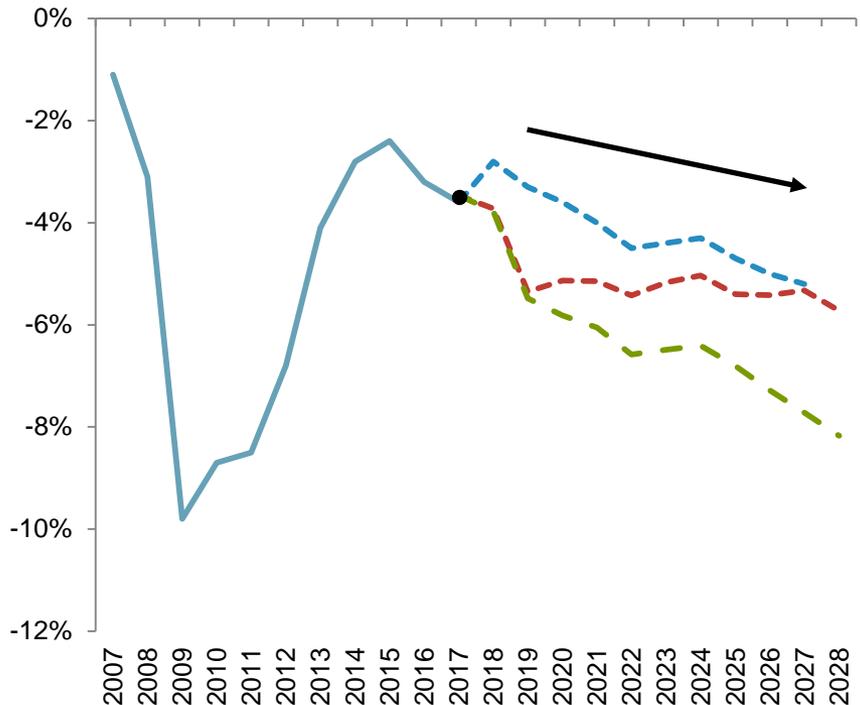
Impact of \$1 Fiscal Stimulus Boost over Next Two Years



U.S. Fiscal Deficit

— Prior Law — Current Law — Alternative Scenario

Deficit as a Share of GDP

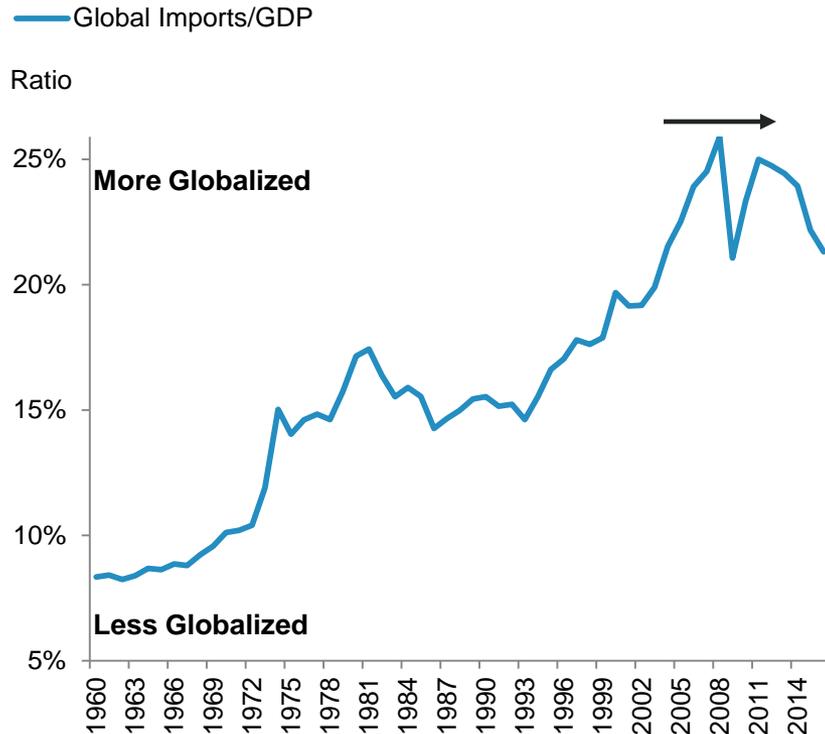


Fed: Federal Reserve. **LEFT:** Expected economic impact per \$1 of fiscal stimulus in the two years that follow the stimulus. Source: Congressional Budget Office (CBO), Fidelity Investments (AART), data as of 2/28/15. **RIGHT:** Prior scenario was as of June 2017, based on CBO projections. Current and alternative scenarios are projections by the CRFB. Alternative scenario assumes various expiring policies will be extended, including recent tax cuts and higher budget caps. Source: Congressional Budget Office, Committee for a Responsible Federal Budget (CRFB), Haver Analytics, Fidelity Investments (AART), as of 9/30/17.

Secular Trend: Peak Globalization

After decades of rapid global integration, economic openness stalled in recent years amid political pressures in many advanced economies. Changes to global rules may pose risks for incumbent companies, industries, and countries that have benefited the most from the rise of a rule-based global order. These risks include potentially higher inflation, lower productivity and profit margins, and higher political risk.

Trade Globalization



Secular Risks for Asset Markets

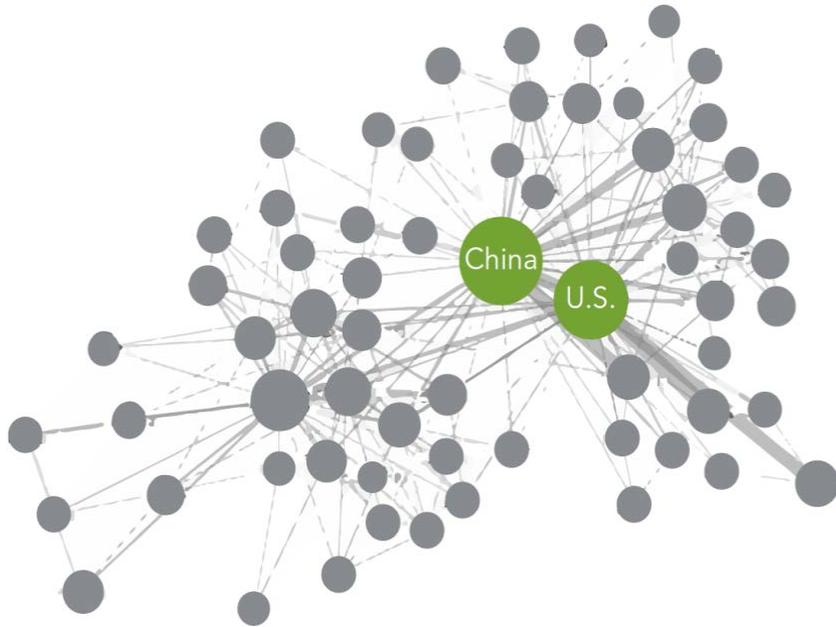
- Less rule-based and less market-oriented global system
- Higher political risk
- Inflationary pressures
- Pressures on productivity growth and corporate profit margins

LEFT: Source: International Monetary Fund (IMF), World Bank, Haver Analytics, Fidelity Investments (AART), as of 12/31/16.

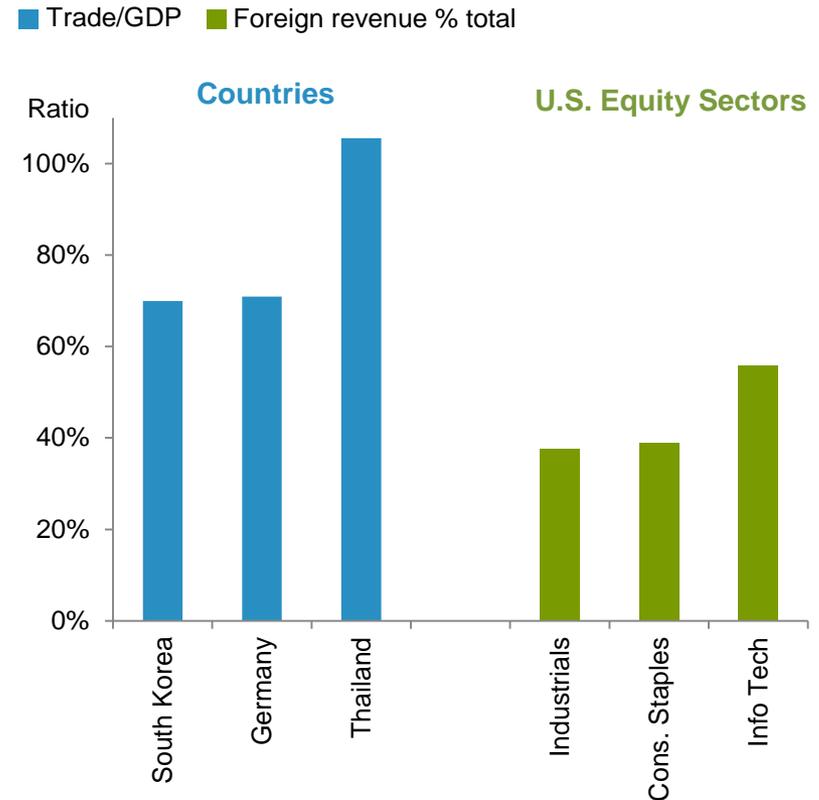
Aggressive U.S. Trade Posture is a Major Risk

U.S. plans to confront China's trade and investment policies have the potential to not only ratchet up bilateral commercial tensions but also represent a significant risk to the global economy. China and the U.S. are the most central economies in the highly integrated global trade network. The entities most at risk might be the countries, industries, and companies that are most dependent on global trade and supply chains.

Global Trade Interdependence



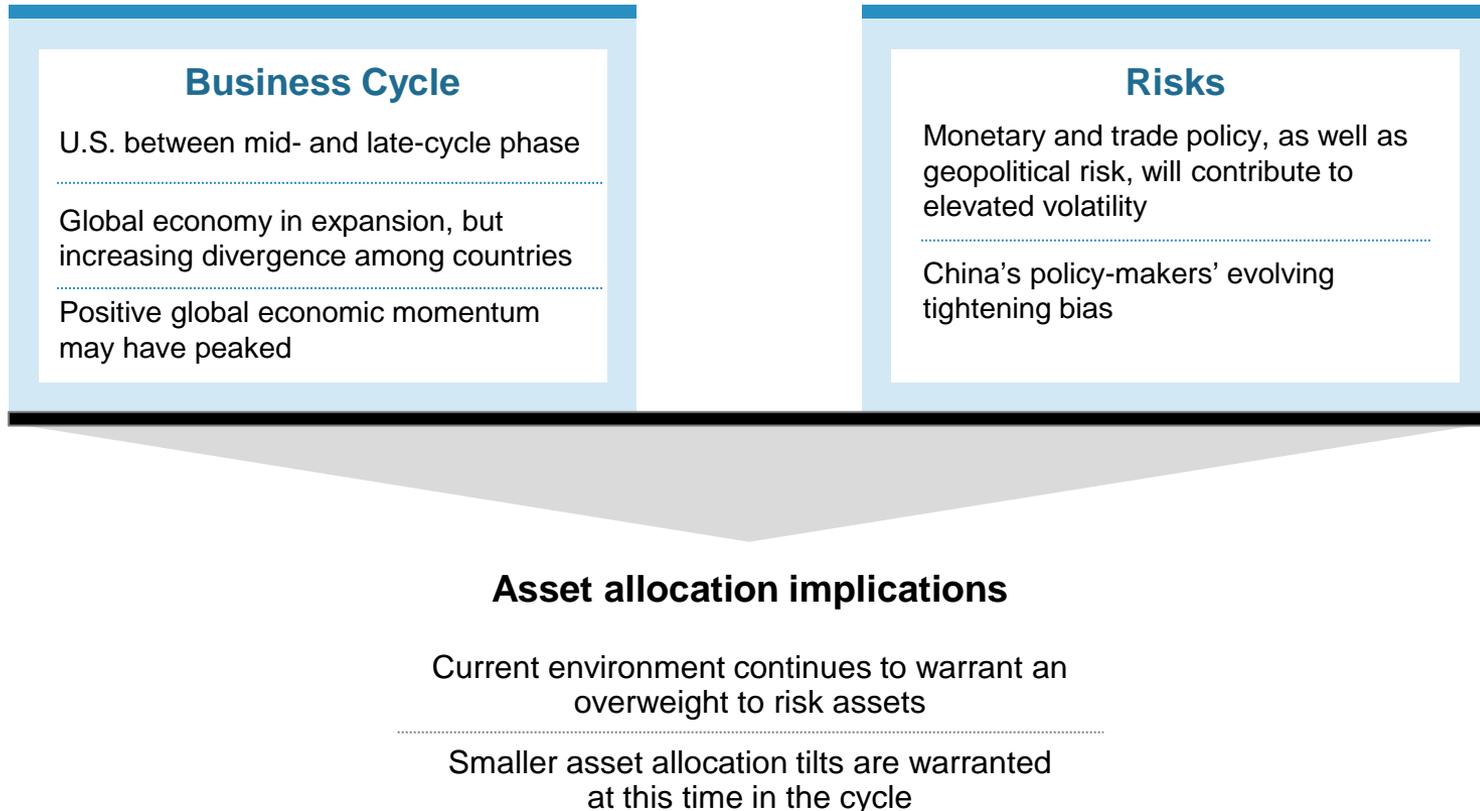
Importance of Global Integration



LEFT: The size of the circles represents total trade. The thickness of lines represents the volume of trade flows. The size of the circle and proximity to other countries represents importance and interconnectedness. Grey circles represent other countries. Source: International Monetary Fund, Haver Analytics, Fidelity Investments (AART), as of 12/31/15. **RIGHT:** Sectors as defined by the Global Industry Classification Standard (GICS®). Source: S&P 500 company data (sector revenue), World Bank (trade/GDP), FactSet, Haver Analytics, Fidelity Investments (AART), as of 12/31/15.

Outlook: Market Assessment

Fidelity's Business Cycle Board, composed of portfolio managers responsible for a variety of global asset allocation strategies, believes the current backdrop warrants an overweight to risk assets. However, the Board believes global economic momentum may have peaked and expects elevated volatility driven by risks to the monetary, political, and economic outlooks. Smaller asset allocation tilts are merited at this point in the cycle.



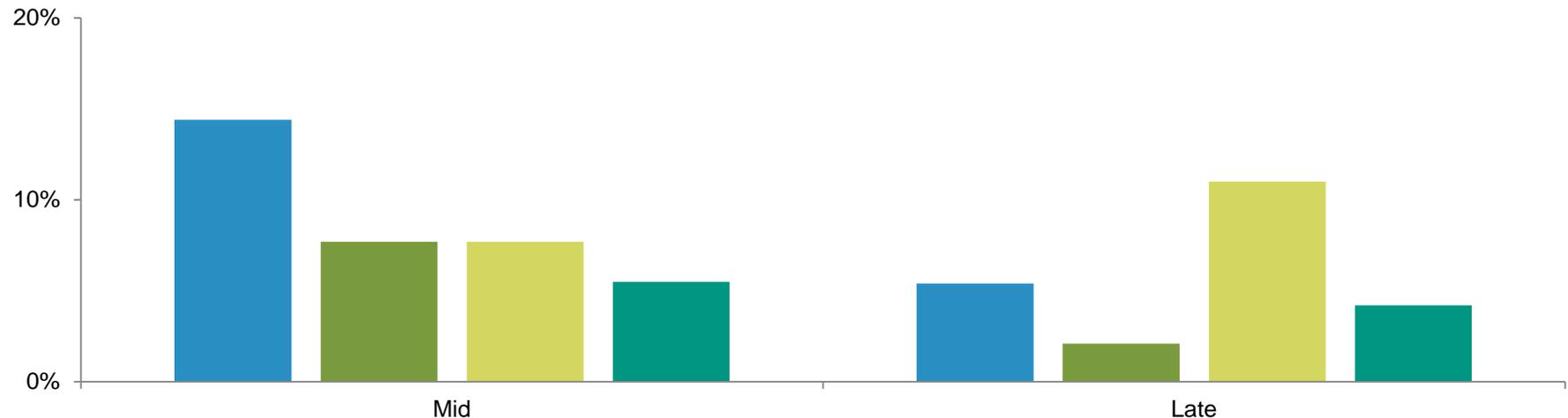
Historical Playbook for Mid- and Late-Cycle Phases

Historically, the mid-cycle phase has tended to favor riskier asset classes, while late cycles have had the most mixed performance of any business-cycle phase. The late cycle has often featured more limited overall upside and less confidence in equity performance, though stocks have typically outperformed bonds. Inflation-resistant assets, such as commodities, energy stocks, short-duration bonds, and TIPS, have performed relatively well.

Asset Class Performance in Mid- and Late-Cycle Phases (1950–2010)

■ Stocks ■ High Yield ■ Commodities ■ Investment-Grade Bonds

Annual Absolute Return (Average)



Mid Cycle: Strong Asset Class Performance

- Favor economically sensitive assets
- Broad-based gains

Late Cycle: Mixed Asset Class Performance

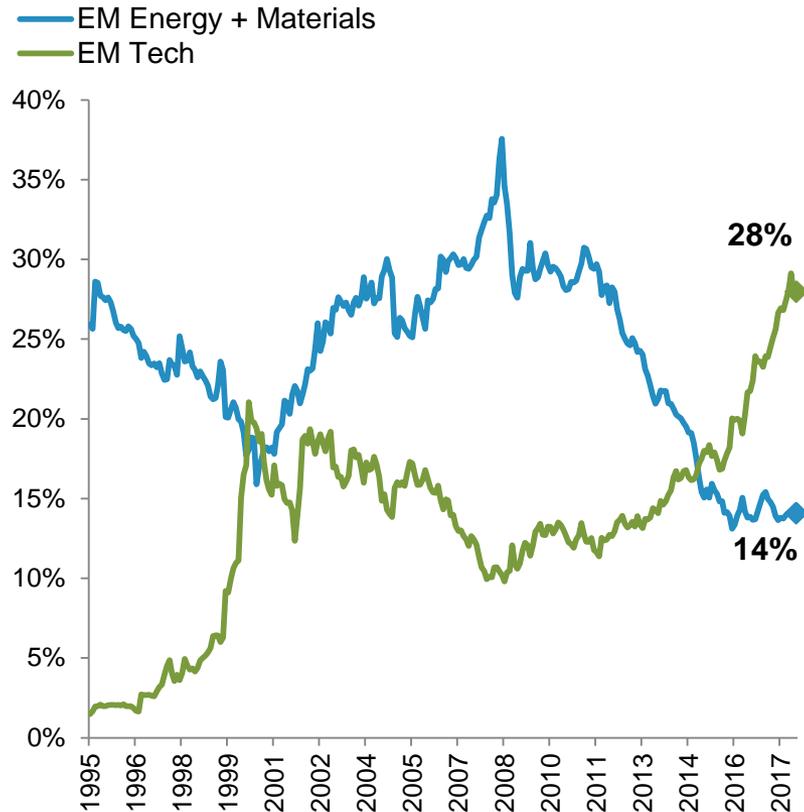
- Favor inflation-resistant assets
- Gains more muted

TIPS: Treasury Inflation-Protected Securities. Past performance is no guarantee of future results. Asset class total returns are represented by indexes from the following sources: Fidelity Investments, Morningstar, and Bloomberg Barclays. Fidelity Investments source: a proprietary analysis of historical asset class performance, which is not indicative of future performance.

Non-U.S. Equities an Important Source of Diversification

The historical business-cycle road map for asset allocation has tended to favor international equities over U.S. stocks as an economic expansion becomes more mature. However, because technology now represents a much larger percentage of the emerging-markets (EM) universe than commodities, EM equities may not benefit as much from the typical global inflationary pressures seen historically when the U.S. has drifted into late cycle.

Sector Weights in EM Equity Index



Supports for non-U.S. equities

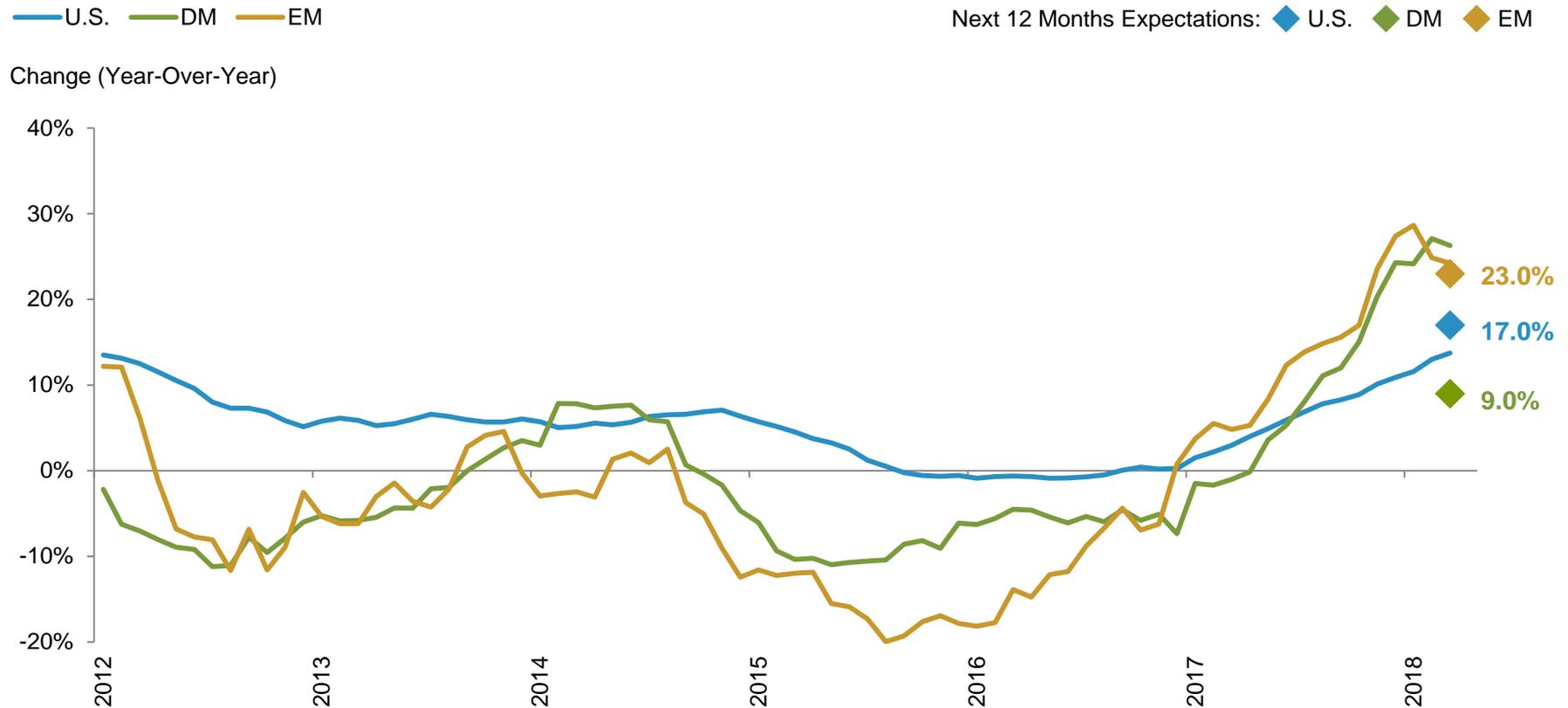
- Global expansion
- Secular GDP outlook
- Cheaper valuations
- \$ close to fair value
- Many investors still underallocated

Diversification does not ensure a profit or guarantee against a loss. **Past performance is no guarantee of future results.** Source: MSCI, FactSet, Fidelity Investments (AART), as of 12/31/17.

Solid Earnings Backdrop in U.S., International

Global earnings continue to provide a solid fundamental backdrop for equity markets, though international developed and emerging markets are showing signs of moderating growth from high levels. Earnings revisions outside the U.S. also stabilized for the first time in years, although lofty forward-earnings-growth expectations may provide a tougher hurdle to clear in the year ahead, particularly in emerging markets.

Global EPS Growth (Trailing 12 Months)



Past performance is no guarantee of future results. DM: Developed Markets. EM: Emerging Markets. EPS: Earnings per share.
Source: MSCI, FactSet, Fidelity Investments (AART), as of 3/31/18.

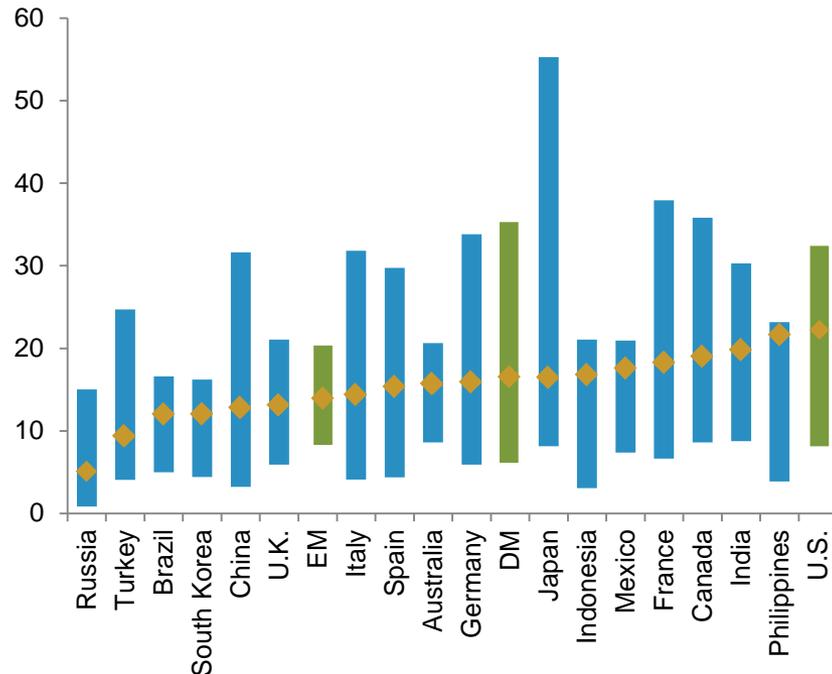
Non-U.S. Equity Valuations More Attractive, Dollar Mixed

Using five-year, peak-inflation-adjusted earnings, P/E ratios for developed and emerging foreign equity markets remain lower than those in the U.S., providing a relatively favorable long-term valuation backdrop for non-U.S. stocks. U.S. dollar weakness in Q1 caused its valuation to be more attractive, with the yen and the euro in generally neutral territory.

Cyclical P/E's

◆ 2/28/18 ■ 20-Year Range

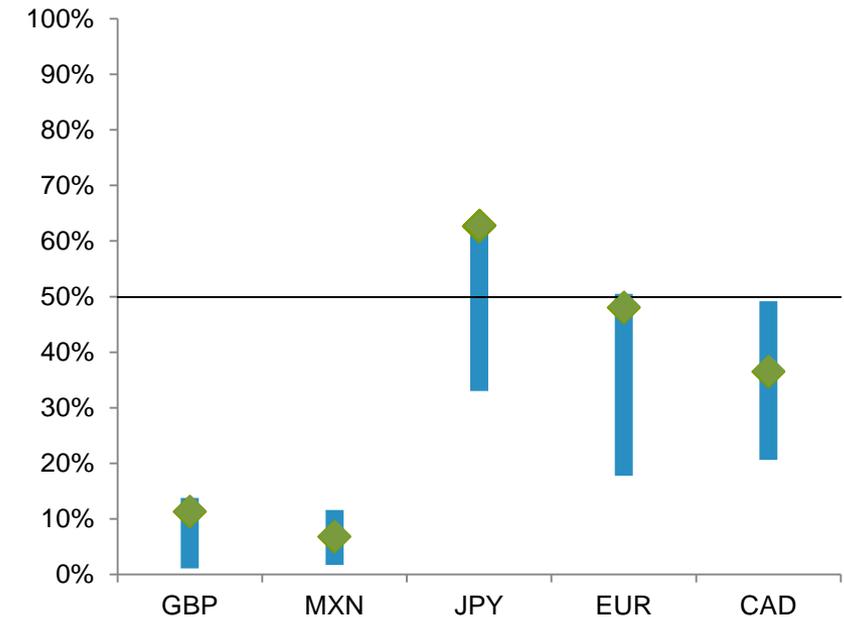
Price/5-Year Peak Real Earnings



Valuation of Major Currencies vs. USD

■ Last 12-Month Range ◆ 3/31/18

Percentile Since 2000



DM: Developed Markets. EM: Emerging Markets. **Past performance is no guarantee of future results.** It is not possible to invest directly in an index. All indexes are unmanaged. See Appendix for important index information. **LEFT:** Price-to-earnings (P/E) ratio (or multiple): stock price divided by earnings per share, which indicates how much investors are paying for a company's earnings power. Five-year peak earnings are adjusted for inflation. Source: FactSet, countries' statistical organizations, Haver Analytics, Fidelity Investments (AART), as of 2/28/18. **RIGHT:** GBP: British pound, MXN: Mexican peso, JPY: Japanese yen, EUR: euro, CAD: Canadian dollar. Source: Federal Reserve Board, Haver Analytics, Fidelity Investments (AART), as of 3/31/18.

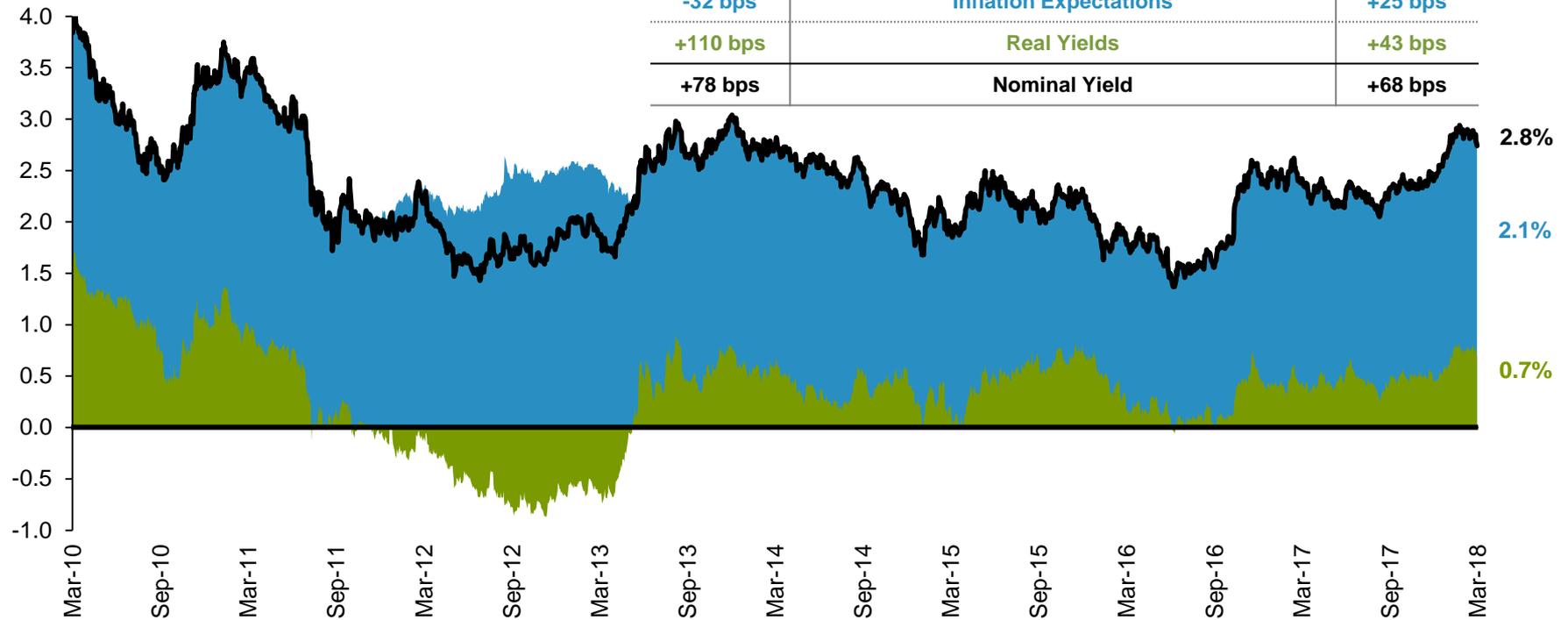
Bond Yields Up as Growth and Inflation Expectations Firm

With the outlook for growth and inflation solidifying and the Fed conveying its intent for a sustained tightening cycle, 10-year Treasury yields rose to their highest level in four years during Q1. In contrast to the “taper tantrum” in 2013, the rise in real yields and inflation expectations has been relatively gradual alongside firmer economic fundamentals, and shorter-term rates and inflation-adjusted borrowing costs are now much higher.

10-Year Treasury Yields

■ Inflation Expectations ■ Real Yields — Nominal Yield

Yield (%)

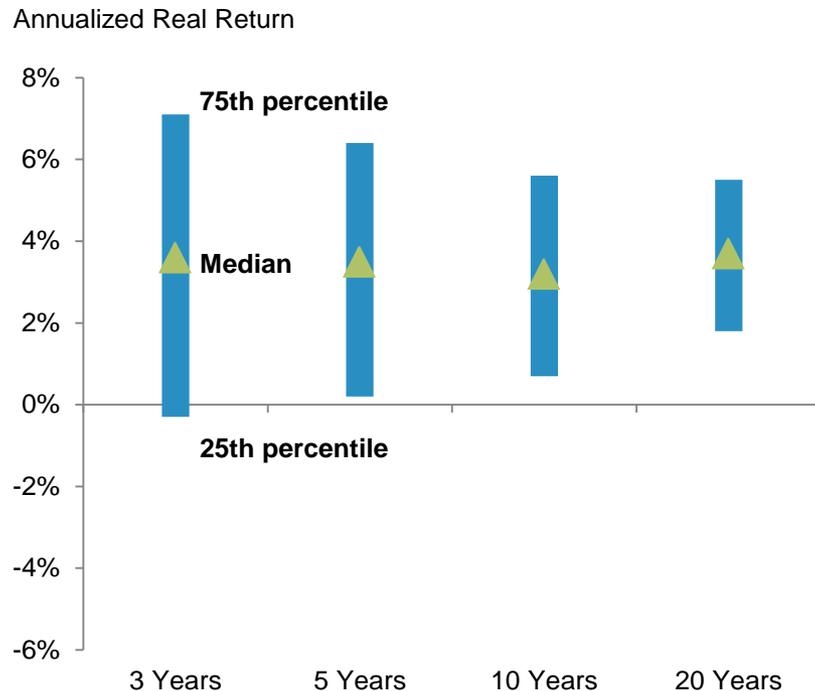


Fed: Federal Reserve. Nominal Yield: 10-Year Treasury yield. Source: Federal Reserve, Haver Analytics, Fidelity Investments (AART), as of 3/31/18.

Cyclical Risk Turns Asymmetrical in the Late-Cycle Phase

Over the intermediate term (3 to 5 years), the starting point in the business cycle has a meaningful impact on the expected distribution of asset returns. Mid-cycle starting points tend to provide a positive skew to a diversified portfolio's returns. Late-cycle starting points tend to experience positive returns on average, but they also exhibit greater equity market drawdowns and volatility, which widens the expected range of returns.

Portfolio Returns Starting in Mid Cycle



Portfolio Returns Starting in Late Cycle



Sample Portfolio: 40% Domestic Equity • 20% Foreign Equity • 30% IG Bonds • 10% HY Bonds

For illustrative purposes only. **Past performance is no guarantee of future results.** It is not possible to invest directly in an index. All indexes are unmanaged. See Appendix for important index information. Portfolio based on Dow Jones U.S. Total Stock Market Index, MSCI ACWI ex-US Index, Bloomberg Barclays Aggregate Index, ICE BofAML U.S. High Yield Index, as of 3/31/18.

Appendix: Important Information

Information presented herein is for discussion and illustrative purposes only and is not a recommendation or an offer or solicitation to buy or sell any securities. Views expressed are as of the date indicated, based on the information available at that time, and may change based on market and other conditions. Unless otherwise noted, the opinions provided are those of the authors and not necessarily those of Fidelity Investments or its affiliates. Fidelity does not assume any duty to update any of the information.

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Past performance and dividend rates are historical and do not guarantee future results.

Investing involves risk, including risk of loss.

Diversification does not ensure a profit or guarantee against loss.

Index or benchmark performance presented in this document does not reflect the deduction of advisory fees, transaction charges, and other expenses, which would reduce performance.

Indexes are unmanaged. It is not possible to invest directly in an index.

Although bonds generally present less short-term risk and volatility than stocks, bonds do contain interest rate risk (as interest rates rise, bond prices usually fall, and vice versa) and the risk of default, or the risk that an issuer will be unable to make income or principal payments.

Additionally, bonds and short-term investments entail greater inflation risk—or the risk that the return of an investment will not keep up with increases in the prices of goods and services—than stocks. Increases in real interest rates can cause the price of inflation-protected debt securities to decrease.

Stock markets, especially non-U.S. markets, are volatile and can decline significantly in response to adverse issuer, political, regulatory, market, or economic developments. Foreign securities are subject to interest rate, currency exchange rate, economic, and political risks, all of which are magnified in emerging markets.

The securities of smaller, less well-known companies can be more volatile than those of larger companies.

Growth stocks can perform differently from the market as a whole and from other types of stocks, and can be more volatile than other types of stocks. Value stocks can perform differently from other types of stocks and can continue to be undervalued by the market for long periods of time.

Lower-quality debt securities generally offer higher yields but also involve greater risk of default or price changes due to potential changes in the credit quality of the issuer. Any fixed income security sold or redeemed prior to maturity may be subject to loss.

Floating rate loans generally are subject to restrictions on resale, and sometimes trade infrequently in the secondary market; as a result, they may be more difficult to value, buy, or sell. A floating-rate loan may not be fully collateralized and therefore may decline significantly in value.

The municipal market can be affected by adverse tax, legislative, or political changes, and by the financial condition of the issuers of municipal securities. Interest income generated by municipal bonds is generally expected to be exempt from federal income taxes and, if the bonds are held by an investor resident in the state of issuance, from state and local income taxes. Such interest income may be subject to federal and/or state alternative minimum taxes. Investing in municipal bonds for the purpose of generating tax-exempt income may not be appropriate for investors in all tax brackets. Generally, tax-exempt municipal securities are not appropriate holdings for tax-advantaged accounts such as IRAs and 401(k)s.

The commodities industry can be significantly affected by commodity prices, world events, import controls, worldwide competition, government regulations, and economic conditions.

The gold industry can be significantly affected by international monetary and political developments, such as currency devaluations or revaluations, central bank movements, economic and social conditions within a country, trade imbalances, or trade or currency restrictions between countries.

Changes in real estate values or economic downturns can have a significant negative effect on issuers in the real estate industry.

Leverage can magnify the impact that adverse issuer, political, regulatory, market, or economic developments have on a company. In the event of bankruptcy, a company's creditors take precedence over the company's stockholders.

Appendix: Important Information

Market Indexes

BofA ML Corporate Real Estate Index, a subset of BofA ML U.S. Corporate Index, is a market capitalization-weighted index of U.S. dollar-denominated investment-grade corporate debt publicly issued in the U.S. domestic market by real estate issuers. Qualifying securities must have an investment-grade rating (based on an average of Moody's, S&P, and Fitch). In addition, qualifying securities must have at least one year remaining to final maturity, a fixed coupon schedule, and a minimum amount outstanding of \$250 million. **BofA ML U.S. Real Estate Index** is a subset of the BofA ML Real Estate Corporate Index; qualifying securities must have an investment-grade rating and an investment-grade-rated country of risk.

Bloomberg Barclays U.S. 1-3 (1-5) Year Government Credit Index includes all publicly issued U.S. government and corporate securities that have a remaining maturity between one and three (five) years and are rated investment-grade. **Bloomberg Barclays U.S. 1-5 Year Credit Index** is designed to cover publicly issued U.S. corporate and specified non-U.S. debentures and secured notes with a maturity between one and five years and meet the specified liquidity and quality requirements; bonds must be SEC-registered to qualify.

Bloomberg Barclays U.S. 1-5 Year Municipal Index covers the one- to five-year maturity, U.S. dollar-denominated, tax-exempt bond market with four main sectors: state and local general obligation bonds, revenue bonds, insured bonds, and pre-refunded bonds.

Bloomberg Barclays ABS Index is a market value-weighted index that covers fixed-rate asset-backed securities with average lives greater than or equal to one year and that are part of a public deal; the index covers the following collateral types: credit cards, autos, home equity loans, stranded-cost utility (rate-reduction bonds), and manufactured housing.

Bloomberg Barclays CMBS Index is designed to mirror commercial mortgage-backed securities of investment-grade quality (Baa3/BBB-/BBB- or above) using Moody's, S&P, and Fitch, respectively, with maturities of at least one year. **Bloomberg Barclays**

Emerging Market Bond Index is an unmanaged index that tracks total returns for

external-currency-denominated debt instruments of the emerging markets. **Bloomberg**

Barclays Euro Aggregate Bond Index is a broad-based flagship benchmark that measures the investment-grade, euro-denominated, fixed rate bond market, including treasuries, government-related, corporate and securitized issues. **Bloomberg Barclays**

Long U.S. Government Credit Index includes all publicly issued U.S. government and corporate securities that have a remaining maturity of 10 or more years, are rated investment-grade, and have \$250 million or more of outstanding face value. **Bloomberg**

Barclays Municipal Bond Index is a market value-weighted index of investment-grade

municipal bonds with maturities of one year or more. **Bloomberg Barclays U.S. Agency Bond Index** is a market value-weighted index of U.S. Agency government and investment-grade corporate fixed-rate debt issues. **Bloomberg Barclays U.S. Aggregate Bond** is a

broad-based, market-value-weighted benchmark that measures the performance of the investment-grade, U.S. dollar-denominated, fixed-rate taxable bond market. **Bloomberg**

Barclays U.S. Corporate High Yield Bond Index is a market value-weighted index that covers the universe of dollar-denominated, fixed-rate, non-investment-grade debt.

Bloomberg Barclays U.S. Credit Bond Index is a market value-weighted index of investment-grade corporate fixed-rate debt issues with maturities of one year or more.

Bloomberg Barclays U.S. Government Index is a market value-weighted index of U.S.

Government fixed-rate debt issues with maturities of one year or more. **Bloomberg Barclays Global Aggregate ex-USD Index Unhedged** is a measure of global investment-grade debt from 24 local currency markets. This multi-currency benchmark includes treasury, government-related, corporate, and securitized fixed-rate bonds from both developed- and emerging-markets issuers.

Bloomberg Barclays U.S. MBS Index is a market value-weighted index of fixed-rate securities that represent interests in pools of mortgage loans, including balloon mortgages, with original terms of 15 and 30 years that are issued by the Government National Mortgage Association (GNMA), the Federal National Mortgage Association (FNMA), and the Federal Home Loan Mortgage Corp. (FHLMC). **Bloomberg Barclays U.S. Treasury**

Inflation-Protected Securities (TIPS) Index (Series-L) is a market value-weighted index that measures the performance of inflation-protected securities issued by the U.S.

Treasury. **Bloomberg Barclays U.S. Treasury Bond Index** is a market value-weighted index of public obligations of the U.S. Treasury with maturities of one year or more. **Bloomberg Commodity Index** measures the performance of the commodities market. It consists of exchange traded futures contracts on physical commodities that are weighted to account for the economic significance and market liquidity of each commodity.

Dow Jones U.S. Total Stock Market Index is a full market capitalization-weighted index of all equity securities of U.S.- headquartered companies with readily available price data.

Dow Jones U.S. Select Real Estate Securities Index is a float-adjusted, market capitalization-weighted index of publicly traded real estate securities, such as real estate investment trusts (REITs) and real estate operating companies (REOCs).

FTSE 100 Index is a market capitalization-weighted index of the 100 most highly capitalized blue chip companies listed on the London Stock Exchange. **FTSE National Association of Real Estate Investment Trusts (NAREIT) All REITs Index** is a market capitalization-weighted index that is designed to measure the performance of all tax-qualified REITs listed on the NYSE, the American Stock Exchange, or the NASDAQ National Market List. **FTSE NAREIT Equity REIT Index** is an unmanaged market value-weighted index based on the last closing price of the month for tax-qualified REITs listed on the New York Stock Exchange (NYSE).

The IA SBBI U.S. Small Cap Stock Index is a custom index designed to measure the performance of small capitalization U.S. stocks. **IA SBBI U.S. Intermediate-Term Government Bond Index** is an unweighted index that measures the performance of five-year maturity U.S. Treasury bonds. Each year, a one-bond portfolio containing the shortest non-callable bond having a maturity of not less than five years is constructed. **IA SBBI U.S. Long-Term Corporate Bond Index** is a custom index designed to measure the performance of long-term U.S. corporate bonds. **IA SBBI U.S. 30-Day Treasury Bill Index** is an unweighted index that measures the performance of 30-day-maturity U.S. Treasury bills.

Appendix: Important Information

Market Indexes (continued)

ICE BofAML U.S. High Yield Index is a market capitalization-weighted index of U.S. dollar-denominated, below-investment-grade corporate debt publicly issued in the U.S. domestic market.

JPM® EMBI Global Index, and its country sub-indexes, tracks total returns for the U.S. dollar-denominated debt instruments issued by emerging-market sovereign and quasi-sovereign entities, such as Brady bonds, loans, and Eurobonds. **JPM® EMBI Global Investment Grade Index**, and its country sub-indices, tracks total returns for traded external debt instruments issued by emerging-market sovereign and quasi-sovereign entities rated investment-grade.

MSCI® All Country World Index (ACWI) is a market capitalization-weighted index that is designed to measure the investable equity market performance for global investors of developed and emerging markets. **MSCI ACWI (All Country World Index) ex USA Index** is a market capitalization-weighted index designed to measure the investable equity market performance for global investors of large and mid cap stocks in developed and emerging markets, excluding the United States. **MSCI World Index** is a market capitalization-weighted index that is designed to measure the investable equity market performance for global investors of developed markets. **MSCI World ex USA Index** is a market capitalization-weighted index designed to measure the equity market performance of developed markets, excluding the U.S.

MSCI Emerging Markets (EM) Index is a market capitalization-weighted index that is designed to measure the investable equity market performance for global investors in emerging markets. **MSCI EM Asia Index** is a market capitalization-weighted index designed to measure equity market performance in Asia. **MSCI EM Europe, Middle East, and Africa (EMEA) Index** is a market capitalization-weighted index that is designed to measure the investable equity market performance for global investors in the emerging-market countries of Europe, the Middle East, and Africa. **MSCI EM Latin America Index** is a market capitalization-weighted index that is designed to measure the investable equity market performance for global investors in the emerging-market countries of Latin America. **MSCI EM Large Cap Index** is composed of those securities in the MSCI EM Index that are defined as large-capitalization stocks.

MSCI Europe, Australasia, Far East Index (EAFE) is a market capitalization-weighted index that is designed to measure the investable equity market performance for global investors in developed markets, excluding the U.S. and Canada. **MSCI EAFE Small Cap Index** is a market capitalization-weighted index that is designed to measure the investable equity market performance of small-cap stocks for global investors in developed markets, excluding the U.S. and Canada.

MSCI Europe Index is a market capitalization-weighted index that is designed to measure the investable equity market performance for global investors of the developed markets in Europe. **MSCI All Country (AC) Europe Index** is a market capitalization-weighted index that is designed to measure the equity market performance of Europe; it consists of the following developed- and emerging-market country indices: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Netherlands, Norway, Poland, Portugal, Russia, Spain, Sweden, Switzerland, Turkey, and United Kingdom. **MSCI North America Index** is a market capitalization-weighted index designed to measure the performance of large and mid cap segments of the U.S. and Canada markets. **MSCI Pacific ex Japan Index**

is a market capitalization-weighted index that is designed to measure the equity market performance of four of the five developed market countries in the Pacific region, including Australia, Hong Kong, New Zealand and Singapore. **MSCI Canada Index** is a market capitalization-weighted index designed to measure equity market performance in Canada. **MSCI Japan Index** is a market capitalization-weighted index designed to measure equity market performance in Japan. **MSCI USA Index** is a market capitalization-weighted index designed to measure the equity market performance of the U.S.

MSCI Europe Financials Index (Total Return) captures large and mid cap representations of financial securities across 15 developed-market countries in Europe, represented by the MSCI Europe Index, **MSCI Japan Financials Index (Total Return)** captures large- and mid-cap representations of financial securities across Japan, represented by the MSCI Japan Index, an index designed to measure the performance of the large and mid cap segments of the Japanese equity market. With 318 constituents, the index covers approximately 85% of the free-float-adjusted market capitalization in Japan.

MSCI REIT Preferred Index is a preferred stock market capitalization-weighted total return index of certain exchange traded perpetual preferred securities issued by U.S. Equity and U.S. Hybrid REITs.

Russell 2000® Index is a market capitalization-weighted index designed to measure the performance of the small-cap segment of the U.S. equity market. It includes approximately 2,000 of the smallest securities in the Russell 3000 Index. **Russell 3000® Index** is a market capitalization-weighted index designed to measure the performance of the 3,000 largest companies in the U.S. equity market. **Russell 3000 Growth Index** is a market capitalization-weighted index designed to measure the performance of the broad growth segment of the U.S. equity market. It includes those Russell 3000 Index companies with higher price-to-book ratios and higher forecasted growth rates. **Russell 3000 Value Index** is a market capitalization-weighted index designed to measure the performance of the small to mid-cap value segment of the U.S. equity market. It includes those Russell 3000 Index companies with lower price-to-book ratios and lower forecasted growth rates. **Russell Midcap® Index** is a market capitalization-weighted index designed to measure the performance of the mid cap segment of the U.S. equity market. It contains approximately 800 of the smallest securities in the Russell 1000 Index.

The **S&P 500® Index** is a market capitalization-weighted index of 500 common stocks chosen for market size, liquidity, and industry group representation to represent U.S. equity performance. S&P 500 is a registered service mark of The McGraw-Hill Companies, Inc., and has been licensed for use by Fidelity Distributors Corporation and its affiliates. The **S&P 500 Total Return Index** represents the price changes and reinvested dividends of the S&P 500® Index. The **S&P SmallCap 600** is a market capitalization-weighted index of 600 small capitalization stocks. The **S&P GSCI® Commodities Index** provides investors with a reliable and publicly available benchmark for investment performance in the commodity markets.

Appendix: Important Information

Market Indexes (continued)

The **Sectors and Industries** are defined by Global Industry Classification Standards (GICS®), except where noted otherwise. **S&P 500 sectors** are defined as follows: Consumer Discretionary – companies that tend to be the most sensitive to economic cycles. Consumer Staples – companies whose businesses are less sensitive to economic cycles. Energy – companies whose businesses are dominated by either of the following activities: the construction or provision of oil rigs, drilling equipment, and other energy-related services and equipment, including seismic data collection; or the exploration, production, marketing, refining, and/or transportation of oil and gas products, coal, and consumable fuels. Financials – companies involved in activities such as banking, consumer finance, investment banking and brokerage, asset management, insurance and investments, and real estate, including REITs. Health Care – companies in two main industry groups: health care equipment suppliers, manufacturers, and providers of health care services; and companies involved in research, development, production, and marketing of pharmaceuticals and biotechnology products. Industrials – companies whose businesses manufacture and distribute capital goods, provide commercial services and supplies, or provide transportation services. Information Technology – companies in technology software and services and technology hardware and equipment. Materials – companies that are engaged in a wide range of commodity-related manufacturing. Telecommunication Services – companies that provide communications services primarily through fixed-line, cellular, wireless, high bandwidth, and/or fiber-optic cable networks. Utilities – companies considered electric, gas, or water utilities, or companies that operate as independent producers and/or distributors of power.

Standard & Poor's/Loan Syndications and Trading Association (S&P/LSTA)

Leveraged Performing Loan Index is a market value-weighted index designed to represent the performance of U.S. dollar-denominated institutional leveraged performing loan portfolios (excluding loans in payment default) using current market weightings, spreads, and interest payments.

Other Indexes

The Consumer Price Index (CPI) is a monthly inflation indicator that measures the change in the cost of a fixed basket of products and services, including housing, electricity, food, and transportation.

The London Bullion Market Association (LBMA) publishes the international benchmark price of gold in USD, twice daily. The **LBMA Gold price** auction takes place by ICE Benchmark Administration (IBA) at 10:30 and 15:00 with the price set in U.S. dollars per fine troy ounce.

A Purchasing Managers' Index (PMI) is a survey of purchasing managers in a certain economic sector. A PMI over 50 represents expansion of the sector compared to the previous month, while a reading under 50 represents a contraction, and a reading of 50 indicates no change. The Institute for Supply Management® reports the U.S. manufacturing PMI®. Markit compiles non-U.S. PMIs.

Definitions

Correlation coefficient measures the interdependencies of two random variables that range in value from -1 to +1, indicating perfect negative correlation at -1, absence of correlation at 0, and perfect positive correlation at +1.

The Price-to-Earnings (P/E) ratio is the ratio of a company's current share price to its current earnings, typically trailing 12-months earnings per share. A Forward P/E calculation will typically use an average of analysts' published estimates of earnings for the next 12 months in the denominator.

Excess return: the amount by which a portfolio's performance exceeds its benchmark, net (in the case of the analysis in this article) or gross of operating expenses, in percentage points.

Appendix: Important Information

The Chartered Financial Analyst (CFA) designation is offered by the CFA Institute. To obtain the CFA charter, candidates must pass three exams demonstrating their competence, integrity, and extensive knowledge in accounting, ethical and professional standards, economics, portfolio management, and security analysis, and must also have at least four years of qualifying work experience, among other requirements.

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