LEADERSHIP SERIES SECOND QUARTER 2019

# Quarterly Market Update


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Fidelity INVESTMENTS

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# Market Summary

# Dovish Policy Shift amid Heightened Late-Cycle Uncertainty

**During Q1, financial markets responded favorably to the U.S. Federal Reserve's shift away from its monetary tightening bias. Most economic indicators remained tepid, although China displayed some initial signs of stabilizing activity. The mature global business cycle continues to warrant smaller cyclical allocation tilts and the prioritization of portfolio diversification.**

| | MACRO | ASSET MARKETS |
|---|---|---|
| **Q1 2019** | • Additional signs of slowing global growth helped spur a significant dovish shift in monetary policy | • Global stocks and commodities rallied, government bond yields dropped and yield curve inverted |
| **OUTLOOK** | • U.S. is firmly in the late-cycle phase, though near-term recession risk remains low<br>• Signs of stabilization in China, but unclear whether policy response is sufficient to reaccelerate<br>• The Fed's pause provides near-term relief for financial conditions, but the global monetary backdrop is still tighter than two years ago | • Late-cycle phases typically exhibit higher volatility, more asymmetric risk-return profile<br>• Wide dispersion of outcomes warrants smaller allocation tilts than earlier in the cycle<br>• Prioritize diversification amid significant uncertainty |

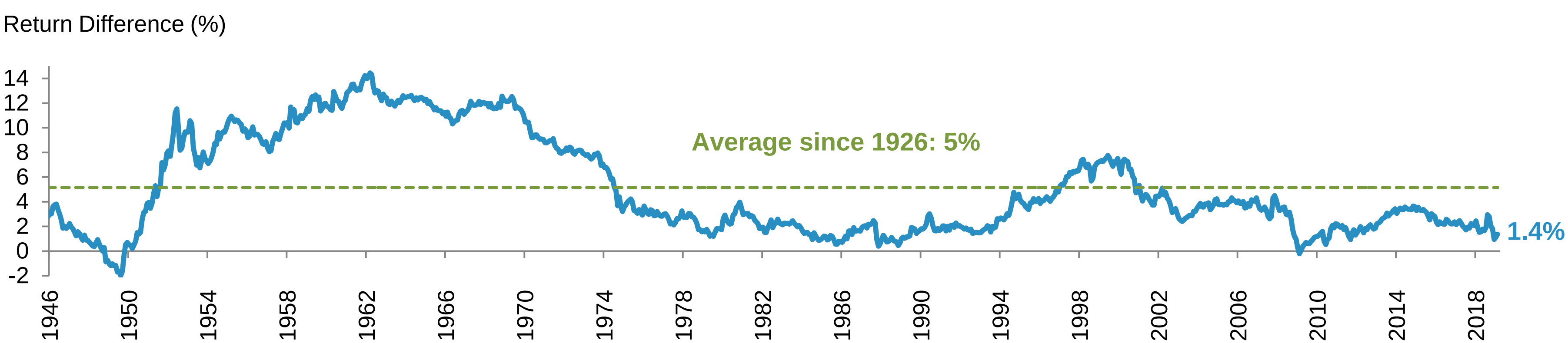
Diversification does not ensure a profit or guarantee against a loss.

# Global Stock Rebound Led Widespread Asset-Price Gains

**In a reversal from the sharp downturn in Q4 2018, prices for riskier assets posted substantial gains during Q1 2019. Global equity markets rallied, with the U.S. leading the way. High-yield corporate bonds and commodities also rebounded. U.S. Treasury bond yields continued their descent, boosting returns to high-quality bonds and solidifying positive results across all major asset categories.**

| | Q1 2019 (%) | 1 Year (%) | | Q1 2019 (%) | 1 Year (%) |
|---|---|---|---|---|---|
| U.S. Mid Cap Stocks | 16.5 | 6.5 | High Yield Bonds | 7.4 | 5.9 |
| Real Estate Stocks | 16.3 | 20.9 | Emerging-Market Bonds | 6.6 | 3.5 |
| U.S. Small Cap Stocks | 14.6 | 2.0 | Long Government & Credit Bonds | 6.5 | 5.2 |
| U.S. Large Cap Stocks | 13.6 | 9.5 | Commodities | 6.3 | -5.3 |
| Non-U.S. Small Cap Stocks | 10.7 | -9.4 | U.S. Corporate Bonds | 4.9 | 4.9 |
| Non-U.S. Developed-Country Stocks | 10.0 | -3.7 | Investment-Grade Bonds | 2.9 | 4.5 |
| Emerging-Market Stocks | 9.9 | -7.4 | Gold | 0.8 | -2.5 |

## 20-Year U.S. Stock Returns Minus IG Bond Returns since 1926

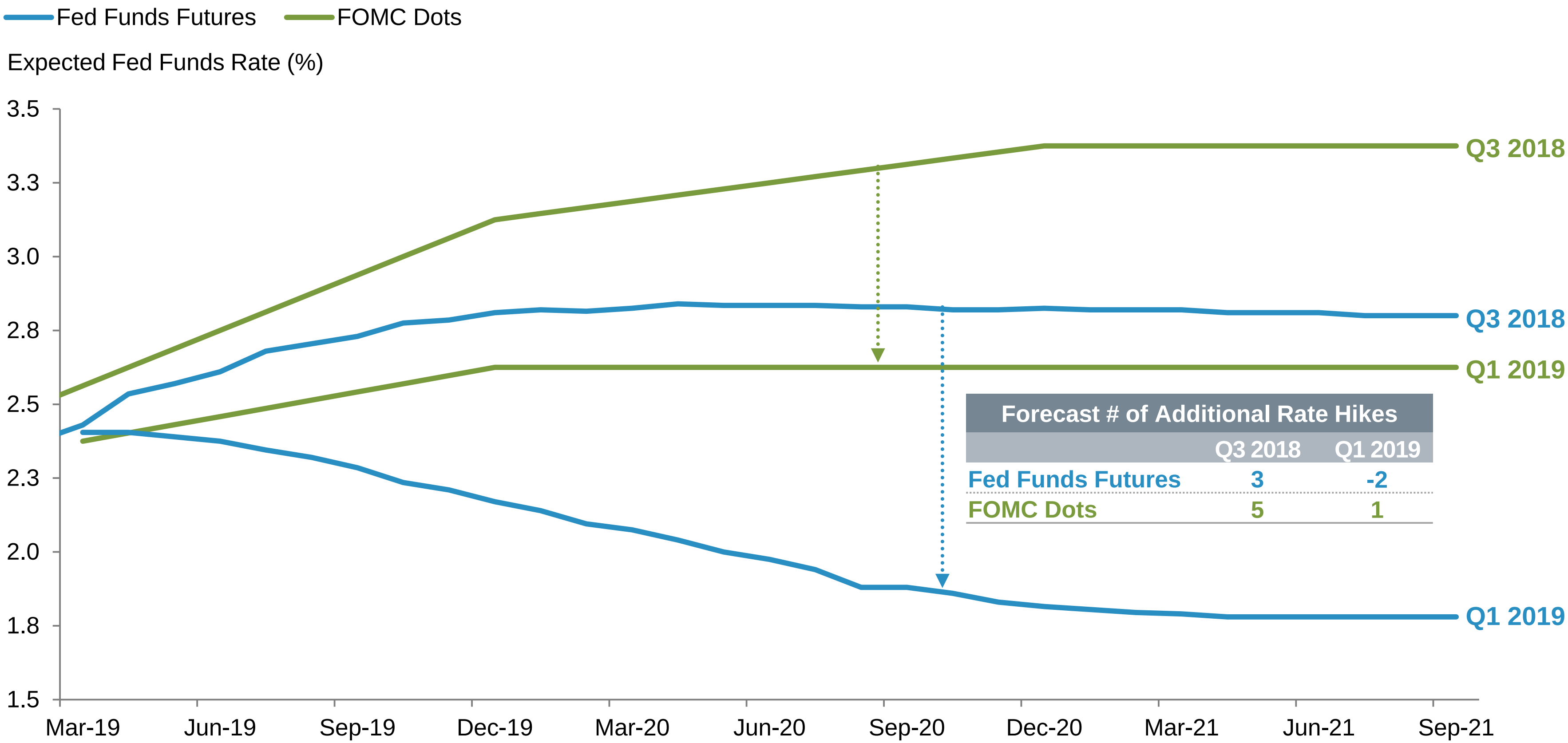



Past performance is no guarantee of future results. It is not possible to invest directly in an index. All indexes are unmanaged. See Appendix for important index information. Assets represented by: Commodities – Bloomberg Commodity Index; Emerging-Market Bonds – JP Morgan EMBI Global Index; Emerging-Market 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 3/31/19.

# Expectations for Fed Policy Shifted Dramatically

**Heading into Q4 2018, the Federal Reserve expressed a baseline plan to raise rates five more times during this tightening cycle; market expectations, meanwhile, were for three more rate hikes. After raising rates once in December, the late 2018 market downturn and weak economic data spurred the Fed during Q1 to communicate an indefinite pause in its rate tightening. Market expectations switched to anticipating a rate cut during 2019.**

## FOMC vs. Market Expectations of Fed Funds Target Rate




| Forecast # of Additional Rate Hikes | Q3 2018 | Q1 2019 |
|---|---|---|
| Fed Funds Futures | 3 | -2 |
| FOMC Dots | 5 | 1 |

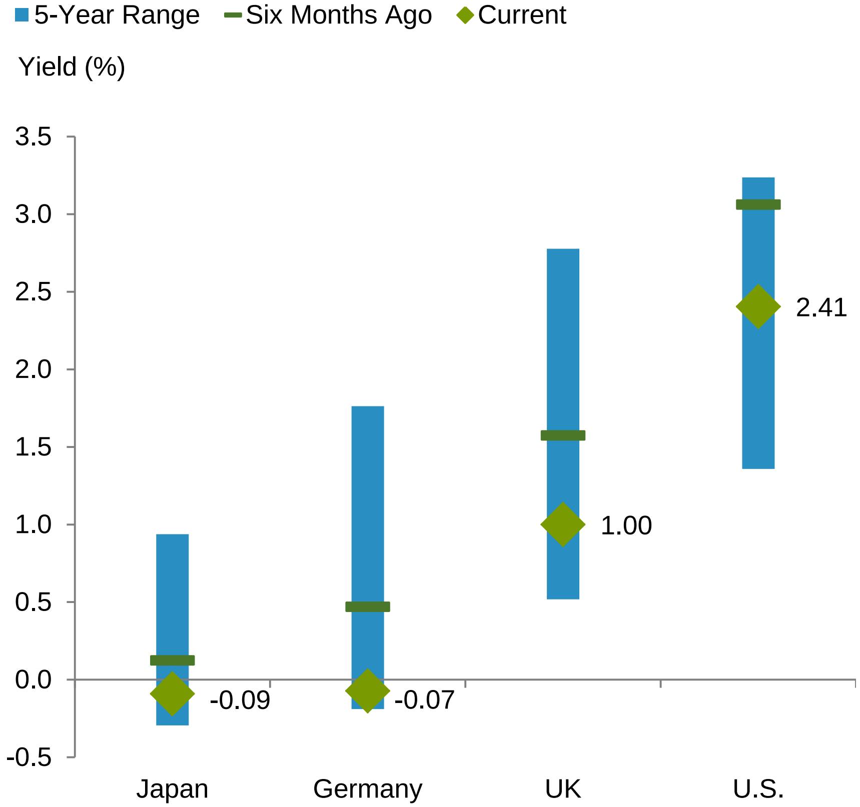
Source: Federal Reserve, Bloomberg Finance L.P., Fidelity Investments (AART), as of 3/31/19.

# Mixed Signals from Global Bond and Commodity Markets

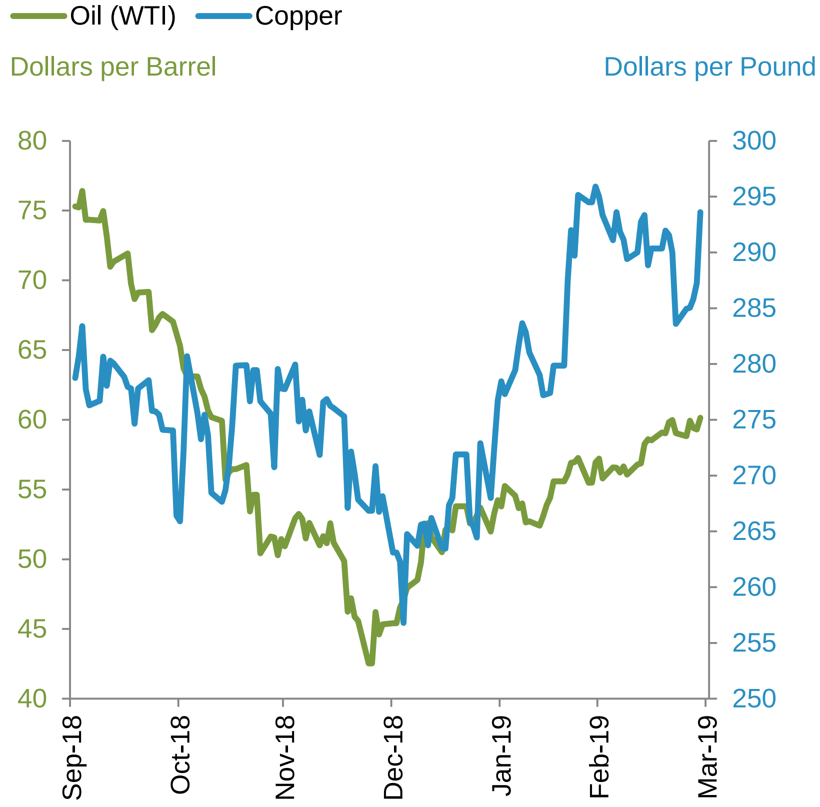
**Global government bond yields continued to drop amid concerns of economic weakness, with 10-year yields in Germany and Japan revisiting negative territory. Prices for most industrial commodities bottomed during Q1, with oil and copper staging rallies. It remains to be seen whether Q1 represents a risk-asset relief rally in reaction to a monetary shift, or whether it portends a more lasting upturn in the global economy.**

SUMMARY

## 10-Year Government Bond Yields




## Commodity Futures Prices

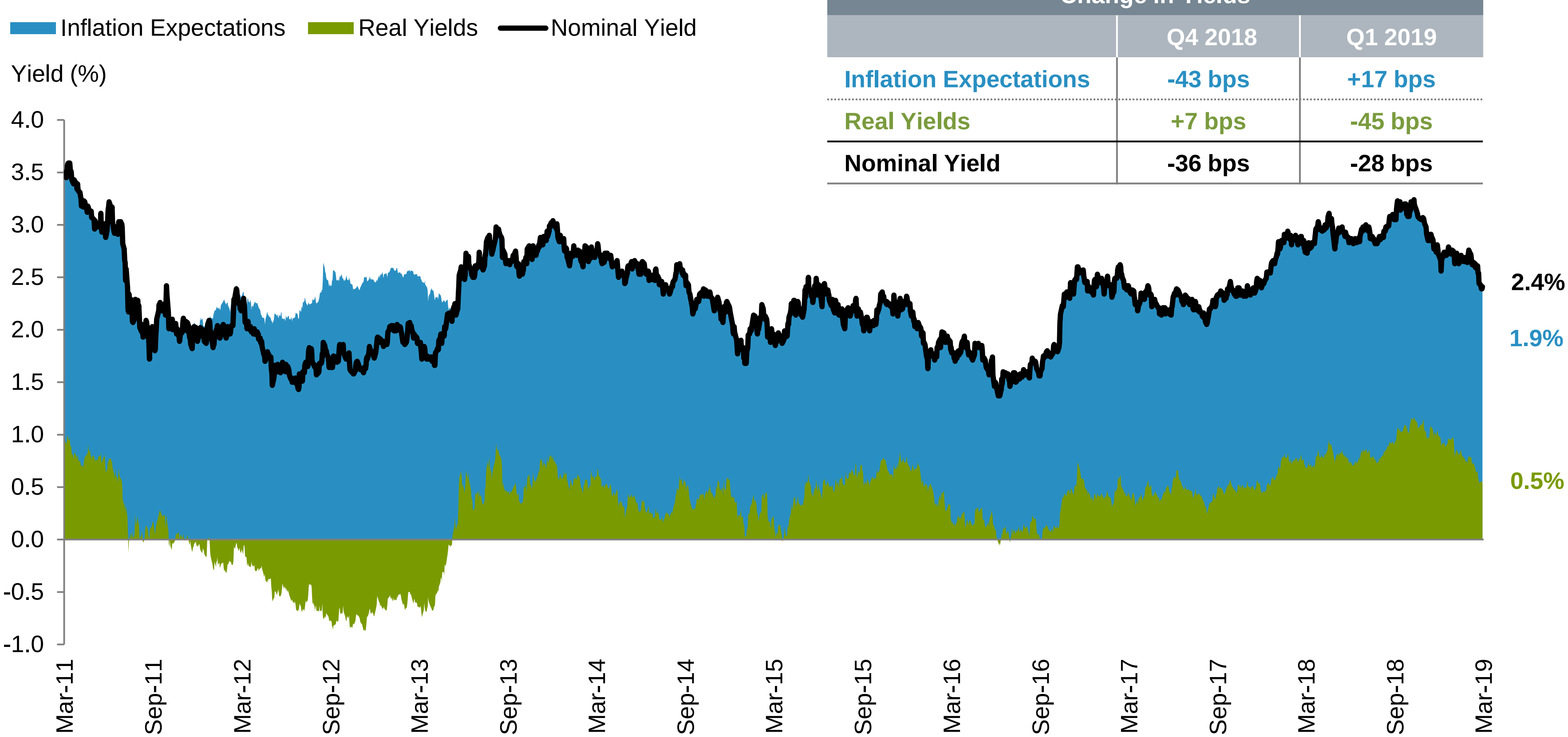



WTI: West Texas Intermediate crude oil. **LEFT:** Source: Bloomberg Finance L.P., Fidelity Investments (AART), as of 3/31/19. **RIGHT:** Source: Bloomberg Finance L.P. as of 3/31/19.

# Yields Priced in Lower Growth and Inflation Expectations

**Nominal 10-year Treasury bond yields fell again during Q1, albeit for somewhat different reasons than they did late last year. During Q4 2018, inflation expectations dropped but real yields held firm as the Fed continued to tighten borrowing costs. In Q1 2019, real yields fell amid the Fed's dovish pivot, whereas inflation expectations stayed stable. These gyrations underscore the uncertainty about the growth and policy outlooks.**

## 10-Year U.S. Treasury Yields



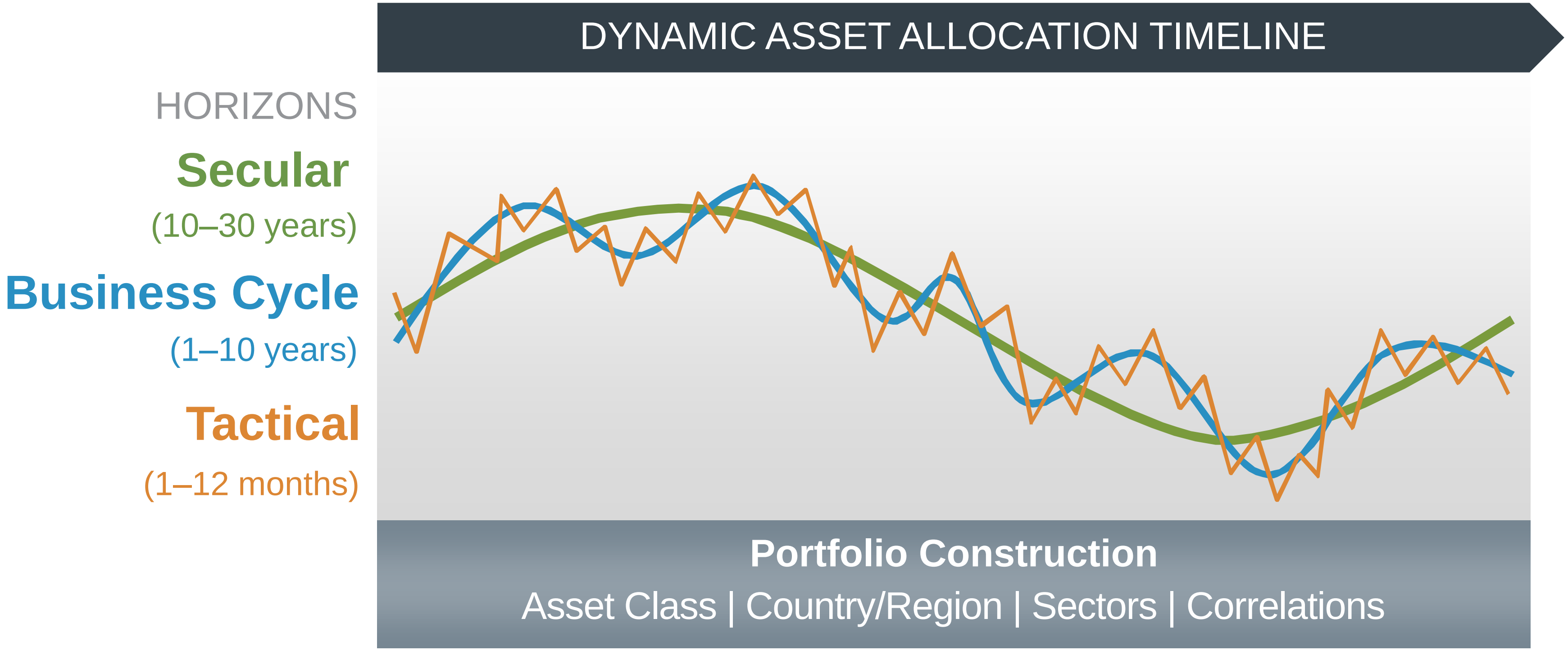

| Change in Yields | | |
|---|---|---|
| | Q4 2018 | Q1 2019 |
| Inflation Expectations | -43 bps | +17 bps |
| Real Yields | +7 bps | -45 bps |
| Nominal Yield | -36 bps | -28 bps |

Fed: Federal Reserve. Nominal Yield: 10-Year Treasury yield. Source: Federal Reserve, Haver Analytics, Fidelity Investments (AART), as of 3/31/19.

# Economy/Macro Backdrop

# 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).**

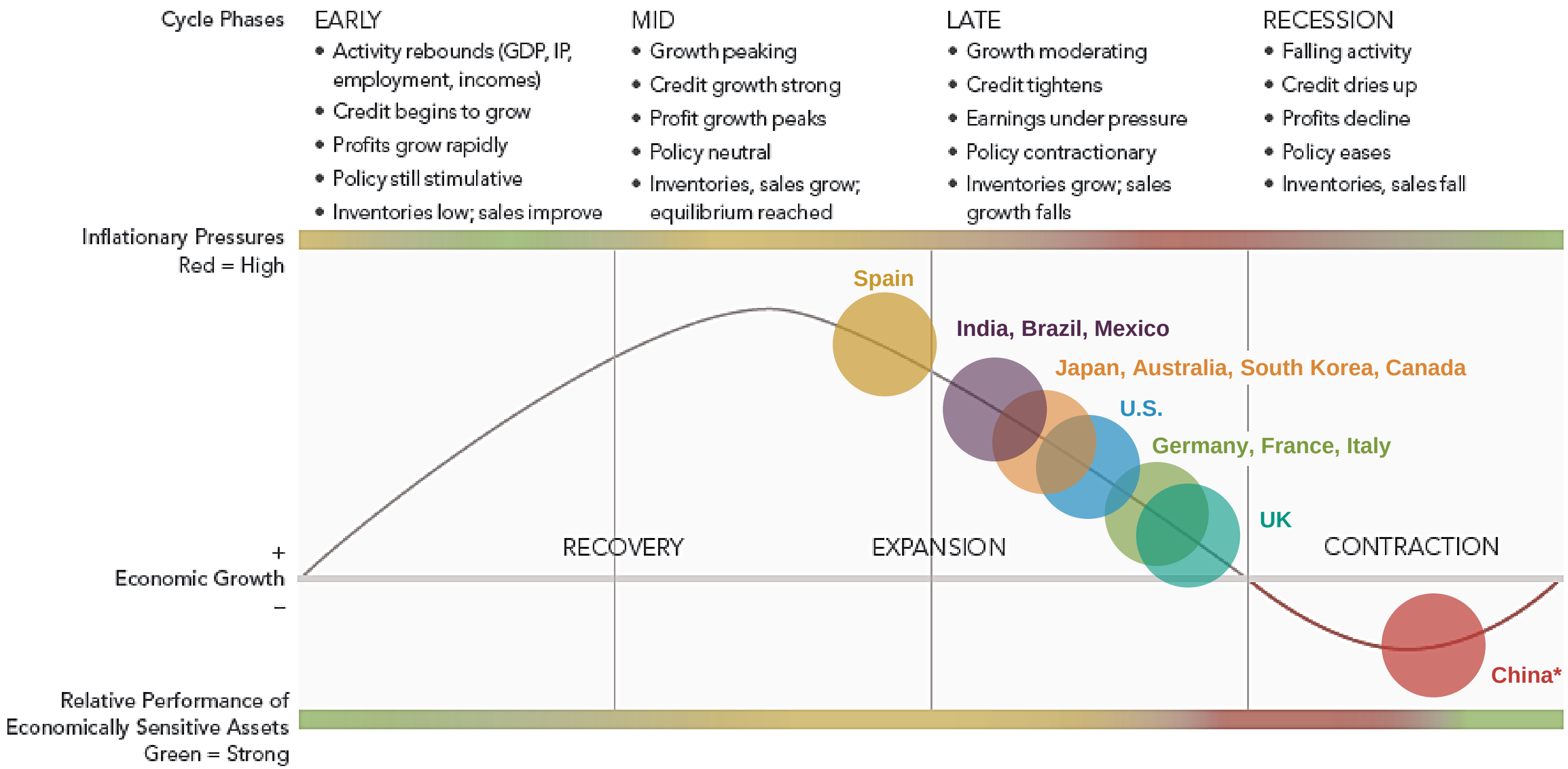



For illustrative purposes only. Source: Fidelity Investments (AART), as of 3/31/2019

# Mature U.S. and Global Business Cycles

**Global growth remains positive but has become more uneven, and many major economies have progressed toward more advanced stages of the business cycle. The U.S. is firmly in the late-cycle phase but with low near-term risk of recession. China's growth recession has weighed on industrial sectors in Europe and other export-oriented economies, but policy stimulus appears to have begun stabilizing China's growth trajectory.**

## Business Cycle Framework



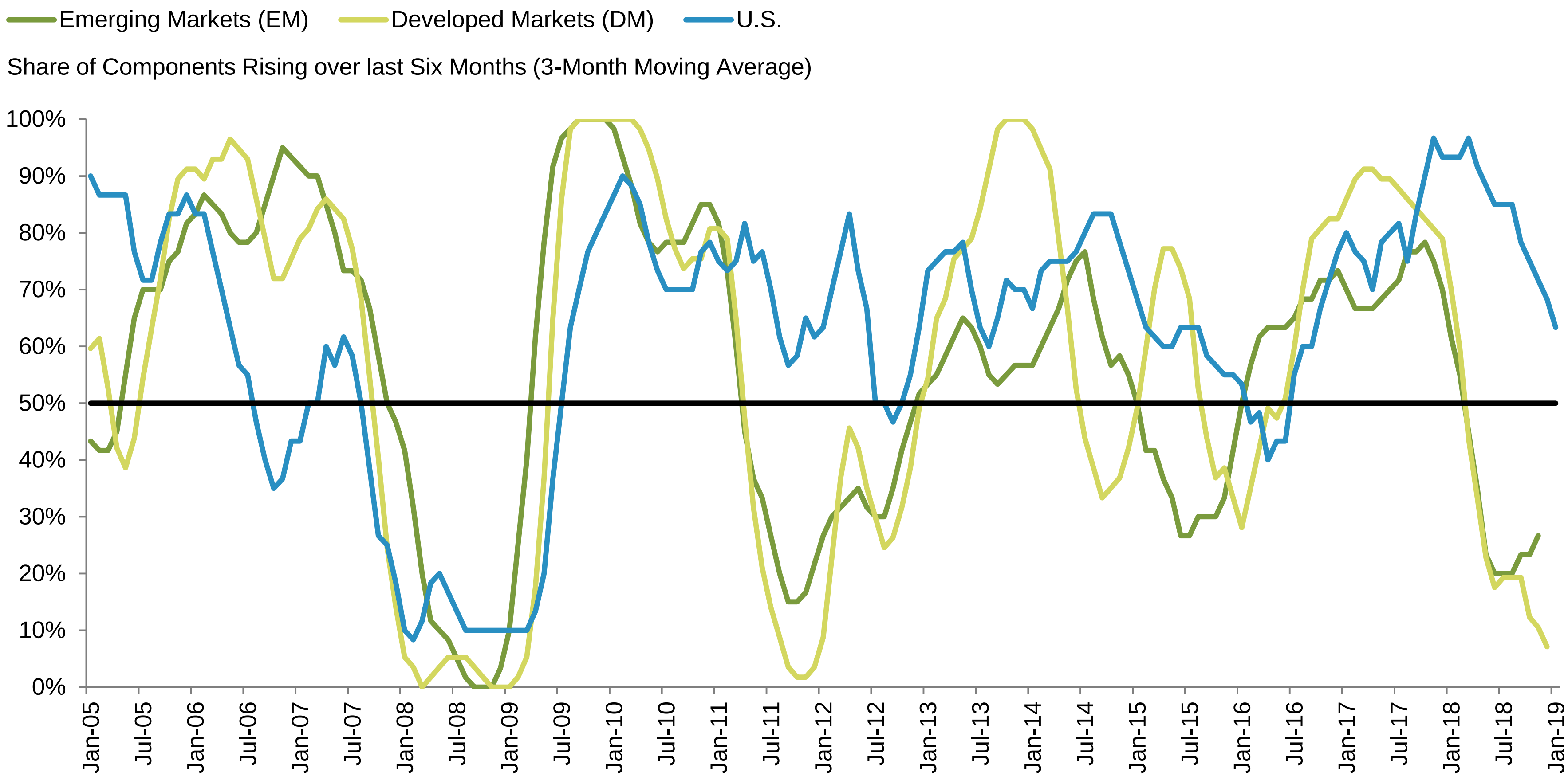

Note: The diagram above is a hypothetical illustration of the business cycle. There is not always a chronological, linear progression among the phases of the business cycle, and there have been cycles when the economy has skipped a phase or retraced an earlier one. * A growth recession is a significant decline in activity relative to a country's long-term economic potential. We use the "growth cycle" definition for most developing economies, such as China, because they tend to exhibit strong trend performance driven by rapid factor accumulation and increases in productivity, and the deviation from the trend tends to matter most for asset returns. We use the classic definition of recession, involving an outright contraction in economic activity, for developed economies. Source: Fidelity Investments (AART), as of 3/31/19.

# Global Economy Tries to Find Floor amid Slower Growth

**Leading economic indicators continue to point to global headwinds, with only a small minority of the world's economies showing improvement on a six-month basis. Moreover, U.S. indicators have deteriorated in recent months and are no longer diverging from the weak global backdrop. Certain emerging-market economies, however, seemed to exhibit early signs of stabilization.**



## Global Leading Economic Indicators

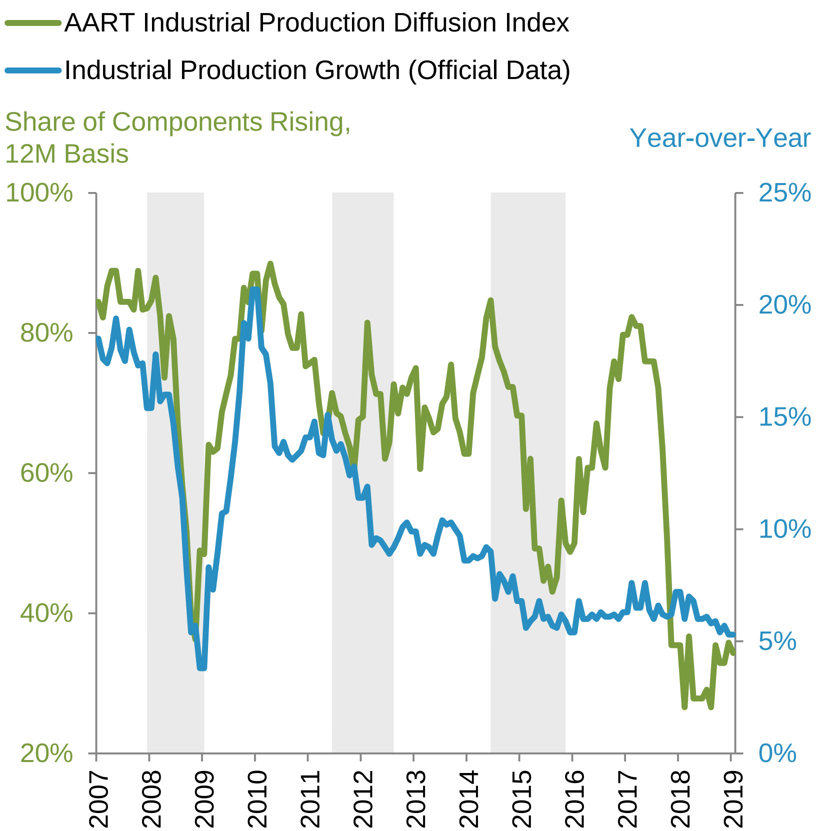



U.S. is share of Conference Board Leading Indicators. EM/DM are share of countries. Source: OECD, FIBER, Conference Board, Fidelity Investments (AART) as of 1/31/19.

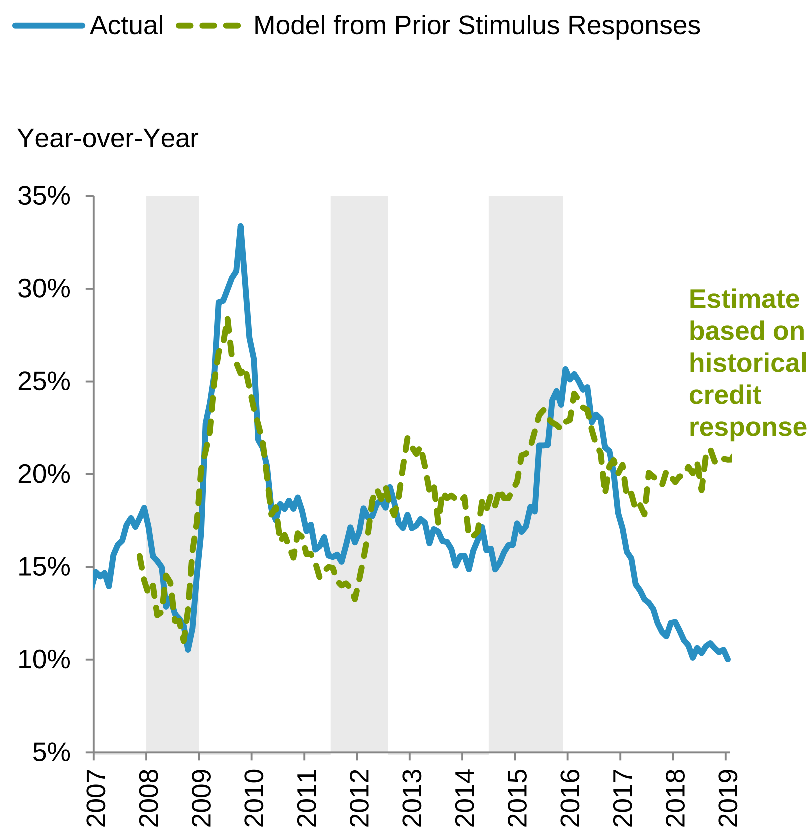
# Signs of China Stability, but Stimulus below Prior Episodes

**China's policymakers stepped up the pace of fiscal and monetary stimulus during Q1, and our proprietary Industrial Production Diffusion Index has recently shown signs of improvement. Credit growth remains subdued, however, and well below prior periods of stimulus. It remains unclear whether policy actions are sufficient to reaccelerate the economy, implying high debt levels may still be inhibiting the policy response.**

## China Industrial Activity




## China Credit Growth

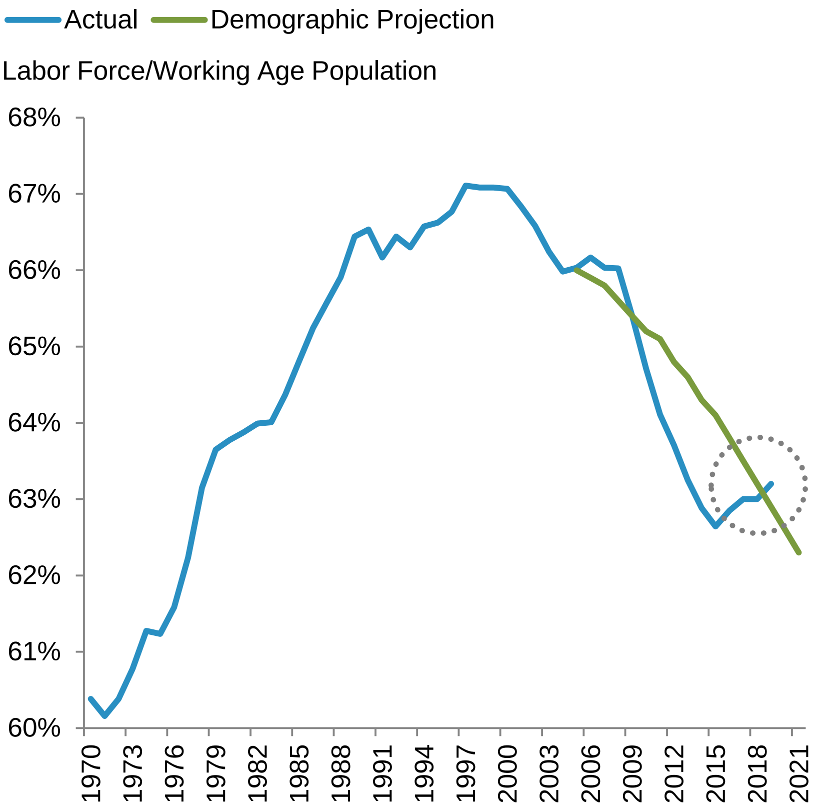



**LEFT and RIGHT:** Gray bars represent China growth recessions as defined by AART. China credit growth estimate based on current economic conditions. Source: China National Bureau of Statistics (official data), Haver Analytics, Fidelity Investments (AART), as of 2/28/19.

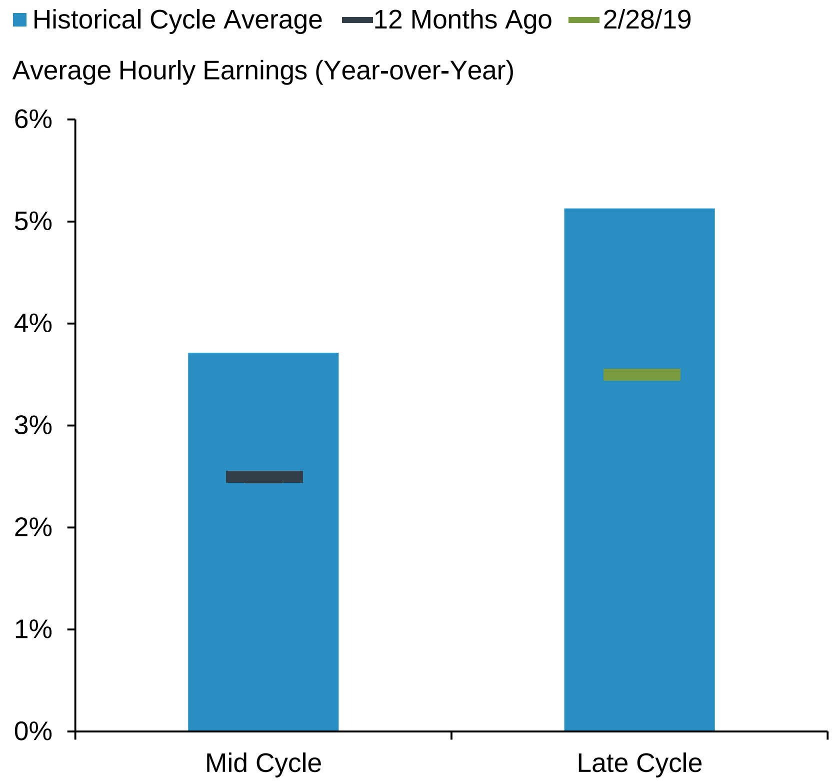
# Tight Labor Markets Support Wages, U.S. Consumer

**People continue to re-enter the workforce amid cyclically low unemployment rates. The increase in the labor force participation rate has now put it at a level above our estimate of the long-term trend, which is lower than historical levels due to an aging population. These tight labor market conditions have spurred accelerating wage growth, which is typical during late cycle and provides support to U.S. consumer spending.**

## Labor Force Participation Rate




## Wage Growth (1966–2019)

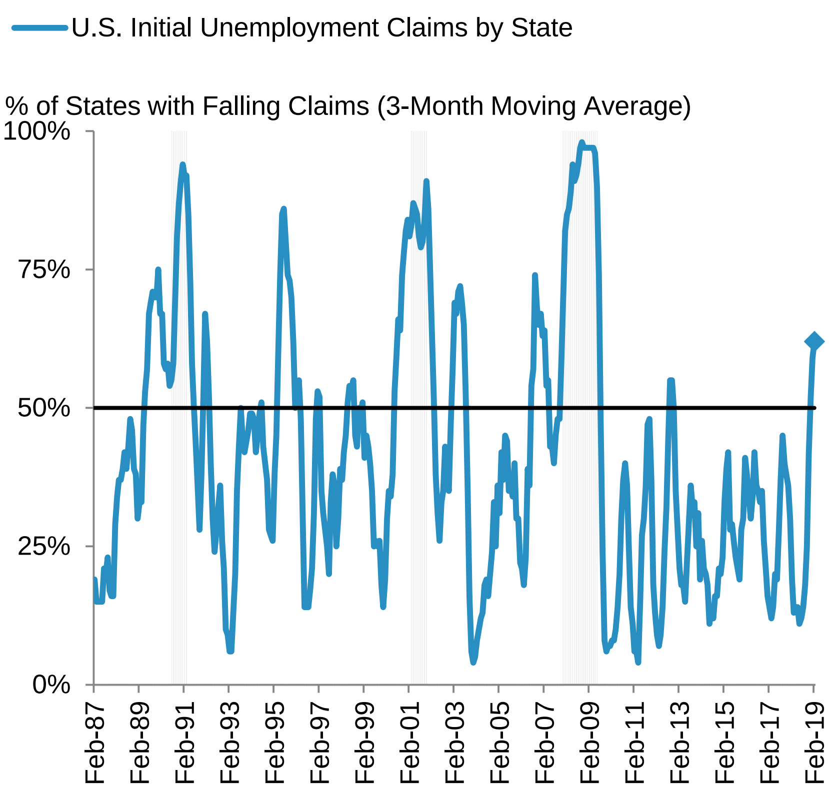



**LEFT:** Source: Demographic projection: Fidelity calculation. Labor Force: Census Bureau, Bureau of Labor Statistics, Haver Analytics, Fidelity Investments (AART), as of 2/28/19. **RIGHT:** Average Hourly Earnings for Production and Nonsupervisory Employees. Source: Bureau of Labor Statistics, Haver Analytics, Fidelity Investments (AART), as of 2/28/19.

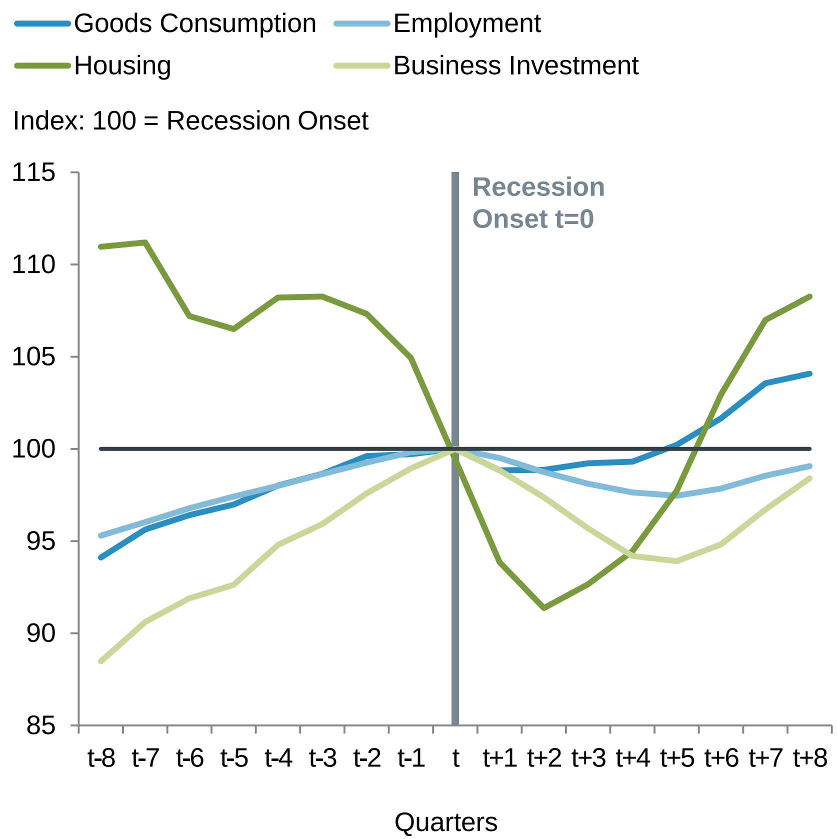
# Peaks in Employment and Housing Typical of Late Cycle

**Initial unemployment claims, a good leading indicator of labor market trends, are very low but have stopped improving over the last year. A rising number of U.S. states are reporting higher initial claims, which may be an early sign of peaking employment growth. Historically, consumer spending and business capex have not fallen until the onset of recession, whereas recent weakness in housing activity is consistent with late-cycle trends.**

## Labor Market Breadth




## Activity around Recessions (1948–2011)

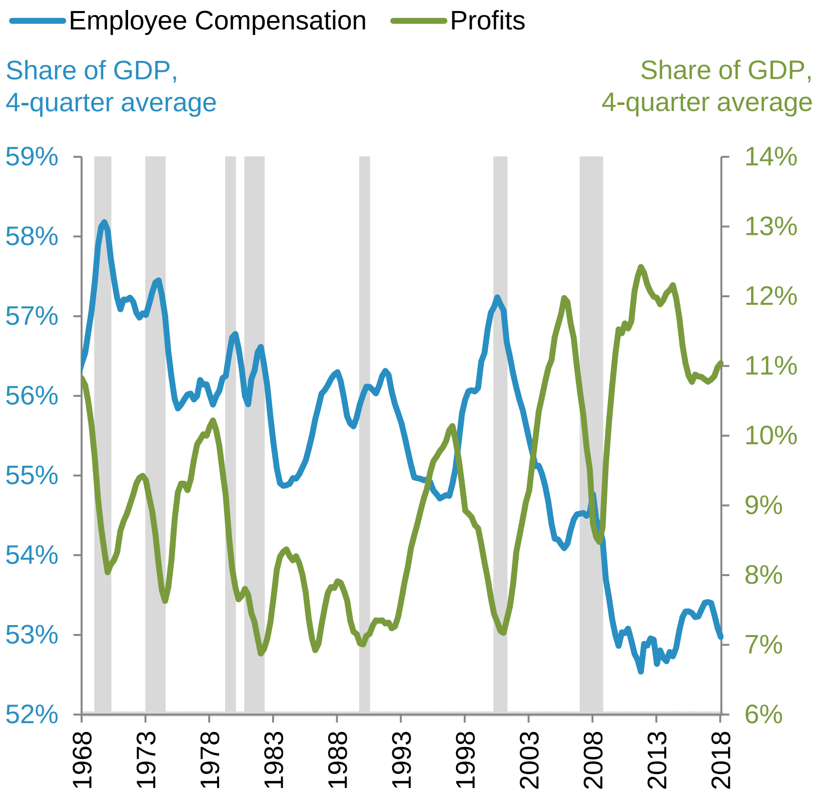



**LEFT:** Shading represents U.S. economic recession as defined by the National Bureau of Economic Research (NBER). Department of Labor, NBER, Haver Analytics, Fidelity Investments (AART), as of 2/28/19. **RIGHT:** Source: Bureau of Economic Analysis, Bureau of Labor Statistics, Haver Analytics, Fidelity Investments (AART), as of 3/31/19.

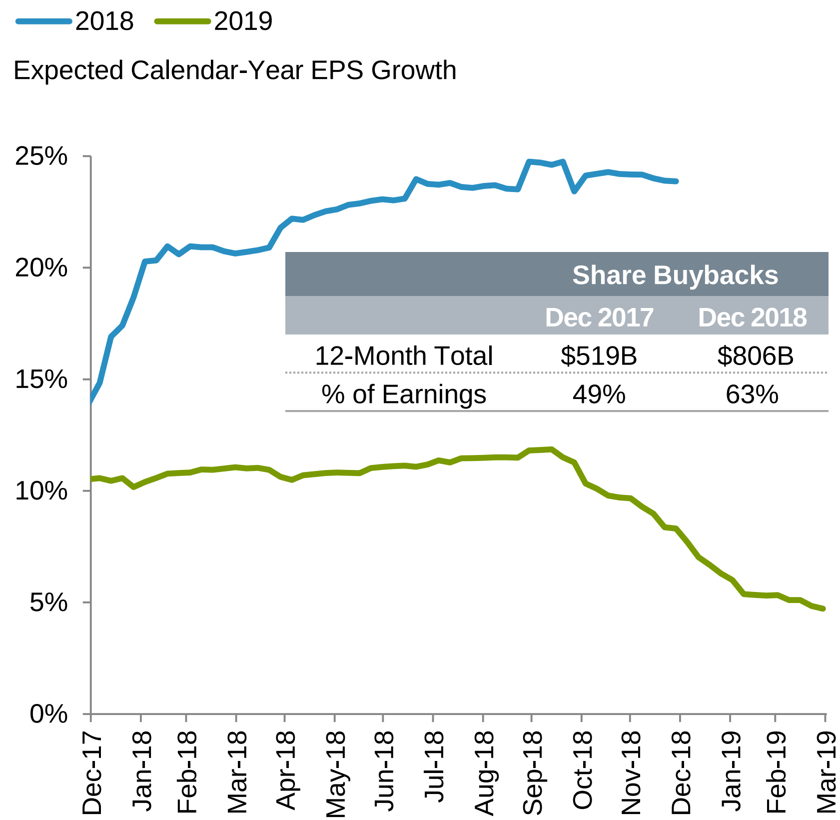
# Margin Pressures Rising, Profit Outlook Weaker

**Over the past several years, the multi-decade trend favoring business profits over wages appeared to be topping out as higher wages and other factors caused profit margins to contract. Last year's corporate tax cuts helped boost margins, and along with record share buybacks, led to earnings growth above 20%. Investors expect these supportive factors to fade in 2019, with earnings growth much lower but still positive.**

## Wages and Profit Margins




## S&P 500 Earnings Estimates



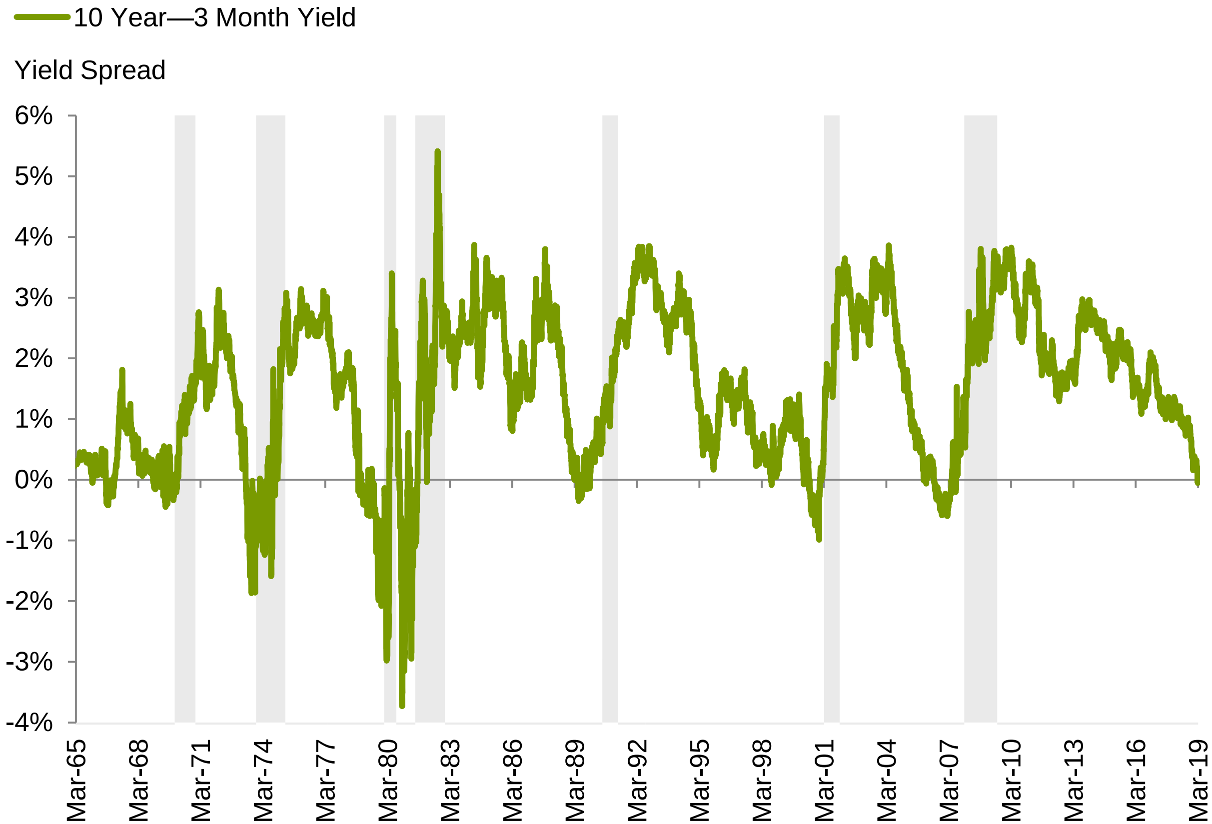

| Share Buybacks | | |
|---|---|---|
| | Dec 2017 | Dec 2018 |
| 12-Month Total | $519B | $806B |
| % of Earnings | 49% | 63% |

**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 12/31/18. **RIGHT:** EPS: Earnings Per Share. Source: Standard & Poor's, Bloomberg Financial L.P., Fidelity Investments (AART), as of 3/31/19.

# Yield Curve Inversion Typical during Late Cycle

**During Q1, 10-year Treasury bond yields fell below 3-month Treasuries, inverting the yield curve. Curve inversions have preceded the past seven recessions, and they may be interpreted as a market signal of weaker expectations relative to current conditions. However, the time between inversion and recession has varied significantly, and there have been two "head fakes" in which the curve re-steepened and expansion continued.**

## U.S. Treasury Yield Curve




### Yield Curve Inversions

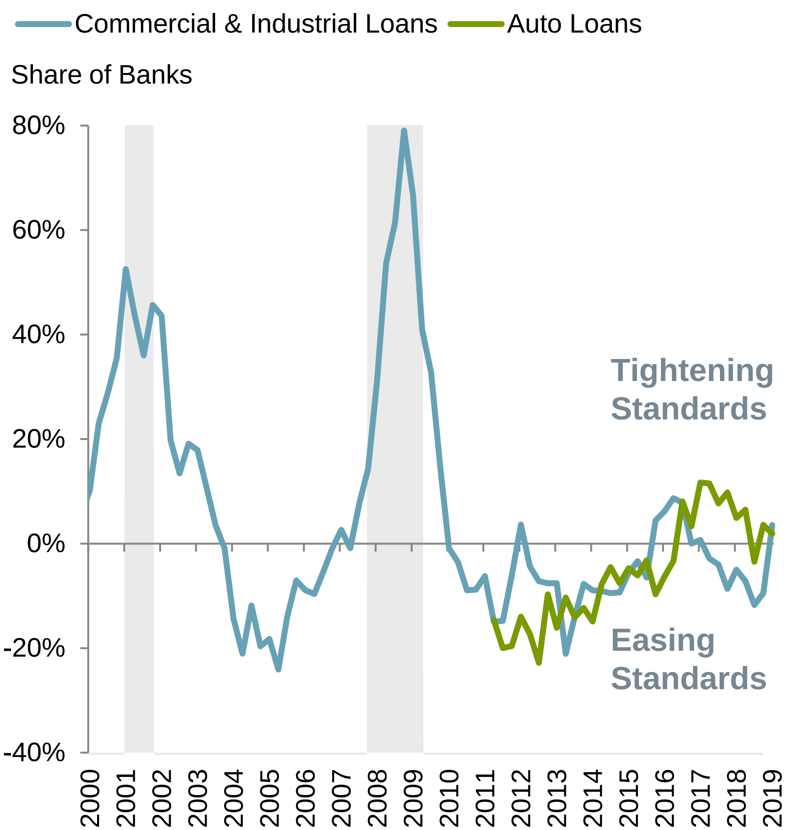
- Occurred before the last 7 recessions
- Occurred twice without a recession (1966,1998)
- Peak inversion ranged from 35 to 373 basis points
- Recessions started 4 to 21 months after, averaging ~1 year

Bps: basis points. Shading represents U.S. economic recession as defined by the National Bureau of Economic Research (NBER). Source: Bloomberg Financial L.P., NBER, Fidelity Investments (AART), as of 3/31/19.

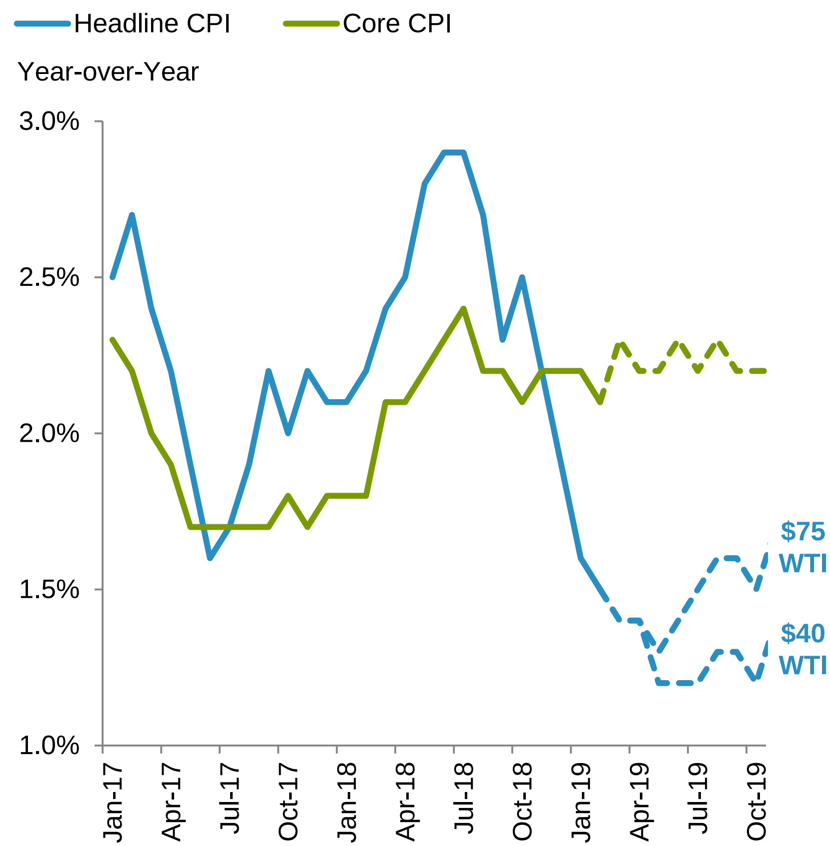
# Credit Conditions and Inflation Will Affect Fed Psychology

**A flatter yield curve has challenged banks' profitability by shrinking the gap between lending rates and funding costs, leading to tighter credit standards in some loan categories. Our current outlook is for core inflation to remain firm over the next several months, with the base effect of weaker oil prices likely to pull overall inflation downward. The Fed is more likely to be patient if inflation remains low and credit conditions mixed.**

## Federal Reserve Senior Loan Officer Survey




## U.S. Inflation under Various Oil Scenarios

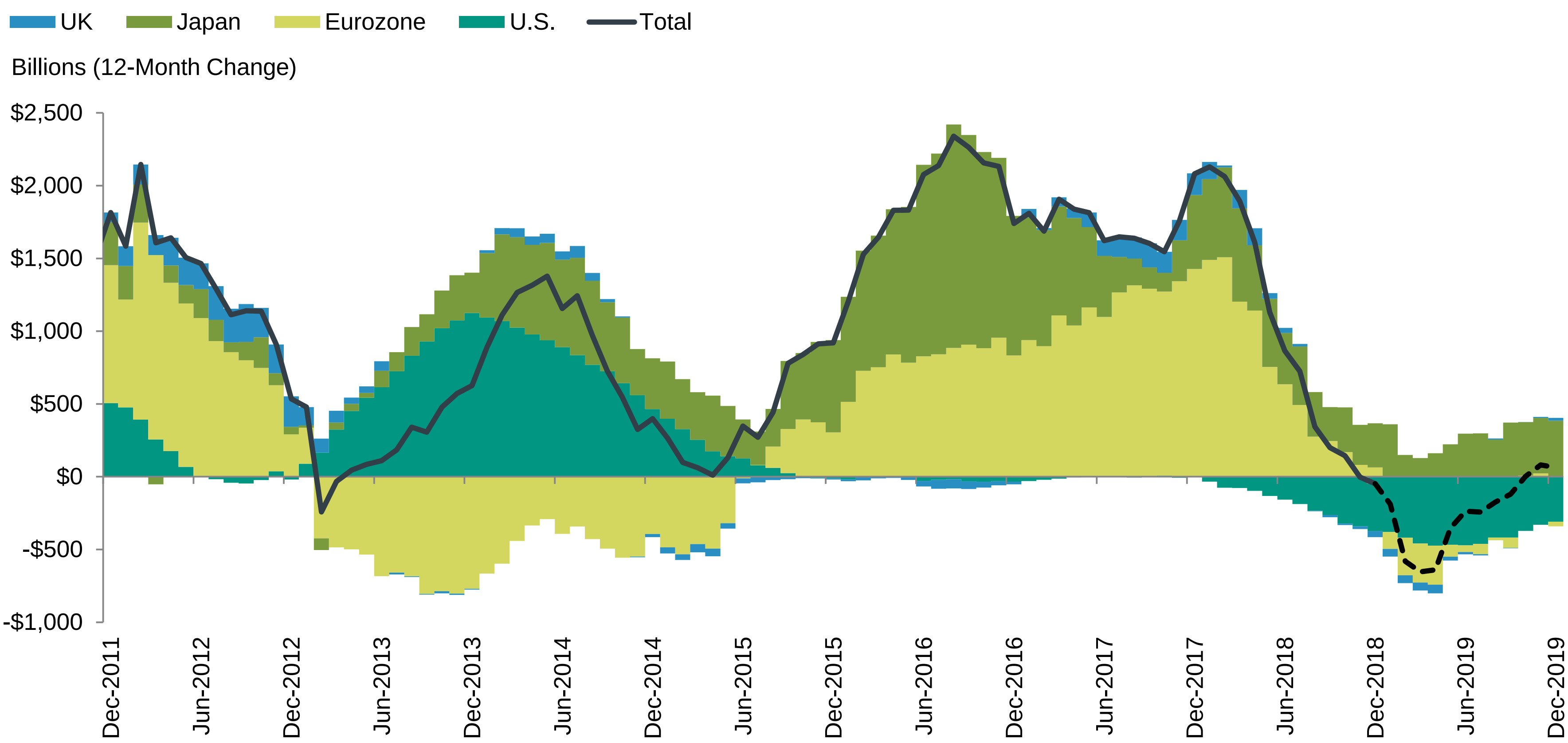



WTI: West Texas Intermediate crude oil. Headline CPI: Consumer Price Index. Core CPI excludes Food and Energy. **LEFT:** Shading represents U.S. economic recession as defined by the National Bureau of Economic Research (NBER). Source: Federal Reserve, NBER, Haver Analytics, Fidelity Investments (AART), as of 3/31/19. **RIGHT:** Scenarios assume AART core CPI and food cost growth rate forecasts under various average prices of oil. Bureau of Labor Statistics, Bloomberg Finance L.P., Fidelity Investments (AART), as of 2/28/19.

# Global Liquidity Growth Still Weak, Despite Early End to QT

**The Fed announced plans to end its quantitative tightening by terminating balance-sheet reductions before year end; meanwhile, the European Central Bank signaled possible balance-sheet expansion. Nevertheless, growth in major central-bank balance sheets likely will stay negative for most of 2019. This liquidity backdrop is much less favorable versus 2016–17, when central banks injected roughly $2 trillion into financial markets.**

## Central Bank Balance Sheets



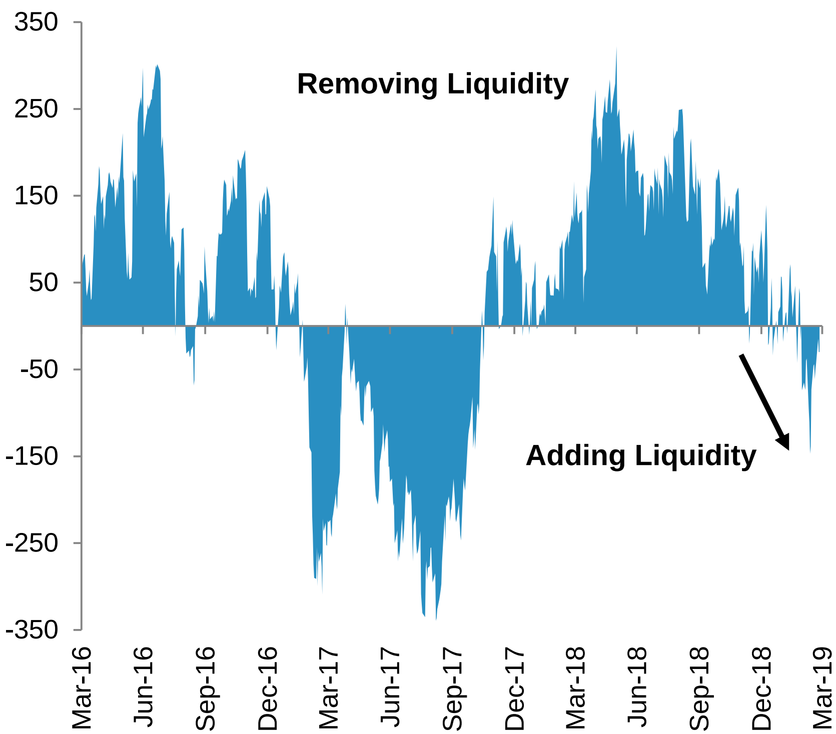

QT: Quantitative tightening. Dotted line estimates future central bank assets: Federal Reserve to taper balance sheet normalization starting in May and end asset purchases in September. European Central Bank (ECB) and Bank of England to maintain constant balance sheets in 2019; Bank of Japan to purchase at annualized rate of average purchases over last 12 months; Source: Haver Analytics, Fidelity Investments (AART), as of 2/28/19.

# Treasury Account May Help Near-Term Liquidity Conditions

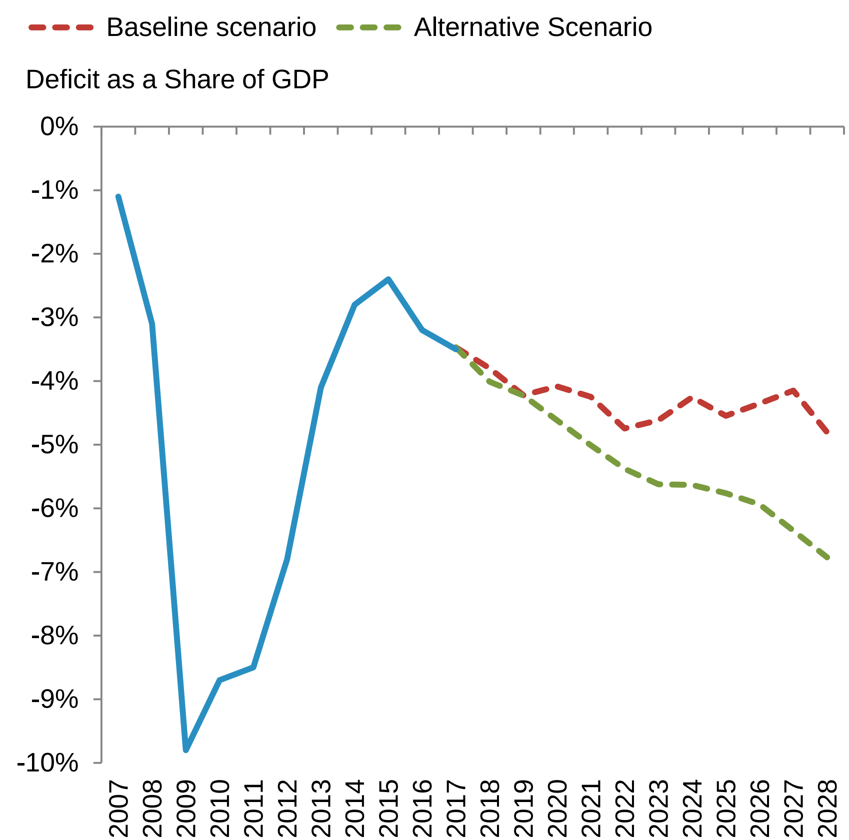
**Swings in the U.S. Treasury Department's cash account at the Fed can affect near-term liquidity. For instance, the Treasury drew down its holdings during 2017 when the debt-ceiling limit was triggered (adding liquidity to the financial system), but then rebuilt its holdings in 2018 after the limit was suspended (withdrawing liquidity). With the debt limit reached this past March, the account drawdown may continue to add liquidity until next autumn.**



## U.S. Treasury Cash Balance at Fed




## U.S. Fiscal Deficit

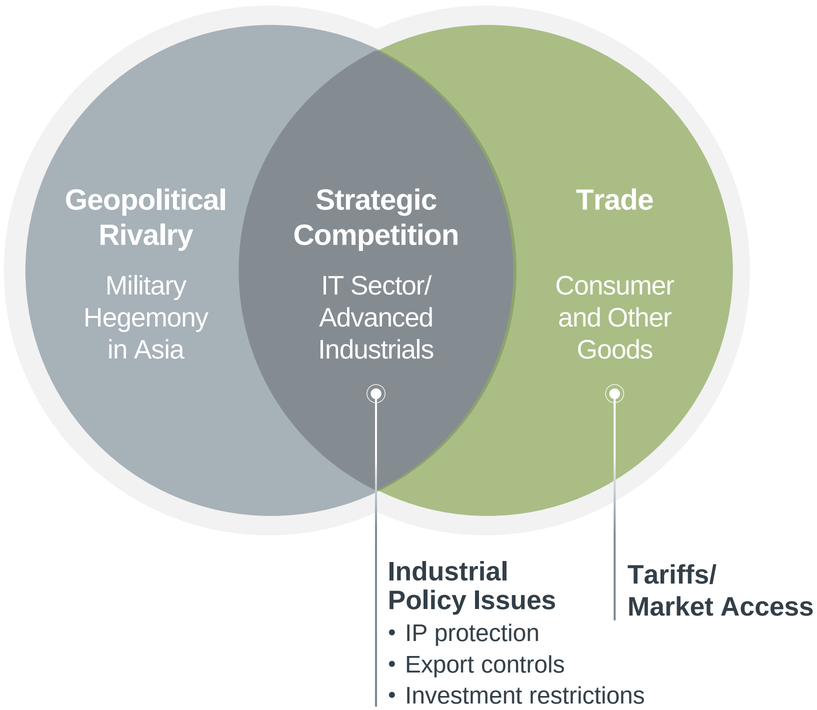



**LEFT:** Source: U.S. Treasury, Fidelity Investments (AART), as of 3/31/19. **RIGHT:** Alternative scenario, projected by the CBO, includes the effects of allowing discretionary funding to grow with inflation beginning in 2020, extending several expiring tax provisions, and repealing certain postponed health taxes. Source: Congressional Budget Office, Haver Analytics, Fidelity Investments (AART), as of 1/28/19.

# U.S.-China: Strategic Competition Intertwined with Trade

**Investors remained hopeful for a U.S.-China trade deal that could deliver near-term relief from tariff escalation. However, a budding geopolitical rivalry may make a variety of other bilateral commercial issues less tractable, particularly strategic competition in the technology sector. This rivalry represents a critical ongoing risk to the highly integrated global economy of which the U.S. and China represent the most central players.**

## U.S.-China Relationship




## Global Trade Interdependence


**RIGHT:** 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 represent importance and interconnectedness. Gray circles represent other countries.
Source: International Monetary Fund, 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 global economic momentum has peaked, but recent changes in the policy stance in the U.S. and China are supportive of asset markets and of the business cycle overall.**

### Business Cycle

U.S. firmly in late-cycle phase

China's economy has slowed, but signs of stabilization have emerged

### Risks

Monetary and trade policy uncertainty

China's uncertain outlook and policy response

### Asset allocation implications

Current environment warrants smaller asset allocation tilts and a diversified strategy

Policymakers' shift to more accommodative stance may support asset markets

Inflation-linked asset valuations appear attractive relative to other asset classes

For illustrative purposes only. Source: Fidelity Investments (AART) as of 3/31/19.

# Asset Markets

# Tech and Growth Stocks Led Broad Risk-Asset Rally

**The U.S. mid cap and growth equity segments stood out as top performers for the quarter; overall, U.S. stocks outperformed international stocks. Fixed income assets posted positive returns across the board, with higher-risk areas such as high-yield corporate credit and emerging-market debt leading the way. Broad commodities also participated in the risk-on rally, with energy prices in particular moving higher during Q1.**

## U.S. Equity Styles Total Return

| | Q1 | 1 Year |
|---|---|---|
| Mid Caps | 16.5% | 6.5% |
| Growth | 16.2% | 12.1% |
| Small Caps | 14.6% | 2.0% |
| Large Caps | 13.6% | 9.5% |
| Value | 11.9% | 5.3% |

## U.S. Equity Sectors Total Return

| | Q1 | 1 Year |
|---|---|---|
| Info Tech | 19.9% | 15.4% |
| Real Estate | 17.5% | 21.0% |
| Industrials | 17.2% | 3.2% |
| Energy | 16.4% | 1.3% |
| Consumer Discretionary | 15.7% | 13.2% |
| Communication Services | 14.0% | 7.7% |
| Consumer Staples | 12.0% | 10.5% |
| Utilities | 10.8% | 19.3% |
| Materials | 10.3% | -0.4% |
| Financials | 8.6% | -4.7% |
| Health Care | 6.6% | 14.9% |

## International Equities and Global Assets Total Return

| | Q1 | 1 Year |
|---|---|---|
| ACWI ex-USA | 10.3% | -4.2% |
| Canada | 15.4% | 3.1% |
| Europe | 10.8% | -3.7% |
| EAFE Small Cap | 10.7% | -9.4% |
| EAFE | 10.0% | -3.7% |
| Japan | 6.7% | -7.8% |
| EM Asia | 11.1% | -6.8% |
| Emerging Markets | 9.9% | -7.4% |
| Latin America | 7.9% | -6.7% |
| EMEA | 5.5% | -10.6% |
| Commodities | 6.3% | -5.3% |
| Gold | 0.8% | -2.5% |

## U.S. Equity Factors Total Return

| | Q1 | 1 Year |
|---|---|---|
| Quality | 16.7% | 11.8% |
| Size | 14.4% | 7.2% |
| Momentum | 12.9% | 8.0% |
| Min Volatility | 12.7% | 15.7% |
| Value | 11.1% | 0.1% |
| Yield | 10.6% | 10.4% |

## Fixed Income Total Return

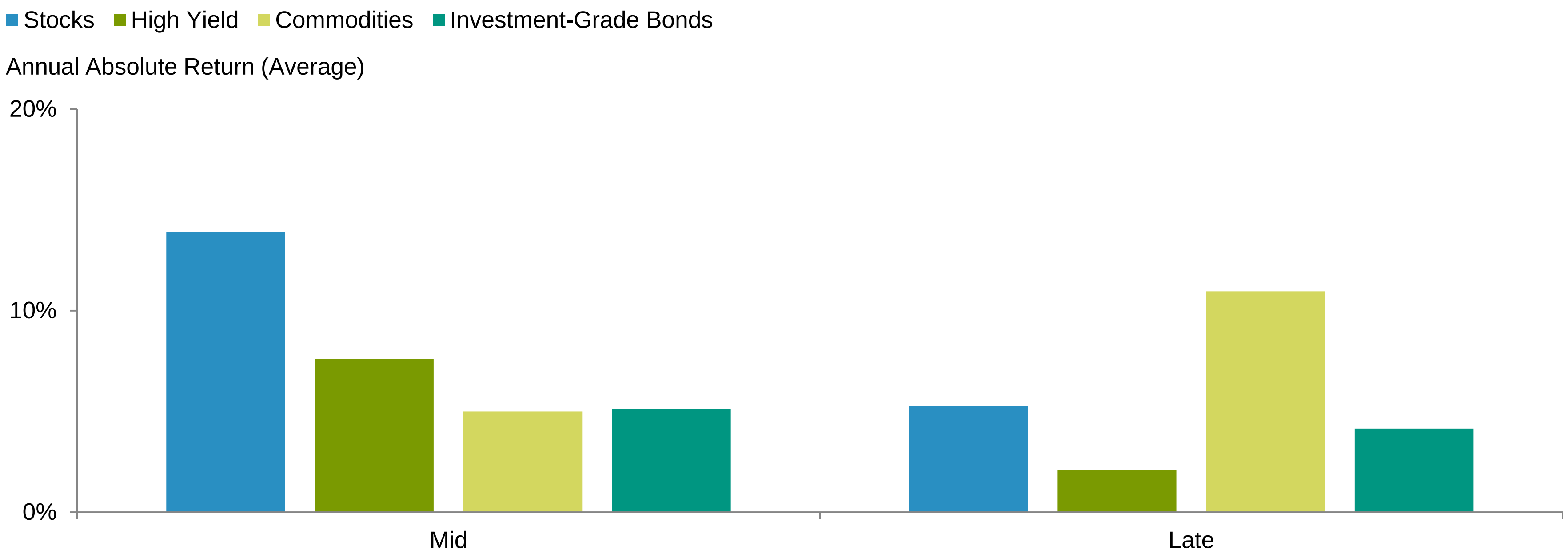
| | Q1 | 1 Year |
|---|---|---|
| High Yield | 7.4% | 5.9% |
| EM Debt | 6.6% | 3.5% |
| Long Govt & Credit | 6.5% | 5.2% |
| Credit | 4.9% | 4.9% |
| Leveraged Loan | 4.0% | 3.0% |
| CMBS | 3.2% | 5.4% |
| TIPS | 3.2% | 2.7% |
| Aggregate | 2.9% | 4.5% |
| Municipal | 2.9% | 5.4% |
| MBS | 2.2% | 4.4% |
| Treasuries | 2.1% | 4.2% |
| Agency | 1.8% | 3.7% |
| ABS | 1.5% | 3.7% |

EM: Emerging Markets. EMEA: Europe, the Middle East and Africa. For indexes and other important information used to represent above asset categories, see Appendix. Past performance is no guarantee of future results. It is not possible to invest directly in an index. All indexes are unmanaged. Sector returns represented by S&P 500 sectors. Sector investing involves risk. Because of its narrow focus, sector investing may be more volatile than investing in more diversified baskets of securities. Source: FactSet, Fidelity Investments (AART), as of 3/31/19.

# Late Cycle: Less Favorable Risk-Return Profile

**Historically, the mid-cycle phase has consistently tended to favor riskier asset classes and result in broad-based gains across most asset categories. Meanwhile, late cycle has had the most mixed performance of any business-cycle phase. Late cycle often has featured more limited overall upside for a diversified portfolio, although returns for most categories have been positive, on average.**

### Asset Class Performance in Mid- and Late-Cycle Phases (1950–2016)




### Mid Cycle: Strong Asset Class Performance

- Favor economically sensitive assets
- Broad-based gains

### Late Cycle: Mixed Asset Class Performance

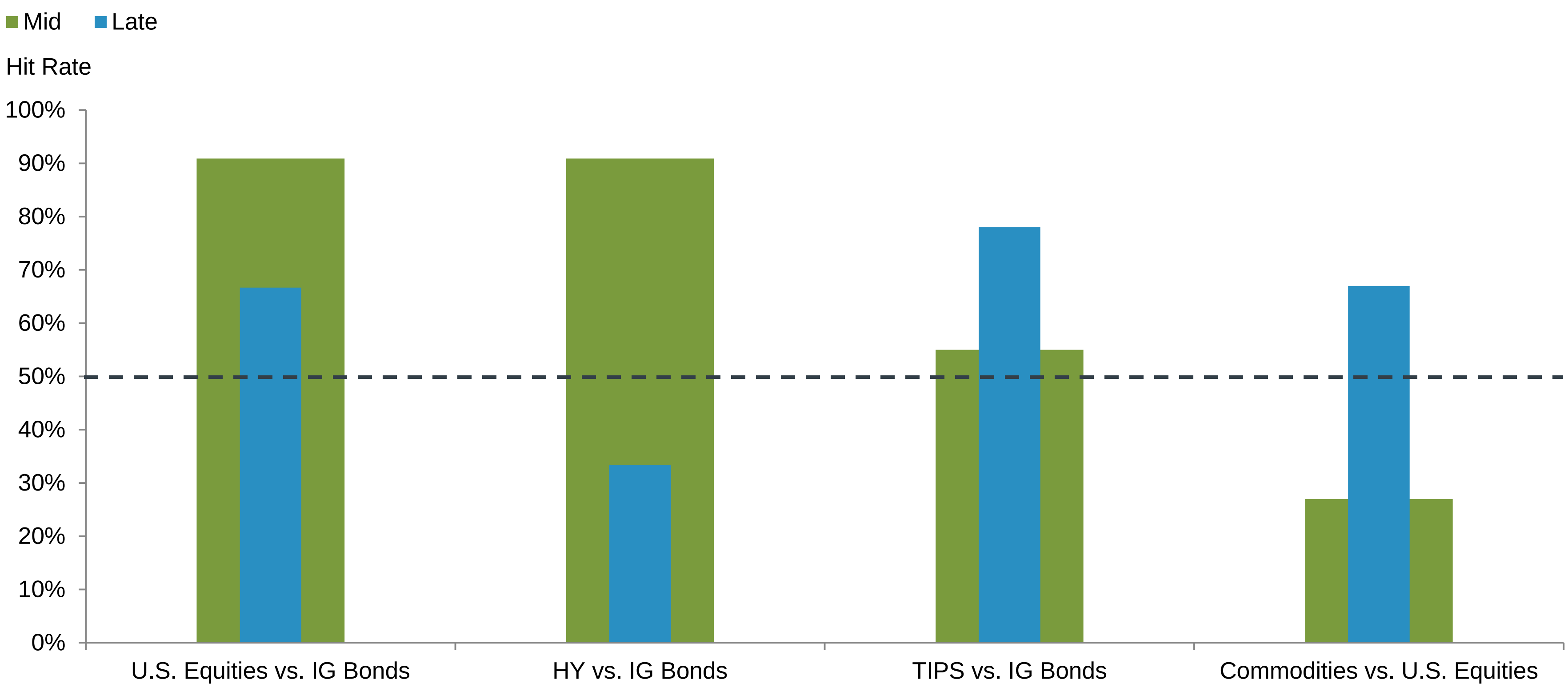
- Favor inflation-resistant assets
- Gains more muted

Diversification does not ensure a profit or guarantee against a loss. Past performance is no guarantee of future results. It is not possible to invest directly in an index. All indexes are unmanaged. 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.

# Late Cycle: Less Reliable Performance Patterns

**The historical business-cycle road map suggests that relative performance among asset classes is much less consistent during late cycle as compared with the mid cycle. This implies less confidence that riskier assets such as equities will outperform more defensive assets like investment-grade bonds. Inflation-resistant assets—such as commodities, energy stocks, short-duration bonds, and TIPS—have performed relatively well.**

## Relative Asset Performance by Cycle Phase (1950–2016)

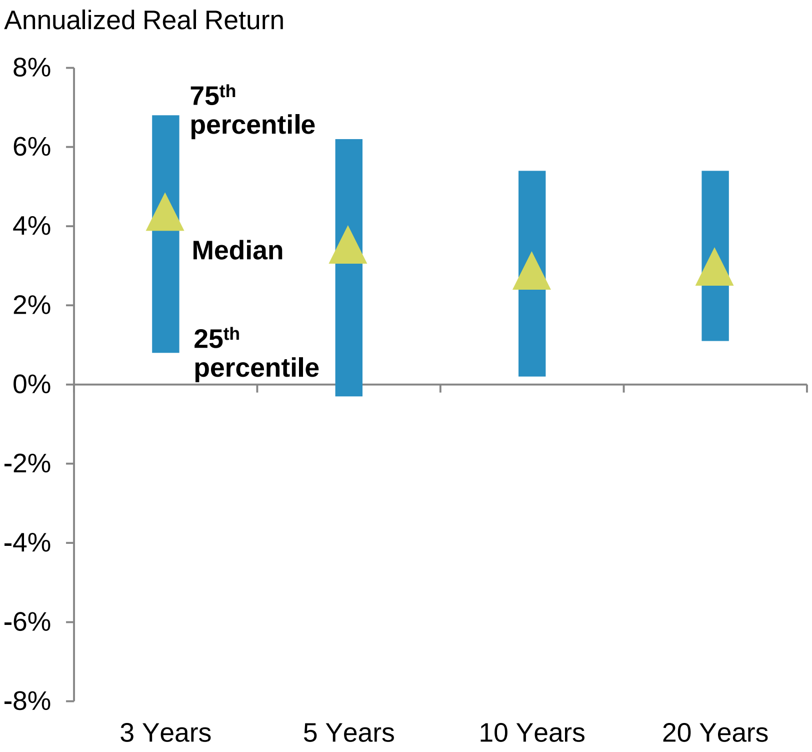



Past performance is no guarantee of future results. It is not possible to invest directly in an index. All indexes are unmanaged.
TIPS: Treasury Inflation-Protected Securities. HY: high yield. IG: investment grade. Hit Rate: frequency of an asset class outperforming another.
Results are the difference between total returns of the respective periods represented by indexes from the following sources: Fidelity Investments, Morningstar, and Bloomberg Barclays. Fidelity Investments source: proprietary analysis of historical asset class performance, which is not indicative of future performance, as of 12/31/18.

# 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 results. Late-cycle starting points tend to 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

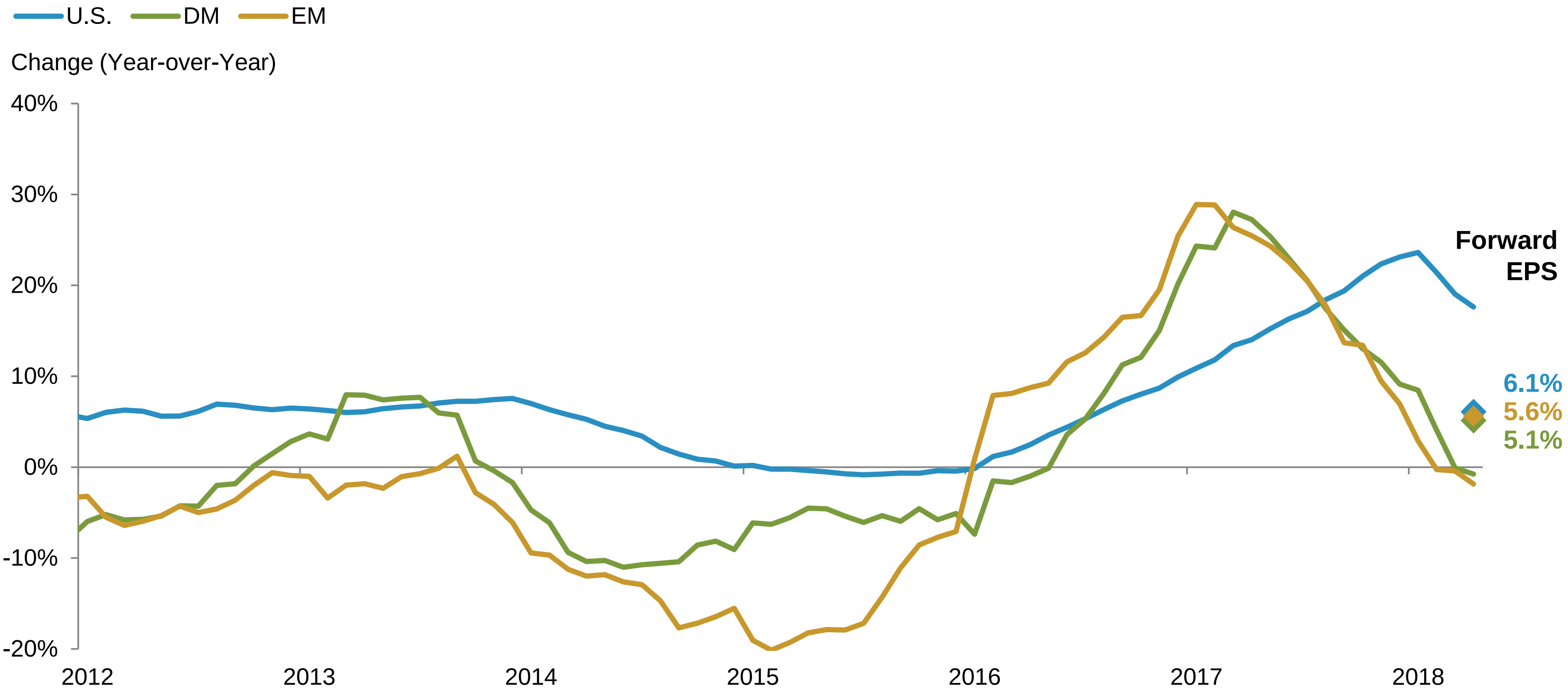

**Sample Portfolio:** 40% Domestic Equity • 20% Foreign Equity • 30% IG Bonds • 10% HY Bonds

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. Diversification does not ensure a profit or guarantee against a loss. See Appendix for important index information. This historical analysis is based on Monte Carlo analysis based on historical index returns. Portfolio based on Dow Jones U.S. Total Stock Market Index, MSCI ACWI ex USA Index, Bloomberg Barclays U.S. Aggregate Bond Index, ICE BofAML U.S. High Yield Index, as of 12/31/18.

# Expectations for Global Earnings-Growth Convergence

**U.S. earnings growth remained high but decelerated during Q1 after receiving a boost from corporate tax cuts in 2018. Non-U.S. developed- and emerging-market profit growth, however, moved into negative territory during the quarter. Forward estimates point to market expectations for a convergence of global profit growth in the mid-single-digit range over the next 12 months.**

## Global EPS Growth (Trailing 12 Months)

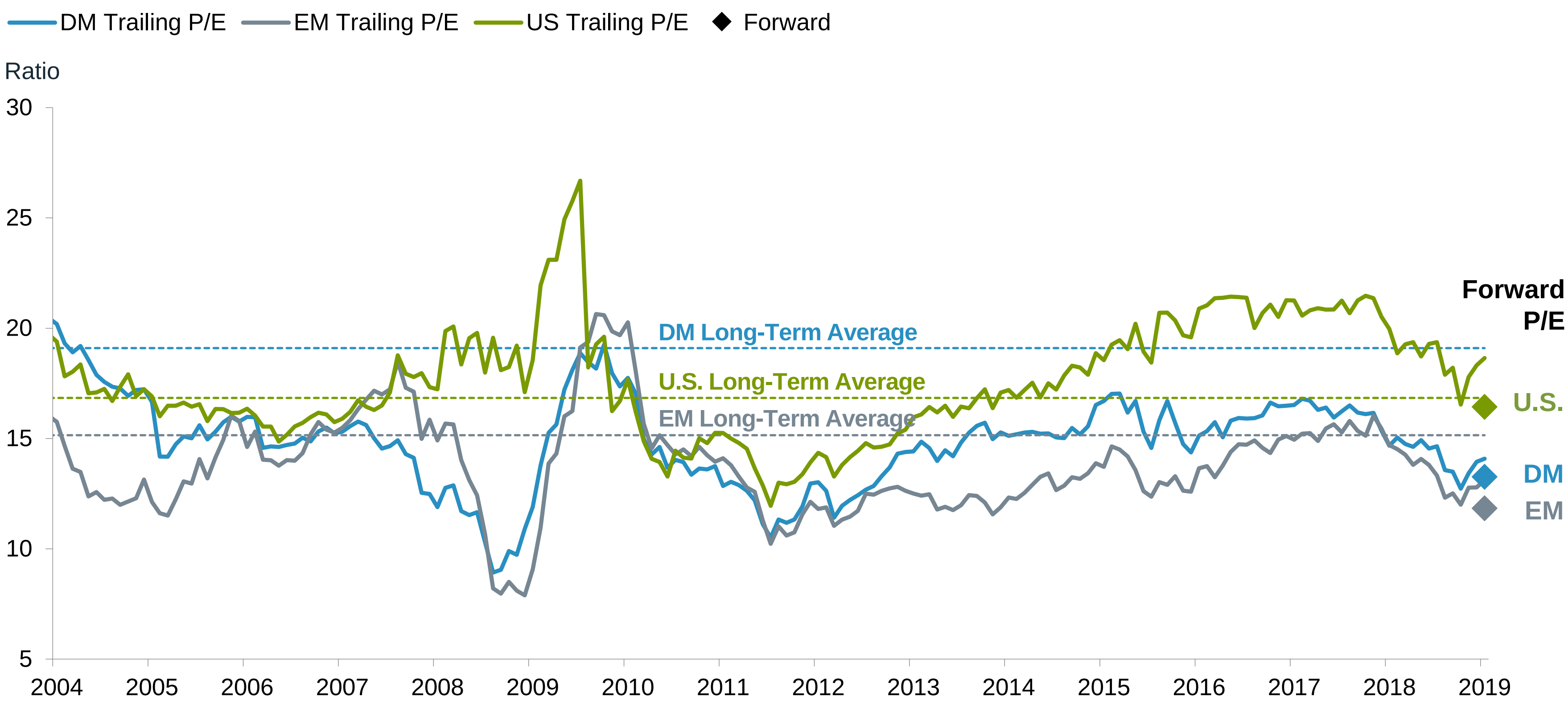



Past performance is no guarantee of future results. DM: Developed Markets. EM: Emerging Markets. EPS: Earnings per share. Forward EPS: Next 12 months expectations. Source: MSCI, FactSet, Fidelity Investments (AART), as of 3/31/19.

# Equity Valuations Mixed Relative to History

**The strong quarter for U.S. equities moved valuations higher after having briefly dipped below long-term averages. Price-to-earnings (P/E) ratios for developed and emerging markets remained below their long-term averages even after a solid quarter of performance.**

## Global Market P/E Ratios

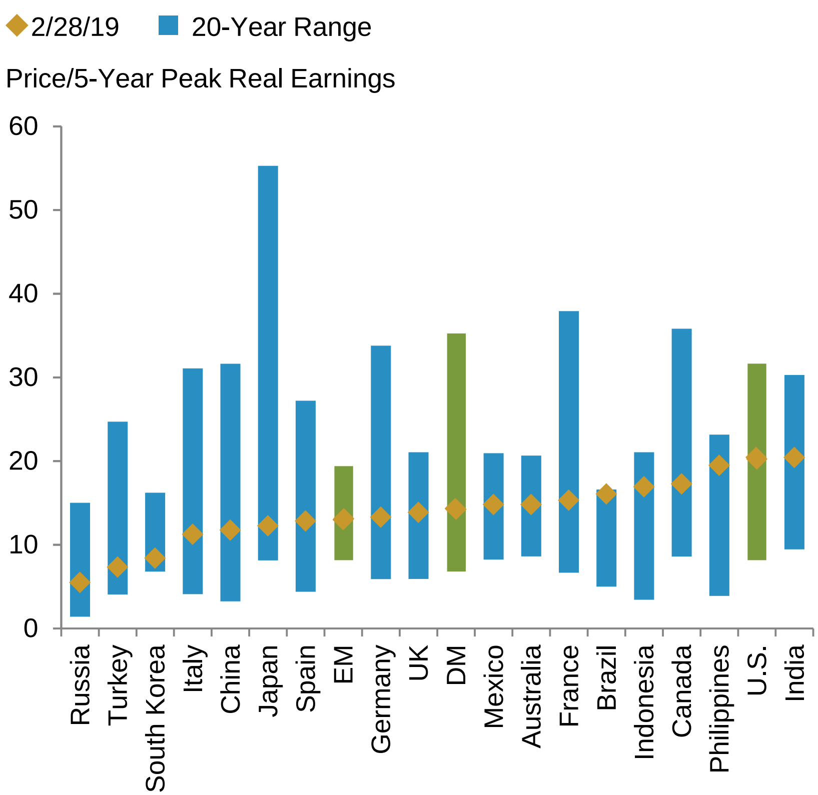



DM: Developed Markets. EM: Emerging Markets. Past performance is no guarantee of future results. It is not possible to invest directly in an index. All indexes are unmanaged. See Appendix for important index information. Price-to-earnings ratio (P/E): stock price divided by earnings per share. Also known as the multiple, P/E gives investors an idea of how much they are paying for a company's earnings power. Long-term average P/E for Emerging Markets includes data for 1988–2017. Long-term average P/E for Developed Markets includes data for 1973–2016, U.S. 1926–2017. Foreign Developed – MSCI EAFE Index, Emerging Markets – MSCI EM Index. Source: FactSet, Fidelity Investments (AART) as of 3/31/19.

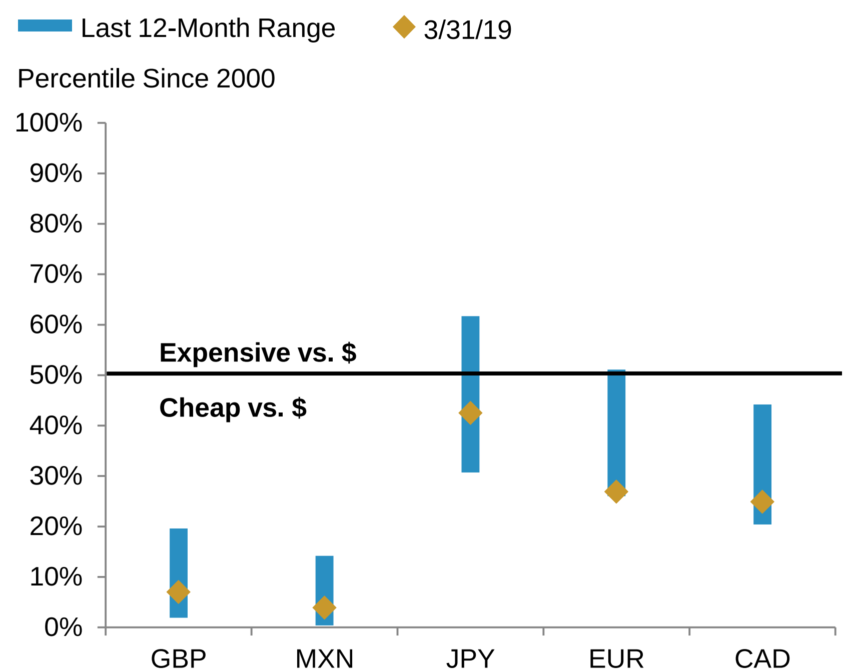
# Non-U.S. Equity Valuations Still Attractive; Dollar Mixed

**Using 5-year peak-inflation-adjusted earnings, P/E ratios for international developed- and emerging-market equities remain lower than those for the United States, providing a relatively favorable long-term valuation backdrop for non-U.S. stocks. After appreciating during 2018, the U.S. dollar was mostly unchanged over Q1, displaying mixed valuations versus many of the world's major currencies at quarter end.**

## Cyclical P/Es




## Valuation of Major Currencies vs. USD




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 2/28/19. **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 3/31/19.

# GICS Change Impacts Business-Cycle Sector Playbook

**A disciplined business-cycle approach to sector allocation can generate active returns by favoring industries that may benefit from cyclical trends. A new GICS structure, implemented in Q4, made changes to three sectors, most notably converting the former Telecommunication Services into a more cyclical sector renamed "Communication Services." We updated the business-cycle heat map to reflect this new GICS structure.**

## Business-Cycle Approach to Sectors

| Sector | Early | Mid | Late | Recession |
|---|---|---|---|---|
| Financials | + | | | |
| Real Estate | ++ | | | -- |
| Consumer Discretionary | ++ | - | -- | |
| Info. Tech | + | + | -- | -- |
| Industrials | ++ | | | -- |
| Materials | + | -- | ++ | |
| Consumer Staples | | | ++ | ++ |
| Health Care | -- | | ++ | ++ |
| Energy | -- | | ++ | |
| Communication Services | | + | | - |
| Utilities | -- | - | + | ++ |

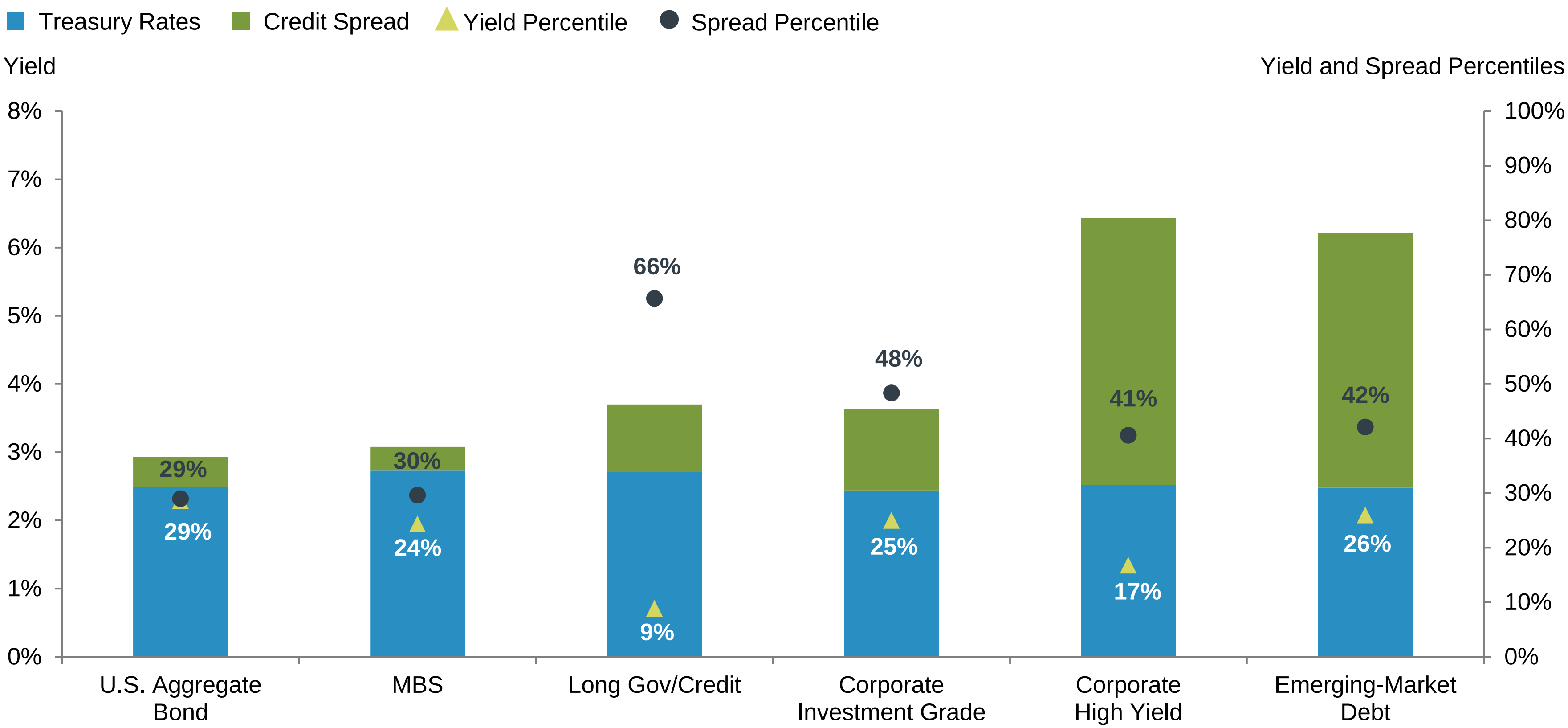
| Updates to Heat Map | |
|---|---|
| **Communication Services** | More cyclical than old Telecom sector (gained entertainment software and internet media) |
| **Information Technology** | Remains cyclical (lost some internet companies and entertainment software) |
| **Consumer Discretionary** | Less favorable in mid cycle (lost internet media) |

Past performance is no guarantee of future results. Sectors as defined by GICS. Unshaded (white) portions above suggest no clear pattern of over- or underperformance vs. broader market. Double +/– signs indicate that the sector is showing a consistent signal across all three metrics: full-phase average performance, median monthly difference, and cycle hit rate. A single +/– indicates a mixed or less consistent signal. Returns data from 1962 to 2016. Source: Fidelity Investments (AART), as of 3/31/19.

# Yields Fell Due to Lower Rates and Tighter Credit Spreads

**Weak growth, modest inflation, and the Federal Reserve's dovish shift fueled a decline in bond yields. Lower interest rates, coupled with tighter credit spreads, pushed yields on most bond categories near the bottom quartile of their long-term histories. Credit spreads fell more abruptly in lower-quality categories such as high-yield and emerging-market debt, moving their spreads back below historical averages.**

## Fixed Income Yields and Spreads (1993–2019)

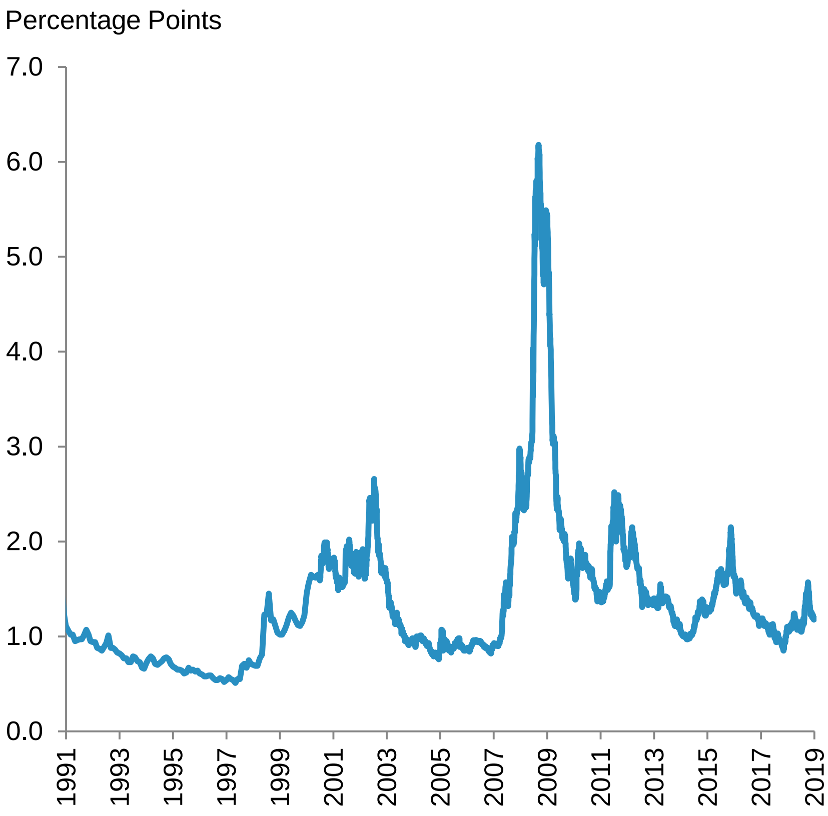



Past performance is no guarantee of future results. It is not possible to invest directly in an index. All indexes are unmanaged. See Appendix for important index information. Percentile ranks of yields and spreads based on historical period from 1993 to 2018. MBS: mortgage-backed security. Source: Bloomberg Barclays, Bank of America Merrill Lynch, JP Morgan, Fidelity Investments (AART), as of 3/31/19.

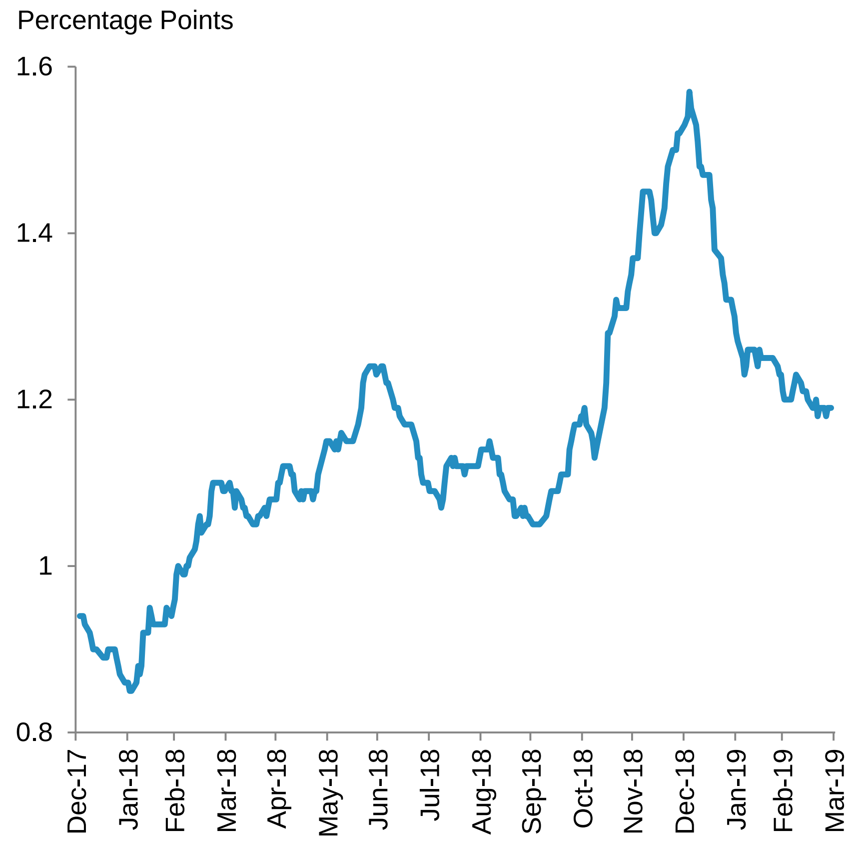
# Corporate Spreads Tightened during the Quarter

**Credit spreads tightened in the first quarter, after widening sharply from 2018's lows. Most of the rally came in January 2019 after the Fed signaled a more patient approach to further tightening. Overall, spreads ended the quarter near long-term averages. Fundamentals remain generally positive but reflect typical late-cycle trends, with leverage elevated and profits peaking. Thus, at current spread levels, the margin for error is low.**

## U.S. IG Corporate Bond Spreads (1990–2019)




## U.S. IG Corporate Bond Spreads




IG: Investment Grade Corporate Index. Source: Barclays Capital, Bloomberg Finance L.P., Fidelity Investments as of 3/31/19.

# Long-Term Themes

# Performance Rotations Underscore Need for Diversification

**The performance of different assets has fluctuated widely from year to year, and the magnitude of returns can vary significantly among asset classes in any given year—even among asset classes that are moving in the same direction. A portfolio allocation with a variety of global assets illustrates the potential benefits of diversification.**

## Periodic Table of Returns

| 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | YTD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18% | 75% | 17% | 38% | 35% | 35% | 35% | 66% | 32% | 14% | 26% | 56% | 32% | 35% | 35% | 40% | 5% | 79% | 28% | 8% | 20% | 39% | 28% | 5% | 21% | 38% | 0% | 16% |
| 17% | 33% | 8% | 37% | 23% | 33% | 29% | 34% | 26% | 8% | 10% | 47% | 26% | 21% | 33% | 16% | -20% | 58% | 27% | 8% | 19% | 34% | 14% | 3% | 18% | 30% | -2% | 16% |
| 15% | 20% | 3% | 37% | 23% | 29% | 21% | 27% | 12% | 5% | 4% | 39% | 21% | 14% | 27% | 12% | -26% | 37% | 19% | 4% | 18% | 33% | 13% | 1% | 18% | 26% | -2% | 15% |
| 15% | 19% | 2% | 30% | 22% | 24% | 20% | 24% | 8% | 2% | -2% | 37% | 18% | 12% | 22% | 11% | -34% | 32% | 18% | 4% | 18% | 32% | 12% | 1% | 12% | 22% | -3% | 14% |
| 11% | 19% | 1% | 28% | 22% | 22% | 14% | 21% | -1% | -2% | -6% | 31% | 17% | 7% | 18% | 7% | -36% | 28% | 17% | 2% | 16% | 23% | 11% | 1% | 12% | 15% | -4% | 12% |
| 8% | 17% | 0% | 20% | 16% | 20% | 9% | 21% | -3% | -4% | -9% | 31% | 11% | 5% | 16% | 6% | -36% | 27% | 16% | 2% | 16% | 19% | 6% | 0% | 11% | 15% | -4% | 10% |
| 8% | 10% | -1% | 18% | 15% | 13% | 3% | 12% | -5% | -4% | -15% | 29% | 11% | 5% | 12% | 5% | -37% | 26% | 15% | 0% | 16% | 7% | 5% | -4% | 9% | 13% | -9% | 10% |
| 7% | 10% | -2% | 15% | 11% | 10% | -3% | 7% | -9% | -12% | -16% | 28% | 9% | 5% | 11% | 2% | -38% | 20% | 15% | -4% | 15% | 3% | 3% | -4% | 8% | 9% | -11% | 9% |
| 5% | 10% | -2% | 15% | 6% | 2% | -18% | 3% | -14% | -20% | -20% | 24% | 8% | 4% | 9% | -1% | -38% | 19% | 12% | -12% | 11% | -2% | -2% | -5% | 7% | 8% | -11% | 7% |
| 4% | 4% | -3% | 12% | 6% | -3% | -25% | -1% | -22% | -20% | -22% | 19% | 7% | 3% | 4% | -2% | -43% | 18% | 8% | -13% | 4% | -2% | -4% | -15% | 3% | 4% | -11% | 6% |
| -12% | -1% | -7% | -5% | 4% | -12% | -27% | -5% | -31% | -21% | -28% | 4% | 4% | 2% | 2% | -16% | -53% | 6% | 7% | -18% | -1% | -10% | -17% | -25% | 2% | 1% | -14% | 3% |

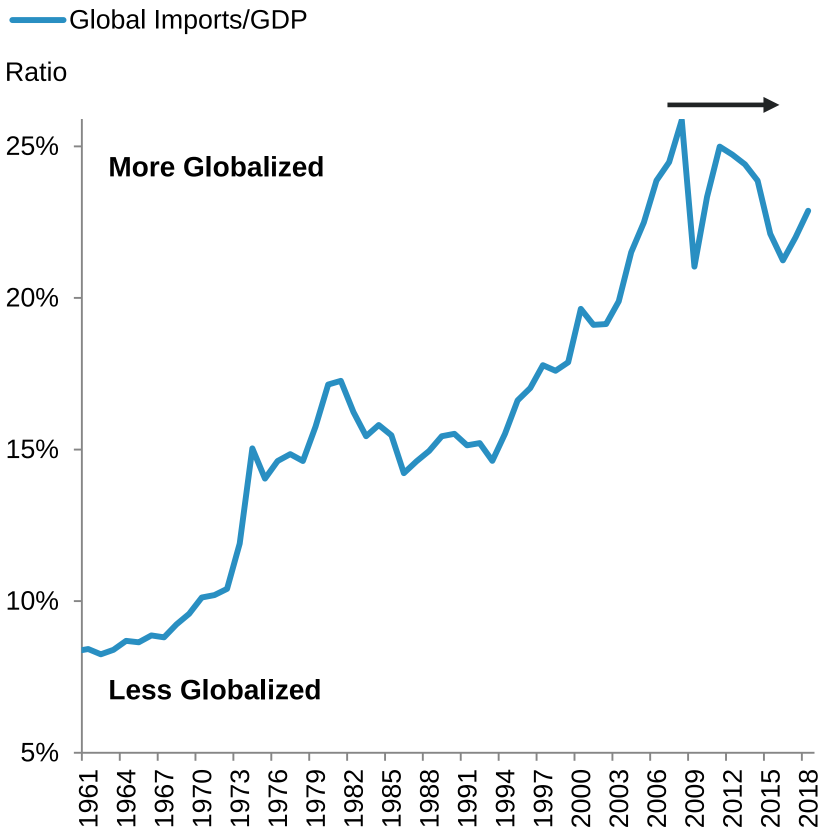
| Legend |
|---|
| REITs |
| Growth Stocks |
| Small Cap Stocks |
| Large Cap Stocks |
| Value Stocks |
| Foreign-Developed Country Stocks |
| Emerging-Market Stocks |
| 60% Large Cap 40% IG Bonds |
| High-Yield Bonds |
| Commodities |
| Investment-Grade Bonds |

Past performance is no guarantee of future results. Diversification/asset allocation does not ensure a profit or guarantee against loss. It is not possible to invest directly in an index. All indexes are unmanaged. See Appendix for important index information. Asset classes represented by: Commodities – Bloomberg Commodity Index; Emerging-Market Stocks – MSCI Emerging Markets Index; Non-U.S. Developed-Country Stocks – MSCI EAFE Index; Growth Stocks – Russell 3000 Growth Index; High-Yield Bonds – ICE BofAML U.S. High Yield Index; Investment-Grade Bonds – Bloomberg Barclays U.S. Aggregate Bond Index; Large Cap Stocks – S&P 500 Index; Real Estate/REITs – FTSE NAREIT All Equity Total Return Index; Small Cap Stocks – Russell 2000 Index; Value Stocks – Russell 3000 Value Index. Source: Morningstar, Standard & Poor's, Haver Analytics, Fidelity Investments (AART), as of 3/31/19.

# 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 rules-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 12/31/18.

# Secular Forecast: Slower Global Growth, EM to Lead

**Slowing labor-force growth and aging demographics are expected to tamp down global growth over the next two decades. We expect GDP growth of emerging countries to outpace that of developed markets over the long term, providing a relatively favorable secular backdrop for emerging-market equity returns.**

## Real GDP 20-Year Growth Forecasts vs. History

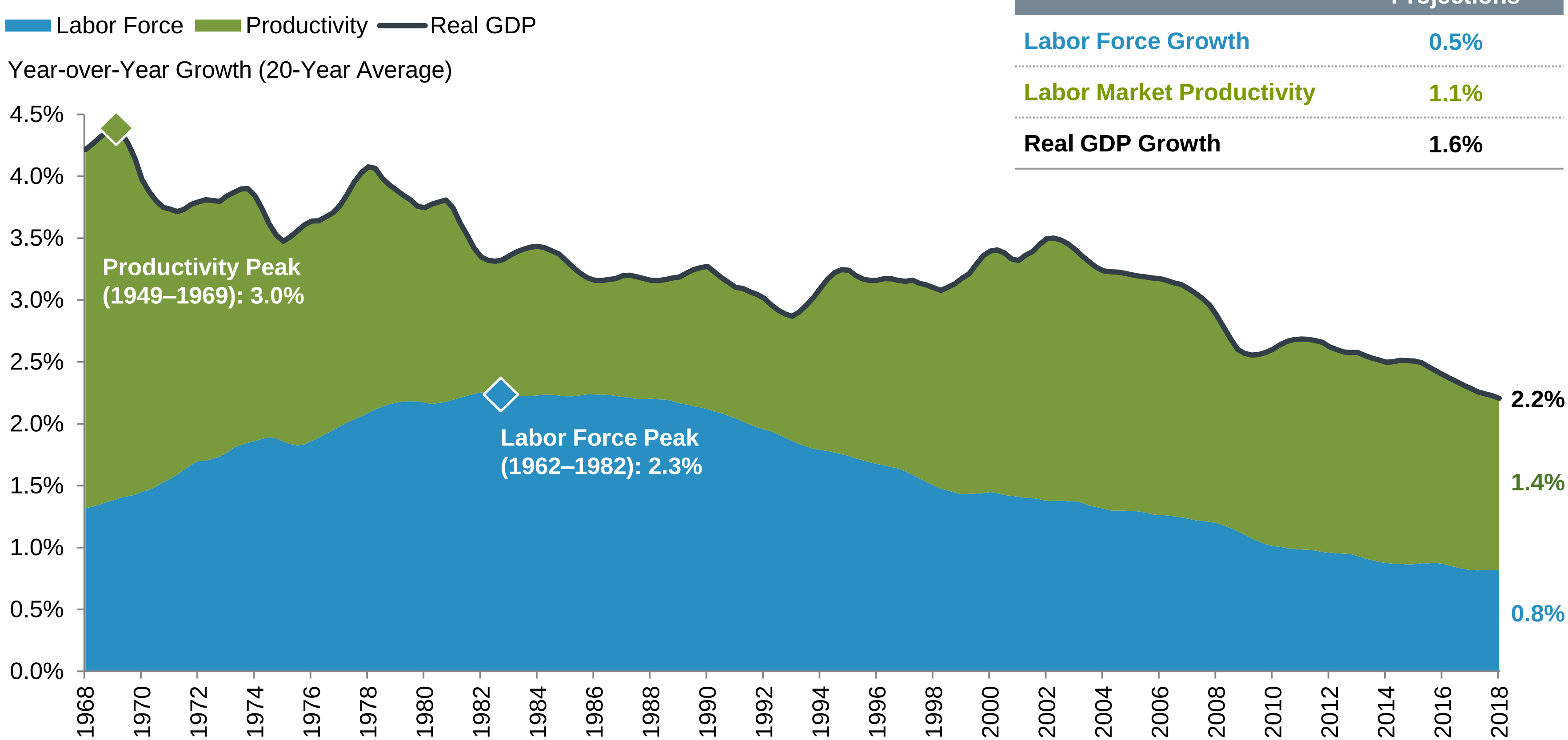

| Global Real GDP Growth | |
|---|---|
| Last 20 years | 20-year forecast |
| 2.7% | 2.1% |

Past performance is no guarantee of future results. EM: Emerging Markets. GDP: Gross Domestic Product. Source: OECD, Fidelity Investments (AART), as of 5/31/18.

# Slower U.S. Economic Growth Likely Over the Long-Term

**Slower population growth and aging demographics provide a more challenging backdrop for U.S. growth over the next 20 years. Labor force growth has continued to decelerate from its peak in the 1960–70s, and since 2000 nearly half of this growth came from immigration. Even if productivity rates reaccelerate, it will be difficult for the U.S. to return to the roughly 3% real GDP growth average since World War II.**

## Real GDP Components



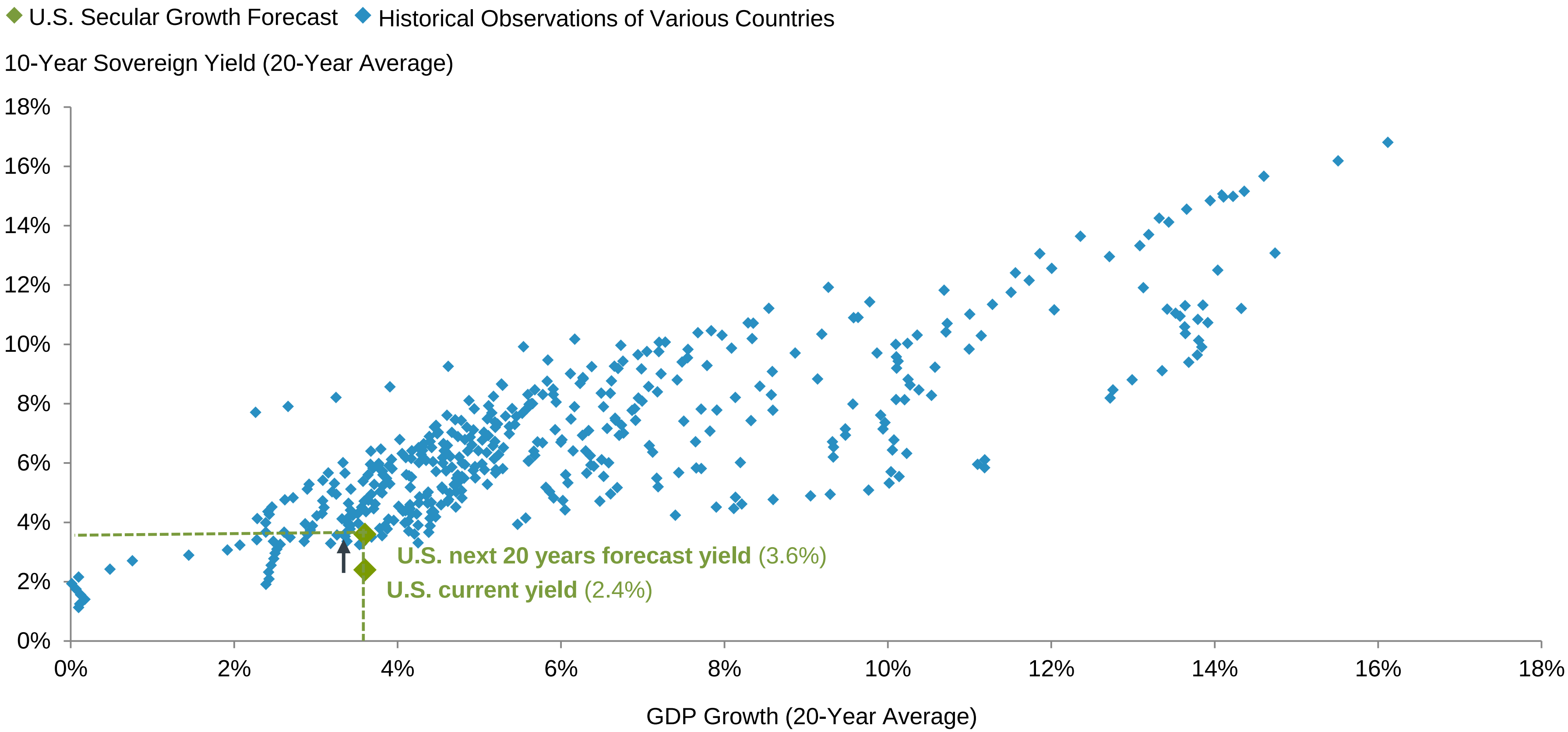

| | 20-Year AART Projections |
|---|---|
| Labor Force Growth | 0.5% |
| Labor Market Productivity | 1.1% |
| Real GDP Growth | 1.6% |

Sources: Bureau of Economic Analysis, Bureau of Labor Statistics, Haver Analytics, Fidelity Investments (AART), as of 12/31/18.

# Secular Rate Outlook: Higher than Now, Lower than History

**Over long periods of time, GDP growth has a tight positive relationship with long-term government bond yields (yields generally have averaged the same rate as nominal growth). We expect interest rates will rise over the long term to an average that is closer to our 3.6% nominal GDP forecast, but this implies they would settle at a significantly lower level than their historical averages.**

## Nominal Government Bond Yields and GDP Growth

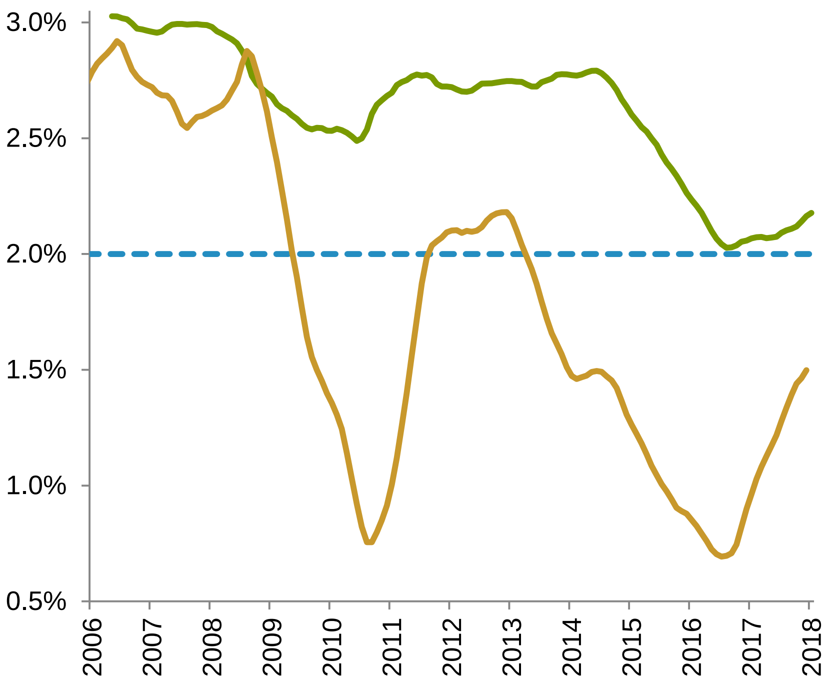



GDP: Gross Domestic Product. Source: Official Country Estimates, Haver Analytics, Fidelity Investments (AART), as of 3/31/19.

# Secular Inflation: Risks on the Upside?

**Recent decades of disinflation have dragged down many investors' long-term inflation expectations. Technological progress and aging demographics might help keep inflation low; however, we believe several factors, including policy changes and "peak globalization" trends, could influence the secular path of inflation, potentially causing inflation to accelerate faster than today's subdued expectations.**

## U.S. Inflation Expectations vs. Fed Target




## 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: | |
| | • Spend less (reducing demand) | ↓ |
| | • Work less (reducing supply) | ↑ |
| **Peak Globalization** | More expensive goods/labor | ↑ |
| **Technological Progress** | More robots, Amazon effect | ↓ |

**LEFT:** PCE: Personal Consumption Expenditures. 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 6/30/18.

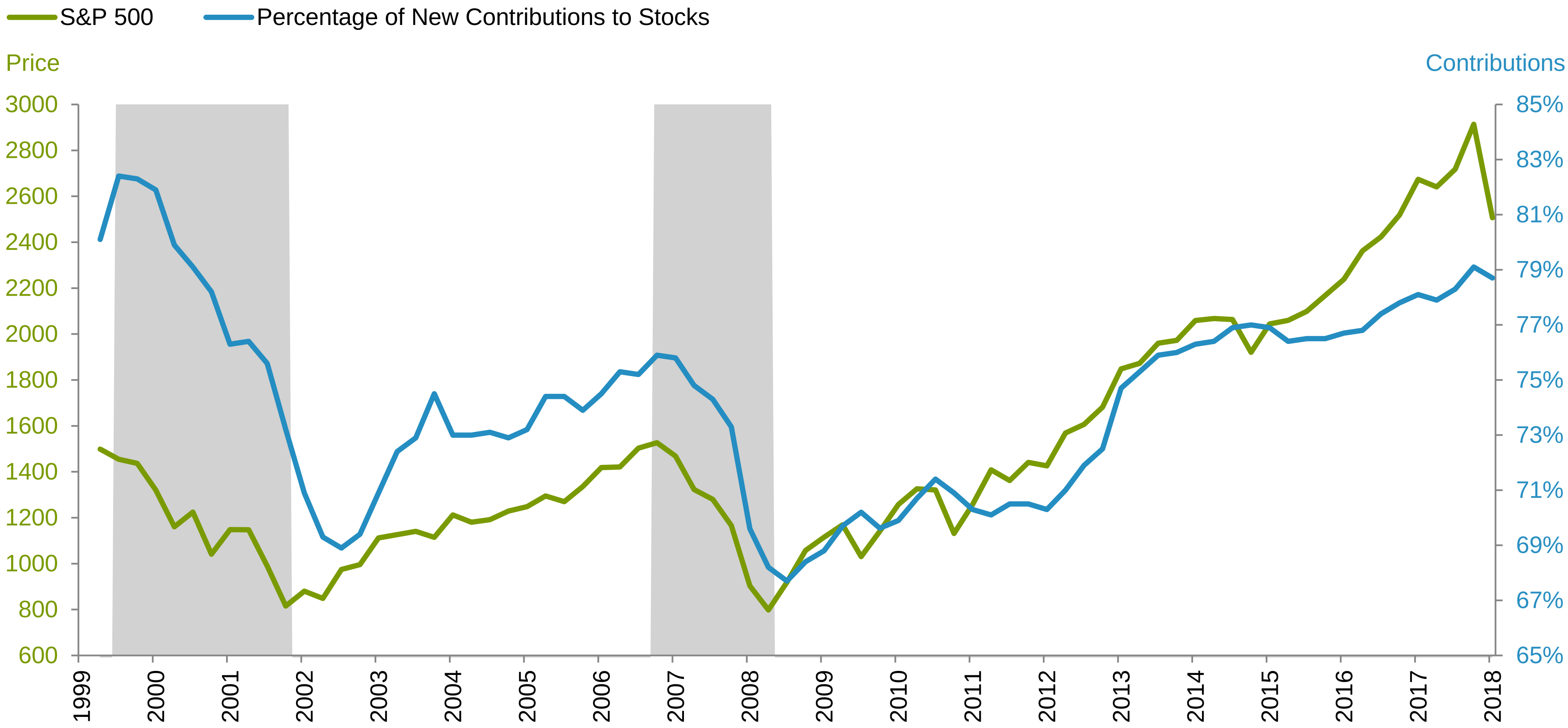


Fidelity INVESTMENTS

# Market Downturns Can Cause Investors to De-Risk

**Data from millions of retirement-plan participants can illustrate how investor behavior may change under varying market conditions. During the past two bear markets, many long-term investors reduced allocations to equities and took years to return to their prior equity contribution rates. Excessive focus on short-term market volatility may hamper the ability to achieve the objectives of a sound, diversified, long-term investment plan.**

## Fidelity Plan Participants Contribution to Equities




Shaded area represents bear markets, when the stock market (S&P 500 Index) fell by more than 20% peak to trough. Stock contributions: the percentage of all new directed deferrals (contributions) into stocks by participants via the available investment options in defined contribution plans administered by Fidelity Investments. Diversification does not ensure a profit or guarantee against loss. Standard & Poor's, Bloomberg Financial L.P., Fidelity Investments as of 12/31/18.

# 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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Fidelity does not provide legal or tax advice and the information provided herein is general in nature and should not be considered legal or tax advice. Consult with an attorney or a tax professional regarding your specific legal or tax situation.

**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**

**Index returns on slide 24 represented by:** Growth - Russell 3000® Growth Index; Large Caps - S&P 500® index; Mid Caps - Russell MidCap® Index; Small Caps - Russell 2000® Index; Value - Russell 3000® Value Index; ACWI ex USA – MSCI All Country World Index (ACWI); Canada – MSCI Canada Index; Commodities – Bloomberg Commodity Index; EAFE – MSCI EAFE (Europe, Australasia, Far East) Index; EAFE Small Cap – MSCI EAFE Small Cap Index; EM Asia – MSCI Emerging Markets Asia Index; EMEA (Europe, Middle East, and Africa) – MSCI EM EMEA Index; Emerging Markets (EM) – MSCI EM Index; Europe – MSCI Europe Index; Gold – Gold Bullion Price, LBMA PM Fix; Japan – MSCI Japan Index; Latin America – MSCI EM Latin America Index; ABS (Asset-Backed Securities) – Bloomberg Barclays ABS Index; Agency – Bloomberg Barclays U.S. Agency Index; Aggregate – Bloomberg Barclays U.S. Aggregate Bond Index; CMBS (Commercial Mortgage-Backed Securities) – Bloomberg Barclays Investment-Grade CMBS Index; Credit – Bloomberg Barclays U.S. Credit Bond Index; EM Debt (Emerging-Market Debt) – JP Morgan EMBI Global Index; High Yield – ICE BofAML U.S. High Yield Index; Leveraged Loan – S&P/LSTA Leveraged Loan Index; Long Government & Credit (Investment-Grade) – Bloomberg Barclays Long Government & Credit Index; MBS (Mortgage-Backed Securities) – Bloomberg Barclays MBS Index; Municipal – Bloomberg Barclays Municipal Bond Index; TIPS (Treasury Inflation-Protected Securities) – Bloomberg Barclays U.S. TIPS Index; Treasuries – Bloomberg Barclays U.S. Treasury Index.

**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 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. 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. 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.

**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).

**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. 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.

**MSCI All Country World Index (ACWI)** is a market capitalization-weighted index 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 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 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.

# Appendix: Important Information

**Market Indexes** (continued)

**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 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.

**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®** 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 **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 mortgage real estate investment trusts (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 that 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 engage in a wide range of commodity-related manufacturing. Real Estate—companies in real estate development, operations, and related services, as well as equity REITs. Communication Services—companies that facilitate communication and offer related content through various media; it includes media companies moved from Consumer Discretionary and internet services companies moved from Information Technology. Utilities—companies considered electric, gas, or water utilities, or 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.

**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** is 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 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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Personal and Workplace investment products are provided by Fidelity Brokerage Services LLC, Member NYSE, SIPC.

Fidelity Clearing & Custody Solutions® provides clearing, custody, or other brokerage services through National Financial Services LLC or Fidelity Brokerage Services LLC, (Members NYSE, SIPC).

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