LEADERSHIP SERIES FIRST QUARTER 2019

Quarterly Market Update

PRIMARY CONTRIBUTORS

Lisa Emsbo-Mattingly
Director of Asset Allocation Research

Jake Weinstein, CFA
Research Analyst, Asset Allocation Research

Dirk Hofschire, CFA
SVP, Asset Allocation Research

Ryan Carrigan, CFA
Research Analyst, Asset Allocation Research

Fidelity INVESTMENTS

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Market Summary

Maturing Cycle and Policy Uncertainties Spur Volatility

During 2018, the markets transitioned away from the low-volatility, mid-cycle environment that had generally persisted for several years. In 2019, further maturing in the U.S. and global business cycles is likely to heighten uncertainties, including in the policy arena where monetary conditions have become less favorable. Elevated volatility is likely, warranting smaller cyclical allocation tilts and a prioritization on portfolio diversification.

	MACRO	ASSET MARKETS
Q4 2018	• Positive growth, but global business cycle less synchronized and more uneven	• Global stocks, oil prices, and Treasury-bond yields dropped
OUTLOOK	• U.S. recession risk remains low, but late-cycle conditions have taken hold • China's policymakers face a difficult challenge in attempting to exit its growth recession • Global monetary policy has shifted to a headwind • Fading effect of tax cuts and uncertain trade policies make policy backdrop less favorable	• Monetary shift to reduce global liquidity growth, keep market volatility elevated • Smaller allocation tilts at this point in the cycle • Prioritize diversification amid tremendous uncertainty

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

Stocks' Q4 Tumble Finished Rough Year for Asset Markets

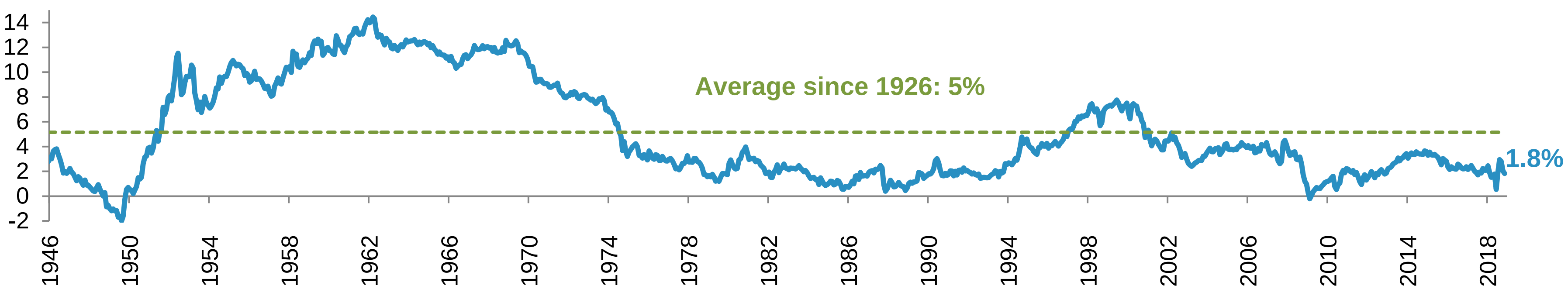
Broad-based asset-price weakness prevailed in 2018, with no major category posting a positive return. U.S. stocks registered double-digit declines during Q4 to finish out their worst year since 2008, though they still outperformed non-U.S. equities in 2018. Treasury bond yields fell and credit spreads rose in Q4's risk-off environment, spurring higher-quality bonds to outperform riskier credit for the year. Plummeting oil prices pulled down commodity prices generally.

SUMMARY

	Q4 2018 (%)	2018 (%)		Q4 2018 (%)	2018 (%)
Investment-Grade Bonds	1.6	0.0	Long Government & Credit Bonds	0.8	-4.7
Gold	7.7	-0.9	U.S. Mid Cap Stocks	-15.4	-9.1
U.S. Corporate Bonds	0.0	-2.1	U.S. Small Cap Stocks	-20.2	-11.0
High Yield Bonds	-4.6	-2.3	Commodities	-9.4	-11.2
Real Estate Stocks	-6.1	-4.0	Non-U.S. Developed-Country Stocks	-12.5	-13.4
U.S. Large Cap Stocks	-13.5	-4.4	Emerging-Market Stocks	-7.4	-14.2
Emerging-Market Bonds	-1.2	-4.6	Non-U.S. Small Cap Stocks	-16.0	-17.6

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

Return Difference (%)

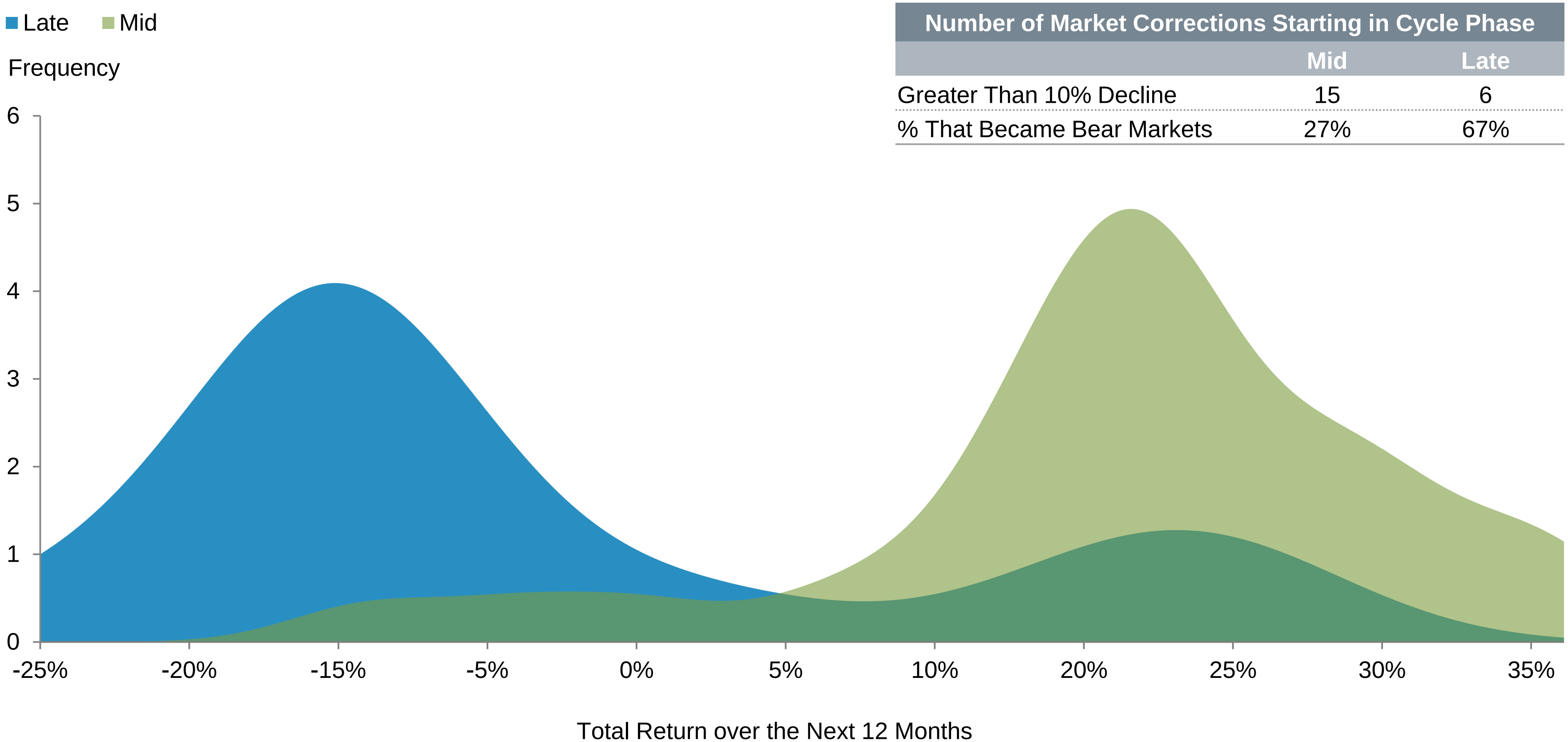


Past performance is no guarantee of future results. It is not possible to invest directly in an index. All indexes are unmanaged. See Appendix for important index information. Assets represented by: Commodities – Bloomberg Commodity Index; Emerging-Market Bonds – JP Morgan EMBI Global Index; Emerging-Market 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 12/31/18.

Stocks' Return Profile Less Favorable during Late Cycle

Data suggests "buying the dips" is a less reliable strategy in late cycle compared with the mid-cycle phase. Historically, after declines of 5%, U.S. stocks in mid cycle had a much higher probability of positive returns over the next 12 months. Post-decline positive returns have occurred in late cycle, but the wider distribution of outcomes skews toward the downside, and 10% corrections have often turned into bear markets.

Subsequent Stock Market Returns after 5% or More Decline (1952–2016)



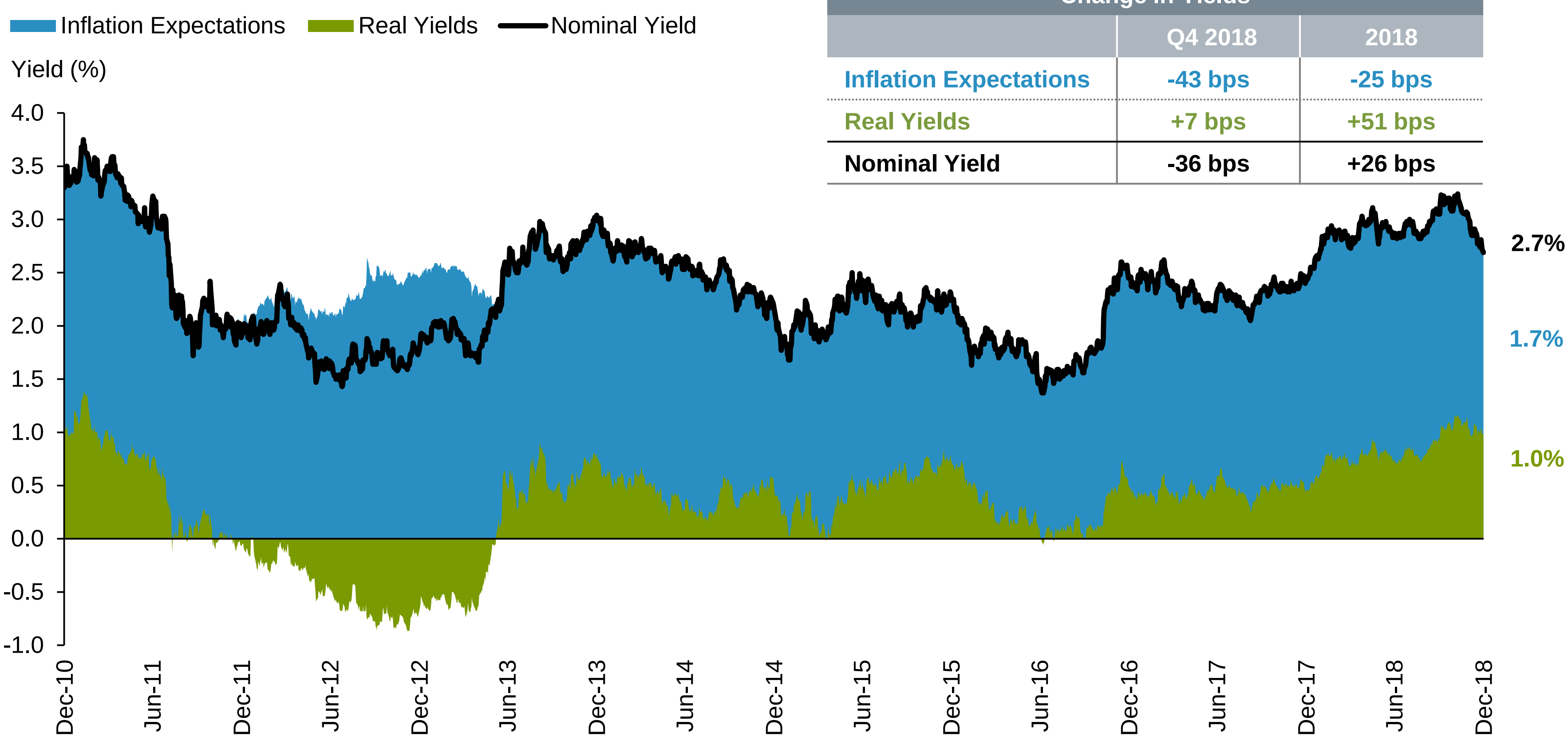
Number of Market Corrections Starting in Cycle Phase		
	Mid	Late
Greater Than 10% Decline	15	6
% That Became Bear Markets	27%	67%

Past performance is no guarantee of future results. The above charts are density plots generated from the 12-month forward returns of a US Equity Index sourced from Fidelity Investments. Declines of 5% or more refers to the trailing 3-month cumulative return for each month in the stated phase.

Bond Yields Finish Barely Higher in 2018 after Q4 Reversal

After rising throughout the first three quarters to their highest levels since 2011, 10-year Treasury bond yields dropped during Q4 amid the sell-off in the equity markets and concerns about global growth. For the year, the modest rise in bond yields was attributed to higher real borrowing costs, while inflation expectations dropped alongside the steep decline in oil prices.

10-Year U.S. Treasury Yields



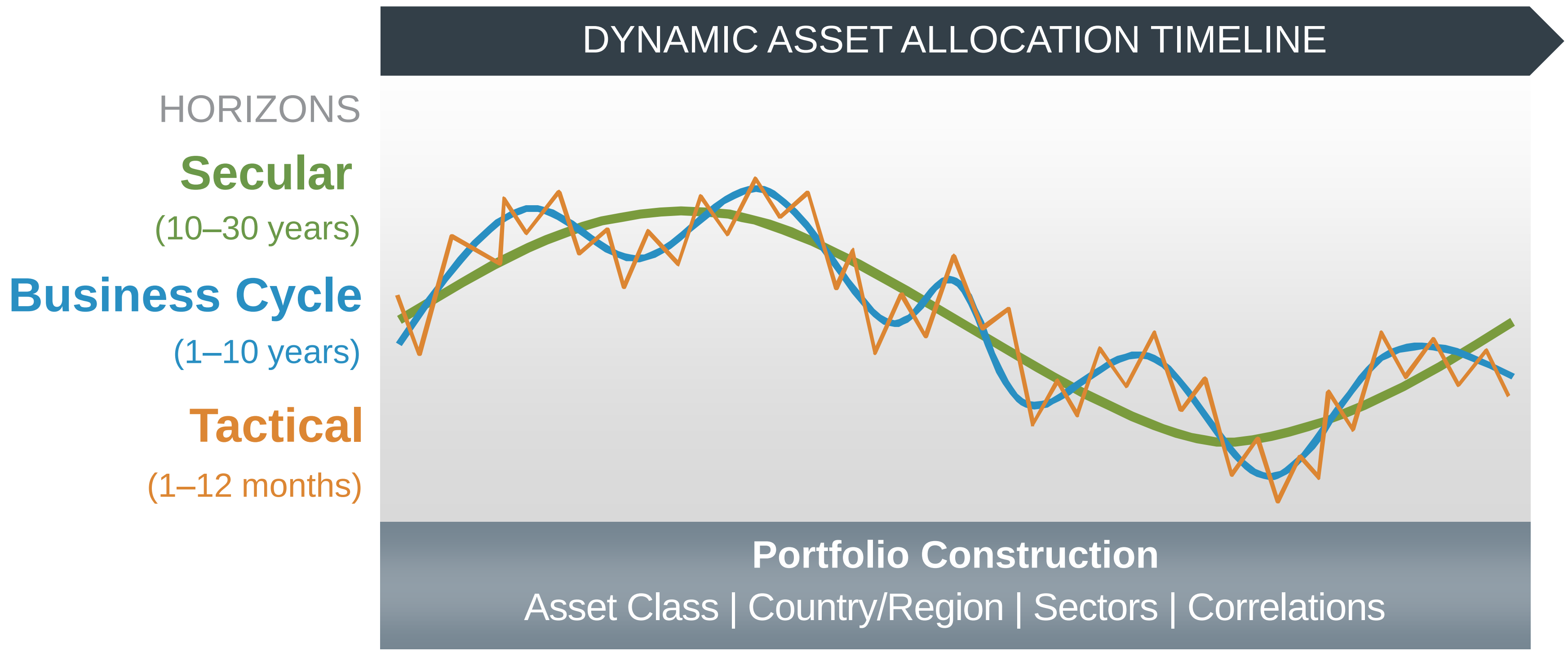
Change in Yields	Q4 2018	2018
Inflation Expectations	-43 bps	-25 bps
Real Yields	+7 bps	+51 bps
Nominal Yield	-36 bps	+26 bps

Fed: Federal Reserve. Nominal Yield: 10-Year Treasury yield. Source: Federal Reserve, Haver Analytics, Fidelity Investments (AART), as of 12/31/18.

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).

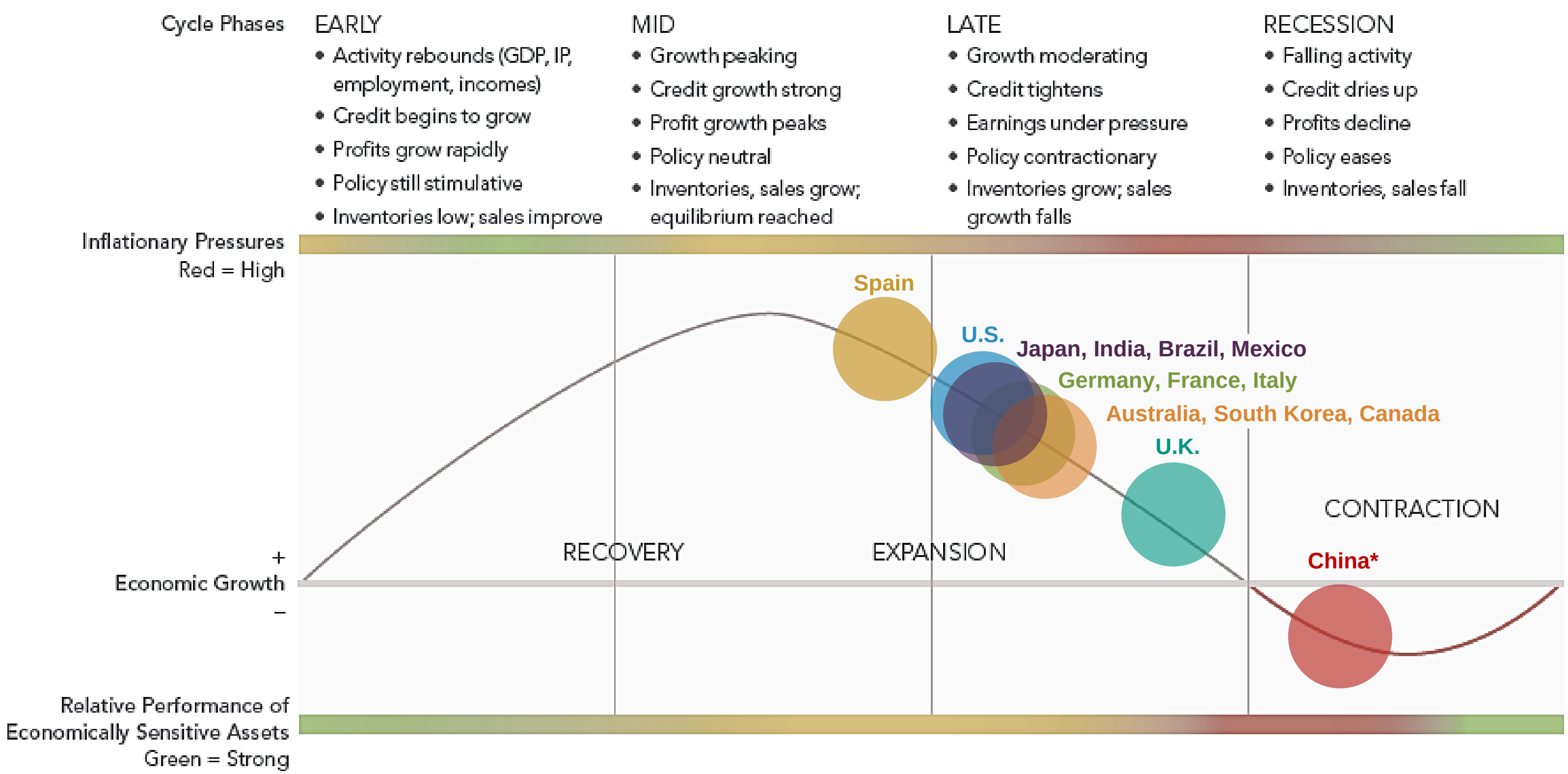


For illustrative purposes only. Source: Fidelity Investments (AART).

U.S. and Global Business Cycles Continue to Mature

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 in the late-cycle phase, although recession risk remains low. China entered a growth recession in the latter part of 2018. China's slowdown, in addition to global monetary tightening and trade-policy uncertainty, has weighed on the industrial sectors in Europe and elsewhere.

Business Cycle Framework

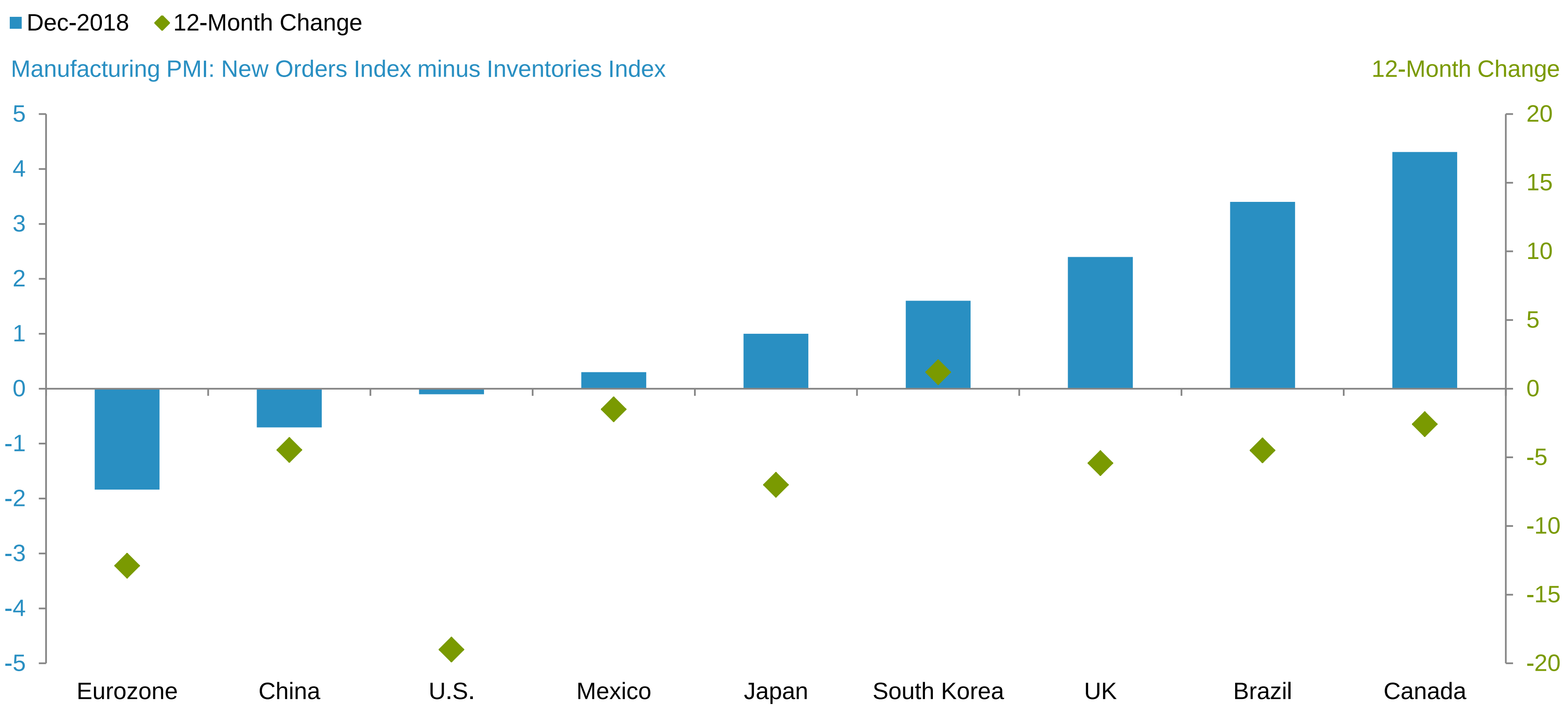


Note: The diagram above is a hypothetical illustration of the business cycle. There is not always a chronological, linear progression among the phases of the business cycle, and there have been cycles when the economy has skipped a phase or retraced an earlier one. * A growth recession is a significant 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 12/31/18.

Growth Less Synchronized as Manufacturing Cools

Industrial "bullwhips" (leading indicators of manufacturing activity that measure the difference between new orders and inventories) declined materially over the past year, dipping negative in the three largest industrial economies in the world—the U.S., China, and the eurozone. Global manufacturing remains in expansion in many economies, but the outlook has deteriorated and activity levels have likely passed their peak.

Global Manufacturing Bullwhips



Source: Institute for Supply Management, Markit, Haver Analytics, Fidelity Investments (AART) as of 12/31/18.

China's Deceleration Challenges Policymakers

Our proprietary Industrial Production Diffusion Index continues to signal significant weakness in China. China's policymakers are caught in a difficult balancing act, facing weak growth but not wanting to over-stimulate after a decade-long credit boom that left private sector debt at worrisome levels. With credit growth remaining stagnant, the policy easing measures enacted so far appear insufficient to sustain a reacceleration.

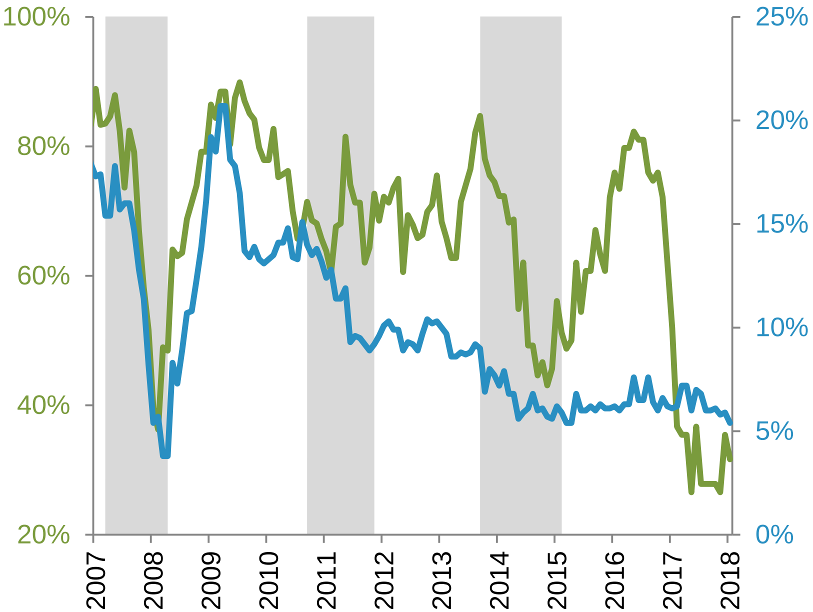
China Industrial Activity

AART Industrial Production Diffusion Index

Industrial Production Growth (Official Data)

Share of Components Rising, 12M Basis

Year-over-Year



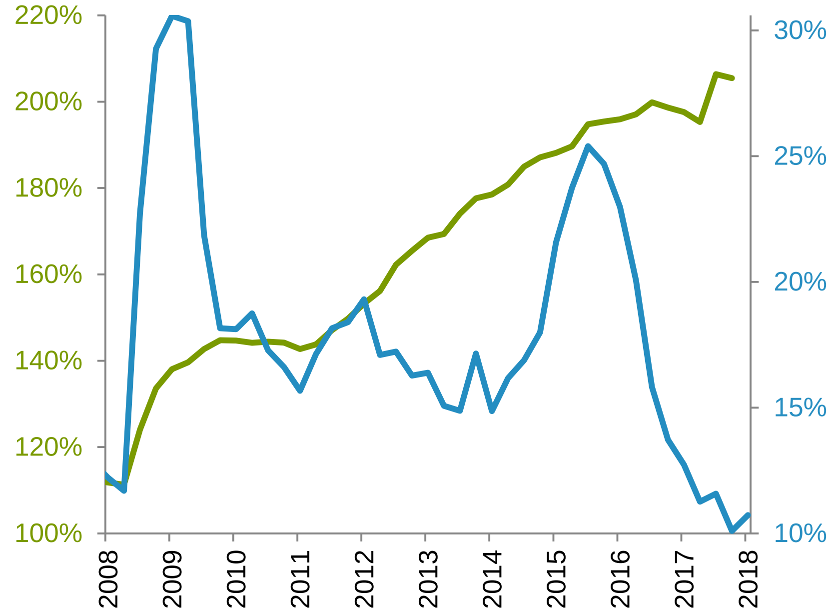
China Credit Growth

Private Sector Debt

Total Credit Growth

% of GDP

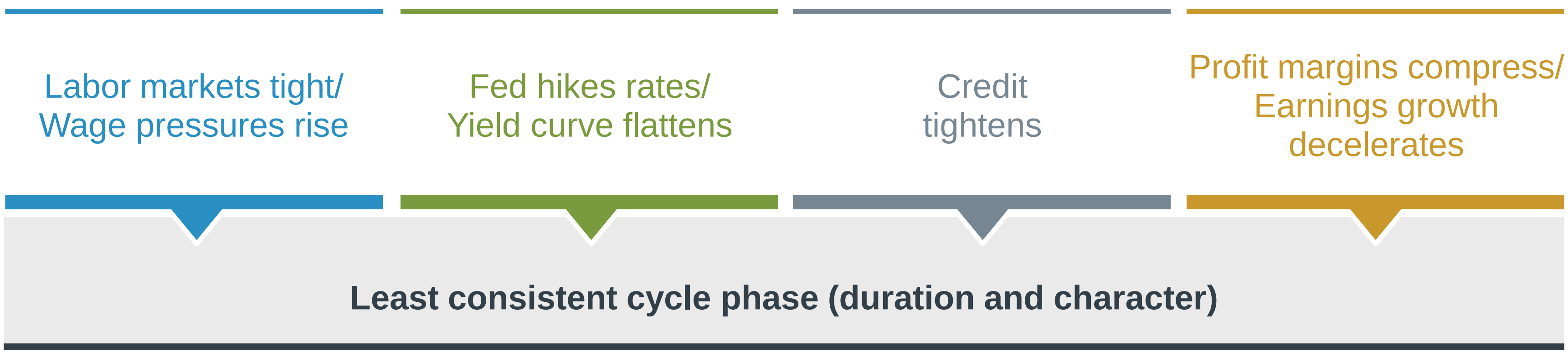
Year-over-Year



LEFT: Gray bars represent China growth recessions as defined by AART. Source: China National Bureau of Statistics (official data), Bloomberg Financial L.P., Fidelity Investments (AART), as of 11/30/18. **RIGHT:** Source: State Administration of Foreign Exchange, Bank for International Settlements, Organization for Economic Cooperation & Development, Haver Analytics, Fidelity Investments (AART), as of 9/30/18.

Late Cycle Defined by Peaking Growth, Rising Uncertainty

Although the economy remains in expansion, the late-cycle phase typically moves the economy past its peak rate of growth. The character of late cycle tends to be less homogenous than other phases and, historically, late-cycle phases have ranged in length from less than a year to more than two years. In general, tight labor markets and rising wages tend to lead to tighter monetary and credit conditions and narrower profit margins.

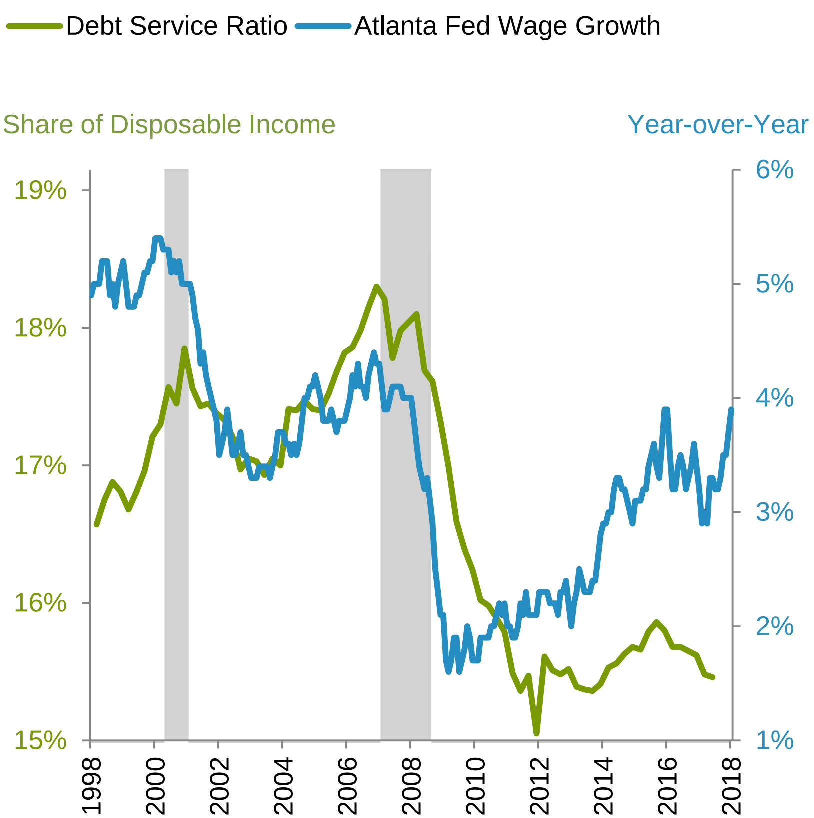


For illustrative purposes only. Source: Fidelity Investments (AART) as of 12/31/18.

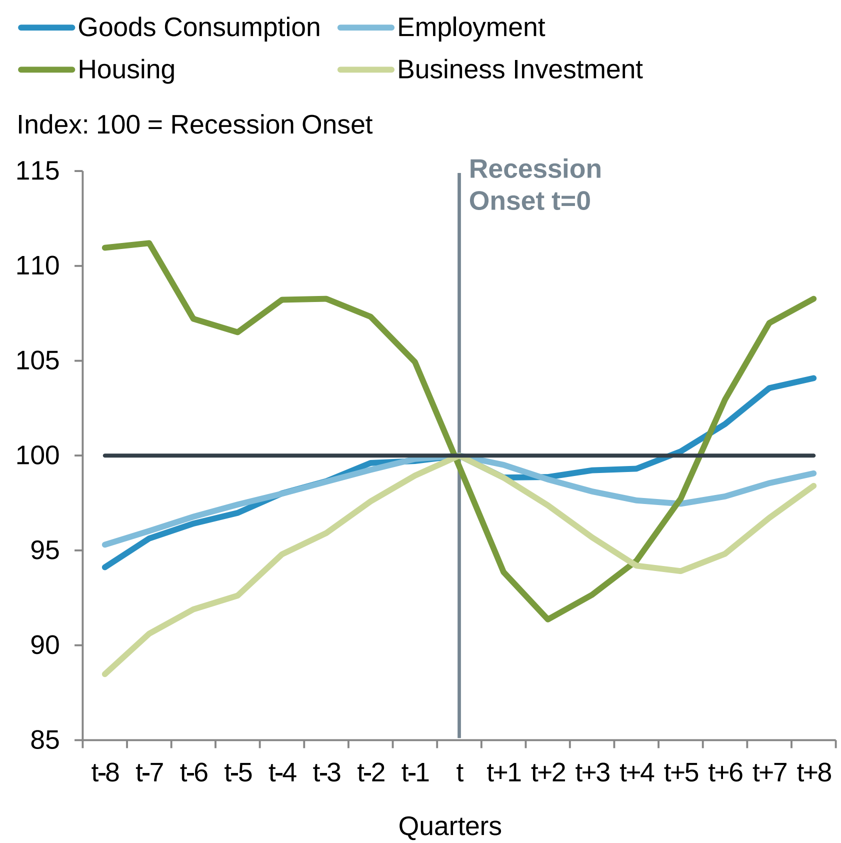
U.S. Consumer in Good Shape, Typical of Late Cycle

The U.S. consumer backdrop is strong amid a low unemployment rate, accelerating wage growth, and manageable financial obligations. Historically, consumer and business spending has grown in late cycle and not fallen until after the onset of recession. Meanwhile, current weak housing construction activity is consistent with prior periods when housing has tended to fall ahead of recession.

Consumer Debt Service and Wage Growth



Activity around Recessions (1948–2011)

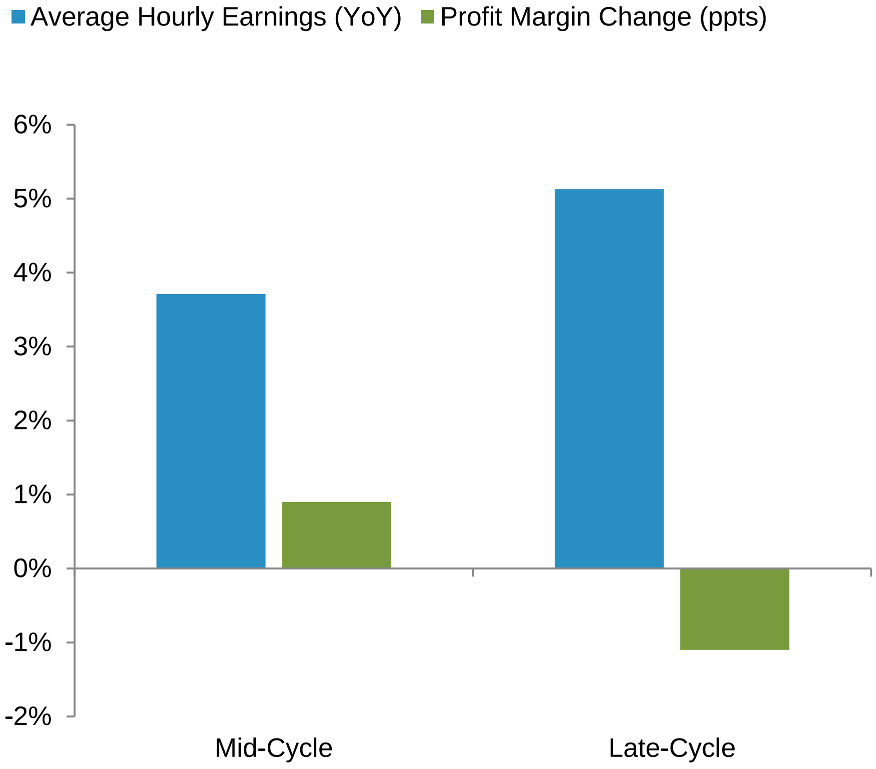


LEFT: Debt Service Ratio is ratio of consumer financial obligations to disposable income including mortgage and consumer debt, automobile lease payments, rental payments on tenant-occupied property, homeowners' insurance and property tax payments. Shaded area represents bear markets, when the stock market (S&P 500 Index) fell by more than 20% peak to trough. Source: Federal Reserve Board, Federal Reserve Bank of Atlanta, Haver Analytics, Fidelity Investments (AART), as of 11/30/18. **RIGHT:** Source: Bureau of Economic Analysis, Bureau of Labor Statistics Haver Analytics, Fidelity Investments (AART), as of 12/31/18.

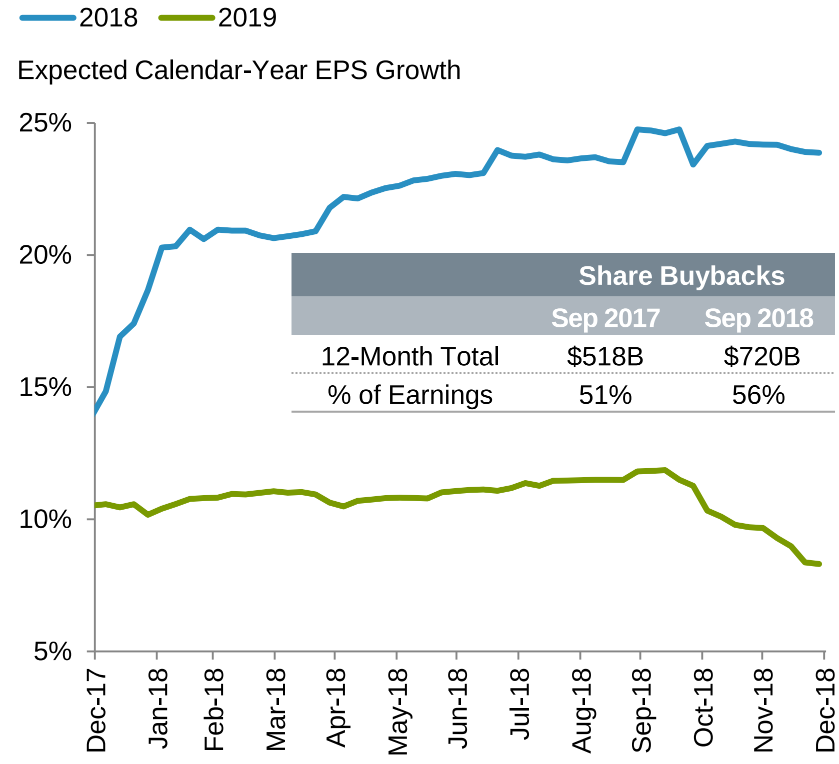
Margin Pressure Rises, Earnings Outlook Stops Improving

As the cycle matures, tighter labor markets tend to pressure wages upward and generate headwinds for corporate profit margins. Corporate tax cuts and record share repurchases fueled earnings growth and rising expectations during 2018. However, the pace of growth in 2019 is expected to decelerate materially amid slower global growth, a stronger U.S. dollar, lower oil prices, and fading effects from 2018 tax reforms.

Wage Growth and Profit Margins (1950–2015)



S&P 500 Earnings Estimates



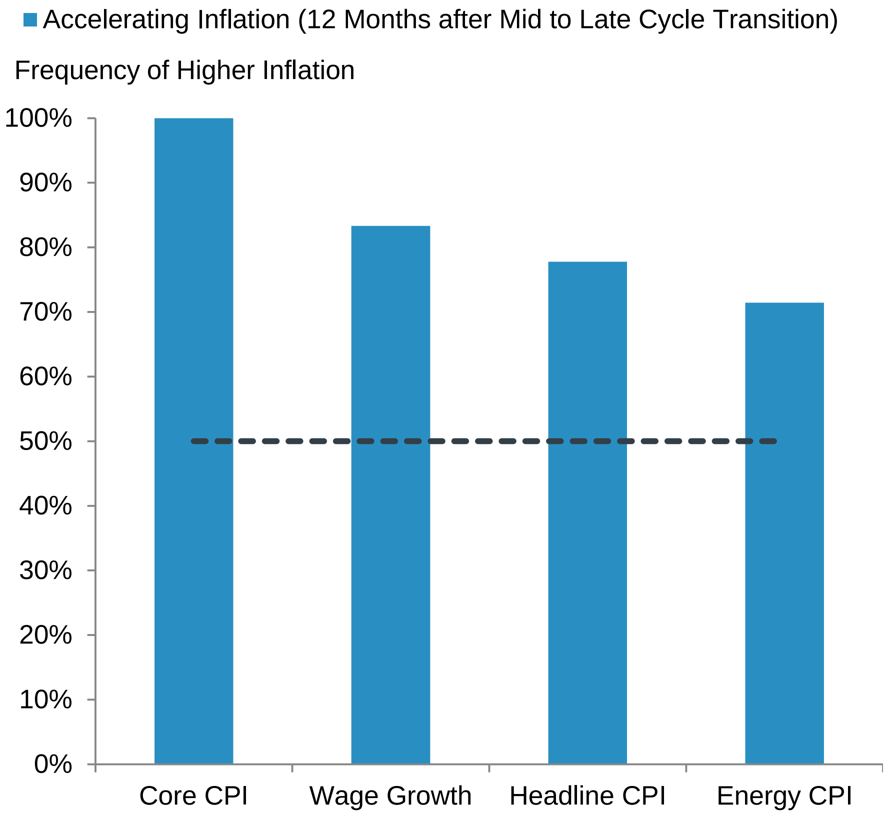
Share Buybacks	Sep 2017	Sep 2018
12-Month Total	$518B	$720B
% of Earnings	51%	56%

LEFT: Wage growth: average hourly earnings for production and non-supervisory employees since 1966. Profit margins for all non-financial corporations in U.S. GDP calculations. Ppts: percentage points. Profit margin change: the median percentage-point change of non-financial corporations' after-tax profit margins for historical mid- and late-cycle periods. Profits sourced from National Income and Product Accounts (NIPA). Source: Bureau of Economic Analysis, Bureau of Labor Statistics, Haver Analytics, Fidelity Investments (AART), as of 9/30/18.
RIGHT: Chart: EPS: Earnings Per Share. Source: Bloomberg Financial L.P., Fidelity Investments (AART), as of 12/28/18. Table: Source: Standard & Poor's, Fidelity Investments (AART), as of 9/30/18.

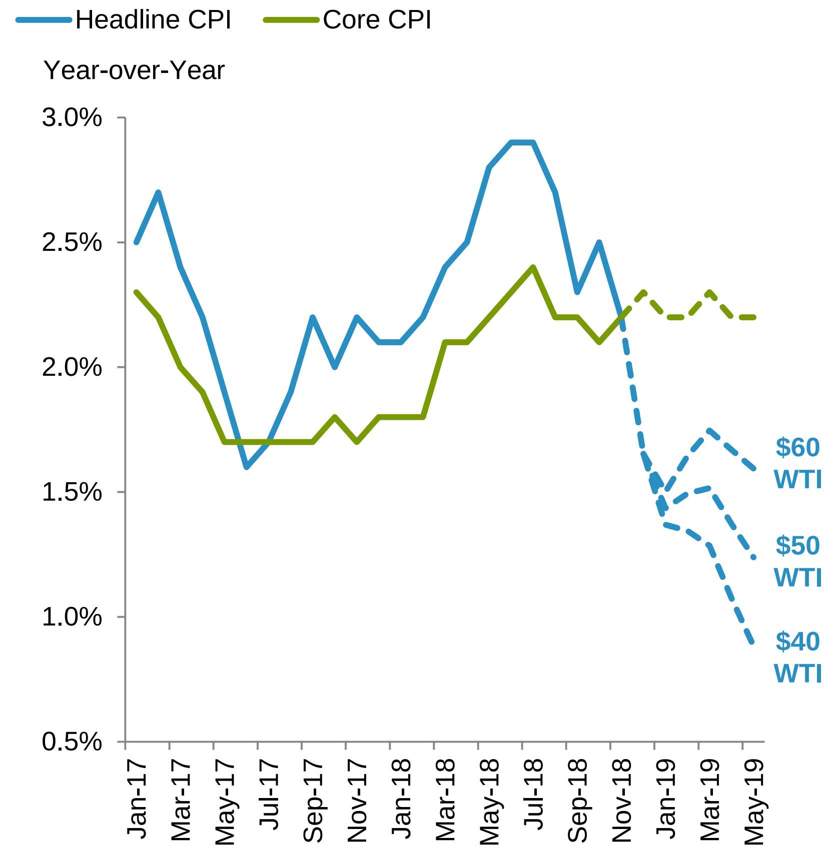
Does Inflation Always Accelerate in Late Cycle?

Most measures of inflation have tended to accelerate in the year following the transition to late-cycle, with wage growth and core inflation (excluding volatile food and energy prices) the most consistent indicators. Our current outlook is for core inflation to remain firm over the next several months, but the decline in oil prices likely will weigh on overall inflation, which may make this less inflationary than the average late cycle.

Inflation around Start of Late Cycle (1950–2010)



U.S. Inflation under Various Oil Scenarios

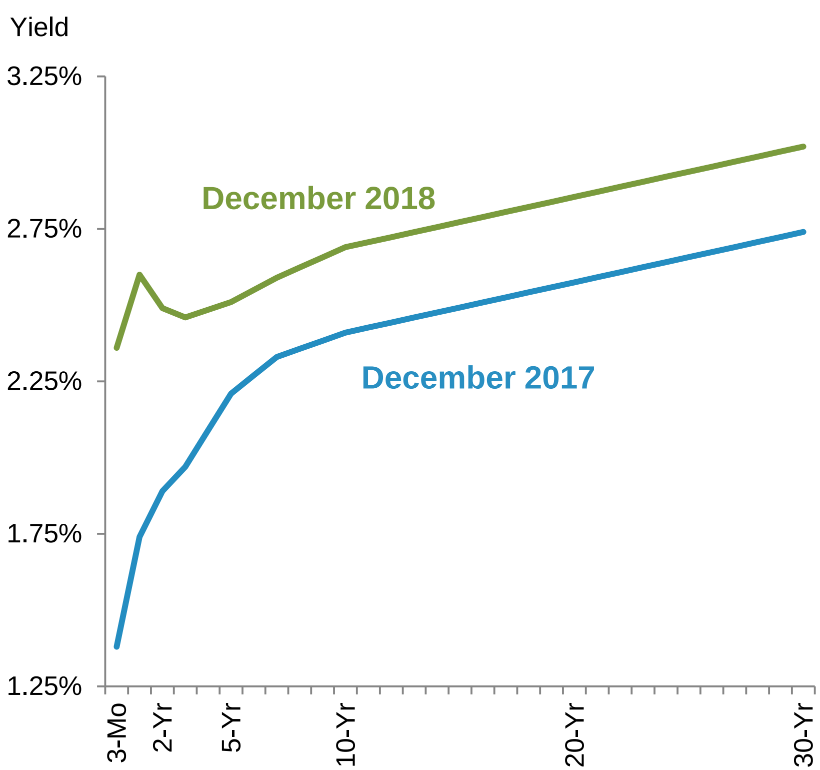


WTI: West Texas Intermediate crude oil. Headline CPI: Consumer Price Index. Core CPI excludes Food and Energy.
LEFT: Wage growth: average hourly earnings for production and non-supervisory employees since 1966. Source: Bureau of Labor Statistics, Haver Analytics, Fidelity Investments (AART), as of 11/30/18. **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 11/30/18.

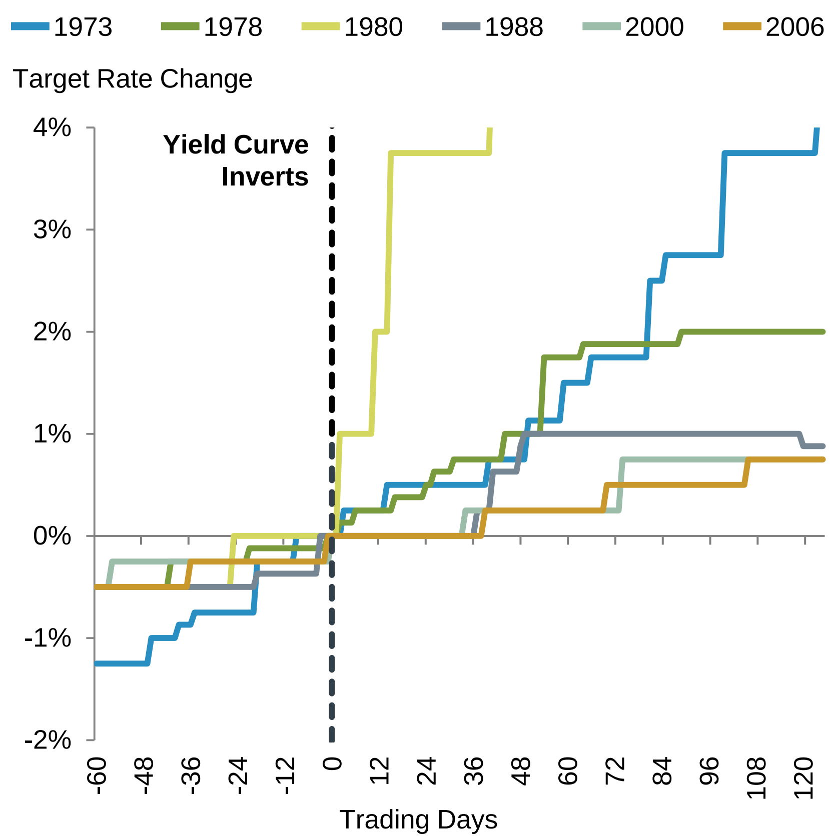
Fed Kept Hiking Despite Yield-Curve Flattening

In Q4, the Fed raised policy interest rates for the ninth time this cycle, further reducing the gap between long- and short-term bond yields. Over the past six tightening cycles, the Fed has responded to low unemployment and rising wages by continuing to hike rates, even after the curve became negatively sloped. This suggests to us that if labor markets remain tight, the Fed may be inclined to continue reducing monetary accommodation.

U.S. Treasury Yield Curve



Fed Funds Rate at Yield Curve Inversions

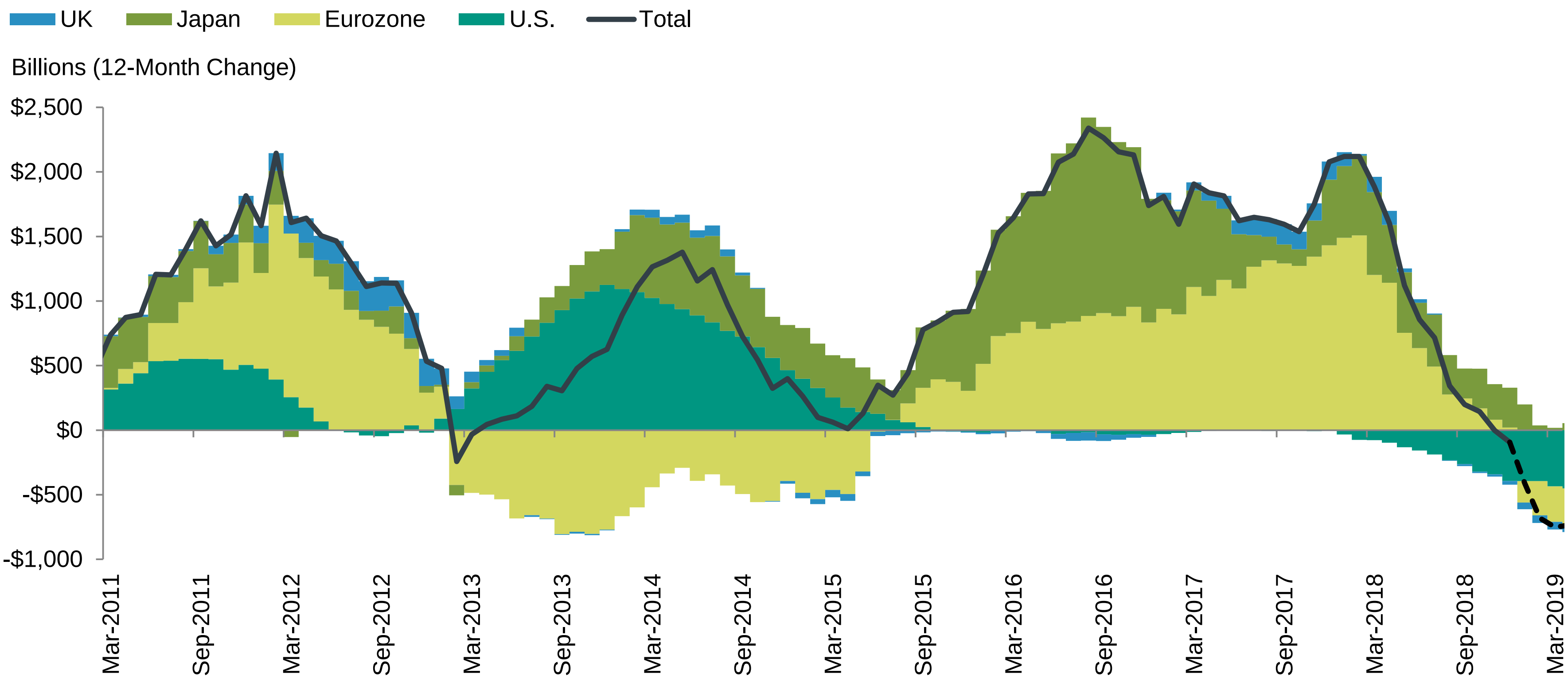


LEFT Source: Bloomberg Financial L.P., Fidelity Investments (AART), as of 12/31/18.
RIGHT: Includes instances when the 10–2 year Treasury yield curve initially inverted during Fed tightening cycles. Source: Federal Reserve Board, Bloomberg Financial L.P., Fidelity Investments (AART), as of 12/31/18.

QE Unwind Is Challenging Global Liquidity Growth

As the U.S. Federal Reserve reduces its balance sheet by around $50 billion per month—and with the ECB having ended its quantitative easing in December 2018—growth in major central-bank balance sheets turned negative in late 2018. After an unprecedented post-crisis period of global monetary easing, the shift toward global monetary tightening is turning into a liquidity headwind that may cause asset-market volatility to remain elevated.

Central Bank Balance Sheets



Dotted line estimates future central bank assets: Federal Reserve to roll off balance sheet assets by lesser of stated caps or total bonds maturing each month; 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 11/30/18.

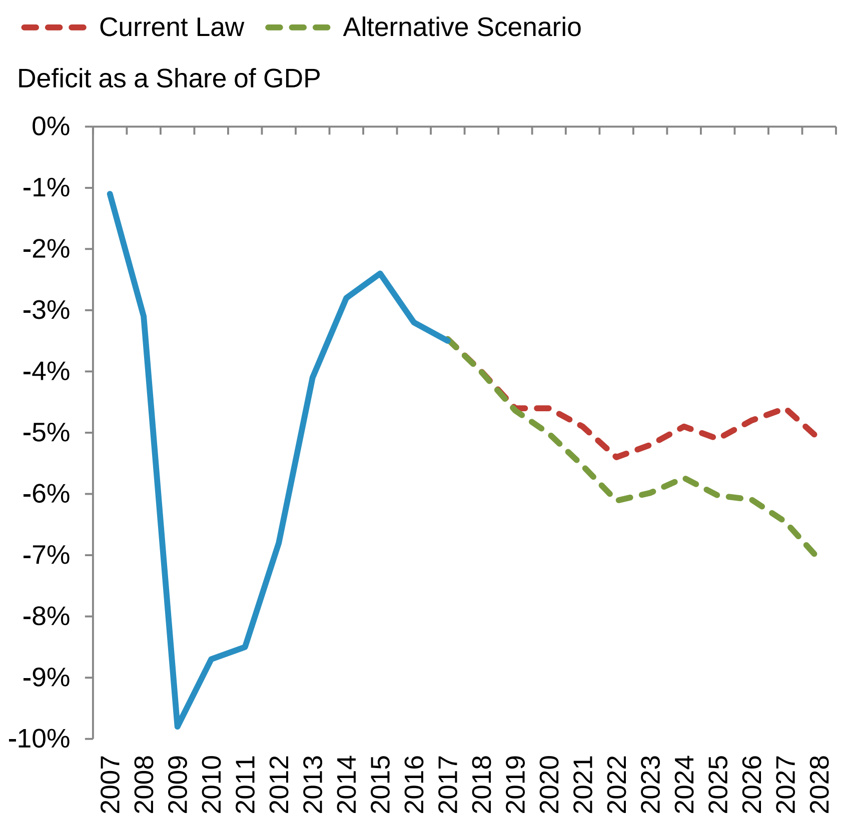
U.S. Economic Policies Likely More Mixed in 2019

A relatively constructive policy backdrop for the U.S. corporate sector during 2018 is likely to become more uncertain and less favorable in 2019. Less constructive trends include the fading boost from corporate tax cuts, the impact of global quantitative tightening, the cumulative drag from trade-policy uncertainty and higher tariffs, and medium-term concerns about the trajectory of the U.S. fiscal deficit.

Economic Policy Scorecard

	2018	2019	Potential Trend Change
Deregulation	+	+	
Tax cuts	+++	+	Fading effect
Fiscal spending	+	+	
Monetary policy		-	From normalization to tightening?
Trade	-	--	From small headwind to bigger one?

U.S. Fiscal Deficit

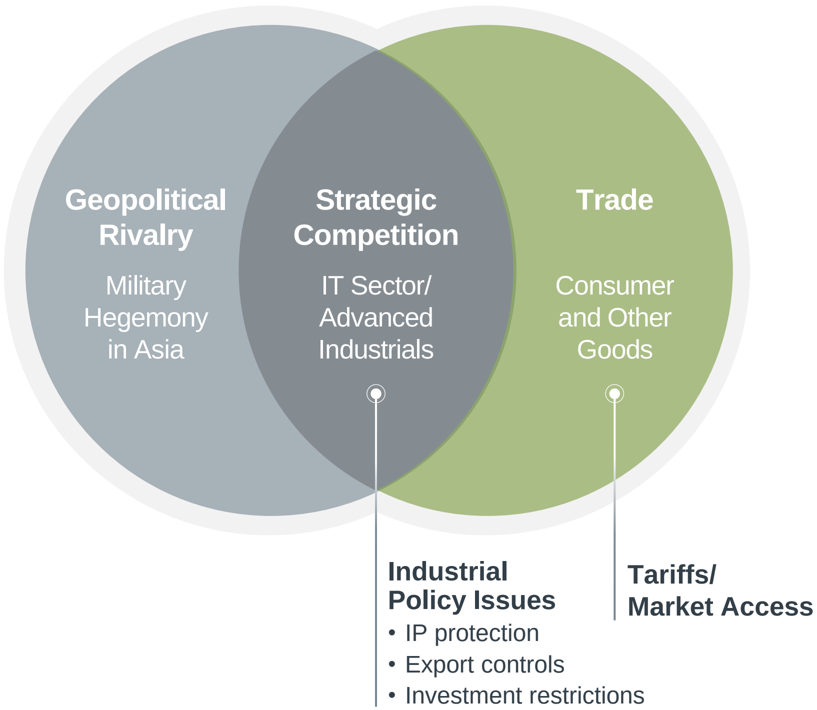


LEFT: Source: Fidelity Investments (AART), as of 12/31/18.
RIGHT: Alternative scenario, projected by the CBO, assumes various expiring policies will be extended, including recent tax cuts and higher budget caps. Source: Congressional Budget Office, Haver Analytics, Fidelity Investments (AART), as of 4/8/18.

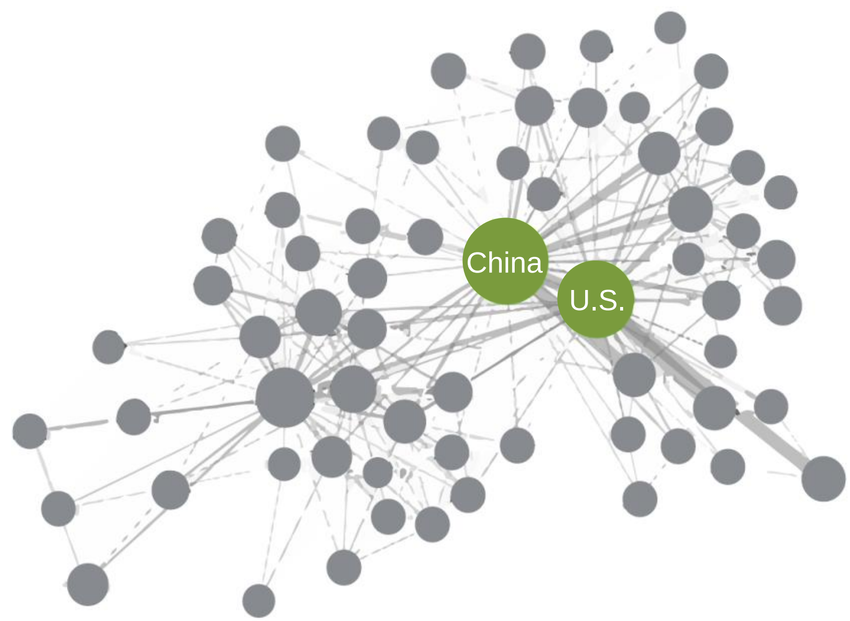
U.S.-China: Strategic Competition Intertwined with Trade

A budding U.S.–China geopolitical rivalry may make it more difficult to resolve bilateral commercial issues, representing a critical risk to the highly integrated global economy of which the U.S. and China are the most central countries. Investors have focused near-term attention on tariffs and trade deals, but the durable strategic competition is likely to continue to breed political uncertainty and conflict in the technology sector.

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 represents 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 and that elevated volatility may be driven by risks to the monetary, political, trade, and economic outlooks. After the equity sell-off in late 2018, the board also debated to what extent the slowdown in growth has already been reflected in market prices.

Business Cycle

U.S. firmly in late-cycle phase

China's economy has slowed meaningfully, weighing on global trade

Risks

Monetary and trade policy

China's uncertain cyclical outlook

Asset allocation implications

Current environment warrants smaller asset allocation tilts

Diversified and disciplined investment strategy needed to navigate uncertainty

For illustrative purposes only. Source: Fidelity Investments (AART) as of 12/31/18.

Asset Markets

Risk-Off Quarter Led to Weak Year for Asset Returns

Small-cap stocks led the decline during Q4 in both U.S. and non-U.S. developed markets. All major equity indexes posted declines for both the quarter and the year. Gold had a strong quarter and investment-grade bonds also posted positive returns. The collapse in oil prices during the quarter dragged down energy stocks as well as other inflation-sensitive assets.

U.S. Equity Styles Total Return

	Q4	2018
Growth	-16.3%	-2.1%
Large Caps	-13.5%	-4.4%
Value	-12.2%	-8.6%
Mid Caps	-15.4%	-9.1%
Small Caps	-20.2%	-11.0%

U.S. Equity Sectors Total Return

	Q4	2018
Health Care	-8.7%	6.5%
Utilities	1.4%	4.1%
Consumer Discretionary	-16.4%	0.8%
Info Tech	-17.3%	-0.3%
Real Estate	-3.8%	-2.2%
Consumer Staples	-5.2%	-8.4%
Communication Services	-13.2%	-12.5%
Financials	-13.1%	-13.0%
Industrials	-17.3%	-13.3%
Materials	-12.3%	-14.7%
Energy	-23.8%	-18.1%

International Equities and Global Assets Total Return

	Q4	2018
ACWI ex-USA	-11.4%	-13.8%
Japan	-14.2%	-12.6%
EAFE	-12.5%	-13.4%
Europe	-12.7%	-14.3%
Canada	-15.1%	-16.6%
EAFE Small Cap	-16.0%	-17.6%
Latin America	0.5%	-6.2%
Emerging Markets	-7.4%	-14.2%
EM Asia	-9.2%	-15.2%
EMEA	-4.0%	-15.6%
Gold	7.7%	-0.9%
Commodities	-9.4%	-11.2%

U.S. Equity Factors Total Return

	Q4	2018
Min Volatility	-7.5%	1.5%
Momentum	-15.6%	-1.6%
Yield	-8.3%	-2.3%
Quality	-13.7%	-2.6%
Size	-13.9%	-6.4%
Value	-16.9%	-11.1%

Fixed Income Total Return

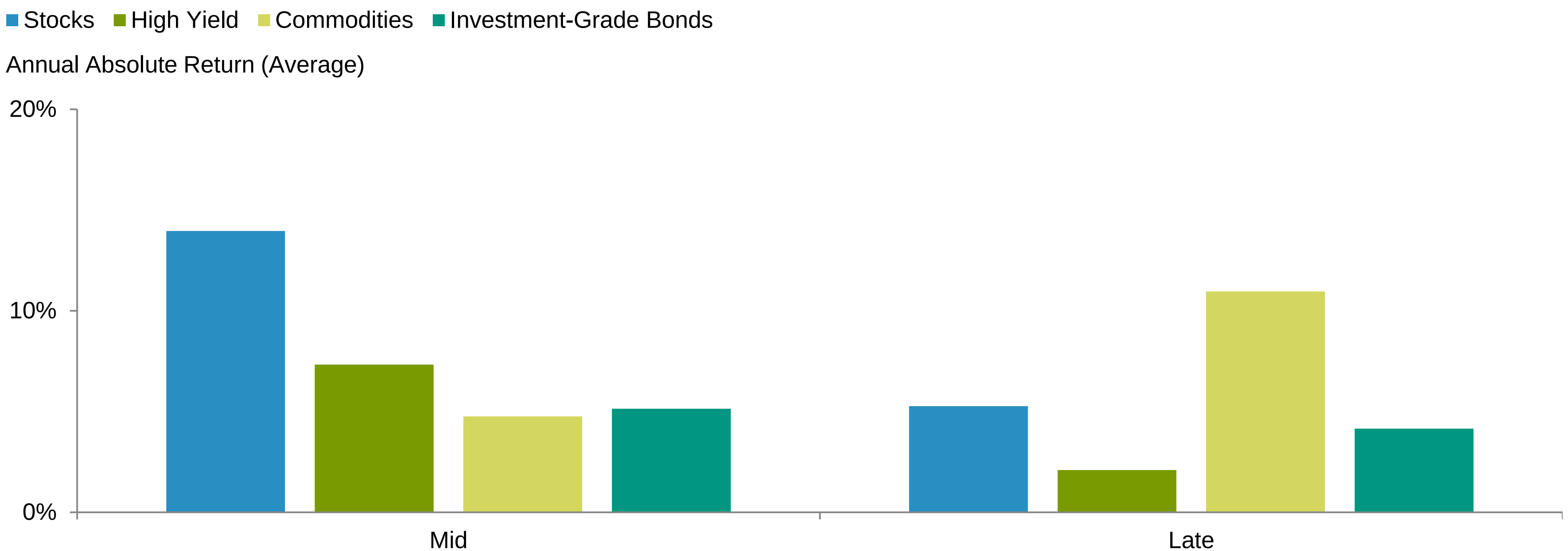
	Q4	2018
ABS	1.2%	1.8%
Agency	1.9%	1.3%
Municipal	1.7%	1.3%
CMBS	1.7%	1.0%
MBS	2.1%	1.0%
Treasuries	2.6%	0.9%
Leveraged Loan	-3.5%	0.4%
Aggregate	1.6%	0.0%
TIPS	-0.4%	-1.3%
Credit	0.0%	-2.1%
High Yield	-4.6%	-2.3%
EM Debt	-1.2%	-4.6%
Long Govt & Credit	0.8%	-4.7%

EM: Emerging Markets. 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 12/31/18.

Late Cycle: Less Favorable Risk-Return Profile

Historically, the mid-cycle phase has tended to consistently 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. The late cycle often has featured more limited overall upside for a diversified portfolio, although on average returns for most categories have been positive.

Asset Class Performance in Mid- and Late-Cycle Phases (1950–2015)



Mid Cycle: Strong Asset Class Performance

- Favor economically sensitive assets
- Broad-based gains

Late Cycle: Mixed Asset Class Performance

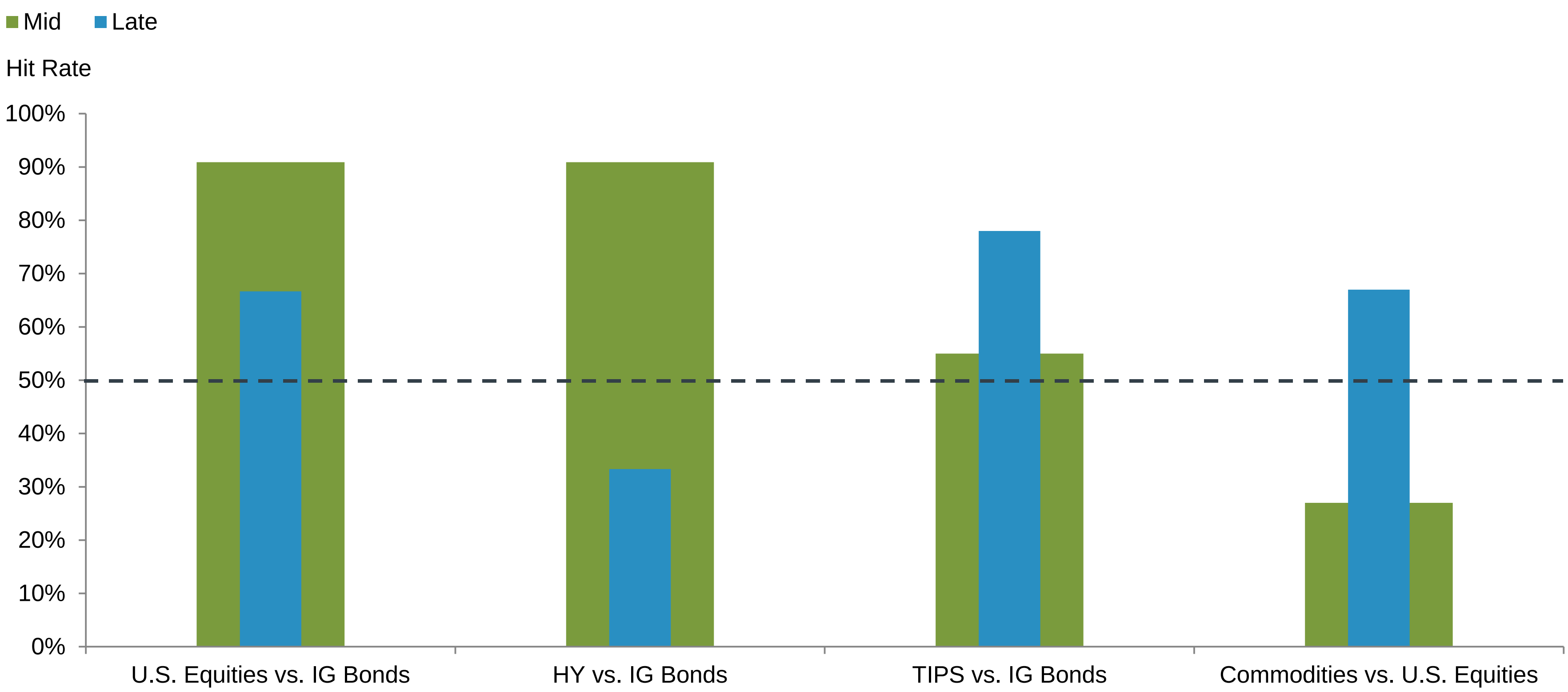
- Favor inflation-resistant assets
- Gains more muted

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 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 (1950–2015)

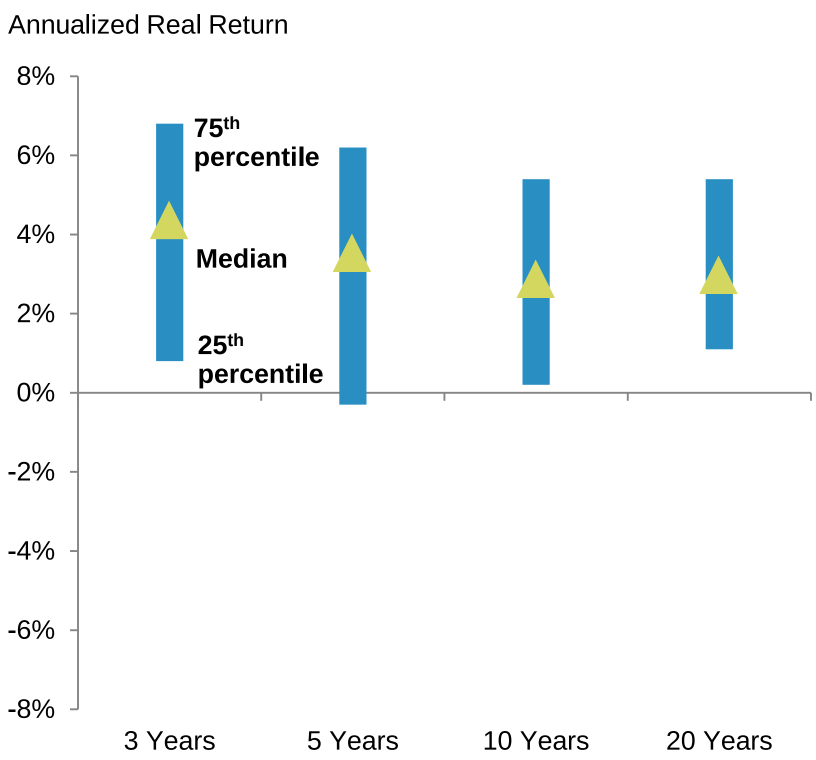


Past performance is no guarantee of future results. It is not possible to invest directly in an index. All indexes are unmanaged.
TIPS: Treasury Inflation-Protected Securities. HY: high yield. IG: investment grade. Hit Rate: frequency of an asset class outperforming another. Results are the difference 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.

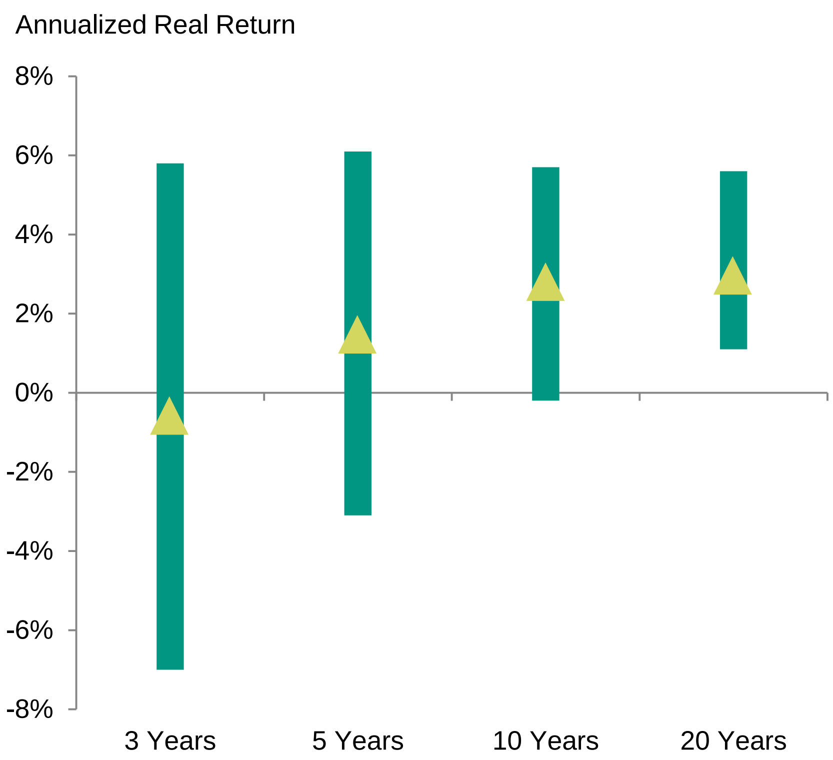
Cyclical Risk Turns Asymmetrical in the Late-Cycle Phase

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



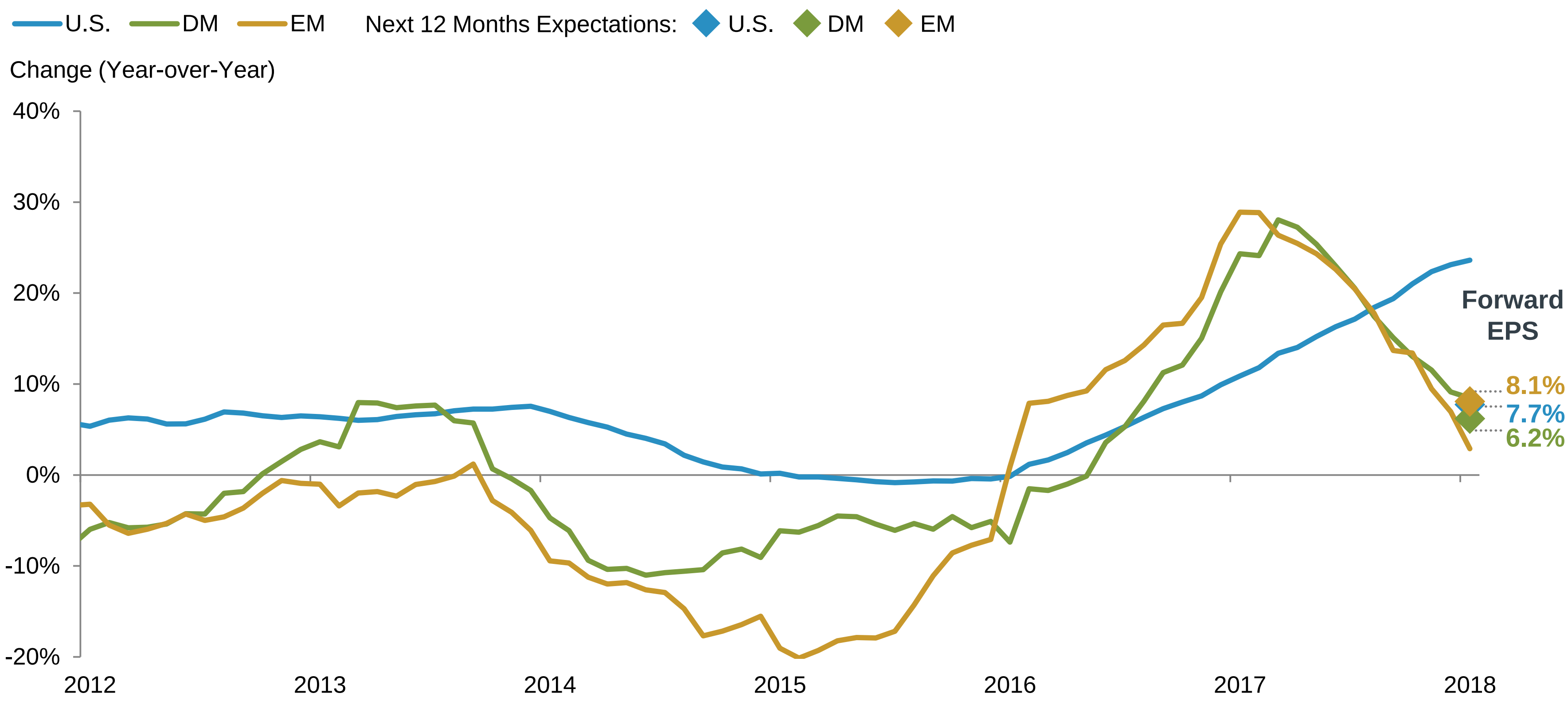
Sample Portfolio: 40% Domestic Equity • 20% Foreign Equity • 30% IG Bonds • 10% HY Bonds

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.

U.S. and International Earnings-Growth Trends Decoupled

U.S. earnings growth continued to improve on a trailing 12-month basis, helped by corporate tax reform enacted early in 2018. Non-U.S. developed-market (DM) and emerging-market (EM) profit growth, however, moderated from high levels. Forward estimates point to expectations for healthy but slower profit-growth rates for all three markets over the coming year.

Global EPS Growth (Trailing 12 Months)

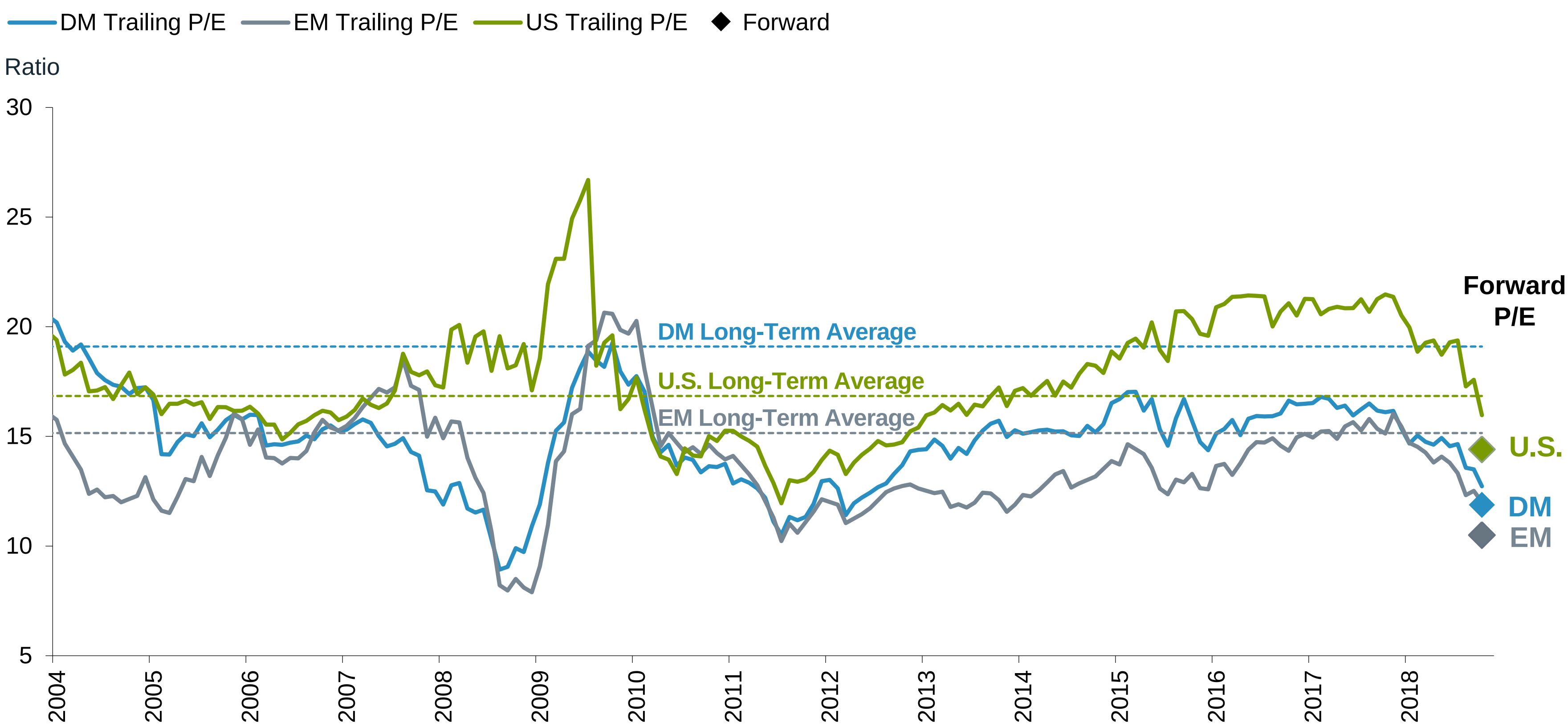


Past performance is no guarantee of future results. DM: Developed Markets. EM: Emerging Markets. EPS: Earnings per share.
Source: MSCI, FactSet, Fidelity Investments (AART), as of 12/31/18.

Equity Valuations More Attractive Relative to History

The steep drop in U.S. stock prices has pushed valuations below their long-term average for the first time in several years. On a one-year trailing-earnings basis relative to their own histories, all global indices' price-to-earnings (P/E) ratios finished 2018 below their long-term averages. Forward P/E estimates suggest investors expect U.S., DM, and EM valuations will remain below long-term averages for the time being.

Global Market P/E Ratios

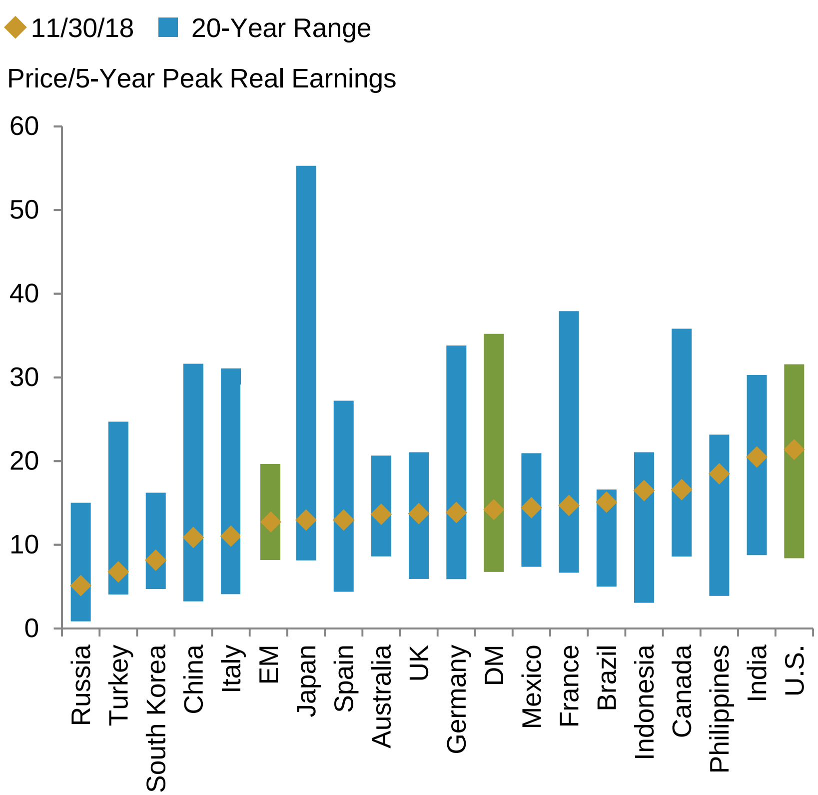


DM: Developed Markets. EM: Emerging Markets. Past performance is no guarantee of future results. It is not possible to invest directly in an index. All indexes are unmanaged. See Appendix for important index information. Price-to-earnings ratio (P/E): stock price divided by earnings per share. Also known 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 12/31/18.

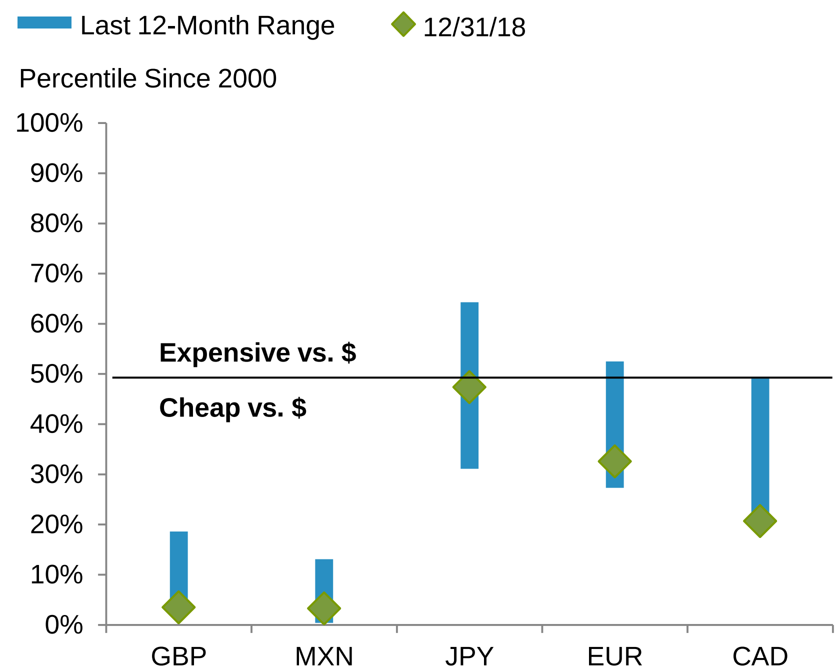
Non-U.S. Equity Valuations More Attractive, Dollar Mixed

Using five-year peak-inflation-adjusted earnings, P/E ratios for international developed and emerging markets remain lower than those for the United States, providing a relatively favorable long-term valuation backdrop for non-U.S. stocks. The U.S. dollar generally stabilized during Q4 after a sharp run-up during the first half of the year. We see the dollar's valuation as relatively mixed against many of the world's major currencies.

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 11/30/18. **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 12/31/18.

GICS Change to Impact 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, which includes changes to three sectors, began in Q4. The changes converted the former Telecommunication Services into a more cyclical sector—renamed "Communication Services." We will update our historical business-cycle heat map next quarter.

Business-Cycle Approach to Sectors

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

Investment Implications of GICS Change

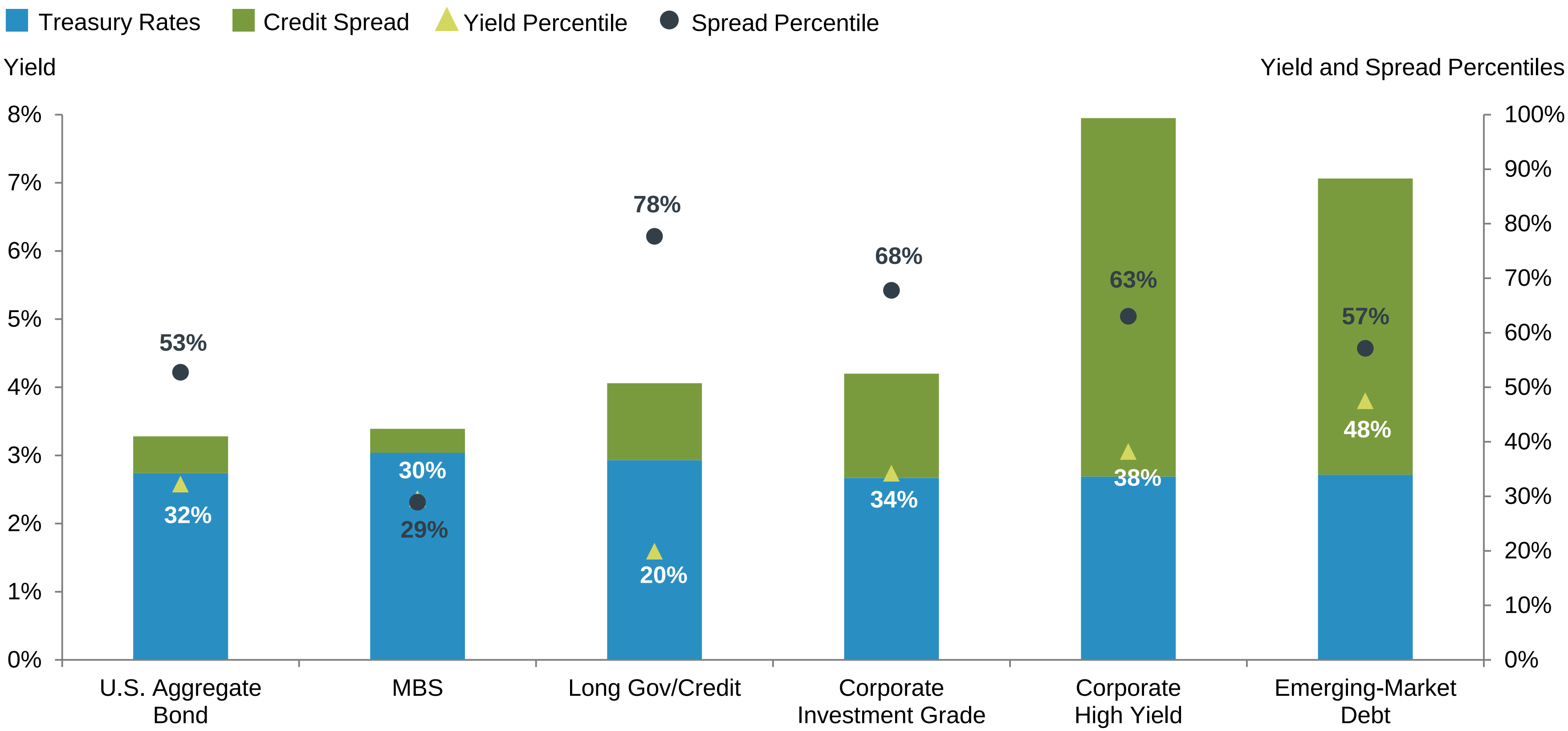
	GICS Changes	Investment Implication
Communication Services	New sector combines telecom, entertainment software, traditional media, and internet media	New sector more cyclical
Telecom	Sector becomes Communications	No longer a defensive sector
Info Tech	Loses some internet companies and entertainment software	Remains cyclical
Consumer Discretionary	Loses media, gains online marketplaces	Remains cyclical

Past performance is no guarantee of future results. Sectors as defined by GICS.
LEFT: 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. Source: The Business-Cycle Approach to Sector Investing, Fidelity Investments (AART), October 2016.
RIGHT: Source: Fidelity Investments (AART), as of 9/30/18.

Spike in Credit Spreads Partially Offset by Falling Rates

After rising through the first three quarters of 2018, interest rates (Treasury bond yields) declined in Q4 amid equity-market volatility. Credit spreads widened materially across all major fixed-income categories, particularly in riskier categories such as U.S. high yield debt. As a result, overall yields did not change dramatically for most bond categories, but credit spreads ended above historical averages.

Fixed Income Yields and Spreads (1993–2018)

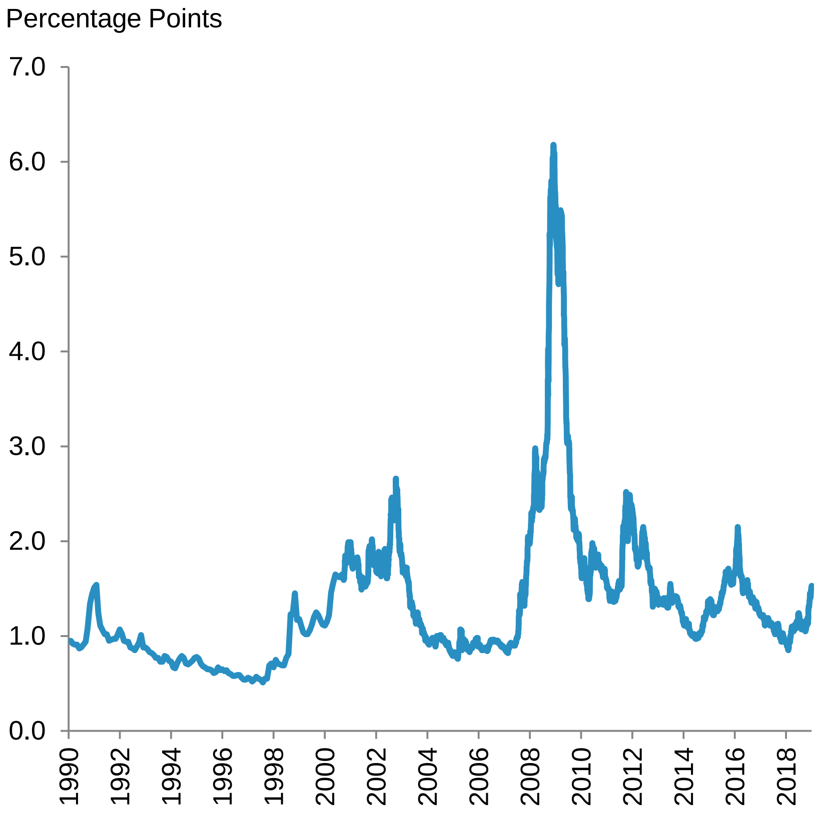


Past performance is no guarantee of future results. It is not possible to invest directly in an index. All indexes are unmanaged. See Appendix for important index information. Percentile ranks of yields and spreads based on historical period from 1993 to 2018. MBS: mortgage-backed security. Source: Bloomberg Barclays, Bank of America Merrill Lynch, JP Morgan, Fidelity Investments (AART), as of 12/31/18.

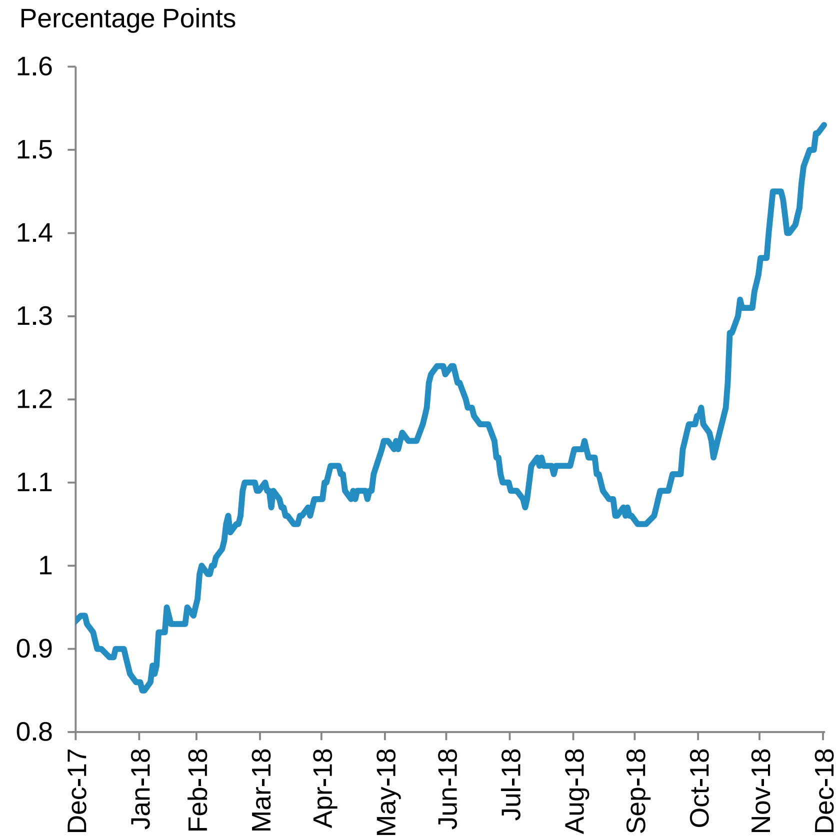
Corporate Spreads Widened during the Quarter

Corporate bond spreads widened sharply in Q4. At 1.53%, investment-grade spreads were 60 bps higher for the year and 68 bps above the February post-crisis low, though they remain only slightly above long-term averages. Risk-off sentiment was driven by growth and policy themes similar to those weighing on equities. On the technical side, foreign demand for corporate credit softened due partly to higher hedging costs.

U.S. IG Corporate Bond Spreads (1990–2018)



U.S. IG Corporate Bond Spreads (Full Year 2018)

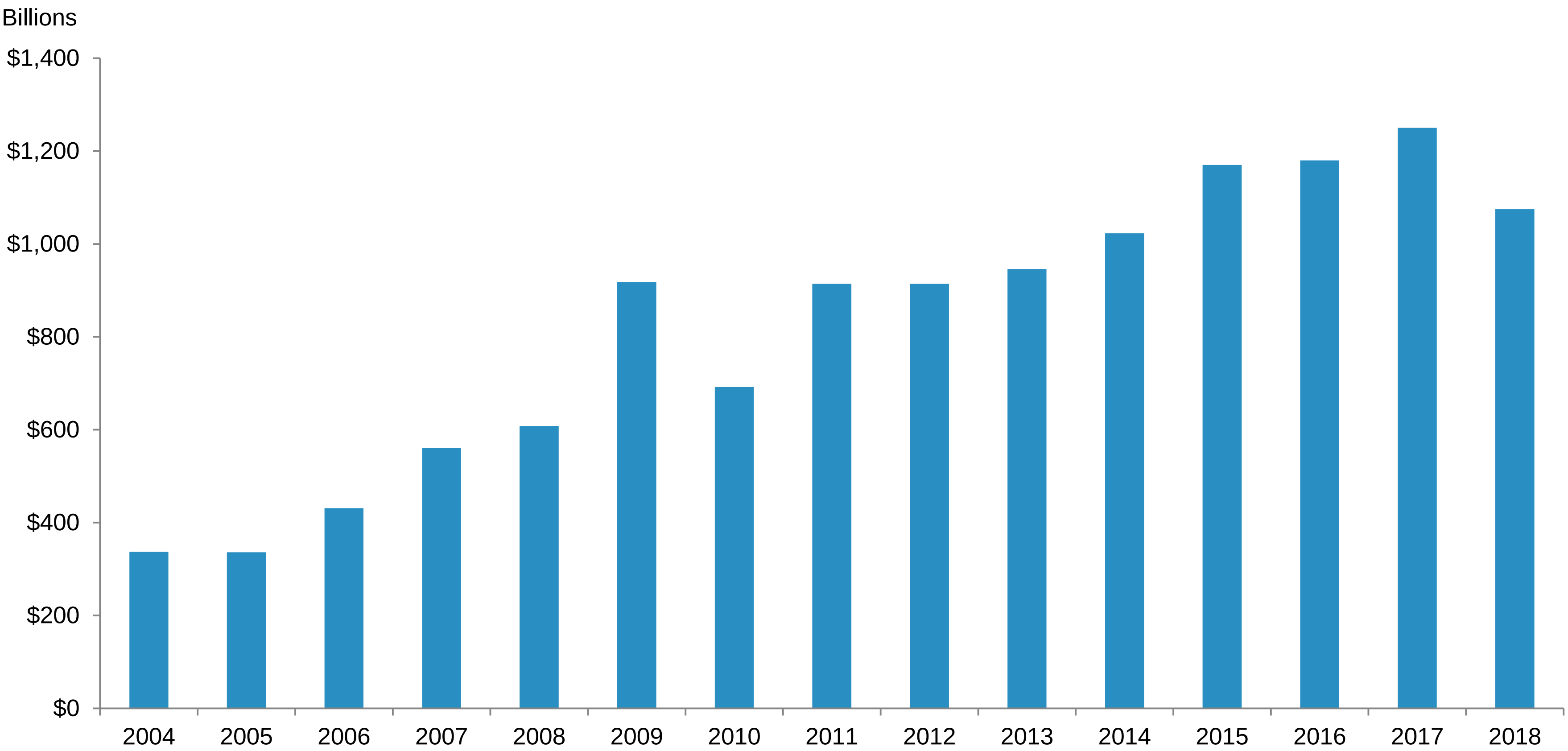


IG: Investment Grade. Source: Barclays Capital, Bloomberg Finance L.P., Fidelity Investments as of 12/31/18.

Bond Issuance Softened but Remains Substantial

Investment-grade bond issuance topped $1 trillion for the fifth year in a row but was the lowest since 2014 and is expected to decline further in 2019. A combination of industry-specific trends (technology and finance) and macro factors (higher rates, tax changes, leverage policies) supported the decline. Consumer discretionary and non-discretionary companies generated over 25% of 2018 issuance.

Investment-Grade Corporate Bond Issuance (Gross)



Source: Bloomberg Barclays, Fidelity Investments as of 12/31/18.

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

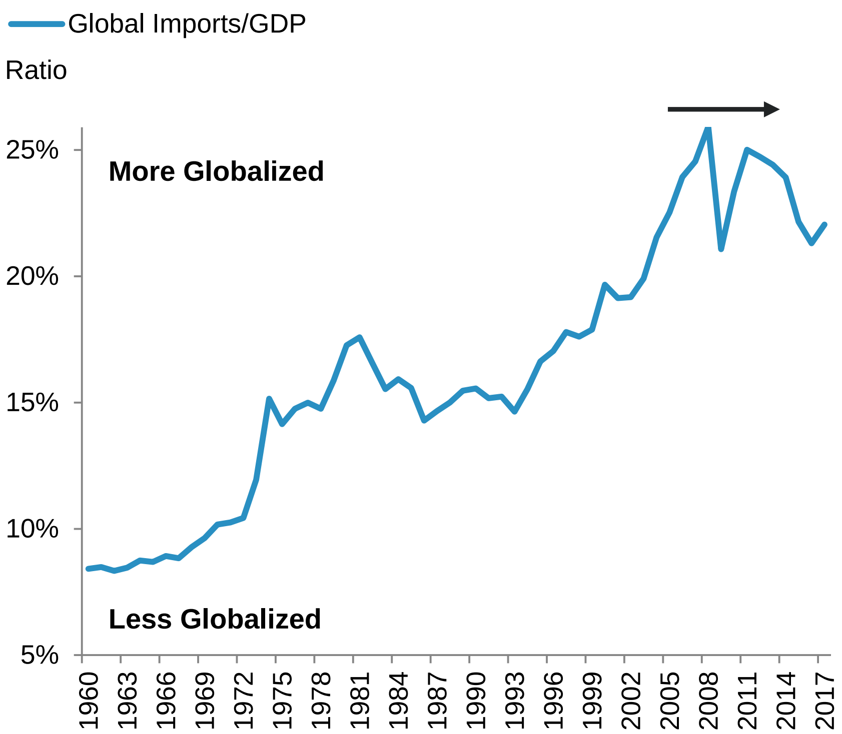
1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	Legend
18%	75%	17%	38%	35%	35%	35%	66%	32%	14%	26%	56%	32%	35%	35%	40%	5%	79%	28%	8%	20%	39%	28%	5%	21%	38%	0%	Investment-Grade Bonds
17%	33%	8%	37%	23%	33%	29%	34%	26%	8%	10%	47%	26%	21%	33%	16%	-20%	58%	27%	8%	19%	34%	14%	3%	18%	30%	-2%	Growth Stocks
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%	High-Yield Bonds
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%	60% Large Cap 40% IG Bonds
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%	REITs
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%	Large Cap Stocks
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%	Value Stocks
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%	Foreign-Developed Country Stocks
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%	Small Cap Stocks
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%	Commodities
-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%	Emerging-Market Stocks

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 12/31/18.

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

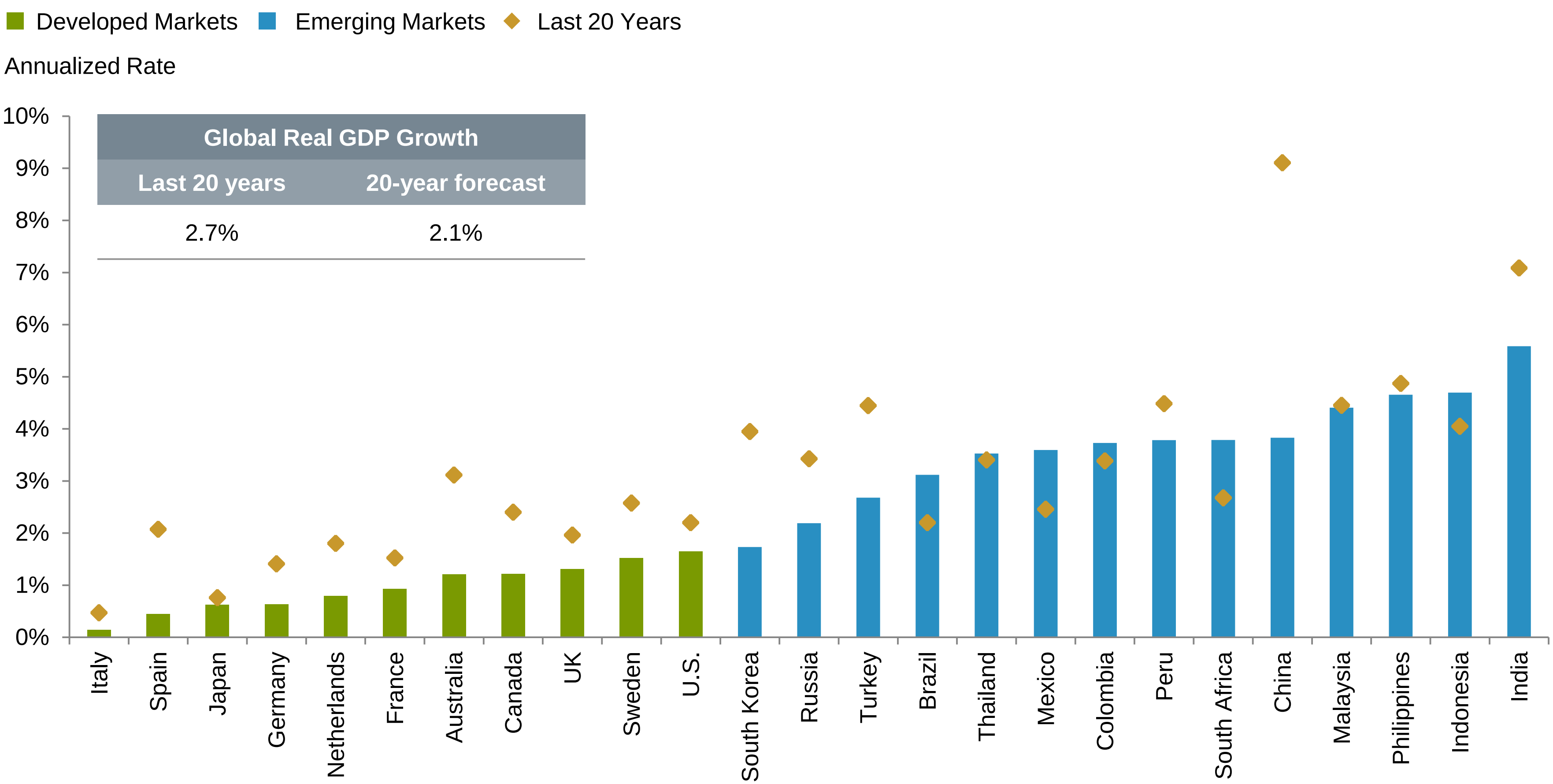
LEFT: Source: International Monetary Fund (IMF), World Bank, Haver Analytics, Fidelity Investments (AART), as of 12/31/17.

Fidelity INVESTMENTS

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



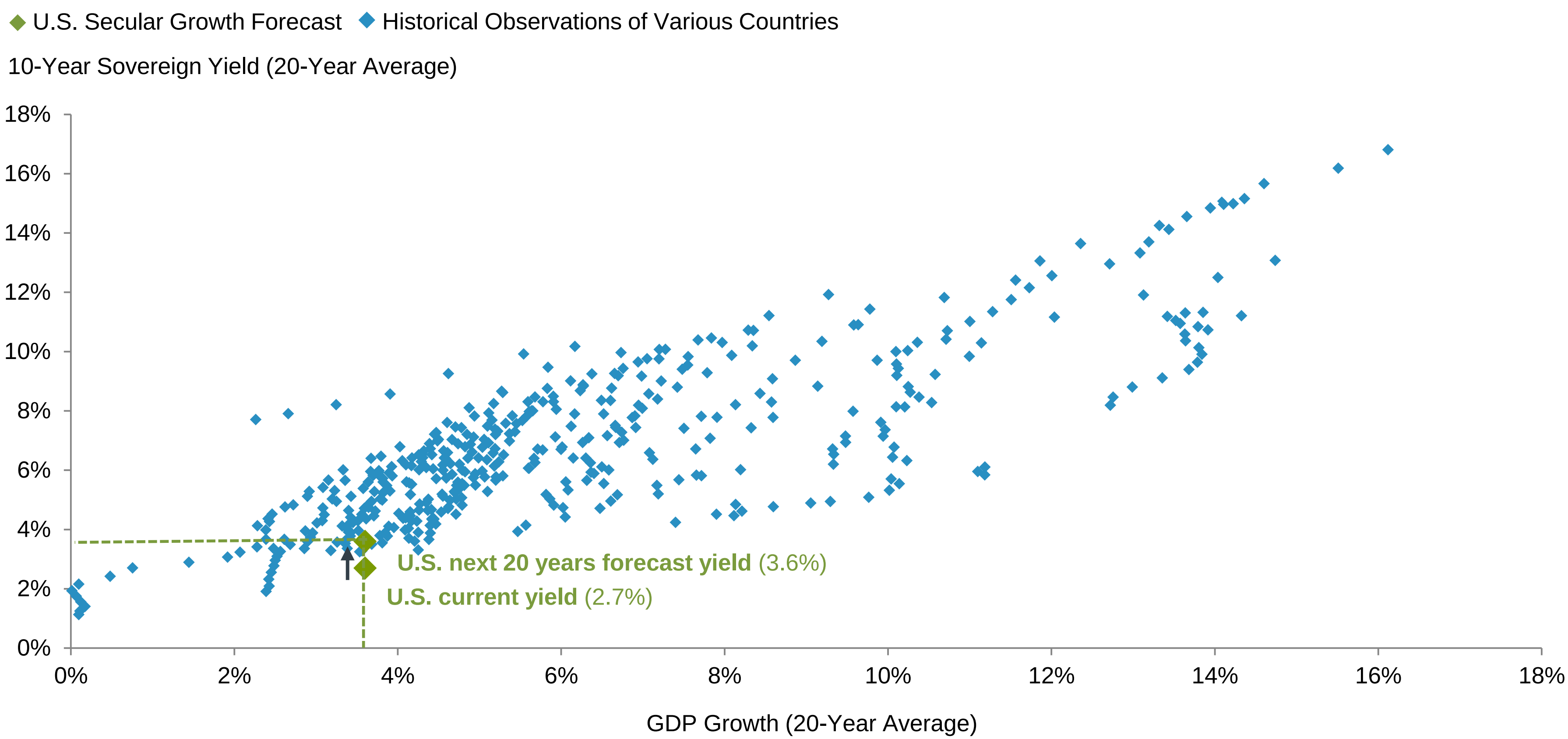
Global Real GDP Growth	
Last 20 years	20-year forecast
2.7%	2.1%

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.

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

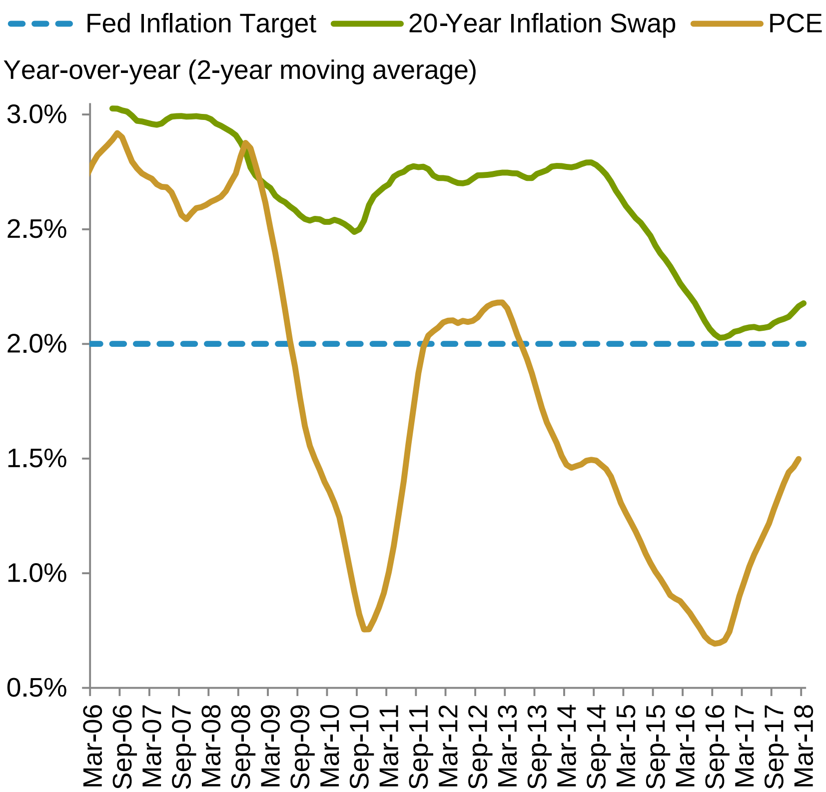


GDP: Gross Domestic Product. Source: Official Country Estimates, Haver Analytics, Fidelity Investments (AART), as of 12/31/18.

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

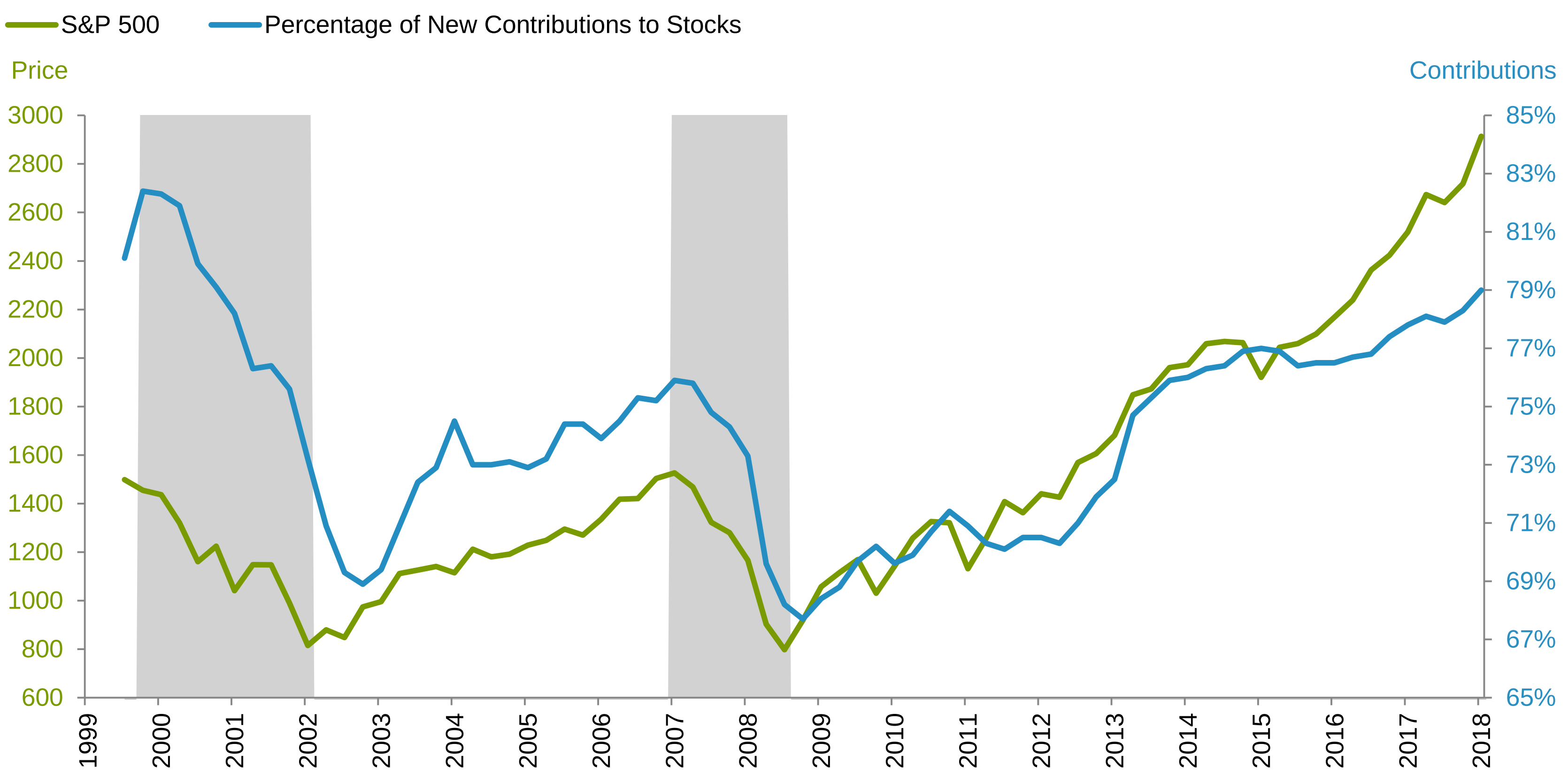
Secular Factors	Possible Developments	Risks to Inflation
Policy	Fed targets higher inflation	↑
	Higher deficits/unsustainable debt	↑
Aging Demographics	Elderly people:	
	• Spend less (reducing demand)	↓
	• Work less (reducing supply)	↑
Peak Globalization	More expensive goods/labor	↑
Technological Progress	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.

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

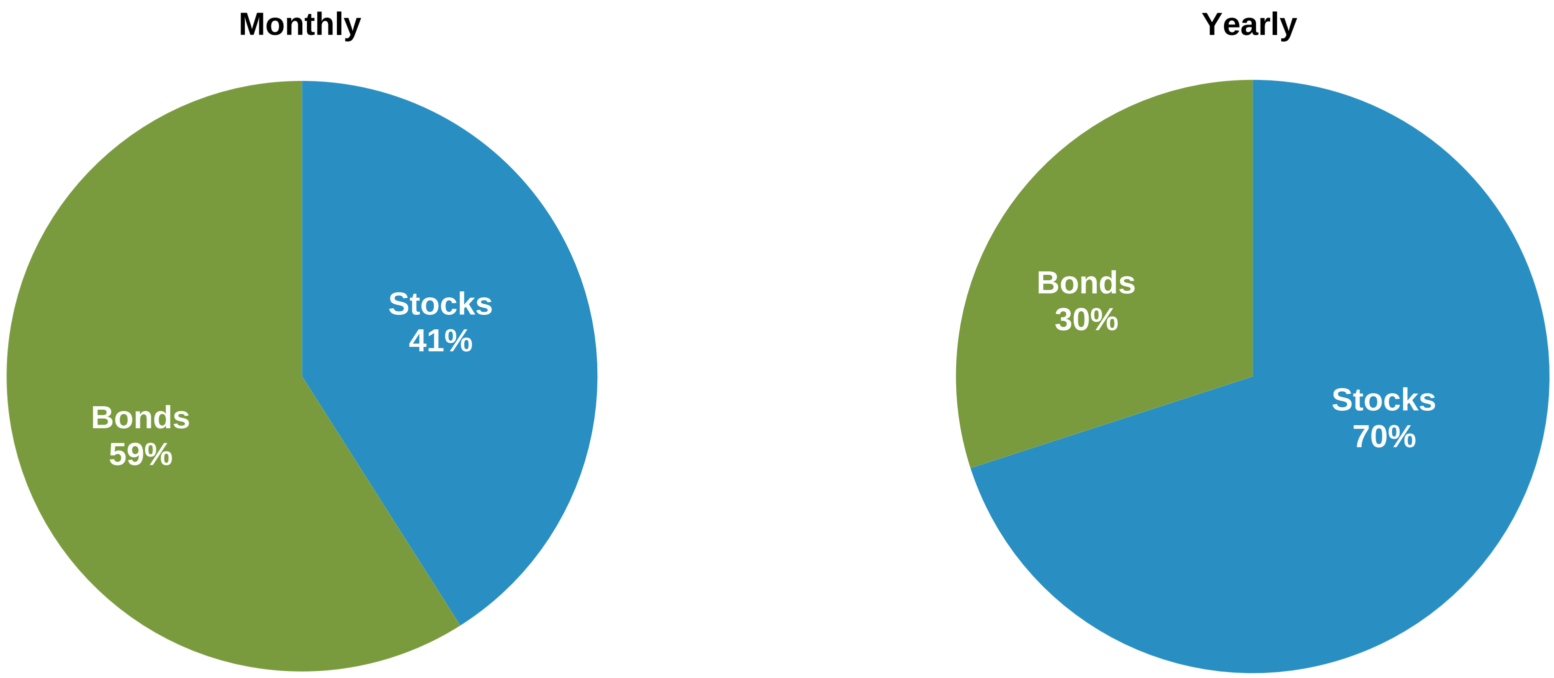


Shaded area represents bear markets, when the stock market (S&P 500 Index) fell by more than 20% peak to trough. Stock contributions: the percentage of all new directed deferrals (contributions) into stocks by participants via the available investment options in defined contribution plans administered by Fidelity Investments. Standard & Poor's, Bloomberg Financial L.P., Fidelity Investments as of 9/30/18.

Myopic Loss Aversion Prompts Risk-Averse Behavior

Myopic loss aversion **describes a common bias in which greater sensitivity to losses than to gains is compounded by the frequent evaluation of outcomes. Investors who review their portfolios more frequently have tended to shift toward more conservative exposures, as increased monitoring raises the likelihood of seeing (and reacting to) a loss.**

Impact of Feedback Frequency on Investment Decisions



In a study, subjects were assigned simulated conditions that were similar to making portfolio decisions on a monthly or yearly basis.
Source: Thaler, R.H., A. Tversky, D. Kahneman, and A. Schwartz. “The Effect of Myopia and Loss Aversion on Risk Taking: An Experimental Test.” *The Quarterly Journal of Economics* 112.2 (1997), used by permission of Oxford University Press; Fidelity Investments (AART), as of 6/30/18.

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 23 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 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 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).

Appendix: Important Information

Market Indexes (continued)

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.

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. **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 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 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 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 United States.

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.

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.

Appendix: Important Information

Market Indexes (continued)

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 **S&P 500 Total Return Index** represents the price changes and reinvested dividends of the S&P 500®. **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.

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.

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 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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