WELLS FARGO
INVESTMENT INSTITUTE

Asset Allocation Strategy

February 15, 2019

Guidance changes.
Pages 5, 8, 18, and 19.

Allocation changes.
Pages 22-27.

Darrell Cronk, CFA,
President, Wells Fargo Investment Institute and CIO, Wealth and Investment Management

Global Asset Allocation Team

Tracie McMillion, CFA,
Head of Global Asset Allocation

Chris Haverland, CFA,
Global Asset Allocation Strategist

Michael Taylor, CFA,
Investment Strategy Analyst

Veronica Willis,
Investment Strategy Analyst

Bobby Zheng, CFA,
Investment Strategy Analyst

Asset Class Strategists

Paul Christopher, CFA,
Head of Global Market Strategy

Brian Rehling, CFA,
Co-Head of Global Fixed Income Strategy

George Rusnak, CFA,
Co-Head of Global Fixed Income Strategy

Peter Wilson,
Global Fixed Income Strategist

Luis Alvarado,
Investment Strategy Analyst

Audrey Kaplan
Head of Global Equity Strategy

Scott Wren,
Senior Global Equity Strategist

Ken Johnson, CFA,
Investment Strategy Analyst

Sameer Samana, CFA,
Senior Global Market Strategist

Peter Donisanu,
Investment Strategy Analyst

Craig Holke,
Investment Strategy Analyst

Charlotte Woodhams
Investment Strategy Analyst

John LaForge,
Head of Real Asset Strategy

Austin Pickle, CFA,
Investment Strategy Analyst

Adam Taback,
Head of Global Alternative Investments

Jim Sweetman,
Global Alternative Investments Strategist

Justin Lenarcic,
Global Alternative Investments Strategist

Investing for increased volatility

Over the past year, market volatility has increased from the unusually low levels in 2016 and 2017, as equity markets corrected and most asset classes had negative 2018 returns. We expect volatility to remain elevated—and more aligned with historical averages—as investors price in global economic growth concerns, trade issues, and political uncertainties in the U.S. and overseas.

Although global equity markets corrected last year, we do not anticipate the end of the bull market just yet. It is not uncommon for equity markets to take time to recover fully after a correction, but corrections—even those as deep as the most recent one—are not typically accompanied by recessions.

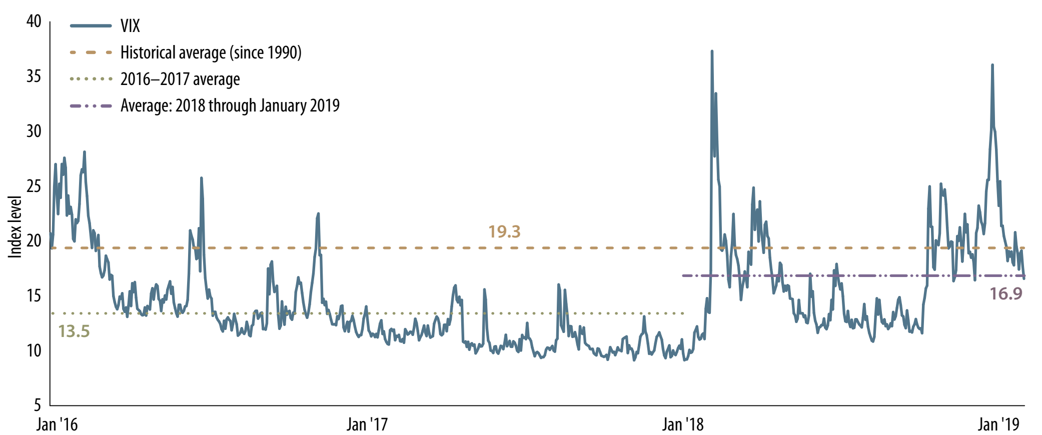
Our view is that the global economy is strong and fundamentals remain positive. We believe that investors should keep a longer-term perspective and remain fully invested in a diversified portfolio that aligns with their risk appetite and time horizon. While we expect equity markets to recover from last year's lows, the ride may be bumpy as volatility rises. We currently favor reducing equity risk in small-cap equities—as small-cap companies may be more vulnerable to a maturing economic cycle than larger firms are.

We suggest that investors consider the following actions in response to market volatility:

- **Maintain a modest cash position, but look for opportunities to become fully invested:** Cash and cash alternatives have a place in an investment portfolio for rebalancing, tactical opportunities, and transaction costs. However, we believe that the amount should be kept at a minimum—as returns for this asset class historically have barely outpaced inflation and recently have lost ground to inflation. For

(Continued on next page.)

Volatility is increasing but remains below the historical average



Sources: Bloomberg, Wells Fargo Investment Institute, as of January 31, 2019. The CBOE Volatility Index® (VIX®) shows the market's expectation of 30-day volatility. It is constructed using the implied volatilities of a wide range of S&P 500 Index options. This volatility is meant to be forward looking and is calculated from both calls and puts. The VIX is a widely used measure of market risk and is often referred to as the "investor fear gauge." An index is unmanaged and not available for direct investing. **Past performance is no guarantee of future results.**

Investing for increased volatility (continued)

investors that are overweight in cash, we recommend dollar-cost averaging into a diversified mix of assets*.

- **Maintain exposure to fixed income:** Even in this low-rate environment, we believe that bonds should be included in a diversified portfolio. They can provide income, stability of principal, and low correlation to equities. Additionally, short-term interest rates have risen since the Federal Reserve (Fed) began tightening monetary policy. Investing in short-term securities can offer a lower volatility profile than longer-term issues.
- **Globalize your equities:** U.S. equity markets have outperformed their international counterparts for much of this recovery, but international economies and earnings generally are improving. International equities do not always move in lockstep with U.S. equities, and these assets can add attractive diversification benefits to a portfolio.
- **Consider alternative investments:** For accredited or qualified investors, hedge funds may provide some downside protection when equity markets decline. We expect hedge funds to generate positive returns in 2019 as correlations fall and the environment for active management improves.
- **Stick to your plan by rebalancing:** Regularly rebalancing portfolio holdings is important. Letting investments move with the markets without rebalancing can lead to portfolio risk that does not match the investor's risk profile. Keeping a portfolio aligned with its strategic allocation targets can reduce potential overexposure to risky assets when a correction or bear market arrives.

* A periodic investment plan such as dollar cost averaging does not assure a profit or protect against a loss in declining markets. Since such a strategy involves continuous investment, the investor should consider their ability to continue purchases through periods of low price levels.

Global Economic Summary

United States

Due to the federal government shutdown, the advance look at fourth-quarter GDP will not be released until the end of February.

The nonfarm payroll report for January surprised to the upside, with 304,000 jobs added to the U.S. economy. The unemployment rate increased to 4.0%, and labor force participation improved to 63.2%. Wage growth increased 3.2% on a year-over-year (YoY) basis.

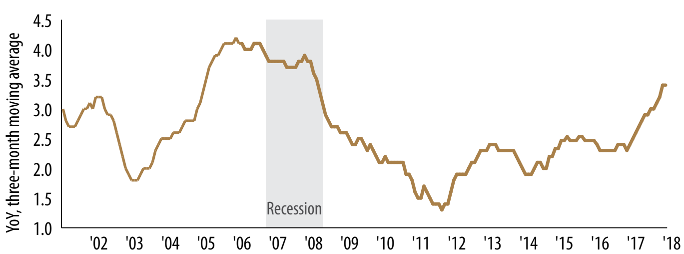
Inflation remains moderate. The Consumer Price Index (CPI) was flat for the month and rose by 1.6% YoY. Excluding the more volatile food and energy components, CPI increased 0.2% for the month and 2.2% YoY.

The January Institute for Supply Management (ISM) manufacturing and services survey data was mixed. The manufacturing survey improved from 54.3 to 56.6, while the services survey declined from 58.0 to 56.7. Both signal continued future growth (a reading above 50 indicates expansion).

Consumer confidence declined to 120.2 in January. The present-situation index decreased slightly, while expectations for the future continued the downward trajectory.

Existing home sales declined -6.4%, to a seasonally-adjusted 4.99-million-unit annual pace. Additional December housing data will not be published until late February and early March.

U.S. wages continue the upward trajectory



Sources: Bureau of Labor Statistics, Bloomberg, February 11, 2019.
Data is a three-month moving average of year-over-year average hourly earnings from January 2002 to January 2019.

Europe

Data suggests that economic activity in Europe remains positive, but was showing signs of slowing heading into year-end. An advance reading on fourth-quarter eurozone GDP growth showed stable quarter-to-quarter activity, but generally softer growth from the same period last year. Fundamentals such as credit, hiring, and household spending remain solid but are increasingly facing headwinds. We believe that softer European growth likely stems from heightened business uncertainty in the face of tighter monetary policy and geopolitical worries.

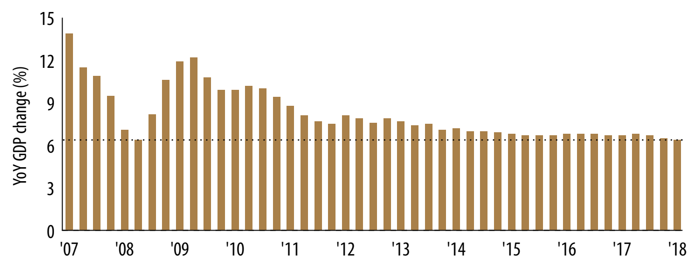
Tariff concerns, upcoming parliamentary elections, and ongoing Brexit-related uncertainty arguably have made it challenging for firms to think long term, when such headline events have the potential for adverse long-term impacts. As a result, European business sentiment weakened in 2018 and early 2019 at a pace that was much faster than anticipated. This weaker outlook likely has curbed firms' willingness to invest in operations, thereby reducing the contribution of business investment to economic activity.

Asia

Data showed that China's economy expanded at its slowest pace since 2009 in the fourth quarter. Stabilizing business and household sentiment—balanced against softer retail sales and housing-market conditions—has contributed to slowing fourth-quarter GDP growth. While this is disconcerting to some, Beijing's recent policy responses suggest that the slowdown is likely to stabilize this year.

Outside of China, external factors such as trade remain supportive of positive (yet softer) activity across Asia. While some broad measures of trade are likely to reflect the effects of U.S. importers front-loading orders of China's goods ahead of tariffs, data from other countries like South Korea, Singapore, and Malaysia show solid household consumption in the fourth quarter. This is important, because we view positive trade activity as a coincidental measure of solid global economic growth.

Fourth-quarter Chinese YoY GDP growth was the slowest since 2009



Source: Bloomberg, February 2019.

Key economic statistics

Global growth rates (%)	Q4 2018	Q3 2018	Q2 2018
U.S. real economic growth (GDP)[1]	2.6[a]	3.4	4.2
Eurozone real economic growth[2]	1.2	1.6	2.2
Japanese real economic growth[1]	1.4[a]	-2.5	2.8
Chinese real economic growth[2]	6.4	6.5	6.7
Key U.S. economic data	**1/19**	**12/18**	**1/18**
Unemployment rate (%)	4.0	3.9	4.1
Leading economic index (LEI) (%)	0.2[a]	-0.1	0.7
Durable goods orders (%)	—	—	-4.2
ISM manufacturing	56.6	54.3	59.6
ISM service	56.7	58	59.4
Retail sales (%)	—	-1.2	-0.5
Consumer confidence	120.2	126.6	124.3
New home sales (thousands)	—	—	633
Existing home sales (millions)	—	5.0[a]	5.38
U.S. Dollar Index	95.58	96.17	89.13
U.S. inflation (%)	**1/19**	**12/18**	**YoY**
Consumer Price Index (CPI)	0.0	0.0	1.6
Core CPI	0.2	0.2	2.2
Producer Price Index (PPI)	-0.1	-0.1	2.0
Core PPI	0.3	0.0	2.6
Personal consumption expenditures (PCE)	—	—	—
Core PCE	—	—	—

Sources: Bloomberg, FactSet, February 15, 2019. [1] Annualized QoQ % change; [2] Year-over-year % change; [a] Bloomberg survey estimate. See end of report for important definitions and disclosures.

Global Economic Summary

Wells Fargo Investment Institute forecasts

GDP growth: Data continue to reflect broad advancement—yet some signs of slowing—in the global economy. We believe that the U.S. economy is in the latter stages of its expansion, which is associated with positive, but slowing, growth. We do not expect a U.S. recession in 2019. Yet, last month, we reduced our 2019 GDP growth forecast to reflect continued growth headwinds. Globally, we expect a strong policy response from Beijing to help underpin China's economy—as tariff-related and other challenges lead to more slowing in its economic growth. Our outlook for Europe has softened recently as a broad deterioration in business sentiment during the second half of 2018 led us to reduce our eurozone GDP growth forecast last month. We believe that Japan's economy should expand at a positive (yet moderate) pace this year.

Inflation: We recently reduced our 2019 U.S. and developed market inflation forecasts slightly to reflect lower energy prices, and slower economic and business spending growth in these markets. We expect the 2019 growth in U.S. inflation to be muted by a slower economic expansion, contained labor-cost pressure, and a deceleration in commodity price changes. Labor-market slack and contained wage growth also are expected to be headwinds for inflation in international developed markets overall. Additionally, in the emerging markets, monetary policy recently has become less restrictive, which should help to moderate emerging market inflationary pressures.

Unemployment rate: The strong labor market is slowly raising wages and producing job openings broadly across the U.S. economy. This trend has been reflected in the U.S. unemployment rate falling to multi-year lows last year. Similar developments are underway in Europe and Japan.

Global economy

	2019 YE targets (%)	Current (%)
Domestic GDP growth	2.5	3.0[1]
Domestic inflation	2.2	1.9[3]
Domestic unemployment rate	3.4	4.0
Global GDP growth	3.6	3.7[3]
Developed-market GDP growth	2.0	2.1[1]
Developed-market inflation	1.9	2.2[2]
Emerging-market GDP growth	4.8	5.0[1]
Emerging-market inflation	4.3	5.4[2]
Eurozone GDP growth	1.6	1.2[3]
Eurozone inflation	1.7	1.4

Sources: FactSet, Bloomberg, International Monetary Fund, January 31, 2019. The 2019 targets are Wells Fargo Investment Institute forecasts, as of February 15, 2019. GDP = gross domestic product. See end of report for important definitions and disclosures.

[1] As of September 30, 2018.
[2] As of October 31, 2018.
[3] As of December 31, 2018.

Fixed Income

Market summary

Fixed income had a solid 2019 start, with January gains for all major bond classes. As Fed Chair Powell signaled a more patient approach to future rate hikes, both bond and equity markets responded positively. The Fed's communications acknowledged slowing (albeit solid) economic data and potential crosscurrents, such as Brexit. Preferred stock (+5.1%) outperformed other fixed-income classes as a "risk-on" environment returned. Improved risk sentiment fueled strong U.S. high-yield (HY) and investment-grade (IG) corporate returns (+4.5% and +2.4%, respectively). It also contributed to the rebound in emerging market (EM) debt returns last month (+4.4% and +5.8% in U.S. dollar-denominated and local currency markets, respectively).

Market observations

U.S. fixed income: Longer-maturity taxable issues (+2.2%) outperformed, and the yield curve flattened slightly, with 2-year to 10-year Treasury yield spreads declining by 3 basis points (0.03%). We expect the curve to remain relatively flat this year. We recently upgraded short-term taxable fixed income to a most favorable view, as we believe this fixed-income class offers the best 2019 risk-adjusted return potential for the asset group.

HY corporates outperformed as the 4.5% January HY bond return reversed the 4.5% fourth-quarter 2018 loss. Similarly, the 2.4% IG corporate monthly return nearly reversed the 2.5% 2018 downturn. Most of the January HY and IG corporate outperformance came from lower-rated credits. We see the recent HY outperformance as an opportunity for investors to "sell into strength," as we believe that further weakness awaits later in the business cycle. We favor raising average credit quality.

Municipals had a healthy January return (0.8%) as demand and asset inflows were strong. Intermediate maturities performed best, while returns were solid for both IG and HY municipals. Municipal-to-Treasury yield ratios are historically rich, and we are entering a time when new issue supply typically rises. Additionally, the coming weeks could be a seasonally weak period for municipals as many investors sell municipals during tax season. We believe that any short-term municipal market weakness should be used as a buying opportunity for longer-term investors.

Developed markets: Increasing signs of Fed dovishness weakened the U.S. dollar and boosted risk assets last month. Unhedged developed market (DM) bonds (+1.9%) outperformed hedged (+1.1%). Canadian, Australian, and New Zealand bonds outperformed as these countries' risk-sensitive currencies responded well to the EM rally. U.K. gilts benefited from the British pound's gains as parliamentary developments suggested that economically negative Brexit outcomes might be less probable. Despite the better sentiment toward global risk assets, eurozone bond yields fell to two-year lows in late January, following disappointing economic data. Swedish bonds underperformed in dollar terms as the krona fell sharply.

Emerging markets: The dovish Fed pivot, Chinese stimulus measures, and trade-resolution hopes created a bullish environment for EM bonds and currencies. Local-currency bonds gained 5.8% in dollar terms, and dollar-denominated sovereigns rose 4.4% last month. Both EM bond classes essentially "erased" 2018 EM index losses last month. In local currency terms, outperformers were the 2018 laggards, such as Turkey, Argentina, and South Africa—along with large index constituents like Brazil and Mexico—in a broad-based rally. India was the only large EM market that declined as missed budget-deficit targets weakened the rupee. There was a similar trend of broad-based gains for dollar-denominated EM sovereigns, but idiosyncratically, Venezuela contributed the largest index gains as hopes of regime change boosted distressed bond prices.

Fixed income index total returns (%)

	MTD	QTD	YTD	1 year	3 year	5 year
U.S. Taxable Inv Grade Fixed Income	1.1	1.1	1.1	2.3	2.0	2.4
U.S. Short Term Taxable	0.4	0.4	0.4	2.3	1.2	1.1
U.S. Intermediate Term Taxable	1.0	1.0	1.0	3.1	1.7	2.3
U.S. Long Term Taxable	2.2	2.2	2.2	-0.4	4.0	4.8
U.S. Treasury Bills	0.2	0.2	0.2	1.9	1.0	0.6
U.S. Municipal Bonds	0.8	0.8	0.8	3.3	2.2	3.6
High Yield Taxable Fixed Income	4.5	4.5	4.5	1.7	9.4	4.6
DM Ex.-U.S. Fixed Income (Unhedged)	1.9	1.9	1.9	-2.8	2.9	0.1
DM Ex.-U.S. Fixed Income (Hedged)	1.1	1.1	1.1	5.2	3.4	4.4
EM Fixed Income (U.S. dollar)	4.4	4.4	4.4	-0.2	6.3	5.3
EM Fixed Income (Local currency)[1]	5.8	5.8	5.8	-5.1	28.1	5.9

Sources: Bloomberg Barclays, J.P. Morgan, January 31, 2019. Inv Grade indicates Investment Grade; DM indicates Developed Market; EM indicates Emerging Market. Returns over one year are annualized. [1]Returns are converted to dollars for U.S. investors. An index is unmanaged and not available for direct investment.
Past performance is no guarantee of future results.
See end of report for important definitions and disclosures.

Wells Fargo Investment Institute perspective

We recommend that investors remain broadly diversified across maturities and bond classes, while shortening average maturities and raising credit quality.

Aside from potential currency-appreciation gains, we see little prospect of strong DM-debt returns this year. Yields remain below Treasury yields and are likely to rise gradually in 2019. We expect some currency appreciation, but given greater foreign-exchange uncertainty, this does not significantly outweigh limited prospects from income and changes in capital values. We have an unfavorable DM-debt view, since the higher foreign-exchange risk is insufficiently compensated by income or capital-gain prospects (the strategic index is unhedged in terms of currency exposure).

We remain favorable on U.S.-dollar-denominated EM debt as we believe that the balance of risks leans toward the positive. Valuations are not stretched, despite the fact that index yields have declined from last year's 7%-plus levels. Positive factors include a supportive global macroeconomic backdrop and strong fiscal and credit fundamentals in many major index constituents. Negative factors include the potential for rising underlying Treasury yields and risks to sovereign-credit ratings from domestic and international politics and trade.

	Guidance				
Asset class guidance	Most unfavorable		Neutral		Most favorable
Cash Alternatives	□	□	■	□	□
U.S. Taxable Investment Grade Fixed Income	□	■	□	□	□
▲ U.S. Short Term Taxable	□	□	□	□	■
U.S. Intermediate Term Taxable	□	■	□	□	□
U.S. Long Term Taxable	□	■	□	□	□
High Yield Taxable Fixed Income	□	■	□	□	□
DM Ex.-U.S. Fixed Income	□	■	□	□	□
EM Fixed Income	□	□	□	■	□

Source: Wells Fargo Investment Institute, February 15, 2019. ▲: recent change.

Fixed Income

Wells Fargo Investment Institute forecasts

Interest rates: We expect the Fed to continue increasing rates slowly and deliberately after taking a modest pause. We look for two fed funds rate increases this year. The yield curve remains relatively flat, and we look for added yield curve volatility in 2019. We see modest upside to our longer-term yields through year-end and recommend that investors favor shorter maturities.

Global fixed income (%)

	2019 YE targets	Current
10-year U.S. Treasury yield	3.00 - 3.50	2.63
30-year U.S. Treasury yield	3.00 - 3.50	3.00
Fed funds rate	2.75 - 3.00	2.50

Sources: FactSet, Bloomberg, International Monetary Fund, as of January 31, 2019. The 2019 targets are Wells Fargo Investment Institute forecasts, as of February 15, 2019. Forecasts are based on certain assumptions and on our views of market and economic conditions, which are subject to change. See end of report for important definitions and disclosures.

Rolling 12-month forecasts

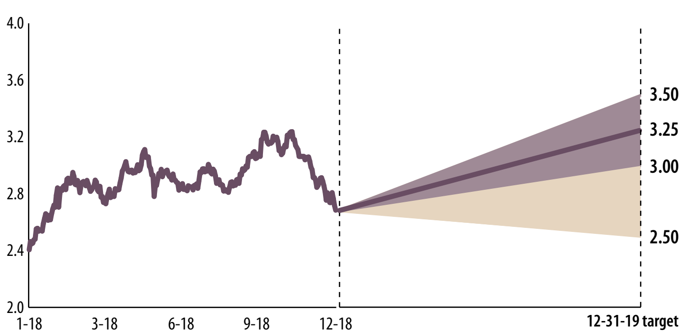
Conviction path definitions

Lower conviction range (upper): The **upper range of the lower conviction path** may occur if economic conditions surprise to the upside. Stronger-than-expected domestic growth occurs as a result of tax reform and fiscal stimulus drives confidence higher, leading to greater household spending and business investment. Global growth may exceed expectations, increasing trade and investment.

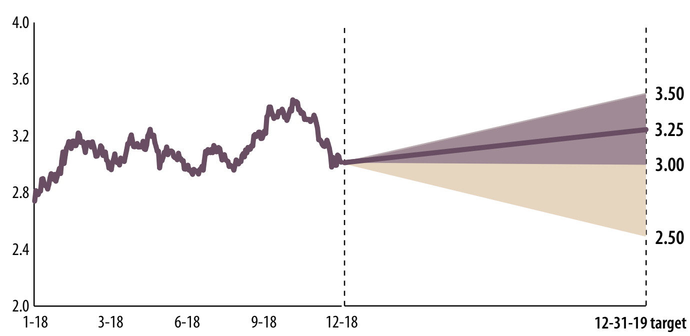
High conviction range The **high conviction middle path** factors in our base-case economic forecasts through 2018 and into 2019. Domestic growth continues to be strong, supported by tax reform and fiscal stimulus, with inflation increasing moderately. Higher growth and a slight pickup in inflation is also expected in developed and emerging markets.

Lower conviction range (lower): The **lower range of the lower conviction path** may occur if events detrimental to the global economy occur. Further escalation of tariff activity, an unexpected surge in inflation, or more aggressive central bank policy would be detrimental to global growth. Eurozone political uncertainty or unexpected military action would also dampen growth prospects.

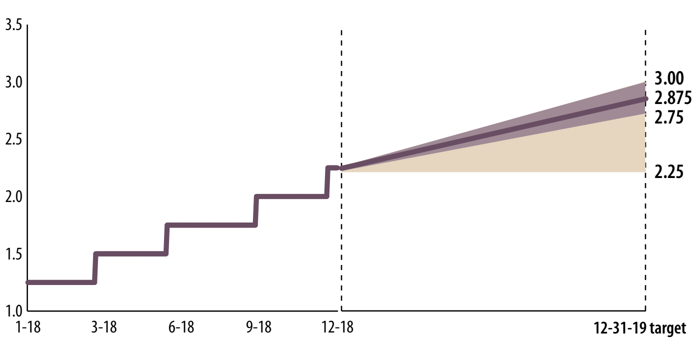
10-year Treasury yield (%)



30-year Treasury yield (%)



Fed funds rate (%)



Past performance is no guarantee of future results.

Fixed Income

Sector strategy: U.S. investment-grade securities

Sector guidance

Sector	Most unfavorable		Neutral		Most favorable
Duration	□	■	□	□	□
U.S. Government	□	■	□	□	□
Treasury Securities	□	□	■	□	□
Agencies	□	■	□	□	□
Inflation-Linked Fixed Income	□	□	■	□	□
Credit	□	□	■	□	□
Corporate Securities	□	□	■	□	□
Preferred Securities	□	□	□	■	□
Securitized	□	□	■	□	□
Residential MBS	□	□	■	□	□
Commercial MBS	□	■	□	□	□
Asset Backed Securities	□	□	■	□	□
U.S. Municipal Bonds	□	□	□	■	□
Taxable Municipal	□	□	□	■	□
State and Local General Obligation	□	□	■	□	□
Essential Service Revenue	□	□	□	■	□
Pre-Refunded	□	□	□	■	□

Source: Wells Fargo Investment Institute, February 15, 2019.
See end of report for important definitions and disclosures.

Duration (Unfavorable): Duration positioning is critical for fixed-income investors. Bonds with shorter duration are less sensitive to changes in interest rates (assuming a parallel shift in the yield curve on all maturities, with the same number of basis points). Interest-rate volatility can provide opportunities to adjust duration to capitalize upon any dislocation. Currently, we recommend that investors consider maintaining duration at a level below that of their individually-selected benchmarks.

U.S. Government (Unfavorable): Steadily rising Treasury issuance to fund last year's federal tax cuts and the Fed's continued balance-sheet reduction introduce the potential for increased sector volatility. We recommend that investors consider holding government-security allocations for diversification, liquidity, and reducing risk in portfolios. Government securities may offer a hedge for unexpected geopolitical developments or an economic slowdown and generally benefit from risk-off market events.

Investment-Grade (IG) Credit (Neutral): High-quality IG credit can allow portfolios to generate excess yield through spread premium (also known as "carry") that is meant to compensate investors for perceived issuer credit risk. We believe that, at times, IG corporate debt offers investors better carry and liquidity per unit of risk than can be found in many other fixed-income credit offerings, such as high-yield debt or securitized investments. We reiterate our bias toward higher quality in the current market.

Total sector returns (%)

Sector	1 month	Year to date	12 months
U.S. Government	0.5	0.5	2.7
Credit	2.2	2.2	0.9
Securitized	0.8	0.8	3.0
U.S. Municipal Bonds	0.8	0.8	3.3

Source: FactSet, January 31, 2019.
Past performance is no guarantee of future results.

Investment-Grade Securitized (Neutral): Yield is an important component of an investor's sector selection, and the securitized sector can offer investors potential income opportunities that cannot be found in many other highly-rated, fixed-income securities. This sector can add diversification benefits to a fixed-income portfolio and generally has lower correlation to other sectors.

U.S. Municipal Bonds (Favorable): Municipal bonds performed well in January (+0.8%) as the sector played "catch up" to the late-2018 Treasury rally. As a result, municipal-to-Treasury yield ratios fell from year-end levels for both short and intermediate maturities. Intermediate municipal bond yields on the shorter end of the maturity spectrum (i.e., five to eight years) declined the most. The municipal rally was fueled by strong demand and asset inflows in the face of limited supply. We expect the net supply of municipals to remain negative in 2019, but to be less negative than it was last year.

Municipal-to-Treasury yield ratios now are historically rich, and we are entering a time in which new issue supply typically rises. Additionally, the coming weeks could pose a seasonally weak period for municipals as many investors sell municipals during tax season. We believe that any short-term municipal market weakness should be used as a buying opportunity for longer-term investors. We favor selectivity, higher quality, and essential service revenue bonds with dedicated revenue streams.

The federal municipal tax exemption should remain valuable as several tax deductions have been eliminated or reduced. In-state bonds have become a higher priority for buyers in high-tax states, including California and New York—as the federal deduction for state income taxes has been capped.

For more information, please request our most recent *Investment Strategy* report or our *Monthly Fixed Income Guidance* report.

Equities

Market summary

Extreme volatility was the story for global equity markets in January. In sharp contrast to December, however, it was to the upside last month—as worries eased over Fed monetary policy—and trade-related headlines improved modestly on a day-to-day basis. Yet, many of the worries that plagued the market in December persist. These concerns include a potential global economic slowdown and geopolitical unrest in Europe.

All major equity classes gained in January—as markets reclaimed December and 2018 losses, and valuation multiples rebounded from depressed December levels. U.S. small caps led January performance as the Russell 2000 Index returned 11.2%. To help reduce future volatility, we downgraded our U.S. small cap equity view from neutral to unfavorable on January 31, following the rally from the Christmas Eve low. We remain favorable on U.S. large caps and mid caps; they returned 8.0% and 10.8%, respectively, last month. We are most favorable on EM equities (+8.8% last month), while we hold a neutral DM equity view (+6.6%).

Market observations

U.S. equities: The S&P 500 Index snapped back from a dismal December as its 8.0% January gain brought the index 15% from the December low. Industrials (+11.4%) led returns. Energy (+11.1%) was second best as oil rebounded. Utilities (+3.4%) had the weakest performance as investors favored risk assets.

Russell Midcap and Russell 2000 indices led U.S. equity returns (as noted, +10.8% and 11.2%, respectively). Energy led for both indices. For mid caps, Consumer Staples (+3.9%) had the weakest performance. Utilities (+4.4%) had the lowest small-cap return.

Growth outperformed value across all market capitalizations last month.

International equities: Dollar-denominated DM equities' 6.6% return exceeded the 5.5% local-currency DM equity gain. Similarly, dollar-denominated EM equities' 8.8% January gain topped the 7.2% return for local-currency counterparts. Frontier markets had the lowest January return, with gains of 4.8% and 4.6%, respectively, in U.S.-dollar-denominated and local-currency terms.

All major country DM indices gained last month. Canada (+13.1% in U.S.-dollar terms) led DM equity returns.

Nearly all EM country equity markets were positive. Turkey had a very strong month (+18.0% in U.S.-dollar terms) as foreign investors purchased the most Turkish stocks since 2005. India was the only major EM country to decline last month (-1.9% in U.S.-dollar terms). Weak earnings and concerns about the country's economic growth prospects dimmed returns.

Wells Fargo Investment Institute perspective

We continue to expect higher U.S. equity market volatility as economic growth slows and interest rates rise. Last month, we reduced our 2019 economic growth forecasts; this implies that earnings growth will remain positive but will be less robust than our initial expectations reflected. The gradual increase in wages and borrowing costs also should create headwinds for corporate margins to expand further from historically high levels, particularly for U.S. small-cap companies. Additionally, investors are unlikely to pay multiples that are as high as those of a year ago, before markets began to reprice economic and earnings growth to lower levels. For these reasons, we also recently reduced our expectations for U.S. earnings growth and U.S. equity index price targets in 2019. Our year-end target range for the S&P 500 Index is 2750-2850. Our target range for the Russell Midcap Index at year-end is 2045-2145. We currently project a year-end target range of 1500-1600 for the Russell 2000 Index of small-cap companies. (Please see page 9 for earnings targets.)

We expect earnings per share (EPS) for the MSCI Emerging Markets Index to rise by double digits over the next 12 months. Our EM equity EPS forecast is $104 in 2019. We expect higher commodity prices to support EM companies this year. In addition, EM governments, including those in China, India, and South Korea, are providing fiscal and monetary stimulus to fuel growth. We also expect the U.S. dollar to weaken somewhat versus EM currencies in 2019. For the MSCI Emerging Markets Index, our year-end target range is 1080-1180. For the MSCI EAFE Index, our year-end 2019 target range is 1850-1950.

Equity index total returns (%)

	MTD	QTD	YTD	1 year	3 year	5 year
U.S. Large Cap Equities	8.0	8.0	8.0	-2.3	14.0	11.0
U.S. Large Cap (Growth)	9.0	9.0	9.0	0.2	16.6	13.0
U.S. Large Cap (Value)	7.8	7.8	7.8	-4.8	11.6	8.3
U.S. Mid Cap Equities	10.8	10.8	10.8	-2.9	13.3	8.9
U.S. Mid Cap (Growth)	11.5	11.5	11.5	0.5	15.6	10.3
U.S. Mid Cap (Value)	10.3	10.3	10.3	-5.4	11.7	7.9
U.S. Small Cap Equities	11.2	11.2	11.2	-3.5	14.7	7.3
U.S. Small Cap (Growth)	11.5	11.5	11.5	-2.6	15.6	7.8
U.S. Small Cap (Value)	10.9	10.9	10.9	-4.5	13.8	6.6
DM Equities Ex-U.S. (USD)	6.6	6.6	6.6	-12.1	8.3	3.1
DM Equities Ex-U.S. (Local)[1]	5.5	5.5	5.5	-6.8	7.1	6.1
DM Small Cap Equity (USD)	8.1	8.1	8.1	-15.3	9.8	5.4
DM Small Cap Equity (Local)[1]	6.8	6.8	6.8	-10.5	8.3	8.3
EM Equities (USD)	8.8	8.8	8.8	-13.9	15.3	5.2
EM Equities (Local)[1]	7.2	7.2	7.2	-9.4	13.8	7.8
FM Equities (USD)	4.8	4.8	4.8	-17.0	8.8	1.8
FM Equities (Local)[1]	4.6	4.6	4.6	-15.1	11.0	5.2

Sources: Standard & Poor's, Russell Indexes, MSCI Inc., January 31, 2019. DM indicates Developed Market; EM indicates Emerging Market; FM indicates Frontier Market; USD indicates U.S. dollar. Returns over one year are annualized.
[1] Returns are in local currencies as experienced by local investors. U.S. investors would experience gains or losses on currency conversion. An index is unmanaged and not available for direct investment.

Past performance is no guarantee of future results.
See end of report for important definitions and disclosures.

Asset class guidance

Asset class guidance	Most unfavorable		Neutral		Most favorable
U.S. Large Cap Equities	□	□	□	■	□
U.S. Mid Cap Equities	□	□	□	■	□
▼U.S. Small Cap Equities	□	■	□	□	□
DM Equities Ex-U.S.	□	□	■	□	□
EM Equities	□	□	□	□	■

Source: Wells Fargo Investment Institute, February 15, 2019.
▼: recent change.

Equities

Wells Fargo Investment Institute forecasts

U.S. equities: We recently reduced our economic growth forecasts; this implies that earnings growth will remain positive but will be less robust than our initial expectations reflected. The continued, gradual increase in wages and borrowing costs also should create headwinds for corporate margins to expand further from historically high levels. Additionally, investors are unlikely to pay multiples that are as high as those of a year ago, before markets began to reprice economic and earnings growth to lower levels. We continue to look for 7% U.S. earnings growth and project a low double-digit return for U.S. equity indices in 2019. However, we also continue to expect higher volatility in U.S. equity markets as economic growth slows and interest rates rise.

Foreign equities: International equities meaningfully underperformed in 2018 as slowing growth and trade concerns appeared to pressure valuations; but performance has improved to date in 2019. We now rate EM equities as most favorable. We expect EPS for the MSCI Emerging Markets Index to rise by double digits in 2019; our full-year EPS forecast is $104. We also expect higher commodity prices to positively impact EM companies this year. In addition, EM governments, including those for China, India, and South Korea, are providing fiscal and monetary stimulus to fuel growth. We anticipate that the U.S. dollar will weaken somewhat in 2019. We are looking for double-digit 2019 returns from EM equities. For the MSCI Emerging Markets Index, our target range is 1080-1180 for December 31, 2019. For the MSCI EAFE Index, our year-end 2019 target range is 1850-1950. We believe that the biggest risks to overseas markets are from trade issues; the potential for rising global interest rates; unexpected changes in central-bank policies; and any material setback to China's economy.

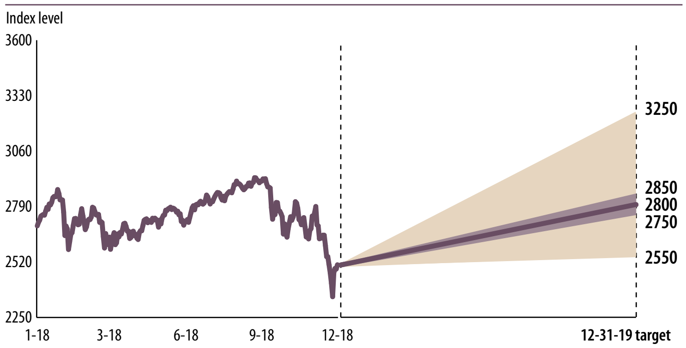
Global equities

	2019 YE targets	Current
S&P 500 Index	2750 - 2850	2704
S&P 500 earnings per share ($)	173	161
Russell Midcap® Index	2045 - 2145	2056
Russell Midcap earnings per share ($)	124	115
Russell 2000 Index	1500 - 1600	1499
Russell 2000 earnings per share ($)	81	58
MSCI EAFE Index	1850 - 1950	1831
MSCI EAFE earnings per share ($)	155	133
MSCI Emerging Markets (EM) Index	1080 - 1180	1050
MSCI EM earnings per share ($)	104	81

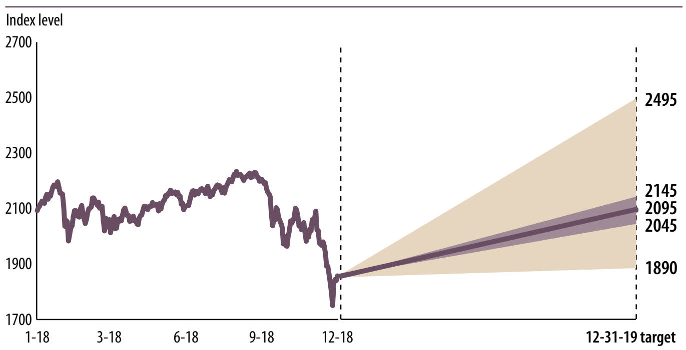
Sources: FactSet, Bloomberg, International Monetary Fund, as of January 31, 2019. The 2019 targets are Wells Fargo Investment Institute forecasts, as of February 15, 2019. Forecasts are based on certain assumptions and on our views of market and economic conditions, which are subject to change. See end of report for important definitions and disclosures.

Rolling 12-month forecasts

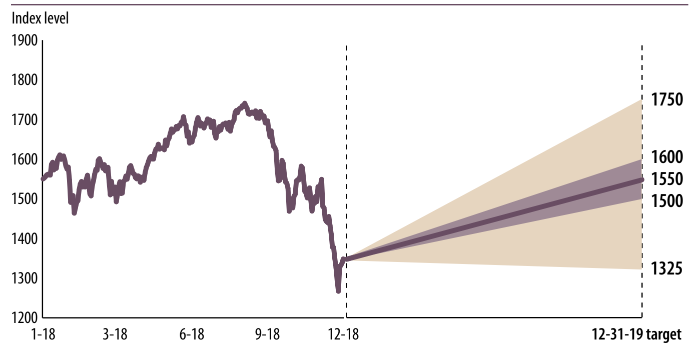
S&P 500 Index



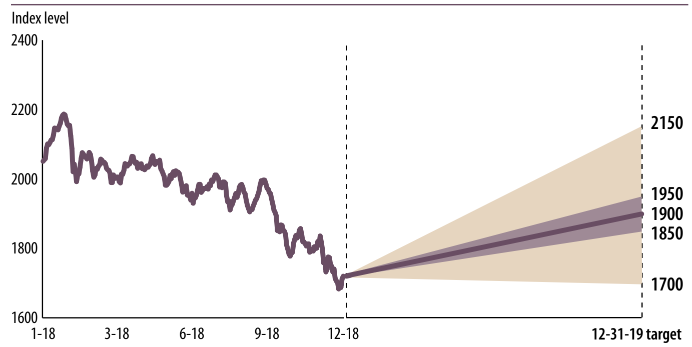
Russell Midcap Index



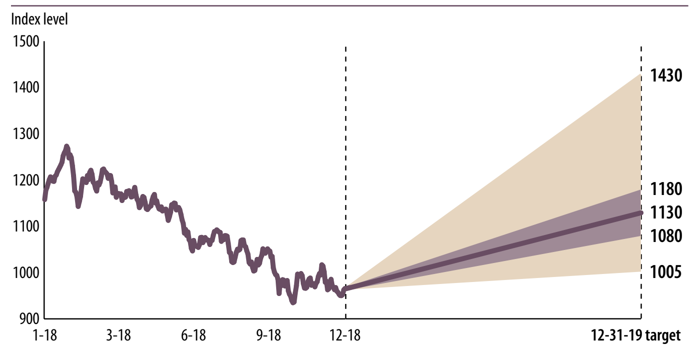
Russell 2000 Index



MSCI EAFE Index



MSCI Emerging Markets Index



Past performance is no guarantee of future results. Conviction range definitions are on page 6.

Table of Contents

Equities

U.S. equity sector strategy

Sector guidance

Sector	S&P 500 Index weight (%)*	WFII guidance (%)	Guidance: Most unfavorable		Guidance: Neutral		Guidance: Most favorable
Communication Services	10.3	7.3	□	■	□	□	□
Consumer Discretionary	10.1	12.2	□	□	□	■	□
Consumer Staples	7.2	6.7	□	□	■	□	□
Energy	5.5	3.5	□	■	□	□	□
Financials	13.5	16.0	□	□	□	□	■
Health Care	15.1	16.6	□	□	□	■	□
Industrials	9.5	12.7	□	□	□	□	■
Information Technology	19.9	22.5	□	□	□	■	□
Materials	2.7	2.5	□	□	■	□	□
Real Estate	3.0	0.0	□	■	□	□	□
Utilities	3.2	0.0	■	□	□	□	□
Total	100.0	100.0					

Sources: Bloomberg, Wells Fargo Investment Institute (WFII). Weightings are as of January 31, 2019. WFII guidance is as of February 15, 2019. *Sector weightings may not add to 100% due to rounding.

Total returns (%): S&P 500 Index sectors

Sector	1 month	Year to date	12 months
S&P 500 Index	8.0	8.0	-2.3
Communication Services	10.4	10.4	-4.0
Consumer Discretionary	10.3	10.3	1.7
Consumer Staples	5.2	5.2	-5.1
Energy	11.1	11.1	-12.3
Financials	8.8	8.8	-11.1
Health Care	4.8	4.8	4.7
Industrials	11.4	11.4	-8.3
Information Technology	7.0	7.0	-0.9
Materials	5.5	5.5	-13.6
Real Estate	10.8	10.8	10.4
Utilities	3.4	3.4	11.1
WFII weighted guidance	8.1	8.1	-3.5

Source: FactSet, January 31, 2019.
An index is unmanaged and not available for direct investment
Past performance is no guarantee of future results.

Communication Services (Unfavorable): Unlike the top-rated Financials sector, Communications Services now rates second lowest for its combined payout from dividends and share buybacks. Analyst forecast dispersion is high, indicating low conviction in the average analyst forecast. Forecast total yield is near the bottom, relative to the other 10 sectors.

Consumer Discretionary (Favorable): Consumer Discretionary has outperformed the S&P 500 over the past 12 months. Consumer spending during the holiday period and fourth quarter was strong. Consumer confidence and a strengthening labor market are expected to fuel consumer spending this year.

Consumer Staples (Neutral): Valuation indicators, such as the trailing 12-month price/earnings (P/E) and price-to-free-cash-flow ratios, have improved for the sector. It ranks well based on our Quality Pillar versus the other sectors. We believe that debt levels, earnings dispersion, and return on equity signal attractive opportunities that are in sharp contrast to those of recent years.

Energy (Unfavorable): Despite our increased 2019 oil-price targets, all four market characteristic pillars remain unfavorable for this sector. We see better valuation opportunities elsewhere. Growth indicators are mixed, and we prefer to invest in higher quality, and more profitable, sectors for which we see more future earnings certainty. Further, oil and natural gas oversupply has been an issue in this cycle.

Financials (Most Favorable): Our valuation work shows that Financials rank best among the 11 sectors. Further, Financials have benefited from the new tax code. We expect rising interest rates, good economic growth, and better loan demand ahead, which should help this sector. A flattening yield curve has hurt Financials' performance over the past 10 months.

Health Care (Favorable): We believe that demographic trends and relative valuations remain attractive for this sector. Health Care has been the third best performer over the past 12 months. Political uncertainty is a headwind; repeal of the health-care mandate (effective in 2019) could prompt Congress to revisit Affordable Care Act repeal.

Industrials (Most Favorable): Our most favorable guidance reflects our expectation for good global economic growth and increased business capital expenditures. This sector historically has performed well late in the cycle and scores well across all four of our pillars (growth, value, quality, and economic). Increased trade frictions would be negative for Industrials.

Information Technology (Favorable): Valuations improved meaningfully during the late-2018 pullback. As a result, we upgraded our rating on this sector to favorable from neutral. Longer-term fundamentals remain compelling as Information Technology (IT) companies are generating high cash flows and have maintained healthy leverage ratios. This sector offers an improved total yield—from increasing dividends and expected share repurchase programs.

Materials (Neutral): Materials have been the worst-performing sector over the past 12 months. However, we recently upgraded our guidance on commodities. Our expectations for good global growth could support this sector in 2019.

Real Estate (Unfavorable): Real Estate was in the bottom half of all sectors based on our value and growth pillars; it is at the bottom based on our quality indicators. The price-to-free-cash-flow ratio is high, while total yield is low. We expect interest rates to rise modestly; we see that as a headwind. Historically, the combination of rising rates and an aging economic cycle frequently has led to this sector's underperformance.

Utilities (Most unfavorable): This sector normally has an above-average dividend yield, and the defensive Utility sector has outperformed with the recent volatility. However, further interest-rate increases are a likely headwind.

Growth versus Value (Neutral): The IT and Consumer Discretionary sectors contain a heavy allotment of growth companies and have led the market higher over the past two years. When most cycles reach their final stages, Growth usually outperforms Value. Yet, for now, we remain neutral.

For more information, please request our most recent *Investment Strategy* report.

Equities

International equity market strategy

Developed Market Ex.-U.S. Equities

Europe region (Neutral): Conviction on the region continues to soften; yet we maintain our neutral rating on European equities.

Economic: Economic surprises edged higher last month following weaker activity to start the year. Backward-looking data confirms that the European economy remains in expansion mode, and recent forward-looking reports suggest a continuation of this trend, but at a significantly slower pace.

Market valuations: On the whole, valuations remain favorable this month even after positive January returns. Earnings growth is positive on a YoY basis.

Market internals: Our market internals work is neutral, while technicals remain largely bearish in key European markets.

Pacific region (Favorable): Our favorable Pacific-region rating remains unchanged. Valuations have declined over the past month—but remain attractive.

Economic: Recent measures of long-term economic growth continue to reflect softer, yet positive, activity for Australia and Japan (when compared with longer-term trends).

Market valuations: While economic indicators have declined from last year's highs, positive earnings-growth momentum nevertheless appears intact.

Market internals: Internals and sentiment measures were negatively biased after a bout of heightened market volatility. Longer-term technical work remains positive for Pacific-region stocks (versus the broad stock benchmark).

Emerging Market Equities

Note: In prior reports, we indicated "Neutral" for each region, because our analysis favored all regions equally. Our work continues to view the emerging market regions as equal. Since we rate the Emerging Market Equities asset class as "Most Favorable," we are changing their ratings to "Most Favorable." If/when our analysis suggests differentiation among the emerging market regions, our ratings will show differentiation.

Emerging Asia (Most Favorable): Emerging Asia equity markets are trending back toward favorable conditions, yet we maintain our neutral regional rating, based on China-related uncertainties.

Economic: Some positive economic surprises, coupled with a continued negative bias in China's long-term growth prospects, suggest that economic momentum may be leveling off.

Market valuations: Equity markets recovered in January, following last year's decline. We expect an ongoing regional earnings recovery to support more favorable valuations. Trade-related concerns nevertheless are likely to keep volatility elevated in the region's markets.

Market internals: Market internals remained negative in January, while regional technical indicators are more neutral.

Emerging Europe, Middle East and Africa (EMEA) region (Most Favorable): Moderating improvements in the EMEA region's economic and earnings environment continue to underpin our neutral rating. We expect that ongoing geopolitical concerns and commodity price volatility may challenge investment sentiment in the region.

Economic: Economic improvements have contributed to strengthening growth trends, and higher incidences of positive data-release surprises for the region. Yet, Turkey remains a headwind to the region's economic rating.

Market valuations: Valuations are less favorable after solid market performance in January.

Market internals: Internals and market sentiment indicators are more negative this month. This is in line with our technical work, which reflects an unfavorable rating when measured against the broader EM benchmark over a longer time period.

Latin America region (Most Favorable): Our neutral guidance for Latin America largely reflects improvement in economic and earnings fundamentals, yet we maintain a cautious near-term outlook on the region's markets. We expect heightened levels of equity market volatility in the region, given ongoing political uncertainties.

Economic: Growth measures have shown that Brazil's economy continues to exhibit signs of improvement. Long-term measures of economic activity in Mexico were generally favorable last month, despite pressures from trade-policy uncertainties and peso weakness.

Market valuations: Valuations are less favorable after solid performance in January. Earnings growth remains positive for the region as a whole.

Market internals: Market internals are balanced this month. Long-term technicals suggest that Latin American equities may continue to face headwinds in the coming months.

International equity guidance by region

Region	Benchmark weight (%)*	Regional guidance: Most unfavorable		Neutral		Most favorable
Developed Market Ex.-U.S. Equities		☐	☐	■	☐	☐
Europe	60	☐	☐	■	☐	☐
Pacific	40	☐	☐	☐	■	☐
Emerging Market Equities		☐	☐	☐	☐	■
EM Asia	74	☐	☐	☐	☐	■
EM Europe, Middle East and Africa	13	☐	☐	☐	☐	■
Latin America	13	☐	☐	☐	☐	■

Source: Wells Fargo Investment Institute, February 15, 2019.
* Benchmarks are MSCI EAFE for DM and MSCI Emerging Markets for EM.

We provide additional context for the regional guidance in our *International Strategy* reports.

↺ Table of Contents

Real Assets

Market summary

January was a strong month for real assets as a bounce from pessimistic extremes supported this asset group as well as others. Commodities had the lowest real assets return, but still gained 5.4% last month. Public real estate and master limited partnerships returned 10.9% and 12.6%, respectively.

Real assets index total returns (%)

	MTD	QTD	YTD	1 year	3 year	5 year
Public Real Estate	10.9	10.9	10.9	5.6	8.9	7.5
U.S. REITs	11.6	11.6	11.6	10.3	9.4	10.0
International REITs	10.1	10.1	10.1	-0.9	10.4	5.9
Master Limited Partnerships	12.6	12.6	12.6	-6.7	7.1	-5.2
Global Infrastructure	8.8	8.8	8.8	-2.7	10.2	6.0
Commodities (BCOM)	5.4	5.4	5.4	-8.2	2.7	-7.9
Agriculture	3.0	3.0	3.0	-9.3	-5.6	-8.5
Energy	9.2	9.2	9.2	-8.8	4.6	-17.6
Industrial Metals	8.0	8.0	8.0	-13.2	11.0	-0.7
Precious Metals	3.2	3.2	3.2	-3.3	4.5	-0.6

Sources: Public Real Estate: FTSE EPRA/NAREIT Developed Index. Domestic REITs: FTSE NAREIT All Equity REITs Index. International REITs: FTSE EPRA/NAREIT Developed ex-U.S. Index. MLPs: Alerian MLP Index, Bloomberg, January 31, 2019. Returns over one year are annualized. An index is unmanaged and not available for direct investment.

Past performance is no guarantee of future results.

See end of report for important definitions and disclosures.

REITs and MLPs

Market observations

Real estate investment trusts (REITs): Surprisingly, REITs kept pace with equities in the first half of January, despite higher interest rates. REITs seemed to benefit from a broad equity rebound and continued market demand for investments with tangible assets and historically consistent cash flows. REITs did not outperform until the latter half of January, when long-term interest rates declined. A relatively flat U.S. dollar helped international and U.S. REITs to perform similarly. Going forward, we expect global REITs to struggle in the face of higher interest rates and an aging economic cycle—even though overall fundamentals remain decent. We hold an unfavorable rating on global REITs (public real estate) which encompasses both U.S. and international REITs.

Master limited partnerships (MLPs): In January, MLPs not only had the best performance within real assets; MLPs also had the best return of any major asset class, asset group, or sector that we track. MLPs were helped by an equity market rebound, along with an oil-price surge (for example, the West Texas Intermediate crude oil price rose 18% in January). We hold a favorable view on MLPs, based on valuation; progress toward simplification and transition to a more self-funded model; the need for additional energy infrastructure; burgeoning relative performance; and our year-end forecast for higher oil prices.

Wells Fargo Investment Institute perspective

REITs and MLPs typically can provide income opportunities for investors, but the main drivers for these two asset classes differ. For REITs, higher interest rates and an aging economic cycle are headwinds. As noted, we hold an unfavorable view on global REITs (public real estate), which encompasses both U.S. and international REITs. For MLPs, we believe that investors' search for yield, relative valuation, improving fundamentals, and the need for additional energy infrastructure are positives. We are favorable toward MLPs and recommend that investors consider high-quality, midstream MLPs that are large and liquid.

Commodities

Market observations

Commodity prices rose in January, led by the Energy sector. Concerns surrounding a global economic growth slowdown and unresolved trade issues remain, and they could contribute to increased commodity-price volatility.

Energy: Both Brent and WTI oil prices rose by more than 15% last month as investors fretted over potential supply disruptions stemming from political turmoil in Venezuela. Additionally, oil-price gains were fueled by production cuts from Russia and OPEC (Organization of the Petroleum Exporting Countries), along with slower-than-anticipated U.S. production growth. Oil prices could continue to rise as the supply/demand balance improves. Natural-gas prices were volatile in January, rising by more than 22% at one point, then collapsing to end the month 4% lower. Expectations for milder weather contributed to lower natural-gas demand forecasts, which drove prices lower. Natural-gas prices could continue to be pressured as they reach a seasonally weak period during the stockpiling season.

Metals: Precious-metal prices ended last month higher—led by palladium. Increased demand for perceived "safe haven" assets continued to support gold and other precious-metal prices in the face of volatility and geopolitical concerns. We expect modest precious-metal price increases as investors digest dollar weakness and increased geopolitical uncertainty going forward. Base-metal prices improved in January, despite concerns regarding global demand and trade. Some renewed optimism surrounding a potential U.S.-China trade deal could have contributed to the positive sector performance.

Agriculture: Global supplies for most agricultural commodities are abundant, and investors remain uncertain about future demand. Within the agricultural commodity sector, livestock and cocoa prices declined last month on demand concerns. Trade tensions and global-growth expectations may fuel increased commodity sector volatility going forward. However, we expect a weaker U.S. dollar and easing trade tensions to benefit agricultural commodities in the coming quarters, since we anticipate healthy global demand.

Wells Fargo Investment Institute perspective

Despite recent investor concerns surrounding economic growth, we continue to believe that a resilient global economy, increased inflation expectations, and some U.S. dollar weakness could support commodity performance this year. Progress toward easing U.S.-China trade tensions also could provide a tailwind for prices. We hold a favorable view of commodities as we believe that the risk/return profile appears attractive over the tactical time horizon.

	Guidance				
Asset class guidance	Most unfavorable		Neutral		Most favorable
Public Real Estate	☐	■	☐	☐	☐
Private Real Estate	☐	■	☐	☐	☐
Commodities	☐	☐	☐	■	☐

Source: Wells Fargo Investment Institute, February 15, 2019.

Table of Contents

Real Assets

Wells Fargo Investment Institute forecasts

Commodities: We expect oil prices to strengthen over the next 12 months. Our year-end 2019 West Texas Intermediate (WTI) crude-oil price target range is $60–$70 a barrel. We believe that the proper supply/demand balance for WTI oil prices is $50-$60. We added a $10 per barrel expected premium for geopolitical concerns and potential production cuts by key producers. Gold-price volatility could rise as interest rate, dollar, and geopolitical uncertainties persist. Investor sentiment could weaken, but our expectations for a weaker U.S. dollar could provide some gold-price support. Our year-end 2019 target range for gold prices is between $1,250 and $1,350 per troy ounce.

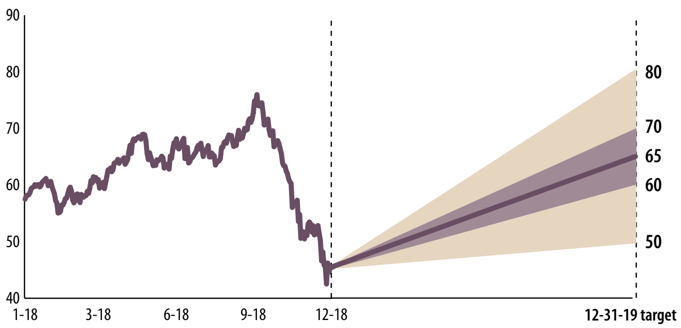
Global real assets ($)

	2019 YE targets	Current
West Texas Intermediate crude oil price ($ per barrel)	60 - 70	54
Brent crude oil price ($ per barrel)	65 - 75	62
Gold price ($ per troy ounce)	1,250 - 1,350	1,320

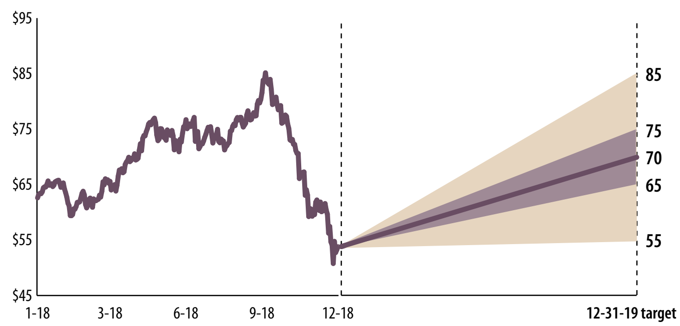
Sources: FactSet, Bloomberg, International Monetary Fund, as of January 31, 2019. The 2019 targets are Wells Fargo Investment Institute forecasts, as of February 15, 2019. Forecasts are based on certain assumptions and on our views of market and economic conditions, which are subject to change. See end of report for important definitions and disclosures. WTI is a grade of crude oil used as a benchmark in oil pricing.

Rolling 12-month forecasts

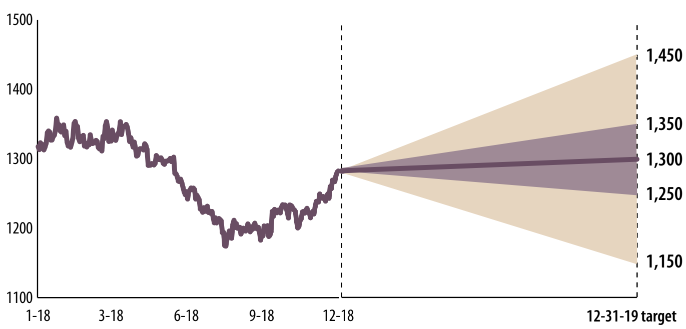
West Texas Intermediate crude oil ($)



Brent crude oil ($)



Gold ($)



Past performance is no guarantee of future results. Conviction range definitions are on page 6.

Alternative Investments*

Market summary

Early estimates from Hedge Fund Research, Inc. (HFR) indicate strong January returns. More directional, long-biased hedge fund strategies—such as Equity Hedge, Distressed, and Activist—performed well, fueled by the risk-asset recovery. Relative Value strategies gained, but trailed broader credit markets, due to short corporate and Structured Credit market exposure. The Macro strategy's negative January return erased much of its December gains as trends in equity and fixed income markets reversed.

Relative Value: Spreads within the Commercial Mortgage Backed Securities (CMBS) market narrowed. This resulted in mark-to-market gains, especially in the retail sector (which rallied strongly, following a difficult fourth quarter).

Macro: Following a solid December in which Systematic Macro (Trend Following) managers profited from short equity and long bond exposure, Trend Following strategies declined as trends reversed amid the equity rally and rising Treasury yields.

Event Driven: A hostile takeover involving two Canadian energy companies was terminated as the acquirer withdrew the takeover attempt. Yet, Merger Arbitrage managers generated gains, driven by a late-stage U.S. media deal and completion of a large cross-border pharmaceutical deal.

Equity Hedge: Equity Hedge managers' gross exposure increased significantly last month, driven largely by rising prices for long positions. Yet, net positioning remained relatively static, indicating more defensive positioning (despite the market rally).

Alternative investments index/strategy total returns (%)

	MTD	QTD	YTD	1 year	3 year	5 year
Global Hedge Funds	3.5	3.5	3.5	-3.5	5.1	3.0
Relative Value	3.1	3.1	3.1	1.7	5.8	3.7
Arbitrage	2.7	2.7	2.7	4.8	5.5	3.8
Long/Short Credit	3.7	3.7	3.7	1.6	7.4	3.8
Struct Credit/Asset-Backed	0.9	0.9	0.9	3.5	6.2	5.3
Macro	-0.3	-0.3	-0.3	-6.9	-0.7	0.8
Systematic	-1.6	-1.6	-1.6	-11.6	-3.4	0.3
Discretionary	1.5	1.5	1.5	-0.3	0.8	0.4
Event Driven	3.5	3.5	3.5	0.1	7.6	3.3
Activist	5.0	5.0	5.0	-6.9	4.6	3.3
Distressed Credit	2.8	2.8	2.8	-0.4	8.4	2.2
Merger Arbitrage	1.4	1.4	1.4	3.6	4.3	3.5
Equity Hedge	5.5	5.5	5.5	-4.6	7.1	3.6
Directional Equity	4.7	4.7	4.7	-4.8	5.3	3.0
Equity Market Neutral	0.7	0.7	0.7	-1.6	2.2	2.8

Source: Hedge Fund Research, Inc., January 31, 2019.
Returns over one year are annualized. An index is unmanaged and not available for direct investment.
Past performance is no guarantee of future results.
See end of report for important definitions and disclosures.

Market observations

Equity Hedge managers exhibited geographic divergence in trading flows. Managers had rotated into North America last year, but this region was "net sold" in January, with short sales outweighing purchases by 5 to 1 (based on cumulative notional trading). To date in 2019, Asia has been the most "net bought" region, with purchases outweighing short sales by 2 to 1 (according to Goldman Sachs Prime Services). Additionally, the Goldman Sachs Hedge Fund VIP Index rose by 10% last month, indicating Equity Hedge managers' high conviction positions performed well.

Wells Fargo Investment Institute perspective

Relative Value: We are favorable on Relative Value and recommend that qualified investors consider combining Structured Credit with Long/Short Credit strategies. Structured Credit historically has had relatively low interest-rate sensitivity—as it relies more on the consumer and economic growth than on other factors. Long/Short Credit strategies can offer downside protection as the credit cycle matures. We anticipate increased opportunity to short securities of overleveraged companies facing rising interest costs and declining earnings.

Macro: We remain neutral overall. Yet, we expect Discretionary Macro strategies to navigate sudden sentiment reversals more quickly than Systematic Macro/Trend Following strategies.

Event Driven: While defaults remain near historical lows, we expect "localized" stresses to rise in certain sectors and industries, particularly retail, which could provide opportunities for Distressed managers. Merger spreads have been volatile during the recent risk-on and risk-off environments, and they are slightly below historical averages. We believe that current merger spreads do not properly compensate investors for the risks associated with global trade tensions and regulatory scrutiny.

Equity Hedge: We remain favorable as we view the environment for equity security selection as supportive. However, recent challenges facing the Equity Hedge strategy require monitoring. Dispersion and volatility rose in 2018, yet unstable correlations have hampered returns. We expect better 2019 returns, due to our constructive equity market view. Yet, we are more constructive on strategies such as Relative Value and Event Driven that can capitalize upon credit-market opportunities.

Private Equity: While we are neutral on Private Equity, we have high conviction in certain strategies and geographies where valuations are more attractive and capital-market funding is tighter. Opportunities within Private Equity have become more nuanced, and careful attention needs to be given to fund size, geographic exposure, and strategy. Opportunities do exist—but not indiscriminately.

Private Debt: We maintain a favorable view for Private Debt funds, due to their historical ability to capitalize on illiquidity to deliver expected cash yields and total returns at a premium to those available in public or broadly syndicated debt markets. Additionally, Private Debt strategies may benefit in a rising-rate environment, due to issuance of floating-rate debt.

Private Real Estate: We are unfavorable on Private Real Estate. Although the fundamental backdrop for real estate investment remains generally supportive, we see risks rising as concerns over higher interest rates have narrowed the strategy's risk premium. Rising rates may have a considerable impact on property capitalization (cap) rates, resulting in declining property values, especially in core markets.

*Alternative investments are not suitable for all investors. They are speculative and involve a high degree of risk that is suitable only for those investors who have the financial sophistication and expertise to evaluate the merits and risks of an investment in a fund and for which the fund does not represent a complete investment program. Please see end of this report for important definitions and disclosures.

Alternative Investments*

Private placements and liquid alternatives

Alternative investment strategies outlook*

Private placements	Guidance: Most unfavorable		Neutral		Most favorable
Relative Value	□	□	□	■	□
Arbitrage	□	□	■	□	□
Long/Short Credit	□	□	□	■	□
Structured Credit/Asset-Backed	□	□	□	■	□
Macro	□	□	■	□	□
Systematic	□	■	□	□	□
Discretionary	□	□	□	■	□
Event Driven	□	□	■	□	□
Activist	□	□	■	□	□
Distressed Credit	□	□	□	■	□
Merger Arbitrage	□	□	■	□	□
Equity Hedge	□	□	□	■	□
Directional	□	□	□	■	□
Equity Market Neutral	□	□	■	□	□
Private Equity	□	□	■	□	□

Liquid alternatives	Guidance: Most unfavorable		Neutral		Most favorable
Relative Value	□	□	■	□	□
Macro	□	□	■	□	□
Event Driven	□	□	■	□	□
Equity Hedge	□	□	■	□	□

Sources: Wells Fargo Investment Institute, Wilshire Liquid Alternative Index family, February 15, 2019.

Notes on alternative investment structures

The core differences between our guidance for private placements versus liquid alternative mutual funds centers on the expected illiquidity premium and the expected complexity premium often associated with private placements. The illiquidity premium refers to the potential for incremental return or yield generated by owning securities that cannot be sold quickly without affecting the price. Certain securities may be illiquid for one month, quarter, several years or longer. This illiquidity may provide investment managers enhanced flexibility which may result in higher long-term returns. Illiquidity may be experienced in public and private credit securities that can include loans, securitized credit, and stressed and distressed corporate credit. However, equity strategies may also be illiquid for periods of time, especially after a corporate restructuring when debt is converted to equity or within strategies that require significant equity ownership such as Activism. A complexity premium may also be associated with illiquid securities as they often require specialized origination, underwriting and investing strategies. Because private placements do not offer daily liquidity to their investors, they potentially provide greater flexibility to invest in securities that may offer an illiquidity premium. Furthermore, private placements can have a larger concentration in illiquid securities.

The complexity premium potentially offered with private placements results from several structural limitations associated with mutual funds, including provisions of the Investment Company Act of 1940, as amended (1940 Act), that apply at the fund level and not the individual strategy level. The 1940 Act requires, among others, the following:

- Regular liquidity—Redemptions must be paid within seven calendar days
- Regular transparency
- Limits on leverage—300% asset coverage limits leverage to 33%; making loans; or investing in real estate or commodities
- Limits on concentration—75% of the value of its total assets cannot be invested more than 5% in any one issuer, 25% in one industry or 10% of the outstanding voting securities of the issuer
- Limits on illiquidity—No more than 15% can be invested in illiquid assets

In addition, under the Investment Advisers Act of 1940, performance-based fees must be symmetric.

As a result of the illiquidity and complexity premiums, performance returns and characteristics are expected to vary between liquid alternative mutual funds and private placements. In our view, when implementing liquid alternatives in a diversified portfolio, they should not be considered a one-to-one substitute for traditional hedge funds. Our new guidance will reflect these differences in product types.

It is important to remember that only "accredited investors" or "qualified purchasers" within the meaning of U.S. securities laws can invest in private placements. This means investors must have a minimum level of income, assets, or net worth to be eligible. They may also need to meet other qualification requirements. Like all mutual funds, liquid alternative funds are regulated under the 1940 Act, and are open to all investors. As such, they are regulated in their use of leverage and have required levels of liquidity and diversification. Mutual funds must value their portfolios and price their securities daily using fair value guidelines. Hedge funds, on the other hand, face less regulation and are not required to provide investors with periodic pricing or valuation. This allows them a great deal of flexibility but may increase the risks for investors. It is also important to note that liquid alternative mutual funds typically have higher fees than traditional mutual funds but their fees are lower than those of private placement hedge funds.

Liquid alternatives are designed to provide retail investors access to strategies utilized by hedge funds and provide investors an "alternative" way to add returns less correlated to traditional assets such as stock, bonds and cash and improve diversification. Relative to broad, long-only traditional asset class mutual funds, liquid alternatives may employ more complex strategies including hedging and leveraging through short selling and derivatives and might invest in assets such as global real estate, commodities, leveraged loans, start-up companies and unlisted securities. Although liquid alternatives may seek to mimic hedge fund strategies, these funds cannot fully duplicate the broad hedge fund industry. Moreover, the regulatory structure under which liquid alternatives are governed may affect their return potential. As noted above, among other things, their use of leverage, investments in illiquid securities and concentration limits are curtailed and thus they are not able to employ hedge fund strategies as fully as private placement vehicles.

Investors should fully understand the strategies and risks of any liquid alternative mutual fund they are considering and keep in mind that many of them have limited performance histories so it is not known how they might perform in a down market. Please see the end of this report for other risks associated with these funds and for a description of the hedge fund and liquid alternative hedge fund replication strategies.

Because of the illiquid and complex nature of private placement hedge funds, Wells Fargo Investment Institute will no longer provide tactical percentage guidance for these asset classes. We will instead provide guidance that may be incorporated into portfolios over a longer period of time.

*Alternative investments are not suitable for all investors. They are speculative and involve a high degree of risk that is suitable only for those investors who have the financial sophistication and expertise to evaluate the merits and risks of an investment in a fund and for which the fund does not represent a complete investment program. Please see end of this report for important definitions and disclosures.

For more information, please request our most recent *Global Alternatives Outlook* or our *Investment Strategy* report.

Currency Hedging Guidance

The U.S. dollar versus developed market currencies

Market observations and outlook

The dollar fell in January, as the Fed pivoted to a more dovish stance, but weakness was contained against DM currencies. The U.S. Dollar Index (DXY) fell by just 0.6% and closed well within recent trading ranges. The dollar was weakest against commodity- and EM-related currencies, such as the Australian and Canadian dollars—and also against the British pound as hopes of a better Brexit outcome sparked gains. Yet, the euro conspicuously failed to benefit from dollar softness, closing little changed from December's levels. The euro was held back by continued data disappointments and fading hopes of a European Central Bank rate increase in 2019. The yen strengthened moderately within its recent range. By year-end 2019, we anticipate a euro range of 1.17–1.25 and a yen range of 102–112, versus the dollar. The DXY levels implied by the midpoints of these ranges are approximately 92–93 for the second half of 2019. Thus, while the dollar may be range-bound in the near term, we continue to expect a resumption of moderate dollar depreciation in 2019.

2019 year-end currency targets

	January 31, 2019	2019 YE forecasts	Expected return versus U.S. dollar
Dollars per euro	$1.14	$1.17-$1.25	5.7%
Yen per dollar	¥109	¥102-¥112	1.8%

Source: Bloomberg, as of January 31, 2019. The 2019 targets are Wells Fargo Investment Institute forecasts, as of February 15, 2019. Forecasts are based on certain assumptions and on our views of market and economic conditions, which are subject to change. See end of report for important definitions and disclosures.

The U.S. dollar versus emerging market currencies

Market observations and outlook

In January, EM currencies gained more than DM currencies, versus the dollar. EM currencies benefited from the Fed pivot, along with Chinese economic stimulus and investor hopes for a favorable U.S.-China trade resolution. The JP Morgan Emerging Markets Currency Index (EMCI) gained 3.3%, and an index of currencies mirroring the weighting of the more manufacturing-based MSCI Emerging Markets Index rose 2.6%. Gains were broad-based but favored commodity producers such as South Africa, Brazil, and Russia. India was the only large EM country with a currency decline as missed budget targets worried market participants. We see the dollar's 2018 strength continuing to wane this year, and we expect a resilient global economy to provide a more supportive backdrop for EM currency stabilization and modest appreciation in 2019.

Currency hedging

Based on our views on the direction of the dollar, we provide our currency-hedging guidance in the matrix below. For DM fixed income, we do not recommend hedging any portion of DM bond holdings, since our outlook for DM currencies over the coming year is for further appreciation against the dollar. While we acknowledge that wide currency swings are possible, our strategic benchmark is unhedged (that is, taking the exposure to DM currencies), so we would require greater conviction that the U.S. dollar would appreciate strongly before suggesting hedging some of this currency risk.

For EM fixed income, the strategic benchmark consists exclusively of dollar-denominated sovereign EM bonds—so our favorable stance on this debt class and our relatively neutral view on the dollar versus EM local currencies suggest that hedging is unnecessary.

Hedging matrix

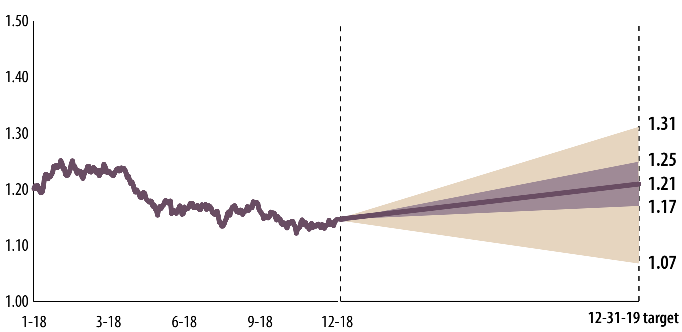
Asset class	Strategic benchmark	Currency advice
Developed Market Ex-U.S. Fixed Income	Local currency	No hedge
Developed Market Ex-U.S. Equities	Local currency	No hedge
Emerging Market Fixed Income	U.S. dollar	No hedge
Emerging Market Equities	Local currency	No hedge

Source: Wells Fargo Investment Institute, February 15, 2019. The table above provides guidance for investors who want and are able to hedge against currency losses, or to take advantage of the dollar's move in either direction. Please note that implementation may vary according to the hedging instruments available to investors.

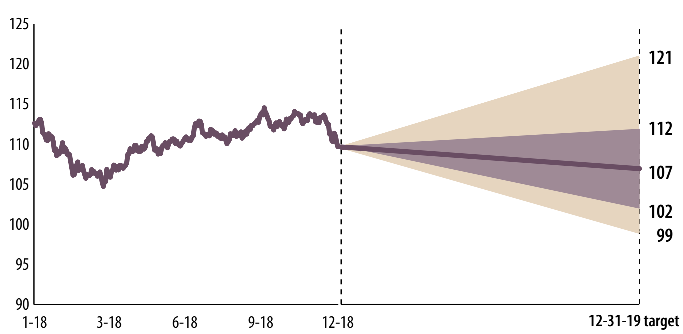
We do not favor hedging currency risk for equities at this time. The hurdle to hedging currency risk is higher for equities than for bonds because, in equity markets, currency movements have had a smaller influence on total return than for fixed income. Further, the cost and complexity of currency hedging for equities may be greater. It is important to consider that many actively managed mutual funds already may incorporate an element of currency hedging. In addition, the cost of hedging against losses from EM currencies is far higher than for those of DMs, and the availability of efficient hedging instruments is limited.

Rolling 12-month forecasts

Dollar/Euro exchange rate ($)



Yen/Dollar exchange rate (¥)



Past performance is no guarantee of future results. Conviction range definitions are on page 6.

Investment Themes and Actions for 2019

Theme	Trends	Strategic (long-term investments)	Tactical (short-term opportunities)
China's Place in the World	The U.S.-China trade dispute highlights China's rising global prominence, prompting questions about its motivation and ability to displace U.S. global economic leadership. China's economic reforms have helped to raise the global reach of its financial markets and the yuan. As China's economy and global influence advance over the next few years, we anticipate continued anxiety in the West but also long-term opportunities.	For investors who seek to benefit from China's economic development, we recommend considering a diversified allocation to EMs. Newfound access to Chinese capital markets could enable investors to capitalize upon long-term growth opportunities as China's economy evolves. We expect that the yuan's low utilization as a trade, savings, and payment currency may hinder its long-term prospects as a dominant global store of value. Yet, this view could change as Beijing expands foreign access to its financial markets.	We currently hold a most favorable view on EM equities. In our view, valuations of EM equities are more compelling than those of U.S. large caps and DM equities. We also favor EM debt for attractive income potential. We expect U.S. dollar strength to wane in 2019, which should boost EM equity returns in U.S. dollars and allow for moderate appreciation of many EM currencies.
The New Approach to Retirement	Traditionally, retirement meant leaving behind a 9-to-5 job and spending time with family, volunteering, or traveling. But that may be changing. Today, as individuals evaluate (and plan for) retirement, many wonder if they can afford it. For some, a job may be necessary; for others, working part-time offers the opportunity to stay engaged and postpone dipping into savings. Today's retirees should plan for a long retirement, as many people could risk outliving their retirement assets without a well-crafted retirement plan.	For workers who truly want to retire, developing the habit of saving early makes the task of achieving that goal more attainable. We suggest a strategic asset allocation that includes fixed income, equities, real assets, and alternative investments, based on long-term objectives. Younger workers should take advantage of time and start saving for retirement today. We recommend investors consider rebalancing portfolios regularly to account for shifts in sentiment and asset values.	We believe that equity holdings are vital for most retirement accounts. Investors may consider owning a mix of dividend-paying and value-tilted stocks for income, along with growth stocks for capital appreciation and to offset inflation. Workers nearing retirement age may be able to take advantage of annual "catch up" contributions in defined contribution plans. The IRS allows workers age 50 and older to make additional tax-deferred contributions to these plans.
How Economic Recoveries End	Historically, recessions vary in duration, depth, and magnitude. Since 1929, the U.S. has had 14 recessions, lasting from 6 to 43 months, with a median length of 10.5 months. Although no two recessions are alike, we typically observe common characteristics that can trigger recessions. As the recovery continues, we are watching for signs that the odds of a recession are building. Since recessions are a normal part of the economic cycle, investors should expect to experience them periodically—and plan accordingly.	We recommend considering a mix of active and passive strategies suitable for current market trends and investor situations. We believe that most investors should maintain equity exposure, since the latter years of an economic cycle and bull market have tended to be strong. Investors also may want to hold global exposure, as overseas markets appear more attractively valued. We recommend investors consider using high-quality bonds for income and to help offset market volatility. We believe that investors should properly diversify their portfolios. Further, regularly rebalancing back to strategic weights can help to prepare a portfolio for a market correction or economic downturn.	Investors may want to hold appropriate levels of cash alternatives and deploy cash selectively—as volatility can create opportunities. As the expansion matures, we recommend investors consider more selectivity in fixed-income holdings by reducing exposure to rate-sensitive securities, including long-duration and developed market bonds. We favor shorter-maturity securities, both in the taxable and municipal sectors. At this point in the cycle, we favor the Health Care, Financials, and Information Technology sectors. We also favor the Consumer Discretionary and Industrials sectors, which should benefit from solid consumer spending, business spending, and steady economic growth overseas.

Asset allocation and diversification do not guarantee investment returns or eliminate risk of loss.

Tactical Guidance

Recommended tactical guidance

Wells Fargo Investment Institute lowered its guidance on U.S. Small Cap Equities to unfavorable (from neutral), and raised its guidance on U.S. Short Term Taxable Fixed Income to most favorable (from favorable).

The strategic (neutral) asset allocations are based on long-term strategies. However, capital markets tend to move in cycles, and there may be short-term opportunities to enhance the risk/return relationship within a portfolio by temporarily adjusting the strategic allocations. The tactical asset allocation adjustments are designed to provide guidance on shorter-term (6–18 months) weightings in the portfolio. The minimum position of any asset class is zero, meaning that no short selling is permitted. The maximum position of all asset classes together is 100%, meaning that no leverage is permitted. The actual extent of the recommended tactical adjustments is a judgment call. It should be enough to make a difference without crowding out other assets or creating a vacuum. Also, all the tactical recommendations have to be considered together. It would not be mathematically possible to underallocate two asset groups while maintaining over-allocations in the other two. Adjustments must be made to bring all the broad asset classes into a proper relationship. These are guidelines to be used prudently for investors with temperaments that agree with a more aggressive, tactical investment style.

Additional asset class guidance

Consider long/short equity strategies: These strategies provide diversification in an equity portfolio by utilizing both long and short exposures to the asset class. While they provide diversification, investors should expect higher tracking error to traditional benchmarks from these strategies. Prudent use through controlled allocations is recommended.

Most unfavorable	Unfavorable	Neutral	Favorable	Most favorable
Cash and fixed income				
	U.S. Taxable Investment Grade Fixed Income U.S. Intermediate Term Taxable Fixed Income U.S. Long Term Taxable Fixed Income High Yield Taxable Fixed Income Developed Market Ex.-U.S. Fixed Income	Cash Alternatives	Emerging Market Fixed Income	U.S. Short Term Taxable Fixed Income**
Equities				
	U.S. Small Cap Equities**	Developed Market Ex.-U.S. Equities	U.S. Large Cap Equities U.S. Mid Cap Equities	Emerging Market Equities
Real assets				
	Public Real Estate Private Real Estate		Commodities	
Alternative investments*				
		Hedge Funds–Macro Hedge Funds–Event Driven Private Equity	Hedge Funds–Relative Value Hedge Funds–Equity Hedge	

*Alternative investments are not suitable for all investors. They are speculative and involve a high degree of risk that is suitable only for those investors who have the financial sophistication and expertise to evaluate the merits and risks of an investment in a fund and for which the fund does not represent a complete investment program. Please see end of this report for important definitions and disclosures.

**Changed January 31, 2019.

Tactical Guidance

Tactical guidance summary

	Asset class	Guidance: Most unfavorable		Neutral		Most favorable	Rationale and further detail
FIXED INCOME	U.S. Taxable Investment Grade Fixed Income	□	■	□	□	□	A risk-off environment at year-end reduced Treasury yields. We believe the market has overreacted to the risk-off sentiment; we would avoid adding significant, new allocations now, given recent price increases. Going forward, we believe that total return expectations should be tempered in view of our rising-rate forecast. Yet, high-quality fixed income is an important diversifier and can provide a portfolio shock absorber in times of market stress.
	▲U.S. Short Term Taxable	□	□	□	□	■	Short-term rates have risen since the Fed began tightening, flattening the yield curve and improving the interest-rate profile for this class. Investing in short-term securities can offer a lower volatility profile than longer-term issues, which can help mitigate the impact of unexpected rate increases.
	U.S. Intermediate Term Taxable	□	■	□	□	□	We expect the Fed to end the rate-hike cycle in 2019. Yields on intermediate-maturity bonds remain above their 12-month averages. As we see the potential for rates to increase more in intermediate maturities than we do further out on the yield curve, we remain unfavorable on this bond class.
	U.S. Long Term Taxable	□	■	□	□	□	Increasing uncertainty over the scope of further interest-rate increases, the shifting inflation outlook, trade-policy ambiguity, and a possible rise in infrastructure spending present this class with a wide range of potential outcomes. As longer-term rates have decreased in recent weeks, we see potential for additional downside risk going forward.
	High Yield Taxable Fixed Income	□	■	□	□	□	The HY spread (over Treasury yields) recently has declined, but it remains near the five-year average. While valuations have improved modestly, we are not confident that the market has bottomed. Additional market swings toward "risk-off" positioning, or an unexpected growth slowdown, could increase spreads, resulting in underperformance. We believe that investors have better risk-adjusted return opportunities elsewhere.
	Developed Market Ex-U.S. Fixed Income	□	■	□	□	□	Sovereign yields (outside the U.S.) should remain low relative to Treasury yields and should rise only gradually. Our view on the dollar is moderately negative, so we do not recommend currency hedging DM bond holdings (page 16).
	Emerging Market Fixed Income	□	□	□	■	□	We expect the current level of EM debt yields and a still-firm macro environment to support the class. The strategic index is 100% dollar-denominated. Potentially higher returns for local-currency debt come with higher currency risk in the event of adverse shocks.
EQUITIES	U.S. Large Cap Equities	□	□	□	■	□	We expect low inflation and solid EPS growth to support further, modest price appreciation and reasonable valuations in 2019.
	U.S. Mid Cap Equities	□	□	□	■	□	We look for mid caps to perform largely in line with large caps over the next 12 months. We expect higher volatility for mid caps than for large caps.
	▼U.S. Small Cap Equities	□	■	□	□	□	We recently downgraded small caps in an effort to reduce overall portfolio risk. Rising borrowing costs, weaker balance sheets, and less share buyback potential are challenges for small-cap companies. These issues are likely to put at least some pressure on valuations.
	Developed Market Ex.-U.S. Equities	□	□	■	□	□	DMs remain challenged by slow economic growth and political uncertainty. European companies face capacity constraints and may not expand without a Brexit deal. This could hamper DM equity returns; yet we forecast mid-single-digit 2019 EPS growth. One bright spot is Japan; despite recent softening of economic data, firms have seen record high profit levels.
	Emerging Market Equities	□	□	□	□	■	We expect EM earnings to rise by double digits over the next 12 months. We expect higher commodity prices to support EMs in 2019. EM governments are providing fiscal and monetary stimulus to fuel growth. We expect the U.S. dollar to weaken somewhat in 2019, which should be positive for EM returns
REAL ASSETS	Commodities	□	□	□	■	□	We expect commodities to continue benefiting from a softer U.S. dollar, robust global economic growth, and reduced trade-war fears in the coming quarters.
	Public Real Estate	□	■	□	□	□	Higher interest rates and late-cycle dynamics should pressure REIT returns going forward.
	Private Real Estate*	□	■	□	□	□	While the environment is largely supportive of real estate fundamentals, we believe that interest rate (and other) risks are rising and have the potential to negatively impact this sector. Private Real Estate funds feature a variety of strategies with differing risk/return profiles. At this point in the cycle, we are more constructive on value-add and opportunistic strategies that emphasize investment in multifamily real estate.
ALTERNATIVE INVESTMENTS*	Hedge Funds–Relative Value*	□	□	□	■	□	We favor the less-directional nature of Relative Value at a time when we see duration risk and credit risk increasing.
	Hedge Funds–Macro*	□	□	■	□	□	We maintain a neutral view on Macro strategies. Over a full market cycle, we believe that investors can benefit from the strategy's low correlation to traditional long-only stock and bond investments. Discretionary managers' more tactical, nimble approach continues to be additive to performance.
	Hedge Funds–Event Driven*	□	□	■	□	□	We maintain a neutral view on Event Driven strategies. The possibility of "localized" stresses in certain sectors or industries could provide opportunities for Distressed managers.
	Hedge Funds–Equity Hedge*	□	□	□	■	□	The environment for equity security selection is supportive, but recent challenges facing Equity Hedge require monitoring, such as unstable correlations. We expect better returns this year, due to our constructive equity market view.
	Private Equity*	□	□	■	□	□	We maintain a neutral view on Private Equity; however, we see opportunities within niche strategies such as secondaries and smaller buyout funds.

*Alternative investments are not suitable for all investors. They are speculative and involve a high degree of risk that is suitable only for those investors who have the financial sophistication and expertise to evaluate the merits and risks of an investment in a fund and for which the fund does not represent a complete investment program. Please see end of this report for important definitions and disclosures.

▲/▼: recent change.

Capital Market Assumptions

Fixed income, equities, real assets and alternative investments

Annual update; as of July 2018

Capital market and asset class assumptions are estimates of how asset classes may respond during various market environments. For example, **downside risk** is based on our assumptions about average returns and the variability of returns. It represents the minimum return that would be statistically likely in 95% of annual returns. In other words, in 19 out of 20 years, performance would likely be better than this figure and in the twentieth year it would likely be worse. There is no guarantee that any particular 20-year period would follow this pattern. **Hypothetical returns** represent our estimate of likely average returns over the next several market cycles. They do not represent the returns that an investor should expect in any particular year. **Geometric return** is the compounded annual growth rate of an investment (asset class or portfolio) over a specified period of time longer than one year. **Standard deviation** is a measure of volatility. It reflects the degree of variability surrounding the outcome of an investment decision; the higher the standard deviation, the greater the risk. **Yield** on a bond assumes constant maturity. **Dividend yield** on an equity or real-asset investment represents the projected dividend as a percentage of the purchase price. The assumptions are not designed to predict actual performance, and there are no assurances that any estimates used will be achieved. The information given has been provided as a guide to help with investment planning and does not represent the maximum loss a portfolio could experience.

Capital market assumptions (%)

	Asset class	Hypothetical arithmetic return	Hypothetical geometric return	Hypothetical standard deviation or risk	Yield or dividend yield	Downside risk
	Inflation	2.5	2.5			
	Cash Alternatives	2.5	2.5	1.0	2.5	0.9
FIXED INCOME	U.S. Short Term Taxable Fixed Income	2.7	2.7	1.8	2.7	-0.1
	U.S. Intermediate Term Taxable Fixed Income	3.2	3.1	4.5	3.1	-4.0
	U.S. Long Term Taxable Fixed Income	3.8	3.2	10.5	3.2	-12.5
	High Yield Taxable Fixed Income	6.8	6.1	12.0	6.1	-11.7
	Short Term Tax Exempt Fixed Income	2.2	2.2	1.8	2.2	-0.7
	Intermediate Term Tax Exempt Fixed Income	2.6	2.5	4.5	2.5	-4.7
	Long Term Tax Exempt Fixed Income	3.0	2.6	9.0	2.6	-11.1
	High Yield Tax Exempt Fixed Income	5.4	4.8	12.0	4.8	-13.1
	Developed Market ex.-U.S. Fixed Income	3.2	2.9	8.3	2.9	-9.7
	Emerging Market Fixed Income	6.8	6.1	12.0	6.1	-11.7
	Inflation-Linked Fixed Income	3.3	3.1	6.0	3.1	-6.3
	Preferred Stock	5.1	4.4	12.0	4.4	-13.4
EQUITIES	U.S. Large Cap Equities	8.9	7.8	16.0	2.1	-15.2
	U.S. Mid Cap Equities	9.8	8.4	17.8	1.8	-16.8
	U.S. Small Cap Equities	10.3	8.5	20.0	1.3	-19.2
	Developed Market ex.-U.S. Equities	8.9	7.5	17.5	3.0	-17.4
	Developed Market ex.-U.S. Small Cap Equities	9.8	8.0	20.0	2.0	-19.8
	Emerging Market Equities	11.5	9.2	23.0	2.3	-22.0
	Frontier Market Equities	11.1	8.2	26.0	3.5	-26.0
REAL ASSETS	Public Real Estate	8.7	7.2	18.0	4.1	-18.2
	Private Real Estate*	8.7	7.7	15.0	6.0	-14.1
	Infrastructure	8.7	7.5	16.0	4.0	-15.5
	Master Limited Partnerships	8.9	7.6	17.0	6.0	-16.7
	Timberland	7.5	6.8	12.3	5.0	-11.4
	Commodities	5.5	4.4	15.0	0.0	-17.3
ALTERNATIVE INVESTMENTS*	Hedge Funds–Relative Value	5.3	5.1	5.8	0.0	-3.9
	Hedge Funds–Macro	5.1	4.9	6.3	0.0	-4.9
	Hedge Funds–Event Driven	5.5	5.3	7.0	0.0	-5.6
	Hedge Funds–Equity Hedge	6.1	5.7	8.8	0.0	-7.7
	Private Equity	13.0	10.9	22.0	0.0	-19.3
	Private Debt	9.3	8.1	16.0	6.8	-14.9

*Alternative investments are not suitable for all investors. They are speculative and involve a high degree of risk that is suitable only for those investors who have the financial sophistication and expertise to evaluate the merits and risks of an investment in a fund and for which the fund does not represent a complete investment program. Please see end of this report for important definitions and disclosures.

Strategic Allocation

Client Goals	INCOME			GROWTH & INCOME			GROWTH		
Risk Tolerance	Conservative	Moderate	Aggressive	Conservative	Moderate	Aggressive	Conservative	Moderate	Aggressive

Efficient frontier

An efficient frontier represents the theoretical set of diversified portfolios that attempt to maximize return given a specific level of risk.

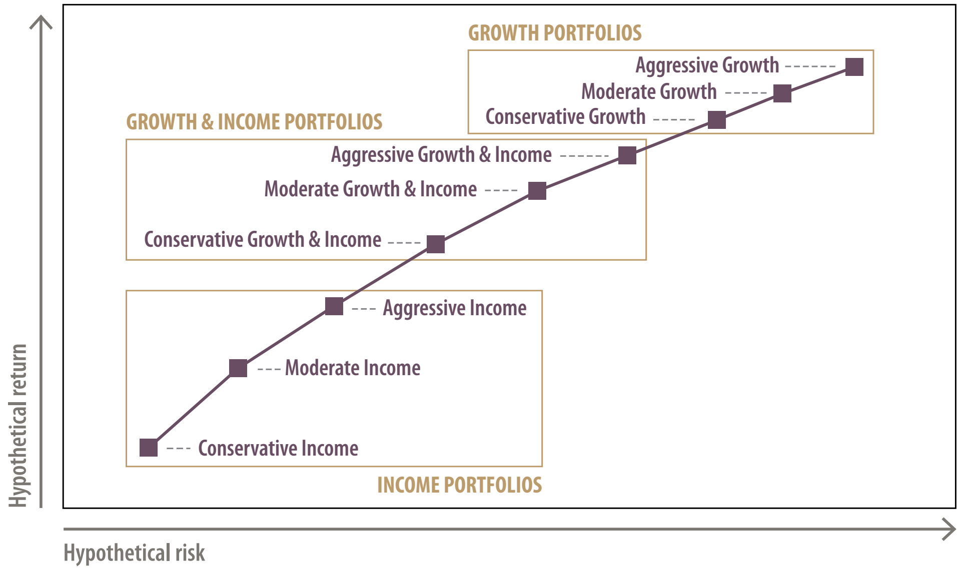


Chart is conceptual and is not meant to reflect any actual returns or represent any specific asset classifications.

Source: Wells Fargo Investment Institute, July 2018

Investment objectives definitions

INCOME

Income portfolios emphasize current income with minimal consideration for capital appreciation and usually have less exposure to more volatile growth assets but can still experience losses.

Conservative Income investors generally assume lower risk, but may still experience losses or have lower expected income returns.

Moderate Income investors are willing to accept a modest level of risk that may result in increased losses in exchange for the potential to receive modest income returns.

Aggressive Income investors seek a higher level of returns and are willing to accept a higher level of risk that may result in greater losses.

GROWTH & INCOME

Growth & Income portfolios emphasize a blend of current income and capital appreciation and usually have some exposure to more volatile growth assets.

Conservative Growth & Income investors generally assume a lower amount of risk, but may still experience losses or have lower expected returns.

Moderate Growth & Income investors are willing to accept a modest level of risk that may result in increased losses in exchange for the potential to receive modest returns.

Aggressive Growth & Income investors seek a higher level of returns and are willing to accept a higher level of risk that may result in greater losses.

GROWTH

Growth portfolios emphasize capital appreciation with minimal consideration for current income and usually have significant exposure to more volatile growth assets.

Conservative Growth investors generally assume a lower amount of risk, but may still experience increased losses or have lower expected growth returns.

Moderate Growth investors are willing to accept a modest level of risk that may result in significant losses in exchange for the potential to receive higher returns.

Aggressive Growth investors seek a higher level of returns and are willing to accept a higher level of risk that may result in more significant losses.

Strategic and Tactical Asset Allocation,

Three asset groups: fixed income, equities, real assets

		CONSERVATIVE			MODERATE			AGGRESSIVE		
		Strategic (%)	Tactical (%)	Difference (%)	Strategic (%)	Tactical (%)	Difference (%)	Strategic (%)	Tactical (%)	Difference (%)
INCOME	CASH ALTERNATIVES	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
	TOTAL FIXED INCOME	85.0	85.0	0.0	72.0	74.0	2.0	64.0	66.0	2.0
	U.S. Taxable Investment Grade Fixed Income	71.0	73.0	2.0	56.0	58.0	2.0	43.0	45.0	2.0
	U.S. Short Term Taxable	28.0	31.0	3.0	19.0	25.0	6.0	8.0	13.0	5.0
	U.S. Intermediate Term Taxable	38.0	40.0	2.0	30.0	30.0	0.0	25.0	25.0	0.0
	U.S. Long Term Taxable	5.0	2.0	-3.0	7.0	3.0	-4.0	10.0	7.0	-3.0
	High Yield Taxable Fixed Income	5.0	3.0	-2.0	6.0	4.0	-2.0	8.0	6.0	-2.0
	Developed Market Ex-U.S. Fixed Income	6.0	3.0	-3.0	5.0	2.0	-3.0	5.0	2.0	-3.0
	Emerging Market Fixed Income	3.0	6.0	3.0	5.0	10.0	5.0	8.0	13.0	5.0
	TOTAL EQUITIES	8.0	10.0	2.0	20.0	21.0	1.0	28.0	29.0	1.0
	U.S. Large Cap Equities	4.0	6.0	2.0	12.0	15.0	3.0	15.0	18.0	3.0
	U.S. Mid Cap Equities	2.0	2.0	0.0	2.0	2.0	0.0	4.0	4.0	0.0
	U.S. Small Cap Equities	0.0	0.0	0.0	2.0	0.0	-2.0	4.0	2.0	-2.0
	Developed Market Ex-U.S. Equities	2.0	2.0	0.0	4.0	4.0	0.0	5.0	5.0	0.0
	Emerging Market Equities	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	TOTAL REAL ASSETS	4.0	2.0	-2.0	5.0	2.0	-3.0	5.0	2.0	-3.0
	Public Real Estate	4.0	2.0	-2.0	5.0	2.0	-3.0	5.0	2.0	-3.0
	Commodities	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
GROWTH & INCOME	CASH ALTERNATIVES	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
	TOTAL FIXED INCOME	51.0	51.0	0.0	41.0	40.0	-1.0	33.0	32.0	-1.0
	U.S. Taxable Investment Grade Fixed Income	37.0	39.0	2.0	27.0	28.0	1.0	17.0	18.0	1.0
	U.S. Short Term Taxable	7.0	12.0	5.0	4.0	11.0	7.0	2.0	7.0	5.0
	U.S. Intermediate Term Taxable	20.0	20.0	0.0	16.0	14.0	-2.0	11.0	11.0	0.0
	U.S. Long Term Taxable	10.0	7.0	-3.0	7.0	3.0	-4.0	4.0	0.0	-4.0
	High Yield Taxable Fixed Income	6.0	4.0	-2.0	6.0	3.0	-3.0	7.0	3.0	-4.0
	Developed Market Ex-U.S. Fixed Income	3.0	0.0	-3.0	3.0	0.0	-3.0	3.0	0.0	-3.0
	Emerging Market Fixed Income	5.0	8.0	3.0	5.0	9.0	4.0	6.0	11.0	5.0
	TOTAL EQUITIES	39.0	42.0	3.0	49.0	53.0	4.0	57.0	61.0	4.0
	U.S. Large Cap Equities	17.0	20.0	3.0	21.0	24.0	3.0	25.0	28.0	3.0
	U.S. Mid Cap Equities	7.0	7.0	0.0	9.0	9.0	0.0	11.0	11.0	0.0
	U.S. Small Cap Equities	6.0	3.0	-3.0	8.0	5.0	-3.0	8.0	5.0	-3.0
	Developed Market Ex-U.S. Equities	5.0	5.0	0.0	6.0	6.0	0.0	7.0	7.0	0.0
	Emerging Market Equities	4.0	7.0	3.0	5.0	9.0	4.0	6.0	10.0	4.0
	TOTAL REAL ASSETS	7.0	4.0	-3.0	7.0	4.0	-3.0	7.0	4.0	-3.0
	Public Real Estate	5.0	2.0	-3.0	5.0	2.0	-3.0	5.0	2.0	-3.0
	Commodities	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0

Strategic allocations are updated annually; last update was July 17, 2018. Tactical allocations are updated periodically; last update was January 31, 2019.

See next page for Growth data and Portfolio allocations across the efficient frontier, strategic and tactical.

Strategic and Tactical Asset Allocation

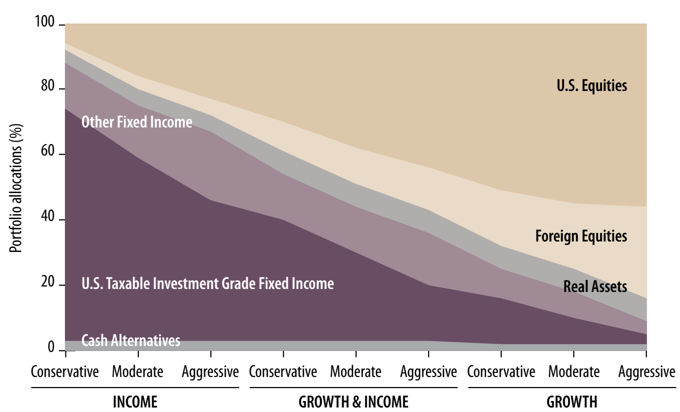
Three asset groups: fixed income, equities, real assets (continued)

		CONSERVATIVE			MODERATE			AGGRESSIVE		
		Strategic (%)	Tactical (%)	Difference (%)	Strategic (%)	Tactical (%)	Difference (%)	Strategic (%)	Tactical (%)	Difference (%)
GROWTH	CASH ALTERNATIVES	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
	TOTAL GLOBAL FIXED INCOME	23.0	23.0	0.0	16.0	16.0	0.0	7.0	6.0	-1.0
	U.S. Taxable Investment Grade Fixed Income	14.0	14.0	0.0	8.0	10.0	2.0	3.0	4.0	1.0
	Short Term Taxable	4.0	10.0	6.0	2.0	7.0	5.0	0.0	4.0	4.0
	Intermediate Taxable	6.0	4.0	-2.0	3.0	3.0	0.0	0.0	0.0	0.0
	Long Term Taxable	4.0	0.0	-4.0	3.0	0.0	-3.0	3.0	0.0	-3.0
	High Yield Taxable Fixed Income	4.0	2.0	-2.0	3.0	0.0	-3.0	2.0	0.0	-2.0
	Developed Market Ex-U.S. Fixed Income	2.0	0.0	-2.0	2.0	0.0	-2.0	0.0	0.0	0.0
	Emerging Market Fixed Income	3.0	7.0	4.0	3.0	6.0	3.0	2.0	2.0	0.0
	TOTAL GLOBAL EQUITIES	68.0	71.0	3.0	75.0	78.0	3.0	84.0	88.0	4.0
	U.S. Large Cap Equities	29.0	32.0	3.0	29.0	32.0	3.0	27.0	30.0	3.0
	U.S. Mid Cap Equities	12.0	12.0	0.0	13.0	13.0	0.0	15.0	15.0	0.0
	U.S. Small Cap Equities	10.0	6.0	-4.0	13.0	9.0	-4.0	14.0	10.0	-4.0
	Developed Market Ex-U.S. Equities	9.0	9.0	0.0	10.0	10.0	0.0	14.0	14.0	0.0
	Emerging Market Equities	8.0	12.0	4.0	10.0	14.0	4.0	14.0	19.0	5.0
	TOTAL GLOBAL REAL ASSETS	7.0	4.0	-3.0	7.0	4.0	-3.0	7.0	4.0	-3.0
	Public Real Estate	5.0	2.0	-3.0	5.0	2.0	-3.0	5.0	2.0	-3.0
	Commodities	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0

Strategic allocations are updated annually; last update was July 17, 2018. Tactical allocations are updated periodically; last update was January 31, 2019.

These allocations span the set of investments available to investors, utilizing broad diversification to help manage portfolio risk. Special issues such as liquidity, cash flow, and taxability would be taken into consideration in the choice of investment vehicles for each asset class. Depending on their tax bracket and on market conditions, investors may elect taxable or municipal bonds to implement their fixed-income allocation.

Portfolio allocations across the efficient frontier–**strategic**



Portfolio allocations across the efficient frontier–**tactical**

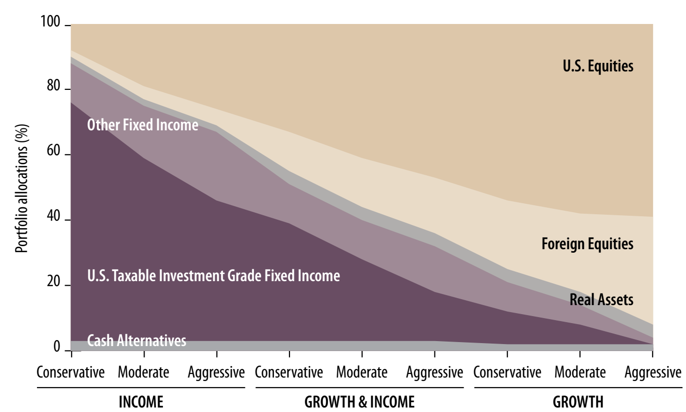


Table of Contents

Strategic and Tactical Asset Allocation

Four asset groups: fixed income, equities, real assets, alternative investments (without Private Capital)

		CONSERVATIVE			MODERATE			AGGRESSIVE		
		Strategic (%)	Tactical (%)	Difference (%)	Strategic (%)	Tactical (%)	Difference (%)	Strategic (%)	Tactical (%)	Difference (%)
INCOME	CASH ALTERNATIVES	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
	TOTAL FIXED INCOME	77.0	77.0	0.0	64.0	64.0	0.0	56.0	59.0	3.0
	U.S. Taxable Investment Grade Fixed Income	61.0	64.0	3.0	46.0	47.0	1.0	35.0	38.0	3.0
	U.S. Short Term Taxable	21.0	24.0	3.0	14.0	18.0	4.0	4.0	9.0	5.0
	U.S. Intermediate Term Taxable	35.0	38.0	3.0	25.0	26.0	1.0	21.0	21.0	0.0
	U.S. Long Term Taxable	5.0	2.0	-3.0	7.0	3.0	-4.0	10.0	8.0	-2.0
	High Yield Taxable Fixed Income	5.0	3.0	-2.0	7.0	5.0	-2.0	8.0	6.0	-2.0
	Developed Market Ex-U.S. Fixed Income	8.0	4.0	-4.0	6.0	2.0	-4.0	5.0	2.0	-3.0
	Emerging Market Fixed Income	3.0	6.0	3.0	5.0	10.0	5.0	8.0	13.0	5.0
	TOTAL EQUITIES	9.0	11.0	2.0	16.0	19.0	3.0	24.0	24.0	0.0
	U.S. Large Cap Equities	5.0	7.0	2.0	10.0	13.0	3.0	11.0	14.0	3.0
	U.S. Mid Cap Equities	2.0	2.0	0.0	2.0	2.0	0.0	6.0	6.0	0.0
	U.S. Small Cap Equities	0.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	-3.0
	Developed Market Ex-U.S. Equities	2.0	2.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0
	Emerging Market Equities	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	TOTAL REAL ASSETS	2.0	0.0	-2.0	5.0	2.0	-3.0	5.0	2.0	-3.0
	Public Real Estate	2.0	0.0	-2.0	5.0	2.0	-3.0	5.0	2.0	-3.0
	Commodities	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	TOTAL ALTERNATIVE INVESTMENTS*	9.0	9.0	0.0	12.0	12.0	0.0	12.0	12.0	0.0
	Hedge Fund–Relative Value	6.0	6.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0
	Hedge Fund–Macro	3.0	3.0	0.0	5.0	5.0	0.0	5.0	5.0	0.0
	Hedge Fund–Event Driven	0.0	0.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
	Hedge Fund–Equity Hedge	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
GROWTH AND INCOME	CASH ALTERNATIVES	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
	TOTAL FIXED INCOME	41.0	41.0	0.0	31.0	31.0	0.0	23.0	23.0	0.0
	U.S. Taxable Investment Grade Fixed Income	29.0	31.0	2.0	17.0	19.0	2.0	9.0	10.0	1.0
	U.S. Short Term Taxable	4.0	9.0	5.0	0.0	6.0	6.0	0.0	3.0	3.0
	U.S. Intermediate Term Taxable	16.0	16.0	0.0	11.0	10.0	-1.0	4.0	4.0	0.0
	U.S. Long Term Taxable	9.0	6.0	-3.0	6.0	3.0	-3.0	5.0	3.0	-2.0
	High Yield Taxable Fixed Income	5.0	3.0	-2.0	6.0	3.0	-3.0	6.0	2.0	-4.0
	Developed Market Ex-U.S. Fixed Income	3.0	0.0	-3.0	3.0	0.0	-3.0	2.0	0.0	-2.0
	Emerging Market Fixed Income	4.0	7.0	3.0	5.0	9.0	4.0	6.0	11.0	5.0
	TOTAL EQUITIES	35.0	38.0	3.0	44.0	47.0	3.0	52.0	55.0	3.0
	U.S. Large Cap Equities	13.0	16.0	3.0	20.0	23.0	3.0	22.0	25.0	3.0
	U.S. Mid Cap Equities	7.0	7.0	0.0	8.0	8.0	0.0	9.0	9.0	0.0
	U.S. Small Cap Equities	6.0	3.0	-3.0	6.0	3.0	-3.0	8.0	5.0	-3.0
	Developed Market Ex-U.S. Equities	5.0	5.0	0.0	5.0	5.0	0.0	7.0	7.0	0.0
	Emerging Market Equities	4.0	7.0	3.0	5.0	8.0	3.0	6.0	9.0	3.0
	TOTAL REAL ASSETS	7.0	4.0	-3.0	7.0	4.0	-3.0	7.0	4.0	-3.0
	Public Real Estate	5.0	2.0	-3.0	5.0	2.0	-3.0	5.0	2.0	-3.0
	Commodities	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
	TOTAL ALTERNATIVE INVESTMENTS*	14.0	14.0	0.0	15.0	15.0	0.0	15.0	15.0	0.0
	Hedge Fund–Relative Value	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
	Hedge Fund–Macro	6.0	6.0	0.0	6.0	6.0	0.0	6.0	6.0	0.0
	Hedge Fund–Event Driven	3.0	3.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0
	Hedge Fund–Equity Hedge	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0

Strategic allocations are updated annually; last update was July 17, 2018. Tactical allocations are updated periodically; last update was January 31, 2019.

See next page for Growth data and Portfolio allocations across the efficient frontier, strategic and tactical.

*Alternative investments are not suitable for all investors. They are speculative and involve a high degree of risk that is suitable only for those investors who have the financial sophistication and expertise to evaluate the merits and risks of an investment in a fund and for which the fund does not represent a complete investment program. Please see end of this report for important definitions and disclosures.

Strategic and Tactical Asset Allocation

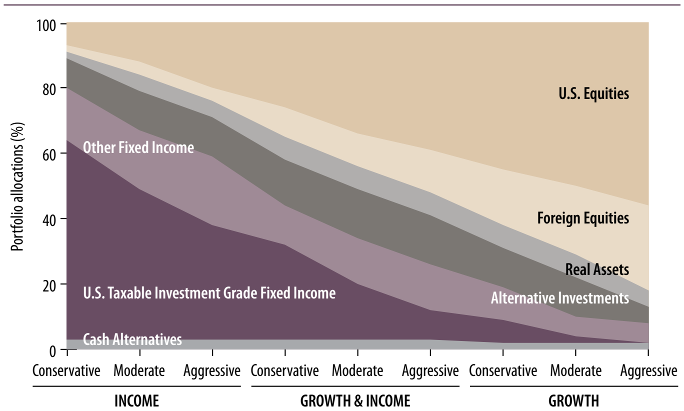
Four asset groups: fixed income, equities, real assets, alternative investments (without Private Capital) (continued)

GROWTH	CONSERVATIVE			MODERATE			AGGRESSIVE		
	Strategic (%)	Tactical (%)	Difference (%)	Strategic (%)	Tactical (%)	Difference (%)	Strategic (%)	Tactical (%)	Difference (%)
CASH ALTERNATIVES	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
TOTAL FIXED INCOME	17.0	17.0	0.0	8.0	7.0	-1.0	6.0	7.0	1.0
U.S. Taxable Investment Grade Fixed Income	7.0	8.0	1.0	2.0	4.0	2.0	0.0	4.0	4.0
U.S. Short Term Taxable	0.0	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0
U.S. Intermediate Term Taxable	4.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
U.S. Long Term Taxable	3.0	0.0	-3.0	2.0	0.0	-2.0	0.0	0.0	0.0
High Yield Taxable Fixed Income	5.0	0.0	-5.0	3.0	0.0	-3.0	3.0	0.0	-3.0
Developed Market Ex-U.S. Fixed Income	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Emerging Market Fixed Income	5.0	9.0	4.0	3.0	3.0	0.0	3.0	3.0	0.0
TOTAL EQUITIES	62.0	65.0	3.0	71.0	75.0	4.0	82.0	86.0	4.0
U.S. Large Cap Equities	24.0	27.0	3.0	25.0	28.0	3.0	25.0	28.0	3.0
U.S. Mid Cap Equities	11.0	11.0	0.0	13.0	13.0	0.0	16.0	16.0	0.0
U.S. Small Cap Equities	10.0	6.0	-4.0	12.0	8.0	-4.0	15.0	11.0	-4.0
Developed Market Ex-U.S. Equities	9.0	9.0	0.0	11.0	11.0	0.0	13.0	13.0	0.0
Emerging Market Equities	8.0	12.0	4.0	10.0	15.0	5.0	13.0	18.0	5.0
TOTAL REAL ASSETS	7.0	4.0	-3.0	7.0	4.0	-3.0	5.0	0.0	-5.0
Public Real Estate	5.0	2.0	-3.0	5.0	2.0	-3.0	5.0	0.0	-5.0
Commodities	2.0	2.0	0.0	2.0	2.0	0.0	0.0	0.0	0.0
TOTAL ALTERNATIVE INVESTMENTS*	12.0	12.0	0.0	12.0	12.0	0.0	5.0	5.0	0.0
Hedge Fund–Relative Value	2.0	2.0	0.0	2.0	2.0	0.0	0.0	0.0	0.0
Hedge Fund–Macro	6.0	6.0	0.0	6.0	6.0	0.0	3.0	3.0	0.0
Hedge Fund–Event Driven	2.0	2.0	0.0	2.0	2.0	0.0	0.0	0.0	0.0
Hedge Fund–Equity Hedge	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0

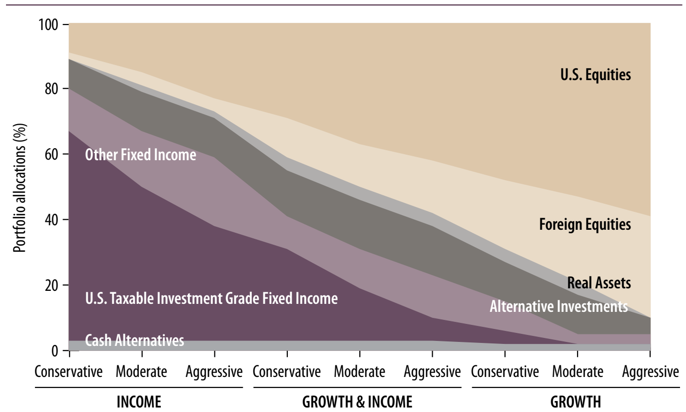
Strategic allocations are updated annually; last update was July 17, 2018. Tactical allocations are updated periodically; last update was January 31, 2019.

These allocations span the set of investments available to investors, utilizing broad diversification to help manage portfolio risk. Special issues such as liquidity, cash flow, and taxability would be taken into consideration in the choice of investment vehicles for each asset class. Depending on their tax bracket and on market conditions, investors may elect taxable or municipal bonds to implement their fixed income allocation. The tactical asset allocation overweights and underweights are designed to provide guidance on shorter-term (6–18 months) weightings in the portfolio.

Portfolio allocations across the efficient frontier–strategic



Portfolio allocations across the efficient frontier–tactical



*Alternative investments are not suitable for all investors. They are speculative and involve a high degree of risk that is suitable only for those investors who have the financial sophistication and expertise to evaluate the merits and risks of an investment in a fund and for which the fund does not represent a complete investment program. Please see end of this report for important definitions and disclosures.

↺ Table of Contents

Strategic and Tactical Asset Allocation

Four asset groups: fixed income, equities, real assets, alternative investments

		CONSERVATIVE			MODERATE			AGGRESSIVE		
		Strategic (%)	Tactical (%)	Difference (%)	Strategic (%)	Tactical (%)	Difference (%)	Strategic (%)	Tactical (%)	Difference (%)
INCOME	CASH ALTERNATIVES	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
	TOTAL FIXED INCOME	73.0	70.0	-3.0	60.0	59.0	-1.0	51.0	53.0	2.0
	U.S. Taxable Investment Grade Fixed Income	56.0	57.0	1.0	42.0	43.0	1.0	30.0	34.0	4.0
	U.S. Short Term Taxable	20.0	25.0	5.0	12.0	18.0	6.0	2.0	7.0	5.0
	U.S. Intermediate Term Taxable	31.0	30.0	-1.0	23.0	22.0	-1.0	19.0	21.0	2.0
	U.S. Long Term Taxable	5.0	2.0	-3.0	7.0	3.0	-4.0	9.0	6.0	-3.0
	High Yield Taxable Fixed Income	6.0	4.0	-2.0	7.0	5.0	-2.0	8.0	6.0	-2.0
	Developed Market Ex-U.S. Fixed Income	8.0	4.0	-4.0	6.0	2.0	-4.0	5.0	0.0	-5.0
	Emerging Market Fixed Income	3.0	5.0	2.0	5.0	9.0	4.0	8.0	13.0	5.0
	TOTAL EQUITIES	8.0	11.0	3.0	20.0	21.0	1.0	25.0	26.0	1.0
	U.S. Large Cap Equities	4.0	7.0	3.0	10.0	13.0	3.0	11.0	14.0	3.0
	U.S. Mid Cap Equities	2.0	2.0	0.0	4.0	4.0	0.0	6.0	6.0	0.0
	U.S. Small Cap Equities	0.0	0.0	0.0	2.0	0.0	-2.0	4.0	2.0	-2.0
	Developed Market Ex-U.S. Equities	2.0	2.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0
	Emerging Market Equities	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	TOTAL REAL ASSETS	5.0	5.0	0.0	6.0	6.0	0.0	10.0	7.0	-3.0
	Public Real Estate	0.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	-3.0
	Private Real Estate*	5.0	5.0	0.0	6.0	6.0	0.0	7.0	7.0	0.0
	Commodities	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	TOTAL ALTERNATIVE INVESTMENTS*	11.0	11.0	0.0	11.0	11.0	0.0	11.0	11.0	0.0
	Hedge Funds–Relative Value	5.0	5.0	0.0	5.0	5.0	0.0	5.0	5.0	0.0
	Hedge Funds–Macro	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
	Hedge Funds–Event Driven	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
	Hedge Funds–Equity Hedge	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Private Equity	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
GROWTH AND INCOME	CASH ALTERNATIVES	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
	TOTAL FIXED INCOME	39.0	38.0	-1.0	29.0	28.0	-1.0	21.0	21.0	0.0
	U.S. Taxable Investment Grade Fixed Income	25.0	28.0	3.0	15.0	18.0	3.0	7.0	10.0	3.0
	U.S. Short Term Taxable	4.0	11.0	7.0	0.0	6.0	6.0	0.0	6.0	6.0
	U.S. Intermediate Term Taxable	14.0	14.0	0.0	10.0	10.0	0.0	2.0	2.0	0.0
	U.S. Long Term Taxable	7.0	3.0	-4.0	5.0	2.0	-3.0	5.0	2.0	-3.0
	High Yield Taxable Fixed Income	6.0	2.0	-4.0	6.0	0.0	-6.0	6.0	0.0	-6.0
	Developed Market Ex-U.S. Fixed Income	3.0	0.0	-3.0	2.0	0.0	-2.0	2.0	0.0	-2.0
	Emerging Market Fixed Income	5.0	8.0	3.0	6.0	10.0	4.0	6.0	11.0	5.0
	TOTAL EQUITIES	32.0	36.0	4.0	40.0	44.0	4.0	48.0	51.0	3.0
	U.S. Large Cap Equities	14.0	17.0	3.0	18.0	21.0	3.0	22.0	25.0	3.0
	U.S. Mid Cap Equities	6.0	6.0	0.0	7.0	7.0	0.0	8.0	8.0	0.0
	U.S. Small Cap Equities	4.0	2.0	-2.0	5.0	2.0	-3.0	6.0	3.0	-3.0
	Developed Market Ex-U.S. Equities	5.0	5.0	0.0	6.0	6.0	0.0	7.0	7.0	0.0
	Emerging Market Equities	3.0	6.0	3.0	4.0	8.0	4.0	5.0	8.0	3.0
	TOTAL REAL ASSETS	10.0	7.0	-3.0	11.0	8.0	-3.0	11.0	8.0	-3.0
	Public Real Estate	3.0	0.0	-3.0	3.0	0.0	-3.0	3.0	0.0	-3.0
	Private Real Estate*	5.0	5.0	0.0	6.0	6.0	0.0	6.0	6.0	0.0
	Commodities	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
	TOTAL ALTERNATIVE INVESTMENTS*	16.0	16.0	0.0	17.0	17.0	0.0	17.0	17.0	0.0
	Hedge Funds–Relative Value	4.0	4.0	0.0	3.0	3.0	0.0	2.0	2.0	0.0
	Hedge Funds–Macro	4.0	4.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
	Hedge Funds–Event Driven	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
	Hedge Funds–Equity Hedge	0.0	0.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
	Private Equity	6.0	6.0	0.0	7.0	7.0	0.0	8.0	8.0	0.0

Strategic allocations are updated annually; last update was July 17, 2018. Tactical allocations are updated periodically; last update was January 31, 2019.

See next page for Growth data and Portfolio allocations across the efficient frontier, strategic and tactical.

*Alternative investments are not suitable for all investors. They are speculative and involve a high degree of risk that is suitable only for those investors who have the financial sophistication and expertise to evaluate the merits and risks of an investment in a fund and for which the fund does not represent a complete investment program. Please see end of this report for important definitions and disclosures.

Strategic and Tactical Asset Allocation

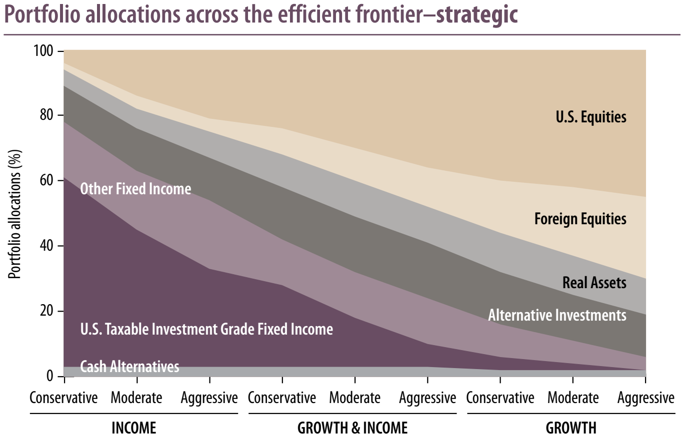
Four asset groups: fixed income, equities, real assets, alternative investments (continued)

		CONSERVATIVE			MODERATE			AGGRESSIVE		
		Strategic (%)	Tactical (%)	Difference (%)	Strategic (%)	Tactical (%)	Difference (%)	Strategic (%)	Tactical (%)	Difference (%)
GROWTH	CASH ALTERNATIVES	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
	TOTAL FIXED INCOME	14.0	15.0	1.0	9.0	8.0	-1.0	4.0	6.0	2.0
	U.S. Taxable Investment Grade Fixed Income	4.0	6.0	2.0	2.0	4.0	2.0	0.0	4.0	4.0
	U.S. Short Term Taxable	0.0	6.0	6.0	0.0	4.0	4.0	0.0	4.0	4.0
	U.S. Intermediate Term Taxable	2.0	0.0	-2.0	0.0	0.0	0.0	0.0	0.0	0.0
	U.S. Long Term Taxable	2.0	0.0	-2.0	2.0	0.0	-2.0	0.0	0.0	0.0
	High Yield Taxable Fixed Income	5.0	0.0	-5.0	4.0	0.0	-4.0	2.0	0.0	-2.0
	Developed Market Ex-U.S. Fixed Income	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Emerging Market Fixed Income	5.0	9.0	4.0	3.0	4.0	1.0	2.0	2.0	0.0
	TOTAL EQUITIES	56.0	58.0	2.0	63.0	67.0	4.0	70.0	71.0	1.0
	U.S. Large Cap Equities	24.0	27.0	3.0	24.0	27.0	3.0	24.0	24.0	0.0
	U.S. Mid Cap Equities	9.0	9.0	0.0	10.0	10.0	0.0	12.0	12.0	0.0
	U.S. Small Cap Equities	7.0	3.0	-4.0	8.0	4.0	-4.0	9.0	5.0	-4.0
	Developed Market Ex-U.S. Equities	9.0	9.0	0.0	11.0	11.0	0.0	12.0	12.0	0.0
	Emerging Market Equities	7.0	10.0	3.0	10.0	15.0	5.0	13.0	18.0	5.0
	TOTAL REAL ASSETS	12.0	9.0	-3.0	12.0	9.0	-3.0	11.0	8.0	-3.0
	Public Real Estate	3.0	0.0	-3.0	3.0	0.0	-3.0	3.0	0.0	-3.0
	Private Real Estate*	7.0	7.0	0.0	7.0	7.0	0.0	8.0	8.0	0.0
	Commodities	2.0	2.0	0.0	2.0	2.0	0.0	0.0	0.0	0.0
	TOTAL ALTERNATIVE INVESTMENTS*	16.0	16.0	0.0	14.0	14.0	0.0	13.0	13.0	0.0
	Hedge Funds–Relative Value	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Hedge Funds–Macro	3.0	3.0	0.0	2.0	2.0	0.0	0.0	0.0	0.0
	Hedge Funds–Event Driven	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Hedge Funds–Equity Hedge	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
	Private Equity	9.0	9.0	0.0	10.0	10.0	0.0	11.0	11.0	0.0

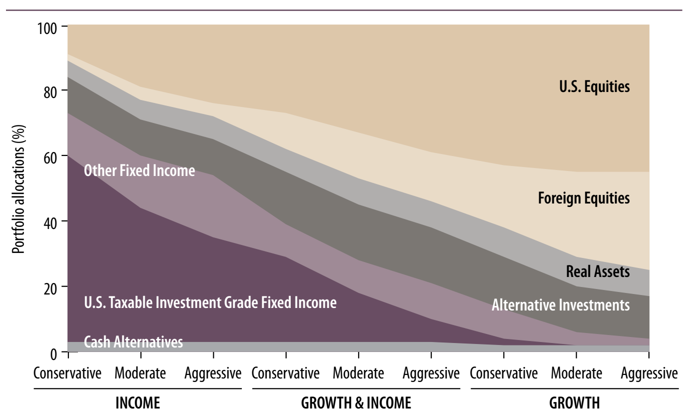
Strategic allocations are updated annually; last update was July 17, 2018. Tactical allocations are updated periodically; last update was January 31, 2019.

These allocations span the set of investments available to investors, utilizing broad diversification to help manage portfolio risk. Special issues such as liquidity, cash flow, and taxability would be taken into consideration in the choice of investment vehicles for each asset class. Depending on their tax bracket and on market conditions, investors may elect taxable or municipal bonds to implement their fixed income allocation. The tactical asset allocation overweights and underweights are designed to provide guidance on shorter-term (6–18 months) weightings in the portfolio.

Portfolio allocations across the efficient frontier–**strategic**



Portfolio allocations across the efficient frontier–**tactical**



*Alternative investments are not suitable for all investors. They are speculative and involve a high degree of risk that is suitable only for those investors who have the financial sophistication and expertise to evaluate the merits and risks of an investment in a fund and for which the fund does not represent a complete investment program. Please see end of this report for important definitions and disclosures.

↺ Table of Contents

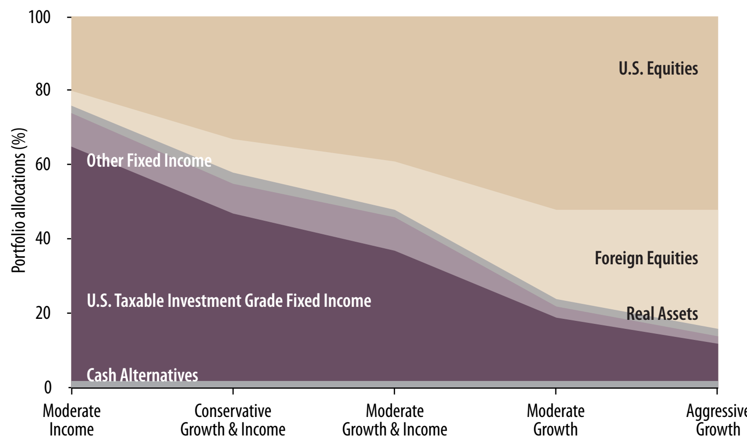
Cyclical Asset Allocation

Three asset groups: fixed income, equities, real assets

Quarterly update; as of January 2019

Our cyclical asset allocation process is based on a rolling three-year outlook—which means that the Global Investment Strategy Committee evaluates how the portfolios are expected to perform over the next 36 months based on asset valuations as well as economic and market outlooks. The cyclical approach is driven by fundamental valuations, which can lead to entering and exiting positions as opportunities arise. Over time, this approach may help avoid chasing unsustainable market swings driven by fear and greed near the end of cyclical declines or advances.

Portfolio allocations across the efficient frontier



Cyclical asset allocation mixes (%)

		Moderate Income	Conservative Growth & Income	Moderate Growth & Income	Moderate Growth	Aggressive Growth
	Cash Alternatives	2	2	2	2	2
FIXED INCOME	Total Fixed Income	72	53	44	20	12
	U.S. Short Term Taxable Fixed Income	27	15	12	10	8
	U.S. Intermediate Term Taxable Fixed Income	30	20	16	5	2
	U.S. Long Term Taxable Fixed Income	6	10	7	2	0
	High Yield Taxable Fixed Income	0	0	2	0	0
	Developed Market Ex-U.S. Fixed Income	–	–	–	–	–
	Emerging Market Fixed Income	9	8	7	3	2
EQUITIES	Total Equities	24	42	52	76	84
	U.S. Large Cap Equities	16	21	26	32	31
	U.S. Mid Cap Equities	2	7	9	13	13
	U.S. Small Cap Equities	2	5	4	7	8
	Developed Market Ex-U.S. Equities	4	5	6	10	14
	Emerging Market Equities	0	4	7	14	18
REAL ASSETS	Total Real Assets	2	3	2	2	2
	Public Real Estate	2	3	2	2	2
	Commodities	–	–	–	–	–
Total Portfolio		100%	100%	100%	100%	100%

For more information, please request our most recent *Cyclical Asset Allocation Quarterly Report*.

Disclosures

Forecasts, targets, and estimates are based on certain assumptions and on our views of market and economic conditions which are subject to change.

Risk considerations

Past performance does not indicate future results. The value or income associated with a security or an investment may fluctuate. There is always the potential for loss as well as gain. Investments discussed in this report may be unsuitable for some investors depending on their specific investment objectives and financial position.

Asset allocation and diversification are investment methods used to manage risk. They do not assure or guarantee better performance and cannot eliminate the risk of investment losses. Your individual allocation may be different than the strategic long-term allocation above due to your unique individual circumstances, but is targeted to be in the allocation ranges detailed. The asset allocation reflected above may fluctuate based on asset values, portfolio decisions, and account needs.

Liquid alternative mutual funds are subject to market and investment specific risks. Investment returns, volatility and risk vary widely among them. They employ aggressive techniques not employed by traditional stock and bond mutual funds, including the use of short sales, leverage and derivatives. Short sales involve leverage and theoretically unlimited loss potential since the market price of securities sold short may continuously increase. The use of leverage in a portfolio varies by investment strategy. The use of leverage can magnify any price movements resulting in high volatility and potentially significant loss of principal. Derivatives generally have implied leverage and entail risks such as market, interest rate, credit, counterparty and management risks. Some of the strategies employed by liquid alternative mutual funds include equity hedge, event driven, macro and relative value. These strategies may, at times, be out of market favor for considerable periods which can result in adverse consequences for the investor and the fund.

Alternative investments, such as hedge funds, private capital funds, and private real estate funds, carry specific investor qualifications and involve the risk of investment loss, including the loss of the entire amount invested. While investors may potentially benefit from the ability of alternative investments to potentially improve the risk-reward profiles of their portfolios, the investments themselves can carry significant risks. Government regulation and monitoring of these types of investments may be minimal or nonexistent. There may be no secondary market for alternative investment interests and transferability may be limited or even prohibited.

Private debt strategies seek to actively improve the capital structure of a company often through debt restructuring and deleveraging measures. Such investments are subject to potential default, limited liquidity, the creditworthiness of the private company, and the infrequent availability of independent credit ratings for private companies.

The use of **alternative investment strategies**, such as Equity Hedge, Event Driven, Macro and Relative Value, are speculative and involve a high degree of risk. These strategies may expose investors to risks such as short selling, leverage risk, counterparty risk, liquidity risk, volatility risk, the use of derivatives and other significant risks. Distressed credit strategies invest in, and might sell short, the securities of companies where the security's price has been, or is expected to be, affected by a distressed situation. This may involve reorganizations, bankruptcies, distressed sales, and other corporate restructurings. Investing in distressed companies is speculative and involves a high degree of risk. Because of their distressed situation, these securities may be illiquid, have low trading volumes, and be subject to substantial interest rate and credit risks. Structured credit strategies aim to generate returns via positions in the credit sensitive area of the fixed income markets. The strategy generally involves the purchase of corporate bonds with hedging of interest rate exposure. The use of alternative investment strategies may require a manager's skill in assessing corporate events, the anticipation of future movements in securities prices, interest rates, or other economic factors. No assurance can be given that a manager's view of the economy will be correct which may result in lower investment returns or higher return volatility.

Equity sector risks: *Communication services* companies are vulnerable to their products and services becoming outdated because of technological advancement and the innovation of competitors. Companies in the communication services sector may also be affected by rapid technology changes; pricing competition, large equipment upgrades, substantial capital requirements and government regulation and approval of products and services. In addition, companies within the industry may invest heavily in research and development which is not guaranteed to lead to successful implementation of the proposed product. Risks associated with the *Consumer Discretionary sector* include, among others, apparel price deflation due to low-cost entries, high inventory levels and pressure from e-commerce players; reduction in traditional advertising dollars; increasing household debt levels that could limit consumer appetite for discretionary purchases. *Consumer Staples industries* can be significantly affected by competitive pricing particularly with respect to the growth of low-cost emerging market production, government regulation, the performance of overall economy, interest rates, and consumer confidence. The *Energy sector* may be adversely affected by changes in worldwide energy prices, exploration, production spending, government regulation, and changes in exchange rates, depletion of natural resources and risks that arise from extreme weather conditions. Investing in *Financial Services companies* will subject a portfolio to adverse economic or regulatory occurrences affecting the sector. Some of the risks associated with investment in the *Health Care sector* include competition on branded products, sales erosion due to cheaper alternatives, research & development risk, government regulations and government approval of products anticipated to enter the market. Risks associated with investing in the *Industrial sector* include the possibility of a worsening in the global economy, acquisition integration risk, operational issues, failure to introduce to market new and innovative products, further weakening in the oil market, potential price wars due to any excesses industry capacity, and a sustained rise in the dollar relative to other currencies. *Materials industries* can be significantly affected by the volatility of commodity prices, the exchange rate between foreign currency and the dollar, export/import concerns, worldwide competition, procurement and manufacturing and cost containment issues. *Technology and Internet-related stocks*, especially of smaller, less-seasoned companies, tend to be more volatile than the overall market. *Real estate* has special risks including the possible illiquidity of underlying properties, credit risk, interest rate fluctuations and the impact of varied economic condition. *Utilities* are sensitive to changes in interest rates and the securities within the sector can be volatile and may underperform in a slow economy.

Investing in **commodities** is not suitable for all investors. Exposure to the commodities markets may subject an investment to greater share price volatility than an investment in traditional equity or debt securities. Investments in commodities may be affected by changes in overall market movements, commodity index volatility, changes in interest rates or factors affecting a particular industry or commodity. Products that invest in commodities may employ more complex strategies which may expose investors to additional risks.

Investments in **fixed-income securities** are subject to market, interest rate, credit/default, liquidity, inflation and other risks. Bond prices fluctuate inversely to changes in interest rates. Therefore, a general rise in interest rates can result in the decline in the bond's price. Credit risk is the risk that an issuer will default on payments of interest and principal. **High yield** fixed income securities are considered speculative, involve greater risk of default, and tend to be more volatile than investment grade fixed income securities. **Municipal bonds** offer interest payments exempt from federal taxes, and potentially state and local income taxes. Municipal bonds are subject to credit risk and potentially the Alternative Minimum Tax (AMT). Municipal securities are also subject to legislative and regulatory risk which is the risk that a change in the tax code could affect the value of taxable or tax-exempt interest income.

Mortgage-related and asset-backed securities are subject to the risks associated with investment in debt securities. In addition, they are subject to prepayment and call risks. Changes in prepayments may significantly affect yield, average life and expected maturity. If called prior to maturity, similar yielding investments may not be available for the Fund to purchase. These risks may be heightened for longer maturity and duration securities.

Currency hedging is a technique used to seek to reduce the risk arising from the change in price of one currency against another. The use of hedging to manage currency exchange rate movements may not be successful and could produce disproportionate gains or losses in a portfolio and may increase volatility and costs.

Equity securities are subject to market risk which means their value may fluctuate in response to general economic and market conditions and the perception of individual issuers. Investments in equity securities are generally more volatile than other types of securities.

There is no guarantee that **dividend-paying stocks** will return more than the overall stock market. Dividends are not guaranteed and are subject to change or elimination. There are no guarantees that **growth** or **value** stocks will increase in value or that their intrinsic values will eventually be recognized by the overall market. The return and principal value of stocks fluctuate with changes in market conditions. The growth and value type of investing tends to shift in and out of favor.

Disclosures *(continued)*

Investing in **foreign securities** presents certain risks that may not be present in domestic securities. For example, investments in foreign, emerging and frontier markets present special risks, including currency fluctuation, the potential for diplomatic and potential instability, regulatory and liquidity risks, foreign taxation and differences in auditing and other financial standards.

Investing in **gold**, **silver** or other precious metals involves special risk considerations such as severe price fluctuations and adverse economic and regulatory developments affecting the sector or industry.

Master Limited Partnerships (MLPs) involves certain risks which differ from an investment in the securities of a corporation. MLPs may be sensitive to price changes in oil, natural gas, etc., regulatory risk, and rising interest rates. A change in the current tax law regarding MLPs could result in the MLP being treated as a corporation for federal income tax purposes which would reduce the amount of cash flows distributed by the MLP. Other risks include the volatility associated with the use of leverage; volatility of the commodities markets; market risks; supply and demand; natural and man-made catastrophes; competition; liquidity; market price discount from Net Asset Value and other material risks.

There are special risks associated with investing in **preferred securities**. Preferred securities are subject to interest rate and credit risks and are generally subordinated to bonds or other debt instruments in an issuer's capital structure, subjecting them to a greater risk of non-payment than more senior securities. In addition, the issue may be callable which may negatively impact the return of the security. Preferred dividends are not guaranteed and are subject to deferral or elimination.

Investing in **real estate** involves special risks, including the possible illiquidity of the underlying property, credit risk, interest rate fluctuations and the impact of varied economic conditions.

Privately offered **real estate** funds are speculative and involve a high degree of risk. Investments in real estate and real estate investments trusts have special risks, including the possible illiquidity of the underlying properties, credit risk, interest rate fluctuations, and the impact of varied economic conditions. There can be no assurance a secondary market will exist and there may be restrictions on transferring interests.

The prices of **small and mid-size company** stocks are generally more volatile than large company stocks. They often involve higher risks because smaller companies may lack the management expertise, financial resources, product diversification and competitive strengths to endure adverse economic conditions.

Sovereign debt are bonds issued by a national government in a foreign currency and are used to finance a country's growth. In addition to the risks associated with investing in international and emerging markets, sovereign debt involves the risk that the issuing entity may not be able or willing to repay principal and/or interest when due in accordance with the terms of the debt agreement.

Technology and internet-related stocks, especially of smaller, less-seasoned companies, tend to be more volatile than the overall market.

Treasury Inflation-Protected Securities (TIPS) are subject to interest rate risk, especially when real interest rates rise. This may cause the underlying value of the bond to fluctuate more than other fixed income securities. TIPS have special tax consequences, generating phantom income on the "inflation compensation" component of the principal. A holder of TIPS may be required to report this income annually although no income related to "inflation compensation" is received until maturity.

There is no assurance that any of the target prices or other forward-looking statements mentioned will be attained.

Economic index definitions

An index is unmanaged and not available for direct investment

Inflation is the change in the **Consumer Price Index (CPI)**. The CPI measures the price of a fixed basket of goods and services purchased by an average consumer.

Core inflation is the change in the core C**onsumer Price Index (CPI)**. The core CPI measures the price of a fixed basket of goods and services—excluding the volatile food and energy components—purchased by an average consumer.

Conference Board's Leading Economic Index (LEI) is a composite average of ten leading indicators in the US. It one of the key elements in the Conference Board's analytic system, which is designed to signal peaks and troughs in the business cycle.

Consumer Confidence Index measures consumer confidence, which is defined as the degree of optimism on the state of the economy that consumers are expressing through their activities of savings and spending.

EU-27 Consumer Confidence. This measure tracks sentiment among households or consumers across the 27 members of the European Union. The results are based on surveys conducted among a random sample of households.

The **Eurozone index** includes only some of the largest countries for the bloc—France, Germany, Spain, Netherlands, Italy, Austria, and Ireland.

Goldman Sachs Hedge Fund VIP index consists of hedge fund managers' "Very-Important-Positions," or the US-listed stocks whose performance is expected to influence the long portfolios of hedge funds. Those stocks are defined as the positions that appear most frequently among the top 10 long equity holdings within the portfolios of fundamentally-driven hedge fund managers.

JPMorgan Emerging Market Currency Index tracks the performance of emerging-market currencies relative to the U.S. dollar.

Purchasing Managers Index (PMI) is an indicator of the economic health of the manufacturing sector. The PMI index is based on five major indicators: new orders, inventory levels, production, supplier deliveries and the employment environment.

The Producer Price Index (PPI) program measures the average change over time in the selling prices received by domestic producers for their output.

The Institute of Supply Management (ISM) Purchasing Manager's Index gauges internal demand for raw materials/goods that go into end-production. An Index value over 50 indicates expansion; below 50 indicates contraction. The values for the index can be between 0 and 100.

The **US Dollar Index (USDX, DXY)** is an index (or measure) of the value of the United States dollar relative to a basket of foreign currencies, often referred to as a basket of U.S. trade partners' currencies.

I**nstitute for Supply Management (ISM) Manufacturing Index** is based on surveys of more than 300 manufacturing firms by the Institute of Supply Management. The ISM Manufacturing Index monitors employment, production inventories, new orders and supplier deliveries.

The Institute of Supply Management (ISM) Non-manufacturing Index (ISM Services Survey) measures the rate and direction of change in activity in the nonmanufacturing industries. An index with a score over 50 indicates that the industry is expanding, and a score below 50 shows a contraction. The values for the index can be between 0 and 100.

Personal consumption expenditures (PCE) is the primary measure of consumer spending on goods and services in the U.S. economy. It accounts for about two-thirds of domestic final spending, and thus it is the primary engine that drives future economic growth.

WFII Economic Diffusion Indices are a regionally aggregated, composite measure of country-level changes in key economic metrics relative to a rolling three-year lookback period. Metrics tracked include labor market conditions and industrial productivity, trade, inflation, monetary conditions, household spending and business investment. A WFII Economic Diffusion Index score reflects a given month's reading represented by the number of standard deviations (x 100) the score is from its the 3-year mean.

Alternative investments—strategy definitions

Private Equity. **Cambridge Associates LLC U.S. Private Equity Index®** uses a horizon calculation based on data compiled from more than 1,400 institutional-quality buyout, growth equity, private equity energy, and subordinated capital funds formed between 1986 and 2017. The funds included in the index report their performance voluntarily and therefore the index may reflect a bias towards funds with records of success. Funds report unaudited quarterly data to Cambridge and Associates when calculating the index. The index is not transparent and cannot be independently verified because Cambridge Associates does not identify the funds included in the index. Because Cambridge Associates recalculates the index each time a new fund is added, the historical performance of the index is not fixed, can't be replicated and will differ over time from the day presented. The returns shown are net of fees, expenses and carried interest. Index returns do not represent fund performance.

Global Hedge Funds. **HFRI Fund Weighted Composite Index.** A global, equal-weighted index of over 2,000 single-manager funds that report to HFR Database. Constituent funds report monthly net-of-all-fees performance in U.S. Dollars and have a minimum of $50 Million under management or a 12-month track record of active performance. The HFRI Fund Weighted Composite Index does not include Funds of Hedge Funds.

Relative Value. **HFRI Relative Value (Total) Index.** Strategy is predicated on realization of a valuation discrepancy in the relationship between multiple securities. Managers employ a variety of fundamental and quantitative techniques to establish investment theses, and security types range broadly across equity, fixed income, derivative or other security types. Fixed income strategies are typically quantitatively driven to measure the existing relationship between instruments

↺ Table of Contents

Disclosures *(continued)*

and, in some cases, identify attractive positions in which the risk adjusted spread between these instruments represents an attractive opportunity for the investment manager. RV position may be involved in corporate transactions also, but as opposed to ED exposures, the investment thesis is predicated on realization of a pricing discrepancy between related securities, as opposed to the outcome of the corporate transaction.

Arbitrage. **HFRI RV: Fixed Income Sovereign Index.** Includes strategies predicated on realization of a spread between related instruments in which one or multiple components of the spread is a sovereign fixed income instrument. Strategies employ an investment process designed to isolate attractive opportunities between a variety of fixed income instruments, typically realizing an attractive spread between multiple sovereign bonds or between a corporate and risk free government bond. Fixed Income Sovereign typically employ multiple investment processes including both quantitative and fundamental discretionary approaches and relative to other Relative Value Arbitrage sub-strategies, these have the most significant top-down macro influences, relative to the more idiosyncratic fundamental approaches employed.

Long/Short Credit. **HFRI RV: Fixed Income—Corporate Index.** Includes strategies predicated on realization of a spread between related instruments in which one or multiple components of the spread is a corporate fixed-income instrument. Strategies are designed to isolate attractive opportunities between a variety of fixed income instruments, typically realizing an attractive spread between multiple corporate bonds or between a corporate and risk free government bond. They typically involve arbitrage positions with little or no net credit market exposure, but are predicated on specific, anticipated idiosyncratic developments.

Structured Credit/Asset Backed. **HFRI RV: Fixed Income—Asset Backed Index.** Includes strategies predicated on realization of a spread between related instruments in which one or multiple components of the spread is a fixed-income instrument backed by physical collateral or other financial obligations (loans, credit cards) other than those of a specific corporation. Strategies are designed to isolate attractive opportunities between a variety of fixed income instruments specifically securitized by collateral commitments, which frequently include loans, pools and portfolios of loans, receivables, real estate, machinery or other tangible financial commitments. Investment thesis may be predicated on an attractive spread given the nature and quality of the collateral, the liquidity characteristics of the underlying instruments and on issuance and trends in collateralized fixed-income instruments, broadly speaking. In many cases, investment managers hedge, limit, or offset interest-rate exposure in the interest of isolating the risk of the position to strictly the disparity between the yield of the instrument and that of the lower-risk instruments.

Macro. **HFRI Macro (Total) Index.** Encompass a broad range of strategies predicated on movements in underlying economic variables and the impact these have on equity, fixed income, hard-currency, and commodity markets. Managers employ a variety of techniques, both discretionary and systematic analysis, combinations of top-down and bottom-up theses, quantitative and fundamental approaches and long- and short-term holding periods. Although some strategies employ RV techniques, Macro strategies are distinct from RV strategies in that the primary investment thesis is predicated on predicted or future movements in the underlying instruments rather than on realization of a valuation discrepancy between securities. In a similar way, while both Macro and equity hedge managers may hold equity securities, the overriding investment thesis is predicated on the impact movements in underlying macroeconomic variables may have on security prices, as opposed to EH, in which the fundamental characteristics on the company are the most significant are integral to investment thesis.

Systematic Macro. **HFRI Macro: Systematic Diversified Index.** Diversified strategies employing mathematical, algorithmic and technical models, with little or no influence of individuals over the portfolio positioning. Strategies are designed to identify opportunities in markets exhibiting trending or momentum characteristics across individual instruments or asset classes. Strategies typically employ quantitative processes which focus on statistically robust or technical patterns in the return series of the asset, and they typically focus on highly liquid instruments and maintain shorter holding periods than either discretionary or mean-reverting strategies. Although some strategies seek to employ counter-trend models, strategies benefit most from an environment characterized by persistent, discernible trending behavior. Typically have no greater than 35% of portfolio in either dedicated currency or commodity exposures over a given market cycle.

Discretionary Macro. **HFRI Macro: Discretionary Thematic Index.** Strategies primarily rely on the evaluation of market data, relationships and influences, as interpreted by individuals who make decisions on portfolio positions; strategies employ an investment process most heavily influenced by top-down analysis of macroeconomic variables. Investment Managers may trade actively in developed and emerging markets, focusing on both absolute and relative levels on equity markets, interest rates/fixed income markets, currency and commodity markets; they frequently employ spread trades to isolate a differential between instrument identified by the Investment Manager as being inconsistent with expected value. Portfolio positions typically are predicated on the evolution of investment themes the Manager expects to develop over a relevant time frame, which in many cases contain contrarian or volatility-focused components.

Event Driven. **HFRI Event Driven (Total) Index.** Maintains positions in companies currently or prospectively involved in corporate transactions of a wide variety including mergers, restructurings, financial distress, tender offers, shareholder buybacks, debt exchanges, security issuance or other capital structure adjustments. Security types can range from most senior in the capital structure to most junior or subordinated and frequently involve additional derivative securities. Exposure includes a combination of sensitivities to equity markets, credit markets and idiosyncratic, company-specific developments. Investment theses are typically predicated on fundamental (as opposed to quantitative) characteristics, with the realization of the thesis predicated on a specific development exogenous to the existing capital structure.

Activist. **HFRI ED: Activist Index.** Strategies may obtain or attempt to obtain representation on the company's board of directors in an effort to impact the firm's policies or strategic direction and in some cases may advocate activities such as division or asset sales, partial or complete corporate divestiture, dividends or share buybacks, and changes in management. Strategies employ an investment process primarily focused on opportunities in equity and equity-related instruments of companies that are currently or prospectively engaged in a corporate transaction, security issuance/repurchase, asset sales, division spin-off or other catalyst-oriented situation. These involve both announced transactions and situations in which no formal announcement is expected to occur. Activist strategies would expect to have greater than 50% of the portfolio in activist positions, as described.

Distressed Credit. **HFRI ED: Distressed/Restructuring Index.** Strategies focus on corporate fixed-income instruments, primarily corporate credit instruments of companies trading at significant discounts to their value at issuance or obliged (par value) at maturity as a result of either formal bankruptcy proceedings or financial-market perception of near-term proceedings. Managers are typically actively involved with the management of these companies; they are frequently involved on creditors' committees in negotiating the exchange of securities for alternative obligations, either swaps of debt, equity or hybrid securities. Managers employ fundamental credit processes focused on valuation and asset coverage of securities of distressed firms; in most cases portfolio exposures are concentrated in instruments that are publicly traded, in some cases actively and in others under reduced liquidity but in general for which a reasonable public market exists. Strategies employ primarily debt (greater than 60%) but also may maintain related equity exposure.

Merger Arbitrage. **HFRI ED: Merger Arbitrage Index.** Strategies primarily focus on opportunities in equity and equity-related instruments of companies that are currently engaged in a corporate transaction. Merger Arbitrage involves primarily announced transactions, typically with limited or no exposure to situations in which no formal announcement is expected to occur. Opportunities are frequently presented in cross-border, collared, and international transactions that incorporate multiple geographic regulatory institutions, typically with minimal exposure to corporate credits. Strategies typically have over 75% of positions in announced transactions over a given market cycle.

Equity Hedge. **HFRI Equity Hedge (Total) Index.** Equity Hedge: Investment Managers who maintain positions both long and short in primarily equity and equity derivative securities. A wide variety of investment processes can be employed to arrive at an investment decision, including both quantitative and fundamental techniques; strategies can be broadly diversified or narrowly focused on specific sectors and can range broadly in terms of levels of net exposure, leverage employed, holding period, concentrations of market capitalizations and valuation ranges of typical portfolios. EH managers would typically maintain at least 50% exposure to, and may in some cases be entirely invested in, equities, both long and short.

Directional Equity. **HFRX EH: Multi-Strategy Index.** Managers maintain positions both long and short in primarily equity and equity-derivative securities. A wide variety of investment processes can be employed to arrive at an investment decision, including both quantitative and fundamental techniques; strategies can be broadly diversified or narrowly focused on specific sectors and can range broadly in terms of levels of net exposure, leverage, holding period, concentrations of market capitalizations, and valuation ranges of typical portfolios. Managers typically do not maintain more than 50% exposure to any one Equity Hedge sub-strategy.

Disclosures *(continued)*

Equity Market Neutral. **HFRI EH: Equity Market Neutral Index.** Strategies employ sophisticated quantitative techniques to analyze price data to ascertain information about future price movement and relationships between securities. These can include both Factor-based and Statistical Arbitrage/Trading strategies. Factor-based investment strategies include strategies predicated on the systematic analysis of common relationships between securities. In many cases, portfolios are constructed to be neutral to one or multiple variables, such as broader equity markets in dollar or beta terms, and leverage is frequently employed to enhance the return profile of the positions identified. Statistical Arbitrage/Trading strategies consist of strategies predicated on exploiting pricing anomalies which may occur as a function of expected mean reversion inherent in security prices; high-frequency techniques may be employed; trading strategies may also be based on technical analysis or designed opportunistically to exploit new information that the investment manager believes has not been fully, completely, or accurately discounted into current security prices. Strategies typically maintain characteristic net equity market exposure no greater than 10% long or short.

Note: While the HFRI Indices are frequently used, they have limitations (some of which are typical of other widely used indices). These limitations include survivorship bias (the returns of the indices may not be representative of all the hedge funds in the universe because of the tendency of lower performing funds to leave the index); heterogeneity (not all hedge funds are alike or comparable to one another, and the index may not accurately reflect the performance of a described style); and limited data (many hedge funds do not report to indices, and, therefore, the index may omit funds, the inclusion of which might significantly affect the performance shown. The HFRI Indices are based on information hedge fund managers decide on their own, at any time, whether or not they want to provide, or continue to provide, information to HFR Asset Management, L.L.C. Results for funds that go out of business are included in the index until the date that they cease operations. Therefore, these indices may not be complete or accurate representations of the hedge fund universe, and may be biased in several ways. Returns of the underlying hedge funds are net of fees and are denominated in USD.

Liquid alternatives—index definitions

Liquid alternatives are represented by the **Wilshire Liquid Alternative Index**. The Wilshire Liquid Alternative Index measures the collective performance of the five Wilshire Liquid Alternative strategies that make up the Wilshire Liquid Alternative Universe. The Wilshire Liquid Alternative Index is designed to provide a broad measure of the liquid alternative market by combining the performance of the Wilshire Liquid Alternative Equity Hedge Index, Wilshire Liquid Alternative Global Macro Index, Wilshire Liquid Alternative Relative Value Index, Wilshire Liquid Alternative Multi-Strategy Index and the Wilshire Liquid Alternative Event Driven Index.

Wilshire Liquid Alternative Equity Hedge Index measures the performance of the equity hedge strategy component of the Wilshire Liquid Alternative Index. Equity hedge investment strategies predominantly invest in long and short equities.

Wilshire Liquid Alternative Event Driven Index measures the performance of the event driven strategy component of the Wilshire Liquid Alternative Index. Event driven strategies predominantly invest in companies involved in corporate transactions such as mergers, restructuring, distressed, buy backs, or other capital structure changes.

Wilshire Liquid Alternative Global Macro Index measures the performance of the global macro strategy component of the Wilshire Liquid Alternative Index. Global macro strategies predominantly invest in situations driven by the macro-economic environment across the capital structure as well as currencies and commodities.

Wilshire Liquid Alternative Relative Value Index measures the performance of the relative value strategy component of the Wilshire Liquid Alternative Index. Relative value strategies are focused on the valuation discrepancy in the relationships between markets or securities.

Asset class index definitions

Fixed income representative indices

U.S. Taxable Investment Grade Fixed Income. B**loomberg Barclays US Aggregate Bond Index** is a broad-based measure of the investment grade, U.S. dollar-denominated, fixed-rate taxable bond market.

Short Term Taxable Fixed Income. **Bloomberg Barclays US Aggregate 1-3 Year Bond Index** is the one to three year component of the Barclays US Aggregate Index, which represents fixed-income securities that are SEC-registered, taxable, dollar-denominated, and investment-grade.

Intermediate Term Taxable Fixed Income. **Bloomberg Barclays US Aggregate 5-7 Year Bond Index** is composed of the Bloomberg Barclays US Government/Credit Index and the Bloomberg Barclays US Mortgage-Backed Securities Index, and includes Treasury issues, agency issues, corporate bond issues, and mortgage-backed securities with maturities of 5-7 years.

Long Term Taxable Fixed Income. **Bloomberg Barclays US Aggregate 10+ Year Bond Index** is composed of the Bloomberg Barclays US Government/Credit Index and the Bloomberg Barclays US Mortgage-Backed Securities Index, and includes Treasury issues, agency issues, corporate bond issues, and mortgage-backed securities with maturities of 10 years or more.

Cash Alternatives/Treasury Bills. **Bloomberg Barclays US Treasury Bills (1-3M) Index** is representative of money markets.

U.S. Treasury. **Bloomberg Barclays US Treasury Index** includes public obligations of the U.S. Treasury with a remaining maturity of one year or more.

U.S. Municipal Bond. **Bloomberg Barclays US Municipal Index** is considered representative of the broad market for investment grade, tax-exempt bonds with a maturity of at least one year.

U.S. TIPS. **Bloomberg Barclays US TIPS Index** represents Inflation-Protection securities issued by the U.S. Treasury.

U.S. Government. **Bloomberg Barclays US Government Bond Index** includes U.S.-dollar-denominated, fixed-rate, nominal U.S. Treasury securities and U.S. agency debentures.

Credit. **Bloomberg Barclays US Credit Index** includes investment-grade, U.S.-dollar-denominated, fixed-rate, taxable corporate- and government-related bonds.

Securitized. **Bloomberg Barclays US Mortgage Backed Securities (MBS) Index** includes agency mortgage backed pass-through securities (both fixed-rate and hybrid ARM) guaranteed by Ginnie Mae (GNMA), Fannie Mae (FNMA), and Freddie Mac (FHLMC).

High Yield Taxable Fixed Income. **Bloomberg Barclays US Corporate High-Yield Index** covers the universe of fixed-rate, non-investment-grade debt.

Developed Market Ex-U.S. Fixed Income (Unhedged). **J.P. Morgan GBI Global ex-US Index (Unhedged)** in USD is an unmanaged index market representative of the total return performance in U.S. dollars on an unhedged basis of major non-U.S. bond markets.

Developed Market Ex-U.S. Fixed Income (Hedged). **J.P. Morgan Non-U.S. Global Government Bond Index (Hedged)** is an unmanaged market index representative of the total return performance, on a hedged basis, of major non-U.S. bond markets. It is calculated in U.S. dollars.

Emerging Market Fixed Income (U.S. dollar). J**.P. Morgan Emerging Markets Bond Index (EMBI Global)** currently covers more than 60 emerging market countries. Included in the EMBI Global are U.S.-dollar-denominated Brady bonds, Eurobonds, traded loans, and local market debt instruments issued by sovereign and quasi-sovereign entities.

Emerging Market Fixed Income (Local Currency). **J.P. Morgan Government Bond Index-Emerging Markets Global (USD Unhedged)** is a comprehensive global local emerging markets index, and consists of regularly traded, liquid fixed-rate, domestic currency government bonds.

U.S. Investment Grade Corporate Fixed Income. **Bloomberg Barclays US Corporate Bond Index** measures the investment grade, fixed-rate, taxable corporate bond market. It includes USD denominated securities publicly issued by US and non-US industrial, utility and financial issuers.

Preferred Stock. **ICE BofAML Fxd Rate Pref TR USD Index** measures the performance of fixed rate US dollar denominated preferred securities issued in the US domestic market.

Equity representative indices

U.S. Large Cap Equities. **S&P 500 Index** is a capitalization-weighted index calculated on a total return basis with dividends reinvested. The index includes 500 widely held U.S. market industrial, utility, transportation and financial companies.

U.S. Large Cap Equities (Growth). **Russell 1000 Growth Index** measures the performance of the large-cap growth segment of the U.S. equity universe. It includes those Russell 1000 companies with higher price-to-book ratios and higher forecasted growth values.

U.S. Large Cap Equities (Value). **Russell 1000 Value Index** measures the performance of the large-cap value segment of the U.S. equity universe. It includes those Russell 1000 companies with lower price-to-book ratios and lower expected growth values.

U.S. Mid Cap Equities. **Russell Midcap Index** measures the performance of the mid-cap segment of the U.S. equity universe.

Disclosures *(continued)*

U.S. Mid Cap Equities (Growth). **Russell Midcap Growth Index** measures the performance of the mid-cap growth segment of the U.S. equity universe. It includes those Russell Midcap Index companies with higher price-to-book ratios and higher forecasted growth values.

U.S. Mid Cap Equities (Value). **Russell Midcap Value Index** measures the performance of the mid-cap value segment of the U.S. equity universe. It includes those Russell Midcap Index companies with lower price-to-book ratios and lower forecasted growth values.

U.S. Small Cap Equities. **Russell 2000 Index** measures the performance of the 2,000 smallest companies in the Russell 3000® Index, which represents approximately 8% of the total market capitalization of the Russell 3000 Index.

U.S. Small Cap Equities (Growth). **Russell 2000 Growth Index** measures the performance of the small-cap growth segment of the U.S. equity universe. It includes those Russell 2000 companies with higher price-to-value ratios and higher forecasted growth values.

U.S. Small Cap Equities (Value). **Russell 2000 Value Index** measures the performance of the small-cap value segment of the U.S. equity universe. It includes those Russell 2000 companies with lower price-to-book ratios and lower forecasted growth values.

Developed Market Ex-U.S. Equities (U.S. dollar)/(Local). **MSCI EAFE Index** is a free float-adjusted market capitalization index that is designed to measure the equity market performance of 21 developed markets, excluding the U.S. and Canada.

Developed Market Small Cap Equity (U.S. Dollar). The **MSCI EAFE Small Cap Gross Total Return USD (M2EASC Index)** is an equity index which captures small cap representation across developed markets countries around the world, excluding the U.S. and Canada. With 2,358 constituents, the index covers approximately 14% of the free float-adjusted market capitalization in each country. Returns measured in U.S. Dollars.

Developed Market Small Cap Equity (Local Currency). The **MSCI EAFE Small Cap Gross Total Return Local Index (GCLDEAFE Index)** is an equity index which captures small cap representation across developed markets countries around the world, excluding the U.S. and Canada. With 2,358 constituents, the index covers approximately 14% of the free float-adjusted market capitalization in each country. Priced in MSCI LCL Currency.

Emerging Market Equities (U.S. dollar)/(Local). **MSCI Emerging Markets Index** is a free float-adjusted market capitalization index that is designed to measure equity market performance of 23 emerging markets.

Frontier Market Equities (U.S. dollar)/(Local). **MSCI Frontier Markets Index** is a free float-adjusted market capitalization index that is designed to measure equity market performance of 24 frontier (least developed) markets.

Real assets representative indices

Public Real Estate. **FTSE EPRA/NAREIT Developed Index** is designed to track the performance of listed real-estate companies and REITs in developed countries worldwide.

Domestic REITs. **FTSE NAREIT US All Equity REITs Index** is designed to track the performance of REITs representing equity interests in (as opposed to mortgages on) properties. It represents all tax-qualified REITs with more than 50% of total assets in qualifying real estate assets, other than mortgages secured by real property that also meet minimum size and liquidity criteria.

International REITs. **FTSE EPRA/NAREIT Developed ex US Index** is designed to track the performance of listed real estate companies in developed countries worldwide other than the United States.

MLPs. **Alerian MLP Index** is a composite of the 50 most prominent energy Master Limited Partnerships (MLPs) that provides investors with an unbiased, comprehensive benchmark for this emerging asset class. The index, which is calculated using a float-adjusted, capitalization-weighted methodology, is disseminated real-time on a price-return basis and on a total-return basis.

Commodities (BCOM). **Bloomberg Commodity Index** is a broadly diversified index comprised of 22 exchange-traded futures on physical commodities and represents 20 commodities weighted to account for economic significance and market liquidity.

Bloomberg Commodity Indices are a family of financial benchmarks designed to provide liquid and diversified exposure to physical commodities via futures contracts. The index currently represents 20 commodities which are weighted to account for economic significance and market liquidity and 22 exchange traded futures contracts.

General disclosures

Global Investment Strategy (GIS) and Global Alternative Investments are divisions of Wells Fargo Investment Institute, Inc. (WFII). WFII is a registered investment adviser and wholly owned subsidiary of Wells Fargo Bank, N.A., a bank affiliate of Wells Fargo & Company.

The information in this report was prepared by the Global Investment Strategy division of WFII. Opinions represent WFII opinion as of the date of this report and are for general informational purposes only and are not intended to predict or guarantee the future performance of any individual security, market sector or the markets generally. GIS does not undertake to advise you of any change in its opinions or the information contained in this report. Wells Fargo & Company affiliates may issue reports or have opinions that are inconsistent with, and reach different conclusions from, this report.

The information contained herein constitutes general information and is not directed to, designed for, or individually tailored to, any particular investor or potential investor. This report is not an offer to buy or sell or solicitation of an offer to buy or sell any securities mentioned. Do not use this report as the sole basis for investment decisions. Do not select an asset class or investment product based on performance alone. Consider all relevant information, including your existing portfolio, investment objectives, risk tolerance, liquidity needs, and investment time horizon. Your actual portfolio allocation may differ from the strategic and tactical allocations reflected in this report.

Wells Fargo Advisors is registered with the U.S. Securities and Exchange Commission and the Financial Industry Regulatory Authority, but is not licensed or registered with any financial services regulatory authority outside of the U.S. Non-U.S. residents who maintain U.S.-based financial services account(s) with Wells Fargo Advisors may not be afforded certain protections conferred by legislation and regulations in their country of residence in respect of any investments, investment transactions or communications made with Wells Fargo Advisors.

Wells Fargo Advisors is a trade name used by Wells Fargo Clearing Services, LLC and Wells Fargo Advisors Financial Network, LLC, Members SIPC, separate registered broker-dealers and non-bank affiliates of Wells Fargo & Company.

Additional information is available upon request.