# WELLS FARGO

## INVESTMENT INSTITUTE

Global Investment Strategy

# 2016 Capital Market Assumptions and Strategic Asset Allocations

Tracie McMillion, CFA®

Head of Global Asset Allocation

Chris Haverland, CFA®

Global Asset Allocation Strategist

Stuart Freeman, CFA®

Co-Head of Global Equity Strategy

Paul Christopher, CFA®

Head Global Market Strategist

Brian Rehling, CFA®

Co-Head of Global Fixed Income Strategy

Veronica Willis

Global Research Analyst

# Key Takeaways

- » Meeting long-term financial goals requires an equally long-term horizon and tools to manage wealth.
- » Capital market assumptions (CMAs) are the foundation for our strategic asset allocation models and are based on the trends we expect to persist or change over the next decade as the global economy slowly evolves.
- » Inflation is the basic building block we use to create the CMAs. We believe the 10-to-15-year strategic time horizon likely will be characterized by inflation that averages somewhat above today's rates and above the Federal Reserve's (Fed's) 2.0 percent target but below the longer-term average of 3.3 percent. We have kept our inflation assumption at 2.5 percent.
- » We have also noted that real cash returns have become negative. That's because money market instruments are yielding significantly less than inflation. While we think this relationship could persist for several years, we eventually expect a return to a more normal market environment in which the cash return equals or exceeds inflation.
- » We think that the U.S. economy will continue a period of slow but steady interest rate normalization as the Fed slowly raises interest rates over our strategic horizon.
- »This year's asset allocation model portfolio statistics reflect somewhat lower returns while risk statistics are similar to last year's assumptions for stocks, bonds, and real assets.
- » Within alternative investments, we have moderately lowered our expected returns and expected risk for hedged strategies relative to last year.
- » Our strategic asset allocation recommendations include:
  - Fixed Income: Allocations continue to favor U.S. fixed income over international fixed income.
  - Equity: Allocations favor U.S. equity over international equity.
  - Real Assets: Allocations favor real estate over commodities. Real estate and commodity allocations are reduced or are held at existing levels.
  - Alternative Investments: Added to Hedge Fund exposure in Income portfolios. Reduced Hedge Fund exposure and added additional Private Capital (where applicable) exposure in Growth portfolios.

# **Long-Term Expectations**

Investing poses many challenges as we try to accumulate wealth or manage existing wealth. We each have financial needs that occur at various points in our lifetime. They can be immediate, short term, and/or long term. Therefore, we must differentiate between what's happening now, what's likely to happen next, and what's likely to happen later.

Because they're forward-looking expectations, our 2016 CMAs focus on what's likely to happen later. They are long-term averages designed to reflect what investors may experience as the economy goes through two or more economic and market cycles over the next 10 to 15 years. During this period, the equity market and interest rates are likely to rise and fall as the economy goes through both expansions and recessions.

These assumptions are based on the trends that we expect to persist or change over the next decade as the global economy evolves. They take historical trends into consideration but do not assume the future will be exactly like the past. In other words, they are not strictly historical averages.

This year, we have kept our inflation assumption at 2.5 percent. This is important because inflation is the basic building block we use to create the CMAs for other asset classes. We believe the 10-to-15-year strategic time horizon likely will be characterized by inflation that averages somewhat above today's rates and above the Federal Reserve's (the Fed) 2.0 percent target but below the longer-term average of 3.3 percent. We have also noted that real cash returns have become negative. That's because money market instruments are yielding significantly less than inflation. While this relationship could persist for several more years, we expect a return to a more normal market environment where the cash return equals or exceeds inflation within our strategic horizon.

The U.S. economy should see continued—if gradual—interest rate normalization as the Fed slowly increases interest rates over our strategic horizon.

- » This year's returns are somewhat lower while risk statistics are similar to last year's assumptions for stocks, bonds, and real assets.
- » Within alternative investments, we have slightly lowered our expected returns and modestly lowered expected risk for hedged strategies relative to last year.

# **Deriving Long-Term Expectations**

When trying to anticipate the performance of the economy and markets over the long run, it's important to understand the long-term trends. The economy and the markets may have short-term fluctuations, but long-term trends reflect the underlying fundamentals of our economic and political system. Historically, these have not changed substantially from year to year. It's almost impossible to know what will happen in any given year, but it may be possible to create a forecast on what we believe is likely to happen, on average, over a long time period based on long-term trends and the variability of those trends.

# **Expecting Long-Term Trends to Continue**

In developing our forward-looking, long-term CMAs, we take historical performance into consideration but also try to anticipate when trends may change. For example, we believe the recent below-average inflation trend is likely to continue. But we are assuming that interest rates are likely to move higher in the years ahead from today's near-historic lows. We also expect the long-term upward trend in corporate profits to continue as inflation is below its long-term average and competition within the U.S. economic system creates an incentive for businesses to innovate and grow in order to survive.

Because they're forwardlooking expectations, our 2016 CMAs focus on what's likely to happen later.

## Inflation Remains in Check

Inflation is one of the greatest threats to accumulating and preserving wealth. Even a little inflation can add up to big price increases over many years, eroding the purchasing power of accumulated savings. U.S. consumer price inflation has averaged only 2.0 percent during the past 10 years and 2.2 percent over the past 20 years. At a 2.0 percent average yearly increase in prices, the cost of consumer goods and services would have increased a total of more than 21 percent during the past decade. Investors will need to hold assets that can grow faster than the inflation rate, or their investments' purchasing power will probably diminish.

Looking ahead, we assume inflation will average 2.5 percent. The Fed is targeting 2.0 percent, but we believe policymakers will be more willing to err on the side of above-target rather than below-target inflation. Therefore, we assume inflation will average slightly more than it has in recent years.

## **Inflation Stays Tame**

10-year average of 12-month increase in consumer prices



Looking ahead, we assume inflation will average 2.5%.

Sources: Bureau of Labor Statistics and Haver Analytics (as of May 31, 2016)

## Interest Rates Remain Low

Long-term interest rates have been in a downward trend for more than 30 years. Looking ahead, interest rates may stay lower for longer but, over 10-15 years, are more likely to go up than down from current levels. As interest rates and bond yields rise, the prices of outstanding bonds tend to drop in value and vice versa.

Of course, the total return (price return plus current yield) on fixed income instruments should still be positive even as rates increase. Rising bond yields would depress bond prices, but investors who buy bonds at increasingly higher interest rates are likely to have positive income to offset some of their portfolios' price weakness. Fixed income securities still play an important role in diversifying a portfolio to help manage risk. Therefore, we continue to recommend that all portfolios include an allocation to fixed income. But we have been reducing our recommended percentage over the past few years in many portfolios as interest rates have dropped to extremely low levels.

# **Current Interest Rates Remain Historically Low**

10-Year Treasury note yields



Sources: Federal Reserve Board and Haver Analytics (as of June 30, 2016)

Yields represent past performance. Past performance is no guarantee of future results. Yields fluctuate as market conditions change.

# Corporate Profits and Stock Prices Are at Record Highs

The U.S. stock market remains in an upward trend with the S&P 500 Index near record highs this year. Investors have been willing to pay higher prices for stocks because after-tax corporate profits are rising and are also near record highs. The good news is that the U.S. stock market does not appear to have increased more than profits. The chart below shows that the stock market and profits do not always move by the same amounts at the same time. But we believe corporate profits will continue to grow over time as the U.S. economy expands. Therefore, we continue to expect equities will offer higher returns, although with more volatility, than fixed income.

# U.S. Stocks and Corporate Profits Recently Have Been Moving in Tandem

*S&P 500 and corporate profits* 

The good news is that the

U.S. stock market does not

appear to have increased

more than profits.



Sources: Bureau of Economic Analysis and Standard & Poor's (as of June 30, 2016)

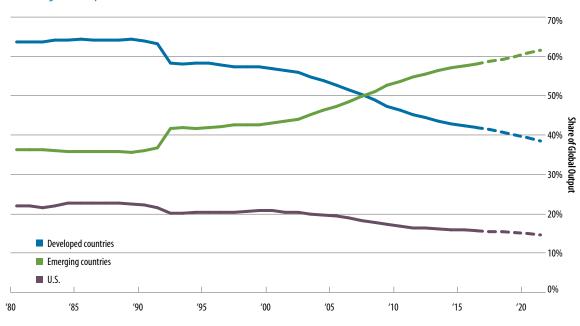
# International Opportunities Still Exist

As the chart below shows, the global economy continues to evolve with the percentage of economic activity outside the U.S. growing nearly every year. Moreover, global economic performance that is unsynchronized with the U.S. economy should create opportunities to earn positive international returns when the U.S. economy struggles. We believe investors should maintain exposure to these markets to help boost return potential. At the same time, we foresee that the historical ebb and flow in the U.S. dollar's value could continue to generate some periods of dollar strength that may detract from international investment returns. On balance, we expect the long-term opportunity to exploit broadening and widespread international economic growth to justify the potential currency risk within a diversified portfolio.

Global economic performance that's unsynchronized with the U.S. economy could produce opportunities to earn positive international returns when the U.S. economy struggles.

# **Global Economy Continues to Evolve**

Share of global output



Sources: International Monetary Fund and World Bank (as of June 30, 2016)

Dotted lines represent International Monetary Fund (IMF) estimates for years after 2015. Past performance is no guarantee of future results.

# The Building-Block Approach

One of the underlying long-term relationships we don't expect to change is the tradeoff between risk and reward. Investors are generally risk averse. This premise is the basis for the building-block approach, a methodology that is widely used in the financial industry for deriving CMAs. Investors are willing to accept a lower rate of return on less-volatile assets but demand a higher return for more-volatile assets.

Our CMAs start with the basic building block of expected inflation. Investors may be willing to purchase assets with returns below the rate of inflation in the short run under certain economic conditions, but we do not expect investors will accept a rate of return below inflation over the long run.

After setting the expected rate of inflation, we add risk premia that we anticipate investors are likely to require to hold assets with increasing volatility risk. Historically, fixed income investments have been less volatile than equities and, therefore, command a lower risk premium. We don't know the exact return a fixed income asset is likely to produce in a specific year. But historical market relationships among asset classes have tended to be relatively stable over time and can help determine the risk premium that investors are likely to demand for fixed income instruments over many years.

After deriving the fixed income risk premium, we add the extra risk premium that investors will require to hold equities over fixed income and then add the risk premium investors are likely to need to purchase international equities, which historically have been more volatile than domestic equities. These building blocks sum to the total return investors are likely to demand to invest in increasingly volatile assets over the long run.

Applying this technique, we started with the assumption that inflation is likely to average 2.5 percent during the next 10 to 15 years. Short-term interest rates on cash alternative investments are currently below this level. However, we believe short-term interest rates are unlikely to remain this low over the long run. Therefore, we assume that interest rates on cash alternatives will normalize over the course of our strategic horizon with a rate of return at or above our assumed inflation rate.

As we moved out the risk spectrum we increased risk premia to reflect returns that we anticipate investors will accept to take on the higher risk of more volatile assets. The following illustration shows conceptually how the components of return build as risk increases.

# Conceptual View of Building-Block Risk Premia

**Emerging market** risk premium Small-cap Potential expected return Fixed income default premium Fixed income Fixed income horizon premium **Expected** Expected ower. inflation inflation inflation inflation inflation inflation **TREASURY CORPORATE U.S. LARGE CAP U.S. SMALL CAP EMERGING MARKET TREASURY BILLS BONDS** BONDS **EOUITIES EOUITIES EOUITIES** Risk premia Higher Lower

These building blocks sum to the total return investors are likely to demand to invest in increasingly volatile assets over the long run.

# **Understanding Risk**

Two different statistical measures are often used within the investment industry to calculate volatility risk. One is the simple standard deviation of gains and losses on an asset over many periods. The other measure, downside risk, focuses on the potential loss an asset could experience in a particularly bad year. Downside risk is not the maximum risk of loss on the asset; it is the level a loss is likely to exceed, on average, once in 20 years. The loss in that event will be at least as bad as the downside risk figure or worse.

We assume a normal distribution of returns when deriving the standard deviation for a given asset but assume a log-normal distribution that probably better reflects the distribution of returns for calculating downside risk. Consequently, the standard deviation and downside risk are derived independently, and downside risk is not simply calculated by subtracting two standard deviations from the mean.

# 2016 Asset Class Return and Volatility Assumptions

Capital market assumptions (10- to 15-year horizon)

	HYPOTHETICAL ARITHMETIC RETURN	HYPOTHETICAL GEOMETRIC RETURN	HYPOTHETICAL RISK STANDARD DEVIATION	YIELD OR DIVIDEND YIELD	DOWNSIDE RISK	SHARPE RATIO
Inflation	2.5%					
Cash Alternatives	2.5%	2.5%	1.5%	2.5%	0.1%	
U.S. Short Term Taxable Fixed Income	2.6%	2.6%	1.8%	2.6%	-0.2%	0.08
U.S. Intermediate Taxable Fixed Income	3.2%	3.1%	5.0%	3.1%	-4.8%	0.15
U.S. Long Term Taxable Fixed Income	3.8%	3.2%	10.5%	3.2%	-12.6%	0.12
U.S. Taxable Investment Grade Fixed Income	3.2%	3.1%	5.0%	3.1%	-4.8%	0.15
Short Term Tax-Exempt Fixed Income	2.1%	2.1%	1.8%	2.1%	-0.7%	0.06
Intermediate Tax-Exempt Fixed Income	2.6%	2.5%	5.0%	2.5%	-5.4%	0.12
Long Term Tax-Exempt Fixed Income	3.0%	2.5%	10.5%	2.5%	-13.3%	0.1
Tax-Exempt Investment Grade Fixed Income	2.6%	2.5%	5.0%	2.5%	-5.4%	0.12
Preferred Stock	5.2%	4.5%	12.0%	4.5%	-13.3%	0.23
High Yield Taxable Fixed Income	6.8%	6.1%	12.0%	6.1%	-11.7%	0.36
High Yield Tax-Exempt Fixed Income	5.4%	4.8%	12.0%	4.8%	-13.1%	0.3
Developed Market Ex-U.S. Fixed Income	3.2%	2.8%	8.0%	2.8%	-9.4%	0.08
Emerging Market Fixed Income	6.9%	6.2%	12.5%	6.2%	-12.3%	0.35
Inflation-Linked Fixed Income	3.3%	3.1%	6.0%	3.1%	-6.3%	0.13
U.S. Large Cap Equities	8.9%	7.7%	16.5%	2.3%	-16.0%	0.39
U.S. Mid Cap Equities	9.8%	8.3%	18.3%	1.8%	-17.5%	0.4
U.S. Small Cap Equities	10.3%	8.5%	20.0%	1.3%	-19.3%	0.39
Developed Market Ex-U.S. Equities	8.9%	7.5%	17.5%	3.3%	-17.4%	0.36
Developed Market Ex-U.S. Small Cap Equities	10.0%	8.3%	20.0%	2.0%	-19.5%	0.38
Emerging Market Equities	11.5%	9.0%	24.0%	2.3%	-23.2%	0.37
Frontier Market Equities	11.6%	8.2%	28.0%	3.5%	-27.9%	0.32
Public Real Estate	8.7%	7.2%	18.0%	4.0%	-18.2%	0.34
Private Real Estate	8.8%	7.7%	15.0%	6.0%	-14.0%	0.42
Infrastructure	8.7%	7.5%	16.0%	4.0%	-15.5%	0.39
Master Limited Partnerships (MLPs)	8.9%	7.6%	17.0%	6.0%	-16.7%	0.37
Timberland	7.5%	6.8%	12.3%	5.0%	-11.4%	0.41
Commodities	5.5%	4.4%	15.0%	0.0%	-17.2%	0.2
Hedge Funds-Relative Value	5.3%	5.1%	5.8%	0.0%	-3.9%	0.48
Hedge Funds-Macro	5.1%	4.9%	6.3%	0.0%	-4.9%	0.41
Hedge Funds-Event Driven	5.6%	5.4%	7.0%	0.0%	-5.5%	0.45
Hedge Funds-Equity Hedge	5.8%	5.5%	8.8%	0.0%	-7.9%	0.38
Private Equity	13.2%	11.1%	22.0%	0.0%	-19.1%	0.49
Private Debt	9.3%	8.1%	16.0%	6.8%	-14.9%	0.42

#### Source: Wells Fargo Investment Institute

Capital market and asset class assumptions are estimates of how asset classes and combinations of classes may respond during various market environments. For example, Downside risk is based on our assumptions about average returns and the variability of returns represents the minimum return that would be statistically likely in 95 percent of annual returns. In other words, in 19 out of 20 years, performance would likely be better than this figure and in the 20th 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 return that would give the same result as a given series of annual returns based on those same assumptions. The return and risk assumptions are statistical averages that do not represent the experience of any individual investor or any specific time period. 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 is the yield-to-maturity of the bond. 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. Sharpe Ratio measures the additional return that an investor could expect to receive for accepting additional risk.

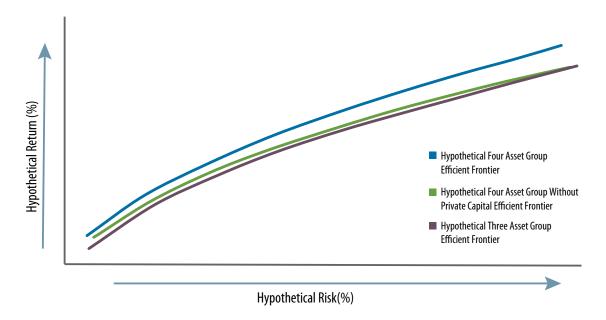
Unfortunately, statistical measures cannot tell us what will happen in any specific year, and actual experience does not always follow long-term statistical averages. Therefore, a one-in-20-year event could happen more than once in 20 years, just like a one-in-two chance of flipping a coin and getting heads could happen several times in a row, not just every other time. Despite these shortcomings, measures of variability risk can help an investor compare an individual asset's or portfolio's return and risk characteristics to better assess the risk of holding those positions.

# Portfolio Risk and Return Statistics

Our portfolio allocations are designed to provide a progression of return and risk from lower to higher, as illustrated below.



Source: Wells Fargo Investment Institute



Source: Wells Fargo Investment Institute

Chart is conceptual and does not reflect any actual returns or represent any specific asset classification.

## **Asset Allocation Recommendations**

- » We offer 27 (three sets of nine) unique portfolios to help match diverse client risk and return objectives:
  - 1. Nine Four Asset Group Portfolios—These include allocations to fixed income, equities, real assets, and alternatives (including private real estate and private equity).
  - 2. Nine Four Asset Group Portfolios (without private capital)—These include allocations to fixed income, equities, real assets, and alternatives (hedge funds) but no private asset classes (private real estate and private equity).
  - 3. Nine Three Asset Group Portfolios—These include allocations to fixed income, equities, and real assets.
- » In our 2016 strategic asset allocation recommendations, we maintain a bias for U.S. assets over international assets by investing at levels that are higher than global gross national product (GDP) and global market cap alone would suggest. Given our concern about persistent geopolitical unrest in certain parts of the world and the lagging economic recoveries in developed markets outside the U.S., we believe that the U.S. offers relatively more attractive return-to-risk opportunities in fixed income and equity markets. If they succeed with current economic reforms, international economies and their markets may merit expanded allocations in the coming years.
- » Within real assets, our allocations favor real estate over commodities. This year, real estate investment trust (REIT) and commodity allocations are reduced or are held at existing levels while private real estate has been increased.
- » We have moderately reduced our return and risk assumptions for hedged strategies. This year, we added to Hedge Fund exposure in Income portfolios as expected returns for fixed income were reduced further. We reduced Hedge Fund allocations and added to private capital (where applicable) in Growth portfolios.

In certain portfolios, we consolidated U.S. equity growth and value styles into one core asset class. For example, U.S. Large Cap Growth and U.S. Large Cap Value allocations have been combined into U.S. Large Cap Equities. Our work indicates that over longer periods of time, there is little difference in returns between these styles. Instead, going forward, we will offer tactical guidance for equity style and sectors. In certain portfolios, we have segregated diversified hedge funds into Macro and Event Driven strategies to provide further allocation guidance in this important asset group. In certain portfolios, we have removed a specific strategic allocation to frontier markets. In portfolios where this is an appropriate asset class, frontier markets may be funded using a portion of the emerging market allocation.

# Summary—Diversify to Help Manage Risk

The 2016 CMAs and strategic asset allocations have been changed to reflect our updated return and risk assumptions. In general, we have modestly lowered most return assumptions with minimal adjustments to risk this year. Our allocation recommendations have changed somewhat to reflect the current assumptions and to provide consistency across the various sets of portfolios. The CMAs are not historical averages or return-to-trend calculations. They reflect the trends that we believe investors are most likely to experience during the next 10 to 15 years.

The actual rate of return on any asset will not necessarily follow these long-term averages. Instead they are more likely to fluctuate around the averages. Therefore, it is important for investors to maintain a well-diversified asset allocation to help manage this volatility and take advantage of evolving long-term opportunities. Of course, one size does not fit all. But comparing the risk and return characteristics of various investment strategies may help an investor choose the investment profile that best suits his or her individual needs.

The 2016 CMAs and strategic asset allocations have been changed to reflect our updated return and risk assumptions.

		(	Conserva	tive		Moderate			Aggressive			
		2016	2015	CHANGE	2016	2015	CHANGE	2016	2015	CHANGE		
	Cash Alternatives	3.0%	5.0%	-2.0%	3.0%	3.0%	0.0%	3.0%	3.0%	0.0%		
	Global Fixed Income	87.0%	85.0%	2.0%	72.0%	72.0%	0.0%	64.0%	62.0%	2.0%		
	U.S. Taxable Investment Grade Fixed Income	73.0%	72.0%	1.0%	56.0%	54.0%	2.0%	43.0%	38.0%	5.0%		
	Short Term Taxable	28.0%	25.0%	3.0%	19.0%	18.0%	1.0%	8.0%	6.0%	2.0%		
	Intermediate Taxable	40.0%	43.0%	-3.0%	30.0%	31.0%	-1.0%	25.0%	24.0%	1.0%		
	Long Term Taxable	5.0%	4.0%	1.0%	7.0%	5.0%	2.0%	10.0%	8.0%	2.0%		
	High Yield Taxable Fixed Income	5.0%	5.0%	0.0%	6.0%	7.0%	-1.0%	8.0%	9.0%	-1.0%		
	Developed Market Ex-U.S. Fixed Income	6.0%	4.0%	2.0%	5.0%	4.0%	1.0%	5.0%	6.0%	-1.0%		
Income	Emerging Market Fixed Income	3.0%	4.0%	-1.0%	5.0%	7.0%	-2.0%	8.0%	9.0%	-1.0%		
ဥ	Global Equities	6.0%	6.0%	0.0%	20.0%	20.0%	0.0%	28.0%	29.0%	-1.0%		
=	U.S. Large Cap Equities	2.0%	2.0%	0.0%	12.0%	12.0%	0.0%	15.0%	15.0%	0.0%		
	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%	2.0%	0.0%	4.0%	4.0%	0.0%		
	Developed Market Ex-U.S. Equities	2.0%	2.0%	0.0%	4.0%	4.0%	0.0%	5.0%	6.0%	-1.0%		
	Emerging Market Equities	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%		
	Global Real Assets	4.0%	4.0%	0.0%	5.0%	5.0%	0.0%	5.0%	6.0%	-1.0%		
	Public Real Estate	4.0%	4.0%	0.0%	5.0%	5.0%	0.0%	5.0%	6.0%	-1.0%		
	Commodities	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%		
	Commountes	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070		
	Cash Alternatives	3.0%	3.0%	0.0%	3.0%	3.0%	0.0%	3.0%	3.0%	0.0%		
	Global Fixed Income	51.0%	59.0%	-8.0%	41.0%	41.0%	0.0%	33.0%	28.0%	5.0%		
	U.S. Taxable Investment Grade Fixed Income	37.0%	46.0%	-9.0%	27.0%	26.0%	1.0%	17.0%	11.0%	6.0%		
	Short Term Taxable	7.0%	10.0%	-3.0%	4.0%	5.0%	-1.0%	2.0%	0.0%	2.0%		
	Intermediate Taxable	20.0%	24.0%	-4.0%	16.0%	16.0%	0.0%	11.0%	9.0%	2.0%		
	Long Term Taxable	10.0%	12.0%	-2.0%	7.0%	5.0%	2.0%	4.0%	2.0%	2.0%		
<u>э</u> е	High Yield Taxable Fixed Income	6.0%	6.0%	0.0%	6.0%	7.0%	-1.0%	7.0%	8.0%	-1.0%		
ő	Developed Market Ex-U.S. Fixed Income	3.0%	2.0%	1.0%	3.0%	3.0%	0.0%	3.0%	3.0%	0.0%		
Ĕ	Emerging Market Fixed Income	5.0%	5.0%	0.0%	5.0%	5.0%	0.0%	6.0%	6.0%	0.0%		
and Income	Global Equities	39.0%	31.0%	8.0%	49.0%	49.0%	0.0%	57.0%	61.0%	-4.0%		
a a	U.S. Large Cap Equities	17.0%	13.0%	4.0%	21.0%	22.0%	-1.0%	25.0%	27.0%	-2.0%		
Ĕ	U.S. Mid Cap Equities	7.0%	4.0%	3.0%	9.0%	8.0%	1.0%	11.0%	11.0%	0.0%		
Growth	U.S. Small Cap Equities	6.0%	4.0%	2.0%	8.0%	6.0%	2.0%	8.0%	8.0%	0.0%		
	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%	5.0%	-1.0%	5.0%	7.0%	-2.0%	6.0%	8.0%	-2.0%		
	Global Real Assets	7.0%	7.0%	0.0%	7.0%	7.0%	0.0%	7.0%	8.0%	-1.0%		
	Public Real Estate	5.0%	5.0%	0.0%	5.0%	5.0%	0.0%	5.0%	6.0%	-1.0%		
	Commodities	2.0%	2.0%	0.0%	2.0%	2.0%	0.0%	2.0%	2.0%	0.0%		
		,				,			,	,		
	Cash Alternatives	2.0%	2.0%	0.0%	2.0%	2.0%	0.0%	2.0%	2.0%	0.0%		
	Global Fixed Income	23.0%	23.0%	0.0%	16.0%	11.0%	5.0%	7.0%	0.0%	7.0%		
	U.S. Taxable Investment Grade Fixed Income	14.0%	19.0%	-5.0%	8.0%	6.0%	2.0%	3.0%	0.0%	3.0%		
	Short Term Taxable	4.0%	8.0%	-4.0%	2.0%	3.0%	-1.0%	0.0%	0.0%	0.0%		
	Intermediate Taxable	6.0%	9.0%	-3.0%	3.0%	3.0%	0.0%	0.0%	0.0%	0.0%		
	Long Term Taxable	4.0%	2.0%	2.0%	3.0%	0.0%	3.0%	3.0%	0.0%	3.0%		
	High Yield Taxable Fixed Income	4.0%	4.0%	0.0%	3.0%	5.0%	-2.0%	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%		
뒫	Emerging Market Fixed Income	3.0%	0.0%	3.0%	3.0%	0.0%	3.0%	2.0%	0.0%	2.0%		
Growth	Global Equities	68.0%	67.0%	1.0%	75.0%	79.0%	-4.0%	84.0%	90.0%	-6.0%		
<u>5</u>	U.S. Large Cap Equities	29.0%	30.0%	-1.0%	29.0%	30.0%	-1.0%	27.0%	28.0%	-1.0%		
	U.S. Mid Cap Equities	12.0%	11.0%	1.0%	13.0%	13.0%	0.0%	15.0%	15.0%	0.0%		
	U.S. Small Cap Equities	10.0%	8.0%	2.0%	13.0%	12.0%	1.0%	14.0%	14.0%	0.0%		
	Developed Market Ex-U.S. Equities	9.0%	9.0%	0.0%	10.0%	12.0%	-2.0%	14.0%	17.0%	-3.0%		
	Emerging Market Equities	8.0%	9.0%	-1.0%	10.0%	12.0%	-2.0%	14.0%	16.0%	-2.0%		
	Global Real Assets	7.0%	8.0%	-1.0%	7.0%	8.0%	-1.0%	7.0%	8.0%	-1.0%		
	Public Real Estate	5.0%	5.0%	0.0%	5.0%	5.0%	0.0%	5.0%	5.0%	0.0%		
	Commodities	2.0%	3.0%	-1.0%	2.0%	3.0%	-1.0%	2.0%	3.0%	-1.0%		

# Strategic Asset Allocations – Four Asset Group Without Private Capital: Fixed Income, Equities, Real Assets, and Alternative Investments

		Conserva	itive		Moderate			Aggressive			
	2016	2015	CHANGE	2016	2015	CHANGE	2016	2015	CHANGE		
Cash Alternatives	3.0%	5.0%	-2.0%	3.0%	3.0%	0.0%	3.0%	3.0%	0.0%		
Global Fixed Income	77.0%	78.0%	-1.0%	64.0%	64.0%	0.0%	56.0%	55.0%	1.0%		
U.S. Taxable Investment Grade Fixed Income	e 61.0%	65.0%	-4.0%	46.0%	48.0%	-2.0%	35.0%	34.0%	1.0%		
Short Term Taxable	21.0%	23.0%	-2.0%	14.0%	16.0%	-2.0%	4.0%	5.0%	-1.0%		
Intermediate Taxable	35.0%	38.0%	-3.0%	25.0%	28.0%	-3.0%	21.0%	22.0%	-1.0%		
Long Term Taxable	5.0%	4.0%	1.0%	7.0%	4.0%	3.0%	10.0%	7.0%	3.0%		
High Yield Taxable Fixed Income	5.0%	5.0%	0.0%	7.0%	6.0%	1.0%	8.0%	8.0%	0.0%		
Developed Market Ex-U.S. Fixed Income	8.0%	4.0%	4.0%	6.0%	4.0%	2.0%	5.0%	5.0%	0.0%		
Emerging Market Fixed Income	3.0%	4.0%	-1.0%	5.0%	6.0%	-1.0%	8.0%	8.0%	0.0%		
Emerging Market Fixed Income  Global Equities	6.0%	6.0%	0.0%	16.0%	19.0%	-3.0%	24.0%	26.0%	-2.0%		
U.S. Large Cap Equities	2.0%	2.0%	0.0%	10.0%	11.0%	-1.0%	11.0%	12.0%	-1.0%		
U.S. Mid Cap Equities	2.0%	2.0%	0.0%	2.0%	2.0%	0.0%	6.0%	4.0%	2.0%		
U.S. Small Cap Equities	0.0%	0.0%	0.0%	0.0%	2.0%	-2.0%	3.0%	4.0%	-1.0%		
Developed Market Ex-U.S. Equities	2.0%	2.0%	0.0%	4.0%	2.0%	2.0%	4.0%	3.0%	1.0%		
Emerging Market Equities	0.0%	0.0%	0.0%	0.0%	2.0%	-2.0%	0.0%	3.0%	-3.0%		
Global Real Assets	4.0%	4.0%	0.0%	5.0%	5.0%	0.0%	5.0%	6.0%	-1.0%		
Public Real Estate	4.0%	4.0%	0.0%	5.0%	5.0%	0.0%	5.0%	6.0%	-1.0%		
Commodities	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%		
Total Alternative Investments	10.0%	7.0%	3.0%	12.0%	9.0%	3.0%	12.0%	10.0%	2.0%		
HF - Relative Value	4.0%	4.0%	0.0%	4.0%	4.0%	0.0%	4.0%	4.0%	0.0%		
HF - Macro	3.0%	3.0%	0.0%	5.0%	5.0%	0.0%	5.0%	6.0%	-1.0%		
HF - Event Driven	3.0%	0.0%	3.0%	3.0%	0.0%	3.0%	3.0%	0.0%	3.0%		
HF - Equity Hedge	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%		
Cash Alternatives	3.0%	3.0%	0.0%	3.0%	3.0%	0.0%	3.0%	3.0%	0.0%		
Global Fixed Income	41.0%	52.0%	-11.0%	31.0%	35.0%	-4.0%	23.0%	24.0%	-1.0%		
U.S. Taxable Investment Grade Fixed Income	e 29.0%	41.0%	-12.0%	17.0%	22.0%	-5.0%	9.0%	9.0%	0.0%		
Short Term Taxable	4.0%	9.0%	-5.0%	0.0%	4.0%	-4.0%	0.0%	0.0%	0.0%		
Intermediate Taxable	16.0%	21.0%	-5.0%	11.0%	14.0%	-3.0%	4.0%	7.0%	-3.0%		
Long Term Taxable	9.0%	11.0%	-2.0%	6.0%	4.0%	2.0%	5.0%	2.0%	3.0%		
High Yield Taxable Fixed Income Developed Market Ex-U.S. Fixed Income	5.0%	5.0%	0.0%	6.0%	6.0%	0.0%	6.0%	7.0%	-1.0%		
Developed Market Ex-U.S. Fixed Income	3.0%	2.0%	1.0%	3.0%	3.0%	0.0%	2.0%	3.0%	-1.0%		
Emerging Market Fixed Income	4.0%	4.0%	0.0%	5.0%	4.0%	1.0%	6.0%	5.0%	1.0%		
Global Equities	35.0%	27.0%	8.0%	44.0%	43.0%	1.0%	52.0%	51.0%	1.0%		
U.S. Large Cap Equities	13.0%	11.0%	2.0%	20.0%	20.0%	0.0%	22.0%	22.0%	0.0%		
U.S. Mid Cap Equities U.S. Mid Cap Equities	7.0%	4.0%	3.0%	8.0%	7.0%	1.0%	9.0%	9.0%	0.0%		
U.S. Small Cap Equities	6.0%	4.0%	2.0%	6.0%	5.0%	1.0%	8.0%	7.0%	1.0%		
Developed Market Ex-U.S. Equities	5.0%	4.0%	1.0%	5.0%	5.0%	0.0%	7.0%	6.0%	1.0%		
Emerging Market Equities	4.0%	4.0%	0.0%	5.0%	6.0%	-1.0%	6.0%	7.0%	-1.0%		
Global Real Assets	7.0%	7.0%	0.0%	7.0%	7.0%	0.0%	7.0%	8.0%	-1.0%		
Public Real Estate	5.0%	5.0%	0.0%	5.0%	5.0%	0.0%	5.0%	6.0%	-1.0%		
Commodities	2.0%	2.0%	0.0%	2.0%	2.0%	0.0%	2.0%	2.0%	0.0%		
Total Alternative Investments	14.0%	11.0%	3.0%	15.0%	12.0%	3.0%	15.0%	14.0%	1.0%		
HF - Relative Value	3.0%	3.0%	0.0%	3.0%	3.0%	0.0%	3.0%	3.0%	0.0%		
HF - Macro	6.0%	6.0%	0.0%	6.0%	6.0%	0.0%	6.0%	7.0%	-1.0%		
HF - Event Driven	3.0%	0.0%	3.0%	4.0%	0.0%	4.0%	4.0%	0.0%	4.0%		
HF - Equity Hedge	2.0%	2.0%	0.0%	2.0%	3.0%	-1.0%	2.0%	4.0%	-2.0%		

Growth continued on page 12

	Conservative				Moderat	e		Aggressive		
	2016	2015	CHANGE	2016	2015	CHANGE	2016	2015	CHANGE	
Cash Alternatives	2.0%	2.0%	0.0%	2.0%	2.0%	0.0%	2.0%	2.0%	0.0%	
Global Fixed Income	17.0%	20.0%	-3.0%	8.0%	9.0%	-1.0%	5.0%	0.0%	5.0%	
U.S. Taxable Investment Grade Fixed Income	7.0%	17.0%	-10.0%	2.0%	5.0%	-3.0%	0.0%	0.0%	0.0%	
Short Term Taxable	0.0%	7.0%	-7.0%	0.0%	2.0%	-2.0%	0.0%	0.0%	0.0%	
Intermediate Taxable	4.0%	8.0%	-4.0%	0.0%	3.0%	-3.0%	0.0%	0.0%	0.0%	
Long Term Taxable	3.0%	2.0%	1.0%	2.0%	0.0%	2.0%	0.0%	0.0%	0.0%	
High Yield Taxable Fixed Income	5.0%	3.0%	2.0%	3.0%	4.0%	-1.0%	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%	0.0%	5.0%	3.0%	0.0%	3.0%	2.0%	0.0%	2.0%	
Global Equities	62.0%	55.0%	7.0%	71.0%	66.0%	5.0%	81.0%	75.0%	6.0%	
U.S. Large Cap Equities	24.0%	24.0%	0.0%	25.0%	25.0%	0.0%	25.0%	24.0%	1.0%	
U.S. Mid Cap Equities	11.0%	8.0%	3.0%	13.0%	11.0%	2.0%	15.0%	12.0%	3.0%	
U.S. Small Cap Equities	10.0%	7.0%	3.0%	12.0%	10.0%	2.0%	15.0%	12.0%	3.0%	
Developed Market Ex-U.S. Equities	9.0%	8.0%	1.0%	11.0%	10.0%	1.0%	13.0%	14.0%	-1.0%	
Emerging Market Equities	8.0%	8.0%	0.0%	10.0%	10.0%	0.0%	13.0%	13.0%	0.0%	
Global Real Assets	7.0%	8.0%	-1.0%	7.0%	8.0%	-1.0%	5.0%	8.0%	-3.0%	
Public Real Estate	5.0%	5.0%	0.0%	5.0%	5.0%	0.0%	5.0%	5.0%	0.0%	
Commodities	2.0%	3.0%	-1.0%	2.0%	3.0%	-1.0%	0.0%	3.0%	-3.0%	
Total Alternative Investments	12.0%	15.0%	-3.0%	12.0%	15.0%	-3.0%	7.0%	15.0%	-8.0%	
HF - Relative Value	2.0%	2.0%	0.0%	2.0%	2.0%	0.0%	0.0%	2.0%	-2.0%	
HF - Macro	6.0%	8.0%	-2.0%	6.0%	8.0%	-2.0%	3.0%	8.0%	-5.0%	
HF - Event Driven	2.0%	0.0%	2.0%	2.0%	0.0%	2.0%	2.0%	0.0%	2.0%	
HF - Equity Hedge	2.0%	5.0%	-3.0%	2.0%	5.0%	-3.0%	2.0%	5.0%	-3.0%	

# Strategic Asset Allocations – Four Asset Group: Fixed Income, Equities, Real Assets, and Alternative Investments

	C	Conservat	ive		Moderate			Aggressive			
	2016	2015	CHANGE	2016	2015	CHANGE	2016	2015	CHANGE		
Cash Alternatives	3.0%	3.0%	0.0%	3.0%	3.0%	0.0%	3.0%				
Global Fixed Income	77.0%	83.0%	-6.0%	62.0%	61.0%	1.0%	53.0%				
U.S. Taxable Investment Grade Fixed Income	60.0%	58.0%	2.0%	44.0%	40.0%	4.0%	32.0%				
Short Term Taxable	20.0%			12.0%			2.0%				
Intermediate Taxable	35.0%			25.0%			21.0%				
Long Term Taxable	5.0%			7.0%			9.0%				
High Yield Taxable Fixed Income	6.0%	8.0%	-2.0%	7.0%	7.0%	0.0%	8.0%				
Developed Market Ex-U.S. Fixed Income	8.0%	12.0%	-4.0%	6.0%	9.0%	-3.0%	5.0%				
Emerging Market Fixed Income	3.0%	5.0%	-2.0%	5.0%	5.0%	0.0%	8.0%				
Global Equities	6.0%	0.0%	6.0%	18.0%	21.0%	-3.0%	25.0%				
U.S. Large Cap Equities	2.0%	0.0%	2.0%	10.0%	13.0%	-3.0%	11.0%				
U.S. Mid Cap Equities	2.0%	0.0%	2.0%	4.0%	4.0%	0.0%	6.0%				
U.S. Small Cap Equities	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	4.0%				
Developed Market Ex-U.S. Equities	2.0%	0.0%	2.0%	4.0%	4.0%	0.0%	4.0%				
Emerging Market Equities	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%				
Frontier Market Equities	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%				
Global Real Assets	4.0%	5.0%	-1.0%	5.0%	6.0%	-1.0%	7.0%				
Public Real Estate	2.0%	3.0%	-1.0%	2.0%	4.0%	-2.0%	3.0%				
Private Real Estate	2.0%	2.0%	0.0%	3.0%	2.0%	1.0%	4.0%				
Commodities	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%				
Total Alternative Investments	10.0%	9.0%	1.0%	12.0%	9.0%	3.0%	12.0%				
HF - Relative Value	4.0%	5.0%	-1.0%	4.0%	5.0%	-1.0%	4.0%				
HF - Macro	3.0%	2.0%	1.0%	5.0%	2.0%	3.0%	5.0%				
HF - Event Driven	3.0%	2.0%	1.0%	3.0%	2.0%	1.0%	3.0%				
HF - Equity Hedge	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%				
			· · · · · · · · · · · · · · · · · · ·								
Cash Alternatives	3.0%	3.0%	0.0%	3.0%	3.0%	0.0%	3.0%	3.0%	0.0%		
Global Fixed Income	41.0%	47.0%	-6.0%	31.0%	32.0%	-1.0%	23.0%	21.0%	2.0%		
U.S. Taxable Investment Grade Fixed Income	27.0%	30.0%	-3.0%	17.0%	20.0%	-3.0%	9.0%	10.0%	-1.0%		
Short Term Taxable	4.0%			0.0%			0.0%				
Intermediate Taxable	16.0%			12.0%			4.0%				
Long Term Taxable	7.0%			5.0%			5.0%				
High Yield Taxable Fixed Income	6.0%	6.0%	0.0%	6.0%	5.0%	1.0%	6.0%	5.0%	1.0%		
Developed Market Ex-U.S. Fixed Income	3.0%	6.0%	-3.0%	2.0%	3.0%	-1.0%	2.0%	2.0%	0.0%		
Emerging Market Fixed Income	5.0%	5.0%	0.0%	6.0%	4.0%	2.0%	6.0%	4.0%	2.0%		
Global Equities	32.0%	29.0%	3.0%	40.0%	43.0%	-3.0%	48.0%	51.0%	-3.0%		
U.S. Large Cap Equities	14.0%	12.0%	2.0%	18.0%	17.0%	1.0%	22.0%	20.0%	2.0%		
U.S. Mid Cap Equities	6.0%	6.0%	0.0%	7.0%	8.0%	-1.0%	8.0%	8.0%	0.0%		
U.S. Small Cap Equities	4.0%	2.0%	2.0%	5.0%	4.0%	1.0%	6.0%	5.0%	1.0%		
Developed Market Ex-U.S. Equities	5.0%	5.0%	0.0%	6.0%	8.0%	-2.0%	7.0%	10.0%	-3.0%		
Emerging Market Equities	3.0%	4.0%	-1.0%	4.0%	6.0%	-2.0%	5.0%	8.0%	-3.0%		
Frontier Market Equities	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%		
Global Real Assets	9.0%	10.0%	-1.0%	10.0%	10.0%	0.0%	10.0%	10.0%	0.0%		
Public Real Estate Private Real Estate	3.0% 4.0%	4.0% 4.0%	-1.0% 0.0%	3.0% 5.0%	4.0% 4.0%	-1.0% 1.0%	3.0% 5.0%	4.0% 4.0%	-1.0% 1.0%		
Commodities	4.0% 2.0%	4.0% 2.0%	0.0%	2.0%	4.0% 2.0%	0.0%	2.0%	4.0% 2.0%	0.0%		
Total Alternative Investments	15.0%	11.0%	4.0%	16.0%	12.0%	4.0%	16.0%	15.0%	1.0%		
HF - Relative Value	4.0%	4.0%	0.0%	3.0%	2.0%	1.0%	2.0%	2.0%	0.0%		
HF - Macro	4.0%	2.0%	2.0%	3.0%	2.0%	1.0%	3.0%	2.0%	1.0%		
HF - Event Driven	2.0%	3.0%	-1.0%	2.0%	3.0%	-1.0%	2.0%	4.0%	-2.0%		
HF - Equity Hedge	0.0%	0.0%	0.0%	2.0%	3.0%	-1.0%	2.0%	3.0%	-1.0%		
Private Equity	5.0%	2.0%	3.0%	6.0%	2.0%	4.0%	7.0%	4.0%	3.0%		

Growth continued on page 14

## Disclosures

This material has been prepared solely for information purposes and is not a recommendation to invest in any particular asset class or strategy. Investments fluctuate with changes in market and economic conditions and in different environments due to numerous factors some of which may be unpredictable. The asset classes in the tables above are represented by broad-based securities market indices which have been selected because they are well-known and easily recognizable by investors. Indices have limitations because they have volatility and other material characteristics that may differ from those of a portfolio. They are unmanaged and not available for direct investment. Hedge fund indices have limitations which are typical of other widely used market indices but these indices are also subject to survivorship bias and limited data. Investments included in a portfolio may differ significantly from the holdings, weightings and asset allocation of an index and, unlike an index, an investment portfolio is subject to fees, expenses, taxes, transaction costs and other charges typically associated with an investment account. The performance and volatility of a portfolio may be materially different from the performance of an index and should not be relied upon as a measure of the performance your portfolio may achieve. CMA forecasts are not promises of actual returns or performance that may be realized. They are based on estimates and assumptions that may not occur.

Each asset class has its own risk and return characteristics. Alternative investments, such as hedge funds and private equity, are more complex investment vehicles. They trade in diverse complex strategies that are affected in different ways and at different times by changing market conditions. Strategies may, at times, be out of market favor for considerable periods with adverse consequences. Equity securities offer long-term growth potential, but may fluctuate more and provide less current income than other investments. Small- and mid-company stocks are generally more volatile and less liquid than large company stocks. Foreign investing entails special risks such as currency, political, economic, and market risks. These risks are heightened in emerging markets. Real assets are subject to the risks associated with real estate, commodities and other investments and may not be suitable for all investors. The commodities markets are considered speculative, carry substantial risks, and have experienced periods of extreme volatility. Real estate investments have special risks, including possible illiquidity of the underlying properties, credit risk, interest rate fluctuations, and the impact of varied economic conditions. Private real estate investing is speculative and not suitable for all investors. Bonds are subject to interest rate, price, credit/default and other risks. Prices tend to be inversely affected by changes in interest rates. 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. Before investing, be sure you are aware of, and understand, all risks associated with a particular investment andasset class.

Wells Fargo Investment Institute, Inc. (WFII) is a registered investment adviser and wholly-owned subsidiary of Wells Fargo & Company and provides investment advice to Wells Fargo Bank, N.A., Wells Fargo Advisors, and other Wells Fargo affiliates. Wells Fargo Bank, N.A. is a bank affiliate of Wells Fargo & Company. The information in this report was prepared by the Global Investment Strategy (GIS) division of WFII. Opinions represent GIS'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. This report is not intended to be a client-specific suitability analysis or recommendation, an offer to participate in any investment, or a recommendation to buy, hold, or sell securities. 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 you existing portfolio, investment objectives, risk tolerance, liquidity needs, and investment time horizon. Wells Fargo Advisors is the trade name used by two separate registered broker-dealers: Wells Fargo Advisors, LLC and Wells Fargo Advisors Financial Network, LLC, Members SIPC, non-bank affiliates of Wells Fargo & Company.

© 2016 Wells Fargo Investment Institute. All rights reserved.