

WEEKLY CAPITAL MARKET OUTLOOK

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In Brief

- **Concerns about the risks of balance sheet normalization are overblown in our view.**
The bigger risk as global growth accelerates is an eventual need to raise interest rates more than the market expects. Still, with inflation relatively low, accommodative policy should persist. Higher-than-anticipated interest rates can still be accommodative.
- **Equity Markets Reach New Highs, but Recession Risk Remains Low**
The S&P 500 rose to new cycle highs last week for a second consecutive time, with implied volatility as measured by the VIX index falling below 10% on a closing basis for the first time in over six weeks. But absent growing evidence that a recession may be approaching, we would expect the market uptrend to remain intact.
- **Global Labor Shock 2.0 and the Investment Implications**
The labor shock of the late 20th century produced a tectonic shift that rattled every corner of the world. This shock is about to go into reverse, with the global demographic sweet spot—abundant labor—about to turn sour owing to a shrinking and aging global labor force.

Economic Outlook

Robert T. McGee, Director of Macro Strategy and Research

RISKS FROM CENTRAL BANK BALANCE-SHEET NORMALIZATION

In a September 19 interview on CNBC, Ray Dalio, the head of Bridgewater Associates, described his concerns that the reversal of the massive quantitative easing that has ballooned many central-bank balance sheets over the past decade could turn out to be a mistake on par with the policy blunder that the Federal Reserve (the Fed) committed in 1937. The U.S. central bank tightened policy prematurely that year, causing another recession and prolonging the Great Depression by four years.

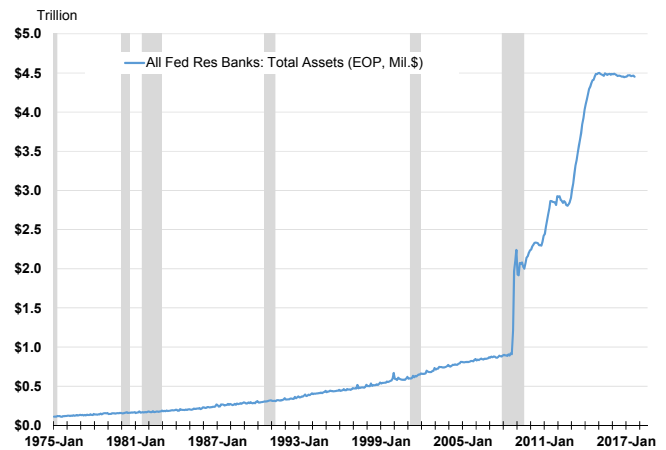
Indeed, over the past decade, Fed officials have raised the specter of that 1937 blunder as a cautionary tale that justified policymakers' view that "risk management" considerations have warranted erring on the side of excessive ease. The downside consequences of a relapse into the deflationary abyss were judged orders of magnitude worse than the consequences from an inflationary overshoot that could be more easily addressed.

Events have proved the Fed's caution well justified, at least up until now. Inflation has consistently run below target and signs of economic overheating are sparse. In fact, it's easy to conclude that the Fed should have been even easier rather than tighter during the past decade, if falling short of the inflation target is the basis for judgment. This has validated the Fed's downside-risk fears to some extent.

The persistence of signs that the lingering aftershocks from the financial crisis are inhibiting economic "normalization" are also implicit in the widespread acceptance of the "secular stagnation" view that seems to

justify Mr. Dalio's bias toward the downside risks inherent in removing the extraordinary monetary accommodation of the past decade (Exhibit 1). Despite these concerns, on September 20th, the Federal Reserve confirmed that it will start its balance sheet run-off in October, allowing a combined \$10 billion a month of Treasury and mortgage-backed securities to mature without replacement. Each quarter thereafter, the monthly run-off caps will rise by an additional \$10 billion, culminating in the fourth quarter of 2018 with \$50 billion per month of run-off. Unanswered is the eventual size of the balance sheet that would cause the Fed to stop shrinking the monetary base. Estimates seem centered around \$3 trillion to \$3.5 trillion as the goal, which based on the announced schedule would occur after about three years of run-off.

Exhibit 1: Time to Normalize the Fed Balance Sheet.



Sources: Federal Reserve Board/ Haver Analytics
Data as of September 20, 2017.

Before the financial crisis in 2007 and 2008, the Fed's balance sheet was less than \$1 trillion. This year, it's averaged just shy of \$4.5 trillion (Exhibit 1). Normal growth over the past decade based on the trend between 1992 and 2007 would have brought it up to about \$2 trillion by now. New operating procedures suggest a somewhat larger size is required beyond what the pre-financial-crisis growth rate would suggest. Because these are uncharted waters, no one knows for sure, hence the uncertainty and the risks.

In some ways, the Fed has a first-mover advantage since other central banks (mainly the ECB and the Bank of Japan) are still adding about \$100 billion per month to their balance sheets. A year ago, they were adding about \$180 billion per month. By the end of 2018, with further ECB tapering and the U.S. run-off, net additions will approach zero.

What are the likely consequences?

Basically, the global central banks have been withdrawing more than enough fixed-income supply from the markets to more than offset the net new issuance from governments. The bond supply to markets has been shrinking, raising prices and depressing yields. From 2016 to 2018, a major shift in supply to the markets on the order of \$2 trillion is likely. The most obvious consequence is a likely rise in longer-term sovereign rates. For example, in her September 20 press conference, Chair Yellen cited Fed research that estimated quantitative easing has depressed longer-term rates by about 100 basis points. A rough guess is the unwind of global QE will add that back.

Risk premia on longer rates have been abnormally and deeply negative during the period of massive central-bank purchases. They are likely to revert to normal as the balance-sheet unwind progresses. Low longer-term rates have been mistaken for signs that the economy is vulnerable to weakening rather than a sign that central-bank purchases are keeping long rates artificially low. They have been a major stimulus behind the synchronized global acceleration in growth and rising equity values.

As these purchases wind down and net redemptions return massive supply back into the market, interest rates will become more reflective of economic fundamentals. Artificially depressed long-term sovereign interest rates will thus revert to higher, more normal levels that will filter through the entire constellation of asset values. Equities, for example, now appear to be reasonably valued when compared to abnormally low bond yields. That

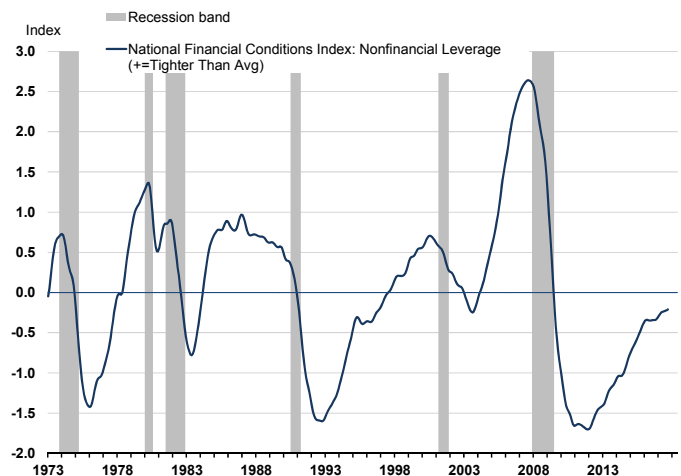
will change as rates rise unless profits increase sufficiently to justify higher prices. Within equities, higher rates are generally better for value stocks and worse for growth companies.

One sign that upside economic risks may be more likely than downside risks is the relative underperformance of defensive stocks, like those in the consumer-staples sector. From September 2015 to February 2016, when many investors were worried that a global recession was coming, the staples sector outperformed, as it usually does when growth fears surface. Since that highpoint almost 20 months ago, staples have consistently underperformed, as markets have increasingly embraced the view that the U.S. and global economies are on a roll. This is clearly a stronger-growth signal.

U.S. leading indicators surprised to the upside last month and also point to continued acceleration in growth. We believe that hurricane reconstruction will add extra oomph over the next year. Fiscal stimulus has already begun to pick up with increased relief spending and strong additions to the defense budget. Tax reform now appears likely to include more substantial stimulus for 2018 than the markets had expected, as key deficit hawks, such as Senator Corker, agree to loosen budget constraints.

Adding major stimulus along with key productivity-enhancing structural reforms at a time when the U.S. economy is already at full employment with no signs of slowing implies that growth is likely to continue to accelerate over the next year. The strong global backdrop reinforces this view. Consumers are in the best financial shape in decades. The latest data on household wealth shows new record levels that will support strong real consumption spending at least at the 3% average pace of the past four years. In addition, wage gains are picking up as record unfilled jobs enhance worker bargaining power. Overall leverage is still at mid-cycle rather than late-cycle levels (Exhibit 2), which also suggests more room to borrow and grow. Housing and vehicle purchases should remain strong as a result.

**Exhibit 2: Despite Low Rates,
Borrowing Is Still Slow
Compared to Past Cycles.**



Sources: Federal Reserve Bank of Chicago;
Haver Analytics.

Data as of September 20, 2017.

All of this adds to the case that rotation into sectors that benefit from stronger growth (cyclicals) and higher interest rates (financials) will continue. While low longer-term rates have lulled many into the weak-growth, low-inflation camp, two-year Treasury yields tell a different story. Since bottoming near 25 basis points in 2011 and 2012, they have been rising in a typical cyclical fashion as the Fed increased rates. After the latest Federal Open Market Committee (FOMC) meeting, two-year yields jumped to new cycle highs near 1.5%. Market expectations are now much closer to the Fed's outlook. The risk going forward, in our view, is that both the Fed and the market start to price in a higher interest-rate trajectory in 2018. The Fed's need to catch up and stop the accelerating ease in financial conditions is likely to create an increase in market volatility. If nominal growth picks up into the 5% to 6% range next year, as we expect, 2% long-term interest rates will become a relic of the financial crisis era, which is slowly receding into the history books.

Accommodative policy mitigates risk from balance-sheet run-off

While concerns are warranted given the unprecedented nature of central bank balance-sheet policies, what ultimately matters is whether policy becomes prematurely restrictive, as it did in 1937. Despite four quarter-point rate hikes over the past two years, the evidence suggests that improvements in the economy have run ahead of the Fed's normalization process, with the net result that financial conditions are easier today than they were when the Fed first hiked rates in December 2015 (Exhibit 3).

Exhibit 3: Despite Four Rate Hikes, Financial Conditions Are Even Easier.



Sources: Federal Reserve Bank of Chicago; Haver Analytics.

Data as of September 20, 2017.

It is typical in the first phase of the rate-hiking cycle for the Fed to proceed cautiously and not keep up with the pace that would maintain the same level of accommodation. As shown in Exhibit 3, financial conditions remain very stimulative. Eventually, the Fed will remove accommodation, but for now is still erring on the side of ease. This makes the adverse effects from gradual balance-sheet normalization less likely to be as consequential as Ray Dalio fears.

As the cycle progresses and inflation risks rise, accelerating balance-sheet reduction will coincide with the Fed's need to also finally start removing accommodation. The more economically consequential balance-sheet normalization turns out to be, the less the Fed will need to raise the Fed funds rate. In essence, the Fed has scheduled balance-sheet drag nicely in sync with where the U.S. economy is in the monetary-policy cycle. It can trade off rate hikes for balance-sheet shrinkage to the extent that they turn out to be substitutable.

While the balance-sheet adjustment tool is unknown territory, the bottom line for policy is still the same. The Fed wants to avoid a mistake that undermines its ability to achieve its mandate of full employment and price stability. Ultimately, this policy framework is based on the belief that the best economic performance, including for employment, comes from an economy operating in an environment of low and stable inflation expectations around 2%.

Ms. Yellen was clear in her press conference that the Fed is unlikely to waver from its preset balance-sheet normalization program on the basis of economic conditions. Instead, she said downside shocks would be addressed first with adjustments to interest-rate policy. That's why the FOMC waited until the funds rate target was comfortably above the zero bound before beginning the roll-off program. The presumption is that any downside impact from contracting the monetary base can be offset with an easier rate policy. We shall see.

Economic Reports in Brief

Brian Wilczynski, Research Analyst

Leading Indicators: The index of leading indicators rose 0.4% to 128.8 in August. This month was the twelfth straight increase, and the index reached a new record high. The data point to strong economic growth over the next few quarters.

Housing Data: Building permits rose sharply in August; increasing 5.7% for the month to a seasonally adjusted annual rate (SAAR) of 1.3M. Building permits have averaged a SAAR 1.25M per month so far this year, up 6% from the same period a year ago.

Housing starts came in at a seasonally adjusted annual rate of 1.18M in August; falling .8% during the month due mostly to a large upward revision to the July data. Single family housing starts rose by 1.6%, while multifamily housing starts fell 6.5%. With the number of building permits running well ahead of housing starts (1.3M vs. 1.18M), we expect that housing starts will continue their upward trend.

Existing home sales totaled a seasonally adjusted annual rate of 5.35M in August, a decrease of 1.7% from last month. The National Association of Realtors' press release noted that the decline in sales came despite solid demand: "Steady employment gains, slowly rising incomes and lower mortgage rates generated sustained buyer interest all summer long...What's ailing the housing market and continues to weigh on overall sales is the inadequate levels of available inventory and the upward pressure it's putting on prices in several parts of the country." The press release also noted that some of the decline in monthly sales in the South can be attributed to Hurricane Harvey. The median sales price for existing homes was \$253,500 in August (NSA); up 5.6% year-over-year.

Data from the Federal Housing Finance Agency (FHFA) reiterated that home prices are growing at a moderate pace as of July. Prices rose 6.3% on a year-over year basis and are higher year-over-year in each of the nine major regions of the country.

Homebuilder confidence, measured by the National Association of Home Builders (NAHB) Housing Market Index fell from 67 to 64 in September (where a reading of 100 indicates "All Good"). The NAHB press release noted the impact of severe weather on confidence, saying "The recent hurricanes have intensified our members' concerns about the availability of labor and the cost of building materials...Once the rebuilding process is underway, I expect builder confidence will return to the high levels we saw this spring." Despite recent declines, confidence levels remain near the high of the previous cycle.

Initial Claims: For the week ending September 16, initial claims for unemployment insurance fell by 23,000 to 259,000. The four-week moving average rose by 6,000 to 268,750. The Department of Labor's press release noted that this week's data were affected by both Hurricane Harvey and Hurricane Irma. We expect that initial claims will gradually decline over the next few weeks as the hurricane effects dissipate.

Preliminary Markit Survey Data: The Markit manufacturing Purchasing Managers' Index (PMI) for the U.S. rose from 52.8 to 53.0 in September, indicating a solid expansion in manufacturing activity (readings above 50 signal expansion). The services PMI fell slightly but remains strong with a reading of 55.1, and the composite of manufacturing and services declined from 55.3 to 54.6, continuing to indicate expansion in the private sector. The survey data suggest that the economy remains on solid footing through the third quarter.

Regional Manufacturing Survey Data: The Philadelphia Fed's manufacturing index rose from 18.9 to 23.8 in September, indicating solid manufacturing conditions during the month. The new orders index, a leading indicator, jumped from 20.4 to 29.5. After adjusting for the Institute for Supply Management methodology (where readings above 50 indicate expansion), the manufacturing index rose from 55.2 to 57.9. Expectations for general business conditions six months ahead rose sharply during the month as well.

Household Balance Sheet: Net worth for households and nonprofit organizations rose to \$96.2 trillion during the second quarter, an increase of 9.3% year-over-year, according to the Federal Reserve Board. Households benefitted from rising home prices, as household real estate assets climbed to \$23.8 trillion, an increase of 7.2%

year-over-year. Household/nonprofit net worth as a percent of assets rose to 86.3% in Q2, a new cycle high, indicating that households are less leveraged.

Mortgage Bankers Association (MBA) Mortgage Applications: Mortgage applications fell by 9.7% during the week ending September 15, according to the Mortgage Bankers Association. Interest rates ticked up for both 30-year and 15-year fixed rate mortgages, which are now at 4.04% and 3.35%, respectively. The survey includes more than 75% of retail residential mortgage applications across the country.

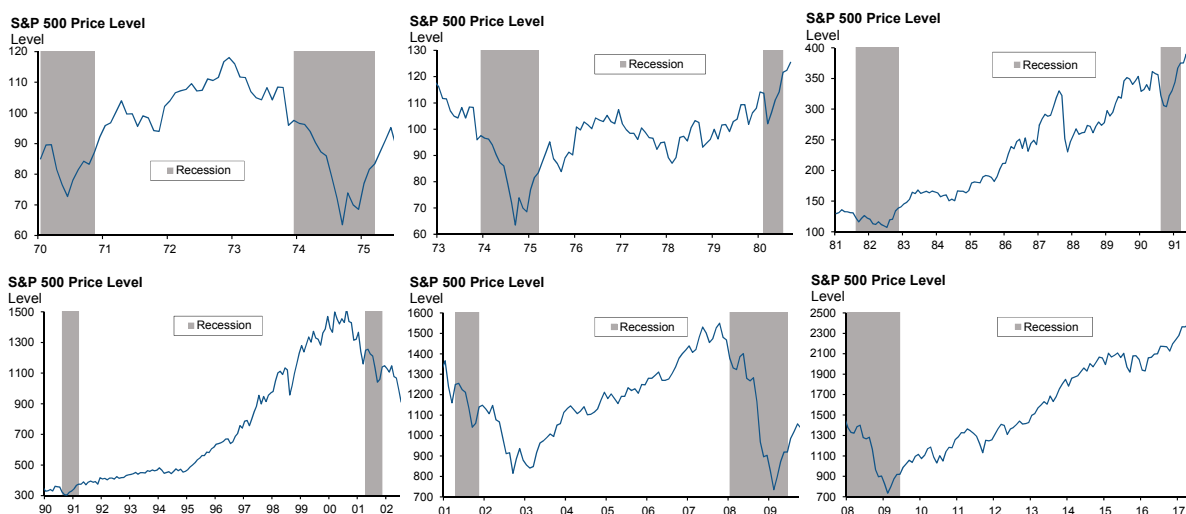
Market Strategy

Ehiwario Efeyini, Senior Vice President and Senior Research Analyst

EQUITY MARKETS REACH NEW HIGHS, BUT RECESSION RISK REMAINS LOW

The S&P 500 rose to new cycle highs last week for a second consecutive time, with implied volatility as measured by the VIX index falling below 10% on a closing basis for the first time in over six weeks. October will be the 100th month of the post-crisis U.S. economic expansion, and the combination of a long stretch of uninterrupted growth (the third longest in post-war history so far), all-time price highs for the equity market, subdued volatility and valuation multiples at their highest levels outside the late-1990s technology boom has given some investors cause for concern. But, as we have emphasized in the past, time alone does not bring an end to economic expansions, and equity markets typically move higher until the end of the expansion is approaching. Since 1970, the S&P 500 has peaked an average of six months prior to the onset of recession, before falling by an average of 36% over the subsequent 16 months (Exhibit 4).

Exhibit 4: Equity Markets Typically Trend Higher Until Recession Is Approaching.



Sources: U.S. Trust, Bank of America Private Wealth Management; Bloomberg; National Bureau of Economic Research.

Data as of August 2017.

Past performance is no guarantee of future results.

And taking a longer-term view of past cycles, recessions have produced average peak-to-trough market declines of 30% over the course of 14 months across 11 episodes in the entire post-war period (Exhibit 5).

Exhibit 5: Recessions and Market Declines in the Post-War Period.**S&P 500 bear markets and recessions since 1945**

Recession	S&P 500 peak-to-trough	Peak	Trough	Bear market length (months)
Nov 48 - Oct 49	-20.6%	6/15/1948	6/13/1949	12.1
Jul 53 - May 54	-14.8%	1/8/1953	9/14/1953	8.3
Aug 57 - Apr 58	-20.7%	7/15/1957	10/22/1957	3.3
Apr 60 - Feb 61	-13.9%	8/3/1959	10/25/1960	15.0
Dec 69 - Nov 70	-36.1%	11/29/1968	5/26/1970	18.1
Nov 73 - Mar 75	-48.2%	1/11/1973	10/3/1974	21.0
Jan 80 - Jul 80	-17.1%	2/13/1980	3/27/1980	1.4
Jul 81 - Nov 82	-27.1%	11/28/1980	8/12/1982	20.7
Jul 90 - Mar 91	-19.9%	7/16/1990	10/11/1990	2.9
Mar 01 - Nov 01	-49.1%	3/24/2000	10/9/2002	31.0
Jan 08 - Jun 09	-56.8%	10/9/2007	3/9/2009	17.2
Average	-29.5%	-	-	13.7

Sources: U.S. Trust, Bank of America Private Wealth Management; Bloomberg; National Bureau of Economic Research.

Data as of 2017.

Past performance is no guarantee of future results.

In short, expansions produce bull markets and recessions produce bear markets. And for this reason, assessing recession risk is an important part of anticipating major market turning points. To this end, six months ago, we developed our own proprietary recession indicator, a monthly series we are using as an input into our internal assessment of recession risk in the current environment. The aim was to gauge in a single measure how closely macroeconomic conditions today—as captured by rates of change in key economic variables—resemble those that prevailed in the past as the economy was entering a downturn. Many macroeconomic and market series may of course be used to track economic activity. But to briefly recap, we selected six fundamental variables intended to measure activity across distinct segments of the economy, each of which has a sufficiently long monthly history to capture the seven recessions since 1970—a majority of the downturns in the post-war period. The inputs used (and type of activity intended for measure) were:

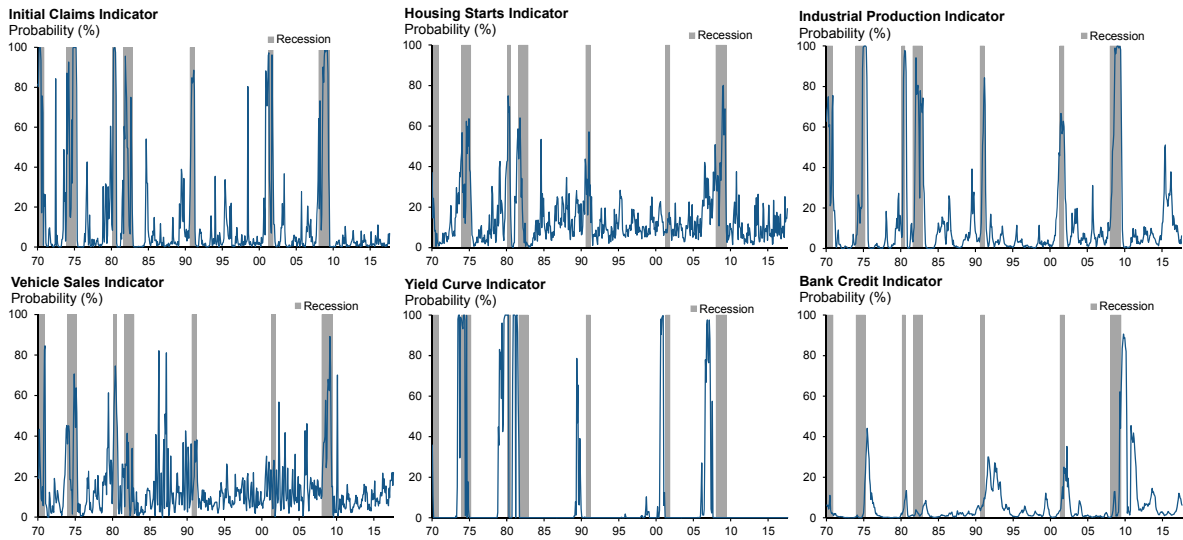
1. Initial unemployment claims (labor market), 6-month change
2. Housing starts (residential construction), 6-month change
3. Industrial production (manufacturing), 6-month change
4. Vehicle sales (consumption), 6-month change
5. Yield curve (monetary policy), 10-year to 3-month Treasury spread
6. Commercial bank loans and leases (credit), 6-month change

To turn the data points in each series into an indicator of recession likelihood, we used the logistic regression method. A typical linear regression describes the statistical relationship between two continuous sets of data, while a logistic regression is used to establish the relationship between a continuous set of input variables and a separate set of output results that fall into discrete categories. It does so by assigning to each input a probability of falling into either one of these categories, based on the historical data set. In this case, the discrete categories are “recession” and “no recession,” with the corresponding inputs as the monthly readings for each of the economic activity series. At the negative extreme, most of the historical data points for each input series have coincided with recession. While at the positive end, most have occurred during periods of no recession. The logistic regression curve of best fit between input (economic variable) and output (recession or no recession) is then used to plot the probability of recession for any given input value.

We transformed each of the six input series individually to generate a recession probability for each macroeconomic variable. And we produced the final composite indicator by combining all six variables in a single regression. The historical time series for each of the individual input series and for the final indicator are shown below (Exhibits 6 and 7). Historically, recessions have started within a few months of, or

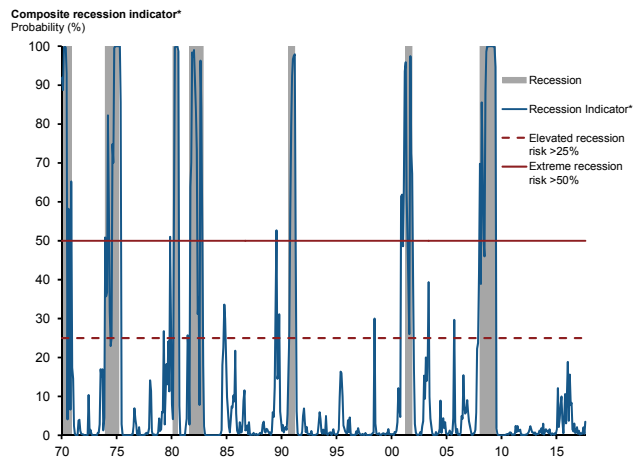
contemporaneous with, the composite indicator crossing the 50% “extreme recession risk” threshold. And the latest reading—which incorporates data released in September for August—stands at 3.5%, pointing to still very low recession risk in the current environment.

Exhibit 6: Recession Probabilities for Six Indicator Variables.



Sources: U.S. Trust, Bank of America Private Wealth Management; Bloomberg; National Bureau of Economic Research.
Data as of August 2017.

Exhibit 7: Composite Recession Indicator—Recession Risk Currently at Low Levels.



*Logistic regression of six macroeconomic variables (initial claims, housing starts, industrial production, domestic vehicle sales, 10yr-3m yield curve, commercial bank loans and leases) against recessionary and non-recessionary periods since January 1970.

Sources: U.S. Trust, Bank of America Private Wealth Management; Bloomberg; National Bureau of Economic Research.
Data as of August 2017.

Barring a spike to just under 20% in early 2016 (when the combination of a trough in oil prices, related contraction in industrial activity and a dip in corporate earnings produced a 12% decline for the S&P 500 over the course of six weeks), the indicator has remained low throughout the current cycle as the market has trended higher. And at present, no single input series is in elevated or extreme recession risk territory, while three of the six (industrial production, the yield curve and bank credit growth) have improved over the past six months. Vehicle sales and housing starts currently have respective recession indicator probabilities of 22% and 19%, with the underlying series having each fallen by just over 10% in level terms from their recent peaks. But ongoing growth in the labor market, manufacturing activity and bank lending, as well as still accommodative monetary policy (even with the Fed about to begin gradually reducing the size of its balance sheet) are providing offsets, leaving recession risk as measured by the indicator low overall.

With market-implied volatility back to its cycle trough, a short-term selloff could yet occur from current price levels. In the eight-plus years since the start of the post-crisis bull market, the S&P 500 has undergone no fewer than 16 drawdowns of 5% or more, each of which was relatively short-lived. But historically, whether or not the economy enters a recession has typically been the main determinant of whether a period of market weakness is

temporary and mild, or becomes deeper and more protracted. We will therefore continue to monitor the indicator as an input into our internal assessment of recession risk, but until we see growing evidence that the economic expansion may be approaching an end, we would expect the market uptrend to remain intact.

Global Perspective

Joseph P. Quinlan, Head of Market & Thematic Strategy

GLOBAL LABOR SHOCK 2.0 AND THE INVESTMENT IMPLICATIONS

*“Is a new golden age for the American worker around the corner?”
From *The New York Times*¹*

For roughly the past thirty-five years, the world economy has enjoyed an abundance of labor, a surfeit courtesy of solid population growth up until 1990, and the integration of China and Eastern Europe into the global economy over the 1990s. The latter—China’s tilt to the west and the collapse of Communism—nearly doubled the available working population of the global economy, producing a positive labor supply shock that reshaped the world economy in the late stages of the 20th century.

As analyzed in a provocative report from the Bank for International Settlements (BIS), this labor shock “led to a shift in manufacturing to Asia, especially China; a stagnation in real wages; a collapse in the power of private sector trade unions; increasing inequality within countries, but less inequality between countries; deflationary pressures; and falling interest rates.”²

An entire generation of investors has grown up with these macro dynamics. To wit, China as the “factory to the world” has been a common refrain for over a decade, and with good reason: the mainland now out-produces everyone on the planet, the U.S. included. Stagnant real wages? Check that box, with real wages in the U.S. having effectively flat-lined over the past decade, although a rebound in wages is underway. The loss of private sector union power, meanwhile, is no better illustrated by the fact that union membership rates in the U.S. private sector today—under 7%—are at levels not seen since 1932. Income inequality has manifested itself in growing global populism, and the stunning rise of Donald Trump and the Brexit vote. Finally, deflation remains the bane of central banks around the world, resulting in ultra-low (or negative) interest rates in the developed and developing nations alike.

All told, the labor shock of the late 20th century produced a tectonic shift that rattled every corner of the world. It penalized more expensive labor in the developed nations. It decimated the influence of unions. It triggered rising income inequality in the U.S. and elsewhere, while fanning political populism. It also, finally, led to a dramatic re-pricing of risk and various asset classes.

That said, as the BIS report highlights, this shock is about to go into reverse. The global demographic sweet spot—abundant labor—is about to turn sour owing to a shrinking and aging global labor force.

“Peak Labor”?

The global pool of labor is poised to tighten and shrink in the coming decades for a number of reasons. Notably, world population growth, after expanding by roughly 2% per annum until 1990, is slowing. Thanks to declining fertility rates, particularly in India and Africa, current population growth rates are estimated at 1.25%, but forecast to slide to just 0.75% per year by 2040, according to the United Nations. Population growth in the developed nations is currently negligible (below 0.5% per year), and expected to fall to near 0% by 2040 (Exhibit 8).

¹ “Unemployment is So 2009: Labor Shortage Gives Workers an Edge,” *The New York Times*, September 20, 2017.

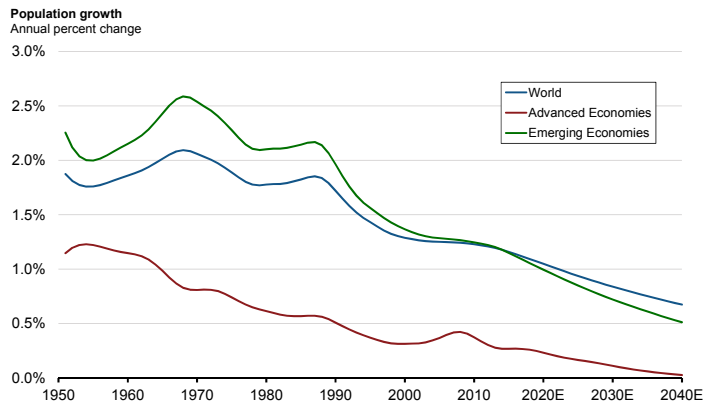
² “Demographics will reverse three multi-decade global trends,” by Charles Goodhart and Manoj Pradhan, *The Bank for International Settlements*, August 2017.

Exhibit 8: World Population
Growth Will Slow Even
Further.

Emerging economies excludes least developed regions and countries, as defined by the United Nations.

Sources: UN World Population Database; Bank for International Settlements.

Data as of September 2017.



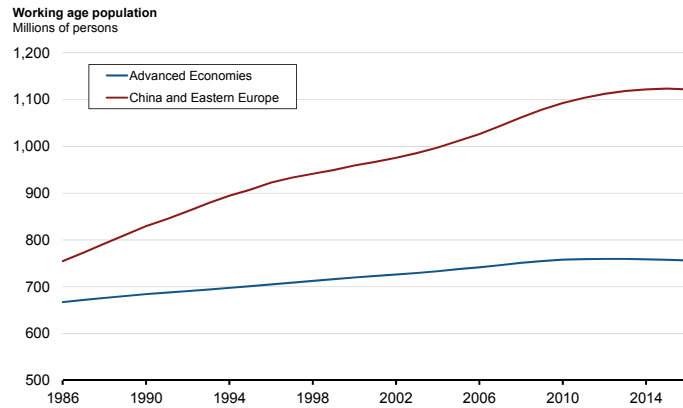
Against this backdrop, the total working age population of the world is on a trajectory to grow slower than in the past. What’s more, as Exhibit 9 outlines, the positive labor supply shock from China and Eastern Europe has already begun to wane, with China’s working age population (age 20–64) expected to turn lower in 2017. After hitting its peak in 2016, the nation’s working age population is projected to shrink by 10 million workers by the end of the decade, with more downside in the offing thanks to the demographic effects of China’s “one-child policy.” In Eastern Europe, a region that flooded the global labor markets with highly trained workers with the demise of the Soviet Union, the collapse in birth rates in the post-communist era is now reflected in shrinking labor forces across the region. In Russia, low birth rates, rising mortality among men below age 50 due to alcoholism, and a decline in the number of working age females have all converged to stunt labor market growth in one of Europe’s largest economies.

Exhibit 9: The Positive
Supply Shock From China
and Eastern Europe.

Working age population defined as population between the ages of 20 and 64.

Sources: UN World Population Database; Bank for International Settlements.

Data as of September 2017.



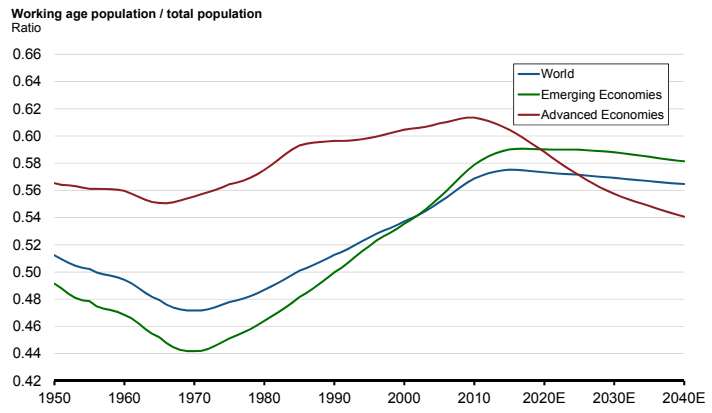
As depicted in Exhibit 10, the working age population as a percentage of the total population in both the advanced nations and emerging markets is expected to decline. Note that after moving sharply higher over the latter part of the 20th century, and the first decade of this century, the working age population as a share of total population is expected to slope lower in the coming decades.

Exhibit 10: Working Age Population Rose in Advanced Economies and Sharply in EM Economies, but Should Now Begin Falling.

Emerging economies excludes least developed regions and countries, as defined by the United Nations. Working age population defined as population between the ages of 20 and 64.

Source: United Nations World Population Database.

Data as of September 2017.



The upshot: An economic input that used to be abundant is on course to become scarcer. The world is on the cusp of “Peak Labor,” with potentially profound implications for global interest rates, inflation rates, growth in real wages and income inequality levels.

Aftershocks

Among the most important effects—a rise in real interest rates—is the most controversial according to the authors. They argue that “demographic developments over the past 35 years help explain the fall in real interest rates thanks to a pickup in ex ante savings over investment.” The imbalance between savings and investment helped produce the global savings glut, with China contributing the most to a world awash in capital. One key consequence: record low real global interest rates.

According to the authors, “real interest rates will reverse course along with demographic trends and the resulting changes in savings and investment dynamics.” Aging labor forces will lower both global savings and investment, but savings will fall by more as surplus nations like China and Germany consume more of their savings, resulting in a decline in their current account surpluses, and by extension excess savings. Rising health care expenditures and increased longevity will also act to lower the global savings rate.

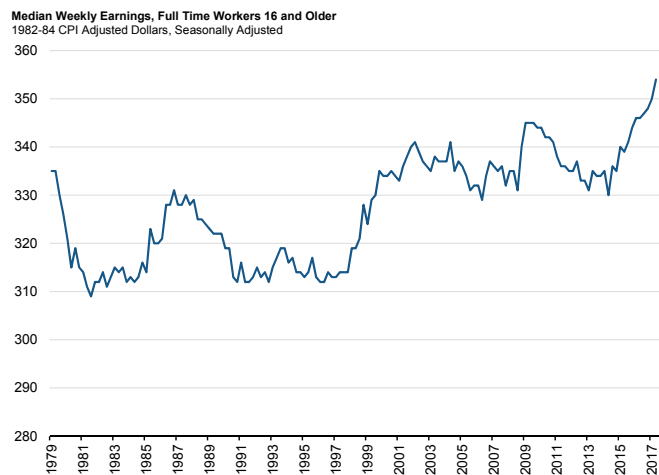
Capital investment levels, in contrast, will be supported by a corporate sector likely to respond to a shrinking labor force by raising the capital/labor ratio—by adding capital to compensate for more expensive and scarce labor.

That wage pressure is already building is readily apparent in the U.S., where real median weekly earnings have climbed over 7% in the past three years (Exhibit 11). As a recent article in *The New York Times* noted, wages are rising at the most sustained pace since the dot-com boom.

Exhibit 11: Real Earnings Currently Advancing at Rate Last Seen During Dot-Com Boom.

Source: Bureau of Labor Statistics.

Data as of September 2017.



Wage pressure is also mounting in Japan, where capital expenditures on robots is expected to rise significantly over the next decade. As we highlighted in a recent report (“Japan is the future, not the past”), no nation has embraced robotics as aggressively, given the nation’s rapidly shrinking labor force. Wages have also soared across China, forcing more firms to either increase outlays on labor-saving equipment or shift production overseas.

As labor scarcity mounts in many parts of the world, workers will be in a better position to bargain for higher wages, suggesting that aging is inflationary. As for income inequality, the good news, according to the authors, is that “rising wages will mean a larger share of national output for labor and falling inequality within economies.” After seeing their share of income decline over the past few decades, labor is expected to experience a rising share in the future. This has downside implications for corporate earnings, notably among firms hesitant to step up capital expenditures.

The end of the labor dividend: The making of a new investment landscape

Nothing is as glacial as demographics and their underlying effects. It takes years, if not decades, for demographics to influence growth, inflation, interest rates and other financial metrics. Moreover, long-term effects can be delayed or slowed—but rarely are they stopped.

As the authors note, “we don’t know what the future will look like precisely. It will not, however, be anything like the past, of that we are sure.”

We concur. The global labor dividend is spent or nearly exhausted. Hence, the 35-year rally in bonds is on its final legs. In the not-too-distant future, rising wage/cost pressures could underpin rising inflation or inflation expectations, a bullish prospect for commodities, real estate, and hard assets like timber and farmland. The premium on robotics and artificial intelligence (AI) will only rise as labor forces age and shrink. This is just for starters. If the authors are correct—that we are close or at “peak labor”—various asset classes will be fundamentally re-priced in the coming years. Stay tuned.

Portfolio Positioning

Investment Strategy Committee

Portfolio Strategy and Asset Allocation

- **We continue to expect equities to outperform fixed income:** We expect equities to remain in an uptrend as U.S. and global expansions gradually continue, corporate profits improve and inflation remains subdued. In most regions, relative valuations for equities remain attractive versus fixed income. Despite higher absolute valuations, we remain positive on U.S. equities. However, we emphasize international equities such as those of Europe, Japan and emerging markets, given more attractive valuations and better earnings prospects. In the shorter term, we have moved from a “get paid to wait” core portfolio theme to a more balanced positioning of value and growth themes in multi-asset portfolios. Information Technology remains our favored sector for long-term growth. We also advise increasing less correlated investments and committing to an increased level of tax-efficiency and rebalancing.
- **We are overweight U.S. equities:** Given our positive stance on the global economy, financial conditions and the profit cycle, we are overweight equities on an absolute basis and relative to fixed income. We have a preference for non-U.S. equities, including emerging markets, but are also lightly overweight U.S. equities as well, despite full valuations. Valuations appear more attractive overseas, but U.S. multinationals, which dominate most equity indices in the U.S., should benefit in the months ahead from the dollar’s stable to slightly weak trend. The latest S&P 500 earnings season suggests that the upper end of our 2017 earnings-per-share target range of \$129 to \$138 is on track. Given this, plus the potential for future growth in 2018 based on improved economic growth globally, current valuations at around 20 times are not concerning to us. Our equilibrium level for the S&P 500 remains at 2450, but we believe that continued positive sentiment can elevate the index toward 2600 by year-end. In terms of U.S. sectors, financials are attractive on a valuation basis, while technology and healthcare are favored secular areas for long-term capital.
- **We are overweight emerging market equities:** We expect emerging markets to benefit from cyclical improvement in global economic activity and the still accommodative monetary policy stance of global central banks. Valuations for emerging markets overall are also attractive, particularly relative to global equities. Low commodity prices remain a headwind for resource producers, but we continue to favor emerging Asia for its rapid growth rates and strong fundamentals. India in particular remains our preferred market given local support from internal reforms and relative insulation from risks to global trade. On a structural basis, we continue to expect strength in demand from emerging market consumers, as incomes and spending power increase over the longer term.
- **We recommend an overweight in international developed equities:** We are favorable on European equities given their attractive valuation and improving earnings potential versus U.S. equities. Political risk has receded following a Macron victory in France, but uncertainty remains from Brexit negotiations and Italian elections in 2018. We acknowledge that Japan’s economy has structural impediments to growth such as high debt levels and demographics. However, cyclical growth there should improve on rising global activity, improving domestic demand and a weaker currency. Along with monetary policy, fiscal policy should be supportive of growth.
- **We are underweight fixed income:** Neutral to slightly short duration is warranted, balancing expectations for higher short-term rates over time and periods of flight to quality given political and geo-political headwinds. We continue to prefer credit over Treasuries, with an emphasis on investment grade corporates, particularly banks, and municipals, although the relative value of credit has moderated. We believe a small allocation to Treasuries for liquidity and relative safety is advised.
- **We are currently underweight corporate high-yield**—valuations are very rich, especially for lower-rated credit tiers. Within high-yield, an allocation to leveraged loans is advised due to the floating-rate coupon, secured status and minimal yield give-up to unsecured bonds. Allocations should be with an active manager favoring higher-quality securities, in our opinion. Current valuations lead us to be cautious on allocations to index-based solutions in high-yield, as we prefer to be “up-in-quality” at this point in the cycle.

We recommend active management to help improve potential risk-adjusted returns in a rising-rate environment. We believe that a barbell strategy of owning bonds with both longer and shorter maturities should perform better than a bulleted strategy in a rising-yield environment.

- **We recommend a strategic allocation to hedge funds:** We believe the environment for active management, and hence hedge funds, will improve through 2017 and continue to recommend a diversified approach when investing in this heterogeneous asset class. We maintain a moderately positive view on equity long/short strategies.
- **We recommend a strategic allocation to private equity:** We view private equity strategies as long-term potential portfolio return enhancers with unique access to specialized deals unavailable to most investors. We recommend that investors plan a disciplined multi-year commitment strategy that builds portfolio diversity among different managers, styles, geographies and, importantly, vintages.
- **We remain neutral in real estate:** Heading into Q4 2017, the U.S. real estate markets appear generally healthy with supply and demand largely in balance for most property sectors. We have an expectation that commercial real estate will continue to perform well through 2017, based on our view of U.S. economic growth, a healthy job market and increasing consumer spending.
- **We remain neutral in commodities:** Commodity prices are likely range-bound in the near-term, weighed down by global economic policy uncertainty, but held up by stable global cyclical momentum, in our opinion. We think oil prices will finish the year in the \$45 to \$65 range and move slightly higher next year.
- **The dollar:** In our view, the dollar is close to fair-value on a trade-weighted basis, but interest rate differentials are favorable, and we think the dollar will remain broadly stable.

Appendix

ECONOMIC AND MARKET FORECASTS (AS OF SEPTEMBER 15, 2017)

	Q1 2017	Q2 2017	Q3 2017E	2016	2017 E	2018 E
Real global GDP (% y/y annualized)				3.1	3.5 – 4.0	3.5 – 4.0
Real U.S. GDP (% q/q annualized)	1.2	3.0	1.0 – 2.0	1.5	2.0 – 3.0	2.5 – 3.5
CPI inflation (% y/y)*	1.6	1.9	2.0	1.3	1.8 – 2.2	2 – 3
Core CPI inflation (% y/y)*	2.2	2.1	2.0	2.2	1.8 – 2.2	2 – 3
Unemployment rate, period average (%)	4.7	4.3	4.3	4.9	4.3	4.1
Fed funds rate, end period (%) **	0.87	1.12	1.12	0.62	1.12 – 1.62	1.87 – 2.37
10-year Treasury, end period (%)	2.40	2.31	2.4 – 2.5	2.45	2.37 – 2.87	2.87 – 3.37
S&P 500, end period ***	2363	2423	2400 – 2500	2239	2300 – 2700	2400 – 2800
S&P operating earnings (\$/share)	31	33	35	119	129 – 138	138 – 148
\$/€, end period	1.07	1.14	1.12 – 1.18	1.05	1.10 – 1.20	1.15 – 1.25
¥/\$, end period	111	112	110 – 114	117	110 – 120	115 – 125
Oil (\$/barrel), end period	51	46	45 – 50	54	45 – 65	55 – 70

Percent calendar-year average over calendar-year average annualized unless stated. E = Estimate.

*Latest 12-month average over previous 12-month average.

**Fed funds rate, end period based on market indications.

***Our 2017 S&P 500 end-period forecast: 2450 is the equilibrium target with 2700 being the highest bull case with pro-growth policies initiated and sentiment driving the earnings number to the upper end of the range.

Past performance is no guarantee of future results.

Economic or financial forecasts are inherently limited and should not be relied on as indicators of future investment performance.

Source: Global Wealth & Investment Management Investment Strategy Committee.

ASSET ALLOCATION TABLE (AS OF SEPTEMBER 8, 2017)

ASSET CLASS	WEIGHTING			POSITIONING	EMPHASIS	VALUATION																				
	Under-weight	Neutral	Over-weight																							
Cash				We are neutral.		Low yields.																				
Equities	• • • ● •			We are overweight equities. Portfolios are being repositioned for higher nominal growth and rising interest rates. This rotation should continue throughout 2017.	We are overweight U.S. equities but emphasize international equities such as Europe, Japan and Emerging Markets, given more attractive valuations and better earnings prospects.	Valuations favor equities over fixed income.																				
U.S. Large Caps	• • • ● •			We are slightly overweight large caps.	Value: Multinationals.	Slightly overvalued but attractive relative to fixed income.																				
U.S. Mid Caps	• • ● • •			We are neutral mid caps.	Beneficiaries of relatively stronger U.S. economy.	Neutral.																				
U.S. Small Caps	• • • ● •			We are slightly overweight small caps.	Small caps should benefit if deregulation and tax reform gain traction.	Neutral.																				
International Developed	• • • ● •			We have become more favorable on Europe on strong cyclical growth and diminished political risks. Japan is benefiting from rising global activity, improving domestic demand and a weaker currency. The European and Japanese central banks remain accommodative.	Japan and Europe.	Valuations for Europe and Japan are attractive versus U.S. equities.																				
Emerging Markets	• • • ● •			Valuations are attractive for long-term investors. Beneficiaries of the pickup in global cyclical momentum. Favor reform-oriented countries and consumer spending.	Asia remains our favored region within the emerging world, and we maintain our preference for India on a country basis.	Attractive for long-term investors.																				
Fixed Income	• ● • • •			We are underweight fixed income, as it is less attractive compared to asset classes such as equities.	Neutral to slightly short duration is warranted, balancing expectations for higher short-term rates and inflation in the U.S. with overwhelming demand for fixed income globally. We continue to prefer credit over Treasuries, with an emphasis on investment-grade corporates, particularly banks, and municipals, although the relative value of credit has moderated. Some allocation to Treasuries for liquidity and relative safety is advised. We recommend active management to improve potential returns in a rising-rate environment. A barbell strategy of owning bonds with both longer and shorter maturities should perform better than a bulleted strategy in a rising yield environment.	Expensive overall.																				
U.S. Investment-Grade	• ● • • •			Barbelled with respect to the curve. Slightly short duration.	<table border="1"> <thead> <tr> <th></th> <th>Under-weight</th> <th>Neutral</th> <th>Over-weight</th> </tr> </thead> <tbody> <tr> <td>U.S. Treasuries/Agencies</td> <td>• ● • • •</td> <td></td> <td></td> </tr> <tr> <td>U.S. Investment-Grade Credit</td> <td>• • • ● •</td> <td></td> <td></td> </tr> <tr> <td>U.S. Collateralized</td> <td>• ● • • •</td> <td></td> <td></td> </tr> <tr> <td>U.S. Municipals</td> <td>• • • ● •</td> <td></td> <td></td> </tr> </tbody> </table>		Under-weight	Neutral	Over-weight	U.S. Treasuries/Agencies	• ● • • •			U.S. Investment-Grade Credit	• • • ● •			U.S. Collateralized	• ● • • •			U.S. Municipals	• • • ● •			Yields, while off the bottom, are still historically low on investment-grade bonds and poised to continue to rise. Some allocation to Treasuries is recommended to provide liquidity and relative safety.
	Under-weight	Neutral	Over-weight																							
U.S. Treasuries/Agencies	• ● • • •																									
U.S. Investment-Grade Credit	• • • ● •																									
U.S. Collateralized	• ● • • •																									
U.S. Municipals	• • • ● •																									
International	● • • • •			We are underweight.	Globally, low yields persist across most developed nations, and are unattractive compared to U.S. alternatives.	Expensive vs. U.S.-dollar-denominated alternatives.																				
High Yield	• ● • • •			We are underweight.	Significantly stretched valuations at the lower credit tiers. We recommend managed solutions that are higher in credit quality. Within high yield, an allocation to leveraged loans is advised.	Rich, expect a high degree of volatility.																				

ASSET CLASS	WEIGHTING			ALLOCATIONS		
	Under-weight	Neutral	Over-weight	POSITIONING	EMPHASIS	VALUATION
Hedge Funds	•	• ●	•	We believe the environment for active management, and hence hedge funds, will improve through 2017 and continue to recommend a diversified approach when investing in this heterogeneous asset class. We maintain a moderately positive view on equity long/short strategies.	We maintain our moderately positive view on equity long/short strategies. Inter-stock correlations have decreased through 2017, which has rewarded fundamental equity research. Despite high valuations, normalized correlations should provide managers with ample opportunity for alpha generation through securities selection and timing.	
Private Equity	•	• ●	•	We view private equity strategies as long-term potential portfolio return enhancers with unique access to specialized deals unavailable to most investors. We recommend investors plan a disciplined multi-year commitment strategy that builds portfolio diversity among different managers, styles, geographies and, importantly, vintages.	Currently, we see opportunities in special situations and private credit.	
Real Estate	•	• ●	•	Heading into Q4 2017, the U.S. real estate markets are generally healthy with supply and demand largely in balance for most property sectors. We have an expectation that CRE will continue to perform well through 2017 based on our view of U.S. economic growth, a healthy job market and increasing consumer spending.	We see compelling opportunities within the real estate debt space.	
Commodities	•	• ●	•	We are neutral commodities.	We expect a slight upward track as the global expansion gains more traction.	

Tactical qualitative investment strategy weightings are relative in nature versus the strategic weightings for a fully diversified portfolio. Weightings are based on the relative attractiveness of each asset class. Tactical strategy weightings are for a 12- to 36-month time horizon.

Because economic and market conditions change, recommended allocations may vary in the future. Asset allocation cannot eliminate the risk of fluctuating prices and uncertain returns. All sector and asset allocation recommendations must be considered in the context of an individual investor's goals, time horizon and risk tolerance.

Not all recommendations will be suitable for all investors.

Alternative investments such as derivatives, hedge funds, private equity funds and funds of funds can result in higher return potential, but also higher loss potential. Changes in economic conditions or other circumstances may adversely affect your investments. Before you invest in alternative investments, you should consider your overall financial situation, how much money you have to invest, your need for liquidity and your tolerance for risk.

Source: Global Wealth & Investment Management Investment Strategy Committee.

U.S. EQUITY INDEXES (TOTAL RETURN, PERCENT CHANGE)

	CLOSE 9/22/2017	LAST WEEK	MTD	YTD	LAST 12 MOS.	TRAILING 12-MO. P/E	GROSS DIV. 12-MO. YLD.
Dow Jones Indstrl. Avg.	22,349.59	0.36	1.91	15.17	24.57	19.03	2.29
S&P 400 MidCap	1,768.65	0.85	2.28	7.67	14.93	24.18	1.58
S&P 500	2,502.22	0.09	1.34	13.43	17.32	21.47	1.98
S&P 600 SmallCap	874.87	1.64	4.18	5.34	15.86	27.24	1.46
Nasdaq Composite	6,426.92	-0.33	0.02	20.41	21.84	23.49	1.13
Russell 1000®	1,387.33	0.16	1.39	13.34	17.23	21.98	1.93
Russell 1000® Growth	1,249.73	-0.20	0.61	19.90	20.41	26.10	1.39
Russell 1000® Value	1,159.79	0.53	2.17	7.08	14.04	19.01	2.47
Russell Midcap®	1,948.07	0.30	1.66	10.53	13.86	23.79	1.85
Russell Midcap® Growth	902.97	0.75	1.92	16.25	16.64	29.11	1.10
Russell Midcap® Value	1,936.57	-0.03	1.46	6.10	11.70	20.89	2.43
Russell 2000®	1,450.78	1.35	3.32	7.88	16.39	52.26	1.39
Russell 2000® Growth	883.90	1.14	2.75	13.82	16.34	89.94	0.84
Russell 2000® Value	1,801.76	1.56	3.92	2.55	16.47	36.29	1.96

U.S. EQUITY SECTORS (TOTAL RETURN, PERCENT CHANGE)

11 GLOBAL INDUSTRY CLASSIFICATION STANDARD SECTORS	INDEX WEIGHT	LAST WEEK	MTD	YTD	LAST 12 MOS.	TRAILING 12-MO. P/E	GROSS DIV. 12-MO. YLD.
Consumer Disc.	11.86	-0.13	0.24	11.26	14.10	21.36	1.44
Consumer Staples	8.30	-2.31	-0.91	6.51	3.68	21.28	2.90
Energy	6.02	1.98	7.92	-8.35	1.59	48.24	3.43
Financials	14.49	2.65	3.54	10.76	32.80	15.90	1.67
Health Care	14.59	-1.15	0.81	20.09	13.28	21.23	1.58
Industrials	10.27	1.97	3.76	13.86	22.54	21.08	2.11
Info. Tech.	23.16	-0.65	-0.36	26.11	27.40	23.67	1.30
Materials	2.99	1.00	3.12	15.37	21.37	20.68	2.04
Real Estate	3.00	-2.79	-1.83	6.91	0.76	44.45	3.30
Telecomm. Services	2.18	3.80	3.02	-5.14	-1.64	15.19	4.84
Utilities	3.15	-2.70	-2.34	12.33	8.12	18.62	3.39
S&P 500	100.00	0.09	1.34	13.43	17.32	21.47	1.98

INTERNATIONAL MARKETS (TOTAL RETURN, PERCENT CHANGE)

	CLOSE 9/22/2017	LAST WEEK	MTD	YTD	LAST 12 MONTHS
MSCI AC World	232.56	0.32	1.81	17.11	17.46
MSCI EAFE	5,852.41	0.70	2.51	19.99	17.54
MSCI Europe	6,658.60	0.75	3.22	22.70	20.62
MSCI Pacific	6,035.59	0.60	1.20	15.65	12.91
MSCI EM	494.39	0.03	1.46	30.16	22.41
MSCI AC Asia ex Japan	472.70	0.13	1.50	33.06	22.70

CURRENCY SPOT RETURN PERFORMANCE AGAINST THE U.S. DOLLAR (PERCENT CHANGE)

CURRENCY	CLOSE 9/22/2017	LAST WEEK	MTD	YTD	LAST 12 MONTHS	90-DAY BOND YLD.
Australian Dollar	0.80	-0.50	0.19	10.46	4.17	1.71
Brazilian Real	3.12	-0.44	0.80	4.03	3.10	8.18
Canadian Dollar	1.23	-1.14	1.16	8.93	5.70	1.00
Swiss Franc	0.97	-0.93	-1.09	5.13	-0.06	-1.01
Euro	1.20	0.05	0.34	13.64	6.63	-0.61
British Pound	1.35	-0.66	4.44	9.43	3.26	0.30
Japanese Yen	111.99	-1.04	-1.79	4.44	-10.03	-0.11
South Korean Won	1,136.70	-0.42	-0.82	6.26	-2.97	1.24
Singapore Dollar	1.35	-0.05	0.74	7.50	0.77	1.19

Past performance is no guarantee of future results.

Sources: Bloomberg; FactSet; U.S. Trust Market & Thematic Strategy Team.

Securities indexes assume reinvestment of all distributions and interest payments. Indexes are unmanaged and do not take into account fees or expenses. It is not possible to invest directly in an index.

U.S. GOVERNMENT BONDS (GENERIC, CHANGE IN YIELD)

	YIELD 9/22/2017	LAST WEEK	YTD	LAST 12 MONTHS
90-day T-bill	1.03	-0.02	0.52	0.85
Two-year Treasury	1.46	0.07	0.26	0.67
Five-year Treasury	1.88	0.07	-0.05	0.70
10-year Treasury	2.26	0.06	-0.19	0.63
10-year TIPS (real)	0.39	0.06	-0.08	0.35

BOND INDEXES (BARCLAYS CAPITAL, TOTAL RETURN, PERCENT CHANGE)

	YIELD TO WORST 9/22/2017	LAST WEEK	MTD	YTD	LAST 12 MONTHS
Corporate & gov't	2.42	-0.16	-0.43	3.63	0.30
Broad corporate	3.16	-0.02	-0.24	5.11	2.37
Non-investment-grade	5.50	0.21	0.60	6.69	9.06
Treasury bills	1.05	0.02	0.06	0.55	0.62
Treasury notes and bonds	1.91	-0.25	-0.58	2.55	-1.20
Agencies	1.86	-0.16	-0.35	2.20	0.32
Mortgages	2.79	-0.12	-0.22	2.32	0.36
Municipals	2.15	-0.16	-0.19	5.00	1.30
Global gov't, ex-U.S.	0.75	-0.41	-0.38	8.90	-3.43
U.S. Aggregate	2.53	-0.15	-0.38	3.24	0.31
Global Emerging Markets	4.10	-0.18	0.23	8.84	5.17
Global Aggregate ex-USD	0.81	-0.36	-0.14	9.98	-1.40

COMMODITIES (PRICE RETURN, PERCENT CHANGE)

BLOOMBERG COMMODITY INDEX & THE UNDERLYING COMMODITIES	LAST WEEK	YTD	LAST 12 MONTHS
Live Cattle	3.55	11.10	11.88
Aluminum	3.43	25.86	28.22
Soy Meal	2.44	1.33	4.28
Soybeans	1.60	-0.51	2.05
Brent Crude	1.45	-4.38	6.65
NY Harbor ULSD	0.99	0.98	14.92
KCBT Wheat	0.95	-4.86	-7.92
Crude Oil WTI	0.44	-11.20	-0.43
RBOB Gasoline	0.29	-0.63	16.23
Zinc	0.25	18.07	32.11
Wheat	0.11	-3.33	-6.45
Copper	-0.15	16.61	32.40
Corn	-0.35	-6.97	-6.11
Bloomberg Commodity Index*	-0.38	-2.43	-0.03
Cotton	-0.88	-1.55	-4.01
Soybean Oil	-1.69	-1.69	-1.53
Natural Gas	-2.07	-16.18	-4.19
Gold	-2.09	11.31	-4.74
Lean Hogs	-3.16	-8.04	-1.86
Sugar	-3.49	-21.21	-26.98
Silver	-4.05	4.74	-17.12
Coffee	-4.92	-8.35	-18.56
Nickel	-6.14	2.49	-3.81

(*Total return index)

INDEX DEFINITIONS

Securities indexes assume reinvestment of all distributions and interest payments. Indexes are unmanaged and do not take into account fees or expenses. It is not possible to invest directly in an index.

The Barclays Bond Indexes are used as performance benchmarks in each respective category of U.S. debt issuances.

The Barclays Capital U.S. Aggregate Index is an unhedged market capitalization-weighted index of the total U.S. investment-grade bond market.

The Barclays Capital U.S. Corporate High-Yield Bond Index is an unmanaged, market value-weighted index, which covers the U.S. non-investment-grade fixed-rate debt market. The index is composed of U.S.-dollar-denominated corporate debt in industrial, utility and finance sectors with a minimum \$150 million par amount outstanding and a maturity greater than one year.

The Bloomberg Commodity Index is composed of futures contracts on 22 physical commodities. It reflects the return on fully collateralized future positions. It is quoted in U.S. dollars.

The Bloomberg International Debt Index represents open-end, international debt funds domiciled in the U.S.

The BofA Merrill Lynch U.S. 3-Month Treasury Bill Index consists of a single issue purchased at the beginning of the month and held for a full month. At the end of the month, that issue is sold and rolled into a newly selected issue. The issue selected at each month-end rebalancing is the outstanding Treasury bill that matures closest to, but not beyond, three months from the rebalancing date. To qualify for selection, an issue must have settled on or before the month-end rebalancing date. While the index will often hold the Treasury bill issued at the most recent three-month auction, it is also possible for a seasoned six-month bill to be selected.

The BofA Merrill Lynch 10-to-15-Year U.S. Treasury Index is a subset of The BofA Merrill Lynch U.S. Treasury Index including all securities with a remaining term to final maturity greater than or equal to 10 years and less than 15 years.

The BOVESPA is a total-return index weighted by traded volume and comprises most liquid stocks traded on the Sao Paulo Stock Exchange.

The Chicago Board Options Exchange (CBOE) Volatility Index (VIX) reflects a market estimate of future volatility, based on the weighted average of the implied volatilities of eight OEX calls and puts—the nearest in and out of the money call and put options from the first- and second-month expirations.

The Commodity Research Bureau (CRB) Commodity Index is a measure of price movements of 22 sensitive basic commodities whose markets are presumed to be among the first to be influenced by changes in economic conditions. The commodities used are in most cases either raw materials or products close to the initial production stage, which, as a result of daily trading in a fairly large volume of standardization qualities, are particularly sensitive to factors affecting current and future economic forces and conditions.

The Commodity Research Bureau (CRB) Food Index is a measure of price movements of basic foodstuffs whose markets are presumed to be among the first to be influenced by changes in economic conditions.

The Conference Board Leading Economic Index (LEI)—Leading indexes generally signal activity/output in the coming three to six months. Relevant indicators include manufacturers' new orders, average weekly hours, vendor performance, initial unemployment insurance claims, building permits, money supply (M2), consumer expectations, stock market prices and interest rate spreads.

The Dow Jones Industrial Average Index, the most widely used indicator of the overall condition of the stock market, is a price-weighted average of 30 actively traded blue-chip stocks as selected by the editors of *The Wall Street Journal*.

The Dow Jones U.S. Select Aerospace & Defense Index measures manufacturers, assemblers and distributors of aircraft and aircraft parts primarily used in commercial or private air transport, and producers of components and equipment for the defense industry, including military aircraft, radar equipment and weapons. The index is weighted by float-adjusted market capitalization.

The Euro STOXX 50 (price) Index is a free-float market capitalization-weighted index of 50 European blue-chip stocks from those countries participating in the European Monetary Union.

The FactSet World Aggregate Indexes are time-series composite indexes based on proprietary country, region, sector and industry classification.

Indexes are all based in dollars.

The J.P. Morgan Emerging Markets Bond Index (EMBI) Global tracks total returns for traded external debt instruments in the emerging markets.

The Morgan Stanley Capital International (MSCI) Australia Index is a broad-based index that tracks the performance of Australian stocks.

The Morgan Stanley Capital International (MSCI) Canada Index is a broad-based index that tracks the performance of Canadian stocks.

The Morgan Stanley Capital International (MSCI) Emerging Asia Index is a capitalization-weighted index that monitors the performance of stocks from the emerging Asia region.

The Morgan Stanley Capital International Europe, Australasia, Far East (MSCI EAFE) Index is a capitalization-weighted index that tracks the total return of common stocks in 21 developed-market countries within Europe, Australasia and the Far East.

The Morgan Stanley Capital International (MSCI) Europe Index is a broad-based index that tracks the performance of European stocks.

The Morgan Stanley Capital International (MSCI) Pacific Index is a free-float-adjusted market capitalization-weighted index designed to measure the equity market performance of developed markets in the Pacific region.

The MSCI AC (All-Country) Asia ex Japan Index is a free-float-adjusted market capitalization-weighted index that is designed to measure the equity market performance of Asia, excluding Japan.

The MSCI ACWI (All-Country World Index) is a free-float-adjusted market capitalization-weighted index that is designed to measure the equity market performance of developed and emerging markets.

The MSCI Emerging Markets Index is a free-float-adjusted market capitalization index that is designed to measure the equity market performance of emerging markets. As of May 30, 2011, the MSCI Emerging Markets Index consists of the following 21 emerging market country indexes: Brazil, Chile, China, Colombia, Czech Republic, Egypt, Hungary, India, Indonesia, Korea, Malaysia, Mexico, Morocco, Peru, Philippines, Poland, Russia, South Africa, Taiwan, Thailand and Turkey.

The Mumbai Sensex—The Mumbai Stock Exchange Sensitive Index is a cap-weighted index.

The Nasdaq Composite Index is a market capitalization price-only index that tracks the performance of domestic common stocks traded on the regular NASDAQ market as well as National Market System-traded foreign common stocks and American Depositary Receipts.

The OITP (Other Important Trading Partners) Index is a weighted average of the foreign exchange values of the U.S. dollar against a subset of currencies in the broad index that do not circulate widely outside the country of issue. The weights are derived by rescaling the currencies' respective weights in the broad index so that they sum to 1 in each subindex.

The Philadelphia Federal Reserve Bank Business Outlook Index—The survey panel consists of 150 manufacturing companies in Federal Reserve District III (consisting of southeastern Pennsylvania, southern New Jersey and Delaware). The diffusion indexes represent the percentage of respondents indicating an increase minus the percentage indicating a decrease.

The Reuters/Jeffries CRB Index is an arithmetic average of commodity futures prices with monthly rebalancing.

The Russian Trading System Index (RTSI) is a capitalization-weighted index that is calculated in U.S. dollars.

The Russell 1000® Growth Index measures the performance of those Russell 1000 Index companies with higher price-to-book ratios and higher forecasted growth values.

The Russell 1000® Index consists of the largest 1,000 companies in the Russell 3000® Index. This index represents the universe of large-capitalization stocks with a base value of 130.00 as of December 31, 1986.

The Russell 2000® Index is composed of the smallest 2,000 companies in the Russell 3000 Index, representing approximately 8% of the Russell 3000 total market capitalization. The index was developed with a base value of 135.00 as of December 31, 1986.

The Russell 1000® Value Index measures the performance of those Russell 1000 Index companies with lower price-to-book ratios and lower forecasted growth values.

The Russell 2000® Growth Index measures the performance of those Russell 2000 Index companies with higher price-to-book ratios and higher forecasted growth values.

The Russell 2000® Value Index tracks the performance of those Russell 2000 Index companies with lower price-to-book ratios and lower forecasted growth values.

The Russell 3000® Index measures the performance of the 3,000 largest U.S. companies based on total market capitalization, which represents approximately 98% of the investable U.S. equity market.

The Russell MidCap Growth® Index measures the performance of those Russell Midcap companies with higher price-to-book ratios and higher forecasted growth values. The stocks are also members of the Russell 1000 Growth Index.

The Russell Midcap® Index measures the performance of the 800 smallest companies in the Russell 1000 Index, which represent approximately 25% of the total market capitalization of the Russell 1000 Index.

The Russell MidCap Value® Index measures the performance of those Russell Midcap companies with lower price-to-book ratios and lower forecasted growth values. The stocks are also members of the Russell 1000 Value Index.

The Shanghai Stock Exchange Composite Index is a capitalization-weighted index.

The Standard & Poor's (S&P) 500 Index tracks the performance of 500 widely held, large-capitalization U.S. stocks.

The Standard & Poor's (S&P) 500 Financials Index is a capitalization-weighted index that tracks the financials sector of the S&P 500, as denoted by the Global Industry Classification Standard (GICS).



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Other Important Information

Past performance is no guarantee of future results.

All sector and asset allocation recommendations must be considered in the context of an individual investor's goals, time horizon and risk tolerance. Not all recommendations will be suitable for all investors.

Equity securities are subject to stock market fluctuations that occur in response to economic and business developments.

Investing in fixed income securities may involve certain risks, including the credit quality of individual issuers, possible prepayments, market or economic developments, and yields and share price fluctuations due to changes in interest rates. When interest rates go up, bond prices typically drop, and vice versa.

International investing involves special risks, including foreign taxation, currency risks, risks associated with possible differences in financial standards and other risks associated with future political and economic developments.

Investing in emerging markets may involve greater risks than investing in more developed countries. In addition, concentration of investments in a single region may result in greater volatility.

Stocks of small cap and mid cap companies pose special risks, including possible illiquidity and greater price volatility than stocks of larger, more established companies.

There are special risks associated with an investment in commodities, including market price fluctuations, regulatory changes, interest rate changes, credit risk, economic changes, and the impact of adverse political or financial factors.

Energy and natural resources stocks have been volatile. They may be affected by rising interest rates and inflation, and can also be affected by factors such as natural events (for example, earthquakes or fires) and international politics.

Investments in real estate securities can be subject to fluctuations in the value of the underlying properties, the effect of economic conditions on real estate values, changes in interest rates, and risks related to renting properties, such as rental defaults.

An investment in a hedge fund involves a substantially more complicated set of risk factors than traditional investments in stocks or bonds, including the risks of using derivatives, leverage, and short sales, which can magnify potential losses or gains. Restrictions exist on the ability to redeem units in a hedge fund. Hedge funds are speculative and involve a high degree of risk.

Treasury bills are less volatile than longer-term fixed income securities and are guaranteed as to timely payment of principal and interest by the U.S. government.

Dividend payments are not guaranteed. The amount of a dividend payment, if any, can vary over time.

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