

Outlook

Goldman
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Investment Management Division

Half Full



“Everything we hear is an opinion, not a fact. Everything we see is a perspective...”

Attributed to Marcus Aurelius



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Dear Clients,

Readers of our previous *Outlook* publications may recall that this page typically summarizes the key themes of our economic and financial market prospects for the coming year. However, for 2017 we decided that a brief overview would not suffice, given the current environment of high market valuations, great policy uncertainty, significant geopolitical tensions and, in all likelihood, an unconventional US presidency.

Since the trough of the global financial crisis, we have consistently emphasized US preeminence and maintained a strategic overweight to US equities relative to global market capitalization-weighted benchmarks. Tactically, we have had an overweight allocation to US equities and US high yield bonds from as early as mid-2008. Even when US equities became more expensive, we continued to recommend that clients stay fully invested at their strategic allocations. Indeed, we have reiterated that recommendation in our past *Outlook* publications, client calls and *Sunday Night Insight* reports as many as 59 times since January 2010.

But now we have crossed into the 10th decile of valuations: US equities have been more expensive than current levels only 10% of the time in the post-WWII period. Yet we continue to recommend staying the course. We are duly aware that this recommendation is long in the tooth, particularly given such high valuations and the unusually high level of policy uncertainty.

Policy uncertainty, both economic and political, abounds globally: uncertainty with respect to Brexit (the how and when), upcoming elections in Germany and France (the who), transitional government in Italy (the how long followed by what) and new appointments to the Standing Committee in China and their significance (the who and what of any reform agenda), to name a few.

We are also facing rising geopolitical tensions that could trigger significant market volatility. Tensions in the Middle East will not abate. Greater Russian involvement in that region is stabilizing in some respects and destabilizing in others. Further Russian incursions into Eastern Europe may elicit a more robust reaction from the West. Terrorism could spread in the US and Europe as ISIL (Islamic State of Iraq and the Levant) loses territory in Iraq and Syria and foreign fighters return home. North

Korea's nuclear program and missile launches go unchecked. There is rising risk of military incidents—or accidents—in the South China Sea and across the Taiwan Strait.

China is the most likely source of global economic shocks over the next two to three years. The country's leadership continues to prioritize imbalanced economic growth over structural reforms, thereby increasing debt at an unsustainable pace. Such increases will eventually prove to be destabilizing.

In Donald Trump, the US has elected an unconventional president in many respects, including his more US-centric approach to China. If China responds to, say, imposition of US tariffs on imports of Chinese products by sharply devaluing the renminbi, significant downside volatility and tighter global financial conditions will follow.

Given already high US equity valuations, uncertain economic and political policy prospects and heightened geopolitical risks, readers may well ask why we continue to recommend staying fully invested in US equities. Among the reasons:

- Our eight-year US preeminence theme is intact and continues into its ninth year. As Professor Jeremy Siegel of the University of Pennsylvania wrote 23 years ago in *Stocks for the Long Run*¹ and recently repeated in a *Wall Street Journal* interview,² “Stocks are the best long-run asset.” We refine that view by saying US equities are the best long-run asset.
- We think that the policy backdrop in the US will be particularly favorable for the economy, with looser fiscal policy, relatively easy monetary policy and a less stringent regulatory environment. We expect US growth to continue through 2017.
- We expect global growth to improve modestly, from 2.5% in 2016 to 2.9% in 2017, with looser fiscal policy and still easy monetary policy in key countries.
- And last but not least, we expect that while President-elect Trump's initial policy measures with respect to tariffs and trade agreements risk jolting financial markets, as a self-described “deal maker” he will likely adjust and change course as necessary to achieve his desired results.

We may have a bumpy ride, but the US economy will not be derailed.

Over the years, we have viewed the glass as half-full—if not full—when it comes to the US economy. Many others have seen the glass as half-empty, pointing out that productivity growth has decreased, US labor demographics are less favorable and government policies have been ineffective. While it is correct that productivity growth has decreased and labor demographics are less favorable, it does not follow that the US economy is in stagnation. Quite the reverse.

We should note that our conviction in US preeminence and US economic growth in 2017 is greater than our conviction in the direction of the equity markets. Just as we were appropriately humble about how much further equity markets could fall when we published our 2009 *Outlook*, we are equally humble today about our financial market outlook given the significant uncertainties ahead.

Here, we are reminded of Voltaire's famous words: "Doubt is not an agreeable condition, but certainty is an absurd one." A client with a well-diversified portfolio that is fully invested at its US equity allocation is generally well positioned for these uncertain and probably volatile times.

We hope our 2017 *Outlook* is helpful as you evaluate your portfolio allocations. We also wish you a healthy, happy and productive 2017.

The Investment Strategy Group



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Half Full

Since the trough of the global financial crisis in March 2009, US equities have returned nearly 300%, producing one of the longest bull markets in the post-WWII period and outperforming all other major developed and emerging market country equities. US equities have also exceeded their pre-crisis peaks of October 2007 and March 2000 by 75% and 103%, respectively, on a total return basis. This bull market has exceeded all other bull markets but one in length and exceeded all but three in magnitude.

US economic growth has also exceeded that of most other recoveries in length. This recovery is the fourth-longest recovery in the post-WWII period³ and if, as we expect, the US economy avoids a recession in the first half of 2017, this recovery will become the third-longest. While many critics correctly point out that it is the slowest recovery since WWII, it has actually created more economic growth than some of the stronger recoveries that lasted for shorter periods. On a cumulative basis, this recovery ranks sixth out of the last 10 recoveries with respect to GDP growth. What this recovery has lacked in strength, it has partially made up for in length.

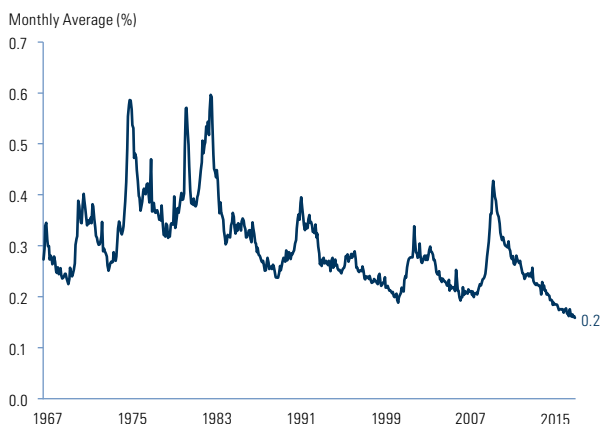
The slow but steady growth has also exceeded that of all other major developed economies, and US GDP per capita has increased more than the GDP per capita of any major developed or emerging market country.

This recovery has created over 15 million jobs. The unemployment rate decreased from a peak of 10.0% in October 2009 to 4.6% in November 2016 and is now below its long-term average of 5.8%. Even the broader U6 measure, which adds the underemployed (such as part-time and discouraged workers) to the number of unemployed, has fallen from a peak of 17.1% to 9.3%, and stands below its long-term average of 10.6%. Unemployment claims are not only lower than they were during pre-crisis troughs but also at their lowest since 1973; they are also the lowest on record as a percentage of the labor force (see Exhibit 1).

As a result of more robust employment, wages have increased as well. Wage growth, as measured by the Atlanta Federal Reserve Bank Wage Growth Tracker (which, in our opinion, is a better gauge of the employment backdrop than average hourly

Exhibit 1: US Initial Unemployment Claims as a Share of the Labor Force

Claims as a share of the labor force are at record lows.

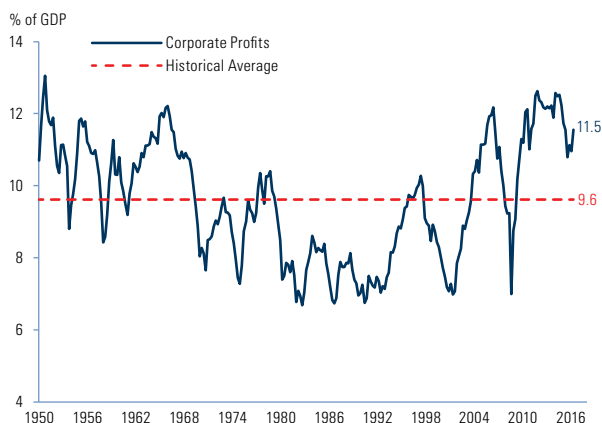


Data through December 2016.

Source: Investment Strategy Group, Datastream.

Exhibit 2: Corporate Profits as a Share of US GDP

Profits have been higher than current levels only 17% of the time since 1950.



Data through Q3 2016.

Note: Showing US corporate profits with inventory valuation adjustment and capital consumption adjustment.

Source: Investment Strategy Group, Datastream.

earnings, since it is not affected by the changing composition of the labor force as new entrants are hired at lower wages), has picked up from a low of 1.6% year-over-year growth in May 2010 to a high of 3.9% in November 2016—just below the 4.4% peak of September 2007. More robust employment and better wage growth have, in turn, led to a steady increase in consumer confidence, reaching levels last seen in August 2001, as measured by the

The Declinists at Work



March 1979

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July 2016

Source: *Financial Times*. Martin Wolf/James Ferguson, 2016. "Global elites must heed the warning of populist rage." *Financial Times* / FT.com, 20 July. Used under licence from the *Financial Times*. All Rights Reserved.

Conference Board. Even median household income, as measured by the US Census Bureau, rose in 2015 at the fastest rate on record.

In the corporate sector, total profits of domestic corporations as a percentage of GDP, as measured by the national income and product accounts (NIPA), are close to all-time highs. At 11.5% of GDP, profits not only are well above the historical average of 9.6%, but have been higher than current levels only 17% of the time since 1950, as shown in Exhibit 2.

Despite these "glass half-full" facts, the announcements of US decline that pervaded the airwaves in the depths of the global financial crisis have persisted. We continue to be inundated with analysis of "America's relative decline,"⁴ "America's slow-growth tailspin" and "sclerotic growth,"⁵ "an economic in-tray full of problems"⁶ and, of course, "secular stagnation."⁷ Two books published in 2016 that have received extensive coverage epitomize the sentiment: Robert Gordon's *The Rise and Fall of American Growth*⁸ and Marc Levinson's *An Extraordinary Time: The End of the Postwar Boom and the Return of the Ordinary Economy*.⁹

Some of the images are equally telling. We were struck by a recent image of the Statue of Liberty on its side that resembles a *BusinessWeek* cover of March 1979 with a tear trickling down

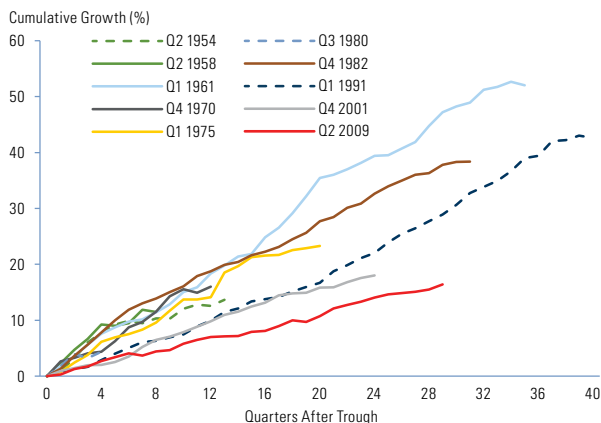
Lady Liberty's face. Since WWII, the waning of US preeminence has been a topic of recurrent hand-wringing. Whether prompted by the flexing of Soviet muscle, most spectacularly with the launch of Sputnik in the 1950s; the civil rights upheavals and growing fallout from the Vietnam War in the 1960s, the Arab oil embargo and the Watergate scandal of the 1970s, the rise of Japan in the 1980s or the rise of China in the 2000s, the declinists have foretold the ebbing of American preeminence. Typical of the genre is a 2009 book provocatively titled *When China Rules the World*¹⁰ by British columnist Martin Jacques.

Yet, as we wrote in our 2011 *Outlook: Stay the Course*, neither the global financial crisis nor the rise of China will hinder what we described as "America's structural resilience, fortitude and ingenuity" and remove the US from its preeminent perch.

What explains our difference of opinion, which has consistently underpinned our investment recommendation for a greater allocation to US assets and for remaining invested at such high valuations? Why do we believe that the US is on a more solid footing both absolutely and relative to all other major countries in the world? Is it a matter of perspective, analytical rigor, bias, review of longer economic history, or reliance on a big cadre of external experts in specialized fields?

Exhibit 3: Growth in US Real GDP Across Post-WWII Expansions

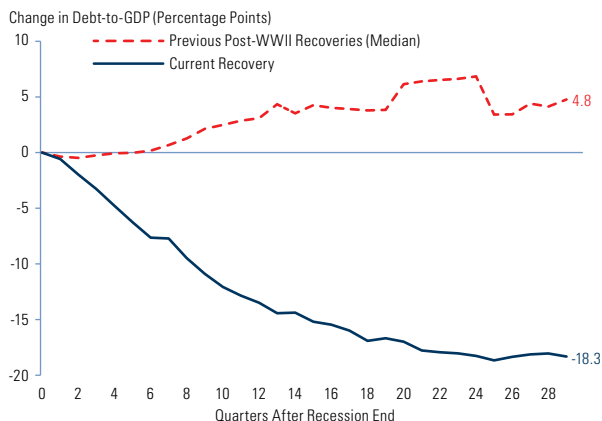
In this recovery, GDP has grown at half the average pace of prior expansions.



Data as of Q3 2016.
Source: Investment Strategy Group, Datastream, National Bureau of Economic Research.

Exhibit 4: Change in US Household Leverage Following Recessions

A large reduction in household debt served as a drag on the pace of this recovery.



Data through Q3 2016.
Source: Investment Strategy Group, National Bureau of Economic Research, Federal Reserve Economic Data.

We believe that no one factor explains the difference in opinion. Instead, we rely on a comprehensive framework of investigation that blends all of these elements, combining rigorous fundamental, quantitative and technical analysis, as well as the insights of an extensive network of external experts. At the same time, we continually endeavor to overcome the behavioral biases Nobel Laureate Daniel Kahneman and his collaborator Amos Tversky have shown to affect economic decision-making and tolerance for risk. These key characteristics of our investment process not only underpin our continued view of US preeminence, but also allow us to form a holistic view across global economies and asset classes. Of equal importance, our framework provides us with a consistent process by which to assess investment opportunities. While we believe our approach is robust, we acknowledge that nothing can ensure we will avoid the next downdraft.

We begin our *Outlook* with a brief review of this recovery and place it in the context of past recoveries showing that the glass is indeed half-full. We address some of the key concerns regarding demographics and declining productivity growth. We show that US labor force demographics have deteriorated and will continue to do so, especially in the absence of policy changes. Nonetheless, we demonstrate why there is room for optimism about productivity growth. The analysis leads us to a

view of slightly above-trend growth for 2017 with some upside potential from higher productivity and fiscal stimulus from a Trump administration.

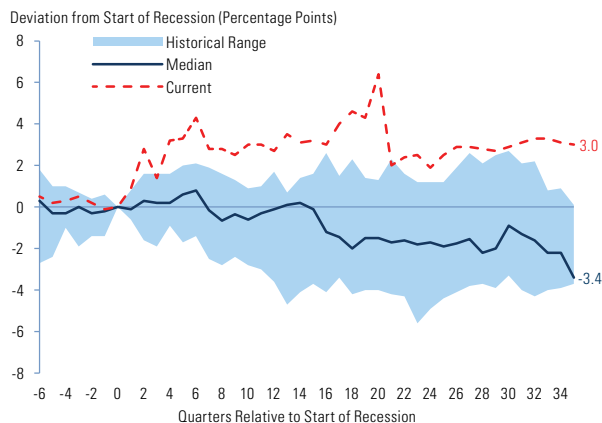
We then turn to our one- and five-year expected returns, which are driven by our view of a solid economic foundation, a well-balanced economy and a positive growth trajectory in the US. We conclude our introductory section with the risks to our view, both upside and downside, including a low probability of recession in 2017, high policy uncertainty under a Trump administration, possible global shocks from economic and currency policies in China, and the risks of geopolitical mishaps in Europe, the Middle East and the Far East.

This Recovery in Context—An Update

This recovery has been the slowest of the 10 recovery cycles since WWII, as shown in Exhibit 3. Since the trough, US GDP has grown at an annualized rate of 2.1% through the third quarter of 2016, which is half the pace of the median and average growth rates of all other recoveries. The slow GDP growth rate stands in stark contrast to the recovery in the labor market and, most recently, in wages and household income. Impressively, the decline in the unemployment rate has been the second-largest of all post-WWII recoveries.

Exhibit 5: Change in US Personal Savings Rate Surrounding Historical Recessions

The increase in the personal savings rate in this recovery has been unusually large.



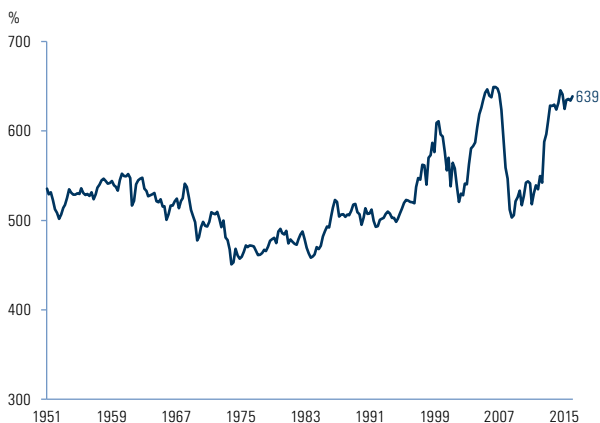
Data through Q3 2016.

Note: Quarter 0 marks the start of each recession since 1950, defined as the NBER recession cycle start. The cycle is measured from the start of each recession until the beginning of the next recession.

Source: Investment Strategy Group, Datastream, National Bureau of Economic Research.

Exhibit 6: Ratio of US Household Net Worth to Disposable Income

Real estate price and financial asset gains have boosted the ratio to near pre-crisis highs.



Data through Q3 2016.

Source: Investment Strategy Group, Datastream.

The anemic (but steady) pace of this recovery has fueled a debate about its causes. The theories fall into six categories:

- A “hangover” from the global financial crisis¹¹
- “Secular stagnation” due to unfavorable demographics
- “Secular stagnation” due to declining productivity growth
- Mismeasurement of GDP statistics
- Poor policies in Washington
- A steady onslaught of external shocks

We briefly examine each of these six theories below—some of which we have touched upon in our prior *Outlook* publications. While there has been further research on the topic over the past year, the debate has not yet been resolved and likely never will be to everyone’s satisfaction. One star-studded group of experts believes that most contributing factors other than weaker demographics have dissipated or will dissipate, and the US economy will remain structurally vibrant. Another star-studded group believes that the best days of the US are behind it, contending that even radical policy changes will not reverse this decline and that the 2016 election results are a testament to this “secular stagnation.”

A Hangover from a Crisis

Proponents of the “hangover” theory suggest that recoveries after a major financial crisis generally have been slower. In their book, *This Time Is Different: Eight Centuries of Financial Folly*,¹² Carmen Reinhart and Kenneth Rogoff use historical data from 66 countries between 1810 and 2010 to demonstrate that, historically, recoveries following a major financial crisis have been markedly slower than other recoveries.

Fundamentally, one can argue that households deleverage for a long time to increase precautionary savings, and corporations limit capital expenditures to build up precautionary cash, out of fear that another major financial crisis is looming. As shown in Exhibit 4, the pace at which households deleveraged in this most recent crisis was faster than in any other recovery in the post-WWII period; commensurately, the increase in the personal savings rate since the start of the recession is unusually large relative to previous cycles (see Exhibit 5).

Along with higher savings, the increase in home prices to levels matching the February 2007 peak (as measured by the S&P/Case-Shiller US National Home Price Index on a seasonally adjusted basis) and the appreciation in financial assets have boosted the ratio of household net worth to disposable income to near pre-crisis levels, as

shown in Exhibit 6. This improvement in net worth will enable households to lower their savings rates going forward and support consumption. Therefore, even if the “hangover” hypothesis was partly valid earlier in the recovery, it should have less impact in the future.

During the current recovery, the financial sector also deleveraged substantially, partly due to the unusually high levels of leverage that existed as the crisis began and partly due to greater financial regulation resulting from the Dodd-Frank Wall Street Reform and Consumer Protection Act signed into federal law by President Barack Obama on July 21, 2010. As shown in Exhibit 7, the financial sector began to deleverage even before Dodd-Frank and has continued to do so through 2016.

However, more recently, the pace of deleveraging has abated, as shown in Exhibits 4 and 7. Furthermore, such deleveraging may well be bottoming and soon reverse as households and the financial sector face a more favorable fiscal and regulatory policy environment under President-elect Trump. For all practical purposes, the “hangover” may now be over.

Secular Stagnation: Unfavorable Demographics

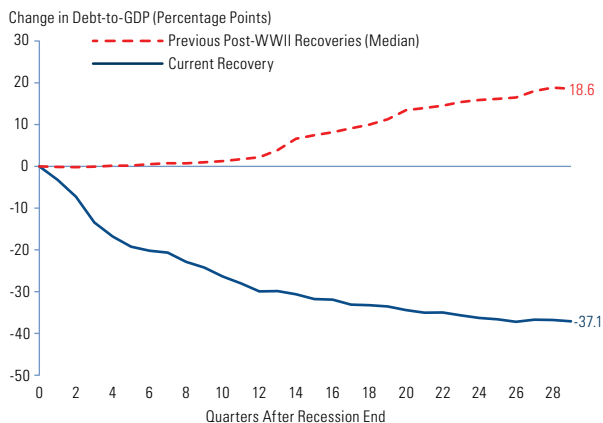
As we discussed in our 2016 *Outlook: The Last Innings*, the term “secular stagnation” was first coined by economist and Harvard professor Alvin Hansen in 1934¹³ and fully described in his presidential address to the American Economic Association in 1938.¹⁴ He predicted that poor demographics, limited innovation and few trading and investment opportunities would slow US growth.

The term was more recently popularized by Lawrence Summers, professor at Harvard University and former secretary of the Treasury, when he referred to secular stagnation in a 2013 speech at the International Monetary Fund.¹⁵

Hansen’s dire predictions never came to pass, and the US experienced close to record levels of productivity growth in the post-WWII period up to 1973, along with strong growth in the labor force. This current cycle, in contrast to the decades immediately following Hansen’s predictions, has been hampered by weak demographics and a decline in the growth rate of the labor force. In a September 2016 study, aptly called “How Should We Think About This Recovery?,” Jay Shambaugh, a member of the Council of Economic Advisers, shows that when one compares this recovery

Exhibit 7: Change in US Financial Sector Leverage Following Recessions

A decrease in financial sector indebtedness has contributed to a slower-than-usual recovery.



Data through Q3 2016.

Source: Investment Strategy Group, National Bureau of Economic Research, Federal Reserve Economic Data.

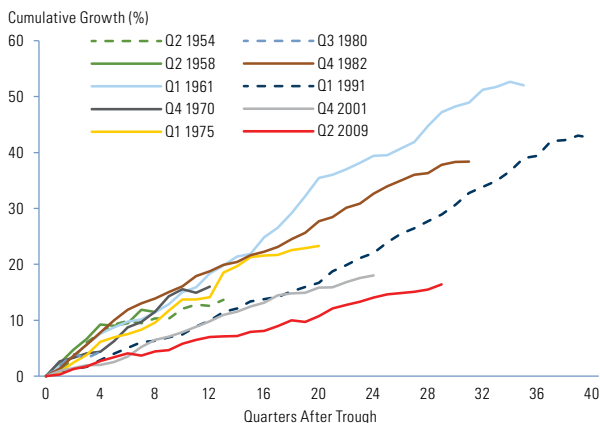
with the average of past recoveries, the growth gap narrows significantly if one accounts for the number of people in the labor force.¹⁶ Instead of this recovery growing at about half the pace of the average of past recoveries, the gap narrows to 83% of the average: GDP per number of people in the labor force has grown at an annualized rate of 1.9%, compared with an average of 2.3% in past recoveries. A recovery that appears to be at half the pace of other recoveries is actually in line with other recoveries after adjusting for the size of the labor force, as shown by comparing the red lines in Exhibits 8 and 9.

There are two components to the unfavorable demographics story. The first is simply the decline in the growth rate of the US working-age population, which is driven by aging, the retirement of the baby boom generation and slower immigration.

This trend cannot be easily reversed; however, the pace of decline can potentially be slowed. For example, the commonly accepted retirement age of 65 can be extended. In fact, there is some evidence that baby boomers are working longer than historical norms.¹⁷ When life expectancy was about 62 years in 1935, the retirement age for Social Security was 65. Today, life expectancy in the US is about 79 years, and the retirement age for Social Security has been extended to 67 for those born in 1960 or later. Of course, more broadly, the retirement age is still regarded as 65. A 65-year-

Exhibit 8: Growth in US Real GDP Across Post-WWII Expansions

In this recovery, GDP has grown at half the average pace of prior expansions.

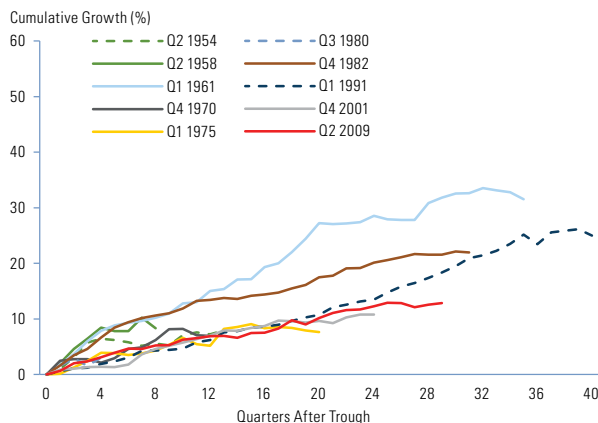


Data as of Q3 2016.

Source: Investment Strategy Group, Datastream, National Bureau of Economic Research.

Exhibit 9: Growth in US Real GDP per Person in the Labor Force Across Post-WWII Expansions

But when adjusted for labor force trends, this recovery has actually been in line with the average of past expansions.



Data through Q3 2016.

Source: Investment Strategy Group, Datastream, National Bureau of Economic Research.

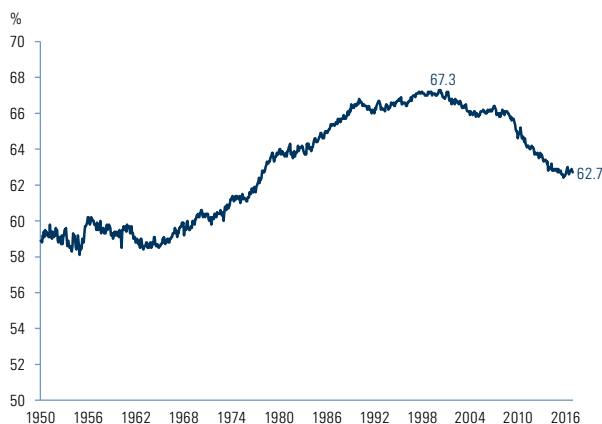
old today, however, is much healthier and more vibrant than a 65-year-old in 1935 and has many more years of active life that can reduce the decline in the growth rate of the working-age population. Furthermore, this cohort is quite productive relative to new entrants into the labor force. Similarly, immigration reform can help offset the decline in working-age population growth. Both factors depend on policy changes, and we do not have any definitive reason to be either optimistic or pessimistic at this time.

The second component of the unfavorable demographics perspective has been the drop in labor force participation, particularly among males. Exhibit 10 shows the rapid growth in labor force participation that occurred as the baby boom generation reached working age and as women joined the labor force in growing numbers after 1950. The labor force participation rate, however, peaked in 2000 and declined by 0.3% a year until it troughed at 62.4% in September 2015. Most of the drop was driven by three factors: significant decline in male labor force participation, retirement of baby boomers and the cyclical decline in demand for labor as a result of the global financial crisis. Some of the cyclical decline reversed as the economic recovery entered its eighth year: the participation rate has risen to 62.7% as of November 2016.

The male labor force participation, however, has been declining, coincidentally also by 0.3%

Exhibit 10: US Labor Force Participation Rate

Both cyclical and structural factors have contributed to a decline in the participation rate from the 2000 peak.



Data through November 2016.

Source: Investment Strategy Group, Datastream.

per year—but since 1952. The trend has occurred across all age cohorts. An important driver of this decline has been reduced demand for lower-skilled and less-educated males. The US ranks 32 out of 34 OECD countries in participation of prime-age (between the ages of 24 and 54) males in the labor force, ahead of only Italy and Israel.¹⁸ A Council of Economic Advisers report in June 2016 attributed that low ranking to the fact that the US spends less than other OECD countries on job search

assistance and job training, and to the fact that the US has a high rate of incarceration that especially affects lower-skilled men.¹⁹ According to the report, several policy measures can boost prime-age male labor force participation, including

- Increased investment in infrastructure
- Systemic reforms in the criminal justice system and in immigration policies
- Tax reforms
- Investment in education and training

This demographic aspect of secular stagnation is undeniable. In fact, an October 2016 paper by a team at the Federal Reserve Board, “Understanding the New Normal: The Role of Demographics,”²⁰ shows that the slow pace of economic growth since 1980 and the more pronounced decline in the last decade could be predicted by a model looking at “fertility, labor supply, life expectancy, family composition, and international migration.”

Thus, a glass half-full or half-empty perspective does not change the facts on the ground. There is little cause for near-term optimism with respect to the slower growth rate of the labor force. The general consensus is that the US labor force will grow at an average of 0.6% per year in the next several decades, compared with 1.6% from 1950 to 2000.²¹

In the shorter term, infrastructure investment and other policies highlighted above may boost the growth rate in the labor force, but it is hard to imagine growth rates reaching levels that would support President-elect Trump’s GDP growth targets of 3–4% on a sustainable basis.²²

Secular Stagnation: Declining Productivity Growth

Of all the theories put forth to explain the slow pace of this recovery, the one that has garnered the most attention is declining productivity growth.

Of all the theories put forth to explain the slow pace of this recovery, the one that has garnered the most attention is declining productivity growth.

It is also the most important issue in terms of its impact on future trend growth in the US, which in turn has the greatest impact on the long-term rate of earnings growth and equity market returns.

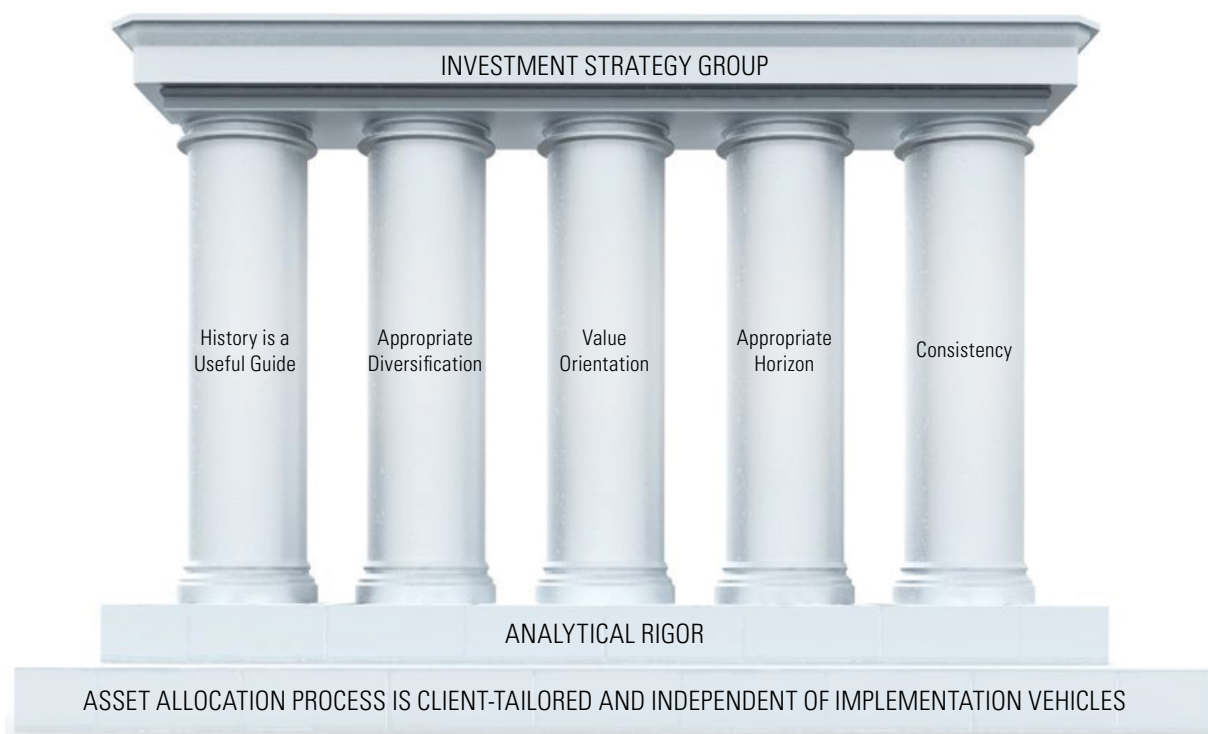
As reviewed in last year’s *Outlook*, the techno-optimists and the techno-pessimists are on opposite sides of the debate on declining productivity growth. Both camps have garnered new members; even Federal Reserve Chair Janet Yellen and Vice Chair Stanley Fischer have joined the fray.²³ Most recently, in September 2016, the Brookings Institution hosted a conference with leading experts from both camps to debate the issue.

We should note that debates on productivity are nothing new. They have surfaced during past periods of slow growth, as was the case in the early 1990s. Even some of the players are the same: Robert Gordon was a techno-pessimist in the early 1990s and remains so in the 2010s.²⁴

Part of the productivity debate is philosophical. For example, one question pertains to the increased use of free digital services such as Facebook, Google Maps, Waze and Khan Academy. These services yield “consumer surplus,” defined as the benefits consumers derive from various activities over and above the price they pay. Should they be included in GDP if they are deemed “non-market” services—those that are provided free of charge or at a fee that is well below 50% of production costs? While social media such as Facebook may (or may not, depending on your perspective) provide a service greater than the advertisement revenues associated with the use of that service, some will argue that if such services do not have an associated market price, they are not part of GDP and therefore should not impact the calculation of productivity levels. As the volume and the impact of these non-market services increase, we believe that the methodology for measuring GDP will evolve to better reflect the value of these services.

Such improvements in measuring GDP are not uncommon. The Bureau of Economic Analysis (BEA) conducts comprehensive revisions of the national income and product accounts every five years, with the goal of reflecting methodological and statistical improvements. Most recently, in 2013, the BEA expanded its definition of fixed investment to include expenditures on research and development and expenditures on artistic originals (e.g., books, music, television

Exhibit 11: Pillars of the Investment Strategy Group's Investment Philosophy



series, movies). Combined with some smaller improvements, these changes added \$560 billion to the level of 2012 GDP, a 3.6% increase relative to the prior estimate.²⁵

The more immediate—and important—question is whether we have entered a new phase in productivity growth trends that will keep productivity growth at the low levels seen since 2004. We believe that the answer is unknowable with any degree of certainty; historically, productivity forecasts have been notoriously wrong. In *The Age of Diminished Expectations*,²⁶ first published in 1990, Paul Krugman, Nobel laureate in economics and professor at City University of New York, wrote that the lower pace of productivity growth experienced since the early 1970s would most likely persist in the future. In 1995, however, productivity growth rates increased and were more than double the rate of the prior 12-year period.

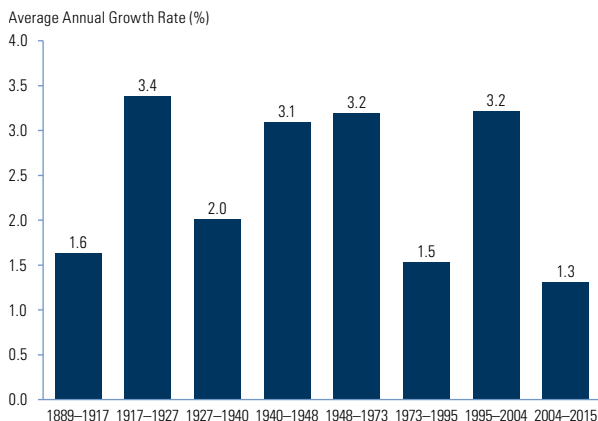
Similarly, in 1997, the Congressional Budget Office estimated that the long-run average annual growth rate of labor productivity would be 1.1%. Between 1995 and 2004, the actual average annual growth rate of labor productivity was 3.2%.²⁷

As many of our clients know, one of the pillars of our investment philosophy is that history is a useful guide (see Exhibit 11). And history tells us that labor productivity has moved in cycles, with periods of low productivity growth followed by periods of high productivity growth. In a forthcoming and comprehensive paper titled “Seven Reasons to Be Optimistic About Productivity,”²⁸ Professors Lee Branstetter of Carnegie Mellon University and Daniel Sichel of Wellesley College show that periods of low productivity growth have been followed by periods of high productivity growth since 1889, as seen in Exhibit 12. There is no reason to believe that “this time is different”; as many of you also know, we believe that those words are among the most dangerous and misused words in our industry.

Olivier Blanchard, senior fellow at the Peterson Institute for International Economics and former chief economist at the IMF, has also shown that the current period of low productivity growth does not tell us much about future productivity trends. He states that the correlation of “successive pairs of five-year averages of total factor productivity growth is only 0.20” since the mid-1970s.²⁹

Exhibit 12: US Labor Productivity Growth

Periods of slow productivity growth have been followed by periods of stronger productivity gains.

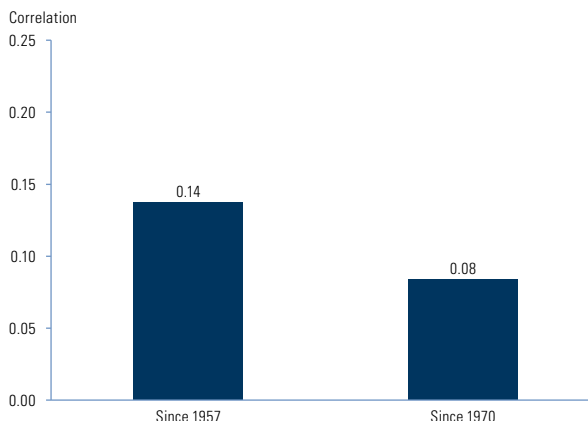


Data through 2015.

Source: Investment Strategy Group, Lee Branstetter and Daniel Sichel, "Seven Reasons to Be Optimistic About Productivity," forthcoming Peterson Institute for International Economics Policy Brief.

Exhibit 13: Correlation of 5-Year US Productivity Growth Rates With Following 5 Years' Productivity Growth Rates

Recent productivity trends tell us little about the future.



Data through Q3 2016.

Source: Investment Strategy Group, Haver Analytics, Olivier Blanchard, "Three Remarks About the US Treasury Yield Curve," Peterson Institute for International Economics, June 22, 2016.

We have examined labor productivity growth rates and, as shown in Exhibit 13, find even lower correlations.

There are two issues to consider. First, if the reported productivity growth rates are accurate, then the exceptionally low rates of the last 10 years account for part of the slow pace of this recovery. However, the current low productivity growth rates do not portend low growth rates going forward. Just as Hansen was proven wrong on his secular stagnation theory and Krugman was proven wrong on his diminished expectations for the US economy (and they were both influenced by their pessimistic view on productivity), those who extrapolate stagnation from the current productivity trends may be proven wrong as well.

Second, as we discuss below, there is also a high probability that real GDP may be mismeasured. If real GDP is mismeasured, it follows that

productivity is also mismeasured, thereby invalidating the whole theory of secular stagnation and the decline of the US economy.

Mismeasurement of GDP Statistics

In addition to the productivity debate, there is a debate as to whether we are measuring GDP correctly in the first place. The key argument being made is that while we correctly measure the value of *nominal* GDP based on the value of goods and services, we mismeasure the value of *real* GDP when we convert nominal GDP to real GDP using various price indices, and this therefore understates the pace of this recovery. This debate garnered considerable attention in 2016.

The mismeasurement argument states that the official price indices do not adequately reflect significant improvements in many products, especially in information and communication

technology, due to the methodology used by the Bureau of Labor Statistics (BLS) and the BEA. If the price indices do not adequately reflect the greater capacity of an improved product such as a smartphone or a microprocessor, then the price index used to convert nominal GDP to real GDP is too high. And if the price index is too high, then real GDP is understated.

If real GDP is mismeasured, it follows that productivity is also mismeasured, thereby invalidating the whole theory of secular stagnation and the decline of the US economy.

It follows that if real GDP is understated, then what appears to be a slow recovery is not as slow as reported and what appears to be a period of low productivity growth is not as low as reported.

We believe that the evidence favors the mismeasurement argument. At a September 2016 Brookings Institution conference on productivity, Martin Feldstein, Harvard professor and president emeritus of the National Bureau of Economic Research, also concluded that “the official statistics substantially underestimate the real growth of output” after studying the methods used to measure price indices.³⁰

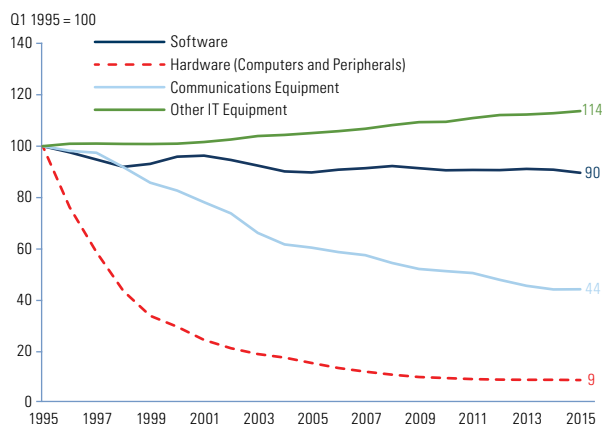
We point to three examples to illustrate the mismeasurement argument. First, our colleagues in Goldman Sachs’ Global Investment Research (GIR) have pointed out that the official price indices for information and communication technology show an implausible gap between the price deflation in computers and that in communications equipment, software and other IT equipment (see Exhibit 14). They question how “a given dollar outlay now buys about 10 times as much computer in real terms as 20 years ago, but it only buys about 10% more software.”³¹

Our colleagues’ conclusion that the official price indices for the information and communication technology sector are overstated matches that of a 2015 study of microprocessor pricing by David Byrne of the Federal Reserve Board, Professor Stephen Oliner of UCLA, and Sichel.³² The trio created an index showing that prices for microprocessor units used in desktop personal computers declined by an average annual rate of 43% between 2008 and 2013, while the official Producer Price Index (PPI) for these units declined by an average annual rate of 8%—substantially mismeasuring the real value created by this sector of information technology equipment. They point out that because microprocessor units represent about half of US shipments of semiconductors, the rate of innovation in this sector is inevitably mismeasured.

A second example of mismeasurement that we can all readily appreciate involves the quality and product improvements in smartphones. Hal Varian, chief economist at Google and emeritus professor at the University of California at Berkeley, has estimated that globally, people took over 1.6 trillion photos in 2015 using their smartphones, compared with 80 billion in 2000 using cameras and film. The price of each photo taken has gone

Exhibit 14: US Technology Price Indices

The implausible gap with hardware suggests IT and communication price indices are likely overstated.



Data through 2015.

Note: Other IT Equipment represents medical and non-medical equipment and instruments.

Source: Investment Strategy Group, Goldman Sachs Global Investment Research, Bureau of Economic Analysis.

from 50 cents to zero for smartphone users; 1.6 trillion photos that would have contributed \$800 billion to GDP have no impact on GDP in the current framework. GDP has declined since camera and film sales have fallen without a commensurate quality adjustment for smartphones. Of course, fewer photos would have been taken had the smartphone not been developed, but the point still stands.³³

Similarly, Varian shows that with the onset of the commercial application of GPS technology, productivity growth in trucking was twice the aggregate US productivity growth, yet when GPS functionality was added to smartphones basically at no additional charge, GDP declined because sales of stand-alone GPS systems fell.³⁴

Finally, a third example, also provided by Varian, shows that, because GDP does not fully count the export of intangibles such as software and design, GDP is understated. He shows how an iPhone manufactured by Foxconn in China using parts from 28 countries and exported to France has no direct impact on US GDP. Varian concludes that in a global supply chain, US design and software that is replicated outside the US through offshore manufacturing and exported to a third country never impacts US GDP measures directly, particularly if the profits are not repatriated and redeployed in the US.³⁵

Our colleagues in GIR continue to estimate that such mismeasurements lower reported annual real



We believe that productivity in health care is underestimated. Consider IBM's Watson Health, an artificial intelligence system that can read 200 million pages of text in 3 seconds. As of 2015, Watson had amassed 315 billion data points representing health records, lab results, genomic tests and clinical studies. The system processes patients' cases against its ever-growing database and recommends customized treatment options. With such developments, we expect continued improvement in growth of productivity in health care.

"If productivity growth were better measured, particularly in health and other services, the growth rate would look better than is currently reported."

Martin Neil Baily and Nicholas Montalbano, "Why Is U.S. Productivity Growth So Slow? Possible Explanations and Policy Responses," Brookings Institution, September 2016.

GDP growth by about 0.7 percentage point, similar to their estimate reported in our *Outlook* last year.

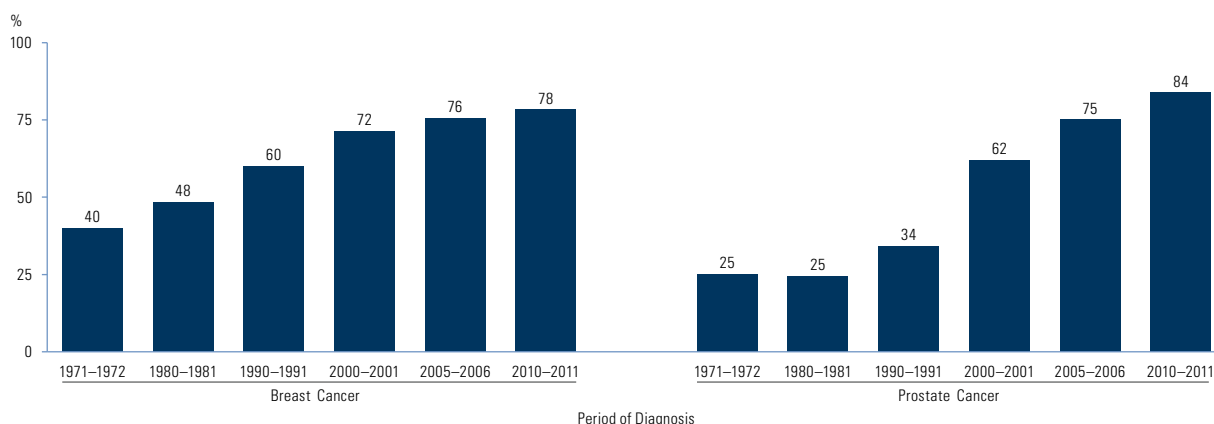
Of course, not all experts believe that there is a mismeasurement problem. Notable among them is Chad Syverson of the University of Chicago, who raises four points in making this case.³⁶ First, he states that the productivity slowdown has been global in nature and unrelated to countries' consumption or production intensities of information and communication technology. Second, he states that estimates of consumer surplus are too small relative to his estimates of lost GDP due to slower productivity growth. Third, he argues that if such mismeasurement existed, the growth rate in the information and communication technology sector would be a multiple of its stated growth rate. Finally, while he acknowledges that gross domestic income has been higher than GDP since 2004 and the gap might reflect the higher wages of workers who are producing non-market digital services, he does not believe that this difference is evidence of mismeasured GDP because the trend started earlier than the slowdown in productivity growth.

A somewhat similar line of reasoning has been presented by Byrne, John Fernald of the Federal Reserve Bank of San Francisco and Marshall Reinsdorf of the IMF in a paper titled "Does the United States Have a Productivity Slowdown or a Measurement Problem?"³⁷ While they agree that productivity growth has been mismeasured in the past, they argue that the mismeasurement has been negligible in the 2004–15 period partly because computer hardware, for which mismeasurement was once a factor, now makes up a smaller part of GDP. Therefore, the impact is less in the 2004–15 period than it was in the 1995–2004 period when productivity growth was much higher. They also state that free digital products not only are non-market and should not be counted in GDP, but also are not sizable enough to account for the level of decline in productivity growth rates.

Experts' opinions on mismeasurement continue to evolve. In fact, in a subsequent publication co-authored with Carol Corrado of the Conference Board, Byrne found a significantly higher level of software price mismeasurement than assumed in his prior paper.³⁸ He has also co-authored a study on prices and depreciation for computer tablets such as iPads, proving that quality-adjusted price indices for tablets have fallen much faster than the broader price indices for computers and peripheral equipment.³⁹

Exhibit 15: 10-Year Net Survival Rate of Breast and Prostate Cancer Patients

Improved cancer survival rates reflect significant gains in science and technology.



Data as of November 2014.

Note: Based on cancer statistics for the UK. Ten-year survival for 2005-2006 and 2010-2011 is predicted using an excess hazard statistical model.

Source: Investment Strategy Group, Cancer Research UK.

We conclude that there is undoubtedly some degree of mismeasurement. We know that information and communication technology has evolved significantly and innovation is occurring at a rapid pace. We know that the BEA reviews its statistical methodologies every five years and revises them as needed, recognizing that measurement methodologies have to evolve with the evolution of the US economy. We also know that we as consumers carry incredibly powerful digital equipment in the palms of our hands and pay less for it than we paid for equipment with lesser functionalities not so long ago. Common sense supplemented by extensive research by the experts on productivity and mismeasurement reinforces our view of a glass half-full when it comes to innovation and productivity in the US.

We realize this debate will be resolved only with the benefit of hindsight, in the same way that realized productivity growth exceeded the

prognostications of Hansen in the late 1930s and Krugman in the early 1990s. Our clients will be inundated with conflicting views from headlines in the media and books with captivating titles. Separating fact from fiction remains challenging. Recently, an article in the *Wall Street Journal* highlighted “dwindling gains in science, technology and medicine.”⁴⁰ The article suggested that improvements in breast cancer mortality have slowed since 1985. Exhibit 15 shows the 10-year net survival rate for breast cancer and prostate cancer since 1971. Maybe it is only a matter of perspective, but, to us, a 78% 10-year survival rate for breast cancer and an 84% 10-year survival rate for prostate cancer represent significant improvements over the rates of the early 1980s, 48% and 25%, respectively, and are even more significant for those whose lives have been saved.

Probably one of the more amusing instances of conflicting perspectives can be seen in the 2016 publication of two books with diametrically opposed messages: *Progress: Ten Reasons to Look Forward to the Future*⁴¹ and *The Innovation Illusion: How So Little Is Created by So Many Working So Hard*,⁴² both written by authors born in Sweden in the early 1970s. Our views, of course, are more aligned with the first book. The second book, however, raises important concerns about excessive regulation and how

We realize this debate will be resolved only with the benefit of hindsight, in the same way that realized productivity growth exceeded the prognostications of Hansen in the late 1930s and Krugman in the early 1990s.

such regulation is “killing frontier innovation.” Indeed, some have put forth the prevalence of poor government policies as one of the theories to explain the slow pace of this recovery.

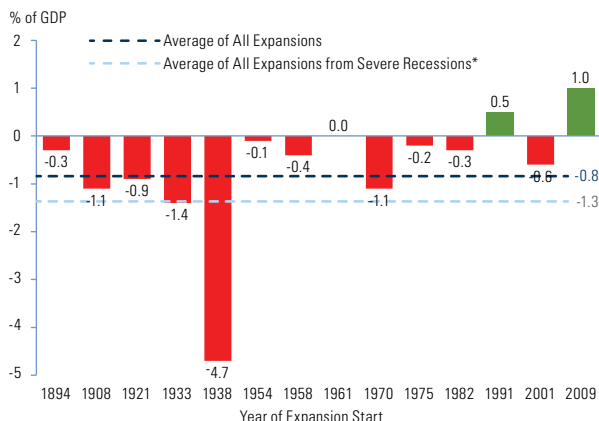
Poor Policies in Washington

One of the theories that has been getting more traction recently attributes the slower recovery to poor policies enacted in Washington. In a June 2016 article about the US economy, Gregory Mankiw, professor at Harvard University and former chair of the Council of Economic Advisers for President George W. Bush, highlighted “policy missteps,”⁴³ including misguided fiscal policy, as a possible contributor to the slow pace of growth since the global financial crisis.

One unusual feature of this recovery has, in fact, been a contractionary fiscal policy. We have derived an approximate historical measure of fiscal policy changes by estimating changes in the cyclically adjusted federal budget as a percentage of GDP. We note that, by this measure, as far back as 1890, fiscal policy has been expansionary in all but three recoveries following a recession—with the fiscal policy in the current recovery being the most contractionary, as shown in Exhibit 16. In this recovery, the budget deficit as a share of GDP was reduced by 1.0% a year, compared to an average widening of the budget deficit by 1.3% a year in all other recoveries after severe recessions. The average increase in the size of the budget

Exhibit 16: Change in US Budget Balance Following Recessions

Fiscal policy has been an unusually large headwind to growth in this recovery.



Data through 2015.

Note: Shows the change in the cyclically adjusted budget balance as a % of GDP for each episode.

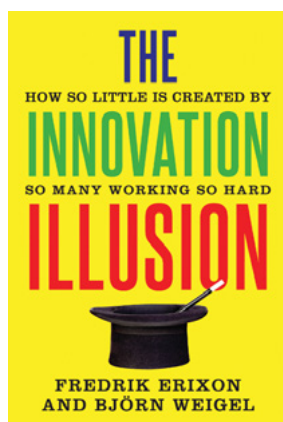
Source: Investment Strategy Group, Datastream, Global Financial Data.

* We define “severe” recessions according to those identified by Carmen Reinhart and Kenneth Rogoff in “Recovery from Financial Crises: Evidence from 100 Episodes” (2014), as well as the 1937 recession (a continuation of the 1929 recession) and the two most severe post-WWII recessions (excluding the 2007 recession).

deficit for all recoveries, including less severe ones, is -0.8%. A swing of 1.8 percentage points would have had a material impact on the pace of this recovery.

Professor Alan Blinder of Princeton University and former vice chair at the Federal Reserve echoed the sentiment by stating that partisan politics have prevented progress in dealing with important economic issues.⁴⁴ Shambaugh has outlined various measures, such as infrastructure spending proposed by President Obama in his fiscal year 2017 budget, that would positively impact productivity and labor force participation.⁴⁵ The budget was not approved. Summers has similarly called for expansionary fiscal policy through infrastructure spending, but such policies have not been pursued.⁴⁶

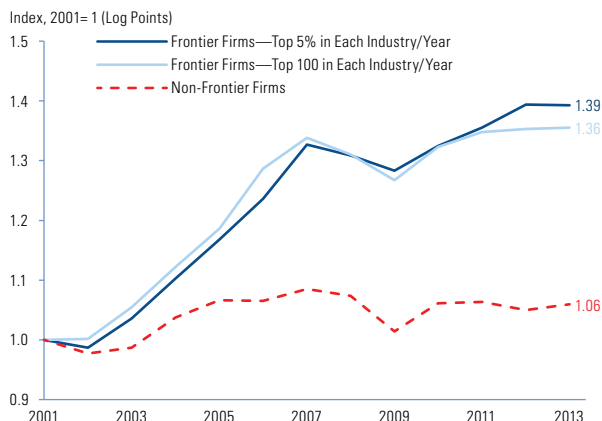
Increased regulation has also been blamed for some of the slow pace of this recovery. A September 2016 working paper by Martin Neil Baily and Nicholas Montalbano of the Brookings Institution on the slow growth of US productivity shows that while productivity in the most productive firms is growing rapidly, their best practices are not spreading to the rest of the players in a given industry.⁴⁷ Exhibit 17 shows the widening gap between the productivity growth rates of firms at the frontier of innovation and



Two books published in 2016 and written by Swedes born in the early 1970s highlight the conflicting perspectives on productivity. Johan Norberg’s *Progress* cover used with permission of Johan Norberg and Oneworld Publications. All rights reserved. Fredrik Erixon and Björn Weigel’s *The Innovation Illusion: How So Little Is Created by So Many Working So Hard* cover used with permission of Fredrik Erixon, Björn Weigel and Yale University Press. All rights reserved.

Exhibit 17: Labor Productivity Growth for Different Groups of Firms

Rapid productivity growth of firms at the frontier of innovation is not spreading to the rest of the industry.



Data through 2013.

Note: Average across 24 OECD countries and 22 manufacturing and 27 market services industries.

Source: Investment Strategy Group, OECD preliminary results based on Dan Andrews, Chiara Criscuolo and Peter N. Gal, "Mind the Gap: Productivity Divergence Between the Global Frontier and Laggard Firms," OECD Productivity Working Papers, forthcoming.

Exhibit 18: US Financial Conditions Index

Conditions tightened significantly due to global shocks emanating from the Eurozone, oil prices and China.



Data through year-end 2016.

Source: Investment Strategy Group, Goldman Sachs Global Investment Research.

the rest of the industry. Baily and Montalbano suggest that increased regulation after the crisis may be partially responsible for the widening gap between frontier firms and the rest of the industry, which lowers overall productivity growth rates across the economy and hence lowers the pace of economic growth.

Our colleagues in GIR think that lower capital investment accounts for the lack of diffusion of new technologies from more productive firms to less productive firms.⁴⁸ Here, again, it is likely that a more favorable business environment could have boosted capital expenditures and increased overall productivity levels.

We conclude that it is reasonable to assign some of the weakness in this recovery to less effective fiscal and regulatory policies out of Washington rather than to structural shortcomings in the US economy.

A Steady Onslaught of External Shocks

A sixth theory posits that numerous external shocks explain the slow pace of this recovery. Just as the US economy was recovering from the trough of 2009, the Eurozone sovereign debt crisis jolted global financial markets. The Eurozone was a source of uncertainty and financial market volatility beyond the initial shock in 2010 as the

crisis spread from Greece to Spain and Italy.

The Eurozone crisis was followed by a series of what the Brookings Institution has called the "fiscal fights of the Obama administration."⁴⁹ The first fiscal fight resulted in the Standard and Poor's (S&P) downgrade of US Treasury debt in August 2011. The equity markets, as measured by the S&P 500 Index, dropped about 19% between April and October of 2011.

Taken together, the Eurozone sovereign debt crisis and the first of the fiscal fights tightened US financial conditions⁵⁰ by 142 basis points (see Exhibit 18). GIR estimates that a 100 basis point tightening of financial conditions is equivalent to a federal funds hike of 150 basis points and a drag on GDP growth of about one percentage point.

The drop in oil prices from a post-crisis high of \$107 per barrel for West Texas Intermediate in June 2014 to a trough of \$26 per barrel in February 2016 also provided a shock to the economy. Employment and capital expenditures in the oil and gas sector dropped by 29% and 67%, respectively, from peak levels seen in 2014. The sector's par-weighted default rate excluding distressed exchanges reached 14.6% and including such exchanges 19.8%, in October 2016.⁵¹

Broad-based fear of policy mistakes in China and unexpected depreciation of the renminbi were

Exhibit 19: US Equity Volatility

Spikes in equity volatility have corresponded with major global shocks.



Data through December 31, 2016.

Note: The red arrows show the S&P 500's (SPX's) peak-to-trough declines around each episode.

Source: Investment Strategy Group, Bloomberg.

another shock to the financial markets, resulting in the tightening of financial conditions in the US in mid-2015 and early 2016, with US equities dropping by more than 10% in both periods.

Exhibit 19 provides a time line of shocks, which, in all likelihood, dampened the pace of the US recovery.

In Summary

As we review the six theories that could account for the notably slow pace of this recovery, we believe that all have some merit. Recovering from the hangover from the deepest recession since the Great Depression took a little longer. Demographics have not been favorable. Productivity growth appears lower, but that fact does not portend weak productivity growth in the future. Productivity growth is also probably not as weak as it appears, given some mismeasurement of GDP. Fiscal and regulatory policies hampered the economic recovery. And the global backdrop provided a steady source of shocks that slowed growth in the US.

That said, we feel confident that the US continues to progress on a solid footing, that the recovery is intact and, as we argued in our 2016 *Outlook: The Last Innings*, that this recovery and bull market have another inning or two left to run. The glass is still half-full.

We now turn to our expected returns for the next one and five years.

One- and Five-Year Expected Total Returns

The Investment Strategy Group began producing one- and five-year annualized expected total returns for major asset classes in our 2013 *Outlook*. Since then, our key message has been to stay invested in US equities despite the low returns we have expected for the asset class. Our recommendation has been driven by a low probability of recession, a reasonable probability of upside for equities, zero expected returns for cash and negative expected returns for bonds.

We have presented these one- and five-year annualized expected returns to: a) provide more context for our investment recommendations; b) encourage our clients to have a longer investment horizon; and c) increase the odds that our clients have greater staying power to withstand market downdrafts.

Fulfilling these three priorities is even more imperative moving forward. Our return expectations are lower than in prior years after several years of outsized returns in equities and high yield, and, at the same time, we are confronted with tremendous economic policy and geopolitical uncertainty. We have been faced with such uncertainty in the past, but today (in contrast with periods such as 2008), we no longer have the wind at our back with the benefit of cheap equity and high yield valuations. In 2008, we believed that attractive valuations would eventually lead to high prospective returns in US equities and high

yield, notwithstanding short-term uncertainty. At the dawn of 2017, we face uncertainty, but US equities and high yield are expensive, and valuations no longer provide much margin of safety and protection from the downside. Similarly, other asset classes such as fixed income provide negligible returns but come with downside risk, e.g., if the incoming Trump administration's fiscal policy is more stimulative than we expect or if the Federal Reserve raises interest rates at a more rapid pace than we expect.

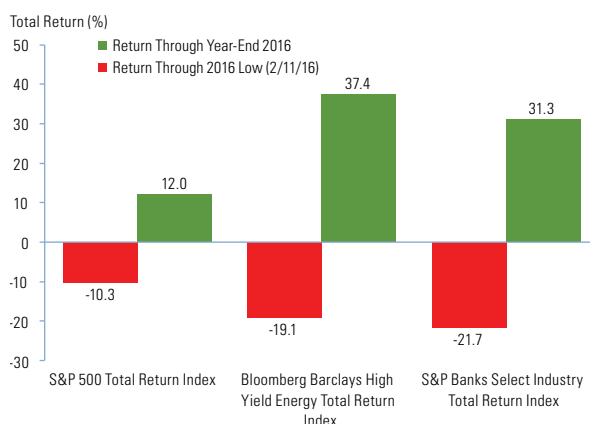
As we prepared our one- and five-year annualized expected returns for this *Outlook* and finalized our investment recommendations for 2017, we were struck by two observations.

First, the general recommendations and volatility warnings in our *Outlook* publications over the last several years have been similar, have been directionally correct and have generally added value to our clients' portfolios. We have continuously recommended that clients stay invested in their strategic US equity allocation. We have also recommended maintaining some tactical tilts such as an allocation to high yield. Yet we have warned clients to be prepared for bouts of volatility. Last year, our exact message to clients with respect to volatility was that "markets will be volatile, so an asset class that performs well in the first half of the year may perform particularly poorly in the latter part of the year; however, investors—unlike traders—should not try to time such short-term moves."⁵² It is very important that clients heed this warning—not just for 2017 but for their entire investing lives.

Exhibit 20 illustrates the point. We have compared the performance of some of the best-performing asset classes and sectors for the year with the performance of those assets at their worst

Exhibit 20: Returns in 2016

Some of the best-performing assets in 2016 experienced significant declines before recovering.



Data through December 31, 2016.
Source: Investment Strategy Group, Bloomberg.

point of the year. Energy high yield provides an excellent example. On February 11, 2016, the US energy high yield sector (as measured by the Bloomberg Barclays High Yield Energy Total Return Index) was down 19.1% year to date—one of the worst-performing sub-asset classes at that time. Similarly, the US bank sector (as measured by the S&P Banks Select Industry Total Return Index) was down 21.7% over the same period. We had in place tactical tilts in both sectors. As oil prices recovered, high yield energy securities rallied, with the benchmark index ending the year up 37.4%—a wild swing of 56 percentage points from low to high. US banks also rallied initially in response to prospects of higher interest rates and later in anticipation of less regulation under a Trump administration. The bank sector index rallied to end the year 31.3% higher than at the start—an equally wild swing of 53 percentage points from low to high.

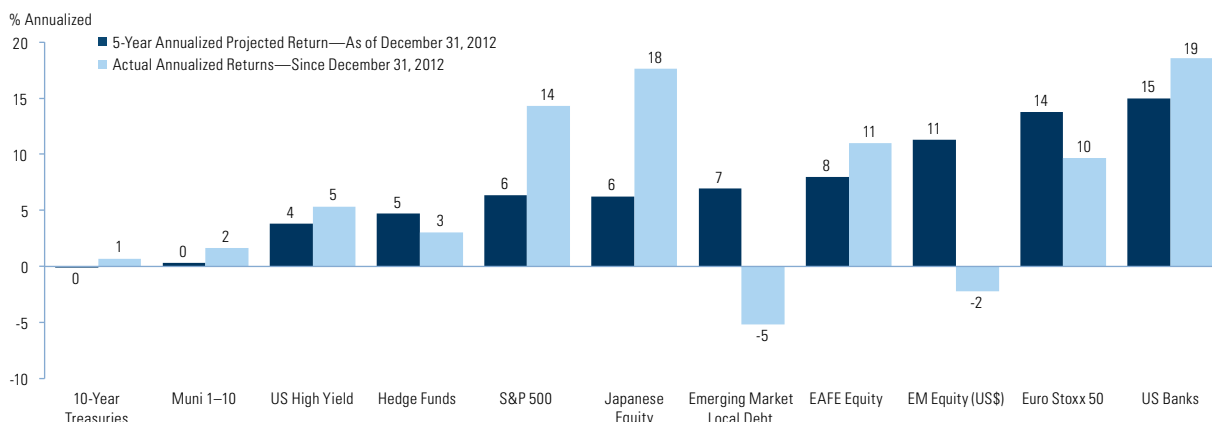
We have to be realistic: we cannot anticipate such market swings on a consistent basis. Therefore, it is imperative that clients maintain a long investment horizon, be tactical when investment opportunities present themselves—usually at times of extreme stress in the financial markets—and otherwise stay invested in the appropriate strategic asset allocation.

Our second observation was that our five-year annualized return forecasts

The general recommendations and volatility warnings in our *Outlook* publications over the last several years have been similar, have been directionally correct and have generally added value to our clients' portfolios.

Exhibit 21: Historical Total Returns vs. ISG's 2013 *Outlook* 5-Year Prospective Total Returns

Our 5-year return forecasts have so far been relatively accurate for the bulk of assets in our diversified model portfolio, but we have not been right across the board.



Data through December 31, 2016.

Note: Rounded to the nearest whole integer.

Source: Investment Strategy Group, Datastream.

have also been relatively accurate for the bulk of assets in our diversified model portfolio. In Exhibit 21, we compare the five-year annualized expected total returns published in our 2013 *Outlook* to what transpired over the last four years. Our forecasts for 1) fixed income returns including both investment grade and high yield, 2) hedge fund returns, and 3) EAFE equity returns were close to the mark. Directionally, we were also right about US equity returns but off in terms of magnitude. We were also struck by how close our US bank sector return forecasts were to the realized returns—approximately a quarter of which were realized after the November election. This observation has reinforced our belief in one of the pillars of our investment philosophy: having the appropriate horizon for various strategies is critical to long-term success.

Not surprisingly, we have not been right across the board. We underestimated Japanese equity returns by 11.4 percentage points on an annualized basis and we overestimated emerging market equity and emerging market fixed income returns, by sizable 13.5 and 12.1 percentage points, respectively, on an annualized basis. Japanese equities realized an annualized 18% return and EM equity and local debt realized negative returns, at -2% and -5% annualized, respectively. While our forecasts were off the mark, our emerging market investment recommendations were on the mark. In mid-2013,

we recommended clients reduce their strategic allocation to emerging market assets. Even though we had forecast expected returns that were nearly double those of US equities, we became

Insight



Investment Management Division

Emerging Markets: As the Tide Goes Out

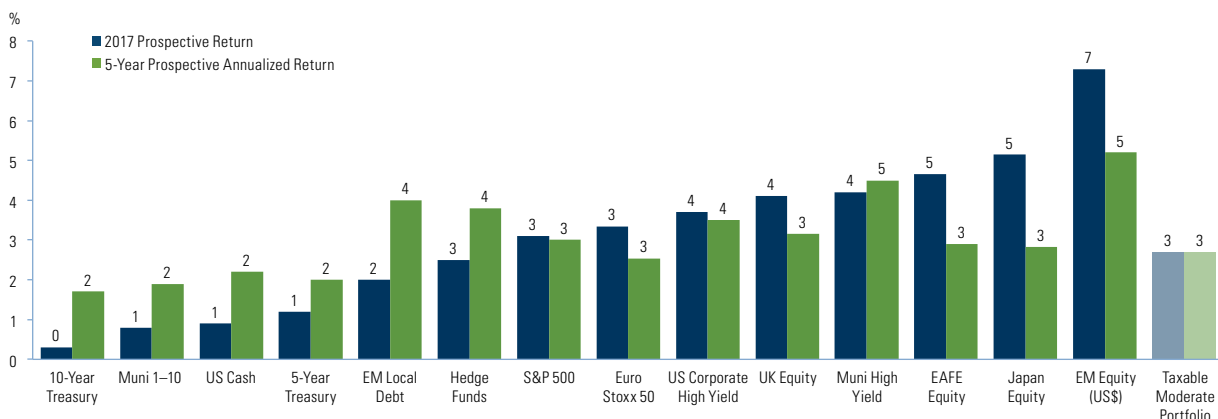


"It's only when the tide goes out that you learn who's been swimming naked."
Warren Buffett, 1992 Letter to Berkshire Hathaway Shareholders

Investment Strategy Group | December 2013

Exhibit 22: ISG Prospective Total Returns

Expected returns over the next one and five years are below historical realized averages.



Data as of December 31, 2016.

Note: For informational purposes only. There can be no assurance the forecasts will be achieved.

Source: Investment Strategy Group. See endnote 53 for list of indices used.

increasingly concerned about the structural fault lines of emerging market countries. These fault lines were discussed in detail in our December 2013 *Insight, Emerging Markets: As the Tide Goes Out*.

We continue to recommend a zero allocation to emerging market debt (dollar-denominated and local currency debt) and a 2% allocation to emerging market equities in a moderate-risk diversified portfolio. We highlight emerging market assets because, yet again, our base case returns, especially for emerging market equities, appear compelling, but we are not recommending a tactical allocation to this asset class. As we discuss below in our review of the risks to our economic and financial market outlook, China is our biggest source of concern in 2017 and for the next few years. Emerging markets are the countries that would be most negatively impacted by any shocks emanating from China.

China is our biggest source of concern in 2017 and for the next few years. Emerging markets are the countries that would be most negatively impacted by any shocks emanating from China.

Our 2017 expected returns, shown in Exhibit 22, are the lowest returns we have published since the global financial crisis. Not a single broad asset class is expected to have double-digit returns. Cash has an expected return of 1%. Expected returns for intermediate investment grade fixed income securities range between 0% and 1% depending on maturities, an expectation driven by our view of rising rates as the Federal Reserve hikes the federal funds rate two or three times in 2017. US equities, which are the most expensive of global equities, have an expected return of about 3%, and we expect slightly higher returns in other developed market equities. Hedge funds, an asset class for which we have had modest single-digit return expectations since our 2013 *Outlook* (as shown in Exhibit 21), should continue to have modest returns; we expect a 3% return before taxes, compared to a 5% annualized return expectation in 2013 and an annualized return of 3% over the last four years.

In aggregate, a moderate-risk diversified portfolio for taxable clients is expected to have a return of about 3%. We must note that our return expectations are not meant to promote a specific investment, and that their basis on current capital market assumptions implies they will likely change over the course of the year.

At this point, our clients may well be asking why they should remain invested in a diversified portfolio with such paltry

return expectations, given all the economic policy and geopolitical uncertainty mentioned earlier. We believe there are three compelling arguments.

First, there is potential for upside surprises in 2017:

- Saudi Arabia and the rest of the oil producers may stick to the announced oil production cuts, thereby boosting energy sector earnings.
- A Trump administration fiscal stimulus could boost growth by more than we expect.
- Corporate tax cuts could increase corporate sector profitability.
- A possible tax holiday could encourage US multinational corporations to repatriate some of their earnings and deploy them for stock buybacks.

We assign a 25% probability of such upside surprises relative to a 60% probability of our base case scenario and a 15% downside probability. (Please see Section III, 2017 Financial Markets Outlook, for a more detailed discussion.)

Second, we recommend staying invested because we believe that the probability of a recession in the US is about 15% over the next year. There is an 85% chance that the economy will grow at a rate of about 2% or higher. Absent a recession, equities are more likely to generate positive returns. Obviously, the probability of a recession is substantially higher over the next five years, and our five-year annualized expected returns incorporate an 80% probability of a recession.

Third, and most importantly, we do not see better investment alternatives. Cash will provide negligible returns with no upside, and we expect investment grade bonds to have equally negligible returns with little upside, if any. We also expect hedge funds, in aggregate, to lag equities on an after-tax basis.

We expect similarly modest returns from our tactical tilts.

As equities, high yield and the dollar have rallied over the course of the year, we have continued to reduce the overall risk level of our tactical tilts.

Our Tactical Tilts

As equities, high yield and the dollar have rallied over the course of the year, we have continued to reduce the overall risk level of our tactical tilts. At the beginning of 2016, we had already reduced our exposures by 50% relative to peak levels in 2015, as measured by value at risk. By the end of 2016, we had reduced exposures further, based on our investment discipline of averaging in and out of our tactical tilts.

Underweight Fixed Income: We continue to recommend underweighting US fixed income assets as the Federal Reserve slowly but steadily raises the federal funds rate. We expect the 10-year Treasury bond yield to range between 2.5% and 3.0%. As a result, we forecast a 1% return across short- and intermediate-maturity fixed income assets and a near zero return for the 10-year Treasury. Longer maturities are expected to have negative returns. We also recommend underweighting fixed income assets to fund tactical tilts given their higher expected returns.

Overweight to High Yield: While we reduced our tactical allocation to high yield assets by half throughout 2016, we continue to recommend an allocation to general high yield bonds, high yield energy bonds and high yield bank loans. The incremental yield in such securities, adjusted for defaults, is still compelling, with expected returns of about 4% for high yield bonds and high yield energy bonds and about 5% for bank loans. We forecast that crude oil prices will stay in the \$45–65 range, partly owing to some production discipline by Saudi Arabia as the largest swing producer. Our bank loan tilt is further supported by a rising rate environment; the coupon rate on bank loans will be reset higher as LIBOR rises.⁵⁴

Modest Overweight to US Banks: We maintain a modest overweight to US banks despite their 31% return in 2016. Banks will benefit from rising rates, especially if the increase is greater in the short end of the yield curve. About 60% of changes in the net interest margin of banks is typically driven by changes in short rates since they are used for setting the banks' prime lending rate. Banks will also likely benefit from a more favorable regulatory environment under a Trump administration. We forecast a return of about 7%.

Overweight US Energy Infrastructure Master Limited Partnerships (MLPs): We initiated a direct allocation to energy MLPs in late January 2016 and have maintained that tilt. Given our assumptions about oil prices, we believe that the cash distributions from MLPs are generally secure and provide a yield to investors of just over 7%. In the absence of any valuation changes, the yield translates into a high single-digit tax-advantaged return. Any growth in cash flow distribution or improvements in valuation relative to the S&P 500 would provide some upside.

Overweight Spanish Equities: We maintain an overweight to Spanish equities on a currency-hedged basis. This tactical tilt was introduced in August 2013, and we have adjusted the size of the overweight about a dozen times since. Spanish equities offer some of the cheapest valuations across the developed markets, attractive dividend yields, expected earnings growth of 4.6%, aided by healthy domestic growth, and a particularly well-capitalized⁵⁵ banking sector that has a lower nonperforming loan ratio than the Eurozone bank average. Furthermore, Spain is unlikely to face the same political uncertainty as Germany, France and Italy in 2017. We expect high single-digit returns for Spanish equities.

Short Five-Year German Bunds: We recommend a short position in five-year German bunds as the ECB embarks upon the process of shifting its monetary policy. After the December 2016 meeting, the ECB announced that it would reduce its monthly purchases of bonds from €80 billion to €60 billion starting in March 2017 and continuing through December 2017. We expect the ECB to end all purchases sometime in 2018, barring any shocks. As a result, we think interest rates for Eurozone sovereign debt will rise gradually over the course of the year, which in the case of German bunds means they will become less negative. We expect a modest 2% return from this tilt.

Short Chinese Renminbi: We have increased our bearish position on the Chinese renminbi over the course of 2016. China is under pressure from multiple sides: the need for loose monetary policy to achieve the leadership's 6.5% target GDP growth rate, 32 months of capital outflows that have accelerated in late 2016, a strong dollar and an incoming Trump administration that will likely

pursue a US-centric policy toward China. Risks are exacerbated by the leadership's lack of experience in handling financial market volatility, as evidenced by China's policy response to its equity market collapse in June 2015 and its approach to shifting the currency regime to a more flexible one in August 2015 and January 2016. We expect the currency to depreciate about 7% in 2017; since 4% is already priced in the forward markets, we expect a return of about 3%. There is considerable scope for further upside from this tilt if China abandons its current control of the currency, a move that could lead to depreciation in the renminbi of about 20%.

Our tactical tilts are based on above-trend growth of 2.3% in the US, global growth of 2.9%, generally favorable monetary policy and more stimulative fiscal policy across developed and emerging market countries. We expect returns to be muted across asset classes, resulting in modest returns in a diversified portfolio with a modest enhancement from tactical tilts. Of course, our views are not without risks. As we discuss below, some are low-probability risks with the potential for high impact while others are high-probability risks with low impact potential.

The Risks to Our Outlook

When we think about the risks to our economic and financial market outlook, we are reminded of the words of French writer Jean-Baptiste Alphonse Karr: *Plus ça change, plus c'est la même chose*—the more things change, the more they stay the same. This year's list of risks overlaps with those of the last several years. As far back as 2011, investors have worried about a hard landing in China. From the inception of the European sovereign debt crisis in 2010 through the Brexit vote in 2016, the potential breakup of the Eurozone has been a source of concern. As soon as the Federal Reserve raised the federal funds rate in December 2015, investors worried about tightening policy causing a recession. Cybersecurity and terrorism are constant threats. And geopolitical risks have grown over time. This year, we are adding trade policy uncertainty and US-China geopolitical relations as new risks.

As we said in our 2013 *Outlook*, there is no shortage of concerns as markets climb a wall of worry. In our view, there are eight risks that



We do not believe this tightening cycle will lead to a US recession in 2017.

could derail the last innings of this recovery and bull market. The first three are low-probability risks in our view, the next three risks have a high probability of occurring but their impact is uncertain and the last two are high-probability and high-impact risks beginning as early as 2017.

Low-Probability but High-Impact Risks:

- The pace of Federal Reserve tightening is disruptive and financial markets react negatively.
- The economy slips into recession.
- Populist parties in the Eurozone gain greater influence.

High-Probability but Uncertain-Impact Risks:

- Geopolitical hot spots get hotter.
- Terrorism escalates.
- Cyberattacks continue.

High-Probability and High-Impact Risks:

- China submerges under its debt burden and capital outflows.
- US-China relations deteriorate under the Trump administration.

Pace of Federal Reserve Tightening

Unlike the December 2015 interest rate hike that prompted a vocal response from naysayers but had limited impact on the bond market, the December 2016 hike has elicited a muted response from market commentators but has had a larger impact on the bond market. The underlying strength of the labor market and the steady improvement in the economy have led to a change of sentiment toward

more interest rate hikes, which are clearly in the offing. Interest rates have increased from a low of 1.3% for the 10-year Treasury in July 2016 to 2.4% by year-end. While this increase in interest rates would ordinarily tighten financial conditions, it has been partially offset by stronger equity markets and tighter corporate bond spreads. In fact, financial conditions were looser at the end of the year than they were at the beginning of 2016 despite expectations of a slow but steady increase in the federal funds rate.

We share the market view that the pace of monetary policy tightening will accelerate but remain benign. As shown

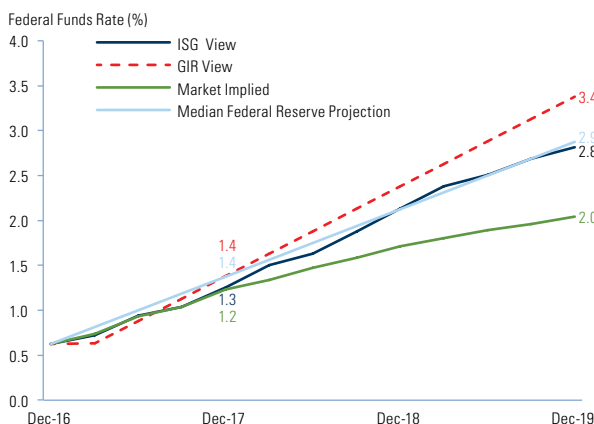
in Exhibit 23, the difference between the Federal Reserve dots, the view implied by the bond market, the forecast by our colleagues in GIR and our view is negligible. The bond market has priced two hikes, the Federal Reserve and GIR expect three hikes, and we think two or three hikes are equally likely in 2017. We assume that the Federal Reserve



There is no shortage of concerns as markets climb a wall of worry.

Exhibit 23: Policy Rate Path Projections

We expect the pace of monetary policy tightening to accelerate but remain benign.



Data as of December 31, 2016.

Note: For informational purposes only. There can be no assurance that the forecasts will be achieved.

Source: Investment Strategy Group, Bloomberg, Goldman Sachs Global Investment Research, Federal Reserve.

will slow down the pace of interest rate hikes should the economy weaken, and will pick up the pace later in 2017 or 2018 if the fiscal package under the Trump administration is bigger than we expect (see Section II, 2017 Global Economic Outlook, for a more detailed discussion).

Irrespective of the realized pace, this tightening cycle will not result in a US recession in 2017, in our view.

Recession is highly unlikely



"Depression Bread Line," Bronze, 1991, George Segal at the Franklin D. Roosevelt Memorial

Low Expectations of a US Recession

Recessions in the US have been triggered by Federal Reserve tightening of monetary policy; by economic imbalances such as the bursting of the dot-com and housing bubbles in 2000 and 2008, respectively; or by external shocks such as the Arab oil embargo in 1973. The first two triggers are unlikely to occur in 2017, and the third, a shock, is not something that we can typically anticipate. However, we do think that China will be a source of downside risk sometime over the next three years.

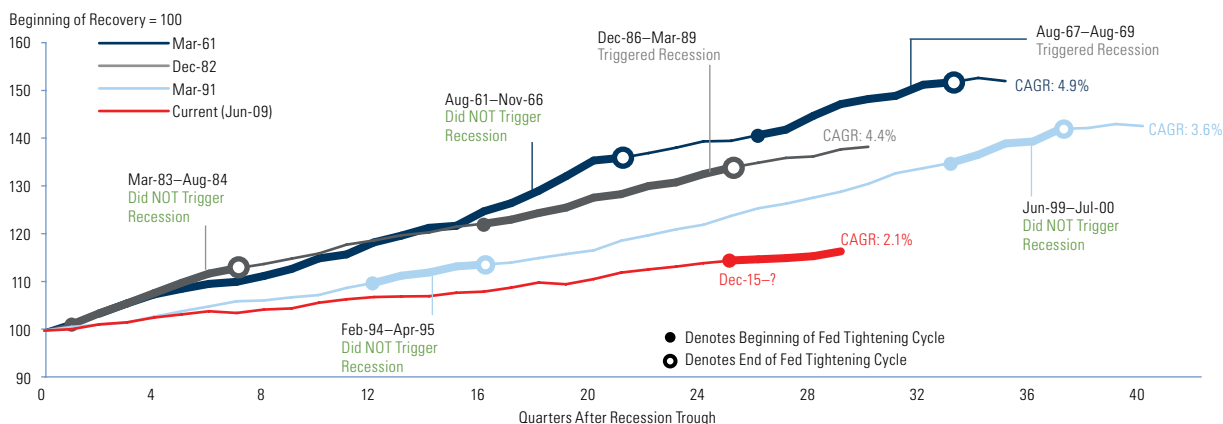
First, as we mentioned in last year's *Outlook*, there have been five tightening cycles in the post-WWII period that have not triggered a recession. Four of those cycles occurred during the three longest recoveries, as shown in Exhibit 24. Those cycles have been characterized by an early start to the tightening cycle, a slow pace relative to historical averages (220 basis points per year for nonrecessionary tightening and 330 basis points per year in recessionary cycles), low core inflation and slack in the labor market. This cycle shares those characteristics: the tightening cycle started in 2015, the pace has been 25 basis points per year, the core personal consumption expenditures (PCE) index—the Federal Reserve's preferred benchmark for inflation—is at 1.6% year over year as of November 2016, and our colleagues in GIR estimate that the labor market still has about 0.3% slack.

Second, the US economy does not suffer from any imbalances in which one sector of the economy has become the sole driver of growth or equity market returns. Before the global financial crisis, residential investment as a percentage of GDP had peaked at 6.7% in 2005, compared to a long-term average of 4.7%, and the credit-to-GDP gap as a measure of nonfinancial sector leverage had peaked at 12.4% in 2007 compared to a long-term average of -1%, leading to meaningful imbalances. Similarly, in 2000, technology and telecommunication sector valuations were more than three standard deviations higher than the average of other sectors. Such imbalances do not exist in the US at this time.

Third, while we cannot anticipate an external shock—otherwise it would not be a shock—we do not see imbalances in other large economies except in China.

Exhibit 24: US Real GDP During the Longest Post-WWII Recoveries

Four of the five tightening cycles that did not trigger a recession occurred during the three longest recoveries in the post-WWII period.



Data as of December 2016.

Source: Investment Strategy Group, Bloomberg, National Bureau of Economic Research.

In our 2016 *Outlook* and our 2016 *Insight* report, *Walled In: China's Great Dilemma*, we stated that China was unlikely to have a hard landing over the next two years (i.e., 2016 and 2017). We believe the view still holds. We do not expect a hard landing in China that would destabilize the US economy in 2017, but the risks grow significantly in 2018 and 2019. As we discuss below, China may nevertheless represent a geopolitical risk in 2017.

Historically, since WWII, the odds of a recession occurring over a 12-month period have been 18%. Our composite recession model, incorporating end-of-year financial and economic data, estimates the probability of a recession in 2017 at 23%. Once we incorporate the likely passage of a fiscal stimulus package of tax cuts and infrastructure investments in the latter half of 2017, the probability of a recession this year declines to about 15%.

Rising Influence of Populist Parties in the Eurozone

Since the election of Prime Minister Alexis Tsipras and the Syriza Party in Greece in January 2015, populism has been gaining momentum across Europe. The support for populist parties has increased to varying degrees in Spain, Greece, Italy, France, the Netherlands, Germany and Austria. The common themes among populists have been anti-immigration and anti-European Union. Outside the Eurozone, the 2016 Brexit vote in Great Britain has been interpreted as a populist

vote against immigration from Eastern Europe, the Middle East and North Africa, as well as against the bureaucracy of the European Union.

The increasing enthusiasm for populist parties in Europe raises two questions. First, will any of the more extremist parties win enough support to break away from the European Union? In France, for example, upcoming elections in May 2017 are likely to pit François Fillon of Les Républicains against Marine Le Pen of the far right Front National. Le Pen has promised a referendum on whether France should stay in the European Union, and, should she win, questions about the viability of the Eurozone will surface immediately.⁵⁶ While polls show Fillon well ahead of Le Pen, polls have been wrong on the UK and Italian referenda and the US election. The Eurasia Group, for one, assigns a 30% probability to a Le Pen victory.⁵⁷

Second, to what extent will the rise of populism influence policies in the Eurozone? Here, Germany will probably provide a litmus test. Chancellor Angela Merkel and her coalition government are likely to respond to recent terrorist attacks there by proposing a stronger police and military presence, according to the Eurasia Group. Security checks will probably be increased as well, since at least 800,000 asylum-seekers entered Germany with minimal security checks and terrorist suspects have already been arrested among them.⁵⁸ With German elections scheduled for September 2017, it remains to be seen whether Chancellor Merkel will adjust her immigration policy.

While populism is on the rise and the support for such parties has increased, we do not think that these movements will threaten the viability of the Eurozone in 2017. In fact, in response to Brexit, we believe that Eurozone policymakers will take a hard line with Britain to make sure other countries do not think it realistic to manage an exit that retains all the benefits while shouldering none of the costs.

Geopolitical Hot Spots Get Hotter

We rely on the insights of external experts to formulate our geopolitical views. They include members of prominent research groups, think tanks and universities as well as former government officials, both in the US and abroad. So informed, we highlight activity in North Korea, Russia and the Middle East among our group of risks with high probability but uncertain impact.

North Korean Belligerence Continues: North Korea's unpredictable and belligerent military activities have continued unabated. In early 2016, North Korea announced that it had tested its first hydrogen bomb.⁵⁹ By the end of 2016, North Korea had conducted nine other military actions, including the launch of a ballistic missile from a submarine,⁶⁰ launches of long-range ballistic missiles toward Japan⁶¹ and additional nuclear tests.⁶²

We can only expect further tests in 2017, given the estimates by a Council on Foreign Relations task force chaired by retired Admiral Michael Mullen that North Korea may have between 13 and 21 nuclear weapons as of June 2016.⁶³

Even more troubling is a pattern highlighted by David Gordon, adjunct senior fellow at the Center for a New American Security. Gordon points out that North Korea makes a habit of testing new presidents, as it did in May 2009, early in President Obama's first term, and again in February 2013 after South Korean President Park Geun-hye was inaugurated.⁶⁴

While populism is on the rise and the support for such parties has increased, we do not think that these movements will threaten the viability of the Eurozone in 2017.

The *Wall Street Journal* reports that the "Obama administration considers North Korea to be the top national security priority for the incoming administration."⁶⁵ Nuclear weapons already in place, long-range ballistic missile capabilities in development, and an unpredictable and provocative leader are a deadly combination. North Korea will remain a serious risk for the foreseeable future.

Russian Adventurism Intensifies: While attention has been focused on Russia's adventurism in Syria, the frozen conflict in Ukraine remains intact, with increasing violations of the Minsk agreements of 2014 and 2015.⁶⁶ Since the first agreement in September 2014, nearly 10,000 people have been killed,⁶⁷ and most recently, Russian-backed separatists attempted to break through Ukrainian government lines.⁶⁸ In response to such lack of progress and concerns about further Russian aggression in the region, the heads of North Atlantic Treaty Organization (NATO) member countries agreed, at a summit in Warsaw in July 2016, to deploy as many as 4,000 troops to the Baltic States and Poland in early 2017 as a deterrent to further adventurism in Eastern Europe.⁶⁹ The risks of accidents and intentional skirmishes will inevitably rise.

Furthermore, the direction of foreign policy in the region under a Trump administration is uncertain given President-elect Trump's July 2016 statement that the US would not automatically defend the Baltic States.⁷⁰

Russia is likely to stay involved in the Middle East as well. Russia has been a constructive force with respect to the fight against the Islamic State of Iraq and the Levant (ISIL) and a stabilizing force with respect to keeping Syrian President Bashar al-Assad in place in the absence of any attractive alternatives. Syria would not have made as much progress in pushing back ISIL and the rebels without Russian air power support. Russia has also hosted a meeting in Moscow with Iran and Turkey to work toward an accord to end the war in Syria⁷¹—a six-year war that has resulted in 400,000⁷² to 470,000 fatalities⁷³ and an estimated economic cost of \$250 billion to \$275 billion.⁷⁴ Given the prospects of continued geopolitical turmoil in the region, Russian involvement in the Middle East will not be reduced anytime soon.

Middle East Conflicts and Tensions Persist: The Middle East will remain a source of conflict for years to come. Many countries have weak or collapsing nation-state structures with varying degrees of civil war. As Zalmay Khalilzad, former ambassador to Afghanistan, Iraq and the United Nations, and president of Gryphon Partners, wrote recently, “the national borders devised by Western powers for Iraq and Syria, in particular, are not standing up well to the test of time ... and Pakistan’s policies have contributed to Afghanistan’s precarious condition.”⁷⁵ Iran and Saudi Arabia compete for influence in the region, and the Sunni-Shia divide that was not a geopolitical factor 40 years ago will continue to escalate tensions in the region.

Another potential risk in the region is the dismantling of the Iran nuclear deal by the Trump administration.⁷⁶ In the absence of a deal, Iran would return to building its nuclear capabilities, thereby increasing the risks of a military strike by Israel or the US.

We assign a low probability to such an event for two reasons. First, we point to comments made by secretary of defense nominee retired General James Mattis, which suggest a different approach in dealing with Iran.⁷⁷ In a speech in April 2016 at the Center for Strategic and International Studies, Mattis said “there is no going back” on the deal “absent a clear and present violation.”⁷⁸ Second, other signatories to the deal, including Russia and China, would not support a unilateral dismantling of the deal by the new administration.⁷⁹ That is not to say that tensions between the US and Iran will not continue this year.

Turmoil in the region will continue into 2017 and beyond. While the direct impact of such conflicts on global growth and world equity markets is limited outside a war among major powers, the threat posed by terrorism is significant and growing.

Terrorism Escalates

Another high-probability but uncertain-impact risk is increased terrorism. The Middle East has been the main source of terrorism even before the September 11, 2001, attack on the World Trade Center. The majority of the 9/11 perpetrators, 15 out of 19, were from Saudi Arabia, with the rest from other Arab countries in the region.⁸⁰ Since then, the spread of ISIL, the Syrian civil war, extremism in Pakistan and Afghanistan, and

the immigration of Arabs and North Africans to Europe and, to a lesser extent, the US, have increased the incidence of terrorism in the West.

In 2016, there were five key terrorist incidents in the US and 15 in Europe, including a December 19 attack when a truck rammed into a Christmas market in Berlin.⁸¹ Some of the terrorists responsible were inspired by ISIL,⁸² and some were lone-wolf Islamic extremists who had lived in their respective countries for years.⁸³ With a growing number of refugees in Europe, it is highly likely that this pace of terrorism will continue.

Terrorist attacks and geopolitical tensions in the Middle East take more than their immediate human toll. While consumer confidence in the US is now above the pre-global financial crisis peak of July 2007 (see Exhibit 25), Gallup Poll data shows that dissatisfaction remains at a very high level, similar to that at the beginning of the global financial crisis. As shown in Exhibit 26, the dissatisfaction rate increased steadily in the aftermath of the 9/11 terrorist attacks and the US wars in Afghanistan and Iraq. It had already reached current levels before the global financial crisis.

Former Federal Reserve Chairman Ben Bernanke has named traumatic national shocks such as 9/11 along with political polarization and “shrill” political debates as possible culprits of the contradictory signals between the high levels of consumer confidence as measured by the Conference Board and the high levels of dissatisfaction as measured by Gallup Polls.⁸⁴

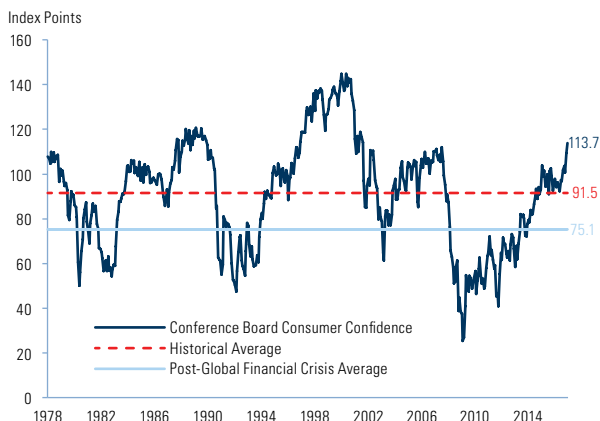
Risks of continued terrorism are very high, but the broader economic impact of the type of terrorist acts we witnessed in 2016 is limited. We can only hope that large attacks such as 9/11 do not occur again.

Cyberattacks Continue

High-profile cyberattacks or cyberattack announcements were a regular feature of 2016. The highest-profile attacks were those perpetrated by the Russian government on the Democratic National Committee computer network, according to a joint statement from the Department of Homeland Security and Office of the Director of National Intelligence on Election Security.⁸⁵ The US government expelled 35 Russian officials and imposed sanctions on four high-ranking members of the Russian military intelligence unit as a result.⁸⁶

Exhibit 25: Conference Board Consumer Confidence Index

The labor market recovery has led to a steady increase in consumer confidence.



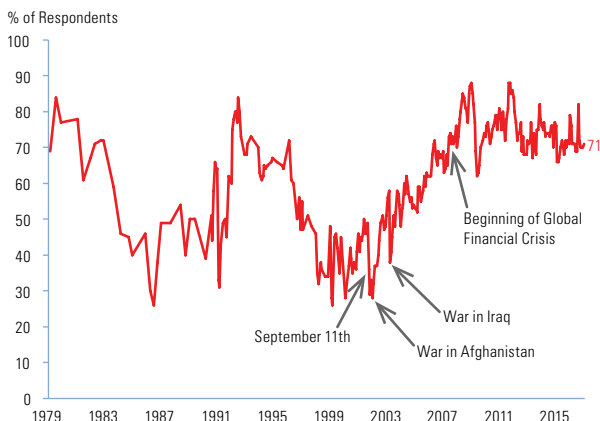
Data through December 2016.

Note: Series starts in January 1978. Post-GFC average begins in July 2009.

Source: Investment Strategy Group, Datastream.

Exhibit 26: Gallup Poll on Satisfaction With the Direction of the US

Dissatisfaction remains at a very high level, similar to that at the beginning of the global financial crisis.



Data through December 2016.

Note: The poll asks, "In general, are you satisfied or dissatisfied with the way things are going in the United States at this time?"

Source: Investment Strategy Group, Gallup.

Other high-profile cyberattacks included

- The announced theft of the account information of 1 billion Yahoo users in 2013 and 500 million Yahoo users in 2014⁸⁷
- The theft of information from as many as 700,000 accounts at the Internal Revenue Service⁸⁸
- A suspected Chinese military hack into the Federal Deposit Insurance Corporation⁸⁹
- The theft of 117 million LinkedIn passwords (stolen in 2012 but announced in 2016)⁹⁰



The risks of cyberattacks continue to increase.

The risks of cyberattacks continue to increase.

To date, the attacks have had limited detrimental impact on the broad US economy, but the impact could be far-reaching if foreign governments such as Russia or China, criminal entities, or lone actors attack critical infrastructure in the US or any other major country.

China Submerges Under Its Debt Burden and Capital Outflows

At \$11.4 trillion, China is the second-largest economy in the world, with a 13.8% share of global exports and a 9.7% share of global imports.

It accounts for nearly half of global demand for zinc, tin, steel, copper and nickel, and more than half for thermal coal, aluminum and iron ore. Any major slowdown or volatility across bond, currency and equity markets in China, including Hong Kong, would have major ramifications for the rest of the world.

While the US has limited direct economic exposure to China—only 0.6% of exports as a share of GDP, 0.6% of bank assets and 0.7% of corporate profits—any shocks in China will reverberate through US financial markets. As shown earlier in Exhibit 18 on page 19, US financial conditions tightened by 118 basis points in the summer of 2015

when China's leadership intervened in the local equity markets and adjusted the trading band around the renminbi, and by 104 basis points in late 2015 and early 2016 when the leadership changed the reference currency from the dollar to a basket of 13 currencies. If US financial conditions had stayed at those levels for over a year, US GDP growth would have slowed by about one percentage point, all else being equal. Financial conditions are the mechanism by which shocks from China would have the most immediate impact on key developed economies such as the US.

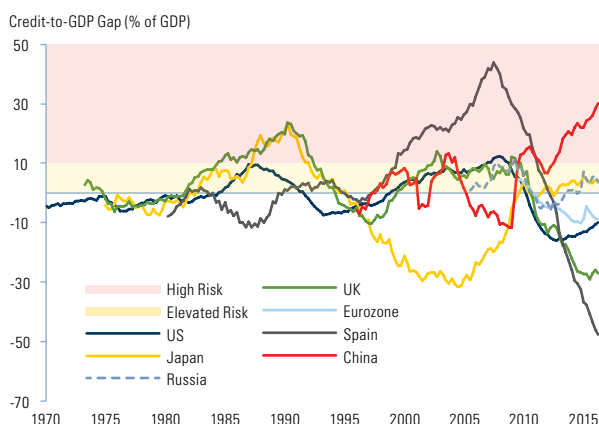
As mentioned above, one of the triggers of US recessions has been economic imbalances. While we do not see such imbalances in the US, or in other major developed economies, at this time, we see significant imbalances in China. Such imbalances have led to crises in other countries, and there is no reason to believe that they will not lead to a financial crisis in China. In our view, it is not a question of if—it is only a question of when.

The biggest imbalance in China is the high level of debt relative to GDP. The Bank for International Settlements (BIS) has a series of early warning indicators. One of the more widely followed and reliable measures is the credit-to-GDP gap, measured as the total credit extended to the private nonfinancial sector as a percentage of GDP compared with its long-term trend. As shown in Exhibit 27, China breached the high-risk threshold in June 2012, when its credit-to-GDP gap rose above the 10% level. At 30.1% as of March 2016 (latest data available) and rising, China's gap exceeds the 10% threshold by 20 percentage points, levels previously seen in Spain before the European sovereign debt crisis. Major developed and emerging market countries have experienced a financial crisis within three years of their credit-to-GDP gap exceeding 10%.

In our 2016 *Outlook* and our 2016 *Insight* report, *Walled In: China's Great Dilemma*, we stated that we did not expect a hard landing in China over the next two years—2016 and 2017. We continue to assign a low probability to a hard landing in China in 2017. However, it is unlikely that China can avoid a financial crisis over the next three years. In prior years, we have pointed to China's high savings rate and government control of many aspects of the economy as reasons for its ability to avert a hard landing. However, the country's debt levels have risen rapidly, the pace of capital outflows has picked up, and net foreign

Exhibit 27: Credit-to-GDP Gap Across Economies

China's gap reached the high-risk threshold in June 2012 and has continued to rise.



Data through Q1 2016.

Note: Estimates based on series of total credit to the private nonfinancial sector. Credit-to-GDP gap is defined as the difference between the credit-to-GDP ratio and its long-term trend in percentage points. Long-term trend is calculated using an HP filter.

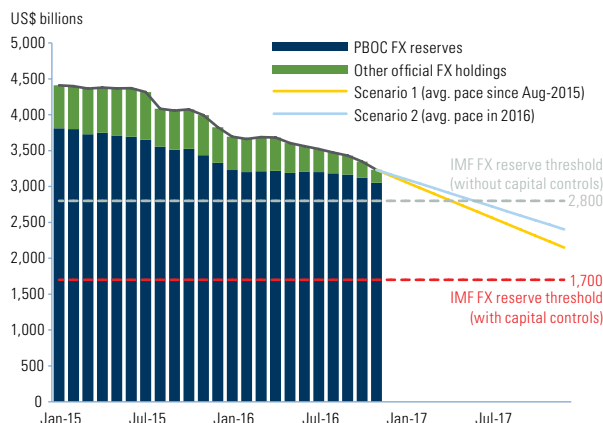
Source: Investment Strategy Group, Bank for International Settlements.

direct investment has reversed and is now negative. In our view, neither China's high savings rate nor its increasing government control of financial markets and capital flows will be sufficient to avert a hard landing over the next several years. Keep in mind that even the US was not able to avert a financial crisis after its credit-to-GDP gap briefly breached the 10% high-risk threshold in December 2006 and peaked at 12.4% in December 2007.

The US has the highest GDP per capita of any major country in the world. The large countries that come closest to the US on this score have GDP per capita levels that stand at about 70% of US levels on a nominal basis and slightly higher on a purchasing power parity (PPP) basis. The US dollar is also the unquestioned reserve currency of the world; its reserve-currency status has only been fortified after the Eurozone sovereign debt crisis and the British referendum for Brexit. Thus, the US is able to access the excess savings of the entire world. The US also receives the largest share of world foreign direct investment flows, capturing 14% of global flows between 2011 and 2015. The US now accounts for 20% of the stock of all foreign direct investment. Yet, despite all these major advantages, it did not avert a financial crisis in 2008. It defies logic to assume that China will be the one major country that avoids a financial crisis and a hard landing when it does not enjoy such advantages. As we often say, stating that "this

Exhibit 28: Total Foreign Currency Holdings of China's Official Sector

If the recent pace of decline continues, China's reserves could soon fall below the IMF's adequacy threshold.



Data through November 2016.

Source: Investment Strategy Group, CEIC, Bloomberg, IMF.

time is different” is extremely dangerous for the investment well-being of our clients’ portfolios.

China, in fact, faces greater risk of a financial crisis because of growing capital outflows. An astounding \$1.3 trillion of capital has flowed out of China since August 2015, when it broadened the trading range for its currency against the US dollar. The outflows averaged \$64 billion per month in

2016. At that pace, China’s total official foreign currency holdings could drop below the IMF’s reserve threshold of \$2.8 trillion by mid-2017, as shown in Exhibit 28.

Of course, China’s leadership has not stood on the sidelines. Since September 2015, the People’s Bank of China and the State Administration of Foreign Exchange have introduced a series of measures to limit capital outflows. These measures have included orders to financial institutions to carefully check and strengthen controls on all foreign exchange transactions⁹¹ and strict oversight of Chinese companies’ outward investment in overseas property, hotels, cinemas and the entertainment and sports industries.⁹² According to reports, leadership has also ordered increased oversight of trade activities to make sure companies are not over-invoicing the value of their imports or under-invoicing the value of their exports as a means of circumventing capital controls.⁹³ Exports and imports are 20% and 15%, respectively, of China’s GDP. It is virtually impossible for China to halt capital flows in such a porous economy without slowing GDP growth rates. Thus, China will not be able to completely stem outflows despite all its measures to slow the pace as much as possible.

Irrespective of the success of such capital controls, China’s growing debt problem poses significant risks to China’s growth trajectory. We estimate that the risk of a hard landing is only about 25% in 2017 but will increase rapidly to about 50% in 2018 and be closer to 75% in 2019. Therefore, while China is not a near-term risk, there is a high probability of an intermediate-term crisis that will reverberate through financial markets. We also know that we cannot anticipate the exact timing of such crises, especially given the uncertainty of how US-China relations will unfold under a Trump administration.

US-China Relations Deteriorate Under the Trump Administration

There is no doubt that US strategy toward China will shift; the only question is when and how. There are two channels by which the Trump administration could affect US-China relations: trade and foreign policy.



According to the Center for Strategic and International Studies, China has installed anti-aircraft guns and other weapons systems on seven man-made islands in the South China Sea, including the Johnson Reef, shown above.

Map data: Google, DigitalGlobe



We may see some fireworks in US-China relations during the Trump administration.

With respect to trade, President-elect Trump can use any one of six US statutes, including the Trading with the Enemy Act of 1917 and the International Emergency Economic Powers Act of 1977, to shift trade policy. The latter two statutes give him latitude to change foreign commerce without interference from Congress or the courts.

President-elect Trump has advocated imposing tariffs and labeling China a “currency manipulator.” While he has continued to threaten tariffs of 45% on imports from China, there is considerable uncertainty as to what his administration will actually impose. If the US and China engage in a full trade war, the Peterson Institute for International Economics has estimated a notable drag on US GDP growth over three years.⁹⁴

Any of these actions by the Trump administration may provoke a strong reaction from China, including a sizable depreciation of the renminbi. Such depreciation would certainly be disruptive to financial markets.

With respect to foreign policy, many policy experts have been calling for a change in strategy toward China. In April 2015, the Council on Foreign Relations published a special report on China, suggesting that Washington needed “a new grand strategy toward China that centers on balancing the rise of Chinese power rather than continuing to assist its ascendancy.”⁹⁵ The militarization of the seven artificial islands in the South China Sea (see image on page 33), according to the Asia Maritime Transparency Initiative at the

Center for Strategic and International Studies,⁹⁶ will only expedite such a shift in strategy.

If President-elect Trump’s actions to date, such as the telephone conversation with Taiwan President Tsai Ing-wen⁹⁷ and his response to the recent Chinese seizure of a US Navy drone,⁹⁸ are any indication, we may see some fireworks in US-China relations during the Trump administration.

Key Takeaways

As we mentioned in last year's *Outlook*, forecasting is difficult under the best of circumstances but particularly so in the last innings of an eight-year-long economic expansion and bull market. This year brings the additional challenge of a new president whose policies are likely to follow an unconventional script.

Nevertheless, there are seven key takeaways from our 2017 *Outlook*:

- **Improving growth:** We expect global economic activity to accelerate this year, with modestly higher GDP growth rates in the US, Eurozone, Japan and many emerging market economies. We expect a small slowdown in China.
- **Low recession risk:** Favorable monetary and fiscal policies substantially reduce the probability of a recession in key developed and emerging market countries.
- **Still accommodative monetary policy:** US monetary conditions will still be relatively easy because of the slow and steady pace of tightening of the federal funds rate by the Federal Reserve. At the same time, other developed central banks are still expanding their balance sheets.
- **Remain vigilant:** Despite a favorable economic and policy backdrop, there is no shortage of global risks, including rising populism in Europe, growing geopolitical tensions, the spread of terrorism and the proliferation of serious cyberattacks.
- **China concerns:** China is the biggest source of uncertainty given its growing debt burden, accelerating capital outflows and potential for a notable deterioration in the US-China relationship driven by changing US trade and foreign policy toward China.
- **Stay invested:** The collective impact of these various risks is not yet sizable enough to undermine our core view: that we are in a longer-than-normal US recovery that supports equity returns, which are likely to exceed those of cash and bonds. Thus, we recommend staying invested in US equities with some tactical tilts to US high yield bonds and European equities.
- **Modest returns:** While we recommend clients remain invested, we have modest return expectations. We expect that a moderate-risk well-diversified taxable portfolio will have a return of about 3% in 2017.

2017 Global Economic Outlook: Winds of Change

FOR MOST OF THE LAST EIGHT YEARS, GLOBAL POLICY MAKERS have been buffeted by the gale force headwinds generated by the financial crisis. In response, central banks around the world have expanded their balance sheets by a staggering \$12.5 trillion,⁹⁹ while fiscal austerity measures in the G-7 economies have reduced the general government budget deficit from 10% of GDP to just 3.6% today.

Although this mix of policies may have helped avoid a second Great Depression, it has fallen short of fostering a robust economic recovery. According to the IMF, the nominal GDP of advanced economies has grown at just a 1.6% annualized pace in US dollar terms since its 2009 trough, making it among the slowest expansions on record. The overt reliance on monetary policy has also had unintended consequences. Persistently low interest rates have crippled bank profitability and penalized savers. Moreover, the boost that low rates provide to stock prices primarily benefited a narrow segment of the income distribution, exacerbating inequality concerns. Not surprisingly, populism has been on the rise globally.



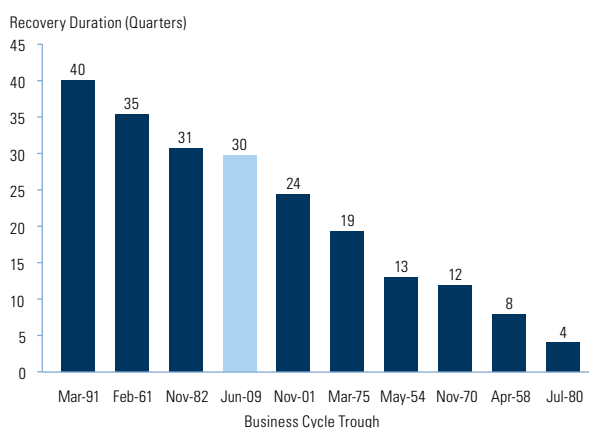
Last year witnessed a growing repudiation of this status quo, evident in the surprise outcome of the UK and Italian referenda, as well as US presidential election. As we begin 2017, these winds of change are gaining force. Central banks are acknowledging the often counterproductive impact of ultra-easy monetary policy and shifting attention to the eventual withdrawal of accommodation. At the same time, the recovery in commodity prices and recent firming in global growth is shifting the focus from deflation to reflation. The same could be said of the increasing focus on expansionary fiscal policy.

While this change brings hope, it also carries risk. In the US, fiscal stimulus arrives eight years into an economic expansion that is already near full employment, increasing the danger of the economy overheating. Although the Federal Reserve could respond by hastening the pace of rate hikes, it might overdo it. Similarly, an overzealous negotiating stance on existing trade relationships or imposition of protectionist policies by the incoming US administration could stanch the flow of trade—an outcome that would be particularly damaging to emerging markets. And in Europe, a victory of the far right in the French presidential election could unleash fears about France exiting the European Union and endanger the survival of the euro.

Still, we do not yet accord a high enough probability to these risks to alter our base case, which assumes these winds of change fill the sails of the ongoing global recovery, rather than capsize it (see Exhibit 29).

Exhibit 30: Duration of Post-WWII Expansions

This expansion is already the fourth-longest since WWII.



Data as of December 2016.

Note: The recovery is measured from the business cycle trough.

Source: Investment Strategy Group, National Bureau of Economic Research.

United States: Age Is Just a Number

The US economic expansion is getting old by historical standards. At nearly eight years, it is already the fourth-longest in post-WWII history and poised to be among the top three by the middle of this year (see Exhibit 30). Concern that the economy's vigor is finally succumbing to its advanced age was only bolstered by anemic 1.6% real GDP growth in 2016, close to the weakest of any year during the recovery.

But as we have argued in the past and as Federal Reserve Chair Janet Yellen recently noted, "it's a myth that expansions die of old age."¹⁰⁰ Instead, business cycles are typically derailed by

Exhibit 29: ISG Outlook for Developed Economies

		United States		Eurozone		United Kingdom		Japan	
		2016	2017 Forecast	2016	2017 Forecast	2016	2017 Forecast	2016	2017 Forecast
Real GDP Growth*	Annual Average	1.60%	1.90–2.70%	1.60%	1.20–1.90%	2.10%	0.50–1.50%	1.00%	0.75–1.50%
Policy Rate**	End of Year	0.75%	1.25–1.50%	0.00%	(0.50)–(0.30)%	0.25%	0.00–0.50%	-0.10%	-0.10%
10-Year Bond Yield***	End of Year	2.44%	2.50–3.00%	0.21%	0.50–1.00%	1.24%	1.50–2.25%	0.05%	0.00%
Headline Inflation****	Annual Average	1.70%	1.80–2.60%	0.60%	0.80–1.60%	1.20%	2.00–3.00%	0.50%	–
Core Inflation****	Annual Average	2.10%	1.80–2.60%	0.80%	0.90–1.40%	1.40%	1.50–2.00%	-0.40%	0.25–1.0%

Data as of December 31, 2016.

Note: The above forecasts have been generated by ISG for informational purposes as of the date of this publication. They are based on ISG's proprietary macroeconomic framework, and there can be no assurance the forecasts will be achieved.

Source: Investment Strategy Group, Goldman Sachs Global Investment Research, Bloomberg.

* 2016 real GDP is based on Goldman Sachs Global Investment Research estimates of year-over-year growth for the full year.

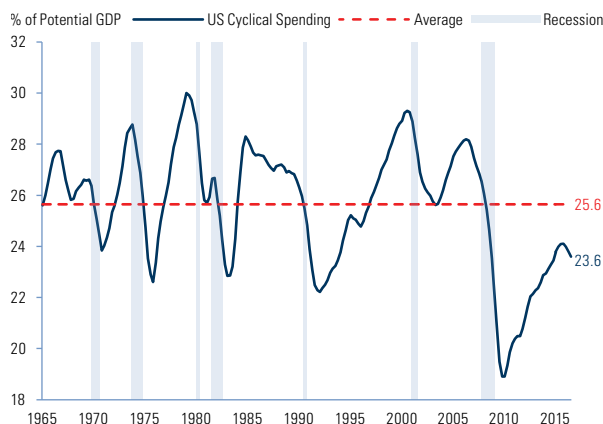
** The US policy rate refers to the top of the Federal Reserve's target range. The Japan policy rate refers to the BOJ deposit rate.

*** For Eurozone bond yield, we show the 10-year German bund yield.

**** For 2016 CPI readings, we show the latest year-over-year CPI inflation rate (November). Japan core inflation excludes fresh food, but includes energy.

Exhibit 31: US Cyclical Spending

There is scope for business and consumer spending to increase in the US economy.



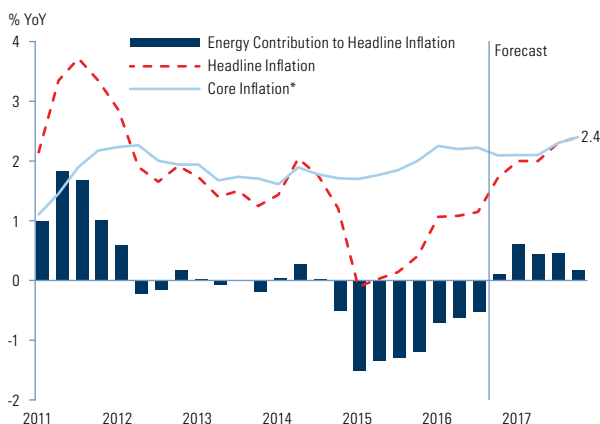
Data through Q3 2016.

Note: 4-quarter average. Cyclical spending is business fixed investment plus consumer durables spending.

Source: Investment Strategy Group, Datastream.

Exhibit 32: US Inflation

Normalizing energy prices account for much of the inflation increase we expect.



Data as of Q3 2016.

Note: ISG forecasts from Q4 2016. For informational purposes only. There can be no assurance the forecasts will be achieved.

Source: Investment Strategy Group, Datastream.

* Core inflation excludes food and energy.

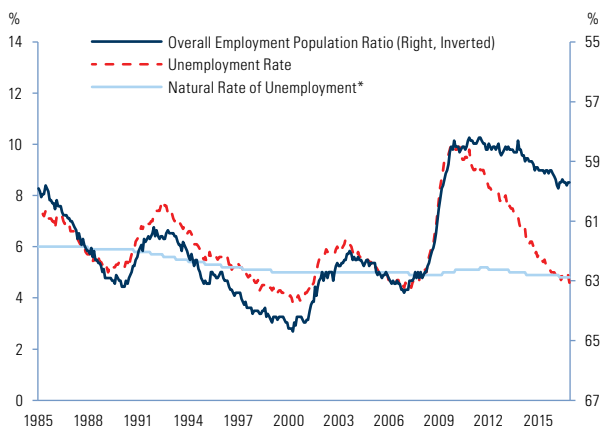
three culprits: economic imbalances, excessive Federal Reserve tightening and/or exogenous shocks (most commonly in the form of spiraling oil prices).

As we survey these risks today, none are particularly alarming. The depth of the financial crisis and the lackluster pace of the recovery have allowed the US to avoid the imbalances that would typically be evident this far into an expansion (see Section I of this year's *Outlook*). If anything, there is scope for spending in cyclical parts of the US economy relative to overall GDP to move toward its long-term average (see Exhibit 31).

There is also less risk of disruptive Federal Reserve tightening, given how few signs we see of economic overheating. Headline inflation remains below the Federal Reserve's 2.0% target, and though we expect it to move higher this year, normalizing energy prices are a key driver (see Exhibit 32). Further, while the November 2016 unemployment rate of 4.6% suggests the economy is near full employment, broader measures of labor slack, as well as today's depressed labor force participation rate, argue that the central bank is not "behind the curve" (see Exhibit 33). Lastly, our expectation for continued modest gains for the US dollar and a rebound in productivity growth from generational lows (see Exhibit 34) provides a natural offset to inflation pressures, even as wages continue to rise.

Exhibit 33: US Unemployment Indicators

There are still signs of slack in the labor market.



Data through November 2016.

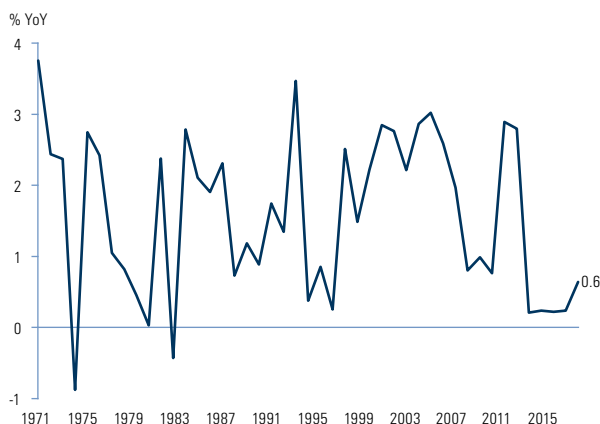
Source: Investment Strategy Group, Federal Reserve Economic Data, Datastream.

* Long-term rate.

Of equal importance, the Federal Reserve is acutely aware of the risks that tighter monetary policy poses to the business cycle, which is apparent in both its willingness to step back from planned rate hikes last year as well as Chair Yellen's acknowledgment that an "abrupt tightening would risk disrupting financial markets and perhaps even inadvertently push the economy into recession."¹⁰¹ With neutral real interest rates

Exhibit 34: US GDP per Hour Worked

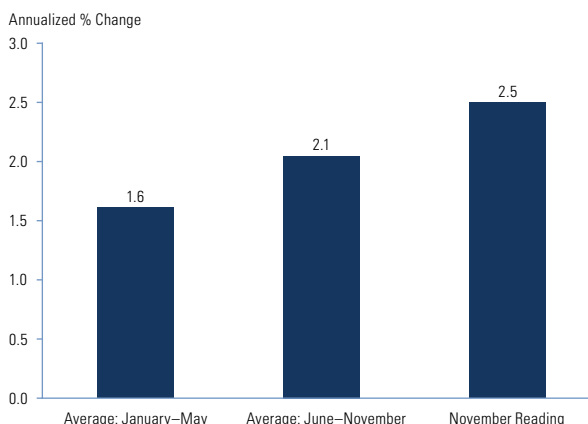
We expect a rebound in productivity growth from generational lows.



Data through 2015.
Source: Investment Strategy Group, OECD.

Exhibit 35: Goldman Sachs US Current Activity Indicator

Economic activity accelerated in the second half of 2016.



Data as of November 2016.
Note: The current activity indicator is the first principal component of real-activity indicators, expressed in GDP-equivalent units. This is the growth signal in the main high-frequency indicators for the US economy.
Source: Investment Strategy Group, Goldman Sachs Global Investment Research.

near zero and inflation expectations still below levels compatible with its inflation target, the Federal Reserve is likely to hike rates two or three times in 2017, below the historical average pace. On this point, it is worth remembering that the Federal Reserve originally projected four hikes by the end of 2016, yet enacted only one in December. Thus, even if the Federal Reserve does raise rates three times this year, it will have delivered those four hikes over two years instead of just one.

Lastly, although a recession created by an external shock is always a risk, the probability we place on a hard landing in Europe and/or China or a destabilizing increase in oil prices is not currently high enough to alter our base-case view. Indeed, even with the recent cut in oil production coordinated between OPEC and non-OPEC members, the size of today's oil-supply glut and the historical tendency for producers to exceed their quotas greatly reduce the risk of a price spike (see

Section III, Global Commodities). With none of the typical signs of economic contractions flashing red, we accord a 15% probability of a recession in 2017, roughly in line with historical average risk.

Against this backdrop, we expect US real GDP growth to accelerate from last year's moderate 1.6% pace, reaching 1.9–2.7% in 2017. There are three key drivers to this story: fading headwinds, a resilient US consumer and supportive policy. We discuss each below.

Fading Headwinds

The combination of falling oil prices and a rising dollar that began in mid-2014 has been a meaningful drag on US growth, with energy-related capital spending falling by more than 60% over this period. In addition, exports have softened, the S&P 500 has suffered almost two years of contracting profits, and inventories throughout the supply chain have ballooned as activity has slowed.

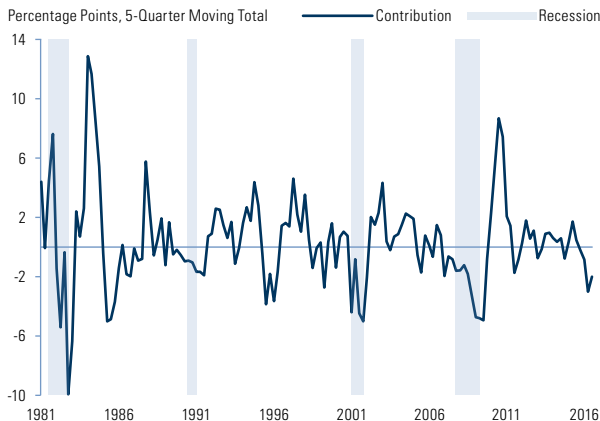
Such broad-based weakness has rarely occurred outside a recession.

The silver lining to last year's slowdown, however, is that growth is now poised to improve from depressed levels. A modest recovery in oil prices and stabilization of the dollar enabled US economic activity to accelerate notably in the second half of last year (see Exhibit 35). This boost will be aided

With none of the typical signs of economic contractions flashing red, we accord a 15% probability of a recession in 2017.

Exhibit 36: Contribution from Change in Inventories to US GDP Growth

Inventories should support growth after five quarters of subtracting from GDP.

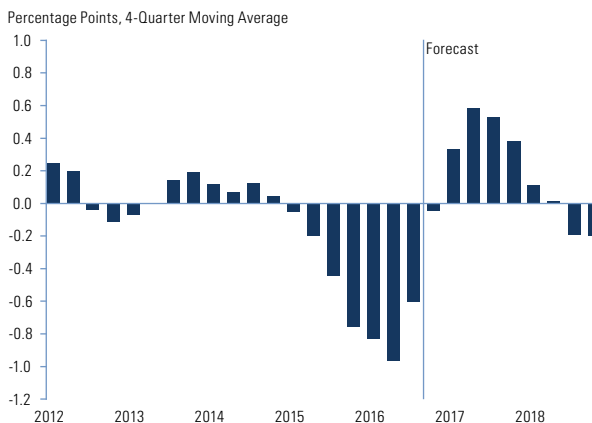


Data through Q3 2016.

Source: Investment Strategy Group, Haver Analytics.

Exhibit 38: US GDP Growth Impulse from Goldman Sachs Financial Conditions Index

The persistent drag from tight financial conditions over the last two years should reverse in 2017.



Data as of Q3 2016.

Note: The financial conditions index is a weighted average of riskless interest rates, credit spreads, equities and FX, based on effects on 1-year forward US GDP growth. Historical estimates and forecasts by Goldman Sachs Global Investment Research. For informational purposes only. There can be no assurance the forecasts will be achieved.

Source: Goldman Sachs Global Investment Research.

by inventory restocking, which looks ready to help GDP growth again after five quarters of negative contributions (see Exhibit 36). Similarly, residential investment is set to contribute, reflected in the

Exhibit 37: National Association of Home Builders US Housing Market Index

The post-crisis high in builder confidence bodes well for US residential investment.



Data through December 2016.

Note: Based on a monthly survey of NAHB members who rate market conditions for the sale of new homes, as well as the traffic of prospective buyers of new homes.

Source: Investment Strategy Group, Datastream.

National Association of Home Builders (NAHB) housing market index reaching a post-crisis high in December of last year (see Exhibit 37). Overall, we expect this momentum to continue as the erstwhile easing in financial conditions provides a growth tailwind throughout 2017 (see Exhibit 38).

A Resilient US Consumer

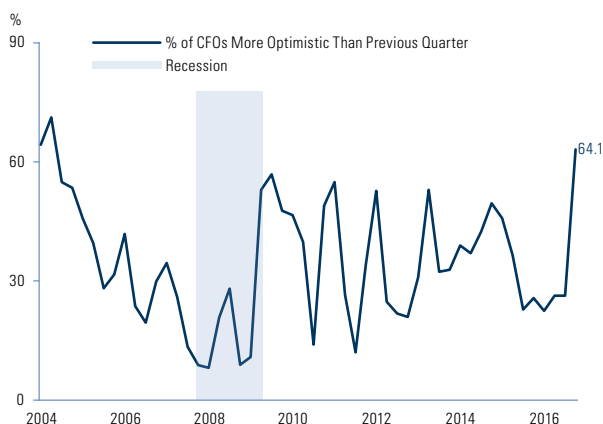
The stars are aligned for US consumers in 2017, as they enter the year with rising wages, higher net worth from asset price gains, historically low debt-servicing costs, ample savings and confidence at a 12-year high. They also stand to benefit directly from potentially lower tax rates and indirectly from higher fiscal spending, a topic we discuss in the next section. The above-mentioned factors should mitigate the headwind from higher inflation. Overall, we expect private consumption—a key driver of our GDP forecast—to expand at a pace of approximately 2.5%.

Supportive Policy

While government policy is always a source of uncertainty, it is even more so in 2017 given potential changes to tax, trade and immigration policies in the wake of last year's presidential election. Nonetheless, our base case is that policy ultimately supports growth this year, with some fiscal expansion and a measured pace of Federal Reserve rate hikes. Although the final contours of

Exhibit 39: CFO Optimism About the US Economy

Chief financial officers' confidence is at its highest level in a decade.



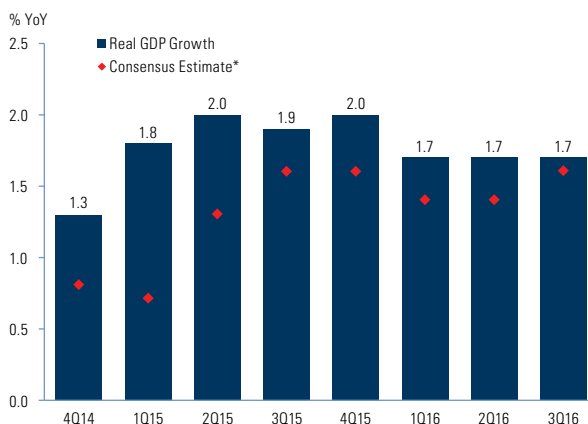
Data through December 2016.

Note: The survey questionnaire is delivered online to senior financial executives and subscribers of *CFO Magazine* from both private and public companies.

Source: Investment Strategy Group, Haver Analytics.

Exhibit 40: Eurozone Real GDP Growth

Economic activity has been surprisingly resilient and higher than expected.



Data through Q3 2016.

Source: Investment Strategy Group, Bloomberg.

* One quarter prior to release.

the new administration's policies remain uncertain, a moderate-sized stimulus package of around \$200 billion per year seems likely.¹⁰² While the *direct* impact of such a package is estimated to boost GDP growth by only 0.3 percentage point in 2017, the positive *indirect* impact of tax cuts and stronger anticipated GDP on household and business confidence is arguably more important. Indeed, both consumer and CFO confidence have recently hit their highest readings in over a decade (see Exhibit 39).

Our View on US Growth

As the expansion enters its eighth year, it is natural to question its durability. But far from showing its age, the US economy begins 2017 at an above-trend growth pace, with little evidence of cyclical imbalances or other excesses that typically portend the end of the business cycle. If anything, the slow pace of this recovery has elongated its life span, a dynamic that is likely to persist this year. Perhaps in macroeconomics, as in life, age is just a number.

Eurozone: Weathering the Storm

The Eurozone has faced its share of challenges in recent years. Not only did it relapse into recession in 2011, but it also endured a domestic sovereign

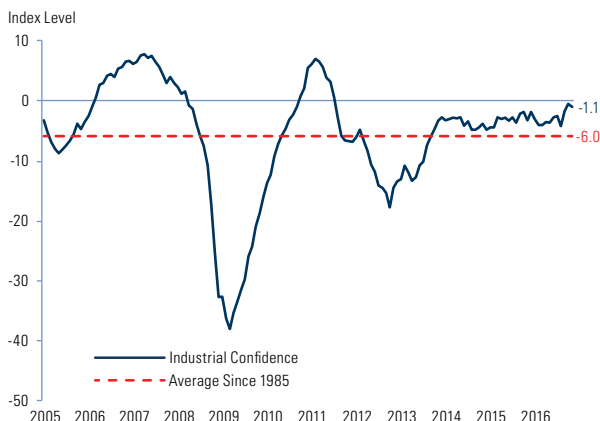
bond and banking crisis at the same time. More recently, it has been buffeted by a spate of tragic terrorist attacks, an immigration crisis, the Brexit vote, a failed Italian constitutional referendum and renewed concerns about the solvency of its banking system.

Yet despite this onslaught of headwinds, the real economy has been remarkably stable in the last two years. That fact is evident in Exhibit 40, which shows real GDP growth has sustained an above-trend pace over this period, an outcome that clearly exceeded consensus forecasts. Business sentiment has remained equally steadfast over this period, suggesting that the rapidity of shocks may have effectively inured confidence to bad news (see Exhibit 41). Meanwhile, real household disposable income grew by 2.3% over the past year—the fastest pace since 2007.

We expect this stability to persist in 2017, with our forecast calling for 1.2–1.9% real GDP growth. Keep in mind that there is ample scope for above-trend growth to continue, as the level of Eurozone GDP still stands below its potential. On this point, the OECD, IMF and European Commission each currently estimate an output gap of around 2%, indicating slack in the economy. The Eurozone's still elevated 9.8% unemployment rate corroborates this point.

Exhibit 41: European Commission Industrial Confidence Survey

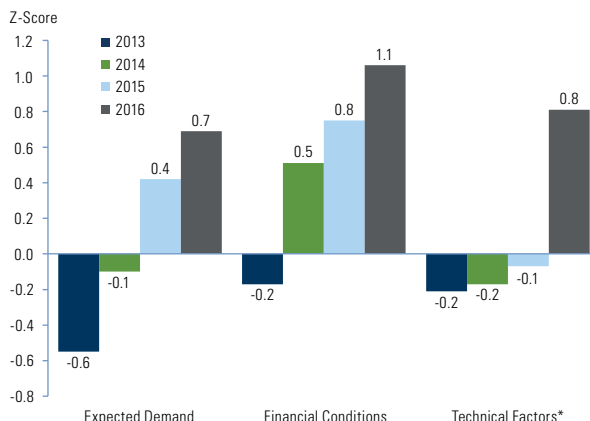
Eurozone business sentiment has remained steady despite recent shocks, including Brexit.



Data through November 2016.
Source: Investment Strategy Group, Datastream.

Exhibit 42: Drivers of Eurozone 2-Year Capital Spending Plans

Key factors that influence business investment stand at their highest levels in years.



Data through 2016.
Note: Based on the European Commission investment survey.
Source: Investment Strategy Group, Datastream.
* Technical factors include technological developments, the availability of labor and government incentives to invest.

As a result, Eurozone policy is likely to remain accommodative, keeping financial conditions supportive of growth. While we expect the European Central Bank (ECB) to gradually shift to a more neutral stance that is less punitive to bank profitability and acknowledges the uptrend in headline inflation, this shift does not imply the removal of accommodation. Indeed, the ECB has already announced an extension of quantitative easing through December 2017. Meanwhile, the European Commission has endorsed a moderate fiscal easing of 0.5% of GDP for the Eurozone. Given that fiscal policy is typically loosened ahead of major elections, this guidance could soon be embraced in France and Germany.

Of equal importance, both consumption and business investment are well positioned as we enter 2017. On the former, continued improvement in the labor market and ongoing GDP growth should

encourage consumers to spend a bit from their precautionary savings, particularly given today's relatively high savings rate. At the same time, the fundamental justifications for increased business spending, such as higher demand and easy credit conditions, stand at their best levels in years (see Exhibit 42). Perhaps not surprisingly, a late 2016 survey of manufacturing firms revealed their investment intentions stood at all-time highs.¹⁰³

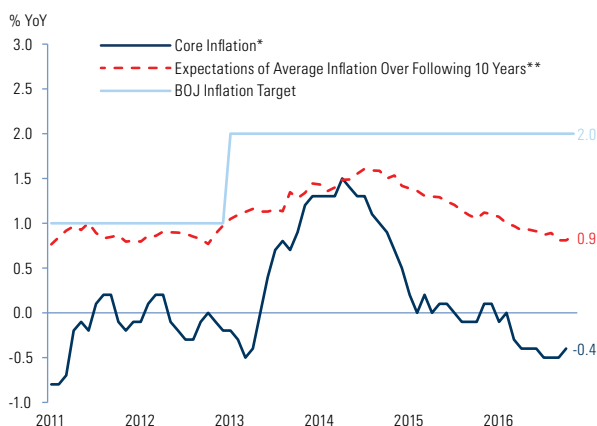
Of course, ongoing uncertainty regarding Brexit, the banking sector and upcoming elections remains a potential downside risk, particularly for an investment recovery. As a result, we acknowledge a greater-than-normal range of potential outcomes, both positive and negative. For example, the victory of the far right in the French presidential election could unleash fears about France exiting the European Union and endanger the survival of the euro, while the new government in Italy could speed up the long-overdue resolution of the banking sector's problems and change the electoral law to reduce political uncertainties.

For now, our base case assumes that Italy will avoid a populist party in government and that a centrist candidate will win the French presidential election. Thus, we expect the Eurozone to again weather the storm in 2017.

Ongoing uncertainty regarding Brexit, the banking sector and upcoming elections remains a potential downside risk.

Exhibit 43: Japan Consumer Prices

Core inflation and inflation expectations remain low.



Data through November 2016.

Source: Investment Strategy Group, Datastream, QUICK Bond Investors Survey.

* Core inflation excludes fresh food and VAT impact.

** Based on the QUICK Bond Investors Survey.

United Kingdom: A Fork in the Road

Much like the Eurozone, the UK economy is notable for its resilience, evident in 15 consecutive quarters of positive quarterly growth averaging 2.5% annualized. This streak is even more impressive considering last year's Brexit vote and the resulting consensus view that the UK was destined for recession. Although the 20% decline in the trade-weighted sterling and rapid easing by the Bank of England were no doubt pivotal in avoiding that fate, the immediate impact of the Brexit referendum has been far less destructive than feared.

But as we begin 2017, the UK is rapidly approaching a fork in the road. The government must choose which path Brexit will take once it triggers Article 50 of the Lisbon Treaty, which formally sets the process of the UK exit in motion. Here, the government's current objectives—limiting freedom of movement into the UK while retaining full access to the European Union's single market—

UK authorities will have little room to cushion a downturn given today's large fiscal deficits and already highly accommodative central bank.

seem mutually exclusive and likely to engender a politically charged negotiation process. This road is made all the more dangerous by the fact that UK authorities will have little room to cushion a downturn given today's large fiscal deficits and already highly accommodative central bank. Of course, a softer stance on the issues is also a possible path, one that could elongate the effective transitional period beyond two years and lead to a far more benign outcome for the UK.

The uncertainty around the government's ultimate choices significantly increases the range of GDP outcomes in the medium term. Our current base case assumes GDP will expand by 0.5–1.5% in 2017. This notable slowdown from last year's 2% pace reflects the likelihood that both hiring and investment activity will become more cautious once the Brexit negotiations start. Even worse, this slowdown arrives just as consumer price inflation is accelerating from past sterling depreciation, creating a lower growth/higher inflation backdrop that is set to erode real income growth. For these reasons, the risks to our central case are skewed to the downside.

That said, the fate of the UK economy is not preordained, even after the government chooses its path. As with any other negotiation, the result will ultimately reflect the reasonableness of the parties, the concessions of both parties and how the discussions evolve over time. Or in the words of golf legend Arnold Palmer: "The road to success is always under construction."¹⁰⁴

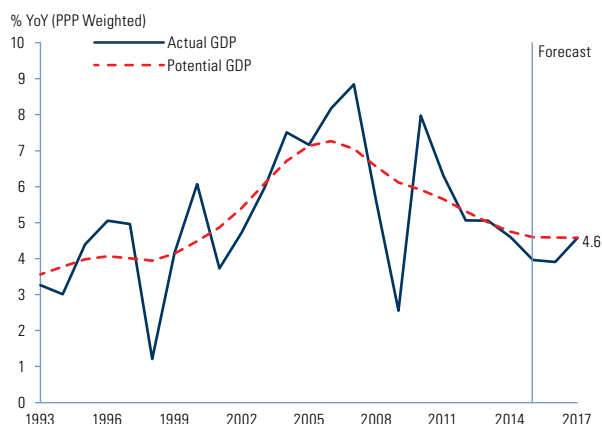
Japan: Same Battle, Different Year

For Japan, the decades-long battle against deflation never seems to end. Despite two years of above-trend GDP growth, including last year's 1% gain, core inflation remains negative, having fallen 0.4% in 2016 (see Exhibit 43). This comes despite a tight labor market and record profits that should have encouraged companies to increase base wages. These already muted inflationary pressures were exacerbated by low energy prices and the appreciation of the yen, once again pushing the Bank of Japan's (BOJ's) 2% inflation target further into the future.

But far from waving the white flag, Japan's policymakers responded with a range of bold measures, including a

Exhibit 44: Emerging Market GDP Growth

We expect growth roughly in line with potential.



Data as of 2016.

Note: ISG forecasts for 2016–17. For informational purposes only. There can be no assurance the forecasts will be achieved.

Source: Investment Strategy Group, IMF.

large fiscal stimulus package last August and a shift by the BOJ away from ever-higher purchases of Japanese government bonds (JGBs). Instead, the BOJ will now use a “yield-curve control” framework, wherein it sets the short rate and targets a yield of about 0% on 10-year JGBs. This novel approach should afford the government low real interest rates with which to finance its fiscal expansion, while also providing Japanese financial institutions with a sufficiently steep yield curve to remain profitable. To augment these deflation-fighting measures, the government also implemented some modest structural reforms and called for a substantial increase in the minimum wage in order to support faster income growth.

Against this backdrop of supportive policies, we expect that GDP will grow by 0.75–1.5% in 2017. Our forecast is supported by three key drivers. First, the fiscal stimulus announced in August is poised to contribute 0.4 percentage point to 2017 GDP growth, and the government has indicated a willingness to do more if necessary. Second, the BOJ remains very accommodative, thereby providing easy financial conditions that should foster an uptick in business investment. While the central bank may consider a modest rate increase in late 2017, we expect it to maintain its negative interest rate policy (NIRP) for short rates and a 0% target for 10-year JGB yields in the interim. Lastly, the government is likely to push for further wage increases during the spring wage negotiations.

These pro-growth policies, coupled with less slack in the economy and a boost from higher energy prices and past yen appreciation, should enable core inflation (excluding fresh food) to reach our expected range of 0.25–1.0%. While Japan may have lost its battles against deflation over the years, it has not yet lost the war.

Emerging Markets: Competing Forces

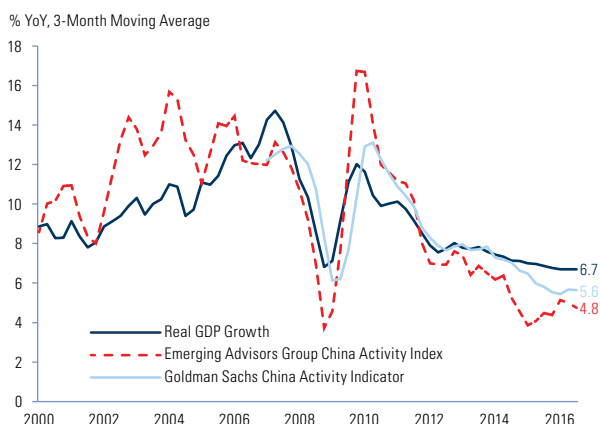
Emerging market economies failed to live up to expectations once again in 2016, with GDP expanding by an estimated 3.9% versus original expectations closer to 5.0%. This marked the second-slowest growth rate in 15 years; only the 2.6% expansion at the depth of the global financial crisis in 2009 was slower. Yet this disappointing headline belies the economic recovery that unfolded over the course of 2016. Consider that growth actually troughed during a challenging first quarter, with economic activity gradually improving thereafter on the back of recovering commodity prices, the Federal Reserve’s willingness to delay any further rate hikes and stable Chinese growth. These tailwinds were bolstered into the final quarter by early signs of recovery in Brazil and Russia, both of which had suffered deep recessions in 2015.

We expect this momentum to persist, with GDP increasing by 4.3–4.8% (purchasing power parity [PPP] weighted) this year, roughly in line with potential (see Exhibit 44). The pickup we expect is the product of two opposing forces. On the one hand, growth should benefit from the ongoing recoveries in Brazil and Russia, and somewhat stronger activity in developed economies should provide a small tailwind to emerging market exports. On the other hand, the further moderation in Chinese growth we expect is likely to weigh on activity across emerging markets, particularly if the US imposes tariffs.

Indeed, the policy agenda of the incoming US administration remains a critical unknown for emerging markets. Even if protectionist tariffs were directed only at China and Mexico—which account for 23% and 15% of US imports of manufactured goods, respectively—they would still negatively impact all emerging markets given the sensitivity of these countries to Chinese growth and fluctuations in the Chinese currency. This being the case, countries with substantial trade exposure to

Exhibit 45: China Economic Activity Measures

Actual growth is likely lower than official figures.



Data through Q3 2016.

Source: Investment Strategy Group, Emerging Advisors Group, Goldman Sachs Global Investment Research.

both China and the US, such as Korea, Taiwan and Malaysia, would be particularly vulnerable.

While the net effect of these competing forces is positive in our base case, the risks are tilted to the downside.

China

China continues to drive its economy with one foot on the gas pedal and the other on the brake. Consider that the government reached its official GDP growth target of 6.5–7% last year only by increasing public spending and allowing rampant credit growth. But these measures also exacerbated real estate bubble concerns and hastened capital outflows, forcing the government to apply the brakes through new restrictions within the property market and more stringent capital controls. This focus on dual-footed driving has also come at the expense of much-needed structural reforms. As a result, China continues to suffer from considerable excess capacity in industrial sectors, such as steel and coal, while its financial sector risks have increased.

Even so, we expect this approach to continue in 2017. Structural reforms are likely to stay on the back burner because China's leaders will not risk slower growth ahead of important leadership changes at the 19th Communist Party of China National Congress in the fall. In turn, the government is likely to use further fiscal easing and rapid credit expansion to target growth of around 6.5%. As a result, we expect official GDP

to expand by 6.0–6.75% in 2017, although actual GDP growth will likely be lower (see Exhibit 45).

The risks to our outlook are skewed to the downside for two reasons. First, the new direction of US trade policy remains uncertain and could have a sizable impact. For instance, a 15% tariff would mechanically reduce China's GDP by 0.9%. China could respond by ramping up leverage, letting its currency depreciate faster and injecting more fiscal stimulus, but that could risk further imbalances in the economy while also disrupting global financial markets. Second, striking the right balance between stimulative and contractionary measures is a hazardous endeavor. On the road, as in government policy, accelerating and braking at the same time greatly increases the risk of an accident.

India

India's streak of strong growth continues. The economy expanded by an estimated 6.5% in 2016, making it the fourth consecutive year of GDP growth in excess of 6.0%, a rare feat that India's economy shares only with China's. Growth would likely have been even higher, were it not for the "demonetization" scheme the government introduced in November 2016. In a surprise move, the government announced that large-denomination bank notes, representing 86% of cash in circulation, would no longer be accepted as legal tender. The scheme—intended to root out illegal income stored in cash—had the unfortunate side effect of starving households of liquidity and thereby thwarting consumption, the main engine of growth. Although the severity of the consumption shock remains uncertain, it should be temporary.

The silver lining for 2017 is that India will probably benefit from a meaningful recovery in household spending. Moreover, fiscal policy will likely be eased ahead of the 15 state elections occurring in 2017 and 2018, while investment should receive a modest boost as the Reserve Bank of India lowers borrowing costs. Accordingly, we expect GDP growth of 6.5–7.5% in 2017.

China continues to suffer from considerable excess capacity in industrial sectors, such as steel and coal, while its financial sector risks have increased.

Brazil

Brazil has had its share of hard times in recent years. After being among the fastest-growing economies in the world in 2010, it has more recently suffered its worst recession in a century, evident in seven consecutive quarters of contraction. In turn, GDP fell an estimated 3.3% last year, leaving it on par with 2010 levels. Even worse, industrial production now stands where it did in 2004.

Fortunately, there are already tentative signs of a recovery. Inflation has peaked; the current account deficit has shrunk; and confidence indicators, while still weak, have stabilized. Of equal importance, the financial markets have welcomed a new government amid expectations that it will finally tackle Brazil's fiscal problems and steer the economy out of recession.

But despite these promising green shoots, our base case does not call for a robust recovery in 2017. While the new administration is off to a promising start, it is facing resistance to key structural reforms while also navigating ongoing corruption probes. Moreover, the recovery in household consumption and business investment is likely to be hamstrung by continuing high real interest rates, a function of falling inflation and a simultaneously easing central bank. Meanwhile, fiscal policy will continue to tighten given a new spending cap and proposed pension reform measures. Finally, the modest commodity price gains we expect are unlikely to foster a meaningful rise in exports for Brazil. Accordingly, we expect a tepid recovery, with GDP expanding just 0–1% in 2017.

Russia

Russia is also slowly recovering from a deep recession. Although the economy contracted for its second consecutive year in 2016, headwinds are now receding thanks to a recovery in real wages, rising oil prices and a related increase in oil production. The economy has also received support from both fiscal and monetary policy, with the central bank

cutting the policy rate by 100 basis points last year as inflation moderated. Still, the economy has likely suffered some permanent damage from the combination of depressed oil prices and Western sanctions, which have pushed down Russia's long-run growth potential.

While the cyclical recovery should continue in 2017, it is apt to be measured. The government is planning to reduce the fiscal deficit by 1% of GDP this year, which will limit fiscal support. That said, elections in March 2018 could ultimately temper such fiscal prudence. Meanwhile, the central bank will likely deliver more rate cuts, but their size and pace will depend on the path of inflation, which could be stickier than anticipated.

Against this uncertain backdrop, we expect the Russian economy to return to modest growth in 2017, expanding 0.5–1.5%. While not our base case, growth could quicken if oil prices increase more than we expect or if sanctions are lifted.

2017 Financial Markets Outlook: The Horns of a Dilemma

INVESTORS HAVE HAD AN AMAZING BULL RUN. Including last year's 12% total return, the S&P 500 is nearly 3.5 times as high as its financial crisis trough. The advance has been equally long-lasting, second in length only to the almost-decade-long period that preceded the technology bubble in 2000. These impressive gains are not limited to just equities or US assets. US corporate high yield has gained 177% over the same time span, while the total return of the MSCI All Country World Index excluding the United States has been higher only 5% of the time over comparable eight-year periods since 1994.

But as we begin a new year, these gains have left investors on the horns of a dilemma. Put simply, they must now choose to either remain invested at high valuations and bear the associated risk of loss or exit the market and forgo the potential for upside surprises as well as returns that are attractive compared to the alternatives.



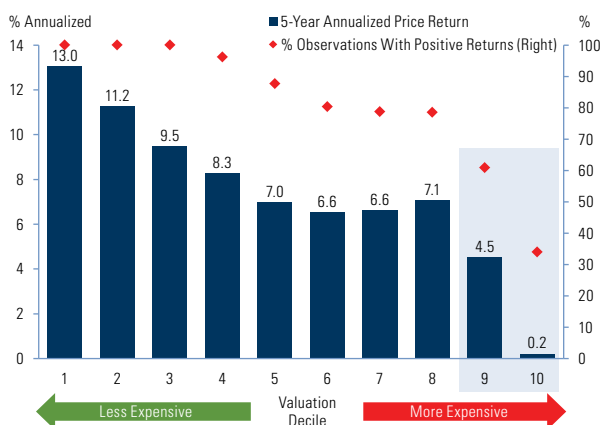
To be sure, there are good reasons to be cautious, as we discussed in Section I, The Risks to Our Outlook. Even worse, investors are exposed to these dangers at a time when most asset valuations are expensive by historical standards, providing them with a narrow margin of safety to absorb such adverse developments. This is particularly true in the US, where valuations have been cheaper at least 90% of the time historically.¹⁰⁵ Even in Europe, where valuations are more attractive, that fact is counterbalanced by greater geopolitical risks and deeper structural fault lines.

Still, as we highlighted in Section I of this *Outlook*, there are three reasons why remaining invested in risk assets is still warranted despite what are likely to be uninspiring returns. First, we see only a 15% probability of a US recession, which has historically been the key driver of losses in risk assets. Indeed, the S&P 500 has generated positive annual total returns 86% of the time during economic expansions in the post-WWII period. Second, the comparable returns of investment alternatives—such as cash and bonds—are unappealing, particularly in the rising interest rate environment that we expect. Third, risk assets can surprise us to the upside, as last year demonstrated. The potential for returns to exceed our expectations is especially true in the US, given the possibility of tax reforms, fiscal expansion and deregulation. The same could be said for our tactical positions across various asset classes, which we discussed in Section I, Our Tactical Tilts.

While we have suggested that the dilemma should be resolved in favor of remaining invested, we are not Pollyannaish. Investors have ridden this bull market for eight years, and while we don't expect the ride to end in 2017, we must stay vigilant to avoid the horns.

Exhibit 47: US Equity Price Returns from Each Valuation Decile

In the past, subsequent returns from high valuation levels have been muted.



Data as of December 31, 2016.

Note: Based on 5 valuation metrics for the S&P 500, beginning in September 1945: Price/Trend Earnings, Price/Peak Earnings, Price/Trailing 12m Earnings, Shiller Cyclically Adjusted Price/Earnings Ratio (CAPE) and Price/10-Year Average Earnings. These metrics are ranked from least expensive to most expensive and divided into 10 valuation buckets ("deciles"). The subsequent realized, annualized 5-year price return is then calculated for each observation and averaged within each decile. Past performance is not indicative of future results.

Source: Investment Strategy Group, Bloomberg, Datastream, Robert Shiller.

US Equities: Life in the Fast Lane

US stocks have been driving in the fast lane since 2009. Over this nearly eight-year period, the S&P 500 has generated a stunning 16.5% annualized price return, a pace exceeded only 3% of the time since 1945. As a result, the 500 companies in the index are collectively worth \$20 trillion today, about 3.5 times as high as they were at the trough of the financial crisis. Needless to say, investors have had a good ride.

Yet such a fast drive also raises the question of whether US equities are now running on empty.

Exhibit 46: ISG Global Equity Forecasts—Year-End 2017

	2016 YE	End 2017 Central Case Target Range	Implied Upside from Current Levels	Current Dividend Yield	Implied Total Return
S&P 500 (US)	2,239	2,225–2,300	-1–3%	2.1%	1–5%
Euro Stoxx 50 (Eurozone)	3,291	3,250–3,400	-1–3%	3.6%	2–7%
FTSE 100 (UK)	7,143	7,050–7,310	-1–2%	4.0%	3–6%
TOPIX (Japan)	1,519	1,530–1,590	1–5%	1.9%	3–7%
MSCI EM (Emerging Markets)	862	880–925	2–7%	2.6%	5–10%

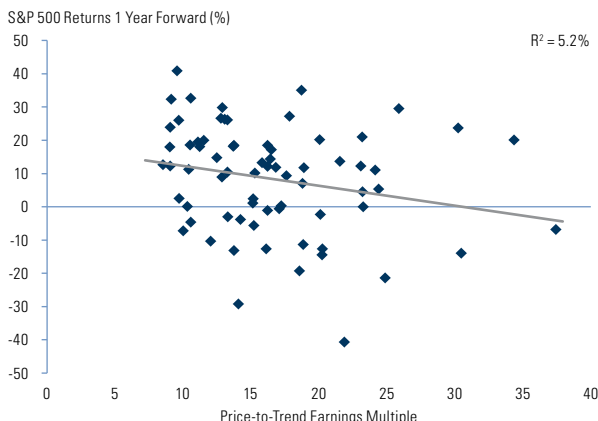
Data as of December 31, 2016.

Note: Forecast for informational purposes only. There can be no assurance that the forecasts will be achieved. Please see additional disclosures at the end of this presentation.

Source: Investment Strategy Group, Datastream, Bloomberg.

Exhibit 48: S&P 500 Price-to-Trend Earnings vs. Subsequent Calendar-Year Price Return

Starting valuation multiples tell us little about equity returns over the following year.

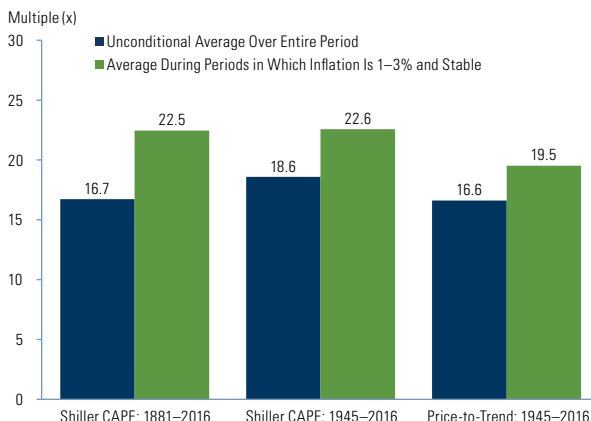


Data as of December 31, 2016.

Source: Investment Strategy Group, Bloomberg, Datastream, Robert Shiller.

Exhibit 49: S&P 500 Valuation Multiples by Inflation Environment

Periods of low and stable inflation have supported higher equity multiples.



Data as of December 31, 2016.

Source: Investment Strategy Group, Bloomberg, Datastream, Robert Shiller.

This bull market is already quite old by historical standards, second in length only to the almost 10-year period that preceded the technology bubble in 2000. Moreover, valuations now stand in their 10th decile, indicating they have been cheaper at least 90% of the time historically. In the past, starting from such a high base has led to muted equity returns over the subsequent five years, with only a third of those episodes generating a profit (see Exhibit 47).

Even so, high valuations should not be confused with certainty of loss, especially over short periods. As seen in Exhibit 48, today's equity multiples tell us very little about potential gains over the next year, explaining only 5% of their variation historically. Moreover, history teaches us that a strategy of selling equities based solely on expensive valuations has been a losing approach over time. As we noted in our 2014 *Outlook*, research conducted by three professors at the London Business School concluded that

Investors have ridden this bull market for eight years, and while we don't expect the ride to end in 2017, we must stay vigilant to avoid the horns.

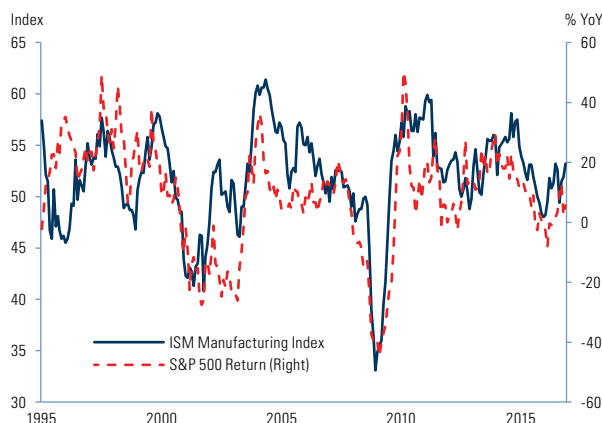
underweighting equities based exclusively on high valuations underperformed a strategy of remaining invested across every one of the 20 countries and three country aggregates they examined.¹⁰⁶ In short, valuations alone are a poor tactical timing signal. Indeed, the S&P 500 has returned more than 36% since first entering its ninth valuation decile in November 2013, a time when many were already suggesting that US equities were in a bubble.

Valuations must also be considered in the context of the prevailing macroeconomic environment. Consider that periods of low and stable inflation, such as we expect for the year ahead, have supported higher valuations in the past (see Exhibit 49). The same could be said for lower taxes and deregulation—were they to materialize later this year—as both would boost real returns on invested capital and justify higher equity values. Similarly, today's structurally lower interest rates—reflecting slower population and productivity growth—reduce the rate at which all future cash flows are discounted, increasing their present value.

Here, it's helpful to remember that the S&P 500's long-term average P/E ratio—which many investors use to gauge fair value—was forged over a period when risk-free rates averaged 4.5%. In contrast, the risk-free rate now is just 0.5–0.75% and the Federal Reserve

Exhibit 51: ISM Manufacturing Index and S&P 500 Returns

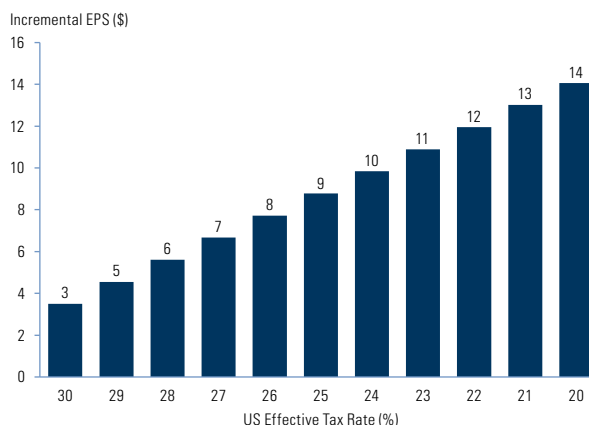
Equity market performance is closely related to the business cycle.



Data through November 30, 2016.
Source: Investment Strategy Group, Bloomberg.

Exhibit 52: Estimated Incremental S&P 500 Earnings per Share by Tax Rate

Proposals for lower corporate tax rates could lead to higher earnings.



Data as of December 31, 2016.
Note: The current US effective tax rate for the S&P 500 companies is 33.3%.
Source: Investment Strategy Group, Standard & Poor's.

estimates its new long-run equilibrium level has fallen to 3%, a full 1.5 percentage points below the historical average.¹⁰⁷ Of equal importance, the Federal Reserve is not expected to reach that 3% target for six years based on current market pricing in Eurodollar futures.

A similar valuation tailwind emerges from the market's current sector composition. The combined technology and health-care sectors constitute about 40% of S&P 500 earnings today, almost three times as high as their 15% share in the late 1980s. Because these faster-growing, higher-margin sectors are generally accorded premium valuations, their higher representation in the index today justifies a higher S&P 500 P/E multiple.

Although current valuations may be fundamentally justified, that does not mean they are impervious to downward pressure. Our central-case equity view for 2017 acknowledges this, calling for some contraction in P/E multiples given the uncertainty associated with a new administration and continued Federal Reserve interest rate hikes. Even so, that headwind will be more than offset by the 6–10% earnings growth we forecast, resulting in a 1–5% total return for US equities this year (see Exhibit 50).

Investors might rightly ask whether it is worth bearing equity risk for such meager returns. Our read of the evidence suggests it is. The linchpin of this view is our expectation of a continued

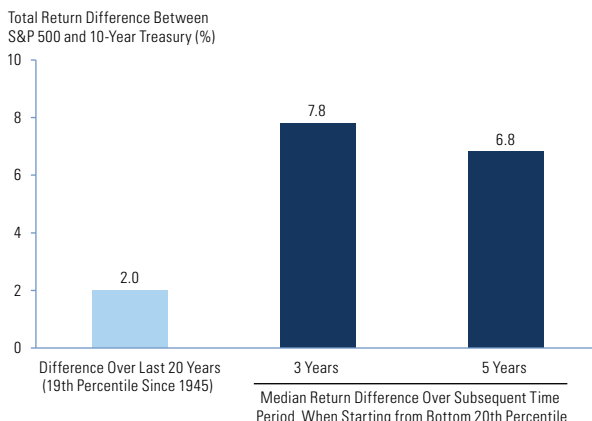
Exhibit 50: ISG S&P 500 Forecast—Year-End 2017

2017 Year-End	Good Case (25%)	Central Case (60%)	Bad Case (15%)
End 2017 S&P 500 Earnings	Op. Earnings \$140 Rep. Earnings \$124 Trend Rep. Earnings \$113	Op. Earnings \$125–130 Rep. Earnings \$113–117 Trend Rep. Earnings \$113	Op. Earnings ≤ \$102 Rep. Earnings ≤ \$78 Trend Rep. Earnings ≤ \$113
S&P 500 Price-to-Trend Reported Earnings	21–23x	18–21x	15–16x
End 2017 S&P 500 Fundamental Valuation Range	2,375–2,600	2,040–2,375	1,700–1,810
End 2017 S&P 500 Price Target (based on a combination of trend and forward earnings estimate)	2,450	2,225–2,300	1,800

Data as of December 31, 2016.
Note: Forecasts and any numbers shown for informational purposes only and are estimates. There can be no assurance the forecasts will be achieved and they are subject to change. Please see additional disclosures at the end of this presentation.
Source: Investment Strategy Group.

Exhibit 53: US Equity Performance Relative to Fixed Income

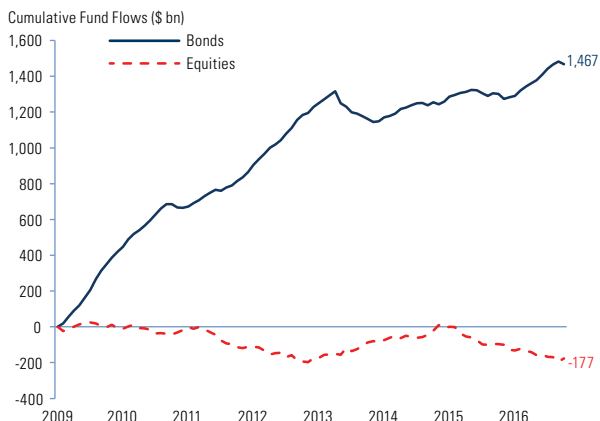
Stocks have outperformed bonds following periods of muted return differences.



Data as of December 31, 2016.
Source: Investment Strategy Group, Bloomberg, Leuthold Group.

Exhibit 54: US Equity and Bond Fund Flows

Equities could benefit from rebalancing out of bonds given lopsided flows since 2009.



Data through November 30, 2016.
Note: Beginning in March 2009.
Source: Investment Strategy Group, Bloomberg, ICI.

expansion in the US economy (see Section II, United States). The state of the business cycle is a key driver of market performance, evident in the tight linkage between the S&P 500 and the ISM Manufacturing Index (see Exhibit 51). Notably, the S&P 500 has generated positive annual total returns 86% of the time during economic expansions in the post-WWII period, while suffering annual declines of greater than 10% just 4% of the time. During the same postwar period, nearly three-fourths of the bear markets—defined here as declines of 20% or more—occurred during US recessions.

With few signs of an economic contraction on the horizon, the high odds of positive returns and low odds of large losses raise the hurdle for underweighting equities significantly. This is particularly true because the risks are not one-sided: markets often surprise to the upside, too, even at high valuations. Last year was a case in point: the S&P 500's 12% return matched our good-case scenario, although at the start of 2016 we had attached only 20% odds to it occurring.

As we consider the potential for similar upside surprises in 2017, earnings growth tops the list for three reasons. First, we expect the sizable profit drag from energy earnings to reverse in 2017, with scope for a greater than \$4–5 contribution to S&P 500 EPS if recently announced global oil production cuts are realized. Keep in mind that this

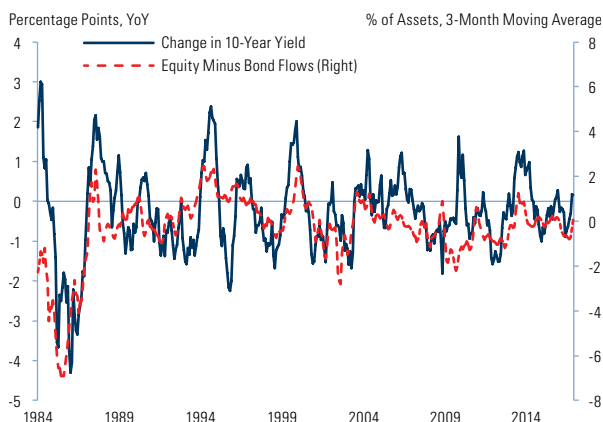
contribution was closer to \$15 prior to the collapse in oil prices. Second, a shift to a 25% corporate tax rate could add \$9–10 to S&P 500 EPS in 2017 if enacted retroactively (see Exhibit 52). Finally, a tax holiday for the estimated \$1 trillion of cash held overseas could lead to an additional \$1–2 of EPS upside from repatriation-driven buybacks.

There are also other, less visible potential catalysts for equities. Over the last 20 years, the total return of stocks has exceeded that of 10-year Treasury bonds by only 2 percentage points, well below the historical average of 4.4 percentage points and a result that ranks in the bottom 20% of all post-WWII observations. But after similar periods of underperformance, stocks generated well above average relative returns over the next three and five years (see Exhibit 53). Said differently, history suggests stock returns will outpace those of bonds, even if expected equity returns are uninspiring.

A related source of upside stems from the lopsided investor flows evident in Exhibit 54. Here, even moderate rebalancing out of bonds by retail investors—who represent 80% of mutual fund owners—would represent a sizable tailwind to equities. Historically, a shift in flows from bonds into equities has been motivated by three factors: confidence in the durability of the economic recovery, unattractive prospects for bond returns and higher equity prices (see Exhibit 55). Our

Exhibit 55: US Equity Fund Flows and Change in 10-Year Treasury Yield

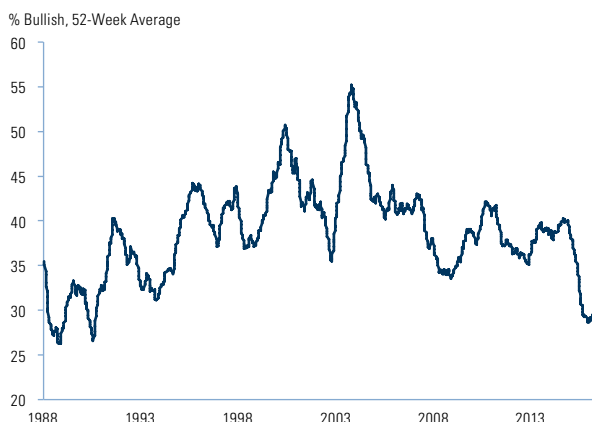
Bond returns can influence flows into equity funds.



Data through December 31, 2016.
Source: Investment Strategy Group, Bloomberg, ICI.

Exhibit 56: The AAIL Bullish Investor Sentiment

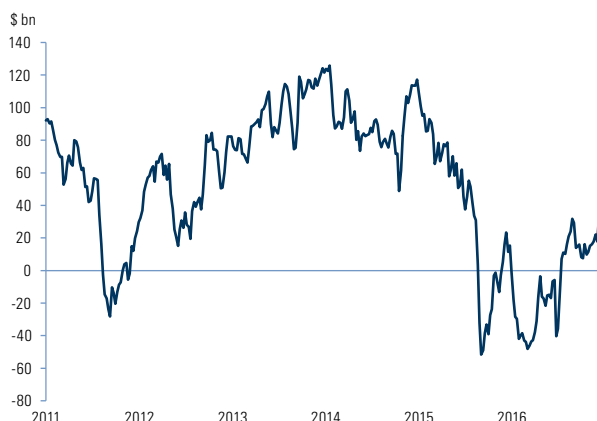
Lack of investor euphoria is a contrarian positive for stocks.



Data through December 31, 2016.
Source: Investment Strategy Group, Bloomberg, American Association of Individual Investors.

Exhibit 57: Non-Dealer US Equity Index Futures Positioning

There is scope for increased US equity positions.



Data through December 31, 2016.
Source: Investment Strategy Group, CFTC, Goldman Sachs Securities Division Equity Strats Group.

central case features all three factors, suggesting the incipient uptick in bond outflows seen in late 2016 may persist, especially with “risk-free” Treasuries delivering a notable loss in the fourth quarter.

Today’s visible lack of market euphoria represents another potential positive for stocks. Exhibit 56 shows the proportion of investors classifying themselves as “bullish” near its lowest level in decades. Meanwhile, non-dealer positions in US index futures stand well below the levels

seen in 2013–14, providing scope for upside (see Exhibit 57). If bull markets “die on euphoria” as Sir John Templeton observed, then these measures argue we have not yet reached the apex.

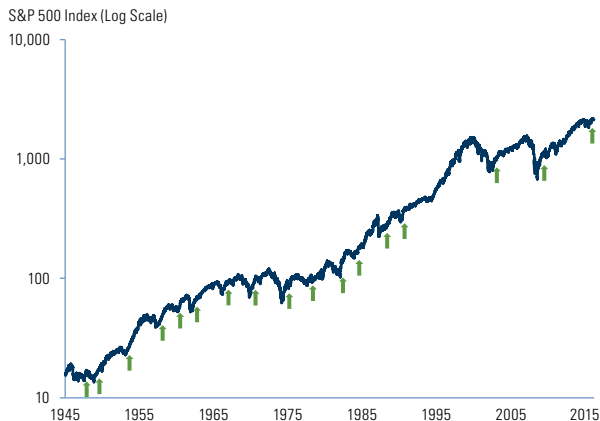
A rare technical analysis signal corroborates that view. As shown in Exhibit 58, the Coppock curve—an intermediate-length momentum signal—has generated only 17 buy signals over the past 71 years, but collectively they have provided attractive low-risk entry points for long-term investors. If we took the median path of S&P 500 prices after past signals, it would imply the market gains 9% this year with 88% odds of a positive outcome. Of particular note, Coppock buy signals on the NYSE, Russell 2000 and FTSE All-World Index were also triggered in November, even before the post-election rally. For all the reasons discussed above, we accord a 25% probability to our good-case scenario of the S&P 500 reaching 2,450 by year-end.

Of course, we are equally aware of the myriad downside risks investors face, including growing unease about a disorderly backup in bond yields. But here, our work suggests that rates have scope to increase further before becoming a headwind for stocks, even if adjusted for today’s lower long-run equilibrium nominal rate (see Exhibit 59). Keep in mind that 88% of S&P 500 debt has a fixed interest rate and only about 10% matures each year. The impact of higher rates will be spread over many years as a consequence.

Some have taken a less sanguine view, arguing that the “taper tantrum” of 2013 suggests bond

Exhibit 58: Coppock Curve S&P 500 Buy Signals

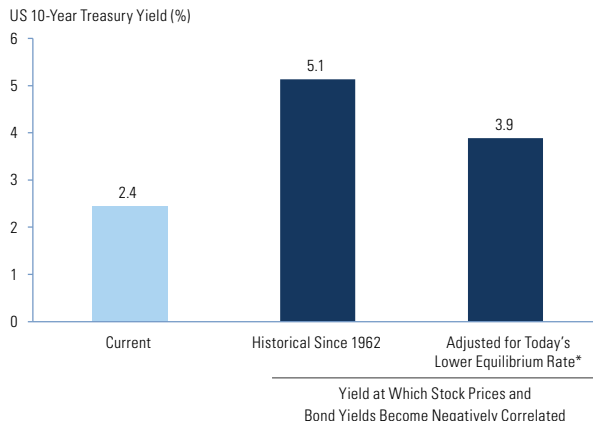
One of only 17 post-WWII buy signals was triggered in July 2016.



Data through December 31, 2016.
Source: Investment Strategy Group, Bloomberg.

Exhibit 59: Inflection Point for Negative Correlation Between Bond Yields and Stock Prices

Typically stocks and interest rates move in the same direction until yields reach levels far above those seen today.



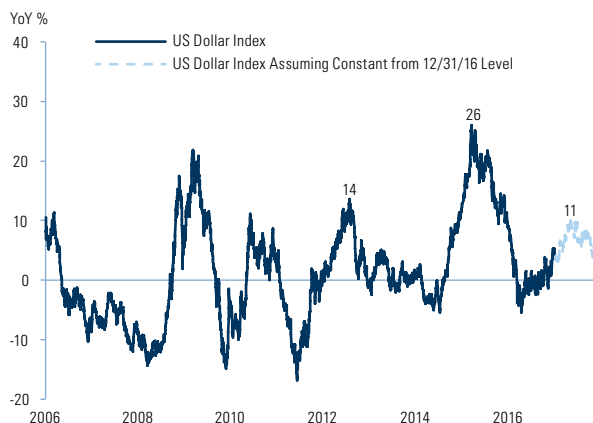
Data as of December 31, 2016.
Note: Based on weekly data since 1962.
Source: Investment Strategy Group, Bloomberg, Federal Reserve.
* Adjusts for the reduction of 1.25 percentage points in the long-run equilibrium nominal rate, in line with the shift in Federal Reserve projections since 2012.

yields have already reached a troublesome level for stocks. However, the tantrum primarily reflected concerns that by tightening policy prematurely, the Federal Reserve was committing a mistake that would undermine growth—a fact evident in the episode's widening credit spreads and declining breakeven inflation rates. Despite a similarly rapid increase in rates this time around, we have seen the opposite market reaction, with credit spreads tightening and breakeven inflation rates moving higher alongside growth expectations. This contrast reminds us that the reason rates are increasing is as important as their resulting level.

Aside from rates, ongoing concern about a hard landing in China and a banking or political crisis in Europe remain top of mind (see Section I, The Risks to Our Outlook). We also start the year with less of a buffer to absorb such adverse developments, given today's high valuations. Even worse, this narrower margin of safety arrives at a time when policy uncertainty in the US is particularly acute, given upcoming changes to tax, trade and immigration policies under the new administration. A destination tax, for example, could be particularly damaging to S&P 500 margins given the growth of global supply chains in the last decade, not to mention the sizable upward pressure it would place on the US dollar. Even at current levels, the dollar will represent a

Exhibit 60: US Dollar Index

Even if the dollar stays unchanged, it will still act as a drag on US multinational earnings in early 2017.



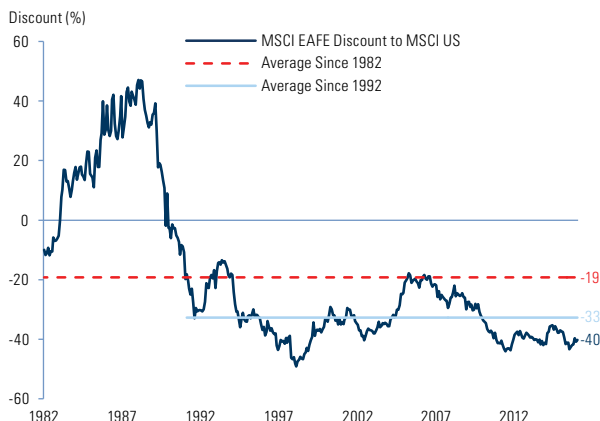
Data through December 31, 2016, with illustrative projection through 2017.
Source: Investment Strategy Group, Bloomberg.

renewed drag on US multinational earnings in the first quarter (see Exhibit 60).

That said, the collective impact of these various risks is not yet sizable enough to undermine our core view: we are in a longer-than-normal US recovery that supports equity returns that are likely to exceed those of cash and bonds. In turn, we recommend that clients maintain their strategic

Exhibit 61: EAFE Price to 10-Year Average Cash Flow Discount to the US

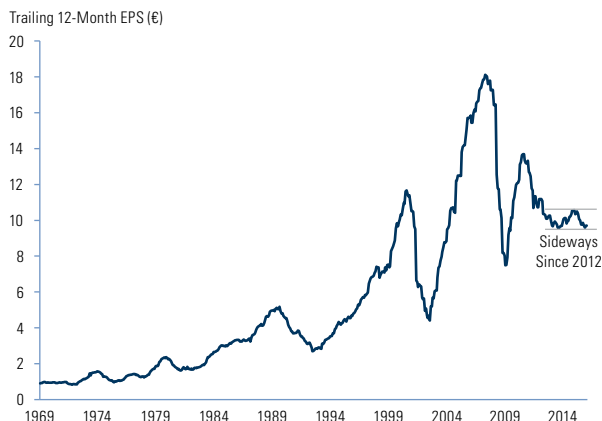
Today's larger-than-average discount provides a margin of safety to EAFE equities.



Data through December 31, 2016.
Source: Investment Strategy Group, MSCI, Datastream.

Exhibit 62: MSCI EMU Trailing 12-Month Earnings per Share

Profits have been range-bound for almost four years.



Data through December 31, 2016.
Source: Investment Strategy Group, Bloomberg.

weight in US equities, although we acknowledge that risks have risen at the same time that returns appear likely to be lower going forward. While US equities are not yet running on fumes, we should keep a close eye on the fuel gauge.

EAFE Equities: Priced for Imperfection

There is no shortage of concerns surrounding the various countries that comprise Europe, Australasia and the Far East (EAFE) equity markets. The list is both long and valid, including persistently low economic growth, a slow pace of structural reforms and incessant political uncertainty, as well as incremental, reactive and inconsistent policy responses. Ongoing questions about the health of the banking system only compound these worries.

But these concerns are also not new and are consequently well understood by the market. In turn, the key question facing investors is not whether EAFE exposure subjects them to downside risks. As the preceding list demonstrates, it clearly does. The question instead is whether investors are being fairly compensated to bear these risks.

One can never know precisely what equity markets are discounting, but the above concerns are almost certainly a key driver of EAFE underperformance and the main reason behind today's larger-than-normal valuation discount to US equities (see Exhibit 61). While this margin

of safety does not guarantee outperformance, it may provide investors with a larger buffer to absorb adverse developments and miscalculations in their forecasts. In our view, the risk/return profile of EAFE equities is more attractive than it first appears.

As a result, we do not recommend that investors underweight EAFE equities. In fact, there are reasons to believe that EAFE equities will outperform US equities in local currency terms this year. In the sections that follow, we explore these reasons by examining the three main EAFE markets, beginning with the Eurozone.

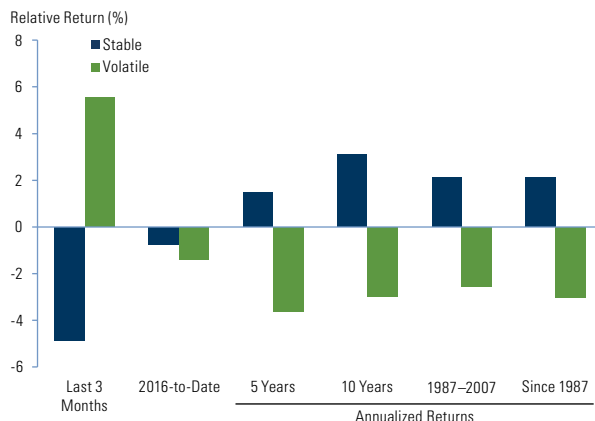
Eurozone Equities: The Onus Is on Earnings

Earnings have been going nowhere fast for Eurozone equities. That's apparent in Exhibit 62, which shows that profits have been range-bound—at nearly half their 2007 peak level—for almost four years. As a result, rising valuation multiples have accounted for all of the 25% price appreciation over this period.

This seeming contradiction between stagnant earnings and rising multiples reflects the copious liquidity provided by the ECB's quantitative easing. By depressing interest rates, ECB policy has both hobbled bank profits—which represent a third of EuroStoxx 50 earnings—and boosted

Exhibit 63: Relative Performance of “Stable” and “Volatile” EAFE Stocks

Investors have recently shifted toward firms more exposed to the business cycle.



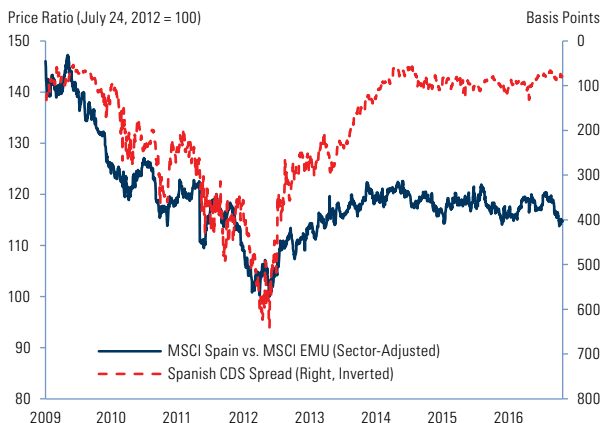
Data as of October 31, 2016.

Note: Equally weighted USD-hedged returns relative to the developed markets (ex-US). Stable and volatile stocks are drawn from the large-cap universe. Stability is measured using a model based on return on equity, earnings growth, financial leverage and beta.

Source: Investment Strategy Group, Empirical Research Partners.

Exhibit 64: Spain 5-Year Credit Default Swap and Relative Equity Performance

The dramatic reduction in Spanish default risks suggests equity valuations have scope for upside.



Data through December 31, 2016.

Source: Investment Strategy Group, MSCI, Datastream.

equity valuations. But with ECB policy unlikely to become any more accommodative, additional valuation expansion can no longer be taken for granted. Instead, the onus for Eurozone equity upside now rests with earnings.

Here, the prospects are favorable for several reasons. First, above-trend Eurozone GDP growth is likely to lead to boosted domestic sales and reduced economic slack, both of which have lifted Eurozone earnings in the past. Second, the broader pickup in global GDP growth we expect should benefit the 45% of the EuroStoxx 50's sales that are generated outside Europe. Higher revenue is particularly beneficial to these EuroStoxx firms given their operating leverage, as small improvements in sales spread over their sizable fixed costs also push profit margins higher. Finally, financial sector earnings stand to benefit from the higher interest rates we foresee.

Against this backdrop, we expect earnings to expand 5% in 2017. Meanwhile, valuation multiples are likely to contract slightly as interest rates normalize higher and investor focus shifts toward eventual ECB tapering late this year. Combining these elements with a 3.6% dividend yield implies EuroStoxx 50 total returns of 3% in 2017.

The risks to our base case are skewed mildly to the upside. After underperforming most equity markets in 2016, Eurozone equities have room to play catch-up. Moreover, the passing of long-feared French and German elections could compress today's elevated equity risk premium, although political uncertainty is likely to remain high in the interim. Finally, investors' recent shift toward firms more exposed to the business cycle should benefit Eurozone firms given their greater operating leverage (see Exhibit 63).

Within the Eurozone, we are overweight Spanish equities. Here, we are drawn to attractive valuations (see Exhibit 64), domestic growth momentum and embedded overweight to banks.

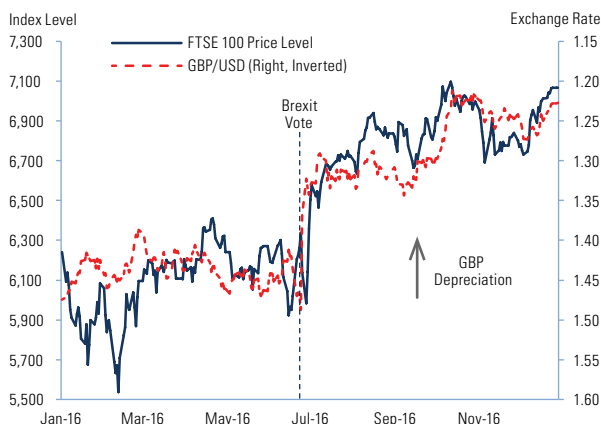
UK Equities: Scaling the Wall of Worry

While the Brexit vote was surprising, the subsequent performance of the UK stock market was even more so. Despite the tremendous political and social uncertainty engendered by the referendum's outcome, UK equities generated one of the strongest returns of any major equity market last year in local currency terms.

Several factors at the root of this outperformance should continue to work in favor of UK equities in 2017. First, FTSE 100's global

Exhibit 65: FTSE 100 Price Level and British Pound

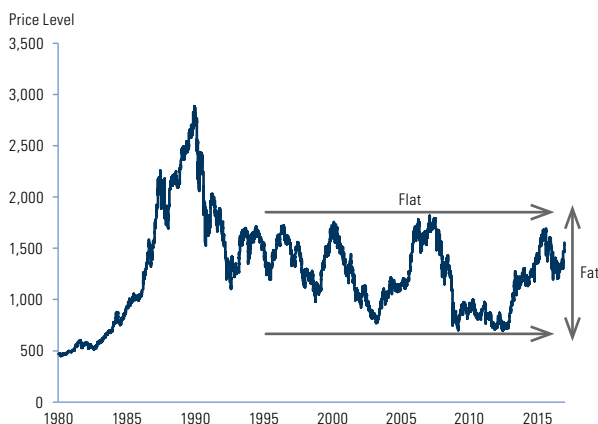
A weaker pound benefits FTSE 100 companies, which generate 75% of sales outside the UK.



Data through December 31, 2016.
Source: Investment Strategy Group, Bloomberg.

Exhibit 66: TOPIX Price Level

Japanese equities have traded in a large-but-contained range.



Data through December 31, 2016.
Source: Investment Strategy Group, Goldman Sachs Global Investment Research, Bloomberg.

footprint—75% of sales come from outside the UK economy—should benefit from the accelerating global GDP growth we expect this year, just as this exposure profited from last year’s 16% depreciation of the British pound (see Exhibit 65). Second, last year’s best-performing sectors—commodities and financials—are well positioned to extend their run. Financials—the largest UK sector—stands to benefit from rising interest rates, while the commodity sectors should get a boost from higher oil prices. Notably, these two sectors account for nearly half of FTSE 100 market capitalization.

With these tailwinds in mind, we forecast UK earnings growth of 11% this year, the highest of our estimates across EAFE markets. That said, continued uncertainty around the implications of Brexit coupled with higher interest rates will likely weigh on FTSE 100’s well-above-average valuations. This view, combined with the UK equity market’s hefty dividend yield of 4.0%, results in a 4% total return projection for the FTSE 100.

Although this return is attractive on its face, we do not believe it offers investors a large enough

margin of safety to justify a tactical overweight. Keep in mind that significant uncertainties remain around the final contours of Brexit. Moreover, a shift by the Bank of England toward raising interest rates this year could reverse much of the British pound’s depreciation, to the detriment of UK earnings. Finally, FTSE 100’s global footprint could magnify any disruption to global trade volumes resulting from protectionist policies.

Japanese Equities: Scaling a Familiar Peak

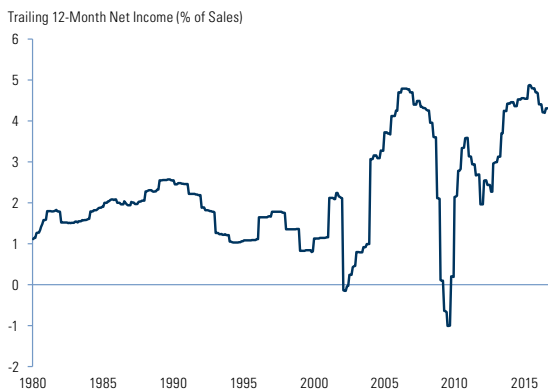
Japanese equities have experienced their fair share of booms and busts over the last 25 years. As seen in Exhibit 66, this pattern of offsetting swings has resulted in a “fat and flat”¹⁰⁸ trading range. With the TOPIX price level again in the upper third of its historical band, it is natural to ask whether 2017 will mark yet another market top in Japan.

The earnings outlook is pivotal to answering this question. While our forecast for accelerating global GDP growth points toward higher earnings, near-peak profit margins are a headwind (see Exhibit 67). Moreover, with less central bank easing given the BOJ’s already sizable balance sheet, yen depreciation—a key driver of Japanese revenue growth since 2012—is expected to moderate this year. Even so, the interplay of these inputs should still lead to positive earnings growth of 6% in 2017.

We project UK earnings growth of 11% this year, the highest of our estimates across EAFE markets.

Exhibit 67: Japanese Profit Margins

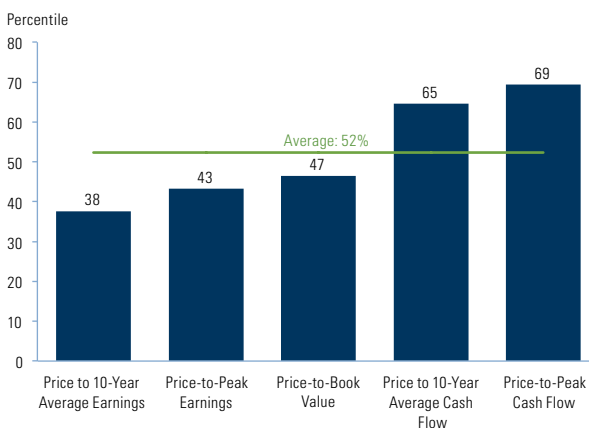
Near-peak profit margins could be a headwind for Japanese equities.



Data through November 30, 2016.
Source: Investment Strategy Group, Datastream.

Exhibit 68: Japanese Equity Valuations

Valuations are near the median level of Japan's deflationary period since 1999.



Data as of December 31, 2016.
Note: Based on data since 1999.
Source: Investment Strategy Group, Datastream, MSCI.

The direction of valuation multiples is equally important. As shown in Exhibit 68, Japanese valuations are middling based on their history since 1999, which we believe is the relevant evaluation period given the deflationary headwinds that emerged thereafter. For equity multiples to move significantly higher from here would require sustainable above-trend earnings growth or a sizable increase in direct equity purchases by the Japanese central bank. But with the BOJ already holding a remarkable 60% of Japanese ETF market assets¹⁰⁹ and profit margins near their peak levels, neither of these upside catalysts seems probable. In fact, P/E multiples are forecast to contract in our base case, as the 6% earnings growth we expect will likely disappoint current market expectations of 12%.

Putting these pieces together, we expect neither a boom nor a bust for Japanese equities. Instead, the combination of mid-single-digit earnings growth, slight compression in valuation multiples and a 1.9% dividend yield should generate a 5% total return. While this return is attractive from an absolute standpoint, it also comes with significant downside risks given the country's poor demographics, declining labor force and high government debt load. Consequently, we are tactically neutral on Japanese equities currently.

Emerging Market Equities: Finally in Gear, but Potholes Ahead

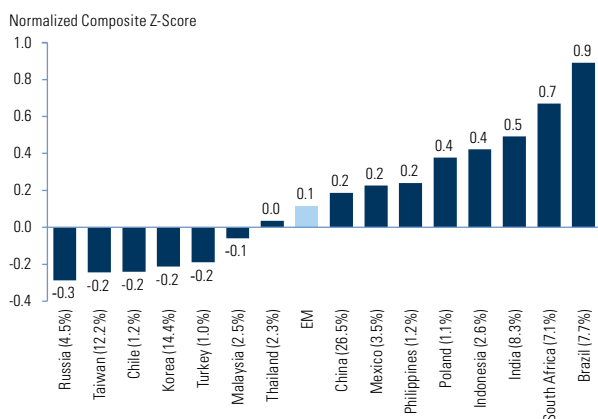
Emerging market equities as a whole finally moved forward in 2016 after three years in reverse: multiples expanded, earnings estimates improved and currencies appreciated, generating a 12% total return. Politics and commodity prices were key performance differentiators among emerging markets last year, leading Brazil and Russia to the winners' podium while leaving Turkey and Mexico in last place.

We expect emerging markets to remain on track in 2017. Our central case calls for earnings growth of 5% in US dollar terms, driven by faster nominal GDP growth and the lagged impact of easier financial conditions and higher commodity prices. But with multiples already at post-crisis highs in an environment of rising global rates and heightened risks, we see little scope for further expansion. Combining these two inputs with a dividend yield of 2.6%, our forecast implies a total return of about 7% this year.

However, the uncertainty around this forecast is quite large, as emerging market equities face several potential potholes on the road ahead. Chief among these is the ultimate policy agenda of the incoming US administration. On the one hand, a policy mix that favors US growth over trade restrictions would support emerging market exports and boost profits and equity returns.

Exhibit 69: EM Equity Valuations

Aggregate valuations are near neutral levels.



Data as of December 31, 2016.

Note: Based on monthly data since 1994 for Price/Forward Earnings, Price/Book Value, Price/Cash Flow, Price/Sales, Price/Earnings-to-Growth Ratio, Dividend Yield and Return on Equity. Numbers in parentheses denote the country's weight in MSCI EM. Only showing countries with a weight greater than 1%.

Source: Investment Strategy Group, Datastream, I/B/E/S, MSCI.

On the other hand, a harsher US stance on trade and foreign policy would hurt emerging market earnings, sentiment and valuation multiples. China, Korea, Mexico and Taiwan—which account for about 60% of MSCI emerging market capitalization and earnings—seem particularly vulnerable in the latter scenario. In comparison, countries with less exposure to the US economy and already strong domestic demand, such as India and Indonesia, would likely fare better.

Against this uncertain backdrop and considering today's uninspiring valuations (see Exhibit 69), we remain tactically neutral on emerging market equities. That said, we continue to explore relative investment opportunities that exploit the significant domestic activity, external vulnerability and valuation differences among individual emerging countries.

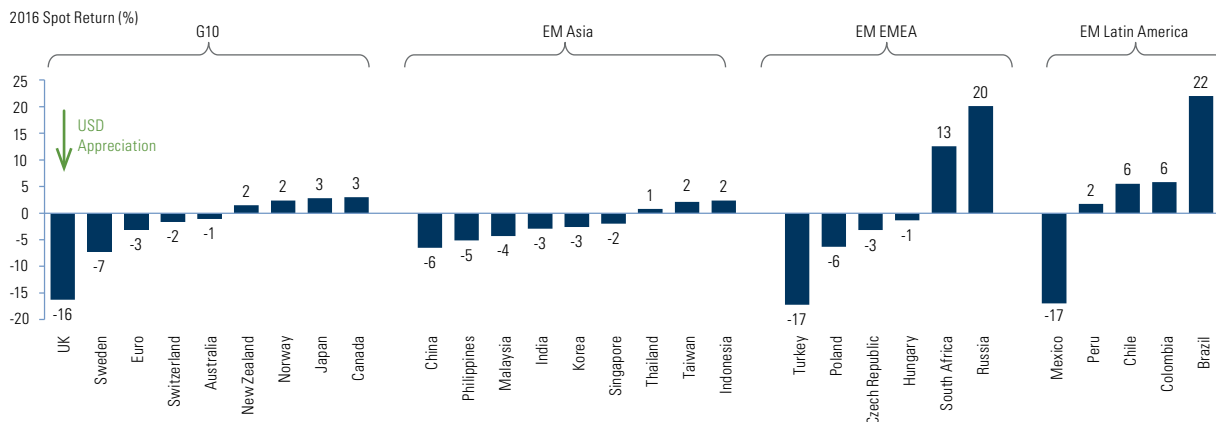
2017 Global Currency Outlook

In a notable departure from recent years, the US dollar did not enjoy unequivocal dominance in 2016 (see Exhibit 70). The yen, for example, ended a four-year slide against the greenback as the market questioned the BOJ's commitment to monetary easing. Certain emerging market currencies—such as the Russian ruble and Brazilian real—also outperformed the dollar on the back of stronger commodity prices and favorable political developments at home. And while the dollar did make notable gains against the euro, pound and Mexican peso in particular, these currencies enter 2017 with a more balanced risk/reward profile as a result.

The upshot is that while tightening monetary policy and potential fiscal expansion in the US will continue to favor dollar strength, those gains are likely to be more modest and reflected in a narrower set of currencies as the dollar bull market enters its fifth year. Our tactical positioning

Exhibit 70: 2016 Currency Moves (vs. US Dollar)

For the first time in several years, the US dollar did not appreciate against all major currencies.



Data as of December 31, 2016.

Source: Investment Strategy Group, Bloomberg.

incorporates this view, as we are neutral on the euro, yen and pound versus the US dollar, but remain bearish on the Chinese renminbi.

We discuss our view on the broader US dollar, as well as each of these currencies, next.

US Dollar

Following three consecutive years of dollar outperformance, it would be reasonable to assume the up-cycle is nearing an end. After all, dollar valuation is now close to its historic average level relative to the currencies of US trade partners, after adjusting for inflation. Moreover, the length of this dollar bull market is approaching that of the two prior episodes shown in Exhibit 71 and shares a similar underlying driver—tighter monetary policy in the US relative to its global peer group.

But while we expect the pace of US dollar appreciation to slow, there are many reasons to believe the greenback's outperformance can continue this year. Dollar valuation remains below the peaks reached in the 1985 and 2002 bull cycles, suggesting it is not yet prohibitively expensive. The dollar should also benefit from solid US macroeconomic fundamentals relative to other developed economies. President-elect Trump ran on a platform that includes fiscal expansion and corporate tax reform. Although his economic team's spending plan is still forthcoming, the package could represent an economic tailwind that may justify tighter US monetary conditions at a time when foreign central banks have committed to easier policy. In turn, relatively higher US yields may entice global investors to favor US dollar assets over lower-yielding foreign-denominated alternatives.

Furthermore, some elements of the new administration's desired corporate tax reform could present material upside risk to the US dollar. For example, the destination-based tax system supported by several House Republicans disallows deductions for any imported good or service—

Dollar gains are likely to be more modest and reflected in a narrower set of currencies as the dollar bull market enters its fifth year.

Exhibit 71: US Dollar Real Effective Exchange Rate

Dollar valuations are near their long-term average but below those reached in past bull cycles.



Data through November 30, 2016.

Note: Z-score is calculated on data since 1973 and represents the number of standard deviations from the mean. Shaded areas highlight periods of dollar strength.

Source: Investment Strategy Group, Datastream.

effectively supporting US goods by making them more competitive. Economic theory suggests that free-floating currencies such as the US dollar would need to adjust higher by the amount of the tax to create equilibrium with similar goods sourced across foreign borders. Taken at face value, this implies a 20% destination tax would require a simultaneous—and potentially very disruptive—20% increase in the US dollar. A tax holiday for cash held abroad could be similarly dollar positive, in spirit if not in magnitude. While it is true that a majority of the \$2.6 trillion of US corporate earnings trapped overseas are already held in US dollar assets, the greenback would still enjoy a tailwind if corporates elected to repatriate some portion of the foreign currency balance.

That said, the risks to the US dollar are not exclusively to the upside, as much of the good news is embedded in current prices (see Exhibit 72). Consider that the bulk of last year's dollar advance occurred in the two weeks following the US presidential election in November, as the market quickly discounted a portion of potential policy changes. Moreover, Federal Reserve rate hike expectations for 2017 have increased following stronger US activity data during the second half of 2016. Lastly, the BOJ and ECB are assumed to maintain their highly accommodative policies again this year. With these tailwinds already

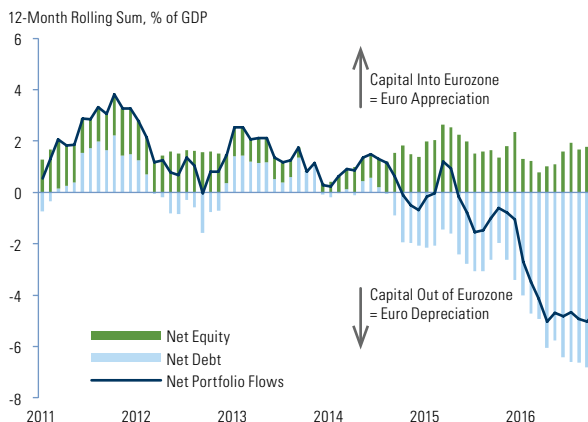
Exhibit 72: Trade-Weighted US Dollar Index

The recent dollar rally implies much of the good news has already been priced in.



Exhibit 73: Eurozone Net Portfolio Flows

Policy divergences could continue to drive portfolio investment out of the Eurozone.



partly reflected in current exchange rates, the US dollar is vulnerable to both domestic and foreign disappointments.

In sum, we expect the dollar to appreciate further, but at a slower pace and with greater volatility than in recent years.

Euro

The euro was on the losing side of the US dollar's strength again in 2016, marking the third consecutive year of underperformance and the longest stretch of annual declines since 2001. Last year's modest 3.2% decline actually masked a much larger 10% drop from the euro's intra-year peak, half of which came in the weeks following the US elections in November. Needless to say, the combination of potentially expansionary fiscal policy put in place by the new administration coupled with tighter US monetary policy represents a stiff headwind to the euro, particularly since

the ECB just extended quantitative easing until December 2017.

We expect these transatlantic policy divergences to persist, driving European investors to continue seeking higher-yielding, non-euro-denominated assets abroad (see Exhibit 73). This preference will likely be bolstered by uncertainty surrounding upcoming national elections in Germany, France, the Netherlands and possibly Italy and Spain. While our central case assumes mainstream parties prevail, any result that raises questions about the long-term viability of the European Monetary Union could push the euro even lower.

Still, we should not lose sight of the fact that after such persistent weakness versus the US dollar, the euro is undervalued and investors are now positioned for further weakness. Additionally, the above-trend Eurozone growth and normalizing inflation we expect could justify the ECB shifting toward a more neutral stance later this year.

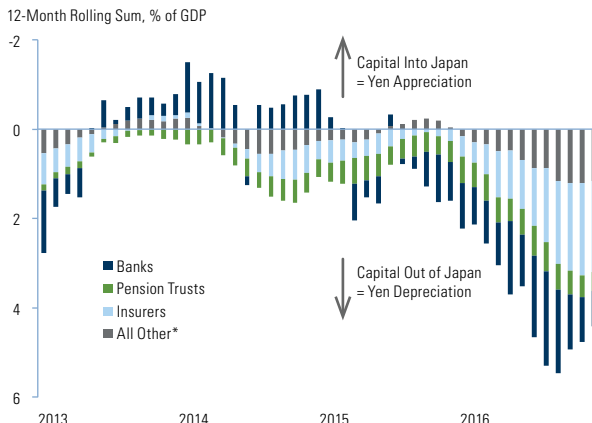
Such a move would narrow the interest rate differential between the US and Eurozone, weakening a linchpin of the weaker euro thesis.

Given this balance of risks, we removed our tactical short positions in the euro relative to the dollar following the November US presidential election, returning to a neutral view.

We should not lose sight of the fact that after such persistent weakness versus the US dollar, the euro is undervalued and investors are now positioned for further weakness.

Exhibit 74: Japanese Net Purchases of Foreign Long-Term Debt by Investor Type

Additional buying of foreign assets by Japanese investors could put further downward pressure on the yen.



Data through November 30, 2016.

Note: Q3 2016 data used to calculate Q4 2016 share of GDP.

Source: Investment Strategy Group, Haver Analytics.

* All Other defined as central banks, general government, financial instruments firms, investment trust management companies and others.

Yen

For yen investors, last year was a reminder that markets often take an escalator up but an elevator down. After steadily appreciating almost 20% against the US dollar over the first nine months of 2016, the currency forfeited those gains in just weeks after the surprising US presidential election. Although the net effect was a small 2.8% appreciation last year—breaking a four-year streak of yen weakness—we do not believe further yen strength is likely.

There are two reasons for this view. First, the BOJ will likely keep rates negative or close to zero this year by maintaining highly accommodative monetary policy. In turn, Japanese investors will continue to sell low-yielding domestic assets—placing downward pressure on the yen—in order to fund purchases of higher-yielding offshore assets (see Exhibit 74). Japan's Government Pension Investment Fund (GPIF)—which manages the world's largest public pension—is a case in point, as it will need to sell domestic fixed income assets to reach its stated targets for foreign investments. Similarly, Japanese life insurers may increase their exposure to foreign currencies if interest rate differentials between the US and Japan remain wide.

Second, Japanese corporations are likely to sell yen to invest in foreign operations with

better growth prospects, which will also place downward pressure on the Japanese currency; such announcements are already on the rise.¹¹⁰

This is not to suggest that the prospects for the yen are completely one-sided. The higher global rates we expect may make it difficult for the BOJ to maintain such low domestic yields, which would alleviate some of the downward pressure on the currency. Moreover, the many sources of global uncertainty in the year ahead could lead investors back into the yen as a liquid hedge, as we saw in the first half of 2016. Finally, after four years of weakness, the yen has reached undervalued levels.

Given this more balanced risk profile, we currently have no tactical position in the yen.

British Pound

While broader financial markets were unperturbed by the UK's decision to leave the European Union, the same cannot be said for currencies. Here, the Brexit vote sent the pound tumbling to its lowest level versus the US dollar since the 1985 Plaza Accord.¹¹¹ Although the pound has since recovered some of those losses, its 16.3% decline relative to the US dollar last year still ranks as the worst performance among all developed market currencies.

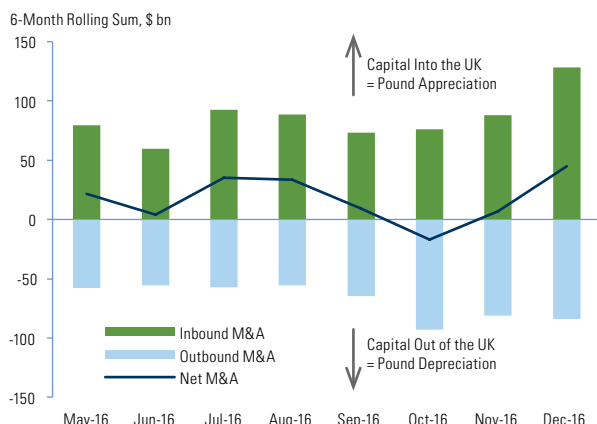
The trajectory of the pound will be largely shaped by the evolution of Brexit negotiations. Even though six months have passed since the vote, there is no greater clarity on how the UK will ultimately exit the European Union and on what terms. Clearly a combative stance could see the pound weaken further as the market discounts lower potential growth in the UK. Alternatively, a more conciliatory negotiating position could lead to upside from today's depressed levels.

Barring a hostile negotiating tack from the UK government, the pound also has several other factors working in its favor. First, foreigners continue to buy pounds to invest in UK-domiciled assets and firms, which is vital to funding the UK's sizable 5.2% of GDP current account deficit. In fact, one of the largest cross-border acquisitions last year was announced less than one month following the EU referendum.¹¹² Importantly, higher-frequency data shows this merger and acquisition (M&A) momentum is continuing (see Exhibit 75).

Second, the Bank of England may need to raise interest rates sooner than markets now expect, as erstwhile sterling depreciation is quickly feeding

Exhibit 75: UK Cash Merger and Acquisition Announcement Pipeline

Continued inbound M&A activity could benefit the pound.



Data through December 31, 2016.

Note: October 2016 outbound M&A adjusted to exclude stock portion of British American Tobacco's takeover of Reynolds.

Source: Investment Strategy Group, Bloomberg.

through to higher domestic inflation. In turn, higher UK interest rates would make sterling-denominated assets more appealing to foreign investors and support the currency.

Finally, while sterling certainly has scope to depreciate, market participants are already well-positioned for further weakness. Those positions may become vulnerable if the UK's negotiations with its trade partners turn more amicable and the domestic UK economy remains resilient.

With these upside risks being tempered by the unknowable evolution of Brexit negotiations for now, we see balanced risks for the pound this year and thus remain tactically neutral.

Emerging Market Currencies

Emerging market currencies caught a welcome updraft last year, following a 45% freefall since mid-2011. The flight was not without turbulence, however. Following a 12% rally in the first half of the year—reflecting a dovish shift in US monetary policy and waning fears about Chinese capital outflows—emerging market currencies hit an air pocket that erased much of these gains following the surprise outcome of the US elections.

We believe this downdraft is likely to persist. The prospect of higher US interest rates, a stronger dollar and China's bumpy deceleration spells tighter global financial conditions and a risk

of capital outflows from emerging markets—conditions that have historically constituted a stiff headwind to their currencies.

These risks are magnified by the uncertainty surrounding the incoming US administration's trade policies. Fears of protectionism have already negatively impacted the currencies of China and Mexico—the two largest sources of manufacturing exports to the US—with the peso and Chinese renminbi down 11.6% and 2.3%, respectively, since the election.

Even so, we do not think a broad tactical short in emerging market currencies is appealing at this stage. Despite the small rally last year, emerging market currencies remain attractively valued (see Exhibit 76), particularly given their enticing 5% yield differential to the US dollar. Moreover, the new US administration may prove to be more measured in its actions than its rhetoric—a non-negligible risk that could revive sentiment and improve prospects for emerging market currencies. The Mexican peso, in particular, could benefit in that event.

For now, we remain tactically positioned to benefit from further renminbi weakness given our long-standing concerns about China's economic vulnerabilities and the likelihood of looser policy, policy mistakes and capital outflows. The potential for US trade protectionism directed at China, though not our base case, would further benefit this position.

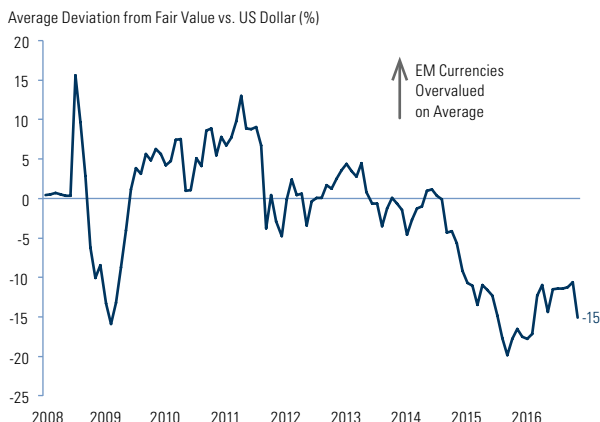
2017 Global Fixed Income Outlook

Last year witnessed a notable reversal of fortune for global interest rates. Despite reaching all-time closing lows shortly after the surprise Brexit vote, 10-year yields in developed markets had reclaimed much—if not all—of those declines by year-end. In the US, a more than one percentage point swing was sufficient to turn the 10-year bond's 9% gain into a loss.

While some have portrayed this reversal as just another setback in the now three-decade-old bond bull market, we are more skeptical. The policy mix that has depressed interest rates in the post-crisis period—a combination of fiscal austerity, negative or near-zero central bank policy rates and large-scale asset purchases—is losing favor, as even policymakers acknowledge the often counterproductive impact of these policies. At

Exhibit 76: Emerging Market Currency Valuation

Despite the recent rally, emerging market currencies remain undervalued against the US dollar.



Data through November 30, 2016.

Note: Average of Goldman Sachs Dynamic Equilibrium Exchange Rate, 5-year moving average, and Fundamental Equilibrium Exchange Rate misalignments of currencies in the JP Morgan Government Bond Index—Emerging Markets Global Diversified.

Source: Investment Strategy Group, Bloomberg, Datastream, Goldman Sachs Global Investment Research, Peterson Institute for International Economics.

Exhibit 77: Estimated Duration of US Bond Market

The bond market's sensitivity to rising rates is the highest on record.



Data through December 31, 2016.

Note: Based on the Barclays US Aggregate Bond Index.

Source: Investment Strategy Group, Bloomberg.

the same time, the recovery in commodity prices, recent firming in global growth and potential for expansionary fiscal policy are shifting the focus from deflation to reflation.

This shift in perspective arrives at a time when the market's vulnerability to rising rates is the highest on record (see Exhibit 77). Losses from these long-duration positions in response to higher rates could beget more bond sales, creating a vicious cycle. That yields are still extremely low by historical standards does little to assuage these fears. Consider that 10-year government bond yields in all G-7 countries have been higher at least 90% of the time since 1958. Given all the above,

we believe the ascent of interest rates remains in its infancy.

Still, it is important to differentiate between a normalization of interest rates and a disorderly backup. While we expect higher interest rates over the coming years, secular headwinds—like aging demographics and slower productivity growth—suggest the terminal point of that increase will be lower than the historical average. This fact is not lost on the Federal Reserve, which has reduced its estimate of the long-run equilibrium nominal rate—the rate consistent with full employment and stable inflation in the medium term—from 4.25% to 3% over recent years.

With a lower interest rate target to reach, the Federal Reserve is likely to proceed slowly, particularly given uncertainty around its estimate of the economy's equilibrium rate and lingering international risks. Even if the Federal Reserve were to raise rates three times in 2017, that pace would still be less than half of the historical median tightening pace.¹¹³ Thus far in this cycle, the Federal Reserve has raised rates only once per year.

Against this backdrop, we recommend investors favor credit over duration risk

For now, we remain tactically positioned to benefit from further renminbi weakness given our long-standing concerns about China's economic vulnerabilities and the likelihood of looser policy, policy mistakes and capital outflows.

by remaining overweight US corporate high yield credit versus investment grade fixed income and by funding various tactical tilts from their high-quality bond allocation. While most investment grade bonds may have uninspiring tactical prospects, we emphasize that investors should not completely abandon their bond allocation in search of higher yields. As the last several years have reminded us, investment grade fixed income serves a vital strategic role in the portfolio, due to its ability to hedge against deflation, reduce portfolio volatility and generate income.

In the sections that follow, we review the specifics of each fixed income market.

US Treasuries

While 2016 began as a bumper year for US Treasuries, it ended in a rout. The yield on 10-year Treasury bonds, for example, reached an all-time low of just 1.36% by the middle of last year before jolting higher by more than one percentage point by year-end. As a result, investors' nearly double-digit gains devolved into a small loss. Even worse, the bulk of the rate increase occurred in just the last three months of 2016, generating a 7% loss for the quarter that has been exceeded less than 1% of the time historically since 1981.

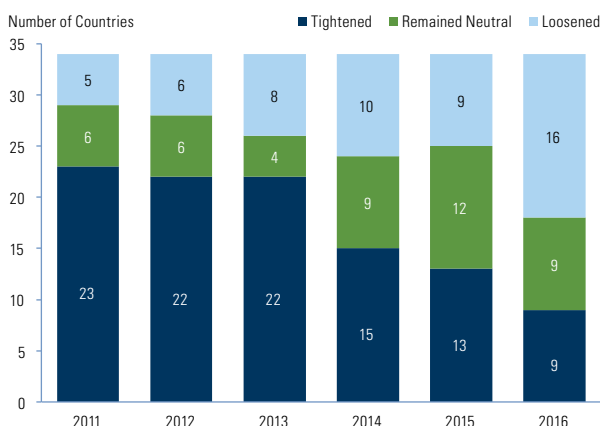
We expect rates to continue to increase, albeit at a slower pace in 2017, as many of the forces that have restrained yields are slowly fading. Inflation, in particular, has been a persistent drag, reflecting a toxic combination of excess labor slack that depressed wages, a strong dollar that lowered import prices and a significant decline in oil prices that weighed on breakeven inflation rates. But as we begin the eighth year of the US expansion, labor slack has been largely absorbed, evident in today's firming wages. Moreover, the impact of the dollar is diminishing as its pace of ascent slows, while the recovery in oil is boosting breakeven inflation rates.

Other headwinds are also receding. The fiscal austerity among the advanced economies that has dampened economic growth and decreased sovereign bond issuance—both of which depress interest rates—is now reversing (see Exhibit 78). Indeed, US fiscal spending is expected to add 0.3–0.5 percentage points to GDP growth in each of the next two years.¹¹⁴

At the same time, there is reduced demand for risk-free assets, like US Treasuries, given the unexpectedly sanguine reaction to negative

Exhibit 78: Fiscal Stance of Advanced Economies

Fiscal austerity in developed markets has reversed in recent years.



Data as of December 31, 2016.

Source: Investment Strategy Group, Bloomberg.

geopolitical events—such as the UK and Italian referenda—and the results of the US election. Finally, the deleterious impact of depressed interest rates on banking sector profitability has raised the hurdle for global central banks to cut interest rates further and/or increase the scale of QE programs. In turn, market focus has shifted toward the eventual tapering of BOJ, ECB and BOE accommodation, which has helped lift bond term premiums and boosted long-term yields (see Exhibit 79).

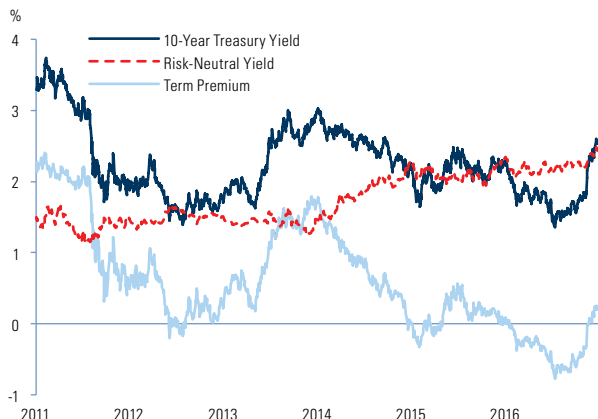
In light of these waning headwinds, the Federal Reserve is likely to hike two or three times in 2017, with upside risks from a larger than anticipated fiscal expansion. Combined with some further normalization in the term premium, we expect 10-year rates to increase to 2.50–3.00% by year-end. Given the balance of risks, we remain comfortable funding tactical tilts out of investment grade fixed income.

Treasury Inflation-Protected Securities (TIPS)

TIPS fared better than nominal bonds in 2016, delivering a positive mid-single-digit return. Their outperformance was driven by the recovery in breakeven inflation rates, which began the year at very depressed levels consistent with only 1.5% annual inflation over the next 10 years—well below long-run forecasts (see Exhibit 80). In fact, our work suggests that breakeven inflation rates were reflecting high odds of a deep recession over the course of 2016, well above the risk suggested by our recession models.

Exhibit 79: US 10-Year Yields and Term Premium

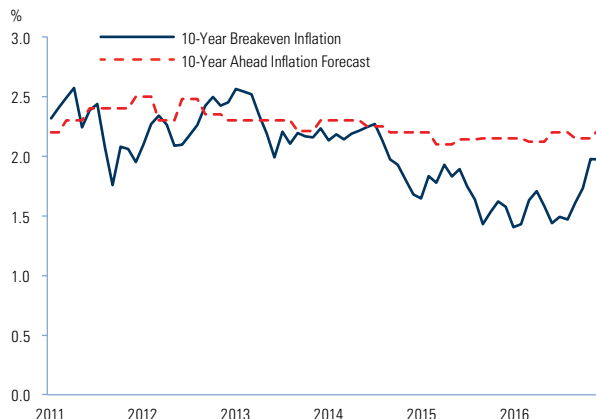
Expected tapering from major central banks has contributed to higher long-term yields and bond term premiums.



Data through December 31, 2016.
Source: Investment Strategy Group, Bloomberg.

Exhibit 80: US 10-Year Breakeven Inflation Rate and Consensus Inflation Rate Forecasts

TIPS benefited from a recovery in breakeven inflation rates in 2016.



Data through December 31, 2016.
Source: Investment Strategy Group, Bloomberg.

We think that breakeven inflation rates have further room to rise as the concerns that depressed them last year fade. First, oil prices are recovering, reversing the persistent drag they had exerted throughout much of early 2016. Second, wages are firming and fiscal policy is being eased, dampening deflation worries. Finally, recession odds are falling as the drag from oil weakness and dollar strength fades.

With breakeven inflation rates still below long-term consensus forecasts and the Federal Reserve's target, we expect positive total returns from TIPS in 2017. Still, TIPS' absolute returns are likely to be modest, as their eight-year duration will make it difficult for coupon income to meaningfully exceed principal losses as rates rise. Moreover, given TIPS' unfavorable tax treatment (discussed at length in our 2011 *Outlook*), we continue to advise US clients with taxable accounts to use municipal bonds for their strategic allocation.

We expect rates to continue to increase, albeit at a slower pace in 2017, as many of the forces that have restrained yields are slowly fading.

US Municipal Bond Market

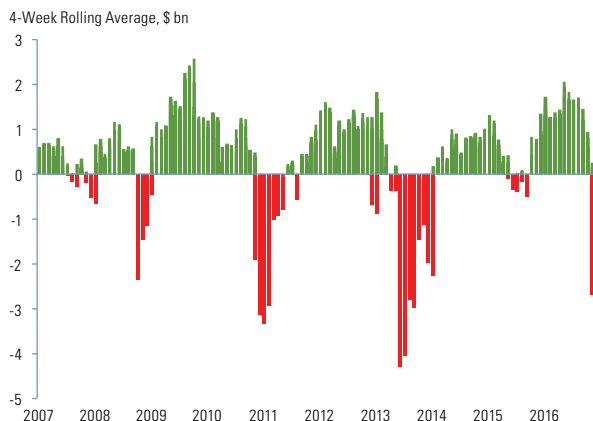
Municipal bond holders were not immune from 2016's about-face in US Treasury yields. Last October, municipal bonds were enjoying some of their best returns in years, only to be hit by losses arising from both rising interest rates and budding concerns about tax changes in the wake of the US presidential election. The abrupt redemptions of municipal bond mutual funds only exacerbated these losses, with the pace of outflows second only to the mid-2013 taper tantrum (see Exhibit 81). All told, municipal bonds suffered one of their worst years in recent history, with intermediate municipal bonds actually experiencing a rare loss (see Exhibit 82).

Unfortunately, the near-term outlook remains challenging. As Exhibit 81 reminds us, mutual fund flows tend to be sticky in this asset class, with persistent periods of both buying and selling depending on the trajectory of interest rates. Based on historical episodes, there is scope for the current string of outflows to extend further.

Moreover, clarity on tax policy will remain elusive for months, during which time headline risk will be significant. Even worse, a sizable reduction in the top individual tax rate for municipal bonds—if ultimately passed—could significantly shift the economics of owning them, leading to further sales. These fresh worries on tax policies

Exhibit 81: Municipal Bond Mutual Fund Flows

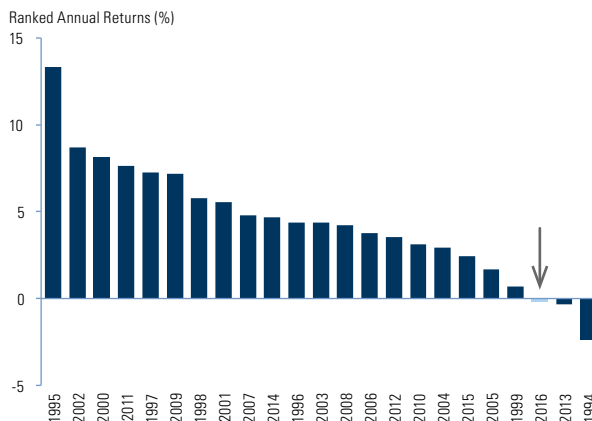
The pace of outflows at the end of 2016 was surpassed in recent history only by the 2013 taper tantrum.



Data through December 31, 2016.
Source: Investment Strategy Group, ICI.

Exhibit 82: Annual Municipal Bond Returns Since 1994

Intermediate municipal bonds experienced a rare loss in 2016.



Data as of December 31, 2016.
Source: Investment Strategy Group, Barclays.

only add to existing concerns about pension funding levels.

While there is clearly no shortage of risks, the silver lining to last year's rout is that we begin 2017 with a much larger valuation buffer to help absorb them. As seen in Exhibit 83, the ratio of municipal yields to Treasury yields is above average for both 5- and 10-year maturities. In turn, investors can currently earn an extra 70 basis points of after-tax yield by owning five-year municipal bonds instead of same-maturity Treasuries—a yield pickup more than double the post-crisis median of 31 basis points. Moreover, this incremental after-tax yield would still be around 50 basis points if the top individual tax on investment income were reduced by 10 percentage points—from 43.4% with the Affordable Care Act (ACA) tax to 33% under new policy recommendations. In short, municipal spreads currently offer a potential offset to rising rates and potential tax changes.

Also keep in mind that municipal fundamentals remain stable. Major state and local tax revenues have continued to increase at a moderate 3% pace, which should be supported by the above-trend US economic growth and rising home prices we forecast. Meanwhile, governments have exercised restraint on capital spending. Consider that net issuance expectations of \$30 billion for 2017 stand well below the pre-crisis 10-year annual average of \$110 billion.¹¹⁵ This restraint has not only kept

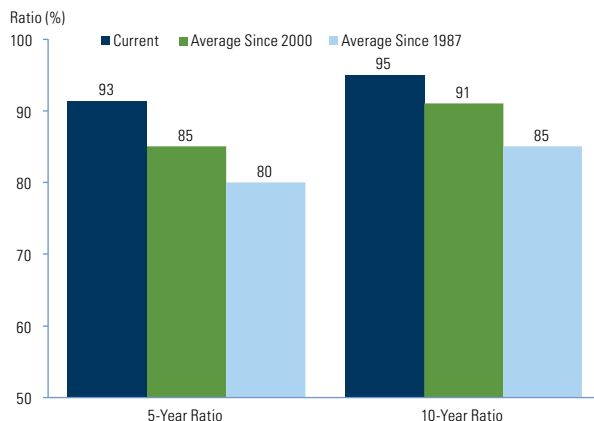
net supply low—as new issuance has been largely offset by maturing debt—but has also helped municipal finances. Ratings trends have improved as a result of both stable revenue and spending discipline, with upgrades in the Moody's universe seeing a notable uptick in last year's third quarter (see Exhibit 84).

Of course, underfunded long-term pension liabilities remain a source of concern. But with aggregate funding levels holding steady at around 74%, we do not think this will be a primary focus in 2017, particularly given last year's increase in stock prices. While rising equity values will do little to remedy municipals' inadequate funding contributions, they will help increase the value of pension assets. Moreover, these medium-term concerns are not the primary driver of recent municipal bond weakness. After all, today's funding levels are no worse than they were in October of last year, a time when municipal bonds were enjoying some of their best returns ever.

All told, we expect intermediate municipal strategies to gain about 1% in 2017. With this return close to that of cash but with more downside potential, we still think it makes sense for clients to fund various tactical tilts from their high-quality municipal bond allocation. This recommendation is motivated primarily by rate risk and not credit concerns, since we expect municipal defaults to be rare events. Outside of tilt funding, we recommend clients target their

Exhibit 83: Ratio of Municipal Bond Yields to Treasury Yields

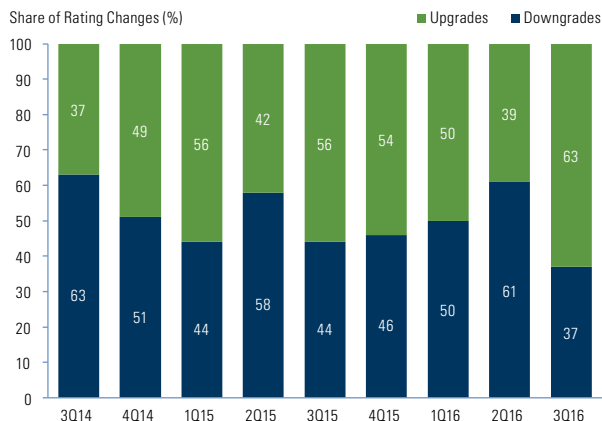
Current municipal bond yields offer a larger valuation buffer to absorb risks than in the past.



Data as of December 31, 2016.
Source: Investment Strategy Group, Bloomberg, Thomson MMD.

Exhibit 84: Municipal Issuer Rating Changes

Stable revenue and spending discipline have led to recent issuer rating upgrades.



Data as of Q3 2016.
Source: Investment Strategy Group, Moody's.

benchmark duration. Given their important portfolio hedging characteristics, municipal bonds should remain the bedrock of the “sleep well” portion of a US-based client’s portfolio.

The same can be said for high yield municipal bonds. Despite their almost 10-year duration, these bonds currently offer attractive spreads of close to 3%, a level that has been higher only 29% of the time since 2000. This spread provides a substantial buffer that could partially offset higher Treasury yields, enabling the high yield municipal market to deliver positive returns of around 4% in our base case. Therefore, we recommend clients stay invested at their customized strategic weight.

US Corporate High Yield Credit

Even for the bullish among us, last year’s 17% total return in corporate high yield was surprisingly strong. Not only was it the largest gain within US fixed income, but it also ranked among

While there is clearly no shortage of risks, the silver lining to last year’s rout in municipal bonds is that we begin 2017 with a much larger valuation buffer to help absorb them.

the top annual returns of all time for the asset class. What makes this performance even more impressive is that high yield was down about 5% at its worst point in early 2016.

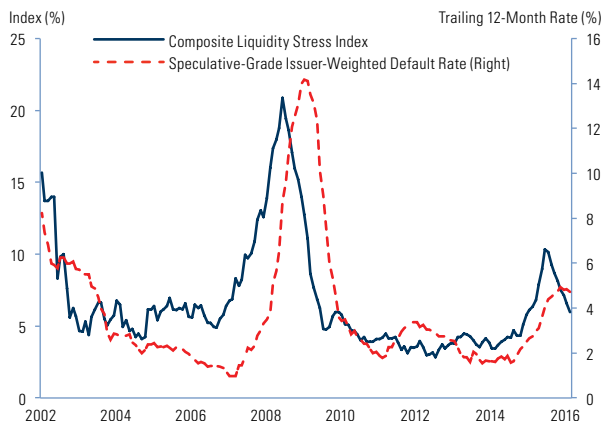
But these sizable gains have come at a cost. Spreads—which compensate investors for the risk of default losses—now stand well below their long-term average. In fact, the level of spreads has been lower only a third of the time in the last 30 years. Moreover, yields have fallen from above 10% early last year to less than 7% now, diminishing the allure of these bonds to investors searching for high returns.

Even so, we think the strong fundamentals underpinning the asset class still warrant an overweight, though returns are almost certain to be more modest going forward. At the heart of this stance is our benign view on default losses, which are the primary risk to high yield investors. Here, several factors support our below-historical-average 2.5% par-weighted default forecast for 2017.

First, high yield firms stand to benefit directly from the strengthening US economy we expect this year, considering almost three-quarters of their sales originate domestically.¹¹⁶ Second, leading indicators of defaults—such as Moody’s liquidity and covenant stress indexes—are trending downward, suggesting fewer speculative-grade companies are

Exhibit 85: Moody's Liquidity Stress Index and Default Rates

Leading indicators suggest the path of defaults for high yield is lower.



Data through November 30, 2016.

Note: Moody's Liquidity Stress Indexes fall when corporate liquidity appears to improve and rise when it appears to weaken.

Source: Investment Strategy Group, Moody's.

Exhibit 86: Cumulative US High Yield Debt Maturity by Year

Less than 10% of existing debt matures in the next two years.



Data as of December 31, 2016.

Source: Investment Strategy Group, JP Morgan.

experiencing liquidity problems or are at risk of breaching financial covenants. As seen in Exhibit 85, Moody's composite Liquidity Stress Index (LSI) began to deteriorate in advance of previous default cycles. Third, the commodity sectors of the high yield universe—which collectively generated a staggering 85% of last year's defaults—are recovering along with oil prices. Keep in mind that the par-weighted default rate excluding these sectors was just 0.5% last year, a fraction of the 3.2% long-run average.¹¹⁷ Finally, our default model—which incorporates the leading characteristics of the Federal Reserve's Senior Loan Officer Opinion Survey and the percentage of distressed bonds—is projecting 2–3% par-weighted defaults in the year ahead.

Other factors corroborate our low-default view. As seen in Exhibit 86, there is very little refinancing

risk given that less than 10% of existing debt matures in the next two years. Of equal importance, interest coverage stands near all-time highs today, in stark contrast to the period preceding the financial crisis (see Exhibit 87). This point is further illustrated by Exhibit 88, which shows that today's high yield universe is much healthier than the pre-crisis cohort, regardless of measure. Keep in mind that low-rated CCC bonds represented just 8% of high yield issuance last year, a 14-year low.¹¹⁸

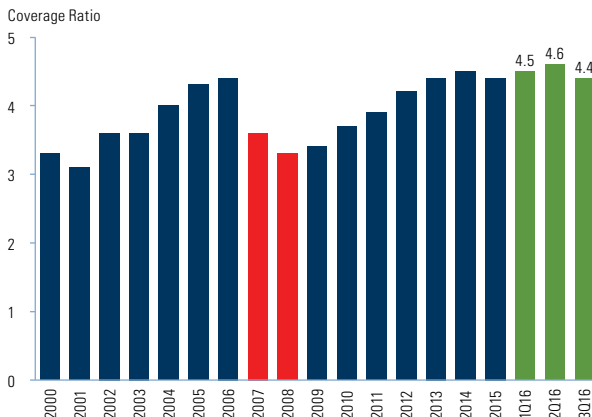
We also note that high yield may be a better interest rate hedge than many investors realize. Consider that during unexpected interest rate backups in the past, high yield has generated a positive return 69% of the time and a return that exceeded investment grade fixed income 85% of the time (see Exhibit 89). This last point is important, as our high yield overweight is funded out of investment grade fixed income.

High yield's hedging qualities were apparent last year, as the asset class appreciated nearly 7% in the second half of the year despite an increase in Treasury yields of more than 100 basis points. Although we assume that any further increase in 10-year Treasury rates this year will not be offset by high yield spreads, this historical relationship suggests that may be overly conservative.

We think the strong fundamentals underpinning US corporate high yield still warrant an overweight, though returns are almost certain to be more modest going forward.

Exhibit 87: High Yield Par-Weighted Interest Coverage Ratio

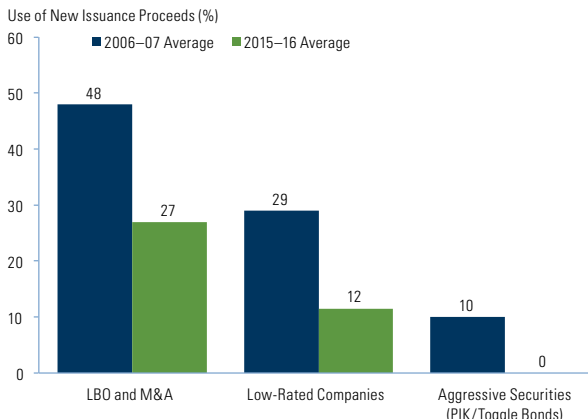
Interest coverage today stands near all-time highs, unlike the pre-crisis period.



Data through Q3 2016.
Source: Investment Strategy Group, Barclays.

Exhibit 88: Characteristics of US High Yield Issuance

Today's high yield universe is much healthier than the pre-crisis cohort.



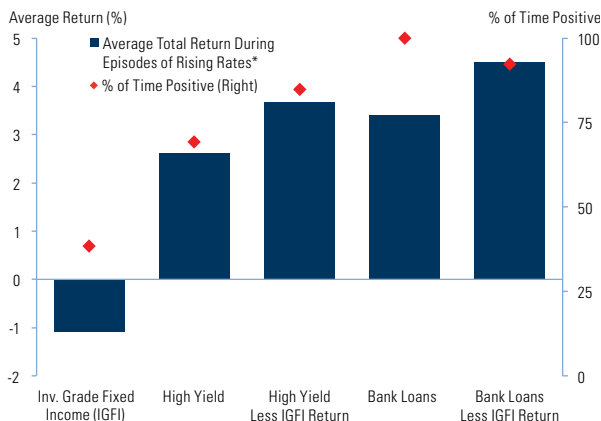
Data as of December 31, 2016.
Source: Investment Strategy Group, JP Morgan.

Of course, a more constructive view of high yield fundamentals does not necessarily suggest robust returns. In high yield bonds, today's below-average spreads already reflect our subdued default expectations and are less likely to offset any further increase in rates. We thus expect returns of around 4% in the year ahead. Although high yield energy is likely to generate similar gains, the potential upside is more significant given wider starting spreads and the potential for distressed bonds to pull to par amid higher oil prices. Finally, bank loans should perform marginally better than bonds with a 5% return, reflecting their attractive 0.25-year duration and continued investor demand for floating rates—a feature that is back in vogue now that 3-month LIBOR is almost above the 1% LIBOR floor that more than 90% of bank loans possess.

While these returns may pale in comparison to those of last year, they remain attractive relative to investment grade fixed income, where we expect rising rates to generate lower returns. Even if rates stagnate while US growth remains positive, the default-adjusted return in high yield should still trump high-quality bonds. Said differently, US corporate high yield credit remains a better house in a bad fixed income neighborhood, supporting our modest overweight recommendation.

Exhibit 89: High Yield Credit Performance During Periods of Rising Rates

High yield has historically outperformed investment grade bonds during episodes of rising rates.



Data as of December 31, 2016.
Source: Investment Strategy Group, Barclays, Credit Suisse.
* Defined as 5-year Treasury yield rising more than 70 basis points over a 3-month period.

European Bonds

Unlike their US counterparts, European fixed income markets did not forfeit all their gains by the end of last year. This served as a poignant reminder of how divergent monetary policies can shape returns. Three ECB actions in March drove this robust relative performance. First, the ECB reversed its prior commitment to avoid

further rate cuts and lowered the deposit rate to -0.40%. Second, it increased the size of its asset purchase program from €60 billion to €80 billion per month, effectively buying more Eurozone bonds each year than are actually issued (see Exhibit 90). Finally, it continued to limit its buying to bonds with yields above the deposit rate, which concentrated its purchases toward long-maturity bonds.

These measures created an extreme scarcity effect in long-term German bunds, as investors scrambled to buy today for fear of even lower interest rates tomorrow. In response, German 10-year rates fell to an all-time low of -18 basis points in July of 2016. During these same summer months, all German government bonds with less than a 15-year maturity offered negative yields.

However, monetary policy does not operate in a vacuum. With negative interest rates impairing the profitability of the European banking system, the ECB has already begun to alter its policy mix. At its December 2016 meeting, the ECB reversed the increase in asset purchases mentioned above, targeting €60 billion per month for the upcoming March–December 2017 period. Moreover, it lifted the restriction on purchasing bonds with yields below the deposit rate, alleviating the scarcity premium attached to long-maturity bonds meeting this criterion. While these adjustments are well short of QE “tapering,” they have shifted the market focus toward the eventual end of asset purchases and the timing of the first ECB rate hike—currently priced for late 2018.

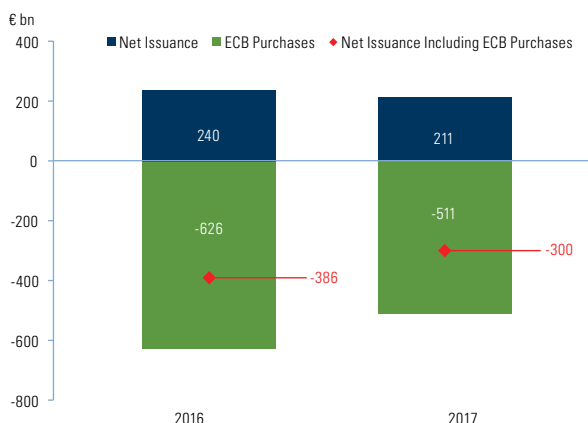
With less ECB policy pressure on long-maturity bonds, coupled with continued above-trend Eurozone growth and some further normalization in global term premiums, we expect 10-year bund yields to increase to 0.5–1.0% by the end of 2017. While overall peripheral bond spreads should be mostly range-bound in 2017, political woes in Italy and France pose upside risks to the spreads of those countries.

In the UK, we expect gilt yields to reach 1.5–2.25%. Here, persistently high headline inflation induced by the depreciation of sterling and a less-than-feared economic drag from Brexit thus far could encourage the BOE to unwind a portion of the preemptive easing it deployed in response to the surprise referendum vote.

Given this outlook and today’s still depressed bond yields, we remain underweight UK and Eurozone government bonds for European

Exhibit 90: European Government Bond Issuance and ECB Purchases

ECB buying is outpacing net issuance of Eurozone bonds.



Data as of December 31, 2016.

Source: Investment Strategy Group, JP Morgan.

investors. After all, just a 2 basis point increase in German 10-year bund yields generates a capital loss sufficient to offset an entire year of income. That said, we should not confuse an underweight with a zero weighting, as European clients should retain some exposure to German bunds and other high-quality Eurozone bonds in the “sleep-well” portion of their portfolios. These high-quality bonds would provide an attractive hedge in the event of a Eurozone recession or the return of deflationary concerns.

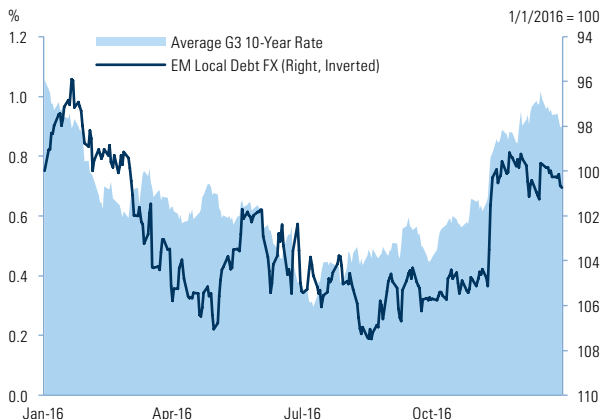
Emerging Market Local Debt

Last year’s 10% return for emerging market local debt (EMLD) provided some solace to those who have suffered through nearly three years of losses totaling more than 30%. But investors had to endure considerable volatility to realize this gain, as returns fluctuated between -4% and +18% in 2016. In fact, the asset class lost roughly 5% in just the last two months of the year.

This last point is important, since many of the tailwinds that drove EMLD’s strong returns in the first half of 2016 reversed toward year-end and are likely to impact the asset class again in 2017. Here, we refer specifically to the resumption of Federal Reserve rate hikes, renewed US dollar appreciation and a resumption of Chinese renminbi depreciation against the dollar. Just as falling global interest rates helped the asset class for the first part of 2016, so too should the rising rates we expect

Exhibit 91: EM Local Debt Currencies and Developed Market Interest Rates

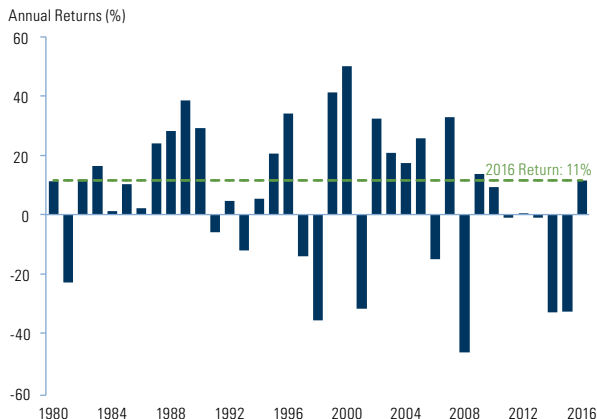
Rising global interest rates would be a headwind to EM local debt.



Data through December 31, 2016.
Source: Investment Strategy Group, Bloomberg, Datastream.

Exhibit 92: S&P Goldman Sachs Commodity Total Return Index

Commodities generated their first double-digit return since 2009.



Data through December 31, 2016.
Source: Investment Strategy Group, Bloomberg.

represent a headwind this year (see Exhibit 91). Meanwhile, any boost to emerging market exports from the modest pickup in global growth we expect is likely to be dwarfed by ongoing US trade policy uncertainty, European political risk and China fears. Lastly, an acceleration of recent outflows from EMLD markets could magnify these risks, particularly since 60% of the cumulative inflows into the asset class since 2004 are experiencing losses at current market levels.

Although the number of concerns is large, so is the risk premium of the asset class. As previously seen in Exhibit 76, the currencies in the EMLD index are 15% undervalued. From this starting point, the asset class could deliver attractive total returns if US trade policy proves to be more benign than feared and China worries abate.

Considering this balance of risks, our central case calls for low single-digit returns. While positive, this return is not sufficient to justify a tactical long position in EMLD in our view, given the still considerable downside risks discussed above.

Emerging Market Dollar Debt

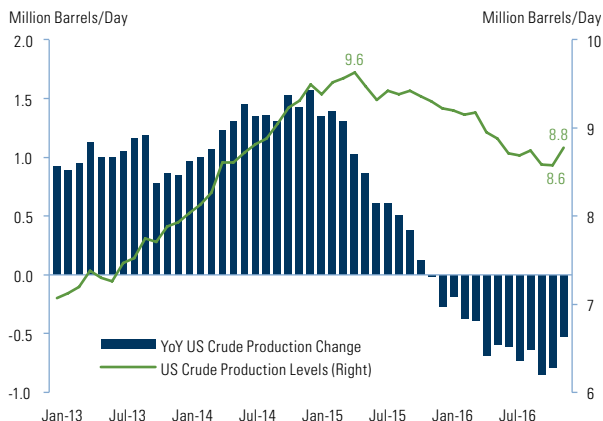
Emerging market dollar debt (EMD) returned 10% in 2016, capping a surprising four-year period of outperformance that has greatly benefited from stable US rates and dollar strength. But the prospects for a fifth year of upside are questionable for several reasons.

First, EMD's almost seven-year duration is a liability in a rising-rate environment. This is particularly true now that the Federal Reserve has resumed tightening policy, a fact evident in EMD's 4.3% drop in response to increasing rate hike expectations late last year. Second, with spreads standing near two-year lows, there is scope for spread widening based on US and European policy uncertainty and renewed China growth fears. Third, countries accounting for 37% of EMD—including Mexico, China, South Africa and Brazil—have negative outlooks from at least two rating agencies, raising the potential for downgrades.¹¹⁹ A potential default by Venezuela and its national oil company could also sour sentiment, as could unfavorable tariffs or trade restrictions from the new US administration. Finally, the backup in interest rates we expect could raise funding costs for EM corporate issuers, which could also heighten concerns about spillover into EMD. Indeed, a recent stress test by Standard & Poor's revealed that EM corporate borrowers—who must repay \$200 billion per year through 2020¹²⁰—are twice as susceptible to downgrades as US corporates if dollar funding costs rise by a third.¹²¹

Based on the above, we do not recommend a tactical position in EMD at this time.

Exhibit 94: US Crude Oil Production

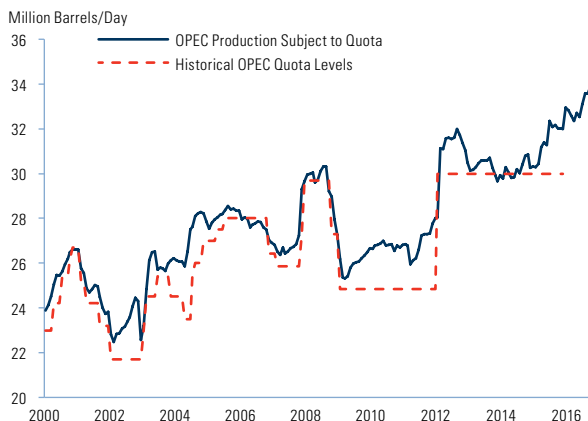
Supply has stabilized after declining by 1 million barrels/day from its peak.



Data through November 30, 2016.
Source: Investment Strategy Group, US Department of Energy.

Exhibit 95: OPEC Crude Oil Production

OPEC producers have exceeded their quota 90% of the time since 2000.



Data through November 30, 2016.
Source: Investment Strategy Group, Bloomberg.

2017 Global Commodity Outlook

After losing more than half its value in the span of two years, the S&P GSCI broke its downward trend with an 11% gain in 2016, its first double-digit return since 2009 (see Exhibit 92). The rebound in oil prices was a key contributor, as oil finished the year with a staggering 52% spot price gain—an outcome made all the more remarkable by the fact that oil was down 25% at its worst point early last year. This strength was not limited to the oil patch, as industrial metals rallied 17% on average and precious metals advanced 8% (see Exhibit 93).

Despite last year's broad-based gains, we are more circumspect about the outlook for 2017. While we expect oil to advance, it begins the year closer to the midpoint of our target range,

providing a more balanced risk/reward profile. Meanwhile, we believe the key elements of our macroeconomic forecast—Federal Reserve tightening, rising interest rates, modest US dollar gains and average inflation—represent continued headwinds to gold prices. Comparable headwinds exist for industrial metals and agricultural goods, given the continued slowdown we expect in Chinese growth.

We discuss the specifics of our outlook for oil and gold in the sections that follow.

Oil: Regaining Its Balance

Oil is finding its footing again after having stumbled dramatically over the last two years. While the market is still awash in oil inventories, the sizable reductions in capital expenditures by the largest international oil and gas companies

Exhibit 93: Commodity Returns in 2016

Most commodity subcomponents saw positive returns in 2016, reversing several years of declines.

	S&P GSCI	Energy	Agriculture	Industrial Metals	Precious Metals	Livestock
Spot Price Average, 2016 vs. 2015	-10%	-14%	0%	-6%	8%	-17%
Spot Price Return	28%	48%	3%	19%	9%	-10%
Excess Return*	11%	18%	-5%	17%	8%	-8%

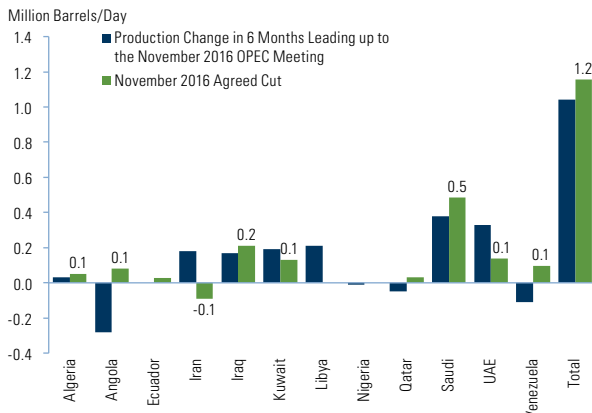
Data as of December 31, 2016.

Source: Investment Strategy Group, Bloomberg.

* Excess return corresponds to the actual return from being invested in the front-month contract and differs from spot price return, depending on the shape of the forward curve. An upward-sloping curve (contango) is negative for returns, while a downward-sloping curve (backwardation) is positive.

Exhibit 96: OPEC 2016 Production Cut Agreement and Recent Changes

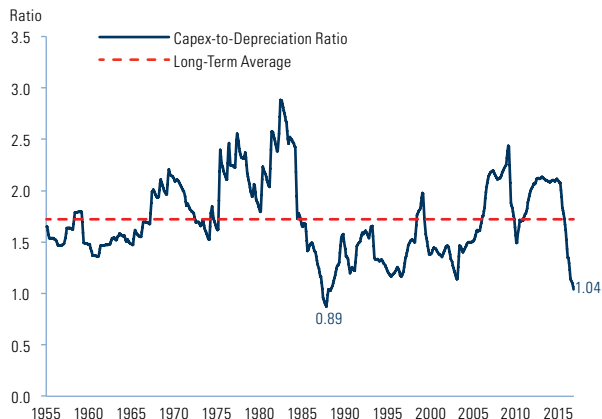
If fully implemented, OPEC's proposed cut would reverse production growth from the prior 6 months.



Data as of November 30, 2016.
Source: Investment Strategy Group, Bloomberg, OPEC.

Exhibit 97: US Energy Sector Ratio of Capital Spending (Capex) to Depreciation

Low capex levels suggest there is upside to investment.



Data through September 30, 2016.
Source: Investment Strategy Group, Empirical Research Partners.

suggest the transition toward a balanced market is underway. The same could be said for the dramatic cuts in US drilling budgets, which have precipitated notable declines in US shale output (see Exhibit 94). Lower oil prices have also supported above-average global demand growth, helping to absorb excess inventories. Lastly, OPEC agreed to lower production in November 2016, while also securing a promise from its significant non-OPEC counterparts to do the same. Taken together, these developments support our forecast for moderately higher oil prices in 2017.

This balancing act is still precarious, however. Oil inventories stand well above seasonal averages, so failure to honor the announced production cuts could delay the recovery in oil prices or, even worse, cause renewed declines. The risk of poor compliance is not trivial, given that producers have exceeded their quota 90% of the time by an average of 1 million barrels per day (mmbd) since 2000 (see Exhibit 95). The pledges from Russia and certain smaller non-OPEC producers are particularly suspect, as similar promises to cut their

own output along with OPEC have been broken in the past.

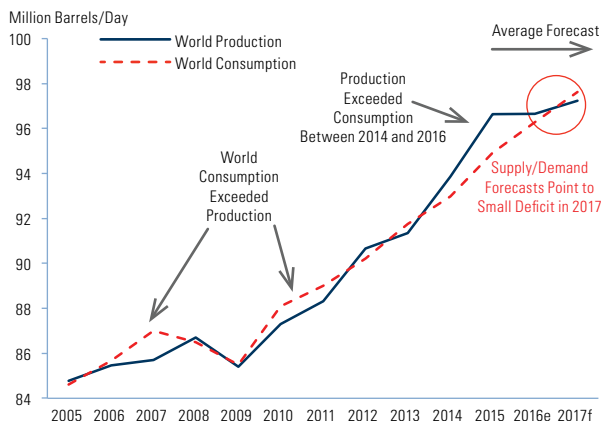
Moreover, while the announced cuts are significant—the OPEC agreement would reduce production by up to 1.2 mmbd, equivalent to about one year of average global demand growth—they are largely a reversal of production growth seen over the last six months (see Exhibit 96). Meanwhile, Libya and Nigeria were excluded from these new OPEC quotas given sizable domestic disruptions that have depressed their production. Recent signs of improvement, however, suggest a rebound in their production cannot be dismissed. Therefore, the announced cuts are not a panacea to the current oil imbalance, particularly if US shale output increases meaningfully in response.

This last point is important, as US shale accounted for 60% of global production growth between 2012 and 2015 despite representing less than 5% of the total output. Although US production is now declining, two factors may arrest its slide in 2017. First, the breakeven price for shale drilling has fallen to an average of \$50 per barrel, reflecting a 20% decline in production costs and improvements to the shale model, including faster drilling, larger wells and better resource recovery. In response, more than 200 oil rigs have been placed in service since their number troughed in May 2016.¹²² Second, capital spending by the US energy sector is

Oil is finding its footing again after having stumbled dramatically over the last two years.

Exhibit 98: Full-Year Average Global Crude Oil Supply and Demand

Oil consumption in 2017 could exceed supply for the first time since 2013.

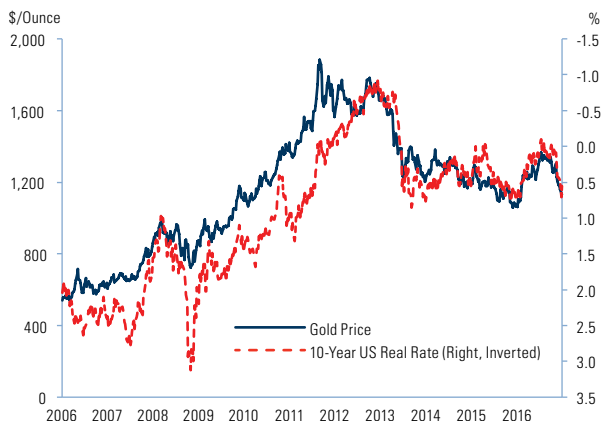


Data through December 31, 2016.

Source: Investment Strategy Group, Goldman Sachs Global Investment Research, International Energy Agency, OPEC, US Department of Energy, Energy Aspects, PIRA, Bloomberg, Barclays, JP Morgan.

Exhibit 99: Gold Prices and US 10-Year Real Interest Rates

Gold prices and real interest rates are closely linked.



Data through December 31, 2016.

Source: Investment Strategy Group, Bloomberg.

very depressed despite the recent uptick in rigs, providing scope for further increases (see Exhibit 97). As a result, we expect shale production to recover in 2017, partially offsetting cuts elsewhere.

Despite these potentially destabilizing forces, we still think the oil market can swing to a small deficit this year. While lower input costs create upside risks to US shale production, these costs are highly correlated with oil itself. As a result, today's \$50 average breakeven level for shale is likely to move higher with oil prices, limiting the rebound in US production. Moreover, even if just half of the proposed production cuts are realized, our work suggests the oil market will still switch into a deficit this year. Finally, OPEC spare capacity has been largely exhausted by the production increases of the last year, while Iran's production has now returned to pre-sanction levels. In turn, the risk of another disorderly market-share battle has declined significantly.

Against this backdrop, we expect oil supply growth to moderate and enable oil demand to again exceed oil production, creating the first deficit since 2013 (see Exhibit 98). With balance restored, we expect oil to trade in a \$45–65 range in the year ahead. Thus we continue to recommend an overweight to US high yield energy bonds and US MLPs.

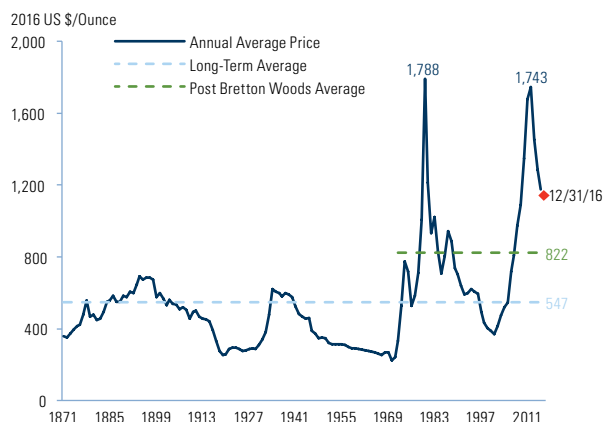
Gold: Still Searching for Its Luster

Gold was not immune from the reversal of fortune that befell interest rates last year, reminding us that their fates are fundamentally linked (see Exhibit 99). Put simply, higher interest rates raise the opportunity cost of holding gold, since the yellow metal generates no cash flow and must be physically stored, often at a cost. A similarly inverse relationship exists with the US dollar, as investors often purchase gold as a hedge against the debasement of fiat currencies; gold has traded inversely to the dollar index 73% of the time on an annual basis over the last 40 years.

Given these relationships, we believe the key elements of our macroeconomic forecast—Federal Reserve tightening, rising interest rates, modest US dollar gains and average inflation—will represent headwinds for the yellow metal in 2017. Keep in mind that gold prices have declined in four of the last five Federal Reserve tightening cycles, with the only exception occurring during a period of dollar weakness in the mid-2000s. Based on these precedents, our expectation of two or three Federal Reserve rate increases in 2017 does not bode well for gold prices.

Exhibit 100: Average Annual Gold Prices

Gold remains expensive relative to its inflation-adjusted long-term average price.



Data through December 31, 2016.
Source: Investment Strategy Group, Bloomberg.

The same could be said of continued outflows from gold exchange-traded funds (ETFs). We estimate that a net 280 tonnes of gold ETF holdings—an amount even larger than the 210 tonnes of ETF outflows that pressured gold prices in late 2016—were purchased over the past year at levels above today's price. Absent a rebound in gold prices, these ETF holders might prefer to realize their losses and rotate into instruments with a yield component. Value-minded investors should also consider that gold remains well above its long-term average price (see Exhibit 100).

Despite this challenging outlook, a number of factors could still buoy gold prices in the year ahead. Emerging market central banks have continued to buy gold to diversify their reserves. Moreover, the stronger global growth we expect could lift jewelry demand, particularly in gold's two largest end markets—China and India. Finally, gold's allure as an inflation hedge could come back into focus if the market begins to worry about economic overheating in the US, although this is not our base case.

In light of these crosscurrents, we are tactically neutral on gold at this time.

In Closing

WE DO NOT BELIEVE THE COMING YEAR WILL BRING AN END to the prolonged run of positive performance for either the US economy or the bull market for equities. Despite greater uncertainties, including those tied to a new US administration, the policy backdrop in the US will likely prove particularly favorable for the economy, with looser fiscal policy, still easy monetary policy and a lighter regulatory burden. As these factors diminish the probability of recession in 2017, they also support the case for clients remaining invested in global equities at their strategic allocation. We believe US equity gains are likely to be modest but still more attractive than the comparable returns of investment alternatives such as cash and bonds. And, as last year demonstrated, US equities often surprise to the upside.

While we see the glass as half-full, there is no shortage of risks—some of which have high probability and uncertain impact for the year ahead—that could cause our forecasts for the economy and asset class returns to miss the mark. As always, we will adjust and communicate our views accordingly should the economic, financial or geopolitical backdrop change materially over the course of 2017.

Abbreviations Glossary

ACA: Affordable Care Act

BEA: Bureau of Economic Analysis

BIS: Bank for International Settlements

BLS: Bureau of Labor Statistics

BOE: Bank of England

BOJ: Bank of Japan

CAGR: compound annual growth rate

CDS: credit default swap

CFO: chief financial officer

CFTC: Commodity Futures Trading Commission

CPI: consumer price index

EAFF: Europe, Australasia and the Far East

ECB: European Central Bank

EM: emerging market

EMD: emerging market dollar debt

EMLD: emerging market local debt

EMEA: Europe, the Middle East and Africa

EMU: European Monetary Union

EPS: earnings per share

ETF: exchange-traded fund

FTSE: Financial Times Stock Exchange

FX: Foreign Exchange

GBP: British pound

GDP: gross domestic product

GFC: global financial crisis

GIR: [Goldman Sachs] Global Investment Research

GPIF: Government Pension Investment Fund

GSCI: Goldman Sachs Commodity Index

IGFI: Investment grade fixed income

IMF: International Monetary Fund

ISIL: Islamic State of Iraq and the Levant

ISM: Institute of Supply Management

JGB: Japanese government bond

LBO: leveraged buyout

Libor: London interbank offered rate

LSI: Liquidity Stress Index

M&A: merger and acquisition

MLP: master limited partnership

mmbd: million barrels per day

MSCI: Morgan Stanley Capital International

NAHB: National Association of Home Builders

NATO: North Atlantic Treaty Organization

NBER: National Bureau of Economic Research

NIPA: national income and product accounts

NIRP: negative interest rate policy

OECD: Organisation for Economic Co-operation and Development

OPEC: Organization of the Petroleum Exporting Countries

PBOC: People's Bank of China

PCE: personal consumption expenditures

PE: price to earnings

PPI: Producer Price Index

PPP: purchasing power parity

QE: quantitative easing

S&P: Standard and Poor's

TIPS: Treasury Inflation-Protected Securities

TOPIX: Tokyo Price Index

UK: United Kingdom

US: United States

VAT: value-added tax

YoY: year-over-year

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