Outlook

Goldman Sachs

Investment Management Division

The Last Innings

"It ain't over till it's over."

Yogi Berra (1925-2015), American Baseball Legend

Sharmin Mossavar-Rahmani
Chief Investment Officer
Investment Strategy Group
Goldman Sachs

Brett Nelson
Head of Tactical Asset Allocation
Investment Strategy Group
Goldman Sachs

Additional Contributors
from the Investment
Strategy Group:

Matthew Weir
Managing Director

Maziar Minovi
Managing Director

Farshid Asl
Managing Director

Overview

FROM ITS TROUGH IN MARCH 2009, THE S&P 500 INDEX has returned 249% through yearend 2015. US GDP is 14.4% higher and going into 2016, we see no recession on the horizon. This bull market is the third-longest since WWII and this economic recovery is the fourth-longest. The US has become the largest producer of oil and natural gas liquids globally, substantially reducing a historic reliance on the tinder box that is the Middle East. The US private sector has deleveraged significantly and the gap between the US and the rest of the world continues to widen across human capital, economic and financial market metrics. Over this recovery, the US budget deficit has decreased from a high of 9.8% of GDP to 2.5%. The trade-weighted dollar measured against the major currencies has rallied 38% since its trough on May 2, 2011. The country remains the number one destination for immigration and its pace of innovation remains unparalleled. The list goes on.

Notwithstanding the positive data, many are unconvinced about the solidity the economic recovery and the underpinnings of this bull market. The naysayers believe that secular forces have constrained and will continue to hold back the US economy and its profit-generating capabilities. The Federal Reserve's interest rate increase last December, the first in nearly a decade, has further stoked such concerns. We take a more optimistic view. While this recovery has been the slowest of all post-WWII recoveries, we believe that it is not secular stagnation, but rather cyclical forces that account for its slow pace. These cyclical forces have now largely dissipated. Furthermore, when the Federal Reserve has historically acted early in launching a tightening cycle, such action has typically steered the economy away from a recession. We expect continued steady economic growth which will, in turn, support mid-single-digit core earnings growth.

We therefore recommend our clients stay invested at their strategic allocation to US equities. We expect modest single-digit returns for a moderate-risk, well-diversified portfolio given current equity valuations and the level of interest rates. As always, there are risks that could derail the recovery and end this bull market, but we are cautiously optimistic that the economy can withstand at least small shocks.

In the first section of this *Outlook*, we provide our perspective on why the US economy is on a more solid footing than generally believed and reflected in published GDP and productivity data. We review our return expectations for the next one and five years, along with our tactical tilt recommendations. We also elaborate on the key risks of 2016. In the next two sections of the *Outlook*, we provide our economic and investment outlook for major developed and emerging markets.

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The Last Innings

WHEN US EQUITIES, AS MEASURED BY THE S&P 500 INDEX, entered the 9th decile of our valuation metrics in the fall of 2013, our clients began to ask if the bull market had run its course and if it was time to reduce portfolio allocations to equities. We continued to recommend that clients remain fully invested at their customized strategic allocation. Between October 31, 2013, and December 31, 2015, the market generated a cumulative total return of 21.8%. As we enter 2016, stocks remain in the 9th decile, as earnings have roughly kept pace with equity prices. Clients are again asking: How long can this bull market go on?


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As fans of baseball know, a game typically lasts nine innings, but can extend well beyond that in the event of a tie. In the American League, the longest game by innings was a 1984 contest between the Chicago White Sox and the Milwaukee Brewers that went 25 innings. In the National League, the longest game by innings was a 1920 game between the Brooklyn Dodgers (now the Los Angeles Dodgers) and the Boston Braves (now the Atlanta Braves) that went 26 innings, or the equivalent of nearly three games. And in the International League, one of baseball's minor leagues for developing players, the longest game was a 1981 game between the Pawtucket Red Sox and the Rochester Red Wings that lasted a whopping 33 innings. Just because most games end after nine innings does not mean all do.

So it is with bull markets. The current bull market has lasted 81 months and provided a total return of 249%. It has exceeded all but two bull markets in length and all but three in amplitude, as shown in Exhibit 1. Longevity and level of returns alone are not sufficient to signal the end of the bull market. Indeed, we remain cautiously optimistic that there are a few innings left in this bull market. But of course, we cannot be certain of the number of innings nor the final score. As discussed below, our optimism stems from our view that worries about secular stagnation are overstated, the cyclical impact of the global financial crisis has been underappreciated, and the drag from innovation is being understated. The economy is on a more solid footing than is widely believed.

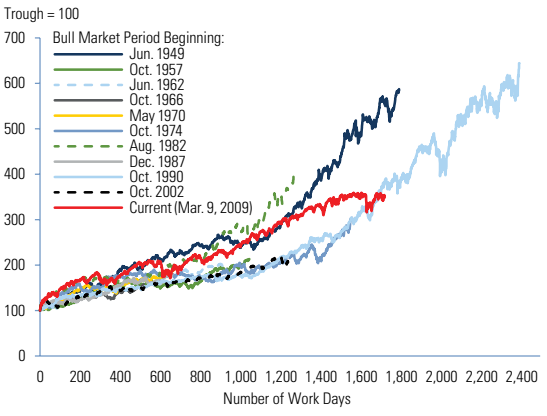
The key question now is whether we will remain in the 9th decile with modest returns or rally to the 10th decile with strong returns. There are a number of factors that lead us to be much more cautious than we were in 2013. In our 2015 *Outlook* report, *US Preeminence*, we highlighted a number of low-probability risks that we now believe are more likely to play a role in the year ahead. For example, a year ago we believed that a disruptive tightening of monetary policy by the Federal Reserve was a low-probability risk. We are more concerned about this risk, since the pace of tightening implied by the Treasury yield curve is slower than we expect. Market participants are skeptical about the need to tighten in the current environment of deflationary impulses from emerging markets, continued downdrafts in commodities—especially oil—and an uncertain economic outlook. Should the Federal Reserve tighten at our expected pace, both equity and fixed income markets may overreact.

Another low-probability risk we discussed was a hard landing in China; we still believe that it is a low-probability risk, but we expect China to be a source of greater volatility in 2016 due to its slower growth and likely currency depreciation.

Similarly, the conditions that led to tactical opportunities in 2015 are now creating meaningful risks for 2016. For example, last year we recommended a tactical tilt to the dollar based on the expectation of diverging monetary policy between the Federal Reserve (tightening) and the European Central Bank, the Bank of Japan and the People's Bank of China (easing). In 2016, continuing dollar appreciation may well tighten financial conditions too much, further stymying US exports and the overseas earnings of US multinationals.

Exhibit 1: Returns Over US Equity Bull Markets

The current bull market has exceeded all but two in length and three in amplitude.



Data through December 31, 2015.
Note: Based on the S&P 500 Index.
Source: Investment Strategy Group, Bloomberg.

We remain cautiously optimistic that there are a few innings left in this bull market. But of course, we cannot be certain of the number of innings nor the final score.

Similarly, a decline in crude oil prices provided a tactical opportunity a year ago, whereas today further declines in oil prices from current low levels pose a default risk to the high yield energy and master limited partnership (MLP) sectors.

We believe the strong underlying fundamentals of the US economy justify mid-single-digit ex-energy earnings growth and modest single-digit equity returns in 2016. But we should take stock of those risks that could derail this recovery and bull market. We are entering the seventh year of the recovery, and the Federal Reserve has embarked upon a tightening path—albeit at a gradual pace. We expect the global economic backdrop in 2016 to be broadly unchanged from that of 2015, with slightly more risk to the downside.

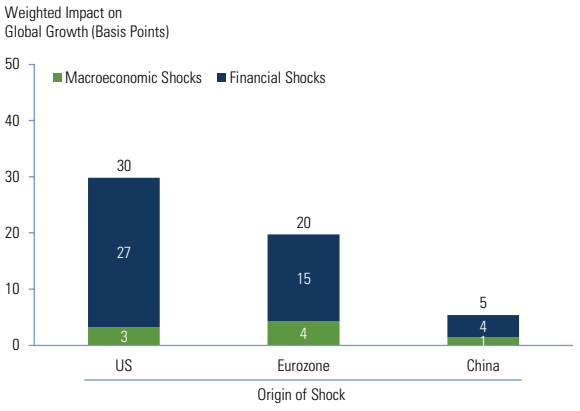
The pace of economic growth in the US since the global financial crisis has been a chief concern of many market participants. This has been the slowest economic recovery in the post-World War II period. Many economists contend that the US economy has been hampered by secular forces that will permanently lower trend growth in the US. These forces include lower productivity growth, lower capital investment, changes in savings habits and a mismatch between the labor skills required by growing companies and those offered by the workforce. Those who hold the view that the US economy is in an era of secular stagnation add that not only do these forces lead to a weak economy, they also make the US more susceptible to external shocks.

The issues surrounding the topic of secular stagnation bear on our economic outlook, on the path of interest rates, on the vulnerability of the economy to external shocks and on the long-term earnings growth potential of US equities. If the US economy were ailing from secular stagnation, our outlook for growth and equities would be grim. If, on the other hand, the pace of this recovery is slower than usual because of the confluence of cyclical factors and likely mismeasurement issues, a cautiously optimistic view of growth and equities is warranted.

We focus on the US economy for two reasons. Not only is it the world's largest economy—with a GDP of $18 trillion, a 24% share of global GDP and 53% share of global equities as measured by the MSCI All Country World Index—but changes in US growth rates have the biggest impact on other countries. In an International Monetary Fund (IMF) report on the spillover effect of a 1% change in GDP in one economy on other economies and financial markets, the US has 50% more impact than the Eurozone and nearly six times the impact of China, as shown in Exhibit 2.[1]

Exhibit 2: Global Spillover Effects from a 1% GDP Shock

Changes in US growth rates have the biggest impact on other economies.



Data as of 2012.
Note: Analysis based on individual country data representing 81% of global GDP.
Source: Investment Strategy Group, IMF.

We begin this introductory section with a review of the key themes underpinning the secular stagnation view and provide our assessment of each. We examine these themes in the context of the current recovery and show why, in our view, such pessimism is not justified. We then turn to our one- and five-year return expectations, and conclude the introductory section with the risks to our outlook. We provide our economic outlook for 2016 for the US, Eurozone, Japan, UK and emerging markets in the second section, followed by our financial market outlook for equities, currencies, bonds, oil and gold in the third and final section.

Secular Stagnation and the Productivity Debate

The term "secular stagnation" was first coined by the economist Alvin Hansen in 1934[2] and fully described in his presidential address to the American Economic Association in 1938.[3] He believed that the economic problems of the 1930s were not simply caused by a cyclical slowdown but attributable to three factors that led to secular stagnation: a "rapid decline in population growth";

"no important areas left for exploitation and settlement," referring to American expansion west to the "new territories" in the 19th century; and "failure of any really important innovations." He concluded that "the essence of secular stagnation [is] sick recoveries which die in their infancy and depressions which feed on themselves and leave a hard and seemingly immovable core of unemployment."

The topic of secular stagnation has received considerable attention in the last few years.

Harvard University Archives, HUP Hansen (7).
Please note that the photograph above has been taken by Harvard News Office photographers.

"The essence of secular stagnation [is] sick recoveries which die in their infancy and depressions which feed on themselves and leave a hard and seemingly immovable core of unemployment."

– Alvin Hansen, 1938

Leading economists in academia and the financial industry have opined on whether the slow pace of this recovery is due to secular stagnation or to cyclical factors resulting from the global financial crisis that will eventually dissipate.

Secular stagnation became part of the investment community's lexicon after Larry Summers, professor at Harvard University and former secretary of the Treasury in the Clinton administration, referred to it in a November 8, 2013, speech at the IMF's 14th Jacques Polak Annual Research Conference. Paul Krugman, professor at City University of New York and Nobel laureate, referred to secular stagnation in a November 16, 2013, article in the *New York Times* titled "Secular Stagnation, Coalmines, Bubbles, and Larry Summers."[4] A keynote address by Summers at the National Association for Business Economics on February 24, 2014, titled "US Economic Prospects: Secular Stagnation, Hysteresis, and the Zero Lower Bound," shone further light on the topic, and brought forth the question of whether US growth would be stymied by secular stagnation for the foreseeable future.[5]

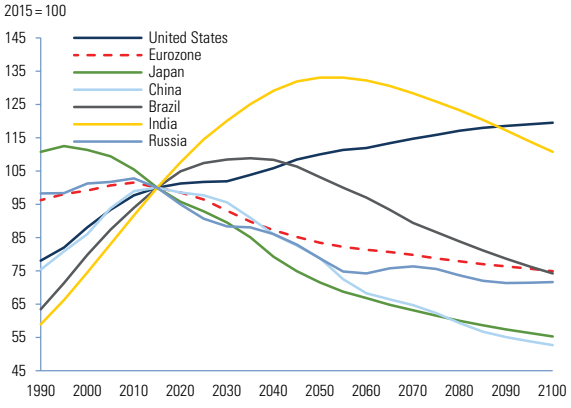
Our colleagues in economics research at Goldman Sachs Global Investment Research (GIR) first addressed the issue in a December 2013 report, "More Cyclical than Secular."[6] In that report, they stated that the recovery was slower than normal but in line with the performance of other economies following major financial crises, as explained by Carmen Reinhart and Kenneth Rogoff in *This Time Is Different: Eight Centuries of Financial Folly*.[7] The GIR group reaffirmed this view in its December 2015 report, "Not So Stagnant."[8]

One can see why secular stagnation has garnered so much attention since Summers raised the topic. At first glance, it seems that Hansen's description fits the post-crisis economic backdrop in the US: a slower-than-usual recovery, lower rates of productivity growth, a low level of labor participation and a slow decline in the unemployment rate as measured by U-6 (total unemployed, including those who are no longer looking but indicate they want to work, and part-time workers who would prefer full-time work).

Yet, upon further analysis, the analogy is a weak one. First, it is interesting to note, given the level of attention garnered by secular stagnation, that Hansen's predictions in 1938 never came to pass. The advent of World War II was partly responsible for Hansen's miscalculation, but so was Hansen.

Exhibit 3: Long-Term Working-Age Population Projections

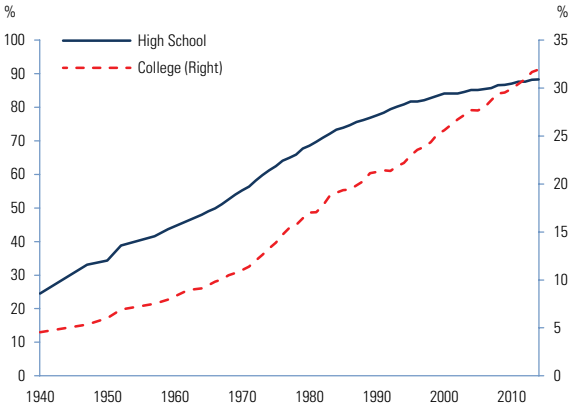
The US has the best working-age demographics on a long-term basis , even compared to Emerging Markets.



Data as of 2015.
Note: Projections are based on United Nations Population Division data.
Source: Investment Strategy Group, United Nations Population Division.

Exhibit 4: Share of Over-25 Population With High School and/or College Degrees

A growing number of US college graduates should continue to improve the quality of labor.



Data through 2014.
Source: Investment Strategy Group, United States Census Bureau.

He was wrong about population growth, as it accelerated from an annual average of 1.1% in the 20 years before his predictions to 1.5% in the 20 years thereafter. But most importantly he was wrong about innovation. Total factor productivity growth doubled over the following 10 years (measured as a residual of GDP growth minus labor and capital inputs, TFP tallies the benefits of technology and innovation that allow output to be greater than the amount of the inputs). The GDP growth rate over the subsequent 30 years was also nearly double that of the 30 years prior to Hansen's observations, according to data from Robert Gordon of Northwestern University.

Let us briefly examine the three factors that accounted for Hansen's secular stagnation view, and see how they may or may not apply to the current economic environment.

We start with population growth. Hansen's description of a "rapid decline" in such growth does, in fact, reflect current demographics. The US labor force is projected to grow at a slower rate in the next 50 years than it did during the last 50. Demographics are not favorable anywhere in the world, and even though the US has the best working-age demographics on a long-term basis (see Exhibit 3), the growth rate is much slower than that of the post-World War II period. From 1950 to the present, the working-age population grew at an average annualized rate of 1.1%; in the next 50 years, the growth rate is expected to be 0.25%. Hours worked, which is a driver of GDP growth, should be higher as a result of likely extensions to the retirement age, but even at an estimated growth rate of 0.5%, growth will be lower than historical levels of 1.0%.

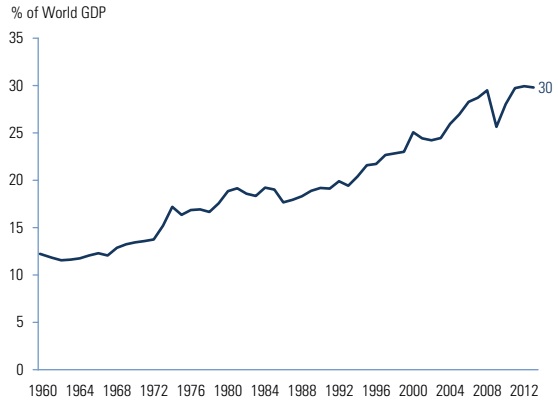
The US labor force is projected to grow at a slower rate in the next 50 years than it did during the last 50.

While not a Hansen factor, the impact of a slower growth rate in hours worked will be partially offset by modest improvements in the quality of labor. The improvement will not be as significant as that witnessed since 1940, since the share of the population older than 25 with a high school degree has already increased from 25% in 1940 to 88% in 2014. There is not much further to go. The pace of growth in college graduates, though, has been steady and may have some further room for improvement from its current level of 32%, as shown in Exhibit 4.

Hansen's second factor—"no important areas left for exploitation and settlement"—appears on the surface to

Exhibit 5: World Exports of Goods and Services

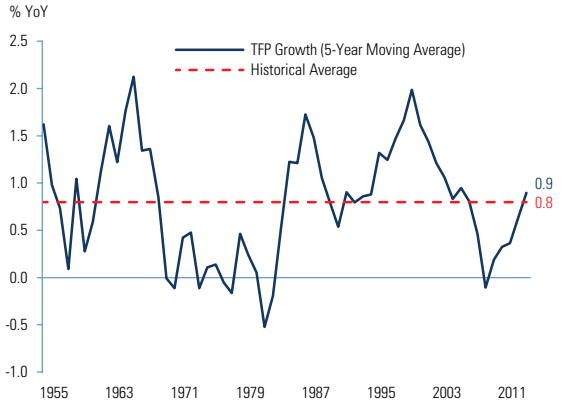
Trade should continue to be supported by globalization.



Data through 2013.
Source: Investment Strategy Group, World Bank.

Exhibit 6: Total Factor Productivity (TFP) Growth

TFP does not grow at a steady pace.



Data through 2014.
Note: Data for 1955–2011 from Penn World Tables 8.1. TFP growth through 2014 is extrapolated using data from the Conference Board.
Source: Investment Strategy Group, Penn World Tables, Conference Board.

apply to our current economic backdrop, since there are no new territories to conquer or draw into the global economy.

However, globalization will in all likelihood continue to support an increase in trade relative to GDP. As shown in Exhibit 5, world exports of goods and services as a percentage of GDP have grown steadily, from 12% to about 30%, and have recovered from the four percentage point drop after the global financial crisis. As GDP per capita increases in emerging markets and China makes some progress on rebalancing its economy away from investment toward consumption, demand for goods and services will likely increase, leading to higher levels of global trade. This hardly meets Hansen's second prerequisite for structural decline.

The third factor—a decline in technological innovation and impact on productivity—is more complex and the most controversial. It therefore requires a more thorough discussion. The debate revolves around whether great innovations have already occurred and whether the latest technological innovations will have the same impact on productivity—and hence potential GDP growth—as those of the Second Industrial Revolution.

There are two schools of thought, generally referred to as techno-optimism and techno-pessimism. The proponents of techno-optimism are best represented by Erik Brynjolfsson and Andrew McAfee, both of Massachusetts Institute of Technology (MIT), and Joel Mokyr of Northwestern University. The proponents of techno-pessimism are best represented by Robert Gordon of Northwestern University.[9]

Three themes underpin the techno-optimists' view: the pace and impact of innovation, the measurement of innovation, and the diffusion of information technology (IT). Exhibit 6 provides some background for the technological innovation and productivity discussion below. The data shows that: TFP growth has recovered to above-average levels, a decline into negative territory is not unusual after an economic recession, and TFP does not grow at a steady pace.

"You can see the computer age everywhere but in the productivity statistics."

– Robert Solow, Nobel laureate in economics

The Pace and Measurement of Innovation

The first theme of the techno-optimists is that the pace of innovation will continue to boost productivity, with developments across robotics, 3D printing, genetic modification, biotechnology, artificial intelligence, the cloud and big data. Joel

Mokyr believes that technological change will result in a "tailwind of tornado strength"—robots will be as ubiquitous as computers, plants, animals and microorganisms will be designed to "serve our needs precisely," and driverless cars will become a reality."[10]

The second theme is that the impact of innovation is not properly measured by current statistical methods, so the level and growth rates of GDP are understated. Underestimating GDP growth rates because of innovation is not a new problem: this mismeasurement is also called the "productivity paradox," where the impact of information technology on GDP growth and productivity appears to be small. Robert Solow, Nobel laureate in economics, helped the layman understand this productivity paradox when he wrote in a 1987 *New York Times* book review that "you can see the computer age everywhere but in the productivity statistics."[11]

David Byrne, principal economist at the Federal Reserve, has been researching the possible mismeasurement of prices of new technology products, from communication equipment to special-purpose electronics equipment. Such mismeasurement has significant implications for growth in labor productivity. In a March 2013 report, "Is the Information Technology Revolution Over?," Byrne, Stephen Oliner of the American Enterprise Institute and Daniel Sichel of Wellesley College contend that the Bureau of Labor Statistics (BLS) price indexes for semiconductors may have "substantially understated the rate of decline in prices in recent years."[12] We should note that their response to the question of whether the technology revolution is over was a resounding "no."

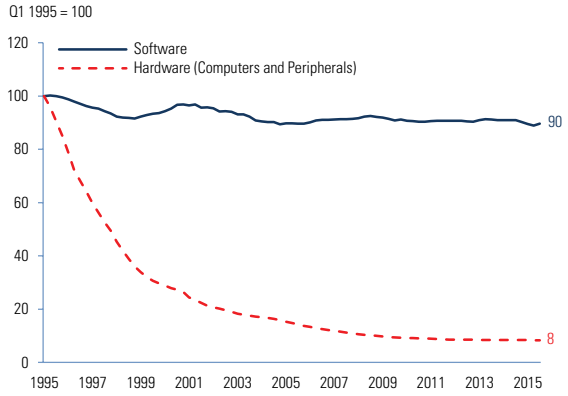
In a report entitled "Doing the Sums on Productivity Paradox v2.0," our colleagues in GIR point out that while statisticians have captured some of the improvement in the performance of hardware, they have not yet captured the improvement in software and digital content; in this area, prices have dropped only minimally over the last two decades, as shown in Exhibit 7.[13] The report estimates that measurement problems in all information technology—hardware, software and digital content—have understated annual real GDP growth by 0.7 percentage points.

The overall level of GDP is also understated. Hal Varian, chief economist at Google, estimates that the combination of the value of time saved using internet searches, the value of the internet to advertisers and publishers, and the value of free applications supported by advertisements, totals more than $140 billion per year, or just under 1% of US GDP.[14] Brynjolfsson and Joo Hee Oh of MIT estimate that between 2007 and 2011 the average incremental welfare from the internet was $159 billion per year, of which $106 billion is the benefit to the consumer of free digital services, corresponding to 0.74% of annual GDP.[15] Current GDP statistics do not incorporate these very tangible benefits from information technology. We also believe that the problem of understating the GDP level is bigger today than in the past given the greater proliferation and reliance on information technology. In its December 2015 report, "Digital America: A Tale of the Haves and Have-Mores," McKinsey Global Institute points out that "the use of free digital platforms such as Google for search, Wikipedia for information, and Facebook for instant communication has expanded dramatically in the past decade."[16]

Thus, this mismeasurement problem that understates GDP levels will also marginally understate GDP growth rates.

Exhibit 7: Technology Price Indexes

Inflation data does not fully reflect improvements in software.



Data through Q3 2015.
Source: Investment Strategy Group, Goldman Sachs Global Investment Research, Bureau of Economic Analysis.

The Diffusion of Information Technology

The third theme of the techno-optimists is that it takes decades for the full impact of innovation to be felt throughout the economy and hence observed in productivity statistics. In a presentation to the American Economic Association in May 1990 titled "The Dynamo and the Computer: An

Historical Perspective on the Modern Productivity Paradox," Paul David of Stanford University used the dynamo (electrical generator) as an example to show that it takes a very long time—decades, to be more specific—for new technology improvements such as the computer to be adopted.[17] He showed how the "diffusion process" for widespread use of new technologies is gradual and protracted. While electric power was developed by Thomas Edison in 1879, for example, its use only gained momentum after 1917 and progressed through the 1920s. While David agreed that computers may not have the same impact as the dynamo, he believed there is much to be learned from the diffusion of electric power over time throughout the United States. With uncanny foresight, he also mentioned the difficulties of measuring quality changes and the production of goods and services that were not previously recorded in the national income accounts.

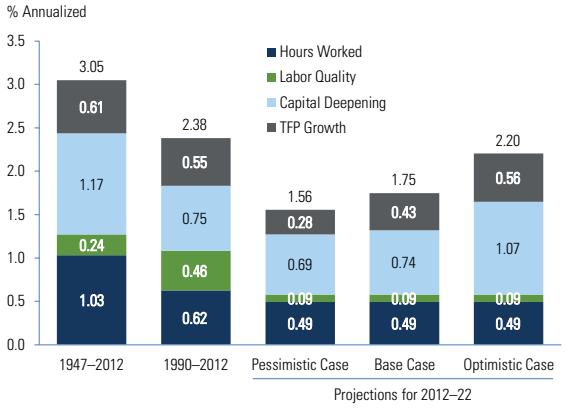
Barry Eichengreen of University of California, Berkeley supports the view that the diffusion of information technology takes time and can, in fact, lower productivity in the short term, as discussed in his recent commentary, "Today's Productivity Paradox."[18] Byrne, Oliner and Sichel have also raised the prospect of a lagging effect of technology on labor productivity; they point to the long lag between the development of the personal computer in the early 1980s and the subsequent increase in the growth rate of labor productivity between 1995 and 2004.[19] Finally, McKinsey Global Institute estimates that the diffusion of information technology could add as much as $2.2 trillion to annual GDP by 2025, as innovations that are "already percolating through the economy … return large dividends."[20]

We agree that the full impact of information technology and its continuous innovations has not yet been completely diffused or accurately measured.

Turning to the techno-pessimists, Gordon's view is that the productivity impact of innovations between 1870 and 1970—such as electricity, internal combustion, telephone, radio, television, interstate highways, commercial air travel and air conditioning—"utterly changed human life" and that these innovations were far more significant than smartphones and social networks.[21] He estimates that TFP growth between 2007 and 2032 will be in line with TFP growth between 1972 and 2007 with no additional boost from information technology. He believes that productivity will not offset the dampening effects of four key growth headwinds: weak demographics, educational stagnation, income inequality and federal debt as a percentage of GDP. He concludes that long-term trend growth in the US will be 1.6% a year, in line with that of the last 11 years and half that of the 1970–2004 period.[22] We note that the 11-year period Gordon has selected includes a 4.2% drop in real GDP between the fourth quarter of 2007 and second quarter of 2009. Excluding this drop, GDP grew at an annualized rate of 2.3%. Therefore, barring a repeat of the global financial crisis and a prolonged period of decline, a 1.6% growth rate is particularly low.

Exhibit 8: Drivers of US Value-Added Growth

Innovation accounted for only 20% of US economic growth in 1947–2012.



Data projections as of August 2014.
Source: Investment Strategy Group; Dale W. Jorgenson, Mun S. Ho and Jon D. Samuels, "What Will Revive U.S. Economic Growth? Lessons From a Prototype Industry-Level Production Account for the United States," Cato Institute, December 31, 2014.

Impact of Productivity on Projections of Trend Growth

Our colleagues in GIR believe that trend growth in the US is about 1.75%.[23] Their estimate is in line with that of Dale Jorgenson of Harvard University, Mun Ho of Resources for the Future, and Jon Samuels of the Bureau of Economic Analysis.[24] In a December 2014 presentation at a Cato Institute conference on the future of US economic growth, Jorgenson explained that the authors' trend growth estimates were based on a data set covering the growth of US output and productivity by industry for the period 1947–2012. They covered 65 industries categorized by either IT-producing, IT-using or non-IT industries.

We should note that Jorgenson has been responsible for some of the most extensive

research on the impact of productivity on GDP. His analysis breaks down historical growth rates into all relevant components: hours worked and labor productivity. Labor productivity, in turn, is broken down into labor quality, deepening of information technology capital and non-information technology capital, and TFP. One of his most important findings, presented in 2009, is that innovation accounted for only 20% of US economic growth from 1947 to 2012, as shown in Exhibit 8.[25]

Using the same methodology, Jorgenson et al. estimate annual US trend growth between 2012 and 2022 at 1.75%, composed of 0.49% from hours worked, 0.09% from improvements in labor quality, 0.74% from capital deepening and 0.43% from TFP.

Trend growth stands at 2.20% in Jorgenson et al.'s optimistic case and at 1.56% in the pessimistic case. As shown in Exhibit 8, the differences between the scenarios are driven by TFP growth and capital deepening. In the base case, TFP growth is the same as the average between 1995 and 2012. In the optimistic case, the 2007–12 period is omitted in the analysis, while in the pessimistic case, TFP growth is based only on the 2007–12 period. The bigger driver of the difference between the optimistic case and the base case is the deepening of capital.

These projections are within the framework of the US National Income and Product Accounts (NIPA). Should data be revised due to the mismeasurements described above, the historical components, as well as projections for trend growth in the US, would be similarly revised.

Jorgenson also believes there is a high likelihood of a mismeasurement of GDP growth rates as a result of the mismeasurement of the price indexes for technology hardware and software. He estimates that the mismeasurement detracts 0.5–1.0 percentage points from GDP growth.[26] We concur.

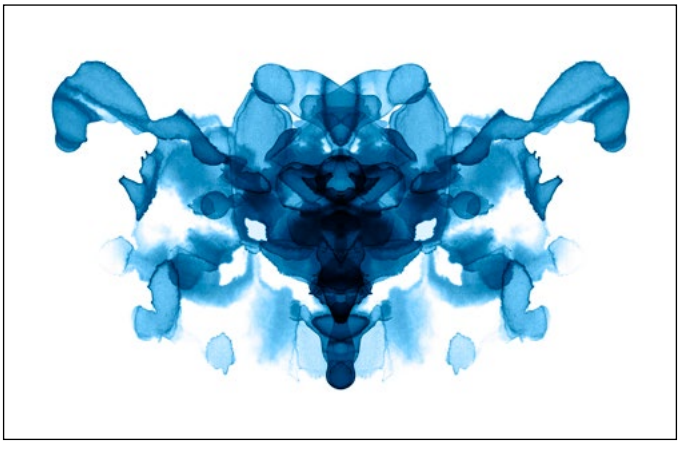
The post-crisis recovery has indeed been the slowest US recovery since WWII, but we do not believe that the slow pace of recovery is due to secular stagnation. In fact, as David Stockton, senior fellow at the Peterson Institute for International Economics, senior advisor at Macroeconomic Advisers, and former director of the Division of Research and Statistics at the Federal Reserve advised us, "secular stagnation taxonomy is not that useful."[27] As Eichengreen has so aptly stated, "secular stagnation, we have learned, is an economist's Rorschach Test. It means different things to different people."[28] The term has become a catchy catch-all used to explain this slow recovery while also promoting specific policy proposals.

If secular stagnation is not ailing the US economy, then what explains this very slow recovery?

"Secular stagnation taxonomy is not that useful."

– David Stockton, senior fellow at the Peterson Institute for International Economics

An Economist's Rorschach Test

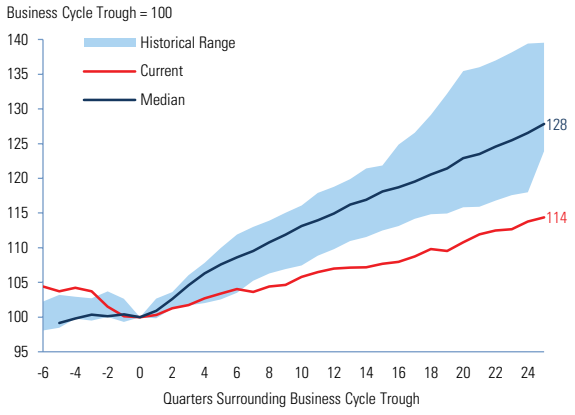


"Secular stagnation, we have learned, is an economist's Rorschach Test. It means different things to different people."

– Barry Eichengreen, professor at University of California, Berkeley

Exhibit 9: US Real GDP Growth Across Post-WWII Recoveries

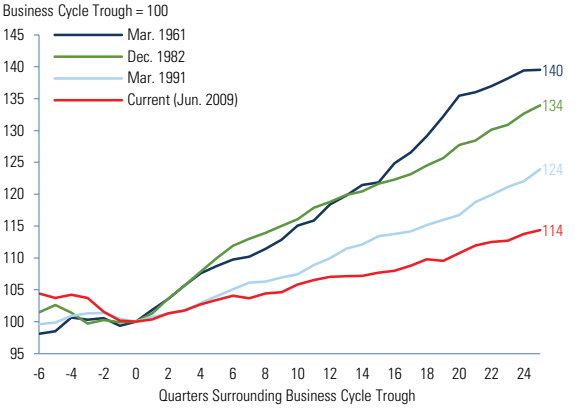
This is the slowest recovery in the post-WWII period.



Data through Q3 2015.
Source: Investment Strategy Group, Datastream, National Bureau of Economic Research.

Exhibit 10: US Real GDP Growth During Recoveries That Lasted Longer Than 25 Quarters

This has been a long but sluggish recovery.



Data as of Q3 2015.
Source: Investment Strategy Group, Datastream, National Bureau of Economic Research.

Putting the Current US Economic Recovery in Context

Let us begin with a brief review of the key facts about this recovery.

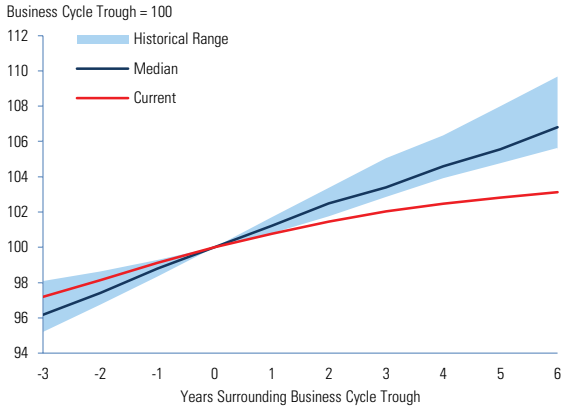
After dropping 4.2% between the fourth quarter of 2007 and the second quarter of 2009, real GDP has increased 14.4% for an annualized growth rate of 2.2%. The recovery is now in its seventh year with no recession in sight, making it the fourth-longest recovery since World War II. Unemployment as measured by U-3—the more widely used measure—has dropped from a peak of 10.0% to 5.0%, and the U-6 unemployment rate—described earlier as measuring the unemployed, part-time workers seeking full-time work and marginally attached workers—has dropped from 17.1% to 9.9%. Both measures are well below their long-term averages. While the drop in the participation rate (partly driven by baby boomers reaching peak retirement years) accounts for some of the improvement in the unemployment rate, our colleagues in GIR estimate that the labor market slack (difference between the current employment rate and full employment) is only about 1%. Inflation, as measured by the core Personal Consumption Expenditure (PCE) price index, has hovered between a low of 0.9% in December 2010 and a high of 2.1% in March 2012. The US fiscal deficit has decreased to 2.5% of GDP compared with its long-run average of 2.2% over the post-World War II period. The bailout funds used during the financial crisis have been paid back and an incremental $60 billion has been paid to the Treasury. Since the trough in the S&P 500 Index in March 2009, US equities have provided a total return of 249%, US high yield has provided a total return of 136% and US Treasuries have returned 28%. NIPA profits have grown by $400 billion relative to their pre-crisis peak level in the third quarter of 2006.

With such relatively positive data, what explains the preoccupation with secular stagnation? We believe the slow pace of this recovery has dominated the discourse more than is warranted. As shown in Exhibits 9 and 10, the current recovery is the slowest of all post-WWII recoveries, including those that have lasted longer. Growth has averaged 2.2% per year compared with a median of 4.0%, a high of 6.1% and a prior low of 2.8% in past recoveries. Understandably, some economists have posited that there is something structurally "stagnating" in the US.

We don't believe so. As many of our longer-standing clients know, US preeminence has driven our investment views since late 2008. In fact, we have stated that the gap between the US and the rest of the world—e.g., Eurozone, Japan and emerging market countries—is widening. It is therefore imperative that we put this recovery in context so that our clients can better understand the framework underpinning our cautious optimism about the US economy, US equities and other risky assets.

Exhibit 11: US Working-Age Population Growth During Recoveries

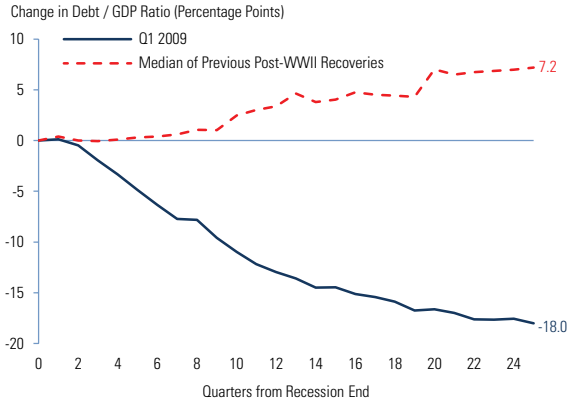
Demographics have been less supportive than in past recoveries.



Data as of 2015.
Source: Investment Strategy Group, United Nations Population Division.

Exhibit 12: Post-Crisis Household Deleveraging

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



Data through Q3 2015.
Source: Investment Strategy Group, National Bureau of Economic Research, Federal Reserve Economic Data.

There are five key factors that explain the slow pace of this recovery in the context of past recoveries:

- Labor force demographics
- Significant deleveraging in the private sector
- Sequential shocks to global growth
- Adjustments to the disruptions of information technology
- Adjustments to globalization

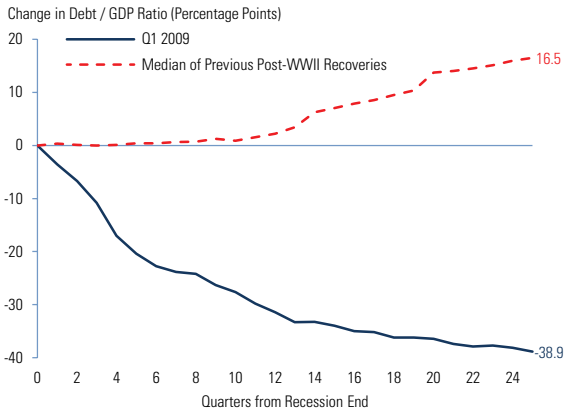
As mentioned above, the growth in working-age population—defined as people between the ages of 15 and 64—was expected to decline as baby boomers began reaching their peak retirement years of ages 62 to 66. As a result, the working-age population in the US has grown at the slowest rate in this recovery relative to past recoveries (see Exhibit 11). In the eight years prior to the global financial crisis, the working-age population was growing 1.09% per year. Since then, the growth rate has slowed to 0.54% per year. This is not an unexpected phenomenon triggered by the global financial crisis; experts on productivity growth such as Jorgenson had incorporated the impact of lower growth rates in the labor force well before the crisis.[29] McKinsey Global Institute published a report in 2008 titled "Talkin' 'Bout My Generation: The Economic Impact of Aging US Baby Boomers," in which it projected that the labor force participation rate would decline by one percentage point every five years after the 2005–10 period.[30] Therefore, while less favorable demographics—one of Hansen's factors—have implied and will continue to imply slower trend growth in the US, this is not driven by the global financial crisis; it would have occurred in the absence of any crisis.

The extent of deleveraging in the private sector has been another important contributor to a slower-than-usual recovery. Debt-to-GDP decreased by a whopping 35 percentage points from 340% at the end of Q1 2009 to 305% by Q2 2015. The deleveraging was primarily driven by two sectors: the household sector, which deleveraged by 18.0 percentage points, as shown in Exhibit 12, and the financial sector, which deleveraged by 38.9 percentage points, as shown in Exhibit 13.

With respect to household sector deleveraging, the savings rate in the household sector rose significantly at the onset of the global financial crisis relative to past crises, as shown in Exhibit 14. This increase in savings was partly due to the desire for higher precautionary savings and partly due to less available credit and increases in write-offs of bad mortgages, credit cards and auto loans. The impact of this surge in savings, from a trough of 2.7% of disposable income at the beginning of the recession to a peak of 9.2% in the fourth quarter of 2012 (the highest rate since 1992), was clearly a drag on consumption, and therefore growth. There have been several studies on the impact of household deleveraging on growth,

Exhibit 13: Post-Crisis Financial Sector Deleveraging

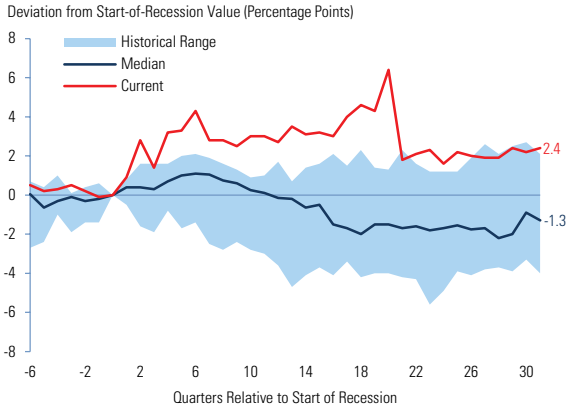
A decrease in financial sector indebtedness has contributed to a slower-than-usual recovery.



Data through Q3 2015.
Source: Investment Strategy Group, National Bureau of Economic Research, Federal Reserve Economic Data.

Exhibit 14: Change in US Personal Savings Rate Surrounding Historical Recessions

An increase in household savings was a drag on consumption, and therefore growth.



Data as of Q3 2015.
Source: Investment Strategy Group, Datastream.

including analysis by the IMF,[31] the European Commission,[32] Brookings Institution[33] and the Federal Reserve Board of Boston.[34] Estimates range from no impact to a drag of 0.6 percentage points on annual GDP growth. We estimate that if the savings rate had changed in line with past recoveries, the GDP growth rate would have been 0.2–0.3 percentage points higher.

Deleveraging by the financial sector also played a significant part because it limited the availability of credit to the household and nonfinancial corporate sectors for several years into the recovery. Total nonfinancial private sector credit declined steadily until the third quarter of 2012, when the pace of decline slowed; total credit outstanding troughed only in the fourth quarter of 2014. The ratio of nonfinancial corporate debt to GDP has remained within a narrow band between 39.5% and 45.5%, and it currently stands at 44.3%. Hence, it is not a major factor in the deleveraging process.

The government also contributed to the deleveraging process after an initial boost from various fiscal stimulus measures. Based on data from our colleagues in GIR, we estimate that the Budget Control Act of 2011 and the American Taxpayer Relief Act of 2012, as well as the related sequestration, shaved an average of 0.9 percentage points per year off the GDP growth rate between 2011 and 2014.[35]

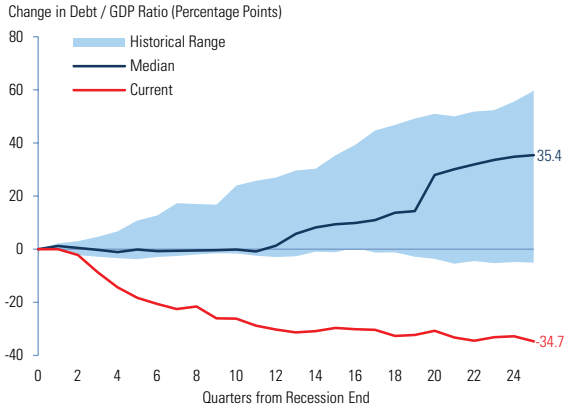
This magnitude of aggregate deleveraging stands in sharp contrast to the experience of past recoveries. Total debt-to-GDP has decreased by 34.7 percentage points in this cycle, compared with a median *increase* of 35.4 percentage points in past recoveries, as shown in Exhibit 15. The next-biggest decrease in total debt-to-GDP seen in a post-WWII recovery was a meager 5.0 percentage points.

It is hard to quantify the total impact of deleveraging on the pace of the recovery. Our colleagues in GIR estimate that, in aggregate, fiscal policy shaved approximately 0.5 percentage points per year from GDP growth rates between 2010 and 2015. We add our estimate of 0.2–0.3 percentage points for the impact of household deleveraging, for

There is no doubt that greater uncertainty and financial market volatility increase precautionary savings, delay investment decisions, impact hiring decisions and hence affect GDP growth.

Exhibit 15: Change in Total Debt to GDP

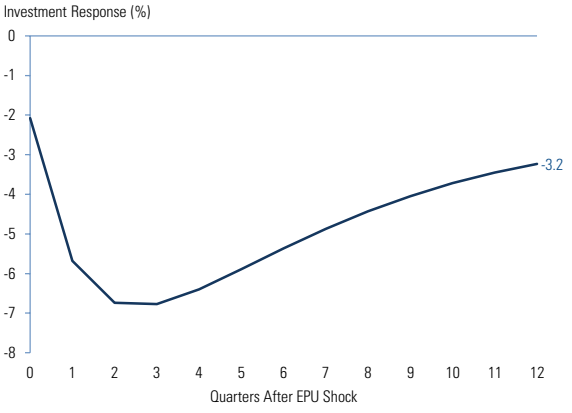
The magnitude of aggregate deleveraging stands in sharp contrast to past recoveries.



Data as of Q3 2015.
Source: Investment Strategy Group, National Bureau of Economic Research, Federal Reserve Economic Data.

Exhibit 16: Impact of Increase in Economic Policy Uncertainty (EPU) on US Investment

An increase in policy uncertainty foreshadows declines in investment.



Data through Q4 2012.
Source: Scott R. Baker, Nicholas Bloom and Steven J. Davis, "Measuring Economic Uncertainty," National Bureau of Economic Research, October 2015.

a total drag of just under one percentage point. If these two factors had not hampered growth, the recovery would not have been as anemic and would be within the range of historical experience. It is worth noting that the drag on growth from deleveraging has dissipated as the deleveraging cycle has ended, as discussed above.

We believe that there are three additional factors that have weighed on this recovery relative to past recoveries, but it is hard to measure their impact.

The first is the series of shocks to global growth after the global financial crisis, as observed by spikes in volatility and/or economic policy uncertainty. We measure volatility using the Chicago Board of Exchange Volatility Index (VIX), which is based on S&P 500 Index option prices. We measure uncertainty using the Economic Policy Uncertainty (EPU) index developed by Scott Baker of Northwestern University, Nicholas Bloom of Stanford University and Steven Davis of University of Chicago. The authors have shown that an increase in policy uncertainty, as measured by the EPU (see Exhibit 16), foreshadows declines in investment, employment and economic growth in the months that follow.[36] They estimate, for example, that gross fixed investment in the US declines by 7% within two quarters following a 90-point increase in the EPU, approximately equivalent to its increase during the global financial crisis.

Some of these shocks were quite significant. For example, the combination of the Eurozone sovereign debt crisis, the debt ceiling negotiations and the downgrade of the US credit rating by S&P led to a 19% downdraft in equities and an increase in the EPU that had not been seen since the inception of the index in 1985. Some of the shocks were less significant, such as the impact of the Ebola epidemic and ISIL. The magnitude of these shocks as measured by the VIX and the impact on the equity market are both shown in Exhibit 17. The impact of these shocks on uncertainty as measured by the EPU is shown in Exhibit 18.

The steady barrage of shocks since the trough of the crisis has been greater than usual. For example, the median level of the EPU in this recovery has been 137.5, which is 71% higher than the median over the five years before the crisis. There is no doubt that greater uncertainty and financial market volatility increase precautionary savings, delay investment decisions, impact hiring decisions and hence affect GDP growth. Such a heightened period of sequential shocks and higher uncertainty undoubtedly slowed the pace of this recovery relative to previous recoveries; though, again, it is difficult to know the extent of the impact.

The second factor that is even harder to measure is the impact of the US economy's adjustment to rapidly changing technology. We have already discussed the likely impact of mismeasurement of the PCE deflator on GDP

Exhibit 17: US Equity Volatility

Spikes in equity volatility have corresponded with major global shocks.

Data through December 31, 2015.
Note: The red arrows show the S&P 500's (SPX's) peak-to-trough declines around each episode.
Source: Investment Strategy Group, Bloomberg.

growth, which amounts to 0.5–1.0 percentage points. But there are more tangible impacts that are harder to quantify.

For example, our real estate colleagues in Goldman Sachs Asset Management's Alternative Investments & Manager Selection Group have shown that, with the "new paradigm in commercial real estate," companies lease substantially less space per worker, downsizing from 600 square feet per worker in the 1970s to 176 square feet by 2012.[37] They expect a further drop to 151 square feet by 2017, as shown in Exhibit 19. This reduction is partly due to companies' attempt to emulate the more collaborative and creative dynamics of technology firms, and partly due to the spillover effects of technology itself. The group points out that law firms, for example, are leasing one-third less office space relative to 10 years ago, in large part because cloud-based storage has replaced libraries, file cabinets and other physical storage areas.

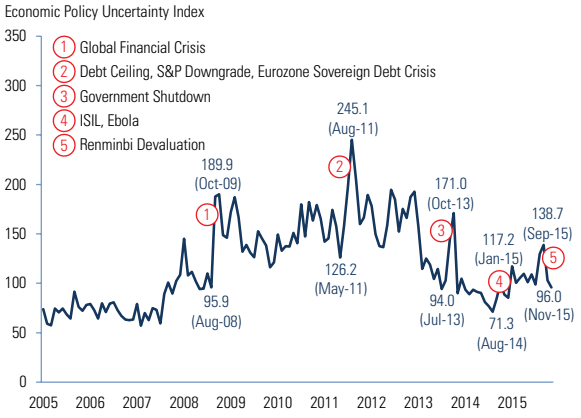
Another example of the impact of technology on real estate was evident at the Amazon Web Services (AWS) re:Invent 2015 conference, where Capital One Financial Corp. and General Electric both mentioned they were closing a significant portion of their data centers and moving workloads to the AWS cloud.[38] During the 2013 conference, Dow Jones & Co. announced it would close most of its data centers and migrate many applications to the cloud.[39] Cloud adoption makes companies much more efficient since it frees them from needing to build excess capacity for peak usage.[40] Such long-term efficiencies are not yet captured in the GDP data, but the drag from closing down data centers is much more immediate.

Cloud adoption reduces need for investment in physical storage.

The continued innovation in technology

Exhibit 18: US Economic Policy Uncertainty

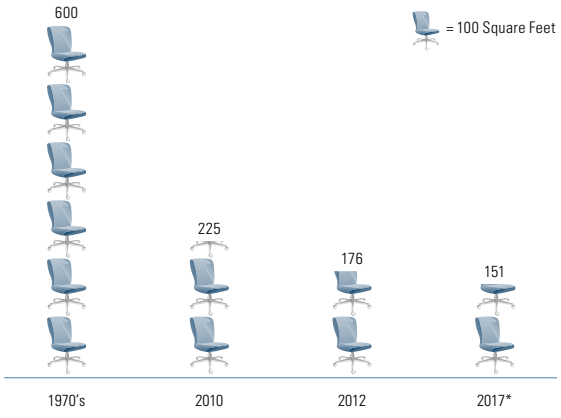
Policy uncertainty has increased in the post-crisis period.



Data through November 2015.
Source: Investment Strategy Group, Economic Policy Uncertainty.

Exhibit 19: Office Space per Worker (Square Foot)

Companies are leasing substantially less space per worker.



Projection as of 2013.
Source: Investment Strategy Group; "Focus on Real Estate," Alternative Investments & Manager Selection Group, 2014; "Creative Office Trends and Workplace Strategy," CBRE, 2013.
* Forecast. There is no guarantee that any historical trend will be repeated in the future.

and the growth of technology companies have directly and indirectly impacted investment in commercial real estate without a clear measurable offset in technology research and development.

Another factor that may have hampered this recovery is the impact of globalization. For example, the offshoring of manufacturing capacity to emerging market countries has reduced the need for investment in US-based manufacturing plants. We do not yet know whether the incremental investment in ports and other infrastructure to accommodate imports offsets the drag from closing manufacturing in the US and the prospective drag from not building additional plants in the future.

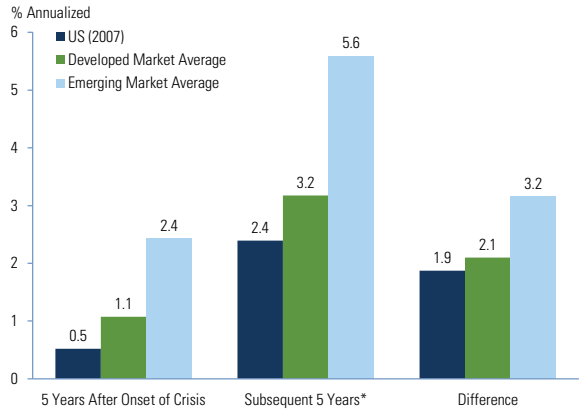
Globalization has also hampered fixed investment in the US because of the excess capacity built in some emerging market countries with the support of government subsidies. In a chapter of its 2015 "Economic Outlook," the OECD points out that "capital spending in advanced economies, particularly in heavy industry, may have been weakened indirectly by developments in EMEs [emerging market economies]."[41] Potentially affected sectors are those highlighted in an October 2015 report from the Development Research Center of the State Council of China, such as iron, steel, cement, solar panels and wind power equipment.[42] Excess capacity in these sectors has dampened the profitability of such industries in other parts of the world, including the US, and that has in turn hampered the pace of future investments.

While it is hard to gauge the extent to which these three factors have slowed this recovery, we believe that they have had some impact. The long-term benefits of information technology will likely more than offset such short-term disruptions to fixed asset investments. Similarly, we think the drag from offshoring to China has run its course as China has become a less competitive exporter.[43] With respect to the excess capacity from China and the drag on global growth, we believe that China's ongoing investments in new industries such as airplanes and arms will affect the profitability of other multinational companies, reduce their prospective growth trajectories and indirectly lower growth in fixed asset investments.

Finally, we conclude with some data from the seminal work on financial crises by Carmen Reinhart and Kenneth Rogoff, *This Time is Different: Eight Centuries of Financial Folly*, which shows that the recoveries from financial crises are systematically more muted.[44] What is most relevant in the context of our cautiously optimistic outlook for growth and financial markets is the fact that in the 10-year windows following severe banking crises that Reinhart and Rogoff examined, growth picked up substantially in the second five-year period relative to the first. In the post-WWII era, on average, developed economies grew 2.1 percentage points faster in the second five-year period relative to the first five years after the onset of the crisis. Similarly, emerging market economies grew an average 3.2 percentage points faster

Exhibit 20: Real GDP Growth Around Financial Crises

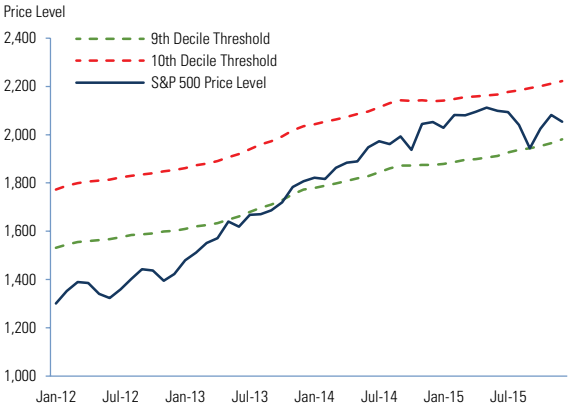
Recoveries from severe banking crises take longer to gain momentum.



Data as of 2015.
Note: The crises included are: Spain (1977), Norway (1987), Sweden (1990), Finland (1991), Japan (1992), Hong Kong (1997), Indonesia (1997), Malaysia (1997), Philippines (1997), Thailand (1997), Korea (1997), Colombia (1998) and Argentina (2002).
Source: Investment Strategy Group; Datastream; Global Financial Data; Carmen M. Reinhart and Kenneth Rogoff, *This Time Is Different: Eight Centuries of Financial Folly*, Princeton University Press, 2011.
* 3 years for US (2007).

Exhibit 21: S&P 500 Performance and Decile Thresholds

The market has been in the 9th decile of valuations since November 2013.



Data through December 31, 2015.
Source: Investment Strategy Group, Bloomberg, Robert Shiller.

than in the first five years after the onset of the crisis. In this recovery, the US economy grew at an annualized rate of 0.5% in the first five years from the onset of the crisis and 2.4% in the subsequent three years, as shown in Exhibit 20. If history is any guide, the US economy should grow at above-trend growth rates for the next several years.

One- and Five-Year Expected Returns

In summary, our view is that the US is not bound by secular stagnation, that some of the key factors that have stymied this recovery have dissipated, and that external shocks will contribute to volatility but not derail this economic recovery. This view has three investment implications:

- Staying invested at the strategic asset allocation to US equities remains an appropriate strategy in the context of above-trend economic growth.
- Returns will be muted given current valuation levels and a Federal Reserve that has embarked upon tightening monetary policy—albeit at a gradual pace.
- 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.

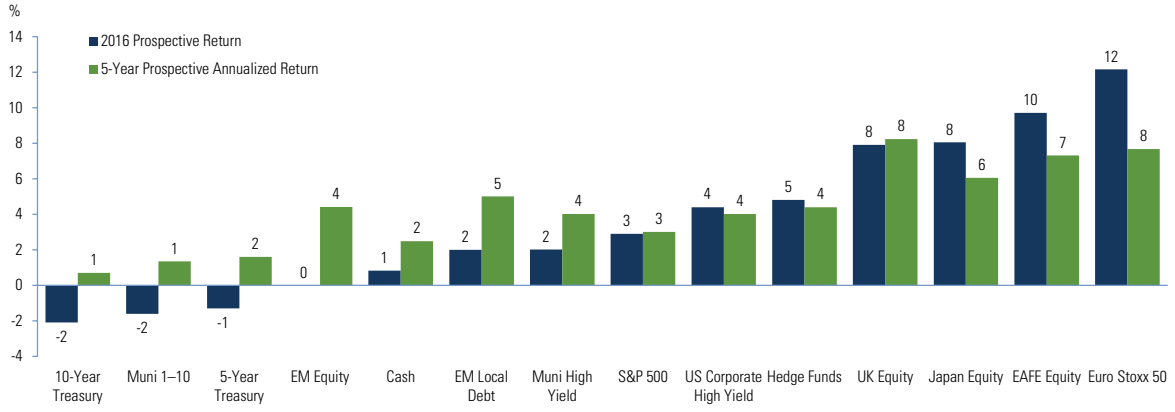
As we mentioned at the beginning of this *Outlook*, we believe that we are in the last innings of a long bull market. We expect a few more innings and are cautiously optimistic that modest earnings growth will keep us in the 9th decile of historical US equity valuations for a while longer. As shown in Exhibit 21, we have been in the 9th decile since November 2013, and our recommendation to stay invested over this period has served our clients well. Inevitably, a time will come when staying invested is the wrong recommendation, but we do not believe that 2016 is that time.

Nevertheless, we have reduced the portfolio allocation to tactical tilts by 50% (as measured by value at risk) from peak levels over the course of 2015. We enter 2016 with modest return expectations for a well-diversified portfolio that has a strategic overweight to US assets and some tactical allocations to European and Japanese equities.

There are two reasons for our recommendation to stay invested. First, based on our valuation framework, discussed in greater detail in the third section of this *Outlook*, we think it is too early to underweight US equities. Second, we believe that the alternatives—be it fixed income or non-

Exhibit 22: ISG Prospective Returns

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



Data as of December 31, 2015.
Note: For informational purposes only. There can be no assurance the forecasts will be achieved.
Source: Investment Strategy Group. See endnote 45 for list of indexes used.

US equities—do not offer attractive risk-adjusted returns that would warrant a significant reallocation away from our core US equity allocation. As shown in Exhibit 22, we expect a modest return of 3% for US equities in 2016. That compares with a 1% expected return for cash and negative returns for high-quality fixed income, driven by our expectation that the Federal Reserve raises interest rates by about 100 basis points over the course of 2016. Developed market equities outside the US should provide attractive returns and underpin some of our tactical tilts, but we believe the tactical allocations should be limited in size.

Low expected returns on US equities and negative returns on fixed income assets imply equally low returns on hedge funds. In 2013, 2014 and 2015, our *Outlook* reports forecast one-year expected returns of 4%, 4% and 5%, respectively, for hedge funds. Hedge funds, as measured by the HFRI Fund of Funds Composite Index, have returned 4.1% a year over this period. We expect similarly modest returns for 2016 and the next five years.

Our tactical tilts are driven by some key themes. First, we expect the Federal Reserve to tighten monetary policy at a pace that is substantially slower than its historical path of 300 basis points a year—or 200 basis points a year if we exclude the tightening during the high inflationary periods of the late 1970s and early 1980s. Second, we expect the European Central Bank (ECB), the Bank of Japan (BOJ) and the People's Bank of China (PBOC) to maintain their easing policies. Third, we expect energy prices to stabilize towards the latter half of 2016 at $40–60 per barrel, but we are uncertain about the near-term downside risk to prices, as Saudi Arabia will attempt to maintain its market share and US shale producers will attempt to cover their debt payments. Fourth, we do not expect a recession in the US in 2016 or 2017, but believe that a recession is highly likely over the subsequent three years. And finally, we think that the markets will be more volatile compared with the levels seen in the last three years.

Our Tactical Tilts

Underweight Fixed Income: We recommend underweighting fixed income as the Federal Reserve tightens monetary policy. We expect high-quality fixed income assets to post modest single-digit negative returns, and therefore be a drag on portfolio returns. We also recommend underweighting fixed income to fund tactical tilts with higher expected returns.

Modest Overweight to the US Dollar: We believe that most of the dollar appreciation is behind us, even though the divergence of monetary policy between the US on one hand, and the Eurozone, Japan and China on the other hand, has just begun, with the Federal Reserve's first rate hike in nearly a decade on December 16, 2015. We have substantially reduced our overweight to the

dollar relative to the euro, expecting a modest 6% outperformance from current levels. We have eliminated our tactical overweight to the dollar relative to the yen.

Overweight to High Yield: While we have reduced our high yield allocation from a cycle peak allocation of 7% in May 2009 and a more recent peak of 4.5% in August 2015, we still maintain a position in high yield bonds, bank loans and high yield energy bonds. Barring a recession in the US, which is not our base case, and with oil prices stabilizing at $40–60 per barrel towards the latter half of 2016, we think high yield fixed income offers a very attractive risk/reward profile, both in the short term and over a longer horizon.

Modest Overweight to US Banks: We maintain a modest overweight to US banks—albeit reduced from our prior allocation. Interest rate increases in the short end will improve the net interest margin of banks through increases in the prime lending rate, which is reset as the Federal Reserve raises interest rates. Loan growth has also accelerated and valuations are particularly attractive. We expect low double-digit returns in 2016.

European Equities: European equities offer some particularly attractive expected returns ranging from 8% for UK equities to 12% for the Euro Stoxx 50. The dividend yields of European stocks are high, valuations are favorable, and easier monetary policy by the ECB provides a tailwind. We specifically recommend allocations to Spanish equities and to the Euro Stoxx 50 on a currency-hedged basis.

Japanese Banks: We recommend a small allocation to Japanese banks. They are undervalued relative to their own history, relative to other Japanese equities, and relative to developed market banks. Corporate governance has prompted Japanese banks to reduce their cross-shareholdings to improve their capital efficiency. We expect an increase in dividends and share buybacks to further boost returns. We expect a high single-digit to low double-digit total return.

Chinese Renminbi: We expect the Chinese central bank to continue to depreciate the currency now that the renminbi has been approved for inclusion in the IMF's Special Drawing Rights basket, effective October 1, 2016. We expect a relatively orderly depreciation of about 5–7% in 2016.

Emerging Market Assets: We do not have any tactical tilts in emerging market local debt or emerging market equities, as we had reduced our strategic allocation to such assets in June 2013, from 9% in a moderate-risk, well-diversified portfolio to 6%. We may consider further reducing the strategic asset allocation on a long-term basis in 2016.

All the tactical tilts are funded out of investment grade fixed income and are based on the premise that we do not expect a recession in the US over the next two years. However, we think a recession is very likely over the subsequent three years, and this view has been incorporated into our five-year expected returns. As shown in Exhibit 22, our medium-term return expectations are much more muted.

Expectations of a US Recession

Some market observers have posited that the risk of a recession in the US has increased because of the long duration of this recovery. This recovery has lasted 6.5 years, compared with an average of 4.9 years and median of 3.8 years for post-WWII recoveries. There have been three recoveries that lasted longer than the current one; the longest occurred between March 1991 and March 2001. We should note that, on a global basis, the duration of recoveries has increased over time.

A number of studies have examined whether there is any duration dependence in the business cycle—i.e., whether a recession is more likely the further an economy is into the recovery. While it might be intuitively appealing to believe that the longer the recovery lasts, the higher the probability of a recession, to date there has been no robust evidence of such dependency. Other factors, such as the absence of slack in the labor market, the unemployment rate, and the deviation in the share of durable goods and structures as a share of GDP from its 10-year average, are better predictors of a recession.[46] So the mere age of this recovery does not increase the likelihood of recession in the next year or two. Federal Reserve Chair Janet Yellen also discredits the idea that economic cycles have certain lifespans. In her press conference following the federal funds rate hike on December 16, 2015,

she said: "I think it's a myth that expansions die of old age … So the fact that this has been quite a long expansion doesn't lead me to believe … that its days are numbered."[47] She believes the probability of the US economy falling into recession in any given year from an external shock is "at least on the order of 10 percent."

We also use stall speed models and a recession index model to monitor recession risk. Our stall speed models suggest an 11% probability of a recession in 2016, based on the recent trends in growth data and the declining unemployment rate. Our recession index currently stands at 30, well below the recession threshold of 65, based on where 13 key variables—including both survey and hard data—stand relative to their average level at the start of a recession. Put together, these models imply low odds of a recession over the next 12 months. We also do not see any financial market or economy-wide imbalances that would suggest a recession in the next year.

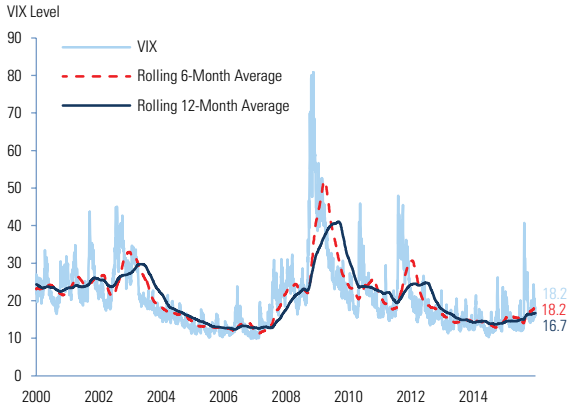
The probability of this recovery extending another five years, on the other hand, is much lower. The frequency of a recession within any five-year window since 1950 is 78%. However, the probability of a recession over the next five years is about 60% based on the current macroeconomic backdrop, with depressed levels of structures investment and a modestly positive employment gap. Finally, while there have been five tightening cycles in the post-WWII period that have not led to a recession, there have been nine that have; of those nine, the longest period between the beginning of a Federal Reserve tightening cycle and the start of a recession was 43 months, or 3.6 years. While there is some probability of this recovery extending another five years, we think it is negligible. We have therefore incorporated the assumption of a US recession some time between 2018 and 2020 in putting forth our five-year expected returns.

"I think it's a myth that expansions die of old age … So the fact that this has been quite a long expansion doesn't lead me to believe … that its days are numbered."

– Janet Yellen, Federal Reserve chair

Exhibit 23: S&P 500 Implied Volatility

Equity market volatility broadly declined between 2012 and 2014, but has since reversed course.



Data through December 31, 2015.
Source: Investment Strategy Group, Bloomberg.

Inevitably, a recession will lower our expected returns. For example, the average annual price return of US equities in the post-WWII period has been 8.1%. The average price return over five-year windows that experienced a recession was 1%, conditioned on elevated multiples and modest growth. Including the current dividend yield, the total return would be 3%. A recession in the US and weaker US equity returns will slow economic growth rates in the rest of the world and reduce non-US equity returns as well.

Volatile Returns

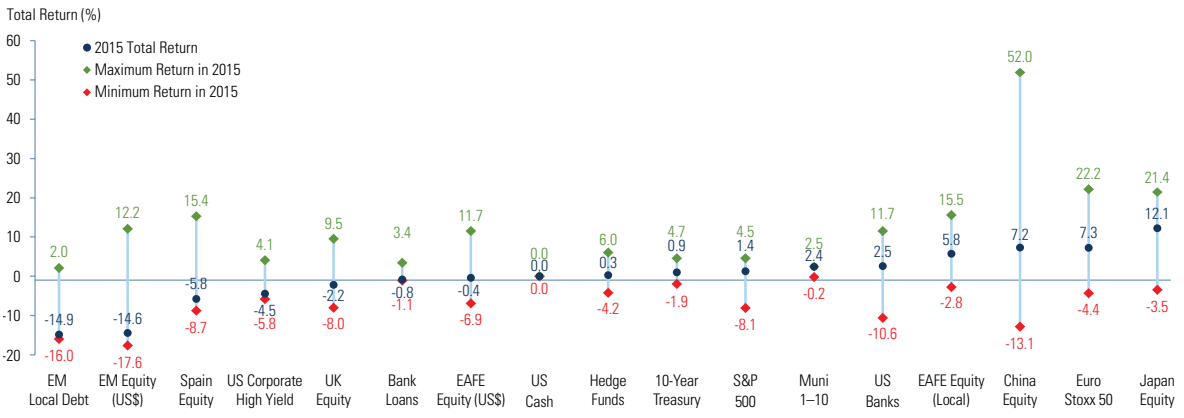
Where volatility is concerned, we expect 2016 to be more akin to 2015 than to the 2012–14 period. As shown in Exhibit 23, equity market volatility as measured by the VIX broadly declined between 2012 and 2014, but has since reversed course, increasing from a low of 10.3% in July 2014 to 18.2% by the end of 2015.

An increase in volatility has two primary implications for our clients. First, clients will be receiving muted returns without a commensurate decrease in volatility, and they may question the merits of staying invested. As mentioned earlier, however, we think the alternatives for clients' core assets are less attractive.

We also note that equities have had positive price returns over a 12-month period 72% of the time historically. Of

Exhibit 24: 2015 Performance Across Asset Classes

Timing the entry and exit into asset classes in a year like 2015 is virtually impossible.



Data as of December 31, 2015

Source: Investment Strategy Group, Datastream. See endnote 48 for a list of indexes used.

the remaining 28% of the time, when the S&P 500 has posted a negative return, more than half of those periods have been associated with a recession. Given that we assign a low probability to a recession in 2016, we do not recommend exiting the equity market at this time. The case for staying invested is even more compelling if clients can tolerate some volatility. The S&P 500 has had a price decline of 10% or greater only 14% of the time over a 12-month period historically. Of that 14%, nearly two-thirds of the episodes were associated with a recession. So in the absence of a recession, the probability of a negative return of more than 10% based on historical experience in the post-WWII period is only 5%. We believe that, in the absence of higher conviction of a major downdraft, we should not exit the equity market.

Of course, for taxable US clients, the hurdle to exit the market should be even higher. If we assume that federal and state taxes on long-term capital gains can range anywhere between 23% and 35%, then equities have to drop significantly to offset the cost of taxes when realizing capital gains. In a hypothetical example, if a California-based client had invested in the trough of the market and had a tax rate of 35%, the market would have to drop at least 23% for a client's tax payment to be offset by buying back equities at a lower level. Obviously, individual clients' tax rates and cost basis will determine the equity downdraft required for them to break even by exiting the equity market.

The second implication of increased volatility is that clients will be tempted to react to it, as would we—both on the upside and the downside. Years ago, in the trough of the crisis on March 16, 2009, we quoted Seth Klarman's article "The Value of Not Being Sure," in which he writes: "The ability to remain an investor (and not become a day-trader or a bystander) confers an almost unprecedented advantage in this environment."[49] Our recommendation to our clients was to remain investors and not be tempted to become traders or bystanders.

While the market is very different today, the same advice holds. Clients can choose to become bystanders and exit the equity market given the expectation of muted returns, but the strategy risks exiting too soon. As mentioned earlier, if a client had exited the market when it entered the 9th decile of historical valuations, they would have missed a 21.8% return through the end of 2015.

Clients can also choose to become traders but that will not, in all likelihood, be a successful strategy. As shown in

We believe that returns will be muted in line with our view of the last three years. However, volatility will be more in line with the higher levels of 2015.

Exhibit 24, timing the entry and exit into asset classes in a year like 2015 is virtually impossible. Core assets such as those represented by the Euro Stoxx 50 Index, composed of blue-chip companies across 12 Eurozone countries, were up as much as 22.2% by April before falling 26.6% to a year-to-date low return of -4.4% in September. The Euro Stoxx 50 then reversed course for a total return of 7.3% for 2015. The spread between the year's high and the year's low among core assets was largest for emerging market equities at 29.8%. In US equities, the spread was 12.6%. If one had evaluated our 2015 forecast on May 21, 2015, it would have appeared to be right on target. If one had evaluated our forecast on August 25, 2015, when the S&P 500 was down 9.3% on the year, our forecast would have appeared way off target. The vast majority of traders—including most macro hedge fund traders—have failed to successfully capitalize on such moves. Hence, we believe that remaining as investors is the optimal choice.

In summary, we believe that returns will be muted in line with our view of the last three years. However, volatility will be more in line with the higher levels of 2015. We recommend clients continue to stay invested in their core equity assets and implement tactical tilts on an opportunistic basis. Our views are not without risks. As we discuss below, we consider most of them to be low-probability risks.

Steve Kelley Editorial Cartoon used with the permission of Steve Kelley and Creators Syndicate. All rights reserved.

The Risks to Our Outlook

As we review the risks to our 2016 outlook, we are struck by the overlap between this year's list and last year's. Federal Reserve policy and geopolitical concerns once again dominate our list as they did in 2015. We think there are five key risks that could derail this recovery and bull market, and one other sixth risk that may increase market volatility:

- The pace of Federal Reserve tightening is disruptive because it is faster than the market anticipates
- Geopolitical hotspots get hotter and terrorism escalates
- Oil prices decline further and stay at low levels throughout 2016
- A major cyberattack occurs
- China succumbs to an often-anticipated hard landing
- Uncertainty rises due to US elections

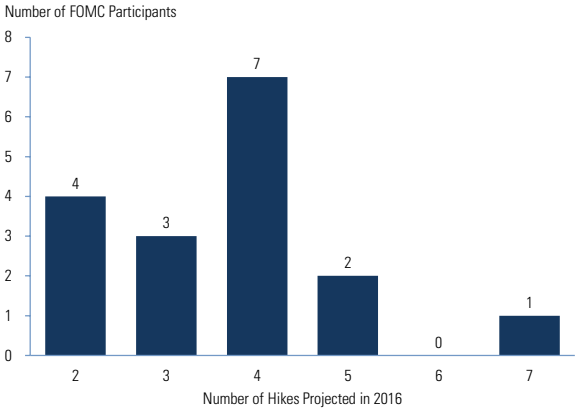
Pace of Federal Reserve Tightening

There has been a wide dispersion of views with respect to the Federal Open Market Committee (FOMC) December 16, 2015, increase in the federal funds rate. The hike was the first in nearly 10 years and marked the end of a seven-year period at the zero-bound level. The cacophony of opinions includes those who contend that the Federal Reserve is late in raising rates, given this recovery is already 6.5 years old, as well as others who warn that raising rates now is a grave mistake that threatens to push the economy into a recession and the equity market into a tail spin. Though these are extreme views, there is certainly some small probability that one of them turns out to be correct. Even within the FOMC, there was a wide dispersion of views at the December 15–16 meeting with respect to rate increases in 2016, with one member projecting seven hikes and four members projecting two, as shown in Exhibit 25.

We believe that the pace will be measured, and the FOMC will adjust its pace according to "incoming data," as explicitly indicated in its December 2015 statement.[50] Therefore, neither extreme view is warranted.

Exhibit 25: Distribution of FOMC Participants' Views of Appropriate Policy in 2016

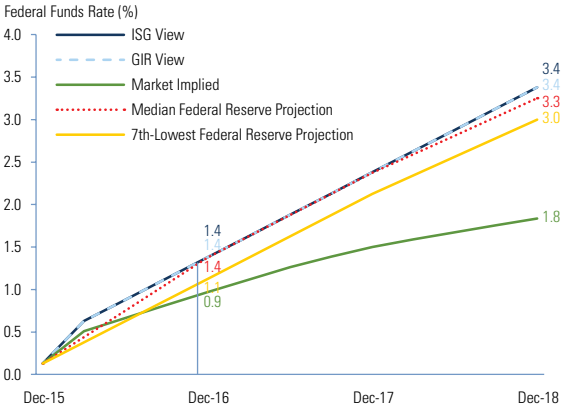
FOMC members are divided on the appropriate number of rate hikes in 2016.



Data as of December 16, 2015.
Note: Assumes 25 basis point interest rate hikes.
Source: Investment Strategy Group, Federal Reserve.

Exhibit 26: Policy Rate Path Projections

The market's expectation is for a slow pace of interest rate hikes.



Data as of December 31, 2015.
Note: For informational purposes only. There can be no assurance that the forecasts will be achieved. Please see endnote 51 for detail regarding the 7th-Lowest Federal Reserve Projection.
Source: Investment Strategy Group, Bloomberg, Goldman Sachs Global Investment Research, Federal Reserve.

We have considered two risks: the market reaction should our base case of a 100 basis point increase in the federal funds rate materialize, and the risk of recession from the FOMC embarking upon a tightening policy.

As shown in Exhibit 26, the fixed income market has priced in a much slower pace of interest rate hikes than the median projection of FOMC participants (commonly referred to as "the dots"), the view of our colleagues in GIR and our view in the Investment Strategy Group. Should the incoming data support our projected pace of hikes, the fixed income and equity markets may both react negatively to a faster pace. We think the Federal Reserve will use its various communication tools—including lengthy statements and press conferences, speeches and the FOMC member projections—to guide the market and minimize any disruptive surprises. The muted reaction of Treasuries in the few weeks following the December rate hike—10-year Treasury rates were practically unchanged—augurs well for the ability of future Federal Reserve communications to guide rates higher before actual increases in the federal funds rate.

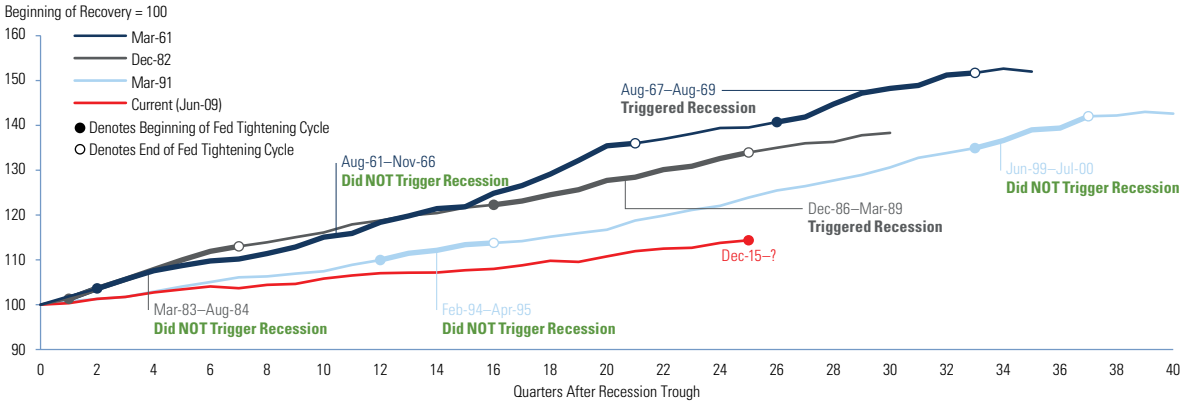
Surprisingly, volatility in both equity and fixed income markets has been on average lower in the 3, 6 and 12 months following the past 10 tightening cycles (which is when daily data for the 10-year Treasury became available), compared with the periods before the cycle began.[52] This lower volatility is somewhat counter to conventional thinking that Federal Reserve tightening leads to higher volatility in financial markets.

A second and more significant risk is that most tightening cycles trigger recessions. Out of the 14 tightening cycles since WWII, nine have triggered a recession while five have not. We first focus on tightening cycles that did not trigger recessions—what we refer to as "benign" tightening cycles—to see what qualities they share. Four factors differentiate the benign cycles from the recessionary cycles:

- More labor market slack: The gap between the employment rate and estimates of full employment is large; historically, benign cycles have had an unemployment gap of 0.9% versus 0.5% in recessionary cycles.
- Lower inflation: The inflation rate as measured by the core consumer price index (CPI) and core PCE is 22% and 31% lower, respectively, than the same measures in recessionary cycles.
- Slower pace of tightening: The average pace is about 220 basis points per year, relative to 330 basis points per year in recessionary cycles.
- An "early"[53] start: The Federal Reserve is ahead of the cycle and therefore does not have to raise rates aggressively.

Exhibit 27: 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 2015.
Note: Please see endnote 54 for detail on the Recession which began in March 2001.
Source: Investment Strategy Group, Bloomberg, National Bureau of Economic Research.

The current recovery is characterized by all four of these factors. Our colleagues in GIR estimate the true slack in the labor market is about 1%. Inflation is also extremely low at 2.0% as measured by core CPI and 1.3% as measured by core PCE. And the pace of interest rates hikes is expected to be very gradual.

With respect to the timing of the tightening and whether the Federal Reserve is ahead of the cycle, Chair Janet Yellen's remarks are elucidating. When asked at the December 16, 2015, press conference if she was concerned about the possibility that central banks "kill" expansions, she responded: "When that has been true [the usual reason] is that central banks have begun too late to tighten policy, and they've allowed inflation to get out of control. And at that point, they have had to tighten policy very abruptly and very substantially, and it's caused a downturn, and the downturn has served to lower inflation … It is because we don't want to cause a recession through that type of dynamic at some future date that it is prudent to begin early and gradually."[55]

It is not a certainty that this long recovery will be derailed by a gradual path of Federal Reserve tightening. In fact, if history is any guide, four of the five benign cycles occurred during the three longest recoveries in the post-WWII period, as shown in Exhibit 27. So this recovery, which is already the fourth-longest, has more in common with the three longest cycles when the economy grew despite the tightening. Therefore, our base case is that Federal Reserve tightening will not be disruptive in a meaningful way and will not derail this recovery in 2016.

Even if we are wrong, that does not mean an equity market peak and a recession are imminent after the first interest rate hike. As shown in Exhibit 28, a repeat exhibit from last year, in those tightening cycles that triggered a recession and a downdraft in equities, the average lead time from the first rate hike to the onset of recession was 30 months and the median was 31 months. In this set of tightening episodes, the S&P 500 peaked on average within 20 months of the first rate hike, and the median was 16 months.

Geopolitical Hotspots and Terrorism

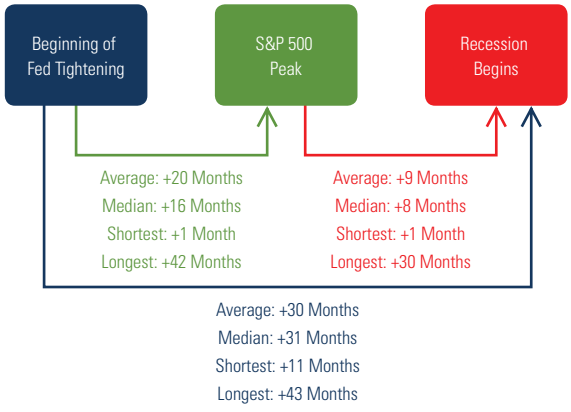
As mentioned last year, we rely on the insights of external experts to formulate our geopolitical views. We reach out to experts from prominent research groups, think tanks and universities, as well as former and current government officials, both in the United States and abroad.

So informed, we highlight three geopolitical hotspots.

China's rising military assertiveness: The World Bank estimates that China increased its military expenditures by 18% a year between 2004 and 2014.[56] The results were on full display on September 3, 2015, at China's military parade to mark the 70th anniversary of the end of WWII. China's moves to reclaim land and build artificial

Exhibit 28: Sequence of Federal Reserve Tightening, S&P 500 Peaks and Recessions

Tightening does not impact US markets or the economy in a predictable manner.



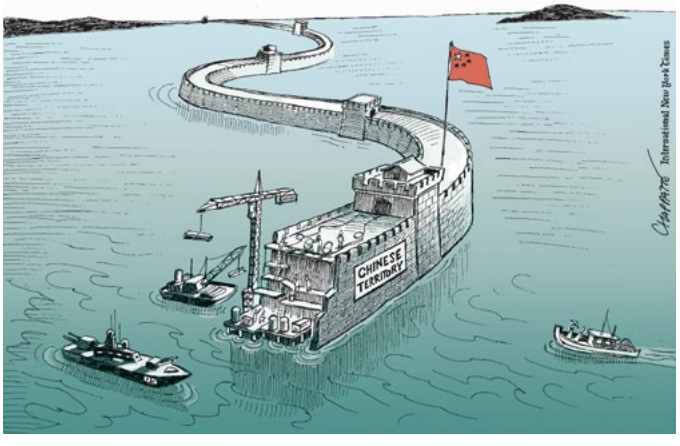
Data as of December 2015.
Note: Based on 9 historical tightening cycles that triggered recessions in the US.
Source: Investment Strategy Group, Bloomberg.

islands on reefs in the Spratly Islands in the South China Sea—strategic locations that could be used for military installations—has raised tensions between China, its regional neighbors and the US. The islands in the South China Sea are also claimed by Malaysia, the Philippines, Vietnam and Taiwan. As US Secretary of Defense Ash Carter has stated, "the United States joins virtually everyone else in the region in being deeply concerned about the pace and scope of land reclamation."[57] The US Navy sailed a navy destroyer within 12 nautical miles of the Subi Reef in late October 2015;[58] the US, Japan and India conducted joint naval exercises in the South China Sea, also in October; and Australia has reportedly stepped up military surveillance flights over the South China Sea.[59] While none of these specific incidents poses a risk, the tensions are certainly escalating and the risk of a miscalculation or inadvertent accident is rising.

The upcoming January elections in Taiwan may also be a source of rising tensions between Taiwan and China, as well as between the US and China. Tsai Ing-wen, the leader of the opposition Democratic Progressive Party in Taiwan, is expected to win, and there is general agreement that she will not be as accommodating of China's guidelines for improving relations. She may also stoke Chinese enmity by promoting Taiwanese independence, as she has in the past. As a result, the US may get drawn into any rising tensions between China and Taiwan across the Taiwan Strait.[60]

North Korea's continued unpredictability: North Korea has stepped up its military activities both in terms of missile launches and rhetoric. In September 2015, it announced that the Yongbyon nuclear facility, which produces plutonium and has the capability to enrich uranium, was fully operational and that North Korea was prepared to use nuclear weapons against the US at any time.[61] The regime has also threatened to conduct its fourth nuclear test and claims it has developed a hydrogen bomb—a claim that has been met with much skepticism by the US and other experts.[62] Earlier in the year, North Korea was reported to have successfully launched five short-range ballistic missiles.[63] South Korea also reported in April and May 2015 that North Korea had fired missiles into waters off its western and eastern coasts.[64]

South Korea has nevertheless attempted to restart dialogue with its neighbor to the north; the resulting negotiations between the two countries broke down after a two-day marathon session in December.[65] North Korea remains an unpredictable and serious risk.



China's rising military assertiveness in the South China Sea.
© Chappatte in *The International New York Times*, May 20, 2015

Increasing instability in the Arab world: The Middle East has become a tinder box. According to Nick Burns, professor at Harvard University and former US under secretary of state for political affairs, "of the 22 Arab states, nearly all are worse off since the Arab Spring revolutions of 2011."[66] The fighting in Iraq and Syria escalated in 2015. The humanitarian toll has been steep with an

Explosion in the Syrian city of Kobani following a reported suicide car bomb attack by ISIL in October 2014.

estimated 140,000–340,000 casualties and millions of refugees from Syria alone.[67] The US, UK, France, Russia, Iran, Turkey, Saudi Arabia and Qatar are all involved in Syria—some with overlapping goals and some with conflicting goals. All claim to share the common goal of destroying the Islamic State of Iraq and the Levant (ISIL). Turkey, however, "has other priorities and other interests" beyond fighting ISIL, namely, the threat from the "Kurdish resistance ... in Turkey," according to James Clapper, the US Director of National Intelligence.[68] Qatar is reported to be focused on funding and providing military aid to Syrian rebel groups.[69] And Saudi Arabia is interested in defeating ISIL "only if the post-conflict order in Iraq and Syria weakens Iran's influence," according to Eurasia Group.[70]

Rising tensions between Iran and Saudi Arabia have also exacerbated instability in the region. Again, according to Eurasia Group, Saudi Arabia is engaging in proxy wars with Iran in Syria, Yemen and Lebanon because it is uneasy with Iran's rise in the region, especially after the conclusion of the nuclear deal in July 2015. Saudi forces have launched a war in Yemen, citing Iran's interference via its support for the Shi'ite Houthi militia, which had toppled the Sunni Saudi-supported regime.[71] Saudi Arabia is also reported to be a major provider of military and financial assistance to several rebel groups in Syria, including those with Islamist ideologies, partly in response to Iran's support of President Bashar al-Assad.[72] The Saudi foreign minister reportedly has two prerequisites for a political settlement in Syria: removal of President Assad, and withdrawal of all foreign (especially Iranian) troops from Syria.[73]

There are two risks emanating from the conflicts in the Arab world: terrorism, as witnessed by the Paris bombings in November 2015 and the San Bernardino shootings in December 2015, and the risk of a major mishap that could escalate into a broader military conflict. The intentional Turkish downing of a Russian Su-24 fighter plane in November 2015 is one such example, since it prompted Russia to fire some warning shots at a Turkish boat in the Aegean Sea. It is not clear whether this incident will lead to further hostilities between the two countries.

> "The United States joins virtually everyone else in the region in being deeply concerned about the pace and scope of land reclamation."
>
> *– Ash Carter, US secretary of defense*

Further Declines in Oil Prices

Saudi Arabia's efforts to contain Iran's influence in the region are spilling over into the oil market. While the decline in oil prices after the global financial crisis could be explained by the economic slowdown and the subsequent decrease in the pace of growth in China, the second leg of the downdraft has taken most market participants by surprise. Spot prices have dropped more than 60% since July 2014. As shown in Exhibit 29, while demand has recovered from the trough of the crisis, supply has far

Footage of the Russian Su-24 fighter plane downed by Turkish forces in November 2015.

exceeded demand. We estimate that production exceeded consumption by 1.3–1.5 million barrels a day (mmbd) in 2015. The OECD inventory data suggests an oversupply of 0.7 mmbd in the OECD, which would be the largest oversupply ever recorded on a 12-month basis.

This supply-demand imbalance is being driven primarily by an increase in world production rather than a decline in trend consumption growth. The International Energy Agency (IEA) estimates that consumption grew by 1.8 mmbd on a global basis in 2015.[74] Supply, on the other hand, has risen in large part due to US shale production and production in Saudi Arabia, as shown in Exhibit 30. The US increased production from 5.1 mmbd in December 2008 to a peak of 9.6 mmbd in April 2015.

Experts believe this trend is about to reverse. Daniel Yergin, vice chairman of IHS, expects US production to average 8.8 mmbd in 2016, down from an estimated average of 9.3 mmbd in 2015.[75] Our colleagues in GIR estimate capital expenditures to have fallen by 28% on a global basis in 2015, and expect another 14% decline in 2016.[76]

Given an increasing demand backdrop and a small reduction in supply from US shale producers, the latest decline in oil prices over the last three months of 2015 seems surprising. Yergin believes the price drop should be viewed in the context of what he calls the "battle for market share" representing "a geopolitical struggle in the Middle East" between Iran and Saudi Arabia.[77] Iran has called on its Arab neighbors to cut back to make room for an increase in production when the sanctions are lifted. However, as Saudi Arabia attempts to contain Iran, especially after the nuclear deal, it is unlikely to reduce production to make room for Iranian oil.

Iran has stated that it wants its original market share back.[78] At peak levels in 1974, Iran produced 6.0 mmbd, accounting for 10% of world production. Currently it produces 2.8 mmbd, accounting for 3% of world production. For its part, Saudi Arabia produced 8.5 mmbd in 1974, a world market share of 14%, compared to production of 10.3 mmbd today and a world market share of 11%. Its market share has oscillated between 10% and 12% of world production over the last 20 years. As Yergin has concluded, it therefore appears that Saudi Arabia's desire for maintaining market share is being shaped by "geopolitical rivalries" across the Persian Gulf.[79]

Hence, the battle may last a lot longer, and the risk of further declines in oil prices is significant in the near term. But there are also risks of supply interruption and oil price spikes: The tinder box in the Middle East could easily ignite as discussed above. The only certainty here is that oil prices will be uncertain and likely volatile in 2016.

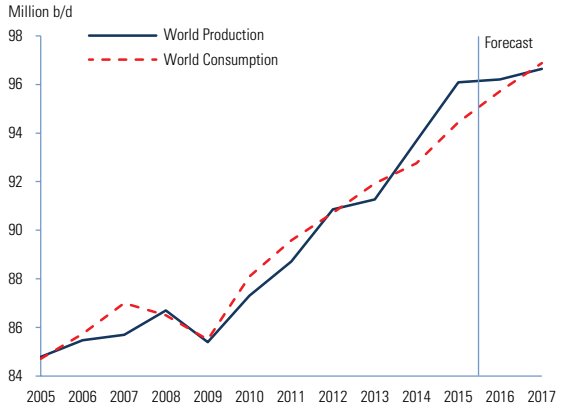
We believe that China will use its policy tools and resources to avert a hard landing in 2016. The risks emanating from China are longer term and are more likely to unfold over the next five years.

Increasing Threats of Cyberattacks

Cyberattacks represent another significant risk that could upend markets in 2016. According to James Clapper, cyberattacks are the greatest threat to US national security: "Critical

Exhibit 29: Global Supply and Demand of Crude Oil

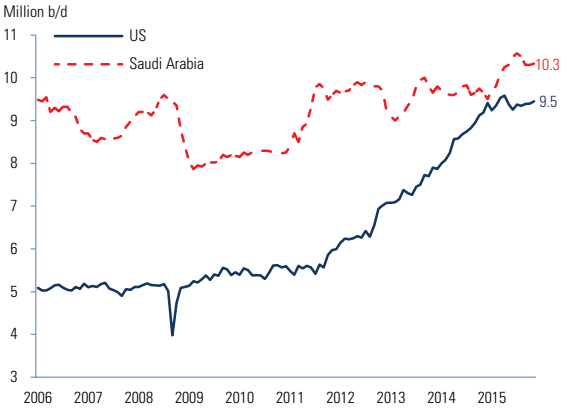
Production has increased faster than consumption in recent years.



Data as of December 31, 2015.
Source: Investment Strategy Group, Barclays, Bloomberg, Energy Aspects, Goldman Sachs Global Investment Research, IEA, OPEC, PIRA Energy, US Department of Energy.

Exhibit 30: Crude Oil Production

The US and Saudi Arabia are fueling the increase in supply.



Data through November 2015.
Source: Investment Strategy Group, Bloomberg, IEA.

infrastructure—the physical and virtual assets, systems, and networks vital to national and economic security, health and safety—is vulnerable to cyberattacks by foreign governments, criminal entities, and lone actors."[80] In the UK, a recent government survey found that "90% of large businesses had experienced a malicious IT security breach."[81]

In response to this rising threat, the US established the Cyber Threat Intelligence Integration Center in February 2015. The objective is to have a centralized effort focused on "connecting the dots regarding malicious foreign cyber threats to the nation and cyber incidents affecting U.S. national interests."[82]

The risk of cyberattacks is certainly increasing and the impacts of such attacks could be far-reaching.

Hard Landing in China

We have been discussing the possibility of a hard landing in China for several years. Every year, we argue that the probability is negligible since China's leadership has both the will and the means to avert such an outcome. We believe the same holds true for 2016.

China's growth has been declining steadily since 2007, from a peak of 14.2% to an estimated 7% in 2015. We expect growth to slow further in 2016, with real GDP growth between 5.8% and 6.8%. Underlying economic activity measures are lower and they, too, should decline further in the coming year. The biggest risk to China's growth in 2016 is a greater-than-expected slowdown in real estate. The actual inventory overhang is uncertain, with estimates ranging from 4.7 months (according to the National Bureau of Statistics)[83] to 24 months (according to the IMF).[84] Some estimates are as high as 4.5 years.[85]

We believe China's leadership will use monetary and fiscal policy measures to prevent a hard landing. We expect it to further reduce benchmark interest rates, lower reserve requirement ratios, further depreciate the currency and support public-private partnerships to boost investments. China also has significant resources at its disposal: a high savings rate, a current account surplus, net foreign direct investment estimated to total about $324 billion in 2016, and total reserve assets (including gold and Special Drawing Rights) of about $3.5 trillion, of which more than $2 trillion is in high-quality, relatively liquid assets.[86]

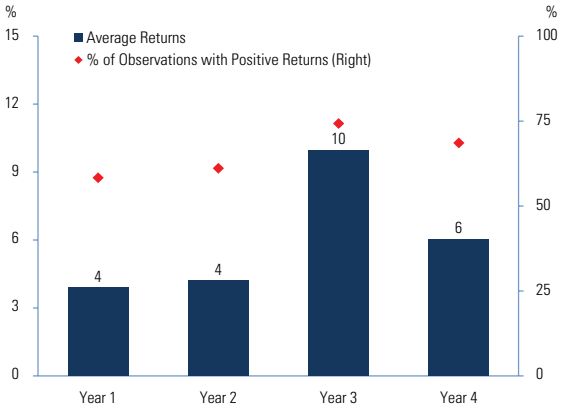
Hence, we believe that China will use its policy tools and resources to avert a hard landing in 2016. The risks emanating from China are longer term and are more likely to unfold over the next five years.

Uncertainty from US Elections

We are often asked whether the presidential cycle or the election cycle has any bearing on

Exhibit 31: Average Annual S&P 500 Price Returns Based on US Presidential Cycle

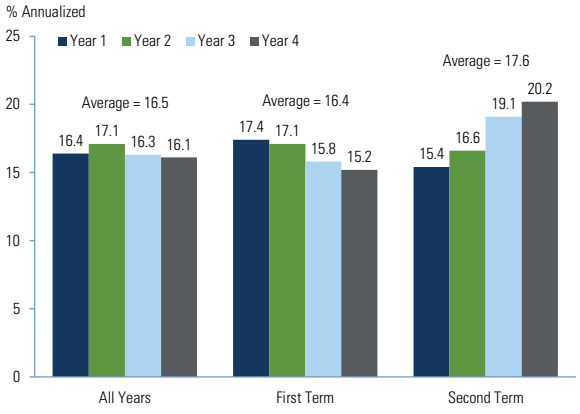
Typically, the third year of a US presidential cycle has posted higher returns.



Note: Shiller data between 1873 and 1927 and Bloomberg data between 1928 and 2014.
Source: Investment Strategy Group, Bloomberg, Robert Shiller.

Exhibit 32: S&P 500 Volatility Based on US Presidential Cycle

Volatility has generally been higher in the fourth year of a president's second term.



Note: Based on data between 1929 and 2014.
Source: Investment Strategy Group, Bloomberg.

market returns. Typically, the third year of a US presidential cycle has meaningfully higher returns, as shown in Exhibit 31, and the difference is statistically significant. This analysis is based on 142 years and 35 presidential cycles, as far back as S&P 500 Index data goes.

Exhibit 31 also shows that the fourth year of a presidential cycle typically has higher returns than the first and second years. However, when one narrows the analysis to the fourth year of a presidential cycle in the second term of a presidency, the returns are negative. The average return in these periods is -10.3% and the median is -12.6%. The reasons for such underperformance are unclear; we cannot attribute it to uncertainty around elections, since it is only observed during the second term of a presidential cycle and not the first.

One can also speculate that, during the eighth year of a presidency, such as the one we're entering now, the president has become a so-called lame duck with limited ability to influence domestic or foreign policy. We conclude that there are too few observations to draw any meaningful conclusions. Since the 22nd Amendment limiting US presidents to two terms was ratified in 1951, only four presidents have served two full terms. Prior to 1951, there were four additional two-term presidencies back to 1873, which is as far back as we have data.

The data is also inconclusive with respect to volatility given the limited number of observations. But, as shown in Exhibit 32, volatility has generally been higher in the fourth year of the second term of a presidential cycle. We should keep in mind that this data includes 2008, the fourth year of President George W. Bush's second term, when the market fell by 38% and volatility spiked to 40%.

Key Takeaways

In our 2009 *Outlook* report, *Uncertain but Not Uncharted*, we underscored the uncertainty surrounding our economic and investment outlook by stating that it was with "a strong dose of humility that we put forth our *Outlook* for 2009." Today, we proceed with an equal amount of caution and provide a warning about the difficulties of forecasting.

Philip Tetlock, co-author of the recently published book, *Superforecasting: The Art and Science of Prediction*,[87] conducted a study of forecasts between 1983 and 2004.[88] He collected 82,361 economic and political forecasts from a group of 284 experts. He found limited evidence that the experts were better forecasters than "dart-throwing chimps," both with respect to the relative probabilities the experts assigned to various potential outcomes and with respect to the eventual outcomes themselves. He provides 10 commandments for "aspiring superforecasters," including striking "the right balance between

inside and outside views," "the right balance between under- and overreacting to evidence," and, importantly, "the right balance between under- and overconfidence, between prudence, and decisiveness."[89] He also emphasizes the importance of an effective team and the benefits of "deep deliberative practice." As we reviewed his commandments, we were pleased to learn that the Investment Strategy Group has followed many of them since the inception of our group.

We believe that forecasting is particularly difficult in the last innings of a bull market and economic recovery. It is even more so when there are significant global forces to which the world may not have fully adjusted. Certain factors in particular are introducing more uncertainty than usual. These factors include: mismeasurement of the PCE deflator likely due to stale methodology for accounting for innovation in information technology hardware and software, mismeasurement of economic growth due to the difficulties of accounting for the economic impact of the internet, periods of disruption to labor and productivity due to technology, and periods of disruption to capital investment patterns due to greater globalization.

We have concluded that "secular stagnation" is not ailing the US economy. Recovering from a deep global financial crisis has historically been a lengthy process and the US has experienced a slower recovery in line with the experience of other countries. Deleveraging across the public and private sectors should cease to be a drag on growth, and we expect that Europe will cause fewer high-impact shocks to the global economy. We also think the probability of a recession in the US in the next two years is extremely low.

As a result, we recommend clients stay invested in core US equities with some tactical allocations to US high yield assets and non-US equities. We remain optimistic, but cautiously so.

2016 Global Economic Outlook: Life in the Slow Lane

ECONOMIES ACROSS THE GLOBE ARE STUCK IN THE SLOW LANE. According to the IMF, the nominal GDP of advanced economies has grown by just 8% in US dollar terms since its 2009 trough, making this expansion among the slowest on record. As a result, last year's nominal output stood below its pre-crisis level for two-thirds of these countries, including Japan and much of the Eurozone. Even China—the world's second-largest economy and among its fastest-growing—has been tapping the brakes. At just 7%, Chinese GDP growth in 2015 represented a marked deceleration from the double-digit pace of the last two decades.

This sluggish growth comes despite extraordinarily accommodative central banks, with policy rates at the zero bound in countries representing 84% of the world's market capitalization and more than half of global GDP. In turn, secular stagnation concerns abound. While structural factors like an aging population and desire for higher precautionary savings partially explain today's lower economic speed limit, there are cyclical headwinds as well. It is estimated that the collapse in oil prices could have subtracted up to 1% from global GDP last year by hobbling the third of capital spending that is commodity-related.[90]

It is also important to differentiate a slower speed from engine failure. While lackluster on the surface, the Eurozone expansion is performing better than expected and we expect its current pace to accelerate this year. Similarly, growth in Japan is likely to pick up as a tight labor market pushes wages higher, government stimulus filters through the economy, and the yen remains competitive. Meanwhile, the US economy is fast approaching full employment, justifying the first Federal Reserve interest rate increase in almost a decade. And though hazard lights are flashing in certain portions of emerging markets, the stabilization we expect in both the dollar and oil prices should temper two key headwinds from last year.

While the growth outlook presented in Exhibit 33 is uneven and uninspiring by historical standards, it nonetheless represents continued global economic progress. If anything, the sluggish pace of this global recovery has enabled it to avoid the type of cyclical excesses and inflationary pressures that typically topple business cycles. For this reason, this expansion has scope to extend, despite its advanced chronological age.

Traveling in the slow lane may result in a longer drive, but it can still get global economies to their destination.

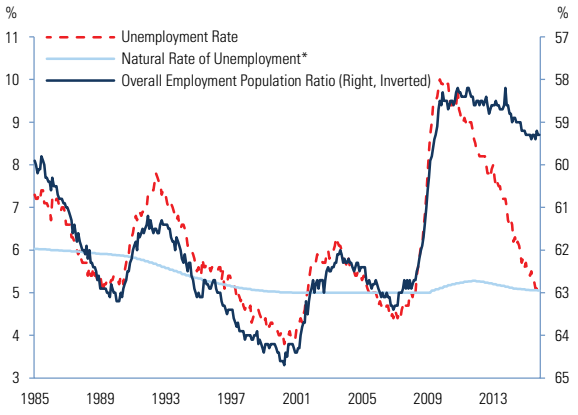
United States: Slow but Steady

Aesop's classic fable "The Tortoise and the Hare" reminds us that it is not always speed that wins the race. The same could be said for this economic expansion. Despite its lackluster pace, the US recovery has made significant cumulative progress in the post-crisis period. For example, headline unemployment has fallen from 10% at its peak to just 5%, a level last seen in April 2008 (see Exhibit 34). The federal budget deficit has also narrowed close to its historic average of about 2.2% of GDP after ballooning to nearly 10% during the crisis. Put simply, while the pace of growth has been slow, the economy has finally become healthy enough to warrant the first Federal Reserve interest rate increase in almost a decade.

Of course, the Federal Reserve's confidence is a double-edged sword, as many worry that any monetary tightening will easily topple the US

Exhibit 34: US Unemployment Indicators

The US labor market has recovered substantially, but the amount of labor slack is uncertain.



Data through November 2015.
Source: Investment Strategy Group, Federal Reserve Economic Data, Datastream.
* Long-term rate.

Exhibit 33: ISG Outlook for Developed Economies

		United States		Eurozone		United Kingdom		Japan	
		2015	2016 Forecast	2015	2016 Forecast	2015	2016 Forecast	2015	2016 Forecast
Real GDP Growth*	YoY	2.50%	2.00 – 2.75%	1.50%	1.25 – 2.00%	2.50%	1.75 – 2.50%	0.70%	0.50 – 1.25%
Policy Rate**	End of Year	0.50%	1.25 – 1.50%	0.05%	(0.50) – (0.30)%	0.50%	0.50 – 1.00%	0.07%	0.07%
10-Year Bond Yield***	End of Year	2.27%	2.25 – 3.00%	0.63%	0.75 – 1.25%	1.96%	1.75 – 2.50%	0.27%	0.00 – 0.50%
Headline Inflation****	Average	0.50%	1.50 – 2.25%	0.20%	0.75 – 1.50%	0.10%	0.50 – 1.25%	0.30%	–
Core Inflation****	Average	2.00%	1.75 – 2.50%	0.90%	0.75 – 1.50%	1.20%	1.25 – 2.00%	0.90%	0.00 – 0.75%

Data as of December 31, 2015.
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 that the forecasts will be achieved.
Source: Investment Strategy Group, Goldman Sachs Global Investment Research, Bloomberg.
* 2015 real GDP is based on Goldman Sachs Global Investment Research estimates of year-over-year growth for the full year.
** For Japan policy rate, we show the unsecured overnight call rate.
*** For Eurozone bond yield, we show the 10-year German Bund yield.
**** For 2015 CPI readings, we show the latest year-over-year CPI inflation rate (November). Japan core inflation excludes fresh food, but includes energy.

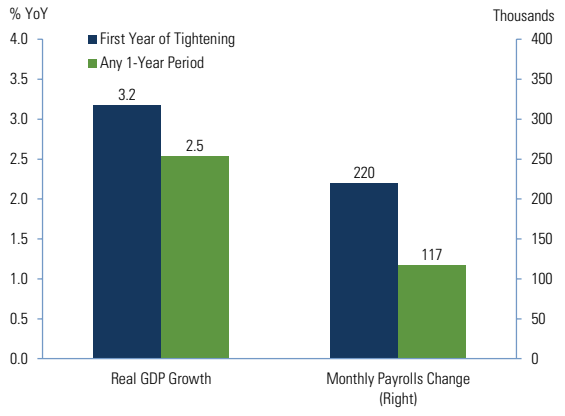
Exhibit 35: Goldman Sachs US Financial Conditions Index

Financial conditions were already tight before the first Federal Reserve rate hike.

Data through December 31, 2015.
Note: Weighted average of riskless interest rates, credit spreads, equities and FX, based on effects on 1-year forward US GDP growth.
Source: Investment Strategy Group, Goldman Sachs Global Investment Research.

Exhibit 36: Growth and Employment Following Monetary Tightening in the US

Economic growth and job gains have been better than average during the first year of tightening cycles.



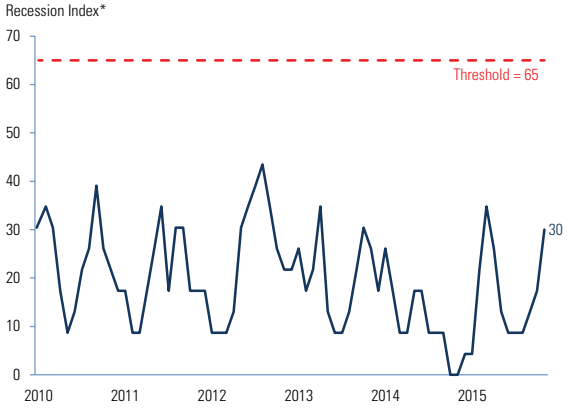
Data as of December 2015.
Note: Real GDP growth and monthly payrolls change are adjusted for the difference between current and historical working-age population growth.
Source: Investment Strategy Group, Datastream.

expansion. These fears are not entirely groundless. Of the 14 historical Federal Reserve tightening cycles in the post-WWII period, nine eventually triggered recessions. Longer-dated rates could also shift abruptly higher if the market misconstrues Federal Reserve communications about the likely pace of tightening. On this point, an unexpected one percentage point increase in 10-year Treasury yields is estimated to reduce GDP growth by about 0.6 percentage point over the subsequent year.[91] Equally troubling is the fact that the anticipation of tighter US monetary policy has already pushed the trade-weighted dollar almost 20% above late 2014 levels, shaving about 0.5 percentage point off 2015 US GDP growth. A repeat of that performance as the Federal Reserve raises rates would further tighten already restrictive financial conditions (see Exhibit 35).

While the threat of a recession from disruptive Federal Reserve tightening is certainly a key risk to our 2016 economic and market views, it is not our base case for several reasons. First, lingering uncertainty about the true amount of labor slack, as evident in Exhibit 34, suggests the central bank is likely to raise rates gradually in 2016. In fact, the term "gradual" appeared twice in the FOMC's December statement and was echoed in Federal Reserve Chair Janet Yellen's own comments late last year: "An abrupt tightening would risk disrupting financial markets and perhaps even

Exhibit 37: ISG US Recession Index

Our recession dashboard does not point to an imminent recession.



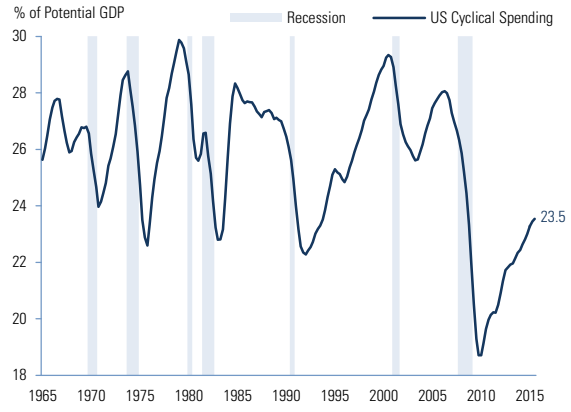
Data through November 2015.
Note: A recession index level above 65 has been historically associated with an impending recession, or one that has just started.
Source: Investment Strategy Group, Datastream, Goldman Sachs Global Investment Research, Macroeconomic Advisers. See endnote 92 for a list of leading indicators.
* Based on a weighted average of leading indicators.

inadvertently push the economy into recession."[93]

Second, economic growth has been better than average during the first year of tightening cycles historically, with real GDP growing 3.2% and nonfarm payrolls increasing 220,000 per month (see Exhibit 36). Even if this tightening

Exhibit 38: US Cyclical Spending

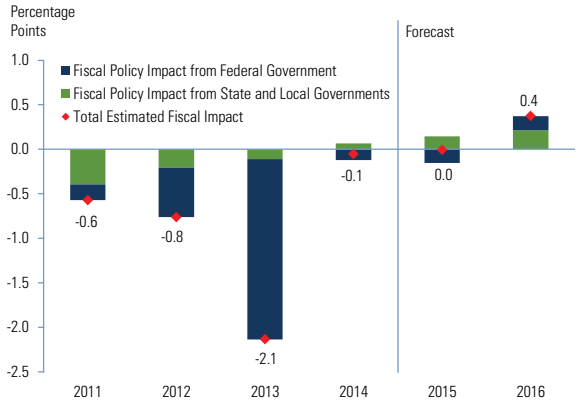
There are no clear cyclical excesses in the economy.



Data through Q3 2015.
Note: 4-quarter average. Cyclical spending is business fixed investment plus consumer durables spending.
Source: Investment Strategy Group, Datastream.

Exhibit 39: Estimated Fiscal Policy Impact on US GDP Growth

Fiscal policies should support growth in 2016 for the first time in five years.



Data through 2015.
Note: Historical estimates and forecasts by Goldman Sachs Global Investment Research.
Source: Investment Strategy Group, Goldman Sachs Global Investment Research.

cycle ultimately culminates in a recession, the median time between the first hike and the onset of recession historically has been 31 months.

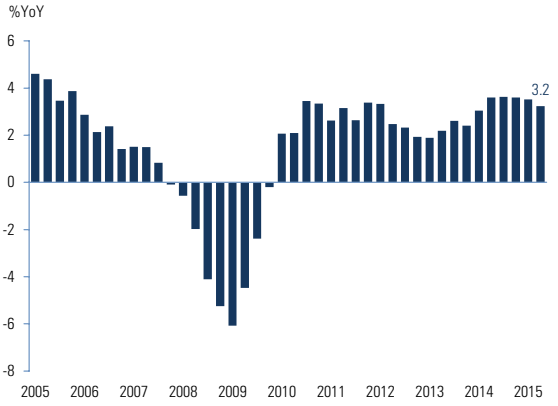
Third, despite the anticipatory tightening in financial conditions mentioned above, the leading indicators included in our recession index continue to signal that a recession is not imminent (see Exhibit 37). This point is reinforced by Exhibit 38, which shows there are no clear cyclical excesses in the economy, a typical harbinger of recession. If anything, there is scope for spending in cyclical parts of the US economy to increase toward the long-term average.

Fourth, we believe that the recent budget agreement and positive developments at the state and local levels should contribute 0.4 percentage point to GDP growth in 2016, the first positive fiscal impact in five years. In contrast, fiscal cutbacks and tax increases have subtracted a sizable 0.7 percentage point from annual growth since 2011 (see Exhibit 39). Finally, the drag from net trade should abate in 2016, consistent with our expectation for more moderate dollar strength. This shift could add an additional 0.2 percentage point to GDP growth in the year ahead.

Taken together, we think that fiscal and trade improvements are likely to boost 2016 GDP growth by about 0.6 percentage point relative to last year. Coupled with steady consumption, a buoyant housing recovery and ongoing business investment, this combination should enable the US economy to withstand slowly rising rates this year. We briefly discuss these growth drivers below.

Exhibit 40: US Real Final Sales to Private Domestic Purchasers

Household consumption and business investment have remained consistent drivers of US growth.



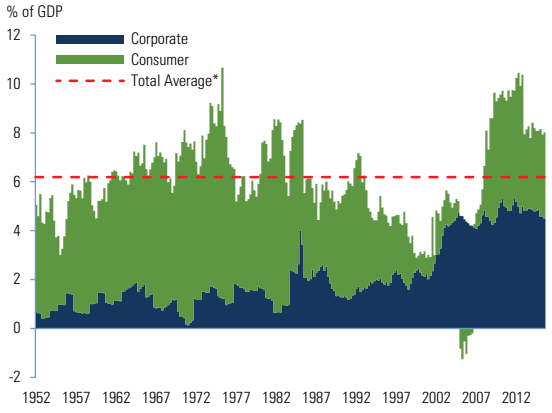
Data through Q3 2015.
Source: Investment Strategy Group, Federal Reserve Bank of St. Louis.

Steady Consumption

Real final sales to private domestic purchasers, which remove the effects of inventory shifts,

Exhibit 41: US Private Sector Free Cash Flow

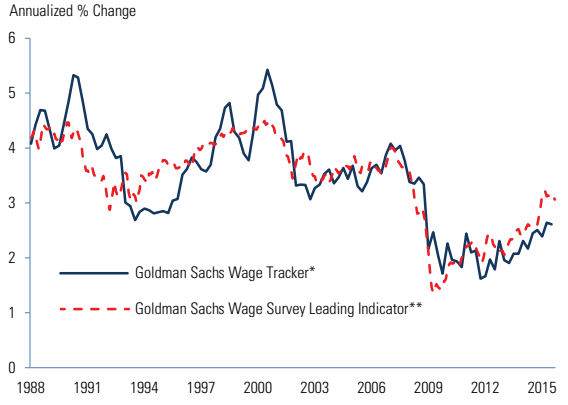
Above-average levels of cash flow in the private sector support future spending.



Data through Q3 2015.
Source: Investment Strategy Group, Empirical Research Partners.
* Average of corporate and consumer free cash flow combined.

Exhibit 43: US Wage Growth

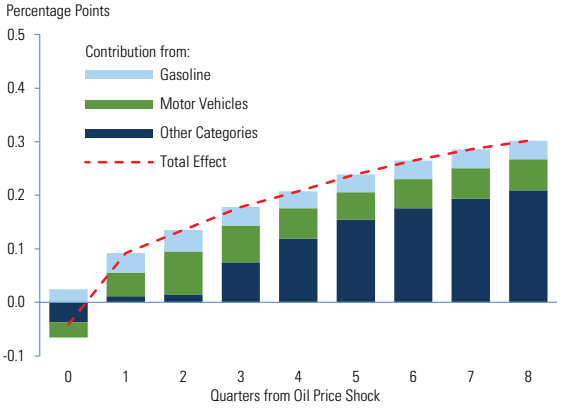
The recent upturn in wages should further boost consumption.



Data through Q3 2015.
Source: Investment Strategy Group, Goldman Sachs Global Investment Research.
* First principal component of average hourly earnings for production and nonsupervisory workers, the employment cost index and hourly compensation in the nonfarm business sector.
** Combines wage survey questions from 10 different surveys using partial least squares method. See endnote 94 for list of surveys.

Exhibit 42: Sensitivity of US Consumer Spending to Declining Gasoline Prices

Lower energy prices should continue to support consumer spending.



Data as of 2015.
Note: Estimated effect of a 10% decline in gasoline prices on the level of real spending.
Source: Investment Strategy Group, Goldman Sachs Global Investment Research.

government spending and net trade from GDP, have remained a consistent driver of US growth in the post-crisis period (see Exhibit 40). We expect this trend to continue. As seen in Exhibit 41, there is ample dry powder for increased future spending given above-average levels of private sector cash flow. US consumers should also benefit from an ongoing energy dividend (see Exhibit 42) in the form of US gasoline prices that recently fell below $2/gallon across much of the US. This is likely to extend the $100 billion of fuel savings Americans realized in 2015, which works out to more than $350 per person.

Similarly, the recent upturn in wages arising from the cumulative erosion of labor market slack over the past several years should further boost consumption, as will the ongoing growth of the workforce. Already, average hourly earnings growth has increased from its trough of 1.5% to 2.3% in late 2015, an improvement echoed in Goldman Sachs' wage tracker (see Exhibit 43). Leading wage indicators, such as the survey of small business compensation plans, also suggest accelerating wage growth in coming quarters.

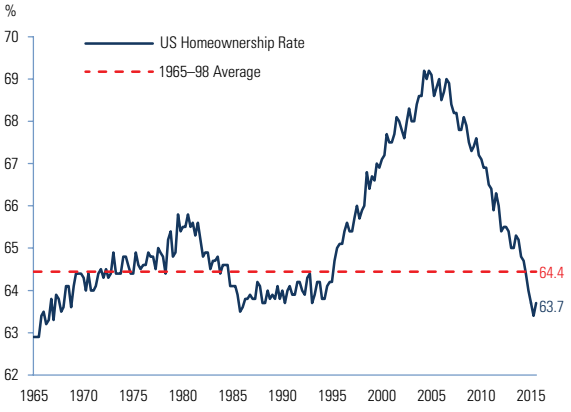
The leading indicators included in our recession index continue to signal that a recession is not imminent.

Buoyant Housing Recovery

Many are concerned that US housing will be the first casualty of Federal

Exhibit 44: US Homeownership Rate

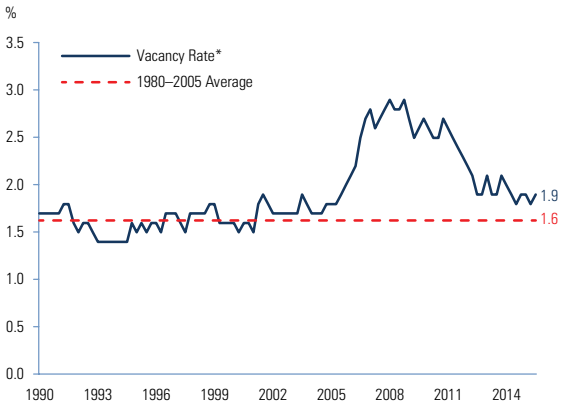
Housing demand should improve, as the bubble in homeownership has been deflated.



Data through Q3 2015.
Source: Investment Strategy Group, US Census, Datastream.

Exhibit 45: US Homeowner Vacancy Rate

Most of the excess housing supply has already been absorbed.



Data through Q3 2015.
Source: Investment Strategy Group, Datastream.
* Among homes for sale.

Reserve tightening, as each percentage point increase in mortgage rates has depressed housing starts by about 9% historically.[95] We note several reasons for a less alarmist view. First, the bubble in homeownership has been completely expunged, removing a key headwind to housing demand (see Exhibit 44). In turn, household formation of 1.5 million annual units now exceeds housing starts of 1.1 million units, creating a positive imbalance that stimulates new construction. This disparity is likely to grow as the more than two million adults currently living with their parents seek independent housing in a market that has already absorbed most of the excess housing supply (see Exhibit 45).

Second, rates are incredibly depressed today, as the 30-year mortgage rate has been lower only 5.9% of the time since 1976. In fact, mortgage rates would need to increase almost three percentage points from current levels to push today's record housing affordability back to its long-term average (see Exhibit 46). Finally, residential investment was a much larger share of GDP at higher interest rates historically, suggesting there is still potential for continued growth despite gradual Federal Reserve tightening (see Exhibit 47).

Ongoing Business Investment

We expect business investment to benefit from three tailwinds in 2016. First, stabilization in oil prices should reduce the drag from energy-related investment, which subtracted 2.4 percentage points from headline capital spending growth in 2015 (see Exhibit 48). Second, firms may begin to substitute capital for labor as wages increase further. Finally, other key drivers of investment remain supportive, as consumption growth is robust and profit margins are high. These combined positives should be sufficient to offset the headwind from gradually rising rates.

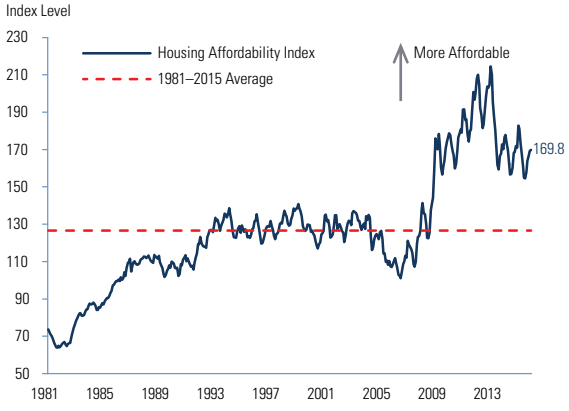
The slow pace of the expansion has enabled it to avoid the types of cyclical excesses that typically extinguish the business cycle.

Our View on US Growth

With the US expansion entering its seventh year—making it the fourth-longest in the post-WWII era—we are increasingly mindful that the end of the cycle could be nearing, particularly with the Federal Reserve now tightening policy. That said, the slow pace of this expansion has enabled it to avoid the types of cyclical excesses that typically

Exhibit 46: US Housing Affordability

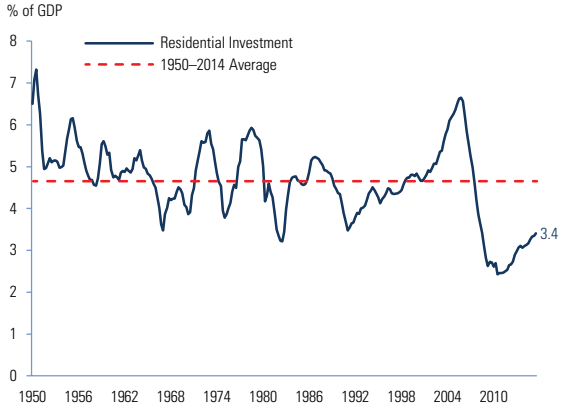
It would take a meaningful rise in mortgage rates to erode today's high affordability.



Data as of December 2015.
Source: Investment Strategy Group, Datastream.

Exhibit 47: US Residential Investment

Residential investment has ample scope for further upside.

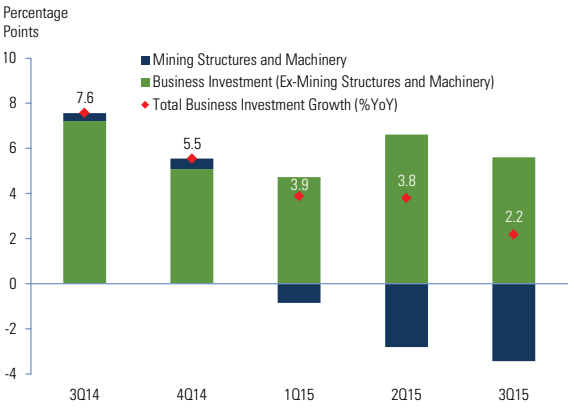


Data through Q3 2015.
Source: Investment Strategy Group, Datastream.

extinguish the business cycle. Moreover, while the 2–2.75% GDP growth we forecast may seem moderate, the drivers discussed above suggest a fundamentally solid US economy. The Federal Reserve seems to agree, with its decision to start normalizing policy a strong vote of confidence. For the US economy, like Aesop's tortoise, perhaps slow and steady ultimately wins the race.

Exhibit 48: Contributions to US Business Investment Growth

Energy-related sectors have been a major drag on business investment.



Data through Q3 2015.
Source: Investment Strategy Group, Datastream.

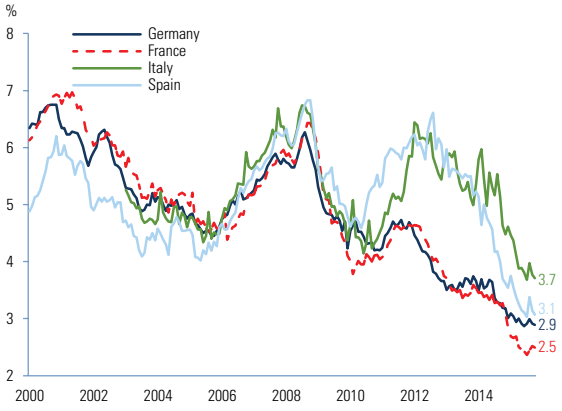
Eurozone: Cyclical Resilience in the Face of Uncertainty

With estimated real GDP growth of 1.5% last year, the Eurozone expansion can hardly be called robust. Yet despite its modest headline, European growth was actually better than expected in 2015, exceeding the high end of our forecast and registering its fastest pace since the last recession. This outcome is even more impressive considering the significant political and economic uncertainty the Eurozone endured as Greece came perilously close to exiting.

There are many reasons to believe this economic momentum can persist, if not even accelerate, in 2016. While the 12% trade-weighted depreciation of the euro over the last 18 months is unlikely to be duplicated, modest currency weakness should remain a tailwind for exports this year, particularly given ongoing quantitative easing by the ECB. Accommodative central bank policy and the willingness of banks to lend again after six years of balance sheet repair is also opening the supply of credit to the periphery, removing a brake on Eurozone growth. Indeed, lending rates to Italian and Spanish small and medium-size enterprises have declined to their lowest levels on record (see Exhibit 49). The health of the financial system is particularly important in the Eurozone, as banks provide 75% of corporate funding. On this point, the pace of money growth is quickening in the Eurozone, which has proven to be a leading

Exhibit 49: European Bank Lending Rates on New Business Loans

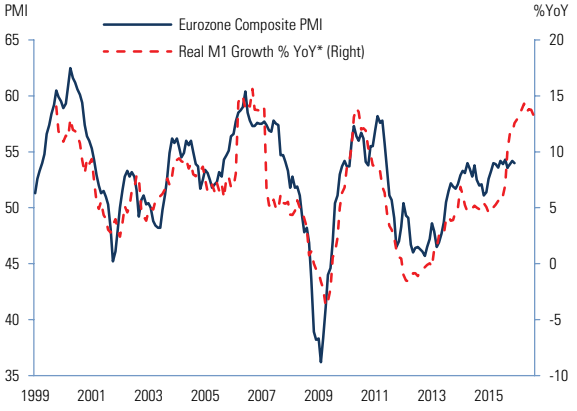
Cheaper credit to small and medium-size companies should support growth in the periphery.



Data through October 2015.
Note: Business loans with maturity of 1–5 years.
Source: Investment Strategy Group, Datastream.

Exhibit 50: Eurozone Purchasing Managers' Index (PMI) and Money Supply Growth

Faster money growth suggests stronger economic activity ahead.



Data through December 2015.
Note: M1 is a measure of the most liquid components of money supply. It includes all physical money, demand deposits, checking accounts and Negotiable Order of Withdrawal (NOW) accounts.
Source: Investment Strategy Group, Datastream.
* Nine months forward.

indicator of stronger economic activity historically (see Exhibit 50).

These easier financial conditions augment other economic tailwinds. Low energy prices should continue to support consumption growth, with the 45% decline in euro-denominated oil prices from their 2014 average estimated to boost GDP growth by 1.5 percentage points over the next two years.[96] At the same time, fiscal policy is set to become moderately expansionary, as Germany ups public investment, Italy's government cuts taxes and several countries assist asylum seekers entering the European Union. Taken together, these factors underpin our 1.25–2% GDP growth forecast for 2016.

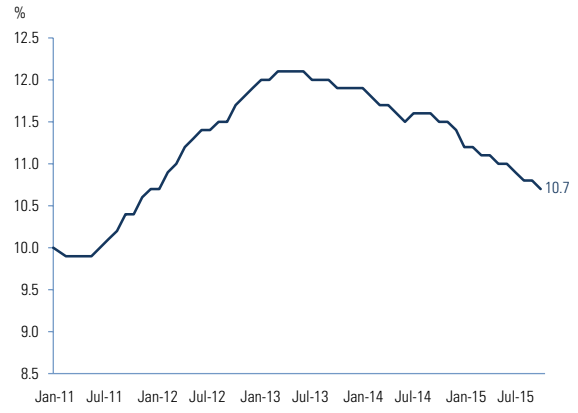
Although the midpoint of our forecast would represent a second year of above-trend growth for the Eurozone, the ECB is unlikely to tighten policy. Keep in mind that unemployment is still running above 10%, limiting wage pressures despite a strengthening labor market (see Exhibit 51). Similarly, our 0.75–1.5% headline inflation forecast suggests the ECB is likely to fall short of its 2% target, even with stabilizing commodity prices. The ECB is also well aware that several of the drivers of recent strength—a weak euro and lower oil prices—are not permanent in nature, underscoring the notion that a self-sustaining recovery has yet to take root. Therefore, we expect the ECB to remain accommodative and we see potential for additional easing measures.

Despite this constructive backdrop, political uncertainty remains a key downside risk. Here, the Eurozone's lower absolute level of growth works against it, as the economy is more susceptible to recessions arising from shocks. While there are no major elections planned for the largest economies in 2016, in our view lackluster progress on reforms in Greece, Portugal and potentially Spain will likely lead to renewed tensions with the European Commission in 2016. Moreover, the growing popularity of France's far-right National Front party ahead of the country's spring 2017 general elections risks rekindling fears of populist uprisings later in the year.

Although our forecast would represent a second year of above-trend growth for the Eurozone, the ECB is unlikely to tighten policy.

Exhibit 51: Eurozone Unemployment Rate

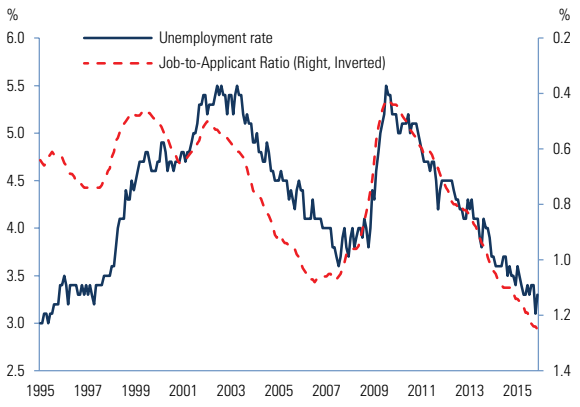
Unemployment has declined, but remains high.



Data through October 2015.
Source: Investment Strategy Group, Datastream.

Exhibit 52: Japan Unemployment Rate vs. Job-to-Applicant Ratio

Japan's labor market is tight.



Data through November 2015.
Source: Investment Strategy Group, Datastream.

Still, we draw some comfort from the resilience of the Eurozone economy in the face of last year's pervasive "Grexit" fears and hence attach 75% odds to continued growth this year.

United Kingdom: Sunny With a Chance of Rain

The UK economy enters 2016 with the sun on its cheek. Monetary policy remains very accommodative despite last year's estimated 2.5% real GDP expansion and rising wages. Job growth is proceeding at a decent clip, evidenced by the unemployment rate declining to 5.2% from a high of 8.5%. Consumer spending also remains robust, benefiting from not only employment strength, but also lower oil and gasoline prices. Even investment spending is positively contributing to GDP growth, supported by all of the aforementioned factors as well as rising capacity utilization.

Yet despite today's sunny backdrop, there are clouds on the horizon. Fiscal policy is set to turn more contractionary, as the government plans to halve the current 5.2% of GDP budget deficit by 2017. Similarly, the Bank of England (BOE) is likely to begin tightening policy by the third quarter, given the continued above-trend economic expansion, wage growth close to 3% and an expected uptick in inflation as the effects of past sterling depreciation and energy price declines abate. In addition, uncertainty surrounding the upcoming referendum on whether the UK should remain in the European Union is likely to weigh on both business and consumer activity.

This last point is important, as the economic impact of "Brexit" could be meaningful. Reversing decades of economic integration would likely undermine UK trade, the attractiveness of foreign investment and general productivity.[97] For these reasons, chief financial officers rank Brexit as among their foremost business risks—above even emerging market weakness.[98] In turn, surveys suggest that executives will take less business risk and reduce capital spending growth in 2016.

While Brexit is not our base case, the odds are a non-negligible 30% in our view. Regardless of the outcome, the uncertainty associated with the referendum will likely detract from GDP growth, with our forecast assuming a 0.2 percentage point drag. Combining this headwind with the other elements of our outlook, we expect UK growth of 1.75–2.5% in 2016.

Japan: In Search of an Updraft

The Japanese economy is struggling to gain altitude. While real GDP growth rose to an estimated 0.7% in 2015, it fell short of expectations once again, registering at the lower end of our 0.5–1.25% forecast. To be sure, part of the disappointment was due to external factors, particularly weakness in emerging market

countries. Yet the core shortfall was rooted in underwhelming domestic demand.

This continues a string of aborted liftoffs for Japan over the years; however, there are indications that the economy may catch an updraft in 2016. Chief among these is the nascent upturn in wages, which if extended could reinforce a virtuous cycle of higher consumption, more investment, faster GDP growth and rising incomes. Keep in mind that although employment growth is moderating, the labor market is tight, with unemployment at a 20-year low. The ratio of job openings to job seekers is also high (see Exhibit 52), with companies reporting that vacancies are difficult to fill. Attempting to support further compensation gains, the government has targeted a 3% increase in the minimum wage this year. Taken together, these developments should improve labor income.

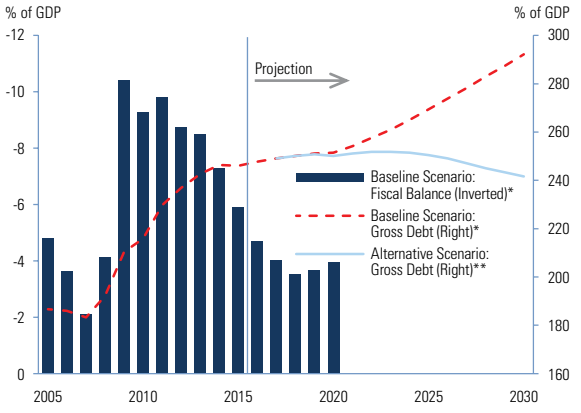
Growth also stands to benefit from other tailwinds this year. First, the government's recently announced 3.3 trillion yen stimulus package should lift GDP growth by up to 0.5 percentage point. Second, Japan's external demand is set to improve, with major trading partners other than China expecting faster GDP growth. Finally, the yen remains competitive and commodity prices are expected to be range-bound at low levels.

Of course, this is not to suggest that Japan is impervious to downside risks. External demand could disappoint, particularly if a sharper-than-anticipated slowdown in China materializes or recoveries in the Eurozone and United States falter. Japanese companies might also resist paying higher wages amid uncertainty about the global outlook and doubts about whether "Abenomics"—the mix of fiscal, monetary and structural reform policies designed to free Japan from its deflationary predicament—will succeed in boosting domestic demand.

Japan also remains plagued by its long-standing structural fault lines, which limit the countercyclical options of its policymakers in response to any adverse developments. For example, fiscal easing is constrained by Japan's large public debt, which is the highest among developed countries at 246% of GDP. Moreover, the BOJ's balance sheet is already expected to reach a staggering 90% of Japanese GDP. In turn, the pool of public assets it can purchase has dwindled, which will force it to include a broader range of private securities if it considers even more quantitative easing.

Exhibit 53: Japan Fiscal Outlook

In the absence of structural reforms, Japan's debt profile risks becoming unsustainable.



Data as of 2015.
Note: IMF projections from 2015–30. Gross debt of the general government includes the social security fund.
Source: IMF.
* Assumes a withdrawal of fiscal stimulus and a consumption tax increase to 10% in 2017.
** Assumes a stimulus of 0.3% of GDP in FY2017 and an additional adjustment of 6% of GDP in the structural primary balance (0.75% of GDP each year 2019–26) with a multiplier of 0.5.

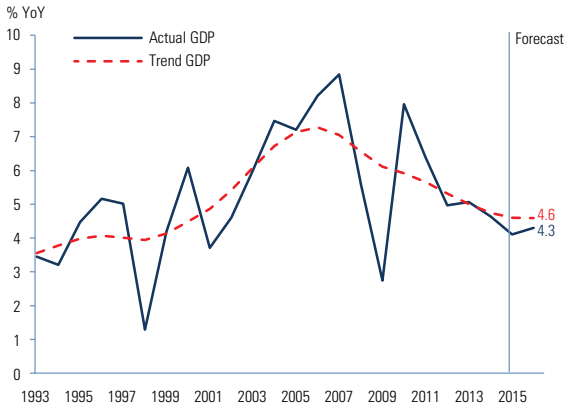
While these unfavorable debt dynamics are not new or imminent risks for Japan, they do highlight the necessity of imposing spending restraint and finding new sources of revenues over the medium term. Crucial in this regard are structural reforms that boost Japan's productivity and prepare it for the rising costs of an aging society. In the absence of such reforms, the debt profile of Japan risks becoming unsustainable over the next two decades (see Exhibit 53). While progress on these structural shortcomings remains elusive, that should not undermine the cyclical tailwinds discussed above. We expect the Japanese economy to gain altitude in 2016, with 0.5–1.25% real GDP growth.

Emerging Markets: Cloudy with a Chance of Thunder

Emerging markets fell short of already muted expectations again last year, with disappointing GDP growth across a large swath of countries. This pattern has become all too familiar, with 2015 marking the fourth consecutive year of below-trend expansion (see Exhibit 54). Although weak exports to the developed world and a gradually slowing China remain consistent features of emerging market weakness, last year added a relentless drop

Exhibit 54: Emerging Markets Real GDP Growth vs. Trend

We expect growth to remain below trend in 2016.



Data through 2015.
Note: ISG forecasts for 2015–16.
Source: Investment Strategy Group, IMF.

in commodity prices and the first Federal Reserve rate hike in almost a decade.

We expect that these cross-currents will continue to foster uneven growth across individual countries. Broadly range-bound commodity prices will likely benefit natural resource importers such as Taiwan, South Korea and India, while penalizing net exporters such as Indonesia, Russia and Brazil. In fact, Brazil and Russia—among the two largest emerging economies—are already in recession and are likely to remain so in the year ahead. Similarly, though further rate hikes in the US should be manageable for many emerging market countries, they do pose a challenge for those dependent on external financing to fund their current account deficits, including Turkey, South Africa and Brazil. Meanwhile, the still unfolding slowdown in China remains a headwind for both commodity exporters and countries with considerable trade exposure to China, such as Taiwan, Malaysia and South Korea. Even the boost that broader emerging market exports should receive from the ongoing expansion we expect in the developed world is suspect, given how disappointing this transmission mechanism has been in recent years.

While the performance of individual emerging economies varies, collectively we expect 4–4.5% growth (PPP weighted) in 2016, compared to 4.1% in 2015.

Emerging markets fell short of already muted expectations again last year, with disappointing GDP growth across a large swath of countries.

China

The Chinese economy continued to slow in 2015. The expansion in yearly GDP dropped to 6.9% in the third quarter, a level last seen in the midst of the global financial crisis. Even worse, several alternative measures of economic activity suggest actual growth could be closer to 5–6%. That such weak activity occurred despite ample policy support—including bank reserve requirement cuts, higher infrastructure investment and generous automobile tax credits—suggests underlying growth could be even lower.

Although slower growth is consistent with stated policy objectives, the government is walking a narrow tightrope. On the one hand, Beijing is well aware that it must transition away from its erstwhile dependence on debt-fueled industrialization. On the other hand, the pace of this transition must be gradual enough to avoid fostering defaults among highly leveraged local governments and private companies. Rationalizing excess industrial capacity without causing mass layoffs and social unrest will only increase these challenges. In short, this focus on managing short-term GDP growth at the expense of structural reforms is ultimately unsustainable and increases the likelihood of a sharp and abrupt slowdown further down the road.

For the year ahead, China should be able to avoid such a hard landing scenario. In addition to the fiscal and monetary supports we have seen repeatedly during this slowdown, China's shift to a more flexible exchange rate policy should help its exports. That said, these efforts likely come at the expense of much-needed structural reforms, leading to further economic imbalances. These imbalances make it increasingly costly to support higher rates of economic expansion, suggesting there is downside risk to China's stated 6.5% minimum growth target. Accordingly, we set the midpoint of our range slightly below the official target and project GDP to increase by 5.8–6.8% in 2016.

Though the Indian economy enters 2016 with positive momentum, it is unlikely to repeat last year's upside surprise for several reasons.

India

India was once again a bright spot among emerging market countries in 2015, with growth exceeding the high end of our initial forecast by a full percentage point. While part of this upside reflected potentially questionable revisions to India's methodology for calculating GDP, more fundamental indicators corroborate the acceleration. As a net importer of commodities, India benefited from lower input costs, higher real incomes and reduced spending on fuel subsidies. Last year's commodity rout has also kept inflation at bay, allowing the Reserve Bank of India to stimulate activity by cutting its policy rate.

Though the Indian economy enters 2016 with positive momentum, it is unlikely to repeat last year's upside surprise for several reasons. First, the significant trade gains that resulted from dropping commodity prices will moderate as natural resource prices stabilize. Second, the government's drive to boost infrastructure investment is constrained by its 7% of GDP fiscal deficit. In turn, India's ability to offset sluggish private sector investment is limited. Finally, stiff resistance from opposition parties has hobbled several of the administration's key reform measures, such as the nationwide goods and services tax and the land reform act. In short, we do not expect a material pickup in growth in 2016, with the midpoint of our 7–8% range the same as growth last year.

Brazil

The Brazilian economy has gone from bad to worse. The seeds of Brazil's current predicament were sown in recent years as the government engaged in interventionist policies that are now proving incredibly costly to correct. Indeed, despite slumping commodity prices and contracting real GDP, the central bank was forced to tighten the policy rate by 250 basis points in 2015, only to see inflation rise above 10% (from 6.4% at the end of 2014) and the exchange rate depreciate by 33%. At the same time, the government's promise to prune the budget fell short of expectations, resulting in fiscal deficits exceeding 9% of GDP for the first time on record and the downgrade of Brazil's sovereign debt to junk status.

The key question for 2016 is how deep the Brazilian economy will sink before conditions are in place for a recovery. Commodity prices play a key role in this assessment. Further weakness would lengthen the period of adjustment, whereas a rebound would hasten the recovery. Brazil's inflation rate and current account deficit also provide clues. Both should improve this year as domestic demand contracts further, ultimately creating room for the central bank to begin easing. In turn, easier policy should set the stage for a new investment cycle. Meanwhile, policymakers will need to do more to regain credibility and reduce risk premiums. They could achieve this with additional rate hikes and stronger adherence to fiscal targets.

Still, the central bank alone cannot deliver Brazil from its recession. Equally important is ending the political uncertainty arising from the ongoing corruption scandal and the potential impeachment of President Dilma Rousseff. Putting these pieces together is an admittedly tall order for Brazil in the year ahead. Thus, we expect the economy will contract again by 2.3–3.3% in 2016 as the search for a bottom continues.

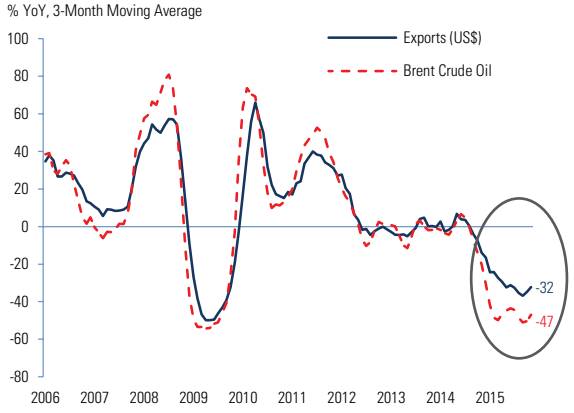
Russia

The Russian economy suffered a deep recession in 2015 after receiving a double blow from low oil prices and Western sanctions. As oil revenues plummeted and capital outflows accelerated, the ruble was the main shock absorber, dropping to an all-time low against the US dollar. The central bank avoided an even deeper slump in the currency by keeping interest rates high. The result has been a collapse in investment, high inflation and rising unemployment. Perhaps it was only Russia's low levels of external and government debt and still-high official reserves that helped it sidestep a full-blown crisis.

The outlook for 2016 remains difficult. Household consumption continues to fall amid a deteriorating labor market and weak consumer sentiment. Meanwhile, oil prices are expected to be range-bound at low levels, forestalling a recovery in the country's key export (see Exhibit 55). Until eased, ongoing Western sanctions limit Russia's

Exhibit 55: Russian Exports vs. Oil Price

We expect oil prices to remain low and forestall a recovery in Russian exports.



Data through November 2015.
Source: Investment Strategy Group, Datastream.

ability to benefit from the better European growth we expect.

Limited monetary and fiscal flexibility compound these challenges. The central bank needs to tread carefully as it cuts rates, because inflationary pressures could quickly return and investor sentiment remains fragile. As a result, real interest rates are expected to remain elevated, depressing both consumption and investment. At the same time, fiscal policy is also set to drag on GDP growth as the government adjusts its budget to reflect lower oil prices. Against this backdrop, we expect GDP to contract again by 0.5–1.5% in 2016.

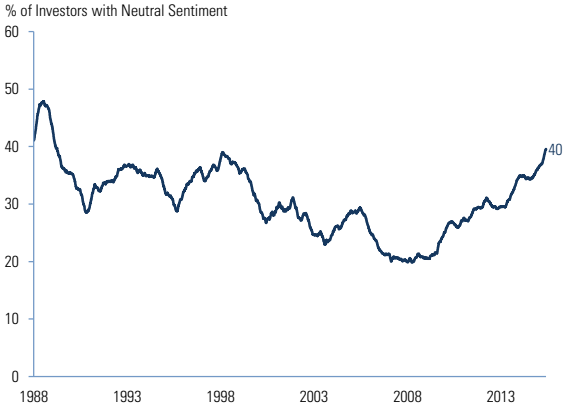
2016 Financial Markets Outlook: A Late Harvest

AFTER A SEVEN-YEAR BULL RUN IN RISK ASSETS, MUCH OF THE RIPEST FRUIT HAS BEEN PLUCKED. Consider that the price of the S&P 500 Index has advanced more than 200% since its 2009 trough, leaving valuations in the 9th decile of their historical distribution. These impressive gains are not limited to the US. The return of the local MSCI All Country World Index excluding the United States has been higher only 15% of the time since 1994 over similar rolling seven-year periods.

There are also signs that the leaves may be starting to brown. High yield bond spreads now stand at levels rarely seen outside a recession and corporate earnings are contracting, a similarly rare non-recessionary development. At the same time, market-based inflation measures have weakened in the wake of a stronger dollar, decelerating growth and collapsing commodity prices. And banks have tightened lending standards for certain sectors, while the Federal Reserve instituted its first rate increase in almost a decade.

Exhibit 56: Neutral Investor Sentiment

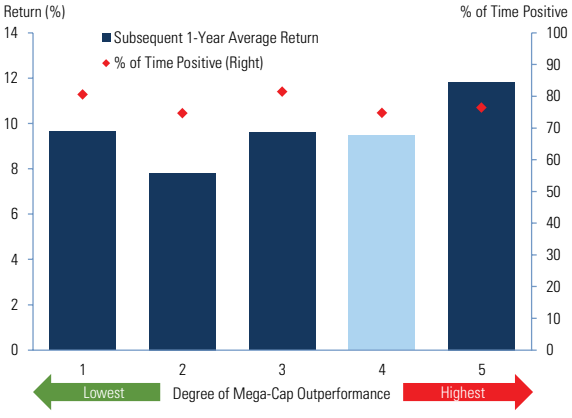
A large percentage of investors have little conviction on the direction of stock prices.



Data through December 31, 2015.
Note: Based on 12-month average of the American Association of Individual Investors Sentiment Survey.
Source: Investment Strategy Group, Datastream.

Exhibit 57: Subsequent S&P 500 Returns Based on Degree of Mega Cap Outperformance

The outperformance of the highest-market-cap stocks has not helped predict subsequent S&P 500 returns.



Data through December 31, 2015.
Note: Quintiles are based on the 12-month return differential between the S&P 100 and S&P 500, using daily data since 1976.
Source: Investment Strategy Group, Standard & Poor's.

As a result, we start the year with less of a buffer to absorb adverse developments and miscalculations in our forecasts. Across financial markets, the strong recovery in asset values since the crisis trough has narrowed the margin of safety available to investors. This applies even to investment-grade bondholders, as today's historically low interest rates provide little compensation for duration risk. Consider that there are now $6 trillion of global government bonds with negative yields and over half of all government bonds yield less than 1%.[99] Of equal worry, more than $2 trillion flowed into bond investment vehicles while 10-Year Treasury yields were below 2.5%, creating a large pool of investments that are susceptible to losses from rising interest rates.[100]

There are several important implications of this backdrop. First, investors should expect more modest returns, as strong erstwhile performance has pulled forward some of the gains from future years. Second, the volatility of those returns is likely to be higher. With risky assets now priced for a more benign state of the world, they are more vulnerable to disappointment. Tighter US monetary policy is also likely to increase volatility, just as the Federal Reserve's accommodative stance for much of the post-crisis period dampened it. Finally, the penalty for investment missteps is now greater, as we begin from higher valuations. In response, we are increasingly on the lookout for attractive hedging opportunities, as was the case last year.

Still, today's late harvest does not necessarily

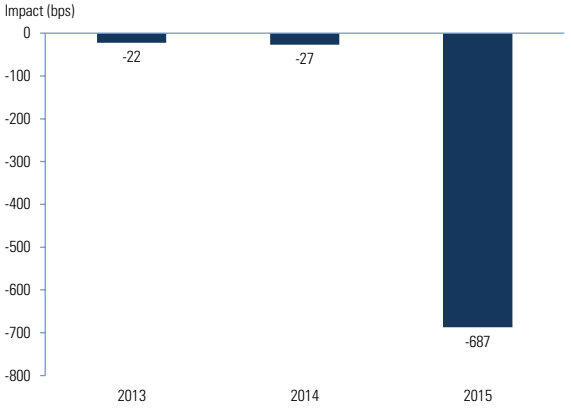
Exhibit 58: ISG Global Equity Forecasts—Year-End 2016

	2015 YE	End 2016 Central Case Target Range	Implied Upside From Current Levels	Current Dividend Yield	Implied Total Return
S&P 500 (US)	2,044	2,025 – 2,100	-1 – 3%	2.1%	1 – 5%
Euro Stoxx 50 (Eurozone)	3,268	3,475 – 3,650	6 – 12%	3.6%	10 – 15%
FTSE 100 (UK)	6,242	6,325 – 6,600	1 – 6%	4.2%	6 – 10%
Topix (Japan)	1,547	1,600 – 1,675	3 – 8%	1.8%	5 – 10%
MSCI EM (Emerging Markets)	794	730 – 810	-8 – 2%	2.9%	-5 – 5%

Data as of December 31, 2015.
Investment Strategy Group, Datastream, Bloomberg.
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.

Exhibit 59: Revenue Growth Drag on Average US Multinational from Dollar Strength

Dollar appreciation has negatively impacted US multinationals.



Data through October 31, 2015.
Source: Robert Boroujerdi, Jessica Graham, Deep Mehta, Christopher Wolf and Ronny Scandino, "Portfolio Manager Toolkit: What's Eating Corporate America? Leverage, Goodwill and FX," Goldman Sachs Global Investment Research, November 10, 2015.

mean the trees are barren. As we discuss in the sections that follow, we see several tactical opportunities that can still bear fruit in 2016.

US Equities: Should I Stay or Should I Go?

Though the English punk rock band the Clash wrote their hit single "Should I Stay or Should I Go" over 30 years ago, the indecision lamented in the song is alive and well in the stock market today. A strikingly high percentage of investors classify themselves as neither bullish nor bearish on equities over the next six months, as shown in Exhibit 56. On this measure, investors have had more conviction about the direction of stock prices 95% of the time since 1988. Their uncertainty was also on display in last year's directionless trading, with the S&P 500 crossing through the unchanged mark 30 times, the highest annual count on record.

Investors should expect more modest returns, as strong erstwhile performance has pulled forward some of the gains from future years.

Investors' hesitation is understandable considering today's concerning market signals. High yield bond spreads now stand at levels rarely seen outside a recession and corporate earnings are contracting, a similarly rare non-recessionary development. Measures of market breadth are no more comforting, showing the kind of deterioration that many argue presages a bear market. That the Federal Reserve has begun tightening despite this muddy backdrop only exacerbates concerns.

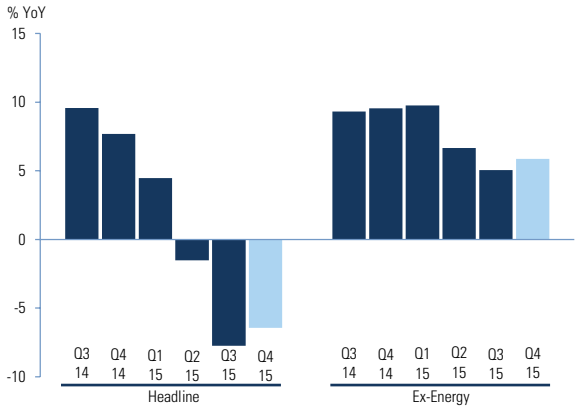
While it is tempting to take these bearish signals at face value, there may be less to them than meets the eye. Turning first to market breadth, the outperformance of the largest-market-capitalization stocks last year is said to reflect the kind of narrowing participation typically seen at market tops. Yet as Exhibit 57 makes clear, the relative returns of the largest 100 stocks have virtually no bearing on the subsequent one-year performance of the S&P 500. Similarly, our colleagues in GIR found that market breadth was an "unreliable indicator of a recession or market peak."[101] Of the 11 historical narrow-breadth episodes they identified, seven resulted in higher S&P 500 prices one year later, with a median gain of 9%.

A similar degree of skepticism can be applied to the signals from high yield and corporate earnings given the distortions arising from weaker commodities and a stronger dollar. Keep in mind that commodity sectors represented nearly three-fourths of 2015's total high yield default volume and a similar percentage of currently distressed credits. Excluding these sectors, only 15 companies totaling $10.9 billion defaulted last year, implying a healthy ex-commodity default rate of just 0.54%.[102]

In the case of corporate earnings, dollar strength alone is estimated to have cost the average US multinational almost seven percentage points in revenue growth in 2015 (see Exhibit 59). For the core of the S&P 500, that suggests the third quarter's anemic 2% revenue growth would have been closer to 5% when adjusted for currency translation effects.[103] Meanwhile, the decline in headline profits and margins in recent quarters belies more resilient ex-energy fundamentals, as shown in Exhibits 60 and 61. We do not think it is a coincidence that a similarly rare "profit recession" occurred in the mid-1980s on

Exhibit 60: S&P 500 Operating EPS Growth

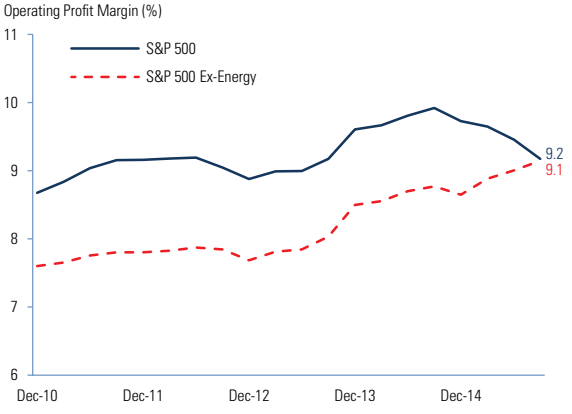
Earnings growth excluding energy has remained positive.



Data as of Q4 2015.
Note: Based on S&P 500 trailing 12-month operating EPS. Q4 2015 based on estimates.
Source: Investment Strategy Group, Standard & Poor's.

Exhibit 61: S&P 500 Operating Margins

The decline in headline margins belies resilience outside the energy sector.



Data through Q3 2015.
Note: Based on trailing 12-month operating EPS.
Source: Investment Strategy Group, Standard & Poors.

the back of dollar strength and collapsing oil prices (see Exhibit 62).

Finally, it is notable that the first year of Federal Reserve tightening cycles has been surprisingly propitious for both the economy and equity returns. Every one of the 14 post-WWII tightening cycles saw higher GDP and earnings a year later, with equities showing price gains 71% of the time, as shown in Exhibit 63. Less fortunate were price-to-trend valuation multiples, which compressed about 80% of the time, falling 10% on average. We expect valuations to decline less in this cycle, however, as the Federal Reserve is likely to hike rates at half the pace embedded in these historical analogs.

To be sure, we are certainly not Pollyannaish. While there may be valid reasons to question each of the warning signs above, their collective presence cannot be entirely dismissed, especially with the Federal Reserve now tightening monetary policy. This last point is important, as US equity valuations already stand in their 9th decile and are likely to fall as rates increase. At the same time, firmer wages and soggy global growth suggest that neither higher margins nor surging sales are likely to offset falling valuations, as they historically have in tightening cycles. In response, we are increasingly on the lookout for attractive hedging opportunities, as was the case last year.

Still, these are more persuasive arguments for modest prospective returns than an end to the bull market, as the S&P 500 has been in its 9th valuation decile for more than two years, over which time it returned 22%. Moreover,

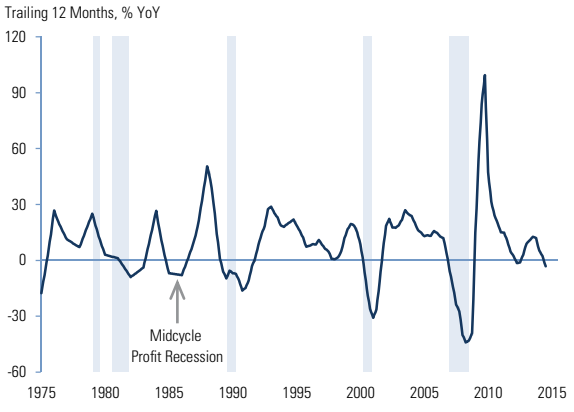
Exhibit 65: ISG S&P 500 Forecast—Year-End 2016

2016 Year-End	Good Case (20%)	Central Case (60%)	Bad Case (20%)
End 2016 S&P 500 Earnings	Op. Earnings $130 Rep. Earnings $124 Trend Rep. Earnings $107	Op. Earnings $118–123 Rep. Earnings $109–113 Trend Rep. Earnings $107	Op. Earnings ≤ $96 Rep. Earnings ≤ $78 Trend Rep. Earnings ≤ $107
S&P 500 Price-to-Trend Reported Earnings	21–23x	18–21x	15–16x
End 2016 S&P 500 Fundamental Valuation Range	2,250–2,460	1,930–2,250	1,600–1,710
End 2016 S&P 500 Price Target (based on a combination of trend and forward earnings estimate)	2,300	2,025–2,100	1,700

Data as of December 31, 2015.
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.

Exhibit 62: S&P 500 Operating Earnings

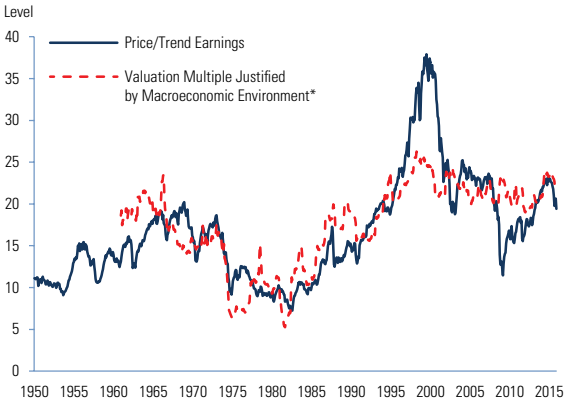
Long declines in profits are rare outside recessions.



Data through Q2 2015.
Note: Blue shaded areas denote periods of US recessions.
Source: Investment Strategy Group, Intrinsic Research.

Exhibit 64: S&P 500 Price-to-Trend Earnings

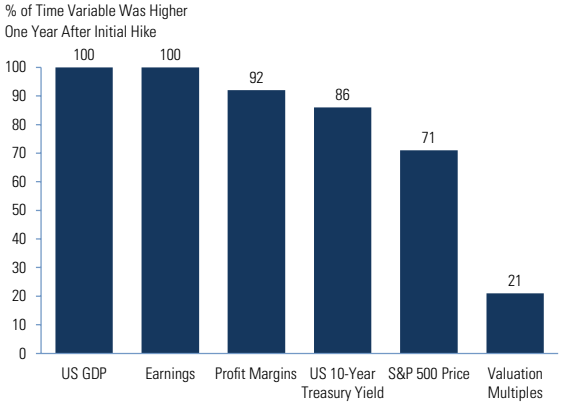
Today's macroeconomic backdrop supports higher multiples.



Data through December 31, 2015.
Source: Investment Strategy Group, Bloomberg, Datastream.
* Macroeconomic environment based on the level of inflation and its volatility.

Exhibit 63: Effect of Interest Rate Hikes on Economic and Market Variables

The US economy and equity prices have done well in the year following an initial rate hike.



Data as of December 31, 2015.
Source: Investment Strategy Group, BEA, Bloomberg, S&P.

periods of low and stable inflation such as we find ourselves in today have historically supported higher equity multiples (see Exhibit 64). That said, higher valuations do suggest lower risk-adjusted returns going forward. Our central case for 2016 acknowledges this, calling for marginally positive total returns of between 1–5% that reflect the offsetting effects of rising earnings and compressing valuations (see Exhibit 65). We note that our headline EPS growth forecast of about 10% is skewed by the base effect of energy losses in 2015. A better characterization of our view is mid-single-digit ex-energy earnings growth in 2016.

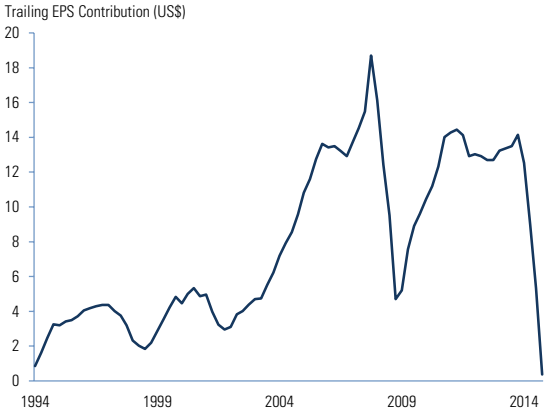
Clients might rightly ask whether it is worth staying invested for such scant equity returns. For now, the evidence argues that it is. As discussed in Section I of the *Outlook*, the state of the economy is a key driver of market performance, with positive returns highly likely and large losses quite rare when the US economy is still expanding.

The state of the economy is a key driver of market performance, with positive returns highly likely and large losses quite rare when the US economy is still expanding.

Indeed, the historical odds of a positive annual return outside a recession were more than 85% in the post-WWII period. Over this same time period, nearly three-fourths of the bear markets occurred during recessions, while the probability of a greater-than-10% annual decline outside a recession was just 5%. With few signs of an economic contraction on the horizon, these odds continue to work in investors' favor. Moreover, equity

Exhibit 66: Energy Sector Contribution to S&P 500 Earnings

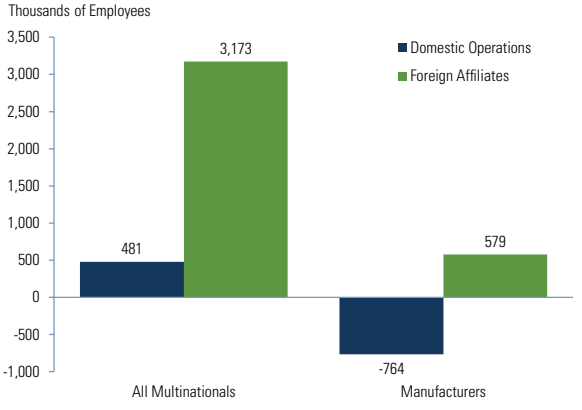
The collapse in energy profits has been a major drag on US equity earnings.



Data through Q3 2015.
Source: Investment Strategy Group, S&P.

Exhibit 67: US Multinational Corporations' Change in Employment

Globalization has decreased the importance of domestic wages for US multinationals and manufacturers.



Data as of December 31, 2015.
Note: 2012 vs. 2005.
Source: Investment Strategy Group, Empirical Research Partners.

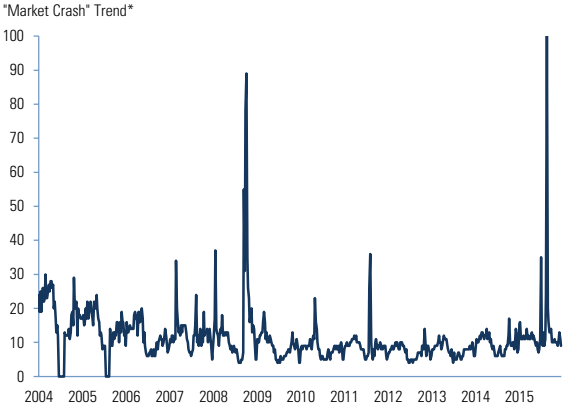
markets frequently surprise to the upside, with about a quarter of the post-WWII episodes that started with valuations similar to those of today generating better-than-10% annualized returns over the following five years.

Paradoxically, earnings could be the source of this upside surprise in the current cycle, for several reasons. First, we expect the sizable profit drag from the dollar and oil to wane in 2016 as year-over-year comparisons become easier. Second, Exhibit 66 reminds us that the collapse in energy sector profits has subtracted almost $15 from S&P 500 earnings per share; a partial reversal of this trend could be a substantial tailwind to profit growth. Finally, we think the margin-eroding effects of higher wages will take longer to materialize in this cycle, as globalization has decreased the importance of domestic wages for US multinationals and manufacturers (see Exhibit 67). In contrast, retailers, restaurants and hotels face acute wage pressure, but they represent a comparatively small 6% of S&P 500 earnings. Given this mix, the pickup in nominal income growth arising from higher wages should be positive for earnings initially, as the revenue boost should trump the hit to margins.[104]

Perhaps the best reason to believe the cycle has yet to reach its apex is captured by Sir John Templeton's famous observation: "Bull markets are born on pessimism, grow on skepticism, mature

Exhibit 68: Internet Searches for the Term "Market Crash"

Concerns over a market crash evident in Internet search trends suggest little evidence of investor euphoria today.

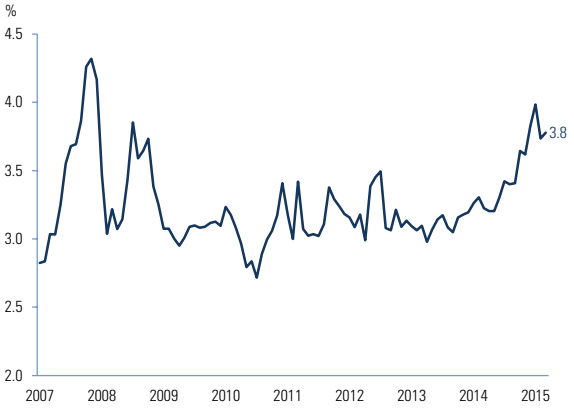


Data through December 31, 2015.
Source: Investment Strategy Group, Google Trends.
* Total searches for a term relative to the total number of searches done on Google over time.

on optimism and die on euphoria." Crucially, we find little evidence of market euphoria today, with headlines such as "The Bull Market Is Over" far more typical.[105] Exhibit 68 reinforces this point, showing that Google searches for the term "market crash" were higher during the August 2015 correction than during the height of the

Exhibit 69: Percentage of Outstanding NYSE Shares Sold Short

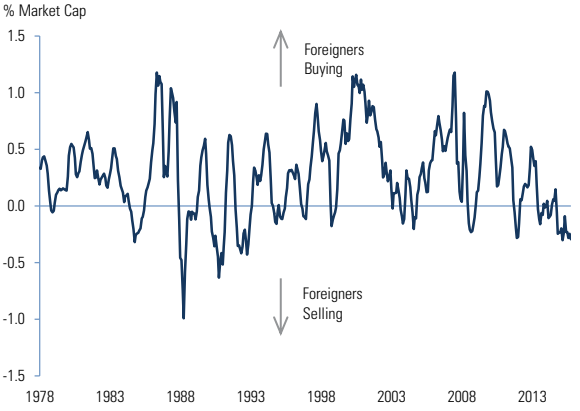
Investors are very defensively positioned.



Data through November 30, 2015.
Source: Investment Strategy Group, NYSE, Bloomberg.

Exhibit 70: Net Foreign Purchases of US Equities

Foreign investors have been selling US equities.



Data through October 31, 2015.
Note: Based on rolling 6-month data.
Source: Investment Strategy Group, US Treasury, MSCI, Datastream.

financial crisis. Similarly, the percentage of NYSE shares that are currently sold short stands near all-time highs, indicating that investors are very defensively positioned (see Exhibit 69). Lastly, foreign investors have been abandoning US stocks en masse over the last six months (see Exhibit 70), a reliable contrary indicator that saw US equities higher a year later 100% of the time historically, with a median gain of 15.7%.[106] For all these reasons, we accord a 20% probability to our good-case scenario of the S&P 500 reaching 2,300 by yearend.

To be clear, our continuing recommendation that clients maintain their strategic equity weight is not a blind endorsement of a buy-and-hold strategy. Rather, it is a humble admission that the odds of losing money or underperforming when underweighting equities are very high historically. In turn, one must have high conviction that the US economy is about to experience a major shock and/or recession to overcome this hurdle. While we have noted several worrisome developments in this year's *Outlook*, we do not yet see a broad enough mosaic of negatives to express that conviction. If that were to change, so too would our equity stance.

In the interim, our base case remains that a longer-than-normal US expansion is likely to support equity returns that exceed those of cash and bonds. And while we give some weight to the market warning signs discussed above, we believe they are not yet compelling enough to act upon. In the parlance of the Clash, it is not yet time to go.

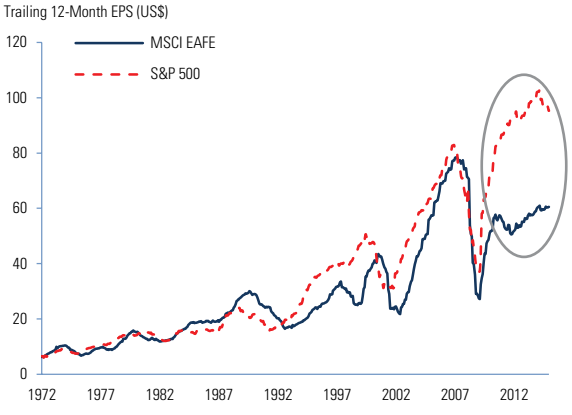
EAFE Equities: A Green Shoot with Roots

Investors in Europe, Australasia and Far East (EAFE) equities have been repeatedly disappointed in the post-crisis period, as the MSCI EAFE Index has cumulatively underperformed the S&P 500's total return by a staggering 103% since March 2009 in local currency terms. So it is not surprising that EAFE equities' outperformance last year is being greeted with a healthy dose of skepticism. Given the substantial scope for further upside, investors must decide whether the asset class's relative upturn is a fluke or marks a key turning point.

We think this green shoot has roots. MSCI EAFE's earnings growth should continue to outpace that of the US, based on our expectations for the Eurozone, Japan and UK (which together represent nearly 75% of MSCI EAFE market capitalization). In turn, the large relative earnings gap that was a key driver of EAFE equities' underperformance prior to last year should narrow further (see Exhibit 71). Keep in mind that while US earnings stand well above pre-crisis levels, those in the Eurozone and UK are nearly 60% below such levels (see Exhibit 72). Thus, there is ample scope for improved relative returns as the market ultimately follows the path of earnings.

Exhibit 71: MSCI EAFE and S&P 500 Earnings

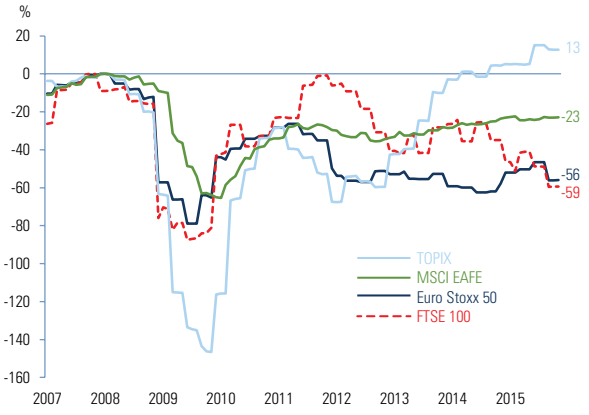
We expect the gap between US and EAFE earnings to narrow going forward.



Data through December 31, 2015.
Source: Investment Strategy Group, Datastream.

Exhibit 72: Deviation of Earnings from Pre-Global Financial Crisis Peak

Eurozone and UK earnings remain well below pre-crisis levels.



Data through December 31, 2015.
Source: Investment Strategy Group, Bloomberg.

EAFE equities' superior earnings momentum also provides a catalyst to reduce the considerable valuation gap between them and US equities (see Exhibit 73). The same could be said for their large relative price gap, considering EAFE equities are still 16% below their 2007 peak while the S&P 500 is 31% above its own. In fact, MSCI EAFE equities' price relative to the S&P 500 has been lower about 1% of the time since 1969.

Taken together, these factors argue for the outperformance of EAFE equities once again in 2016. In contrast to the US, the EAFE region's largest equity markets benefit from a combination of attractive valuations, ongoing earnings growth and easier monetary policy. We therefore recommend clients maintain their strategic allocation to EAFE equities and tactically overweight certain countries, which we discuss next.

We see scope for double-digit returns for Eurozone equities this year, due to a combination of expanding valuations, high single-digit earnings growth and a large 3.6% dividend yield.

Eurozone Equities: Entering the Cyclical Sweet Spot

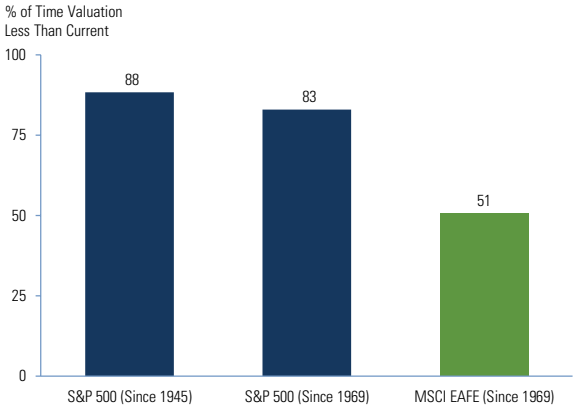
For Eurozone equities, expanding valuations have done most of the heavy lifting in the post-crisis period. This uneven division of labor is rooted in the Eurozone's anemic economic recovery, which has weighed on the 54% of sales exposed to the region while also warranting the type of easy monetary policy that lifts valuations. Put simply, there has been less revenue to cover these firms' larger fixed costs, leading to subdued margins and declining earnings. Given this weak economic backdrop, Euro Stoxx 50 earnings are still less than half their pre-crisis peak.

Fortunately, this dynamic works both ways, as small improvements in revenue spread over sizable fixed costs can also push profit margins higher. Our 2016 forecast reflects this, with accelerating and above-trend Eurozone GDP growth likely to lift sales and reduce economic slack, both of which have historically benefited Eurozone earnings. Consequently, we expect high-single-digit earnings growth this year, a pickup from last year's 3% expansion. In contrast, consensus expectations have been lower only 10% of the time historically, setting a low hurdle for profits to beat estimates.

While improving earnings growth often comes at the expense of lower valuations, we think there is scope for

Exhibit 73: MSCI EAFE and S&P 500 Historical Valuations

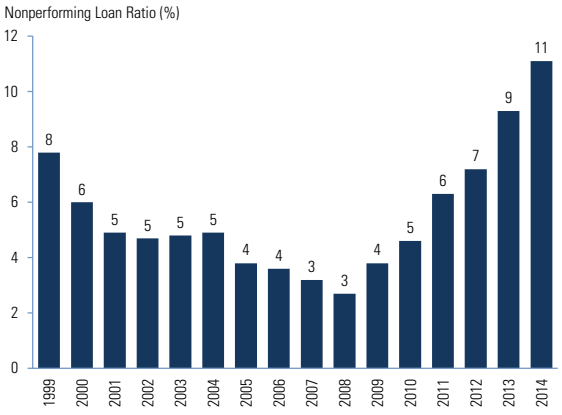
Equity valuations are more attractive in EAFE than the US.



Data as of December 31, 2015.
Note: S&P 500 valuations based on price/12-month earnings, price/peak earnings, price/trend earnings, Shiller cyclically-adjusted price/earnings ratio (CAPE) and price/10-year average earnings. MSCI EAFE valuation based on price/book value, price/10-year cash flow, price/peak cash flow, price/10-year average earnings and price/peak earnings.
Source: Investment Strategy Group, Datastream.

Exhibit 75: Italian Banks' Nonperforming Loan Ratio

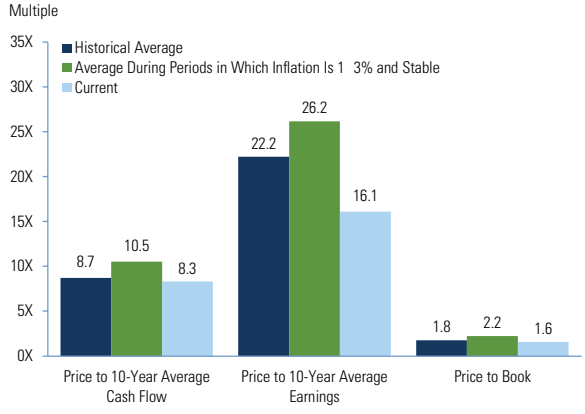
Rising delinquent loans have reduced Italian banks' appetite to lend.



Data as of December 31, 2014.
Source: Investment Strategy Group, Datastream.

Exhibit 74: Eurozone Multiples in Periods of Low and Stable Inflation

Periods of low and stable inflation have supported higher Eurozone valuations.



Data as of December 31, 2015.
Note: Based on MSCI EMU Index.
Source: Investment Strategy Group, Datastream.

both to move higher from here. Keep in mind that past periods of low and stable Eurozone inflation, like that experienced today, have supported valuations 21% higher than average (see Exhibit 74). Furthermore, the ECB's ongoing monetary easing provides a tailwind to equity multiples over the next 12 months. Thus, we see scope for double-digit returns for Eurozone equities this year, due to a combination of expanding valuations, high single-digit earnings growth and a large 3.6% dividend yield.

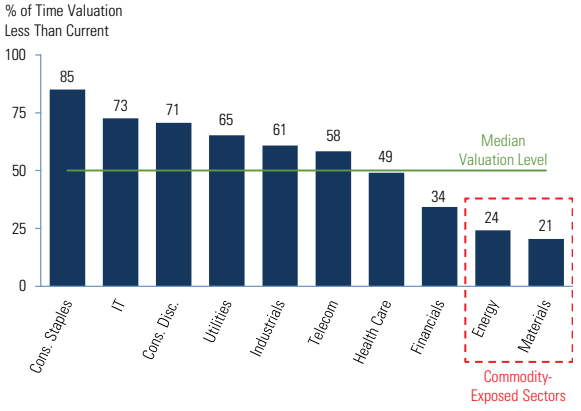
Within the Eurozone, we see the greatest return potential in Spain and Italy. Both markets offer attractive valuations and a supportive macroeconomic landscape. In the case of Spain, positives also include the fastest GDP growth among the large Eurozone economies and improving credit quality at banks (which represent 32% of Spanish equities' market capitalization). Meanwhile, banking sector reform in Italy arrives at an opportune time, as the country's high nonperforming loan ratio has been a key drag on banks' appetite to lend (see Exhibit 75). Any improvement there would likely ease financial conditions for borrowers and thereby boost economic activity.

UK Equities: A Tale of Two Cities

UK equities are a tale of two cities. While earnings for the FTSE 100's non-commodity sectors stand within a few percentage points of their all-time highs, the same cannot be said for the nearly 20% of the index represented by the energy and materials industries. Here, the commodity rout of

Exhibit 76: UK Sector Valuations

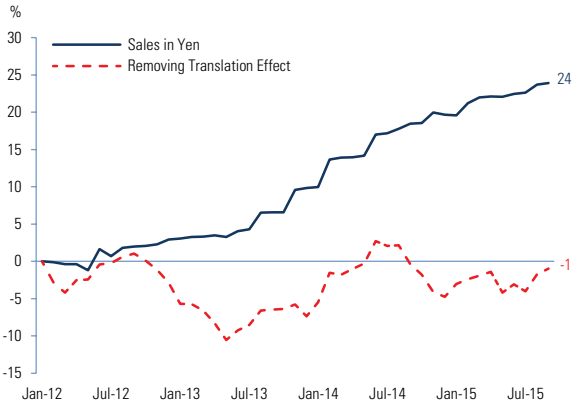
Valuations of most non-commodity sectors remain well above their median levels.



Data as of December 31, 2015.
Note: Based on price/book value, price/10-year cash flow, price/peak cash flow, price/10-year average earnings and price/peak earnings of MSCI UK.
Source: Investment Strategy Group, Datastream.

Exhibit 77: Japan Sales Growth

Japanese revenue growth has been largely driven by yen depreciation.



Data through September 1, 2015.
Note: Data excludes financials and utilities. Based on MSCI Japan.
Source: Investment Strategy Group, Empirical Research Partners.

recent years has had a deleterious effect on profits. Despite their smaller index weight, the commodity sectors have clearly dominated, evident in the staggering 59% decline in the FTSE 100's headline earnings since their 2011 high. Not surprisingly, FTSE 100 earnings stand significantly below their pre-crisis peak as a result.

This bifurcation is also reflected in underlying valuations. While commodity sectors stand within the bottom third of their historical range, most other sectors are well above their median levels (see Exhibit 76). In turn, the often-cited cheapness of UK equities belies significant dispersion below the surface, as the undervaluation signal is not broad-based. Moreover, uncertainty surrounding the referendum on EU membership, potential for a further slowdown in emerging markets and the BOE's likely upcoming rate hikes are among a number of risks that may constrain multiples in 2016.

Given the commodity sectors' mix of depressed earnings and low valuations, they are naturally on the radar screen of contrarian investors. While we sympathize with this view, we are reluctant to overweight these sectors at present for two reasons. First, commodity earnings are likely to remain under pressure in the near term, as the oil market struggles to balance supply and demand. Second, we see more attractive tactical overweight opportunities in other areas of the energy complex, as we discuss elsewhere in the *Outlook*.

Despite this uneven foundation, UK equities are certainly not an underweight candidate. In contrast, we expect a combination of ongoing earnings growth, a hefty 4.2% dividend yield and largely unchanged valuation multiples as the BOE tightens policy to generate high single-digit total returns for the year ahead. As discussed earlier, this positive return adds another leg of support to EAFE equities' prospects for outperformance.

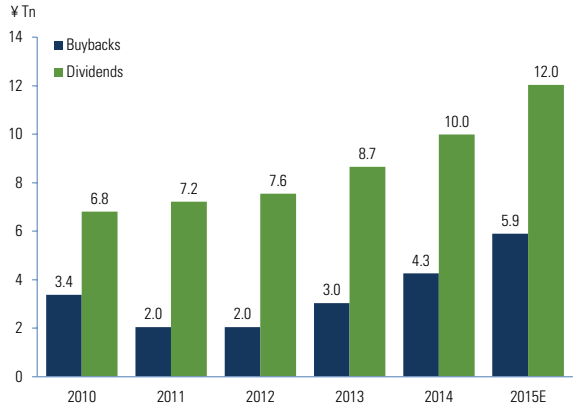
Japanese Equities: The Aging Bull

Japan has certainly had the wind at its back in recent years. The BOJ has undertaken the largest quantitative easing program of any of its developed market peers, expected to push its balance sheet to 91% of GDP by the end of this year. This large easing has been a primary driver of the yen's 37% depreciation from its cycle peak in October 2011, providing a boon to the export-related companies that account for 38% of TOPIX market capitalization. These tailwinds have been bolstered by increased equity allocations from pensions, reduced corporate tax rates and supplementary budget packages measuring in the trillions of yen. In response, Japanese earnings have expanded at a 26% annualized pace since Prime Minister Shinzo Abe's ascent to office in 2012.

But as the bull market in Japan matures, it will be nearly impossible to duplicate this confluence

Exhibit 78: Buybacks and Dividends from Japanese Firms

Companies have steadily increased cash returns to shareholders.



Data through Q3 2015.
Note: Based on securities filings of 1,816 Tokyo Stock Exchange-listed companies with consolidated data available since March 2009. FY 2015 based on Goldman Sachs Global Investment Research estimates.
Source: Investment Strategy Group, Goldman Sachs Global Investment Research, QUICK, company data.

of equity-positive catalysts. The country's poor demographics, shrinking labor force and high government debt are likely to limit further fiscal policy support, while the BOJ's already sizable balance sheet expansion is approaching its natural limits. With less central bank easing, yen depreciation is expected to moderate this year. This last point is important, as recent research shows that yen depreciation has driven the bulk of Japan's revenue growth since late 2012 (see Exhibit 77).

Given this uncertain backdrop, investors are demanding a higher risk premium to hold Japanese equities. Thus, large valuation expansion is unlikely given decelerating earnings growth and lingering uncertainty about China, an important end market for many of Japan's companies. Furthermore, even if the BOJ does deliver a third round of quantitative and qualitative monetary easing this year, history has shown each incremental round's positive impact on valuation diminishes.

Even so, we should not confuse an aging bull with a lifeless one. The faster nominal GDP growth that we expect in Japan this year could fuel earnings growth as high as 9%. While this represents a slowdown from the pace of recent years, it is still positive. And although the headwinds mentioned above are likely to constrain the full realization of Japan's attractive valuations, their lowly starting point combined with companies' increasingly shareholder-friendly capital deployment provides scope for upside. Importantly, the focus placed on shareholders' interests in last year's Corporate Governance Code is reinforcing companies' willingness to pay dividends and repurchase stock (see Exhibit 78). This trend is likely to continue, as management teams that have boosted dividends have seen their stock outperform.

The new Corporate Governance Code is particularly important for the country's banking sector, as increased capital efficiency could help unlock Japanese banks' substantial valuation discount. Indeed, Japanese banks trade at half the price-to-tangible-book multiple of the broader market, or double their historical average discount. Moreover, Japanese megabanks' relatively large US operations position them well for Federal Reserve tightening, and their limited direct exposure to China should shield them from the ongoing slowdown there. For these reasons, we continue to recommend a tactical overweight to Japanese banks.

For Japanese equities overall, we expect mid-single-digit earnings growth, relatively flat valuation multiples and a 2% dividend yield to support a high single-digit total return in 2016.

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Emerging Market Equities: Still Trapped in a Perfect Storm

Emerging market equities continue to be buffeted by a perfect storm. Last year added a devastating commodity rout and the first Federal Reserve rate hike in nearly 10 years to the long list of existing challenges facing emerging market firms, including corruption scandals, softening local growth, heightened geopolitical

tensions and rising corporate leverage. In response, emerging market equities declined in both local currency and US dollar terms last year, with the latter marking the third consecutive year of losses.

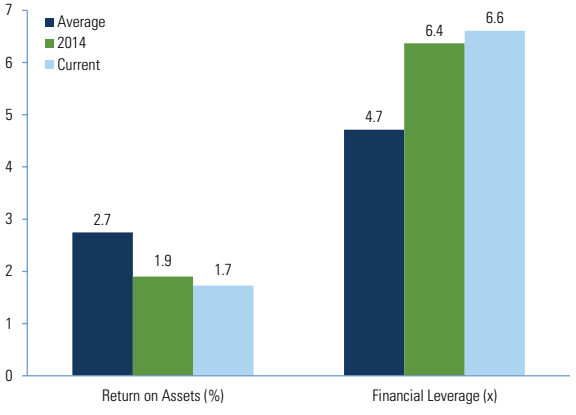
Unfortunately, we see few signs of calm in the year ahead. Despite their significant underperformance, emerging market equities still trade at only median valuations, as investors have marked down their earnings estimates even more rapidly than equity prices have fallen. Actual earnings declined in three of the last four years and were flat in the other. Even worse, earnings quality continues to deteriorate; the financial leverage ratio rose to all-time highs in 2015 while the return on assets fell to a 15-year low (see Exhibit 79).

Thus, emerging market equities are unlikely to outperform until profitability measures stabilize. We do not expect that to happen in 2016. Higher US interest rates, weak commodity prices and relatively muted global growth create a challenging environment for emerging market exports, traditionally a big driver of profitability. These headwinds are exacerbated by the many structural fault lines facing emerging markets—highlighted in our 2013 *Insight* report, *Emerging Markets: As the Tide Goes Out*—the bulk of which have yet to be meaningfully addressed.

Against this backdrop, we expect earnings to contract again this year, by 3% in US dollar terms, and see little reason for valuations to expand. Combined with a dividend yield of 3%, this implies a flat total return for emerging market equities in 2016, keeping us tactically neutral heading into the year. That said, we continue to explore investment opportunities that exploit the significant valuation dispersion among individual countries (see Exhibit 80).

Exhibit 79: EM Equities—Return on Assets and Financial Leverage

The quality of emerging market equity earnings continues to deteriorate.



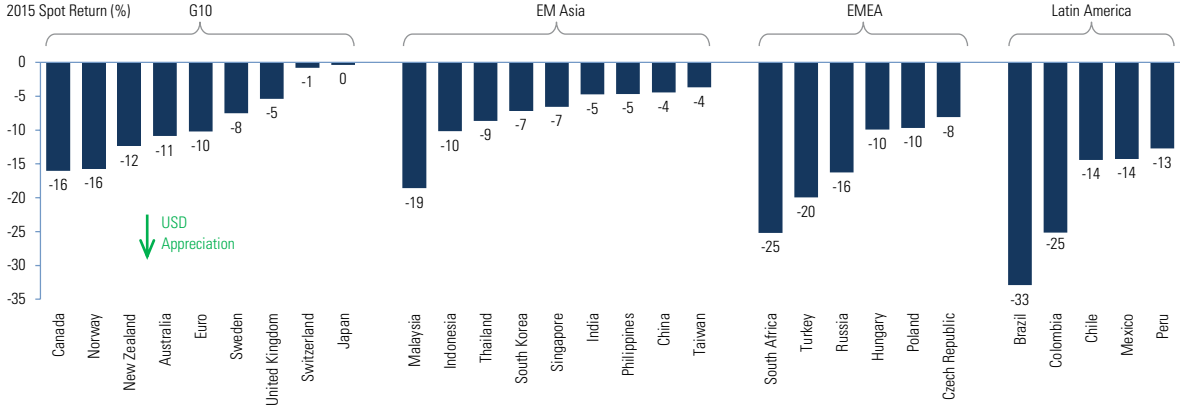
Data as of Q3 2015.
Note: Based on MSCI EM.
Source: Investment Strategy Group, Bloomberg.

2016 Global Currency Outlook

Broad US dollar strength remained a key feature of last year's macroeconomic landscape. As was

Exhibit 81: 2015 Currency Returns (vs. US Dollar)

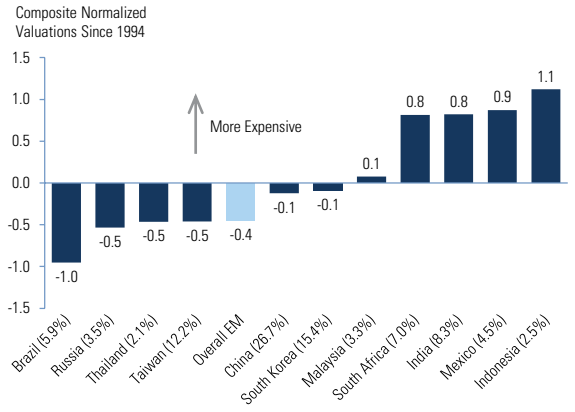
Every major currency across all regions depreciated against the dollar in 2015.



Data as of December 31, 2015.
Source: Investment Strategy Group, Bloomberg.

Exhibit 80: Dispersion in EM Equity Valuations

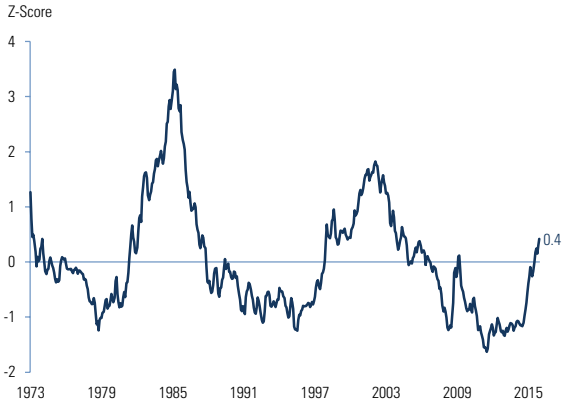
Divergence in multiples creates relative value opportunities.



Data as of December 31, 2015.
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 brackets denote the country's weight in MSCI EM.
Source: Investment Strategy Group, Datastream, MSCI, I/B/E/S.

Exhibit 82: US Dollar Real Effective Exchange Rate

US dollar valuations are not stretched.



Data through November 30, 2015.
Note: Z-score is calculated on data since 1973 and represents the number of standard deviations from the mean.
Source: Investment Strategy Group, Datastream.

the case in 2014, both the magnitude and breadth of this outperformance were striking. This is apparent in Exhibit 81, which shows that the US dollar bested every major currency in 2015. The currencies of commodity-sensitive countries were particularly hard hit, with the Brazilian real depreciating a substantial 33%, and the Canadian, Australian and New Zealand dollars also suffering double-digit declines.

Though commodities played a supporting role, the roots of this dollar strength can be traced to differences in both US growth and monetary policy compared to the rest of the world. With the Federal Reserve now officially tightening policy against a backdrop of uneven global growth, these divergences will continue to shape world currency trends in 2016.

We next discuss the details of our US dollar view, as well as our outlook for the major developed and emerging market currencies.

US Dollar

After the last two years of marked outperformance, it would be natural to assume the greenback has become overvalued. But surprisingly, the dollar's advance has simply brought it back in line with its historical average (see Exhibit 82). Moreover, its current valuation stands well below the peaks reached in the 1982 and 2002 dollar bull markets, suggesting there is scope for upside before valuation becomes a credible headwind.

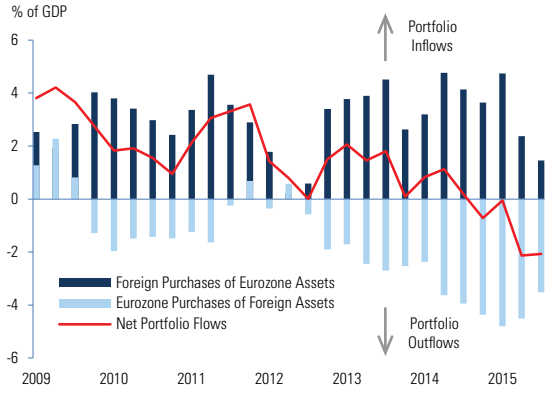
In addition to this valuation backdrop, the dollar should continue to benefit from the relative strength of US fundamentals. Put simply, US growth is outpacing that of developed markets and narrowing the gap with slowing emerging economies, warranting tighter US monetary policy at a time when the majority of the world is easing. In turn, the relatively higher yields in the US are enticing global investors and central banks to favor US dollar-denominated assets, providing a tailwind to the greenback. Because these dynamics reflect broad macroeconomic trends, they are unlikely to reverse course in 2016.

That said, we are mindful that some of these tailwinds have been discounted now that the dollar has appreciated 38% since its 2011 trough. After all, much of the dollar's recent strength reflected expectations of Federal Reserve policy actions. With the tightening process now underway, the risk of disappointment increases. Of equal importance, the divergence between interest rates in the US and those in the rest of the world—a key driver of historical dollar bull markets—is unlikely to be as large today given expectations for a lower terminal interest rate in the US. Lastly, any growth or inflation surprises that cause other developed market central banks to rethink their easy monetary policy stances could quickly lead to liquidation of popularly held dollar positions.

Accounting for these risks, we expect the pace of dollar appreciation to be more subdued compared to recent years.

Exhibit 83: Eurozone Portfolio Flows

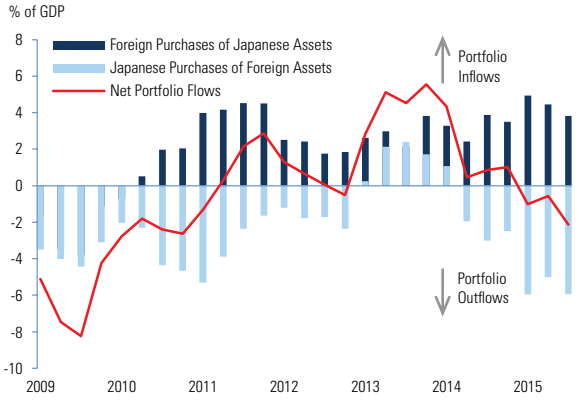
The Eurozone's low domestic interest rates encourage the purchase of better-yielding foreign assets which are paid for by selling euros.



Data through Q3 2015.
Note: Purchases over prior four quarters.
Source: Investment Strategy Group, Haver.

Exhibit 84: Japan Portfolio Flows

Japanese investors continue to seek higher-yielding assets abroad.



Data through Q3 2015.
Note: Purchases over prior four quarters.
Source: Investment Strategy Group, Haver.

Euro

The euro's 10% depreciation against the US dollar in 2015 represented a second consecutive year of double-digit declines, its worst back-to-back performance in the last 15 years. This sharp depreciation marks a notable about-face for the euro, which was one of the most resilient G-10 currencies of the previous decade. While existential doubts about the long-term viability of the European monetary union have occasionally weighed on the currency since 2011's sovereign crisis, such concerns have not been the primary driver of recent euro weakness.

Instead, that distinction rests with the growing divergence between US and European central bank policy. Indeed, last year saw the Federal Reserve hike interest rates at a time when the ECB was undertaking its first substantial quantitative easing program. This separation is likely to grow in the wake of the ECB's late 2015 decision to extend the time line of its existing sovereign bond buying program and reduce the bank's deposit rate. ECB President Mario Draghi has also made clear that additional easing measures are possible in pursuit of the central bank's inflation mandate.

This policy mix is likely to bolster two headwinds for the euro. First, lower domestic interest rates should reinforce European investors' preference for higher-yielding, non-euro-denominated assets abroad. That trend is clear in Exhibit 83, which shows Eurozone investors have steadily increased the pace of their foreign asset purchases over the last three years. Second, foreign investors concerned about further euro depreciation are likely to hedge their Eurozone assets by selling the euro.

Although the euro has already depreciated substantially, there is scope for further weakness. Valuations are not stretched, nor is short-euro market positioning relative to the last two years. At the same time, we recognize that the pace of depreciation is likely to be far more moderate than in recent years. Thus, while we continue to recommend clients stay short the euro relative to the dollar, we have reduced the size of that position over the course of the past year.

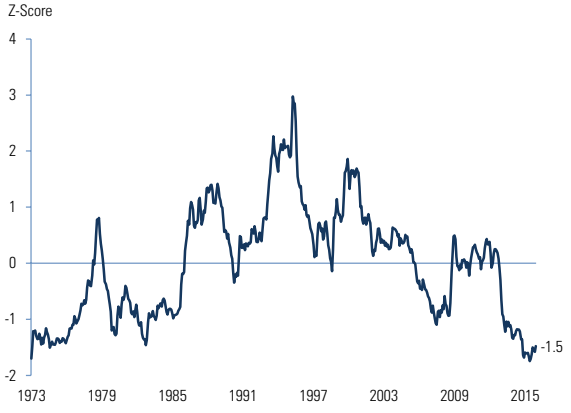
While we continue to recommend clients stay short the euro relative to the dollar, we have reduced the size of that position over the course of the past year.

Yen

While 2015 marked the fourth consecutive year of yen depreciation

Exhibit 85: Japanese Yen Real Effective Exchange Rate

The yen is now undervalued following three years of depreciation.



Data through November 30, 2015.
Note: Z-score is calculated on data since 1973 and represents the number of standard deviations from the mean.
Source: Investment Strategy Group, Datastream.

versus the US dollar, the 0.4% decline was small compared to its staggering 37% cumulative drop since the cycle peak in 2011. Relative to previous years, the risks around the yen seem more balanced now, though ongoing policy divergence with the US will likely remain a headwind. As a result, we think this nascent trend of more modest depreciation versus the US dollar is likely to continue for several reasons.

First, the BOJ seems to be taking a less aggressive policy stance, favoring minor technical adjustments over a material increase in its existing quantitative easing program at its final meeting of 2015. Second, Japan's Government Pension Investment Fund (GPIF)—which manages the world's largest public pension—is now closer to meeting the higher international equity and bond targets it announced over a year ago. In turn, the capital outflows this reallocation engendered are likely to slow, along with the downward pressure they exerted on the yen.

This is not to suggest that the cross-border flows responsible for yen weakness in recent years will abruptly reverse. As Exhibit 84 shows, Japanese investors continue to seek higher-yielding assets abroad while foreign appetite for Japanese assets is less robust. We expect this dynamic to continue, albeit at a slower pace, as long as US assets offer higher returns.

Finally, after three years of yen weakness, the currency has reached undervalued levels. As shown in Exhibit 85, the yen now stands nearly 1.5 standard deviations below its historic valuation relative to the currencies of Japan's trade partners.

Given this more balanced risk profile, we removed our tactical short positions in the yen relative to the dollar late last year.

British Pound

Along with its developed market peers, the pound was caught in the long shadow of the dollar last year, falling 5% against the greenback. We do not expect a repeat performance in 2016, however. Keep in mind that the currency offers more attractive valuations relative to the dollar now, having already fallen 14% from its 2014 peak. The pound is also trading near the lower end of its multiyear range relative to the dollar, an area of technical support. Of equal importance, the strength of the UK economy may provide cover for the BOE to raise rates by midyear, instead of early 2017 as market pricing currently suggests. Finally, short positioning is near the highest levels recorded over the last 12 months, setting a lower hurdle for upside surprises.

Sterling also screens well relative to other developed market currencies. In fact, the pound gained approximately 5% against the euro last year, a notable achievement given the euro represents the largest share of sterling's trade-weighted basket. This strength could extend if the BOE hikes rates this year, as higher UK rates would be enticing to Eurozone investors in search of yield. As we noted last year, the UK is among the most popular destinations for European investors.

Of course, the currency is not without risks. The UK is currently attempting to renegotiate its position within the EU and a referendum is expected later this year. Sterling has been sensitive to political risk historically, as evidenced by weakness ahead of last year's general election and the 2014 Scottish referendum.

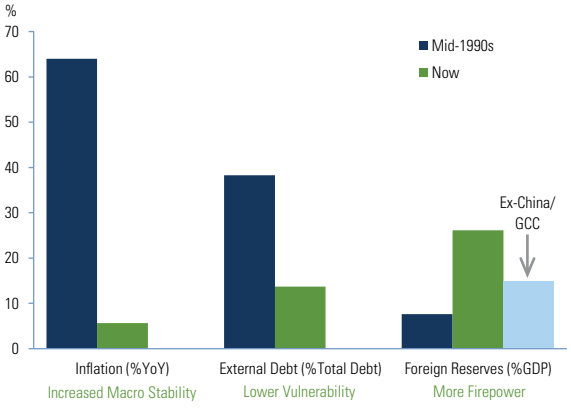
Therefore, while "Brexit" is not our base case, the heightened volatility surrounding the referendum keeps us neutral the pound for now.

Emerging Market Currencies

Last year's dollar strength coupled with the collapse in commodity prices contributed to a third consecutive year of emerging market currency underperformance. The 42%[107] depreciation against the greenback since mid-2011 has dragged emerging market currencies close to levels last

Exhibit 86: Improvements in Emerging Markets Over the Last 20 Years

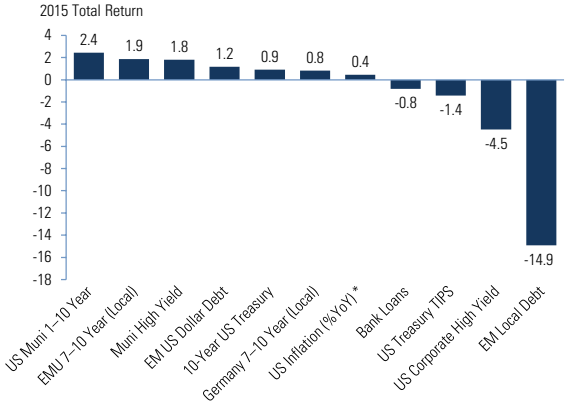
Emerging markets are better positioned than during the Asian financial crisis.



Data as of December 31, 2015.
Source: Investment Strategy Group, Datastream, JP Morgan.

Exhibit 87: Fixed Income Returns by Asset Class

Fixed income generated surprisingly low returns in 2015.



Data through December 31, 2015.
Source: Investment Strategy Group, Datastream.
* Inflation data as of November 2015.

seen during the late 1990s Asian crisis. Thus, it is reasonable to ask whether emerging markets are again facing the type of sovereign defaults, banking crises and bailouts prevalent during that time.

In our view, those outcomes are unlikely. Recall that a key driver of the Asian crisis was an abundance of dollar-denominated debt made worse by central banks that pegged their currencies to the greenback. As the dollar appreciated, so did these countries' liabilities, ultimately leading to widespread defaults. In contrast, most emerging markets today have flexible exchange rates, a lower share of dollar-denominated government debt, central banks focused on targeting inflation and sizable foreign reserves (see Exhibit 86).

Yet we should not confuse this greater macroeconomic stability with a strong overweight signal, as many of the drivers of underperformance in recent years are likely to persist in 2016. These include the prospect of further dollar appreciation, the threat of capital outflows as the Federal Reserve tightens policy, the ongoing negative impact on commodities and growth from China's slowdown, and a weaker renminbi arising from countercyclical policy measures in China. Indeed, the 5–7% renminbi depreciation we expect relative to the dollar is likely to represent a stiff headwind to other emerging market currencies. Of equal importance, none of the three triggers that would make us more constructive on emerging market currencies—meaningful structural reforms, accelerating emerging market exports and a falling dollar—seem likely this year.

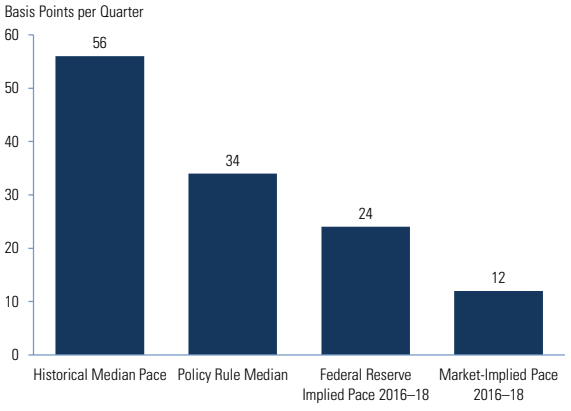
Today's scant yields are likely not sufficient to offset falling prices as interest rates increase, which we expect this year as the Federal Reserve tightens policy and the temporary drags on inflation—namely the dollar and oil—abate.

At the same time, we do not find a tactical short appealing either. Valuations have become more attractive, with the yield differential to the US dollar at 5.4%. Meanwhile, sentiment on the emerging market space, our own included, is dour. Together, these lower the hurdle for positive surprises.

Instead of expressing our view at the asset class level, we prefer to focus on country-specific opportunities. To that end, we are tactically positioned to benefit from further renminbi weakness,

Exhibit 88: Federal Funds Rate Path Projections

Market prices imply a shallower path of rate hikes than Federal Reserve guidance, policy rules or history would suggest.



Data as of December 31, 2015.
Source: Investment Strategy Group, Bloomberg, Federal Reserve.

as well as appreciation in the Mexican peso. On the peso, we like Mexico's linkages to resilient US growth, progress on structural reforms and strong balance sheet.

2016 Global Fixed Income Outlook

Last year should have been an extraordinary one for fixed income investors, as the conditions for higher bond prices were certainly in place. Global growth disappointed, with Bloomberg consensus expectations for 2015 falling almost a full percentage point over the course of the year. At the same time, market-based inflation measures crumbled in the wake of a stronger dollar, weaker growth and collapsing commodity prices. And demand for the safety of high-quality bonds was bolstered by recessionary warnings from high yield spreads, renewed fears about a Chinese hard landing and broad-based depreciation in emerging market currencies.

Yet despite these gale-force tailwinds, fixed income generated surprisingly low returns in 2015 (see Exhibit 87). This may suggest there is a practical limit to the downside for today's already ultralow interest rates. After all, 10-year US Treasury yields stand near their lowest levels of the past 140 years. Moreover, there are now $6 trillion of global government bonds with negative yields and $17 trillion yielding less than 1%.[108]

In turn, today's scant yields are likely not sufficient to offset falling prices as interest rates increase, which we expect this year as the Federal Reserve tightens policy and the temporary drags on inflation—namely the dollar and oil—abate. Keep in mind that a mere 26 basis point increase in the 10-year Treasury yield is sufficient to eclipse an entire year of annual coupon income. The comparable figure for German Bunds is just seven basis points. Put simply, we do not think bond investors are being adequately compensated for duration risk.

While we are mindful of the potential downturn being signaled by wider credit spreads, the evidence in hand argues such spreads have more to do with oversupplied commodity markets and rising illiquidity premiums than an upcoming wave of broad-based defaults. Accordingly, we think high yield corporate credit is attractive for a portion of clients' budgets for tactical risks. More broadly, we remain comfortable being underweight duration given our expectation for higher rates this year.

Despite poor expected returns, investors should not completely abandon their investment grade bond allocations. As recent years have reminded us, these bonds serve a vital strategic role in portfolios, providing a hedge against deflation, reducing portfolio volatility and generating income.

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

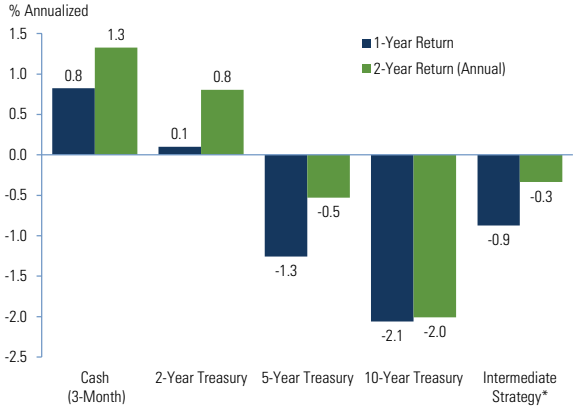
US Treasuries

After repeated false dawns, the Federal Reserve finally raised its benchmark rate last year, the first such move in nearly a decade. With a tightening cycle now underway, investor attention is squarely focused on the pace of subsequent hikes. In our view, the pace embedded in current market pricing seems slow relative to history, current US fundamentals and even the FOMC's own communications.

As shown in Exhibit 88, market prices imply the Federal Reserve will raise rates about 12 basis points per quarter over the next three years. This is much slower than the 56 basis point pace experienced during historical tightening cycles, the 34 basis points suggested by models that relate macroeconomic fundamentals to Federal Reserve policy and the FOMC's own projection of 24 basis points. This last point is important, as the FOMC projections over the last three cycles have tended

Exhibit 89: US Treasury Return Projections

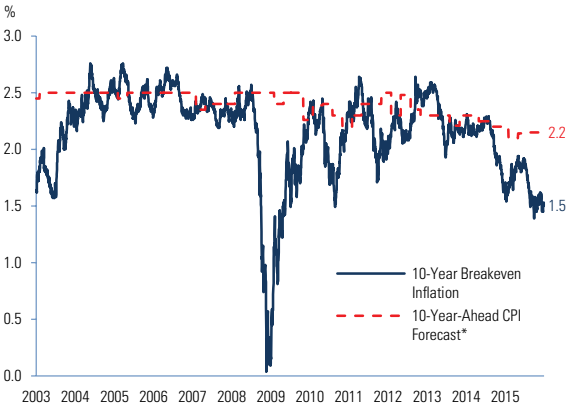
Cash is set to outperform bonds as rates rise.



Data as of December 31, 2015.
Source: Investment Strategy Group.
* Portfolio of 2-year, 5-year and 10-year bonds which is rebalanced every quarter to maintain a constant portfolio maturity of around 5 years.

Exhibit 90: 10-Year Breakeven Inflation Rate and Long-Term Inflation Forecasts

TIPS-implied breakeven inflation stands well below long-run inflation forecasts, providing some valuation support.



Data through December 31, 2015.
Source: Investment Strategy Group, Datastream.
* US Professional Forecasters Survey.

to *underestimate* the actual pace of tightening by more than 22 basis points per quarter. As a result, risk seems skewed toward a faster pace of tightening than the market expects.

Yet we must be careful to differentiate between a pace that exceeds market expectations and one that is inappropriately hasty. Even if our base case of 25 basis point increases per quarter is realized, it would still be less than half of the median historical tightening pace. Furthermore, the Federal Reserve is likely to proceed slowly, given lingering international headwinds and uncertainty around the economy's true equilibrium rate, or "the rate consistent with full employment and stable inflation in the medium term."[109]

There are also good reasons to expect a more modest transmission of policy tightening to the long end of the yield curve in this cycle, limiting the risk of an unruly rise in rates. The Federal Reserve's large $4.3 trillion securities portfolio reduces the supply of long-duration bonds available to investors, putting downward pressure on yields. The same can be said of continued quantitative easing by both the BOJ and ECB, which depresses global term premiums. And while debate about the equilibrium rate continues, most acknowledge it is lower today than historically, suggesting a commensurately lower terminal point for the Federal Reserve benchmark rate in this tightening cycle.

Despite these headwinds, 10-year Treasury yields are still likely to rise, consistent with a median increase of 60 basis points in the first year of historical tightening cycles. Given today's scant coupon levels, even the modest increase in yields we expect this year will result in bonds underperforming cash (see Exhibit 89). As a result, we remain comfortable being underweight duration in US dollar-based portfolios.

Treasury Inflation-Protected Securities (TIPS)

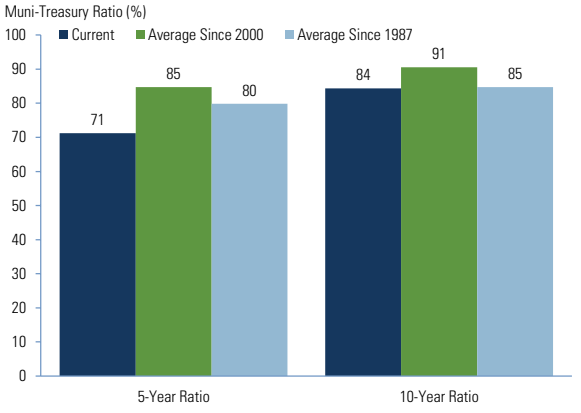
Though far from the oil patch, TIPS were nonetheless a victim of last year's energy price rout. Recall that principal and coupon payments of TIPS are directly linked to headline CPI inflation, which rose a meager 0.4% in light of oil weakness. This was easily offset by rising real yields, leading to a 1.4% decline for the asset class, only the third annual loss for TIPS since their inception.

Given this underperformance, relative valuations of TIPS have become more attractive. As seen in Exhibit 90, 10-year TIPS imply breakeven inflation of just 1.5%, a level that has been lower only 12% of the time since 2000 and one that stands well below long-run inflation forecasts. Moreover, the stabilization in oil prices and the more modest drag from dollar appreciation that we expect this year should help lift inflation, benefiting TIPS payouts.

Yet, while we believe that TIPS are likely to outperform nominal bonds in 2016, their absolute

Exhibit 91: Muni-Treasury Ratios

Today's valuations offer little buffer to absorb the backup in Treasury yields that we expect.



Data as of December 31, 2015.
Source: Investment Strategy Group, Bloomberg.

returns will be modest. Keep in mind that TIPS have an eight-year duration that will make it difficult for coupon income to meaningfully exceed principal losses as rates rise.

Based on our outlook, we consider TIPS, as well as intermediate-dated Treasuries, to be an attractive funding source for potential tactical tilts with more promising prospects. 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.

US Municipal Bond Market

Last year's provocative headlines around Puerto Rico's debt restructuring and Illinois' fiscal woes belied much healthier fundamentals for the wider municipal market. Tax revenues posted a solid 5% annual gain, while credit upgrades exceeded downgrades for municipal issuers by 7%, a positive skew seen in three of the last four quarters.[110] Meanwhile, net debt issuance remained tepid as governments deferred capital spending in part to limit their interest expense. The market also saw $9 billion of new mutual fund inflows, as investors sought shelter from federal and state tax rates. And despite rising interest rates, municipal high yield bonds returned 1.8% in 2015 and outperformed Treasuries, not to mention many other fixed income asset classes.

We expect this backdrop of benign credit and favorable technicals to continue in 2016. For starters, the potential for any dramatic tax reforms that could weaken investor sentiment is unlikely in an election year. Moreover, the stable federal fiscal outlook reduces the need to find alternative sources of revenues, such as reversing the treatment of tax-exempt interest.[111] And while we would not be surprised by further downgrades to the credit ratings of Illinois, New Jersey and other issuers with poor pension funding, we expect little spillover to broader market sentiment, as was also the case in 2015. Notably, Puerto Rico's debt woes are unlikely to disrupt the tax-exempt market, as much of the exposure has moved to more risk-tolerant investors.

Still, municipal bond returns are unlikely to sidestep the negative impact of higher rates again this year. As seen in Exhibit 91, today's municipal-Treasury valuations offer little buffer to absorb the backup in Treasury yields we expect. In turn, municipal yields are likely to rise along with those of Treasuries, resulting in slightly negative total returns of about 1% in our base case.

While such modest declines should not lead to disruptive mutual fund outflows, they remain a risk in a rising rate environment. Concerns about the pace of rate hikes triggered an exodus from municipal bond mutual funds in 1994, 1999, 2004 and following the "taper tantrum" in 2013. Such outflows can result in exaggerated moves within the municipal market.

Given the meager return outlook, we think that clients should underweight their high-quality municipal bonds by funding various tactical tilts. This recommendation is motivated by rate risk and not credit concerns, since we expect defaults among higher-quality municipal bonds to be rare events.

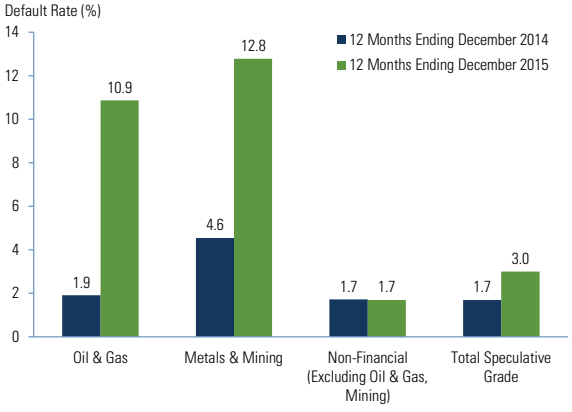
In contrast, clients should retain their strategic allocation to high yield municipal bonds. Despite their almost 10-year duration, these bonds currently offer spreads that are in their 83rd percentile since 2000. This suggests spread compression could partially offset higher Treasury yields, enabling the high yield municipal market to deliver a modest positive return of around 2%. While uninspiring by historical standards, it would nonetheless exceed the expected returns of cash and investment grade fixed income.

US Corporate High Yield Credit

Few would fault high yield investors for wanting to forget 2015. Double-digit default rates in

Exhibit 92: US Speculative Grade Default Rate Trends by Industry

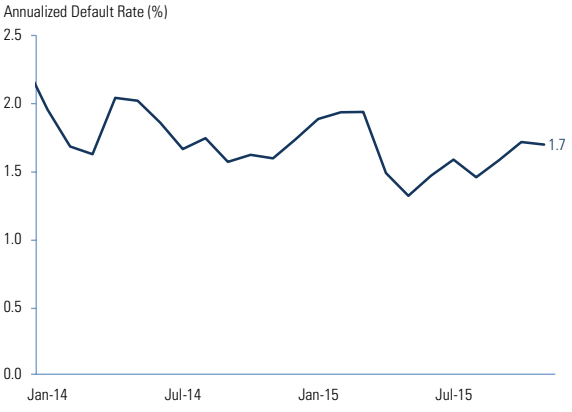
The entire increase in high yield default rates in 2015 is explained by commodity sectors.



Data as of December 31, 2015.
Source: Investment Strategy Group, Moody's.

Exhibit 93: Issuer-Weighted US Speculative Grade Default Rates Excluding Commodities

Default rates outside commodities have not shown signs of contagion.



Data through November 30, 2015.
Source: Investment Strategy Group, Moody's.

commodity sectors conspired with balance sheet worries, tighter business lending standards and the first Federal Reserve rate increase in almost a decade to push spreads toward recessionary levels. At the same time, suspended redemptions at Third Avenue's high yield mutual fund crystalized fears about market liquidity and the potential for a mass exodus from the asset class by retail investors. The $12 billion of high yield mutual fund and ETF outflows last year—representing 6% of assets under management—only compounded these worries.[112] All told, high yield bonds registered their first annual loss since 2008, ending a six-year streak of consecutive gains.

Investors are naturally worried that the credit cycle has turned, which seems to be the message of today's high yield bond spreads. We are about midway between the median spread seen during expansions (464 basis points) and recessions (887 basis points), implying that the market is placing equal odds on an economic contraction over the next 12 months. Our forecast places that risk closer to 20%.

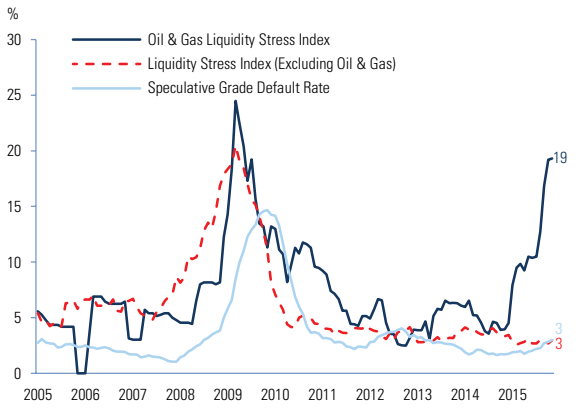
While it is possible that high yield investors have a particularly dour view of US growth, it is more likely that spreads are sending mixed messages. Here, we need to differentiate between market pricing (which can be driven by illiquidity and fear) and underlying fundamental deterioration. There are three parts to this story. First, credit deterioration in commodity-related sectors is leading to wider spreads in areas without the same fundamental challenges. The commodity supercycle may be over, but the same fate need not apply to the US expansion. Second, the market is likely overpricing the impact of Federal Reserve tightening. Finally, the risk premium for illiquidity has increased, reflecting smaller dealer balance sheets and shifting investor preferences.

On the first point, it may seem lackadaisical to blame the bulk of high yield's woes on oversupplied commodity markets, but there is a bounty of evidence to support that view. Commodity sectors represented nearly three-fourths of 2015's total high yield default volume on a par-weighted basis. Excluding these sectors, only 15 companies totaling $10.9 billion defaulted last year, implying a healthy ex-commodity default rate of just 0.5%.[113] Issuer-weighted metrics tell the same tale, as seen in Exhibit 92. Note the entire increase in last year's default rate can be traced to commodity areas. Even recovery rates are being distorted, with the headline figure now 29.5%, well below the 25-year annual average of 41.4%. Yet excluding the troubled commodity areas, recovery rates of 46.1% stand *above* their long-term average.[114]

Of course, there is always the risk that fundamental distress will spread to other areas of the market, as most default cycles begin with

Exhibit 94: Moody's Liquidity Stress Index and Default Rates

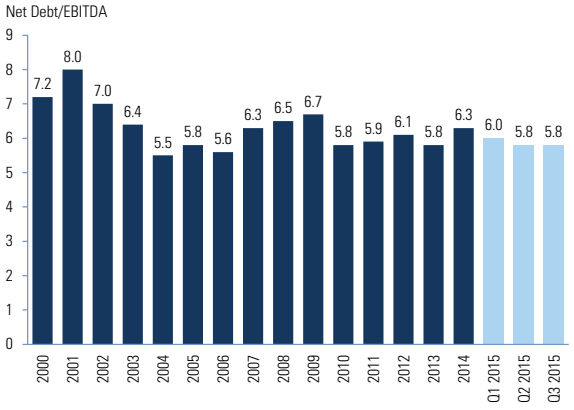
Stress in the oil & gas sector has not spilled over into the broader market.



Data through November 30, 2015.
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 96: High Yield Average Net Debt-to-EBITDA, Excluding Commodities & Financials

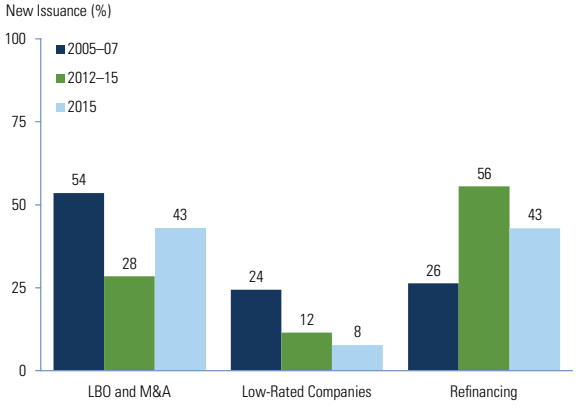
Market fundamentals seem less compromised than current spreads suggest.



Data through Q3 2015.
Note: Par-weighted. Based on public filings of companies in the Barclays US High Yield Index. Commodities defined as energy and metals & mining.
Source: Investment Strategy Group, S&P Capital IQ, Barclays Research.

Exhibit 95: Characteristics of Bank Loan and High Yield Issuance

Despite increased issuance to fund M&A activity in 2015, the stock of debt was predominantly used for refinancing.



Data as of December 31, 2015.
Source: Investment Strategy Group, Bank of America Merrill Lynch, Bloomberg, Barclays.

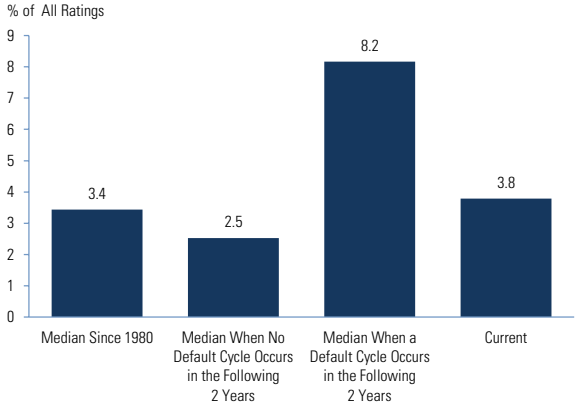
problems in one area. Yet default rates have shown few signs of contagion in recent quarters (see Exhibit 93). Similarly, leading indicators of defaults, such as Moody's Liquidity Stress Index, show little stress and ample liquidity for non-commodity credits despite significant stress in oil and gas areas (see Exhibit 94). Thus far, the commodity damage has not metastasized to the rest of the high yield market.

More broadly, market fundamentals seem less compromised than current spreads suggest. While issuance in 2015 featured more balance-sheet-weakening M&A activity, it represents a small inflow into a large stock of debt that was predominantly used for refinancing (see Exhibit 95). Crucially, it is the credit characteristics of the *aggregate* pool of debt, not just the recent issuance, which ultimately dictate the level of defaults. The same could be said of par-weighted leverage ratios that are more representative of market-wide credit loss potential than median ones. Today, this measure is sending a less worrisome signal (see Exhibit 96). Finally, today's downgrade-to-upgrade ratio is in line with its historical median and just half the level typically seen as the economy approaches recession (see Exhibit 97).

This is not to say the credit cycle is impervious to risks, especially given the uncertain effects of the Federal Reserve's nascent tightening cycle. But this particular risk seems overpriced. Rising rates usually reflect an improving economy, which is generally supportive of credit quality and therefore lower defaults. Limited near-term maturities also delay the pass-through of rising rates to high yield borrowers. Keep in mind that just 7% of the total

Exhibit 97: Difference Between US Corporate Rating Downgrades and Upgrades

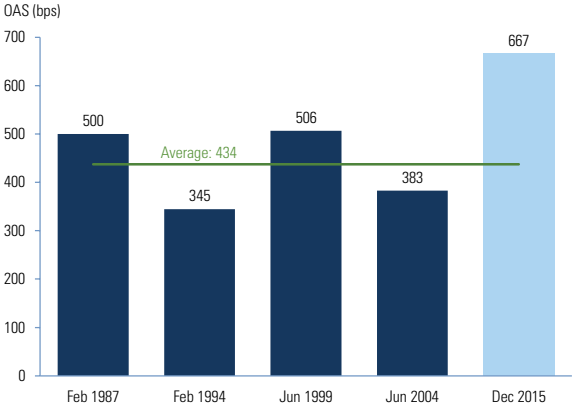
The current difference between downgrade and upgrade actions is in line with its historical median.



Data as of December 31, 2015.
Note: Default cycles defined as periods with speculative default rates above 10%.
Source: Investment Strategy Group, Moody's.

Exhibit 98: High Yield Spread Levels at Initial Rate Hikes

Today's high spreads provide a large cushion to offset the gradual increase in interest rates that we expect.



Data as of December 31, 2015.
Source: Investment Strategy Group, Barclays.

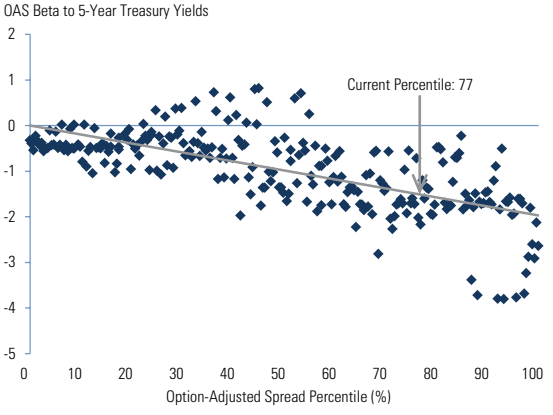
$2.7 trillion of leveraged credit outstanding will mature in the next two years.

This tightening cycle also begins with significantly higher spreads, providing a larger cushion to offset the gradual backup in interest rates we expect (see Exhibit 98). As seen in Exhibit 99, the starting level of spreads has been a key determinant of their ability to absorb rising rates in the past. Today's spreads are consistent with a -1.5x "spread beta," implying that spreads will compress 15 basis points for every 10 basis point increase in rates if they follow their historical pattern. Given this dynamic, high yield bonds generated a positive return 67% of the time during historical interest rate backups. That return exceeded the performance of investment grade bonds 83% of the time (see Exhibit 100). Bank loans did even better. This relative performance is noteworthy, as our high yield overweight is funded out of investment grade fixed income.

Put simply, spreads today imply a higher level of distress than is justified by company-level fundamentals alone. To be sure, defaults are set to rise, with our models suggesting that a 4–5% rate is likely in 2016. Even so, today's high yield spreads already stand above the level of 450–600 basis points that would be historically consistent with such an increase. This is particularly true for high yield energy, where current spreads of around 1,300 basis points are implying about 16%

Exhibit 99: Sensitivity of High Yield Spreads to Interest Rates

If the historical relationship holds, spread compression should more than offset rising rates in the current cycle.



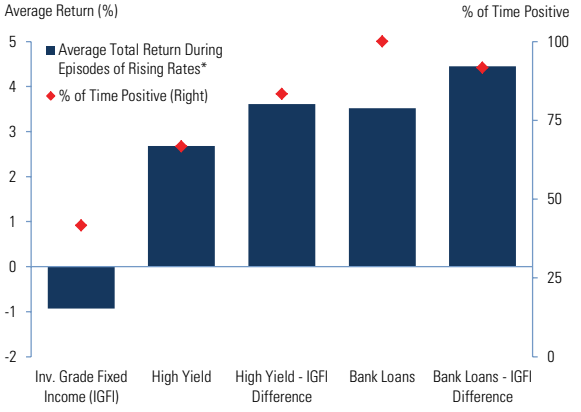
Data as of December 31, 2015.
Source: Investment Strategy Group, Barclays, Datastream.

breakeven defaults next year and cumulative four-year peak defaults of 47%, assuming modest 20% recoveries. To put this number in perspective, four-year cumulative defaults peaked at 27% during the late 1990s oil collapse, which also saw crude prices drop more than 60%.

Sustaining energy spreads at these levels would require oil prices to remain around $30 per barrel

Exhibit 100: High Yield Credit Performance During Periods of Rising Rates

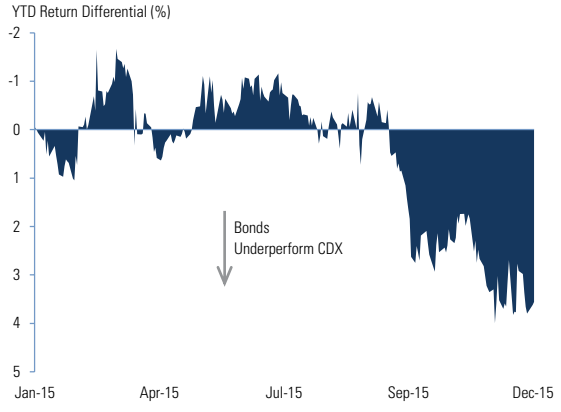
High yield has historically outperformed investment grade bonds during episodes of rising rates.



Data as of December 31, 2015.
Source: Investment Strategy Group, Barclays, Credit Suisse.
* Defined as 5-year Treasury yield rising more than 70 basis points over 3-month period.

Exhibit 101: High Yield CDX Outperformance vs. Corporate High Yield

Illiquid cash bonds have significantly lagged their synthetic index, showing the premium investors are willing to pay for liquidity.



Data through December 31, 2015.
Note: Corporate high yield excess return to US Treasuries, excluding energy.
Source: Investment Strategy Group, Barclays.

through 2017, based on our bottom-up credit analysis. In contrast, we believe a combination of resilient demand and moderating non-OPEC supply will bring the oil market into balance in late 2016, supporting oil prices between $40 and $60. Such stabilization in the oil patch would no doubt boost risk appetites across the broader high yield market as well.

Nevertheless, we are realistic in our expectations for spread compression. Changes in the regulatory environment and the resulting reduction in the size of dealer balance sheets have placed a premium on liquidity. That's apparent in Exhibit 101, which shows illiquid cash bonds have significantly lagged their more easily traded synthetic index, despite having similar credit risk. Unfortunately, this higher illiquidity risk premium is likely to persist given its structural underpinnings.

Based on the foregoing, we still believe high yield corporate credit warrants an overweight, but a smaller one than previously recommended given rising defaults and lower liquidity.

Eurozone Bonds

Last year was a rude awakening for Eurozone bond investors expecting an encore of 2014's stellar performance. Consider the case of German Bunds. While their full-year return of just 0.2% was disappointing in its own right, the outburst of volatility that accompanied it was jarring. At one point last year, German 10-year yields fell to a low of eight basis points before ricocheting more than 60 basis points higher within just 23 days as extreme bullish positioning was forcefully unwound.

While a repeat of that kind of volatility is unlikely this year, we do expect bond returns to be unattractive.

To be sure, central bank policy remains a tailwind with the ECB slated to own around 25% and 11% of the German and Italian Treasury markets by yearend, respectively. Yet, improving Eurozone economic conditions and Federal Reserve tightening put upward pressure on euro rates. Moreover, today's low starting yields make bonds vulnerable to even a modest backup in rates or change in investor sentiment. For example, just a seven basis point backup in Bund yields is sufficient to offset a year of coupon income. Our forecast calls for a much larger backup, with 10-year Bund yields reaching 0.75–1.25% by yearend.

For some peripheral bonds, the drag of higher rates is likely to be exacerbated by widening spreads this year. High public debt, low trend growth, political tensions and limited progress on reforms are all negative for these bonds, only partly offset by ongoing ECB purchases. Increased volatility around yearend, as potentially diminishing ECB purchases and higher political risk come into focus, also cannot be ruled out.

Finally, three factors are likely to push UK 10-year Gilt yields toward our central case range of 1.75–2.50% this year. First, yields are low relative to UK growth and inflation prospects. This moderate overvaluation should diminish as the economic recovery continues. Second, the BOE is likely to tighten policy this year, putting upward pressure on yields. Finally, Federal Reserve tightening should raise global term premiums to the benefit of higher Gilt yields, consistent with the historically high correlation of around 0.8 between Gilt and US Treasury yield movements.

Given this outlook, we remain underweight UK and Eurozone government bonds. That said, European clients should retain some exposure to German Bunds and other high-quality bonds in the "sleep well" portion of their portfolios. These high-quality bonds could mitigate portfolio losses if recession and deflation risks reemerge.

Emerging Market Local Debt

The third time was not a charm for emerging market local debt (EMLD) in 2015, as it suffered its third consecutive year of losses. Currency depreciation remains the primary culprit. Last year, a more than 17% drop in emerging market currencies translated into a 15% decline for EMLD. As recent years remind us, currency swings are the dominant source of volatility in EMLD.

Volatility is likely to remain elevated in 2016, but we are cautiously optimistic on EMLD nonetheless. This view is predicated on the asset class's attractive 7% yield, coupled with an above-average spread to US Treasuries that should absorb much of the backup in interest rates we expect. To be sure, emerging market currencies are likely to detract from returns given the headwinds from a modestly stronger US dollar, slowing China, weakening renminbi and soft commodity prices. Yet importantly, depreciation should not fully offset the other sources of EMLD return as it has in recent years, thanks to already significant undervaluation, higher starting yields and our expectation for a gradual pace of Federal Reserve tightening. All told, we are expecting a low single-digit EMLD return.

Within EMLD, we expect differentiation to provide opportunity in 2016 as pressure mounts on countries that are caught in the above crosscurrents and reliant on external financing. Emerging markets that have not undertaken reform due to political constraints—such as Turkey, South Africa, Brazil and Malaysia—are most vulnerable. In contrast, we believe that reformers like Mexico, as well as commodity importers with little reliance on China, such as Poland and Hungary, are well positioned.

Of course, there are downside risks even from today's depressed levels. After three consecutive years of losses, a large-scale investor exodus from EMLD cannot be completely ruled out. Particularly worrisome are recent indications that more traditionally stable institutional investors are exiting the asset class. Moreover, although the share of local-currency sovereign debt held by foreigners has slowly dropped from its peak in 2013, it remains double that of 2009.

In our 2013 *Insight* piece, *Emerging Markets: As the Tide Goes Out*, we highlighted the growing uncertainties arising from the structural headwinds facing emerging markets and recommended that clients reduce their strategic allocation to EMLD. The stakes facing China as it tries to rebalance its economy while avoiding a crisis have only increased in the interim. Therefore, we may consider further reducing the strategic allocation to EMLD this year.

Emerging Market Dollar Debt

In a mirror image of EMLD, emerging market dollar debt (EMD) has been among the better-performing bond markets for three years running, largely thanks to the stability of US rates. We think that trend is unlikely to extend to a fourth year for several reasons.

First, EMD's almost seven-year duration should finally work against it now that the Federal Reserve has begun a tightening cycle. Second, there is scope for spreads to rise to their longer-term average if the emerging market outlook does not improve. On this point, the rising risk of defaults in commodity exporters, like Venezuela, and large government-controlled oil companies in Latin America could be a negative catalyst for EMD. Finally, further downgrades to the credit ratings of Brazil, South Africa, Turkey and Russia—which account for about 15% of the index and have a negative outlook from two ratings agencies—could also sour sentiment.

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

2016 Global Commodity Outlook

Declining energy prices may have captured the spotlight in 2015, but the rout was not limited to the oil patch. That much is apparent in Exhibit 102, which shows no commodity sector was spared last year. Not surprisingly, gloomy headlines such as "Commodity Rout: Only the End of the Beginning" abounded.[115]

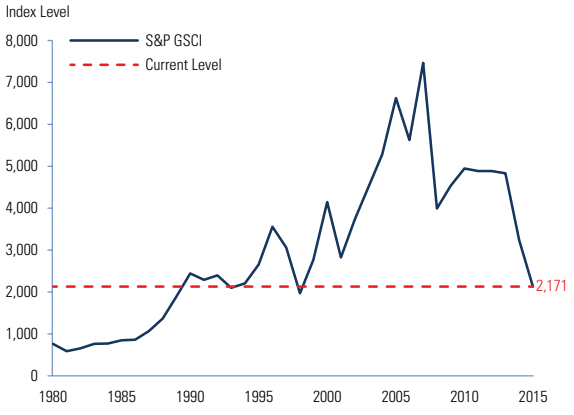
Such broad-based declines drove the GSCI Total Return Index down 33% last year. Combined with 2014's tumble, the index has lost over half its value in the span of two years, the worst such performance since its inception in 1970. Remarkably, all the gains from the "commodity supercycle" have been erased, with the index back to levels last seen in 1998 (see Exhibit 103).

In addition to idiosyncratic market conditions, these declines were driven by macro factors that are likely to influence commodities in 2016 as well. Chief among them is China's ongoing slowdown, which has sapped demand across a range of commodities, particularly industrial metals. US dollar strength has also played an important role, lowering the domestic costs of production for many non-US producers in dollar terms, which in turn has brought more supply to the market at lower prices. Complicating matters further, price weakness can be self-reinforcing, with declines in one commodity lowering production costs for others. For example, energy represents about 20% of copper production costs, so lower oil prices have made it cheaper to produce copper in an already oversupplied market.

An end to this negative feedback loop will depend largely on when the oil market stabilizes. More broadly, the interplay between monetary policy and foreign exchange rates will also impact commodity prices, particularly gold.

Exhibit 103: S&P Goldman Sachs Commodity Index Since 1980

All gains from the commodity supercycle have been erased.



Data through December 31, 2015.
Source: Investment Strategy Group, Bloomberg.

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

Oil: A Balancing Act

The global oil market is struggling to find its balance. At issue is the massive stockpile of oil, which continues to mount despite robust demand growth that is nearly twice its 10-year average. Indeed, OECD petroleum inventories increased by a record 245 million barrels last year and reached new all-time highs (see Exhibit 104). In response to this burgeoning imbalance, average crude oil prices fell 48% in 2015, the largest downdraft in the past 30 years (see Exhibit 105).

Supply has yet to meaningfully adjust to the collapse in oil prices for a mix of reasons. US production, for example, recorded only a slight and temporary decline (see Exhibit 106). While US producers have cut the number of active drilling

Exhibit 102: Commodity Returns in 2015

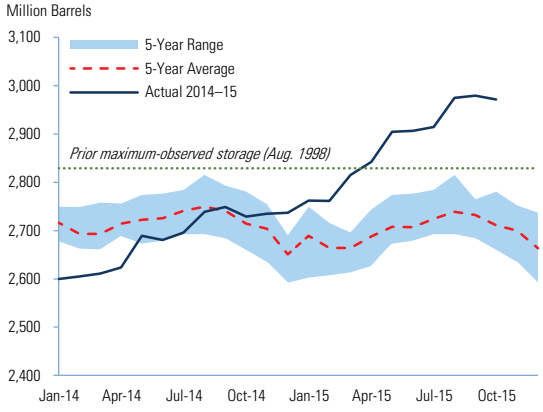
Last year extended the streak of negative commodity returns, with all subcomponents declining.

	S&P GSCI	Energy	Agriculture	Industrial Metals	Precious Metals	Livestock
Spot Price Average, 2015 vs. 2014	-35%	-44%	-16%	-17%	-10%	-14%
Spot Price Return	-25%	-31%	-12%	-23%	-11%	-20%
Excess Return*	-33%	-42%	-17%	-25%	-11%	-18%

Data as of December 31, 2015.
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 104: OECD Petroleum Inventories

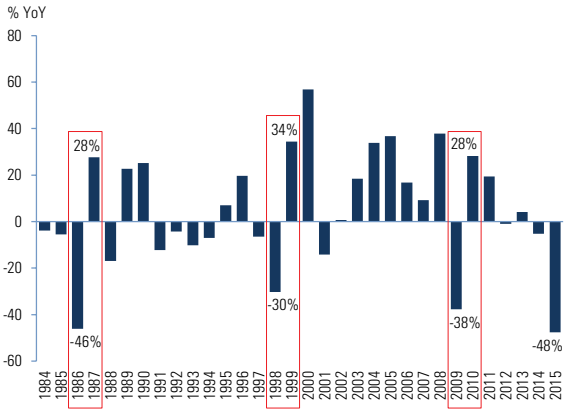
The OECD's stockpile of oil has reached new all-time highs.



Data through October 31, 2015.
Source: Investment Strategy Group, International Energy Agency.

Exhibit 105: Annual WTI Oil Price Return

The downdraft in oil prices in 2015 was the largest in 30 years.



Data through December 31, 2015.
Source: Investment Strategy Group, Bloomberg.

rigs by a staggering 65%, more efficient use of the remaining ones has insulated production. Rig productivity is up by 30–100% over the past 12 months, depending on the region.[116]

Projects where large investments in the past have made the incremental cost of extracting oil today relatively low, such as those in the deep waters of the Gulf of Mexico and oil sands of Canada, have also maintained their supply. The same is true for overseas producers whose currencies have depreciated enough to protect the value of their exports in local-currency terms, such as Russia.

Even worse, OPEC members have actually *increased* supply, as they try to offset the impact of declining oil prices with greater volumes. Leaders of Saudi Arabia, the traditional "swing producer," have shifted their focus from maintaining oil prices to protecting their market share, culminating in the removal of any production target at OPEC's December 2015 meeting. Overall, global oil production grew even faster than demand in 2015, compounding an imbalance that began in 2014.

For oil to regain its footing, the current oversupply requires a combination of demand growth and supply reduction. Our economic outlook calls for healthy oil demand, especially as low prices continue to benefit US drivers and lead to opportunistic increases in China's strategic oil reserves. Even so, an encore of last year's well-above-trend demand growth is unlikely in an environment where oil prices are rising, as we expect they will be later this year.

Consequently, we expect the bulk of the adjustment to be supply-based. Of course, a decrease in production could come from renewed disruptions given heightened geopolitical tensions in several large oil-producing countries. But offsetting this risk, OPEC production might actually increase further, a product of continuing growth in Iraq and the return of Iranian supply after international sanctions are lifted.

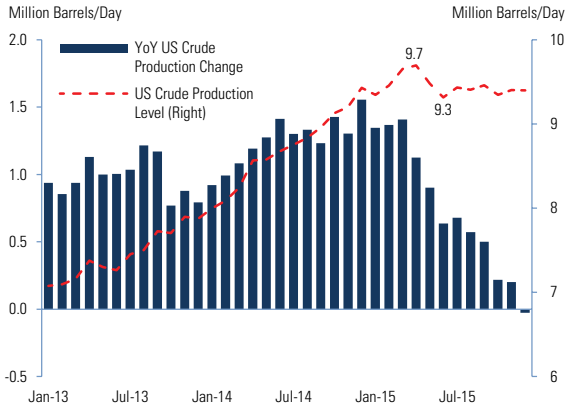
However, barring new disturbances or a quick reversal in OPEC policy, we expect that prices will need to stay low for a long-enough period of time to discourage production growth among higher-cost non-OPEC producers. As it is often said about commodity markets, "the cure for low prices is low prices." This process is already underway.

Based on a survey of the 47 largest international oil and gas companies, capital expenditures were cut by 28% last year. Because large amounts of oil production remain uneconomic below $55–60 per barrel,[117] our colleagues in GIR expect an additional 14% reduction this year.[118] In addition, current production levels are coming under pressure from natural decline rates, particularly for shale oil. As seen in Exhibit 106, the annual change in US production is now close to flat, a marked deceleration from its 20% growth a year ago. Similarly, production growth is now slightly negative year over year in the rest of non-OPEC countries.

Given these dynamics, we expect oil prices to range from $40 to $60 per barrel by the end

Exhibit 106: US Crude Oil Production

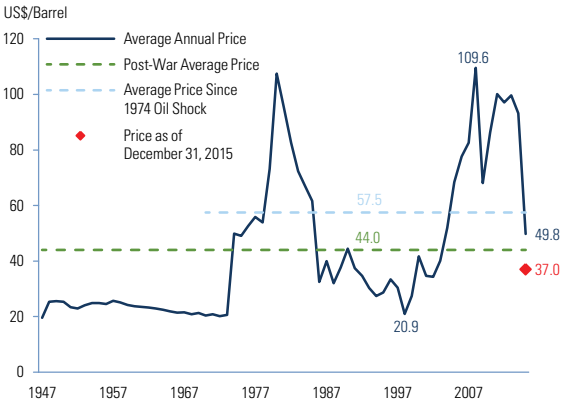
US production growth has decelerated markedly.



Data through December 31, 2015.
Note: Levels after September 2015 from IEA projections.
Source: Investment Strategy Group, International Energy Agency.

Exhibit 107: Long-Term Real WTI Oil Price

Oil prices now stand below their inflation-adjusted historical average.



Data through December 31, 2015.
Source: Investment Strategy Group, Bloomberg.

of 2016, with a volatile path in between. For the first half of the year, price risks are skewed to the downside, as rising inventory levels challenge storage capacity constraints at the same time that Iranian oil returns to the market. That said, the risks are not completely one-sided. Today's large accumulation of speculative short positions in oil futures suggests that any signs of rebalancing could lead to rapid price rallies, as we saw at various points last year. Furthermore, history reminds us that oil prices rebound strongly following price weakness similar to last year's, with an average gain of about 30% across the 1987, 1999 and 2010 analogs. Finally, oil prices now stand below their inflation-adjusted historical average, providing scope for upside (see Exhibit 107).

In light of this still uncertain timing, we do not recommend directional exposure to oil prices at this time. We do, however, find value in US high yield energy bonds. Here, spreads currently imply oil prices of $30 per barrel for the next two years based on our bottom-up analysis, an unlikely scenario in our view. Value is also emerging in oil-related equities, prompting us to recommend tactical exposure to US energy stocks and MLPs that benefit from stable-to-rising prices.

Gold: In Search of Its Luster

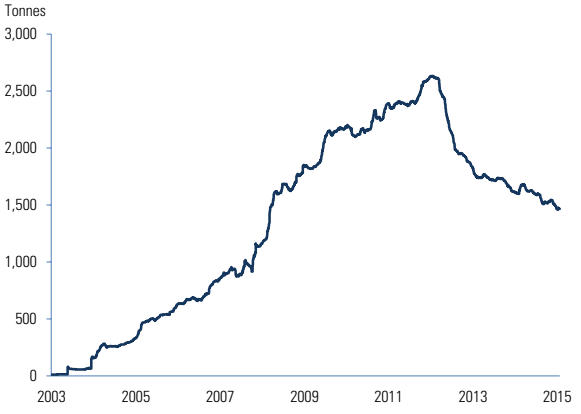
Despite its frequently cited safe haven status, gold has not been immune to the broader commodity rout. Last year's 10% decline marked the third consecutive year of losses and the second-longest streak of declines since the mid-1980s. Gold prices now stand 44% below their 2012 peak and near five-year lows. After such protracted declines, it is natural to wonder if the bear market in gold has run its course. While we still see scope for downside, the risks seem more balanced than in recent years.

To be sure, gold still faces many headwinds. The fears of monetary debasement and inflation that drove investors toward gold continue to fade, given the ongoing normalization in US monetary and budget policy. More specifically, today's higher real rates raise the opportunity cost of holding gold while the strengthening dollar undermines gold's role as a hedge against dollar debasement. Gold has traded inversely to the dollar index 76% of the time on an annual basis over the last 40 years. Moreover, gold prices declined in three of the last four Federal Reserve tightening cycles. Based on these precedents, our expectation of further Federal Reserve rate increases and moderate dollar strength this year does not bode well for gold prices.

Further ETF outflows could also weigh on prices. As these instruments are backed by gold, their fund flows translate into purchases and sales in the physical gold market. That creates downside risks to prices, considering that the stockpile of gold represented by these ETFs is equivalent to almost half a year of global mining output. Clearly, further investor exodus from these ETFs (see Exhibit 108) would put downward pressure on gold at a time when prices remain historically

Exhibit 108: Total ETF Holdings of Gold

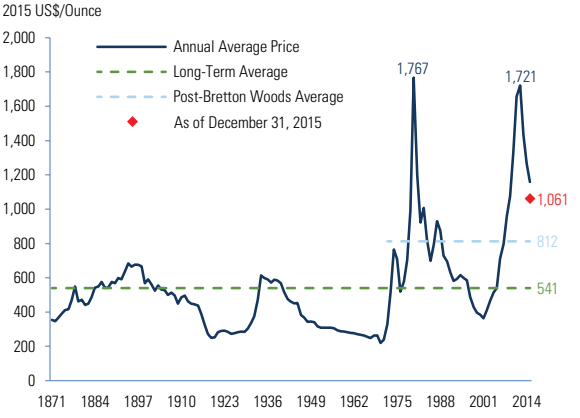
Further investor exodus from gold ETFs would put downward pressure on gold.



Data through December 31, 2015.
Note: Known gold holdings for NewGold ETF Funds tracked include SPFR, ETF Securities, ZKB, iShares, Swiss & Global, Central Fund, Credit Suisse, Source, New Gold, Sprott Gold, Deutsche Bank, Central GoldTrust, Claymore (now iShares), Goldlist and Merk Gold Trust.
Source: Investment Strategy Group, Bloomberg.

Exhibit 109: Average Annual Gold Prices

Prices remain historically elevated.



Data through December 31, 2015.
Source: Investment Strategy Group, Bloomberg.

elevated, in both nominal and inflation-adjusted terms (see Exhibit 109).

Still, the news is not all bad. Emerging market central banks continued to accumulate gold at a steady pace last year, as did consumers in China and India, the two largest end markets for physical gold. Moreover, market sentiment is very dour currently, with speculative long positioning at its lowest level since 2002. Such lopsided positioning makes the market vulnerable to sharp rallies, as we saw in both January and late summer last year. This is particularly true as we near the psychologically important price level of $1,000 per ounce, which is likely a significant technical support.

Given these crosscurrents, we are tactically neutral on gold in the near term.

In Closing

WE RECOMMEND CLIENTS STAY INVESTED at their strategic allocation to US equities. We expect modest single-digit returns for a moderate-risk, well-diversified portfolio given current valuations and interest rates across the globe. While we are cautiously optimistic, we nonetheless remain vigilant given the broad range of risks that continue to confront us in 2016. Of course, should the economic, financial or geopolitical backdrop change materially, we will adjust—and communicate—our views accordingly.

Glossary

AWS: Amazon Web Services

BOE: Bank of England
b/d: barrels per day
BLS: Bureau of Labor Statistics
BOJ: Bank of Japan
bps: basis points
Brexit: British exit of the European Union

CAPE: Cyclically Adjusted Price/Earnings ratio
CPI: consumer price index
CSI 300: China Securities Index 300

DXY: Dollar Index

EAFE: Europe, Australasia and Far East
EBITDA: earnings before interest, taxes, depreciation and amortization
ECB: European Central Bank
EM: emerging market
EMD: emerging market dollar debt
EMEA: Europe, Middle East and Africa
EMLD: emerging market local debt
EMU: European Monetary Union
EPU: Economic Policy Uncertainty [Index]
EPS: earnings per share
ETF: exchange-traded fund
EU: European Union
EUR: euro

Fed: Federal Reserve Bank
FOMC: Federal Open Market Committee
FTSE: Financial Times Stock Exchange
FX: foreign exchange

G10: Group of 10
GCC: Gulf Cooperation Council
GDP: gross domestic product
GFC: global financial crisis
GIR: [Goldman Sachs] Global Investment Research
GPIF: Government Pension Investment Fund (Japan)
Grexit: Greek exit from the European Union
GSCI: Goldman Sachs Commodity Index

I/B/E/S: Institutional Brokers' Estimate System
IEA: International Energy Agency
IGFI: investment grade fixed income
IMF: International Monetary Fund
Ind.: industrials
ISG: [Goldman Sachs] Investment Strategy Group
ISIL: Islamic State of Iraq and the Levant
ISM: Institute for Supply Management
IT: information technology

LBO: leveraged buyout

M&A: mergers and acquisitions
M1: narrowest measure of US money supply
MIT: Massachusetts Institute of Technology
MLP: master limited partnership
mmbd: million barrels a day

NAHB: National Association of Home Builders
NBER: National Bureau of Economic Research
NIPA: National Income and Product Accounts
NYSE: New York Stock Exchange

OAS: option-adjusted spread
OECD: Organisation for Economic Co-operation and Development
OPEC: Organization of the Petroleum Exporting Countries

PBOC: People's Bank of China
PCE: personal consumption expenditure
PMI: Purchasing Managers Index
pp: percentage points
PPP: purchasing power parity

SPX: S&P 500 Index

TIPS: Treasury Inflation-Protected Securities
TFP: total factor productivity
TOPIX: Tokyo Price Index
TWI: trade-weighted index

VIX: (Chicago Board of Options) Volatility Index

WTI: West Texas Intermediate [crude oil]
WWII: World War II

YoY: year over year
YTD: year to date

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The co-authors give special thanks to:

Matheus Dibo
Vice President

Paul Swartz
Vice President

Amneh AlQasimi
Associate

Mary Craig
Associate

Michael Murdoch
Associate

Additional contributors from the
Investment Strategy Group include:

Venkatesh Balasubramanian
Vice President

Thomas Devos
Vice President

Andrew Dubinsky
Vice President

Oussama Fatri
Vice President

Gregory Mariasch
Vice President

Howard Spector
Vice President

Giuseppe Vera
Vice President

Harm Zebregs
Vice President

Lili Zhu
Associate

Goldman Sachs

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Geneva
Hong Kong
Houston
London
Los Angeles
Madrid
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