Outlook

Goldman Sachs

Consumer and Investment Management Division

American Preeminence in a Rattled World

Emma Lazarus' *Colossus*

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The New Colossus

Not like the brazen giant of Greek fame,
With conquering limbs astride from land to land;
Here at our sea-washed, sunset gates shall stand
A mighty woman with a torch, whose flame
Is the imprisoned lightning, and her name
Mother of Exiles. From her beacon-hand
Glows world-wide welcome; her mild eyes command
The air-bridged harbor that twin cities frame.
"Keep, ancient lands, your storied pomp!" cries she
With silent lips. "Give me your tired, your poor,
Your huddled masses yearning to breathe free,
The wretched refuse of your teeming shore.
Send these, the homeless, tempest-tost to me,
I lift my lamp beside the golden door!"

Emma Lazarus (1849–1887)

A plaque bearing this sonnet is placed inside the Statue of Liberty.

Dear Clients,

Not since we launched our investment theme of US preeminence 10 years ago, supplementing it with our recommendation to stay invested in US equities, have investors been rattled on so many fronts. In contrast to that time, which fell during the early stages of the global financial crisis, the current level of angst has appeared despite the strongest annual GDP growth rate in 10 years, earnings growth that was in the top 20% of all readings in nearly 40 years, the lowest unemployment rate in 49 years and a steady core inflation rate of about 2%.

On the economic front, investors worry we are rapidly approaching the end of the nearly 10-year US expansion. Slowdowns in Europe, Japan and China exacerbate such concerns. Investors also fret that the recent free fall in equity markets is a harbinger of recession and further downdrafts in asset prices. The steep drop has, in fact, tightened US financial conditions since the peak of equities in late September; such tightening, if sustained, could shave as much as 1% off US GDP growth in 2019.

On monetary policy, there is concern that the Federal Reserve will continue raising rates, thereby inverting the Treasury yield curve and rendering a recession all but inevitable. Worryingly, the European Central Bank has ended its quantitative easing program even though growth in Europe has disappointed. In China, the reduction in reserve requirement ratios and lowering of targeted lending rates have not reversed the weakening of the economy.

On the geopolitical front, the misgivings are even higher. The US administration and China have rattled each other and the global world order, unnerving investors that an escalating trade spat could morph into a drawn-out cold war.

Meanwhile, President Donald Trump has been rattled by investigations not only by the special counsel, but by several US attorneys general. The now Democrat-controlled House of Representatives appears set to launch its own investigations and public hearings, likely creating more uncertainty and market volatility.

A steady stream of departures of senior members of the US administration has also unsettled investors. Turnover in both the White House and the cabinet has exceeded turnover in the first two years of any presidency as far back as 1980.

Finally, talk of removing the Federal Reserve chair does not inspire confidence in an already rattled investment community, even though a sitting governor cannot be removed without cause, and disagreement over policy is not considered cause.

In Europe, the still-uncertain outcome of Brexit weighs heavily on investor sentiment. The coalition among the two Italian populist parties of the right-wing Northern League and the Five Star Movement is unstable, and the prospect of new elections increases uncertainty and reinforces investor concerns about the geopolitical and economic stability of the Eurozone. France's "gilets jaunes" protests have rattled investor confidence in President Emmanuel Macron's ability to stay the course with market-friendly economic reforms. In Germany, the era of Chancellor Angela Merkel, a leader who brought Eurozone leaders together to address economic shocks, is coming to an end, leaving investors wondering how Europe will weather future troubles.

Russia continues to rattle the global order. Two reports prepared for the US Senate Intelligence Committee, released in December 2018, provided details on extensive interference by Russian entities in US elections through social media. The recent seizure of three Ukrainian ships was a reminder of Russia's adventurism, if not territorial ambitions, beyond its borders. President Trump's decision to withdraw US troops from Syria heightens concerns that Russia will play an even larger, perhaps disruptive, role in the Middle East.

In North Korea, progress on denuclearization appears illusory.

We also note that the growing assertiveness of authoritarian leaders in the world, including in China, Russia, Turkey, Saudi Arabia, Hungary and Poland, has rattled investor confidence in the orderly functioning of economies, capital markets and civil societies. The resulting economic and geopolitical uncertainty invariably dampens economic growth through lower consumer and business confidence, which, in turn, hampers business investment and household consumption.

Finally, the growing backlash against the lax privacy and data security policies of US technology and social media companies is also of concern. Private data, including messages, contact information and photos, has not been adequately protected by these businesses. Indeed, some companies have profited greatly from sharing or selling such data. Regulators have finally taken notice and are threatening action. New regulations designed to tighten or enforce privacy policies, along with forthcoming European taxes on (largely US-based) technology companies, will impact the earnings growth of these companies, which together represent some 18% of US stock market earnings.

This growing list of investor concerns raises two questions for our clients.

First, is US preeminence still intact and, if so, is this preeminence sufficient to insulate the country and its financial markets from the current rattling? We have had a strategic overweight to US equities relative to market capitalization-weighted benchmarks over the last 10 years, and this overweight has served our clients well. We believe this strategic overweight is still warranted. While the US is not immune to developments beyond its borders, the country is better positioned to weather

future storms than virtually any other. It is also sufficiently resilient to absorb uncertainty created from within. The US remains preeminent, and its institutions are stronger than any one president or administration. Furthermore, we do not believe that the relative cheapness of other developed and emerging market equities is sufficient to prompt a tactical shift.

The second question is whether our recommendation to stay fully invested is still warranted. In our 2018 *Outlook: (Un)Steady as She Goes*, we stated that we cannot make investment recommendations based on the unsteady undertow of geopolitical risks but had to stay focused on the steady economic and earnings growth and on low inflation. While the markets have been pulled down by the growing strength of the unsteady undertow, our recommendation to stay invested, driven by the strength of the steady factors in the US, remains intact. The key risk to our view is that the free fall in equities will continue and create its own recession.

The purpose of this report is to provide the data and analysis underlying our views. As usual, we put forth our 2019 *Outlook* with a strong dose of humility, since we cannot rule out—or wish away—the possibility that the unsteady undertow will strengthen and drag the US and the rest of the world into a recession. At the very least, bouts of volatility are inevitable as markets continue to react to heightened political and geopolitical uncertainty. Clients would be well served to evaluate their strategic asset allocation in order to ensure that their portfolio is structured to withstand such volatility.

We take this opportunity to wish you a very healthy, happy and, yes, less-rattled New Year.

The Investment Strategy Group

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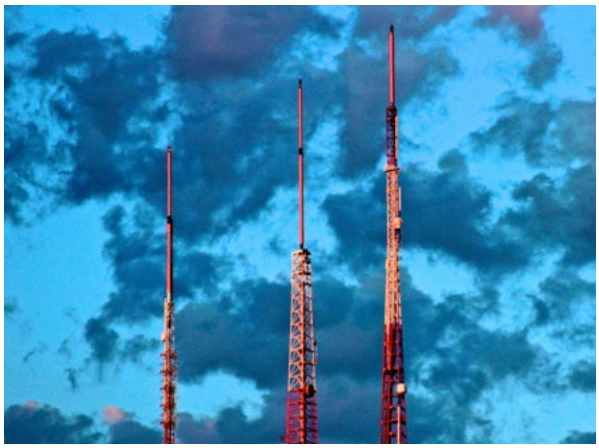
SECTION I



American Preeminence in a Rattled World

A ROBUST AND ENDURING VIEW OF US PREEMINENCE has informed one of the key investment recommendations of the Investment Strategy Group, consistent since the trough of the global financial crisis a decade ago: maintain a strategic overweight to US equities.

But is this view, which has served our clients well over the past 10 years, still valid?

Yes. We believe that the various factors that drove our view of US preeminence in the past remain intact today, notwithstanding recent domestic political and global geopolitical upheaval that has rattled markets. Pundits have suggested that the Trump administration has created crises that are undermining the very institutions that support and sustain US preeminence, pushing the US into decline.

But we remind our clients that this country has faced similar challenges in the past: unconventional presidents; nepotism and corruption in Washington, D.C.; weak global economic backdrops; trade skirmishes, if not trade wars; threats from a rising power; blurred lines between friends and foes—the list goes on. The US overcame these past challenges, and we believe that the country's resilience and its strong institutions will ensure that it remains preeminent. In fact, on some metrics, the gap between the US and other countries has widened over the past decade.

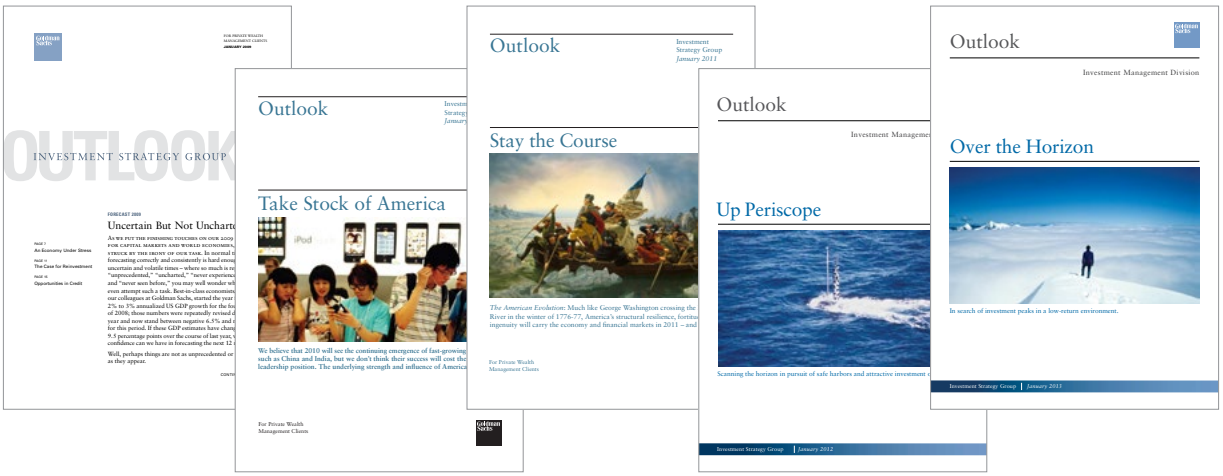
In our 2009 *Outlook: Uncertain But Not Uncharted*, we stated that the global financial crisis then raging was not as unprecedented as many believed, and that much of what we were experiencing had occurred in some form in the prior several decades. For example, banks and insurance companies had been brought to their knees in the early 1990s when Drexel Burnham Lambert and Bank of New England failed and Citicorp, the predecessor to Citigroup, was deemed too weak to survive intact but too big to fail. Similarly, when Penn Central Transportation Company, the largest transportation company in the world, declared bankruptcy in 1970, the Federal Reserve introduced new and aggressive liquidity measures to shore up financial institutions. So, in 2009, while some were sounding the death knell of American capitalism, the end of the US dollar as reserve currency and the end of the American Century, we disagreed. Our 2009 portfolios had a strategic asset allocation overweight to US equities that was 20% greater than a market capitalization-weighted global equity portfolio; this strategic overweight was funded by an underweight to non-US developed and emerging market equities.

Similarly, in our 2010 *Outlook: Take Stock of America*, we argued against the prevailing wisdom heralding the rise of the East, particularly China, on the one hand, and the fall of the West, particularly the US, on the other. The global financial crisis had dealt a fatal blow to US hegemony, it was asserted, and China, with its centrally managed governing process, would maintain high growth rates and knock the US off its economic perch. We disagreed. Since the trough of the crisis in 2009, US equities have returned about 355% (16% annualized) while Chinese equities have returned about 164% (10% annualized). We continue to believe that many investors are underestimating the breadth and depth of China's structural fault lines.

In our 2011 *Outlook: Stay the Course*, we wrote that "America's structural resilience, fortitude and ingenuity will carry the economy and financial markets in 2011 and beyond." We used the iconic image of a determined and undeterred George Washington crossing the Delaware River in the winter of 1776–77 to illustrate our point.

The following year, we stated in our 2012 *Outlook: Up Periscope* that the US was best poised for a cyclical recovery, that the Eurozone would continue its "incremental, reactive and inconsistent" approach and that China was unlikely to have a hard landing but would face long-term structural imbalances. We continue to believe that the US is best poised to stay on its growth path.

In our 2013 *Outlook: Over the Horizon*, we suggested that the strong outperformance of US assets was winning over skeptics. We also suggested that Japan and key emerging markets would continue to face a bumpy ride, that Europe was



addressing some of its structural fault lines and that the deteriorating US fiscal profile would not pose a problem for another 15 to 20 years. Today, many investors are still too pessimistic about US assets and too optimistic about non-US assets.

In our 2014 *Outlook: Within Sight of the Summit*, we recommended that clients stay fully invested at their strategic asset allocation to US equities because we thought the bull market had further to run. Importantly, we also stated that valuation alone was not an effective tool for underweighting equities.

In our 2015 *Outlook: US Preeminence*, we revisited our view of US preeminence and concluded that our six-year investment theme had endured, and that the gap between the US and other countries and regions had actually widened. We maintain that view in this year's *Outlook*, too.

Our 2016 *Outlook: The Last Innings* argued against the theme of secular stagnation in the US and suggested that the US recovery and bull market had a few more innings to go. The expansion is closing in on a 10-year run with an annual growth rate of 2.3%, and unemployment is near its lowest rate in 49 years. Most indicators point to continued expansion in 2019.

In our 2017 *Outlook: Half Full*, we posited that the glass was still half full when it came to the US economy and that clients should stay invested in US assets.

Finally, in our 2018 *Outlook: (Un)Steady as She Goes,* we suggested that the year would be characterized by a tug-of-war, with the steady factors that drive the US economy and financial markets—such as economic and earnings growth and sound monetary policy—pulling from one side, and the unsteady undertow—of geopolitical risks and the unconventional Trump presidency, with its barrage of "tweeting and teetering"—pulling from the other. We believe that 2019 will bring more of the same.

We begin with a review of the economic, social and institutional factors that account for US preeminence, and demonstrate that these remain intact. We will show that "declinists" have called the decline of the US six times since the 1950s, including now. None of the earlier prophecies came to pass. Nor will this one.

We then turn to the US economy and examine the three potential triggers of recession: economic and financial market imbalances, Federal Reserve tightening and exogenous shocks. We show why we think the odds of a recession remain low.

If US preeminence is intact and a recession is unlikely in 2019, then we can maintain our strategic asset allocation overweight to US assets and resist the current calls to underweight US assets and overweight non-US developed and emerging market equities.

Of course, we recognize that an equity market that resumes its free fall can create a vicious downward spiral as it hits consumer and business confidence, leads to a negative wealth effect and tightens financial conditions. However, we will show that not every 20% market decline results in a recession.

We then present our one- and five-year expected total returns together with our tactical tilts. We conclude the first section with our key takeaways. Our global economic and financial market outlooks follow in the second and third sections of this *Outlook*.

US Preeminence Still Intact

Throughout our 10-year US preeminence-driven investment theme, we have observed that those who have portended the decline of the US have been proven wrong time and again. We believe the current declinists will be proven wrong as well. We briefly review five prognostications of American decline made since the 1950s and show why Trump administration policies are not a product of—nor are they likely to trigger—American decline. We then compare a broad range of US data to that of other countries, including economic growth, earnings growth, leverage and productivity. We conclude that the economic, political and judiciary institutions that underpin US resilience remain strong and that US preeminence is intact.

Notable recent prophecies of American decline include:

1. In the 1950s, following Soviet missile launches and the success of Sputnik (the first orbital satellite), declinists warned that the Soviet Union was establishing an unchallengeable lead in missiles and producing superior scientists and engineers.
2. In the late 1960s, declinists said the bipolar world was coming to an end and that Europe and Japan would emerge as equals of the US and the Soviet Union.
3. In the 1970s, declinists pointed to the Vietnam debacle, the Arab oil embargo, Watergate and the Nixon resignation, and the Kent State University shootings as harbingers of US political, geopolitical and social decline.
4. In the 1980s, declinists warned that Japan and the Asian Tigers were on the march as the US receded. Books like *Japan as Number 1: Lessons for America*[1] and *The Enigma of Japanese Power*[2] epitomized the thinking of the time.
5. In 2008–09, the declinists touted the rise of China and the fall of the US. Some even went so far as to say that the dominant force in the 21st century would be China, just as the US was the dominant force in the 20th century. So far, time has proven them wrong. In 2007, China outgrew the US by 12 percentage points, but the gap has narrowed since, and China is estimated to have outpaced the US by only four percentage points in 2018. Over this same period, China's overall debt-to-GDP ratio has nearly doubled, from 142% to 253%, while that of the US has increased only from 229% to 249%. Since the trough of the US equity market, US equities have returned 355% (16.1% annualized), while Chinese equities have returned 164% (10.0% annualized).

With the election of President Trump, the declinists are out again in full force. With headlines such as "RIP American Exceptionalism, 1776–2018,"[3] "America's Slide Toward Autocracy,"[4] "Trump's America: Smaller, Meaner, and Increasingly Unexceptional"[5] and "Trump and the Decline of Democracy,"[6] the declinists are auguring the crumbling of the foundations of US strength.

In a recent book, *One Nation After Trump*, E.J. Dionne Jr., Norman J. Ornstein and Thomas E. Mann write that they have "never had a president who, from his first day in office, plainly showed that he had *no business being president*."[7] They warn of "Trump's larger assault on our institutions, his tendency to think in autocratic terms, his abusive attitude toward the judicial system, and his disrespect for civil servants and the day-to-day work of government."

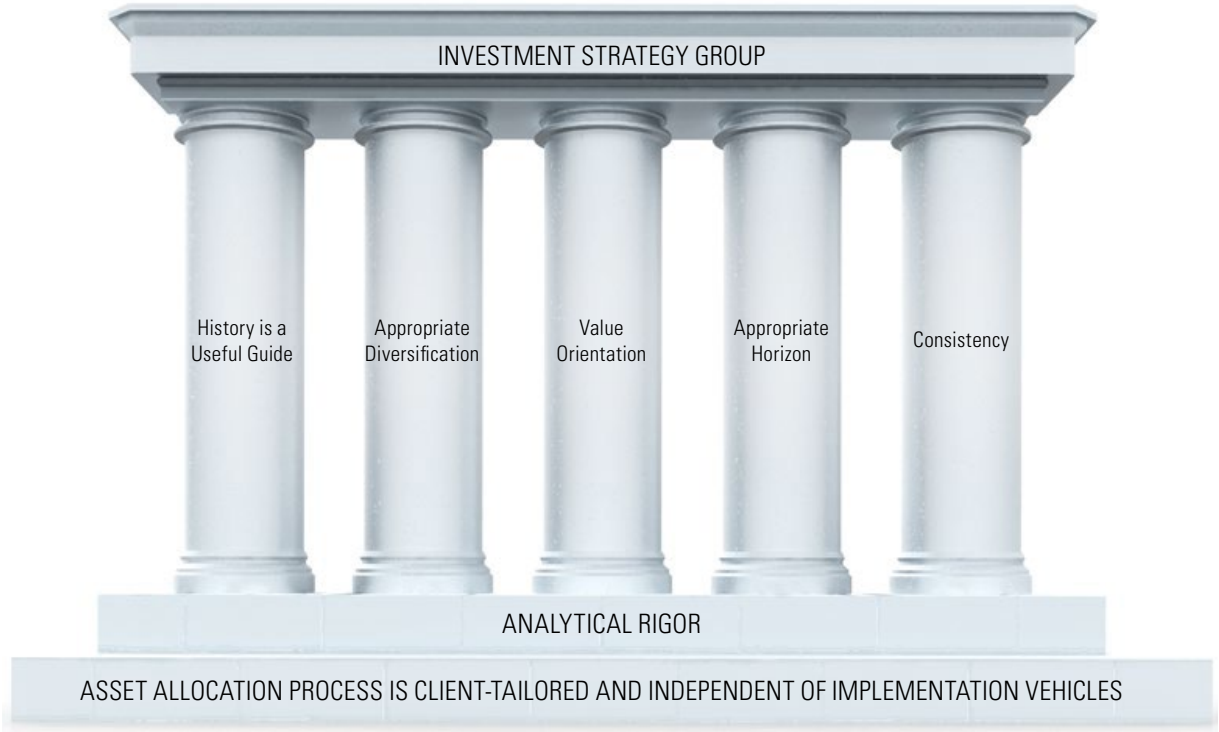
In another recent book, *The Hell of Good Intentions: America's Foreign Policy Elite and the Decline of U.S. Primacy*, Stephen M. Walt, professor of international affairs at Harvard University, argues that the rise of Trumpism is but the latest development in a US decline that began after the fall of the Soviet Union and the end of the Cold War, a decline driven by failures and failings in US foreign policy.[8]

As many of our clients know, one of the key pillars of our investment philosophy is that history is a useful guide (see Exhibit 1). History provides perspective and enables us to evaluate whether there has been an overreaction to what the Eurasia Group has called the "unprecedented" and "authoritarian" Trump presidency, "full of conflicts of interest."[9] Not all Trump administration policies, actions and attitudes are new, and certainly they are not unprecedented. We review below some of the more controversial or otherwise notable ones in a historical perspective.

Immigration

As John Steele Gordon, American economic historian and author of *An Empire of Wealth: The Epic History of American Economic Power*,[10] recently highlighted in the *Wall Street Journal*, the US has

Exhibit 1: Pillars of the Investment Strategy Group's Investment Philosophy



had a long history of waves of immigration being followed by waves of anti-immigration sentiment and policies.[11] Some notable examples are:

- The first mass migration in the US was the arrival of about 1 million Irish after the potato famine in the 1840s, triggering the first major opposition to immigration and the formation of an anti-immigrant and anti-Roman Catholic party called, perhaps knowingly, the Know-Nothing party.[12] By 1855, 43 members of Congress were members of this party.
- The Chinese Exclusion Act of 1882 suspended Chinese immigration for 10 years, partially in response to non-Chinese workers' concerns about Chinese laborers taking jobs and working for much lower wages.[13] It was renewed in 1892. By 1902, Chinese immigration was made illegal indefinitely. The act wasn't repealed until 1943.
- The Emergency Quota Act of 1921 and the Immigration Act of 1924 restricted immigration from Southern and Eastern Europe, prevented immigration from Asia, and encouraged immigration from Britain and Western Europe.[14]

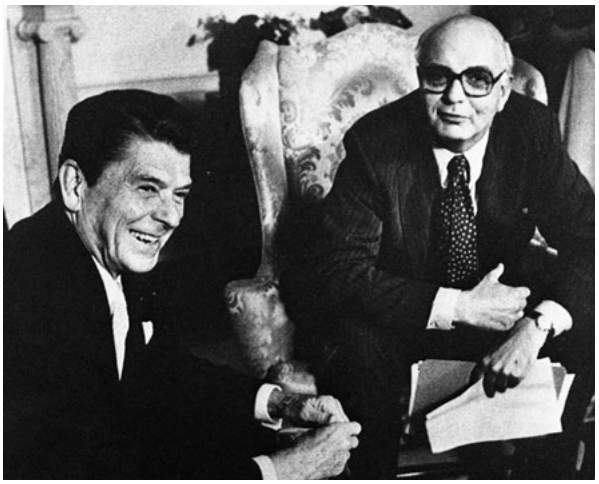
Columbia, a symbol of American democracy, protects a Chinese man from a working-class mob in this 1871 image.

- In 1954, the US Immigration and Naturalization Service deported 1.1 million Mexican nationals[15] in an effort that became known as "Operation Wetback."[16] At the time, the prevailing anti-immigrant sentiment was driven by opposition to illegal immigrants who were believed to be depressing wages for US workers.
- Annual deportations during the Obama administration averaged 344,000 between fiscal years 2009 and 2016. In fiscal years 2017 and 2018, annual deportations have averaged 241,000, or 38% less than in the prior eight years.[17]

Pressure on the Federal Reserve

Past presidents have attempted to pressure the Federal Reserve to support their agendas.

- In one early high-profile instance in which the Federal Reserve Board pursued a goal other than maximum employment and stable prices, it issued a statement in 1941 that the Federal Reserve Banks stood ready to "advance funds on United States Government securities at par to all banks."[18] After WWII, there was support of the general view expressed by President Harry S. Truman that the government had to protect "patriotic citizens" who had purchased war bonds.[19]
- President Truman agreed to Federal Reserve independence from the Treasury Department in 1951 only in return for the resignation of the then-chairman so that he could appoint William McChesney Martin Jr. in hopes of pressuring the Federal Reserve to keep interest rates low.[20] The new chairman resisted such pressure and was reportedly called a "traitor" by President Truman some years later.
- In 1965, President Lyndon Johnson was increasingly agitated by Martin's independence. He is reported to have asked his attorney general whether he could remove a Federal Reserve chairman from office.[21] Even at the time, Federal Reserve Board governors could be removed only "for cause," and policy disagreements were not viewed as "cause," as is still the case today. The law does not address whether a chairman can be removed as chairman but remain on the board as governor.
- In a scenario uncannily similar to that of the present day, President Johnson, a Democrat, expressed his concern about an interest rate increase at the then-forthcoming board meeting on December 3, 1965.[22] The Federal Reserve hiked interest rates despite the president's concerns, just as it did at the December 18–19, 2018, meeting. Martin was subsequently summoned to fly down to Texas to meet with the president for a private chat.
- More recently, President Ronald Reagan and his chief of staff, James Baker, summoned Federal Reserve Chairman Paul Volcker to a meeting on July 24, 1984. In his book *Keeping At It: The Quest for Sound Money and Good Government*, Volcker wrote that Baker, a fellow Princeton alumnus, explicitly told him that "the president is ordering you not to raise interest rates before the election."[23]



Federal Reserve Chairman Volcker meets with President Reagan in the Oval Office in 1981.

President Johnson, Treasury Secretary Fowler (left) and Federal Reserve Chairman Martin (center) at the LBJ Ranch in 1965.

Whether President Trump will ask for a chat with Chairman Jerome Powell (another Princetonian) remains to be seen, but such a meeting between a president and a chairman is certainly not without precedent. Nor would be the likely topic of conversation.

Pressuring NATO Allies

In a speech in 1963, President John F. Kennedy criticized NATO allies as follows:

> *We cannot continue to pay for the military protection of Europe while the NATO states are not paying their fair share and living off the "fat of the land." We have been very generous to Europe and it is now time for us to look out for ourselves, knowing full well that the Europeans will not do anything for us simply because we have in the past helped them.*[24]

Sound familiar? And at that time, the US accounted for 73% of all NATO spending, compared to 70% today. The similarities between President Kennedy and President Trump (without even touching on their private lives) are not limited to pressuring NATO allies to pay a greater share of NATO expenses. President Kennedy appointed his brother as attorney general and his brother-in-law as director of the Peace Corps, just as President Trump appointed his daughter and son-in-law as White House senior advisors.

Threat of Auto Tariffs and Escalating Trade Wars

Trade spats and trade wars have long been part of American history. During the British-French wars of the early 1800s, in response to the British kidnapping of American sailors from US ships, President Thomas Jefferson signed the Non-Importation Act in 1806, prohibiting the import of certain British goods.[25] This was followed by the Embargo Act in 1807, which prohibited trade with *all* nations.[26] Needless to say, this act hurt the US economy, particularly that of New England.

More recently, President Johnson imposed a 25% duty on imported light trucks in 1964 in response to tariffs placed by France and West Germany on US chicken.[27] Never mind that at the time, France and Germany were important US allies at the height of the Cold War. President Reagan imposed quotas on Japanese cars in 1981[28] and 49% tariffs on Japanese motorcycles in 1983.[29]

At present, global exports of goods represent about 22% of world GDP. While US goods exports make up a smaller percentage of US GDP, at 8%, we believe that escalating trade wars and higher tariffs will hamper global growth as well as that of the US, and will increase policy uncertainty, thereby depressing equity markets. However, we also note that the US tariffs imposed on light trucks in 1964 have been a boon to the American light truck industry for over 50 years.

Badge from the Reagan-Bush campaign for the 1980 presidential election.


OLEAN EVENING TIMES
FINAL
9561
TUESDAY, JUNE 17, 1930
SIXTEEN PAGES
PRICE TWO CENTS

President Hoover Signs Tariff Bill

Ambassador Morrow Is Favored To Win New Jersey Primary

Republicans Of State Are Voting For Three Prominent Men In Race For Nomination For U. S. Senator.

Ousted In Fight Against Gangsters

WHITE WINS IN MAINE

Governor Gardiner Renominated In Republican Primary

New And Higher Duties Go Into Effect Tonight

Smoot-Hawley Bill Becomes Law With Signing By President In Short And Simple Ceremonies This Afternoon.

President Hoover signed the Smoot-Hawley Bill into law in 1930, aggressively raising import tariffs to protect US businesses and farmers.

Make America Great Again

Make America great, *again*? Our 10-year investment theme has been driven by our view that the US has been preeminent for well over half a century. But we also note that this slogan is not original. As best seen in the image on this page, *Let's Make America Great Again* was a Reagan-Bush campaign slogan in 1980.

America First

Even President Trump's use of "America First" is not without precedent—it has been used both positively and negatively for over 130 years. A recently published book by Sarah Churchwell, *Behold, America*, details the history of this catchphrase.[30] Some examples are:

- "America First and Always" was the headline of an article in a California newspaper in 1884 about fighting a trade war with the British.
- President Woodrow Wilson used the term to defend US neutrality during WWI.
- The term was used by the Ku Klux Klan starting in 1919.
- President Warren Harding used the term during his 1920 presidential campaign.
- The America First Committee was a group formed in September 1940 to oppose US entry into WWII. Prominent members included Charles Lindbergh, Frank Lloyd Wright, Sargent Shriver, Gerald Ford and Robert Wood (chairman of Sears, Roebuck and Co.). Kennedy also supported the group before it dissolved in December 1941 after the attack on Pearl Harbor.

WWII propaganda poster from 1940 by the America First Committee.

The US has a long history of vacillating between greater engagement on the global scene and a more isolationist agenda. President George Washington's Farewell Address in 1796 certainly pointed toward a policy of isolation:

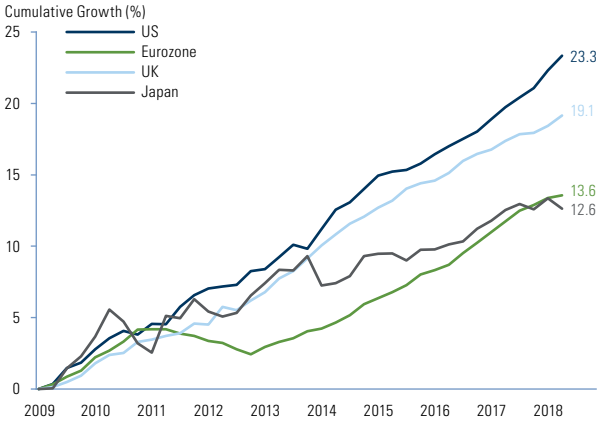
> *The great rule of conduct for us in regard to foreign nations is, in extending our commercial relations, to have with them as little political connection as possible. So far as we have already formed engagements, let them be fulfilled with perfect good faith. Here let us stop. Europe has a set of primary interests which to us have none; or a very remote relation. Hence she must be engaged in frequent controversies, the causes of which are essentially foreign to our concerns. Hence, therefore, it must be unwise in us to implicate ourselves by artificial ties in the ordinary vicissitudes of her politics, or the ordinary combinations and collisions of her friendships or enmities.*
>
> *Our detached and distant situation invites and enables us to pursue a different course. If we remain one people under an efficient government, the period is not far off when we may defy material injury from external annoyance; when we may take such an attitude as will cause the neutrality we may at any time resolve upon to be scrupulously respected; when belligerent nations, under the impossibility of making acquisitions upon us, will not lightly hazard the giving us provocation; when we may choose peace or war, as our interest, guided by justice, shall counsel.*[31]

As America's role in the Middle East is debated—should troops be retained in Afghanistan and Syria or returned home; is the US alliance with Saudi Arabia worth preserving in its current form—we would do well to remember that the question of whether the US can play a significant role in the world while avoiding the hazards of engagement, including debt and taxes, was a source of debate among Federalists and Republicans from the founding of the country. Jefferson struggled with but never seemed to have resolved the dilemma, although he is often placed in the isolationist camp.

Jefferson's friend and successor as president, James Madison (another Princetonian), wrote in 1795 that:

Exhibit 2: Post-Crisis Real GDP Growth

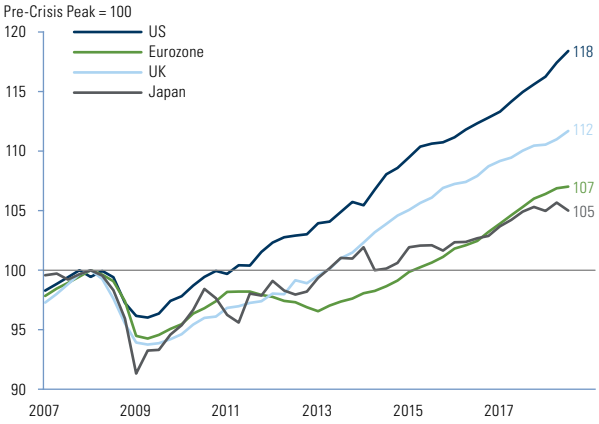
The US has outpaced other key developed economies during this expansion.



Data through Q3 2018.
Note: Cumulative growth since Q2 2009.
Source: Investment Strategy Group, Datastream, Goldman Sachs Global Investment Research.

Exhibit 3: Real GDP Growth Since 2007

The US was the first major developed economy to surpass its pre-crisis GDP.



Data through Q3 2018.
Note: Each economy is indexed to its peak pre-crisis GDP.
Source: Investment Strategy Group, Datastream, Goldman Sachs Global Investment Research.

> *Of all the enemies to public liberty, war is, perhaps, the most to be dreaded, because it comprises and develops the germ of every other. War is the parent of armies; from these proceed debts and taxes; and armies, and debts, and taxes are the known instruments for bringing the many under the domination of the few.*[32]

It is estimated that the war on terror, including the wars in Iraq, Afghanistan and Syria, will have cost the United States $5.9 trillion through fiscal year 2019, including the future costs for veterans' medical and disability benefits, according to the Watson Institute at Brown University.[33]

US preeminence has endured changes in this country's policies regarding immigration and trade, shifting attitudes between isolationism and engagement, and disruptive challenges to its institutions. It will do so again.

Economic and Financial Market Data in Support of US Preeminence

Turning to the state of the US economy, there is scant evidence of sufficient deterioration to put a stop to US preeminence. In fact, the most meaningful data underscores the persistent strength of the US economy relative to the rest of the world.

GDP Growth

The US economy, the largest in the world with a GDP of $20 trillion—or a quarter of the global total—is closing in on 10 years of expansion, matching the longest expansion in US history and far outpacing those of other key developed economies (see Exhibit 2) and several emerging economies, such as Russia and Brazil. It has surpassed its peak GDP level prior to the crisis by 18% and has done so sooner than other developed economies (see Exhibit 3).

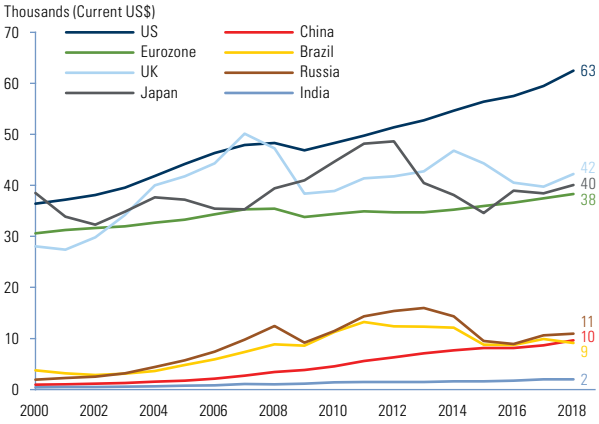
Relative to emerging market economies that typically grow at a faster rate, the US has also narrowed the gap. At their peak in 2007, emerging economies outgrew the US by 6.5 percentage points; they are estimated to have outpaced the US by only two percentage points in 2018. In 2007, China outgrew the US by 12 percentage points; it is estimated to have outpaced the US by only four percentage points in 2018, as mentioned earlier.

GDP Per Capita Growth

With respect to the prosperity of individual citizens, US GDP per capita has increased by 33% since the trough of the global financial crisis (GFC), eclipsing other developed and emerging economies. As shown in Exhibit 4, the gap between the US and other large countries has actually widened in favor of the US; this is the case whether we use nominal GDP data or adjust each country's GDP per capita by its purchasing power. China's

Exhibit 4: Nominal GDP Per Capita

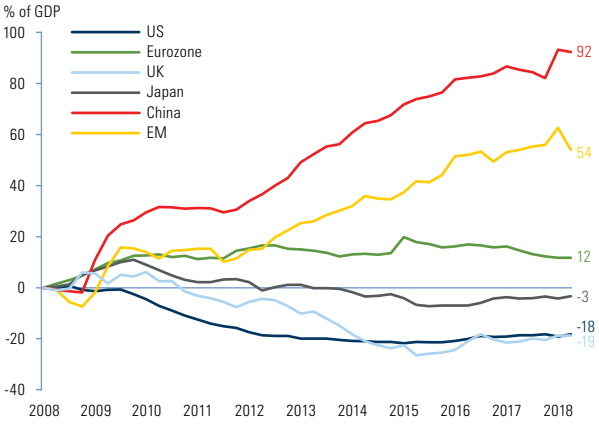
The gap between the US and other large economies has widened.



Data through 2018.
Source: Investment Strategy Group, IMF, Datastream.

Exhibit 5: Cumulative Change in Non-Financial Private Sector Leverage

The US economy has outpaced its peers despite significant deleveraging.



Data through Q2 2018.
Source: Investment Strategy Group, BIS, Datastream, IMF.

GDP per capita, which is below the poverty level of the United States on a nominal basis, will not catch up to that of the US in this century.

Deleveraging

Remarkably, US growth has outpaced that of other countries in the face of significantly greater deleveraging in the private sector—households, the non-financial corporate sector, and the financial sector—relative to other key countries, as shown in Exhibits 5, 6 and 7. Financial sector deleveraging is particularly relevant in terms of the stability of the financial system. US banks also rank most favorably when we compare tangible equity to assets across key countries and regions. As shown in Exhibit 8, US banks have the highest ratio of tangible equity to assets and have shown the biggest increase since 2007.

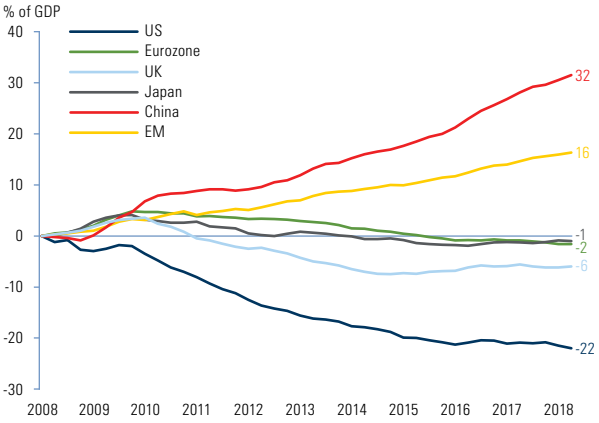
Not only has the US deleveraged by a greater magnitude, but leverage across corporate America is lower than in other key developed countries and regions, as shown in Exhibit 9. Such lower levels of leverage mean that the US is better positioned to withstand external shocks or a global recession.

Earnings Growth

The favorable economic data over the last decade, paired with a benign inflationary backdrop, has enabled US companies to generate a stronger earnings recovery over this cycle than other countries and regions, as shown in Exhibit 10.

Exhibit 6: Cumulative Change in Household Leverage

US households have meaningfully reduced their debt levels since the crisis.



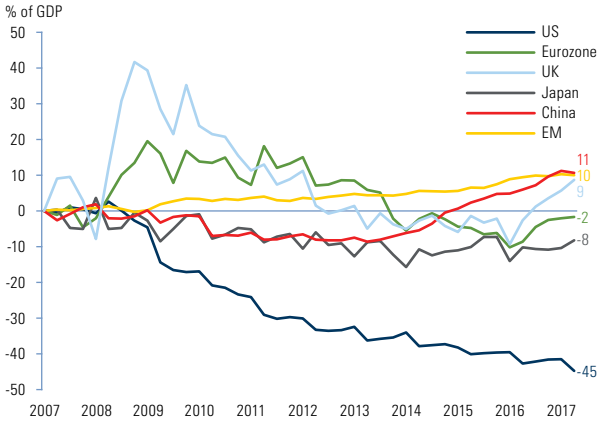
Data through Q2 2018.
Source: Investment Strategy Group, BIS, Datastream, IMF.

Earnings in the US are 71% above their pre-crisis peak, compared to 45% in China, 17% in Japan, and declines in the UK, Eurozone, and emerging market countries in aggregate.

The outperformance of US earnings has continued apace over the last few years. As shown in Exhibit 11, US earnings have increased by 43% since 2014, compared to 35% in Japan, and no increase in China.

Exhibit 7: Cumulative Change in Financial Sector Leverage

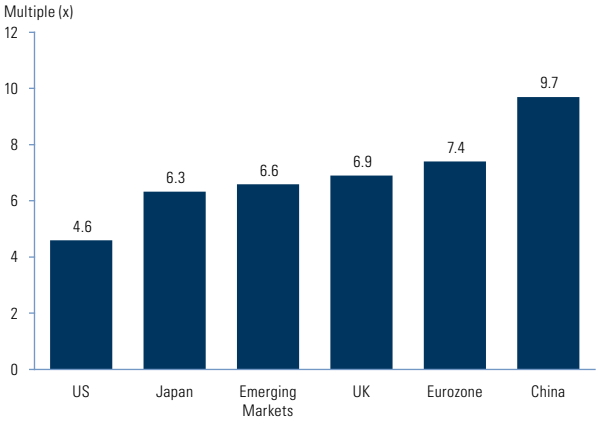
The magnitude of deleveraging in the US is greatest in the financial sector.



Data through Q2 2018.
Source: Investment Strategy Group, BIS, Datastream, IMF.

Exhibit 9: Financial Leverage of Listed Companies

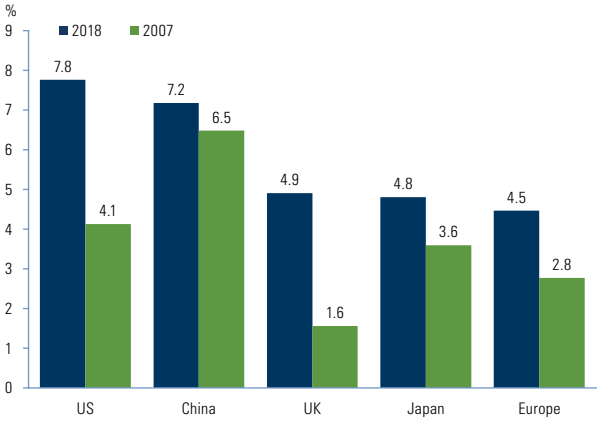
US corporate leverage stands below that of other key developed economies.



Data as of Q3 2018.
Note: Financial leverage is measured as assets divided by shareholder equity.
Source: Investment Strategy Group, Bloomberg, Datastream.

Exhibit 8: Banks' Tangible Equity to Tangible Assets

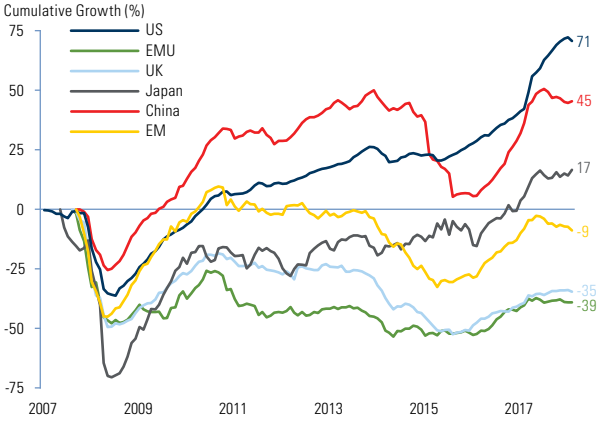
US banks have meaningfully improved their loss-absorbing capacity since the global financial crisis.



Data as of Q3 2018.
Note: Metrics are based on the constituents of each country's MSCI Banks Index. For China, analysis uses H Shares.
Source: Investment Strategy Group, Bloomberg, MSCI.

Exhibit 10: Earnings Growth Since Pre-Crisis Peak

US earnings have grown the most since their pre-crisis highs.



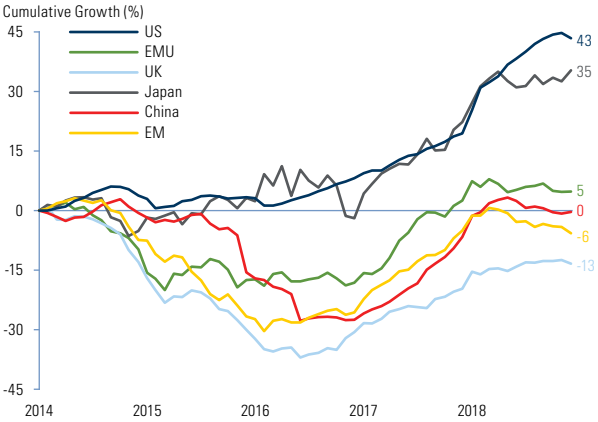
Data through December 31, 2018.
Note: Based on 12-month trailing earnings of MSCI indices and using the respective pre-crisis peaks for the UK (Jun-08), EM (Jul-08), EMU (Mar-08), Japan (Mar-08) US (Oct-07) and China (Jul-08).
Source: Investment Strategy Group, Datastream.

Equity Market Performance

Stronger US earnings growth has, in turn, led to the outperformance of US equities. As shown in Exhibit 12, the S&P 500 has returned 355% (16.1% annualized) since its trough in March 2009, compared to 169% (10.2% annualized) for non-US developed equities and 161% (9.9%) in emerging markets. US equities continued to outperform in 2018, returning -4.4%, compared to -10.5% for non-US developed equities and -14.2% for emerging market equities. These returns are even more compelling when we adjust for the level of risk; the US provided investors with much better Sharpe ratios (excess unit of return per unit of risk) in 2018, as it has over the course of the entire bull market.

Exhibit 11: Earnings Growth Since 2014

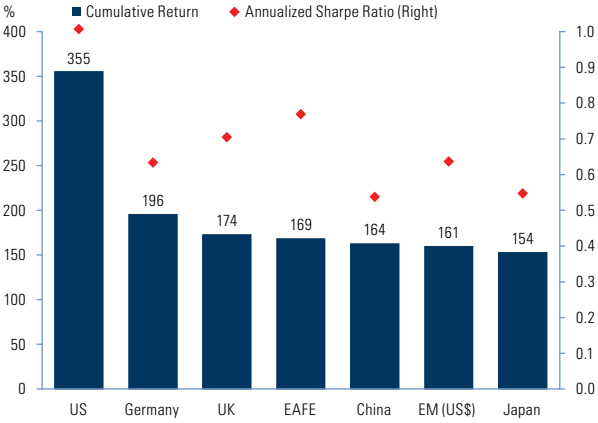
US earnings growth has continued to outpace that of its peers over recent years.



Data through December 31, 2018.
Note: Based on 12-month trailing earnings of MSCI indices.
Source: Investment Strategy Group, Datastream.

Exhibit 12: Cumulative Equity Returns Since Global Financial Crisis Trough

US equities have posted the strongest absolute and risk-adjusted returns since the crisis.



Data from March 9, 2009, through December 31, 2018.
Source: Investment Strategy Group, Datastream, Bloomberg.

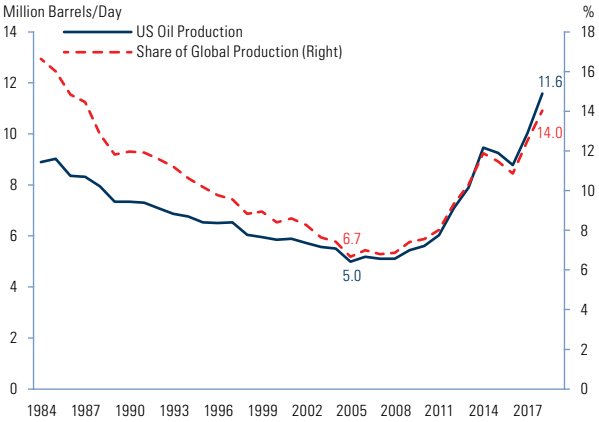
We note that since the dollar, as measured by the US Dollar Index (DXY), has appreciated about 8% since the trough of the US equity market and 4% in 2018, the relative outperformance of US equities is slightly higher for dollar-based investors.

Crude Oil Production

The doubling of US oil production from the lows hit around 10 years ago has been another

Exhibit 13: Annual US Crude Oil Production

The US is currently the world's largest producer of crude oil, thanks to the shale revolution.



Data through November 30, 2018.
Note: Crude oil only, based on year-end levels.
Source: Investment Strategy Group, IEA.

contributor to growing US preeminence. As shown in Exhibit 13, oil production was in decline for nearly two decades. This decline turned around in 2009. By late 2018, the US was producing 11.6 million barrels per day (mmb/d), which is marginally higher than either Russia or Saudi Arabia. If natural gas liquids are added, the US produced about 16 mmb/d, which is 3 mmb/d more than Saudi Arabia, the next-largest producer. In fact, for one unusual week in late November 2018, the US became for the first time a net exporter of oil, natural gas liquids and refined products combined. While it is still a net importer of 2.8 mmb/d of petroleum products combined, the US may become a net exporter over the next two years if current trends continue.

As we have highlighted in past reports, the US also has the benefit of vast natural resources—in aggregate and on a per capita basis—including hydrocarbons, metals and minerals, renewable water resources, and irrigated and arable land.

Other Structural Advantages

In addition to favorable economic and earnings data, the US benefits from such long-term structural advantages as its investment-friendly economy, its level of innovation and productivity, its favorable demographics and its strong institutions. Such factors will continue to support

The US is now the world's largest oil producer thanks to soaring shale output in states like North Dakota, pictured above.
Jim Wilson/The New York Times/Redux

better-quality economic and earnings growth for the foreseeable future.

Investment-Friendly Metrics

The US ranks in the top 10% of all countries across four key metrics as shown in Exhibit 14. We should note that its rankings would be even higher if one excluded small countries such as Singapore, Denmark and Switzerland, each of which accounts for less than 1% of world GDP. In global competitiveness, as measured by the World Economic Forum's Global Competitiveness Index—which takes into account macroeconomic stability, innovation capability, market size, business dynamism, and institutional strengths such as rule of law and control of corruption—the US ranks number one.

Innovation

There are different approaches to measuring innovation. While none are perfect, we believe that three accurately convey the continued preeminence of the US in technological innovation.

1. *Patents filed abroad*: According to the World Intellectual Property Organization, patents that are filed abroad (defined as outside one's own jurisdiction) are considered to have more commercial value than patents filed only domestically.[34] For example, China, Iran, Indonesia, Sudan, Uzbekistan and Iraq file over 95% of their patents domestically, so their overall number of filings does not reflect real innovation. Exhibit 15 shows that the US files the largest number of patents abroad, and the gap between it and Japan has widened over the last several years as the US has continued to innovate at a steady pace.
2. *Commercial value of intellectual property*: As shown in Exhibit 16, the US has the most favorable international intellectual property earnings profile, as it receives $128 billion in revenues for licensing its technology to firms in other countries and pays $48 billion to patent holders in other countries, for a net surplus of $80 billion. The Eurozone has a negative balance of $65 billion. China receives only $5 billion in revenues but pays out $29 billion. According to Gavekal Research, "On this metric, China does not look like a country that is rapidly closing the technological gap with the most advanced countries."[35]

Exhibit 14: Country Ranking Across Investment-Friendly Metrics

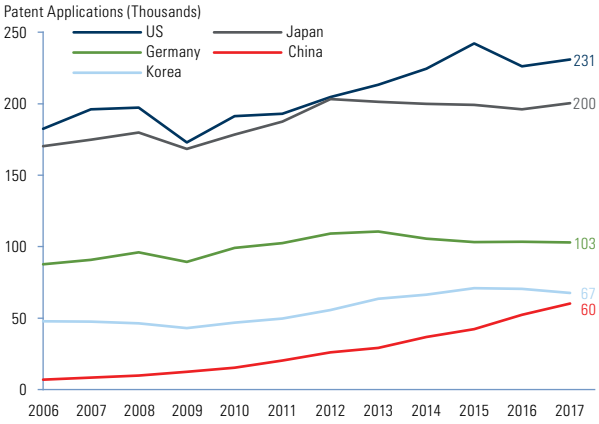
The US ranks in the top 10th percentile of all countries across four key metrics.

	Economic Freedom Index	Ease of Doing Business	Global Competitiveness Index	World Governance Indicators
Economy	**Percentile (Lower Is Better)**			
United States	10	3	1	10
United Kingdom	4	4	6	9
Germany	14	10	2	7
Japan	16	17	4	9
France	38	16	13	15
Russia	58	18	32	77
China	59	41	21	63
India	70	52	44	51
Brazil	83	66	54	54

Data as of 2018 all indicators except World Governance, which is as of 2017.
Note: The World Governance ranking represents an average score across six subcomponents: Voice and Accountability, Political Stability and Absence of Violence/Terrorism, Government Effectiveness, Regulatory Quality, Rule of Law, Control of Corruption.
Source: Investment Strategy Group, World Economic Forum, World Bank, The Worldwide Governance Indicators.

Exhibit 15: Patent Applications Filed Abroad

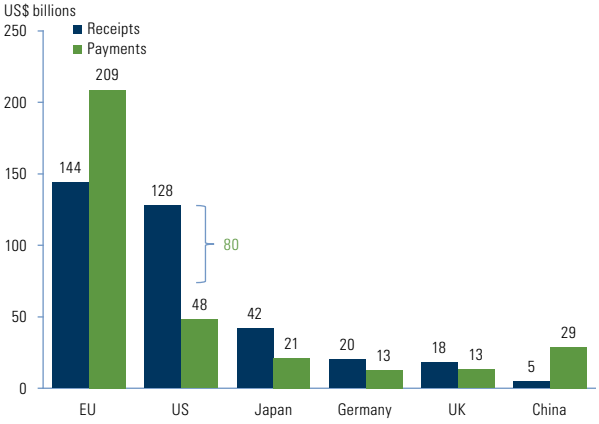
The US files the largest number of patents abroad, a sign of its strong innovation capability.



Data through December 2017.
Source: Investment Strategy Group, World Intellectual Property Organization, "World Intellectual Property Indicators 2018," December 2018.

Exhibit 16: Charges for the Use of Intellectual Property

The US has the highest surplus in international intellectual property transactions.

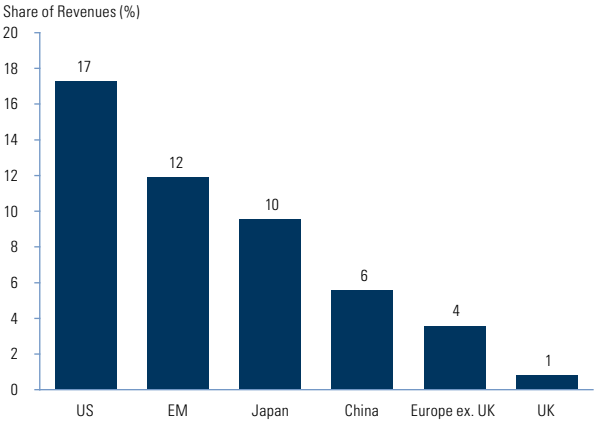


Data as of 2017.
Source: Investment Strategy Group, World Bank.

3. *Percentage of equity market revenues in technology-intensive sectors*: Sectors included are software and services, technology hardware and semiconductors, biotechnology, health-care equipment, interactive media and services (e.g., Facebook, Twitter, Tencent) and internet and direct marketing (e.g., Amazon, Booking.com, Alibaba). As shown in Exhibit 17, the revenue share of such companies in the US is 17%, compared to 10% in Japan, which is the next-highest share among developed economies, and 12% in emerging markets in aggregate. China is at 6% on this measure.

Exhibit 17: Revenue Contribution of Technology-Intensive Sectors

Innovative sectors have the highest share of equity index revenues in the US.



Data as of Q3 2018.
Source: Investment Strategy Group, Factset, Bloomberg.

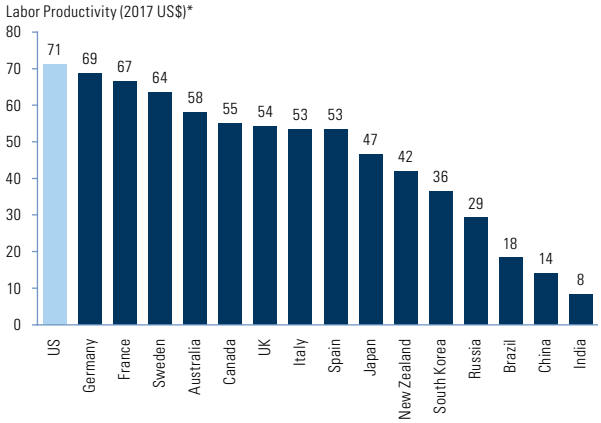
Productivity

US productivity remains the highest among developed economies, as shown in Exhibit 18, and it is five times as great as that of China, the second-largest economy in the world and the one purported to challenge US preeminence. While China's productivity has been growing much faster than that of the US—about 8% over the last decade, compared to 0.8% in the US—China is unlikely to approach the levels seen in developed economies anytime soon. One of the biggest contributors to labor productivity growth is educational attainment and training, in which China lags the US on multiple fronts:

- Average years of schooling in the US is 13.1 years, compared to 8.5 in China.[36]
- 28% of the US working-age population has completed tertiary education, compared to 4% in China.[37]
- The Penn World Table Human Capital Index, which combines years of schooling with the rates of return on education, ranks the US second among large developed and emerging countries—

Exhibit 18: Labor Productivity

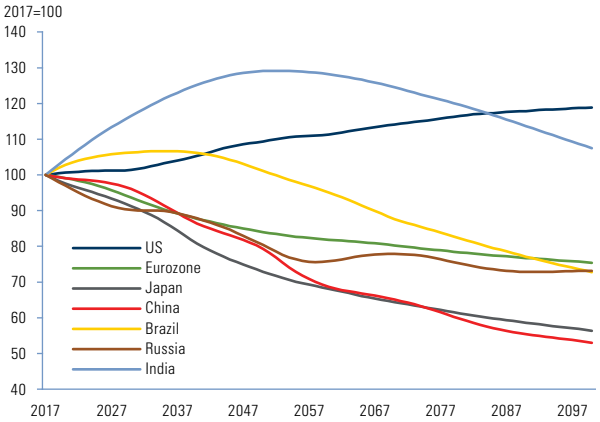
US labor productivity remains the highest across major economies.



Data as of 2017.
Note: Labor productivity defined as output per hour worked.
Source: Investment Strategy Group, Conference Board Total Economy Database.
* Converted with updated 2011 PPPs.

Exhibit 19: Working-Age Population Projections

Declining working-age populations are a drag on growth outside the US.



Data projected through 2100.
Source: Investment Strategy Group, United Nations Population Division.

just behind the UK. China is ranked among the lowest, just ahead of India and Turkey.[38]

Demographics

Growth in the labor force is one of the key components of long-term growth, and the US is the only large developed economy whose working-age population is expected to rise for the foreseeable future. As shown in Exhibit 19, the working-age populations in the Eurozone, Japan, Russia and China are forecast to continue their decline—an inevitable drag on future growth. China's shift to a two-child policy has not changed the trajectory of its working-age population, as the fertility rate has remained at 1.6 births per woman, and 75% of couples surveyed by the Chinese government said that they do not want a second child given the high cost of child care and education.[39]

Strength of Institutions

One of the most important pillars of US preeminence is the strength of its institutions and its system of checks and balances—all protected by the rule of law. While some of our clients have reacted to the Trump presidency with great concern and asked whether his unconventional approach and authoritarian impulses can jeopardize US preeminence, we do not believe so. A review of the congressional, judicial and private sector responses to some of his policies and tweets partly accounts for our confidence in this view.

We begin with one of his first executive orders: Executive Order No. 13769, dated January 27, 2017, titled "Protecting the Nation from Foreign Terrorist Entry into the United States," generally referred to as the Muslim Travel Ban.[40] Various courts blocked the first travel ban within days of its issuance. It was only after two attempts at a less restrictive version that the Supreme Court upheld the ban in June 2018.[41]

On trade, the president used Section 232 of the 1962 Trade Expansion Act to impose tariffs on steel[42] and aluminum[43] in March 2018. A lawsuit brought by US steel importers and foreign producers is being reviewed by the US Court of International Trade to see whether Congress has delegated too much of its constitutional power to the president.[44] The case is ongoing.

On environmental policy, after President Trump withdrew the US from the Paris Climate Accord in June 2017,[45] several states, including California and Massachusetts, tightened environmental standards at the state level.[46] The private sector, including General Motors Co., American Honda Motor Co., Ford Motor Co., Toyota Motor North America Inc., and Shell Oil Products US, responded to the Trump action by filing their opposition to a complete rollback of the Obama administration policies with the Environmental Protection Agency and the Department of Transportation.[47]

On immigration, the Ninth US Circuit Court of Appeals and the District Court for the

Southern District of New York have ruled against President Trump's executive order to cut funding to sanctuary cities.[48] The Supreme Court let stand the lower courts' rulings that prevented the administration from requiring immigrants to seek asylum only at legal checkpoints.[49]

Following President Trump's repeated criticism of federal judges, Chief Justice John Roberts defended the independence of the judiciary by asserting that "we do not have Obama judges or Trump judges, Bush judges or Clinton judges."[50]

Most importantly, the system of governance in the US prevents the pendulum from swinging too far to one side over time. In 2018, voter turnout was the highest for any midterm election since 1914—over 100 years ago—and close to the voter turnout in the 1996 presidential election. Democrats gained 40 seats in the House of Representatives, their largest gain since 1974. Democrats also won the popular vote by an 8.6% margin, which was the largest margin in a midterm election since 1986.

Another characteristic somewhat specific to America is the extent to which the private sector responds to what it considers the ineffective or even destructive policies or behaviors of an administration. For example, on the Republican side, the Koch brothers[51] and Sheldon Adelson[52] have often been significant active donors, and they ramped up their efforts during the Obama administration. On the Democratic side, George Soros has been a significant and active donor.[53] And since the Trump election, other Democrats have increased their own efforts:

- Michael Bloomberg, former mayor of New York City and founder of the global information and technology company Bloomberg LP, spent over $40 million on House of Representatives races.[54]
- Former hedge fund manager Tom Steyer has spent $50 million on an organization called Need to Impeach, and over $70 million on the midterm election and on mobilizing voters.[55]
- The swing to the right with an undivided government in the 2016 election spawned the formation of several left-leaning groups, such as Democracy Forward, American Oversight and Restore Public Trust, which challenge the Trump administration at every turn.[56]

In a twist of events, the Koch brothers, who have historically and extensively backed Republicans, recently launched a nationwide campaign attacking the president's immigration policies.[57]

It is the strength of US institutions that facilitates such dynamic adjustments, preserves the rule of law and enables the country to rebalance and self-correct. As William Galston, senior fellow at the Brookings Institution and former deputy assistant to the president for domestic policy in the Clinton administration, wrote in one of his recent columns in the *Wall Street Journal*, "while American democracy suffers from many ills, its immune system is strong enough to repel the virus and heal the body politic."[58]

Capital Flows

US preeminence has resulted in significant inflows into US assets. As shown in Exhibit 20, the US has maintained a dominant position in foreign direct investment and portfolio inflows for the last 20 years. Following a big dip after the GFC, inflows into the US resumed; they totaled about $900 billion over the last four quarters, nearly double the flows of the next-largest recipient of foreign inflows. Of course, some of these flows are driven by the US dollar's position as the reserve currency of the world and the fact that US Treasuries are the largest holding of most central banks. But even without those flows, the US has received the largest share of net foreign direct investment of any country.

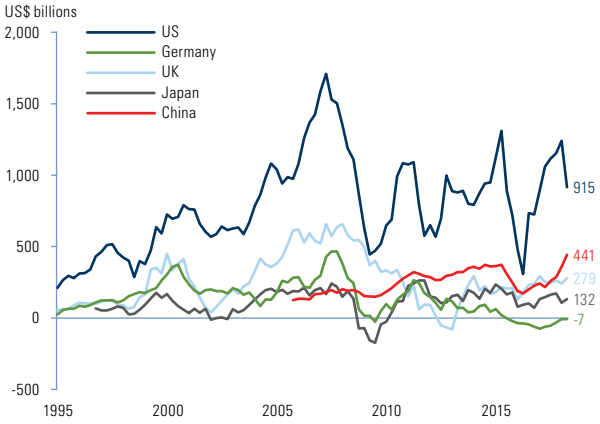
While we believe that our view of US preeminence is still valid, we do not believe that the US economy can be insulated from the undertow of domestic policy uncertainty, trade wars and global geopolitical tensions.

US Preeminence Does Not Eliminate the Risk of Recession

While we believe that our view of US preeminence is still valid, we do not believe that the US economy can be insulated from the undertow of

Exhibit 20: Foreign Direct Investment and Portfolio Inflows

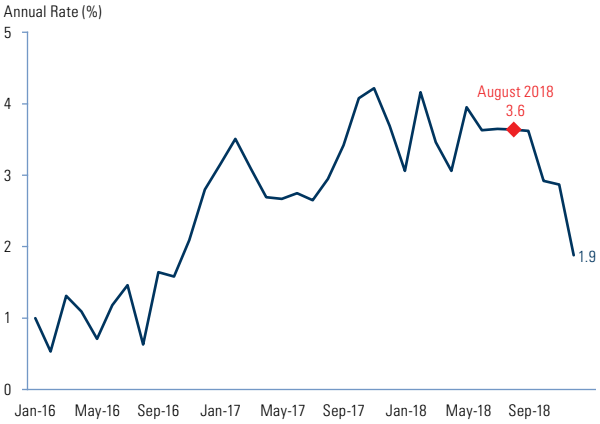
The US has maintained a dominant position in FDI and portfolio inflows for the last 20 years.



Data through Q2 2018.
Note: 4-quarter sum.
Source: Investment Strategy Group, IMF Balance of Payments Statistics, Haver.

Exhibit 21: US Current Activity Indicator

US economic activity growth has slowed, but it remains at above-trend levels.



Data through December 2018.
Note: The Current Activity Indicator is a high-frequency proxy measure of real GDP growth.
Source: Investment Strategy Group, Goldman Sachs Global Investment Research, Bloomberg.

domestic policy uncertainty, trade wars and global geopolitical tensions. The US is simply better positioned to weather a storm than are other countries, and US assets are more likely to outperform non-US assets.

The next key question is whether the likelihood of a recession has increased enough to warrant an underweight to US and non-US equities. Without the benefit of the proverbial crystal ball, it is difficult to have a view with near-total confidence; however, we believe that the likelihood of a recession, while higher than in our 2018 forecast, is still low.

Low Likelihood of Recession

In our 2018 *Outlook*, we had forecast a one-year probability of recession of 10%. Since then, our estimate has increased to a 15–20% probability, which is slightly above the historical probability of a recession at 11%, based on data since 1981.

We recommend using data since 1981 because the volatility of the US economy has moderated relative to the pre-1981 period. This moderation can be attributed to the growing weight of the service sector (which is less volatile than the manufacturing sector) in US GDP, as well as to more effective central bank policies around the world and better management information systems that reduce the frequency of excessive inventory buildup and shortages. The average expansion after 1981 has lasted 33 quarters, or just over eight years, compared to 15 quarters, or 3.75 years, between 1949 and 1981.

None of the leading economic indicators currently signal an imminent recession. While several indicators have declined from unsustainably high levels, they are all still pointing toward above-trend growth for 2019. Yet the declines in some of these indicators—such as the Goldman Sachs Current Activity Indicator from August 2018 (see Exhibit 21)—probably were among the factors that triggered the recent equity free fall. The tightening of financial conditions and the increase in the 10-year Treasury yield through September 2018 also contributed to the downdraft.

Between September 21 and December 26, equities, as measured by the S&P 500, had an intraday peak-to-trough drop of 20.2%. The drop, in a self-reinforcing manner, has tightened financial conditions, which in turn will slow economic growth and could result in further equity market declines.

However, it is important to note that not every major equity market decline leads to a recession. In this bull market alone, the S&P 500 had a peak-to-trough drop of 19.4% in 2011 during the European sovereign debt crisis and the S&P downgrade of the US Treasury debt rating from AAA to AA+. No recession ensued.

Similarly, in 1987, the S&P 500 dropped by 33.5%, with the biggest single-day drop on record

Exhibit 22: Large Historical S&P 500 Drawdowns Which Did Not Coincide with a Recession
A recession did not occur in seven of fourteen 19%+ drawdowns.

Date of S&P Peak	Duration of Drawdown (Months)	Peak-to-Trough Decline	Recession From Drawdown?
May-29-1946	11.7	-28.5%	No
Dec-12-1961	6.4	-28.0%	No
Feb-9-1966	7.9	-22.2%	No
Sep-21-1976	17.5	-19.4%	No
Aug-25-1987	3.3	-33.5%	No
Jul-17-1998	1.5	-19.3%	No
Apr-29-2011	5.2	-19.4%	No

Data through December 31, 2018.
Source: Investment Strategy Group, Bloomberg.

in the post-WWII period on October 19, and yet the economy did not fall into recession. In the post-WWII period, there have been 14 instances in which equities have dropped by about 20% or more. A recession did not occur in seven of those instances (see Exhibit 22). We have included periods with declines of over 19%. We believe that calling something a "bear market" only if equities have dropped by 20% or more, i.e., differentiating a 20% drop from a 19.4% drop, is an irrelevant artifact of our industry.

Therefore, the recent equity market decline, although a factor to be considered, is not the primary driver of the increase in our estimated probability of a recession.

As Federal Reserve Chair Janet Yellen said after the first hike in the federal funds rate in December 2015, "It's a myth that expansions die of old age."[59] A recession must be triggered by a catalyst. Typically, recessions in the post-WWII period have been triggered by one or more of three factors: major economic or financial market imbalances, aggressive Federal Reserve tightening and exogenous shocks. We now examine all three factors.

Typically, recessions in the post-WWII period have been triggered by one or more of three factors: major economic or financial market imbalances, aggressive Federal Reserve tightening and exogenous shocks.

Economic or Financial Market Imbalances

Over the years, several metrics have been developed to measure imbalances in the economy and in financial markets. For macroeconomic imbalances, we focus on unemployment, the consumption and business investment share of GDP, and the private sector's financial balance.

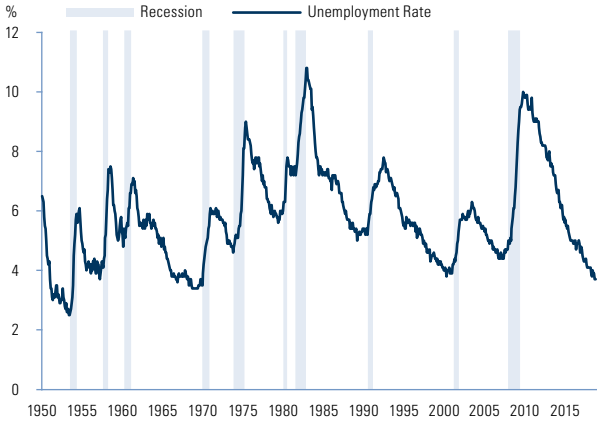
Unemployment

As shown in Exhibit 23, the unemployment rate is near its lowest in 49 years. On the basis of this metric, one could easily conclude that such a low unemployment rate indicates an imbalance that will lead to wage inflation, which will then work its way through to core inflation and a more aggressive pace of rate hikes by the Federal Reserve. While we agree that this indicator is sounding an alarm, it is a very light alarm.

There are two reasons we are not yet concerned. First, the low rate of unemployment has not led to a significant increase in wages, as shown in the Goldman Sachs Wage Tracker (see Exhibit 24). This gauge is a weighted average of five different measures of nominal wage growth. It stands at 2.8% and is probably headed to above 3%, but it is not yet at levels that are likely to result in a surge in inflation.

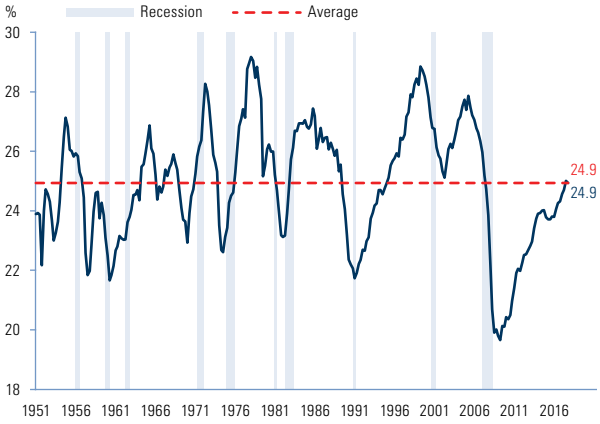
Second, the extent to which wage inflationary pressures build up is driven by how much slack there is in the labor market—defined as how far the current unemployment rate is from the non-accelerating inflation rate of unemployment, commonly referred to as NAIRU. The problem is no one, ex ante, knows where NAIRU stands. It is only after inflation picks up that economists,

Exhibit 23: US Unemployment Rate
The unemployment rate is near five-decade lows, pointing to a tight labor market.



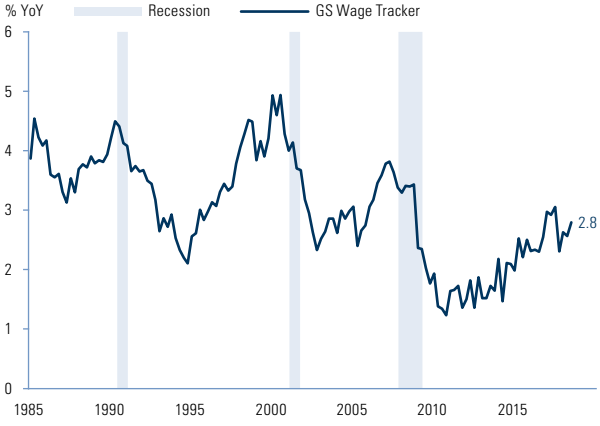
Data through December 2018.
Source: Investment Strategy Group, Datastream.

Exhibit 25: US Consumer Durables and Investment Share of Potential GDP
Consumption and business investment suggest the economy is not overheating.



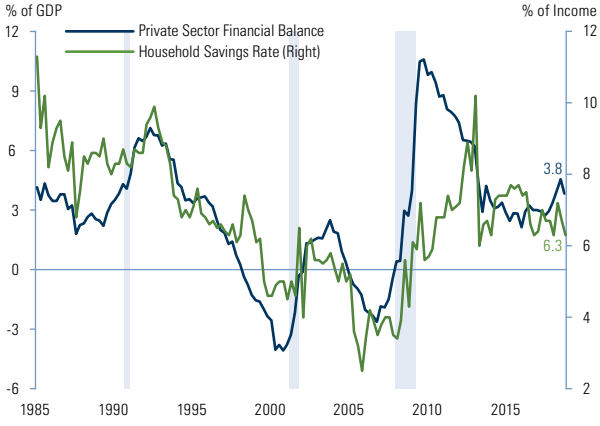
Data through Q3 2018.
Source: Investment Strategy Group, Datastream, Haver.

Exhibit 24: Goldman Sachs US Wage Tracker
Wages have not yet reached levels that are likely to spur a surge in inflation.



Data through Q3 2018.
Source: Investment Strategy Group, Goldman Sachs Global Investment Research.

Exhibit 26: US Private Sector Financial Balance
Household savings and the private sector balance do not show signs of excess spending.



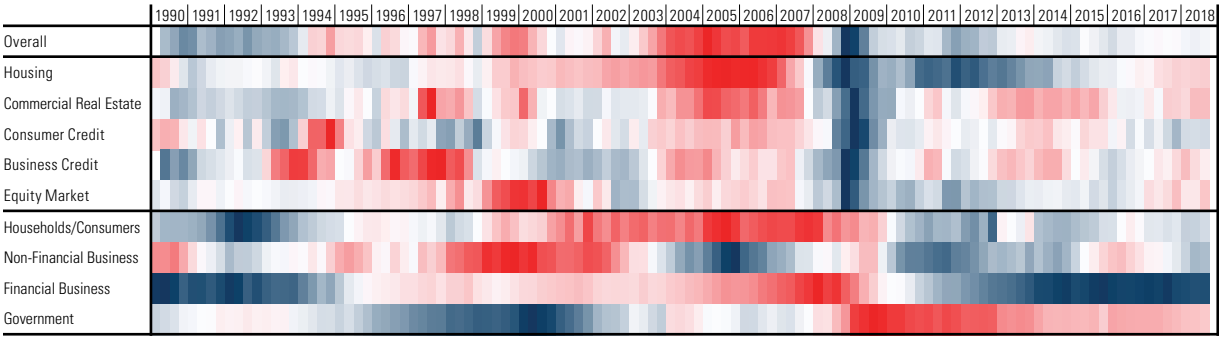
Data through Q3 2018.
Note: Blue shaded areas denote periods of US recessions.
Source: Investment Strategy Group, Datastream, Haver.

with the benefit of hindsight, estimate a level for NAIRU. If NAIRU is 4.5%, then the labor market is very tight. If NAIRU is 4%, then the labor market is not as imbalanced. We are watching indicators of labor market slack very carefully.

Consumption and Business Investment
Another useful indicator of macroeconomic imbalances is private sector spending, composed of spending on consumer durables (goods such as automobiles and appliances that last for some extended time) and business capital expenditures. As shown in Exhibit 25, the measure as a share of GDP stands at 24.9%, in line with its long-term average. The metric shows a well-balanced economy that is not overheating.

Exhibit 27: GIR Financial Excess Monitor

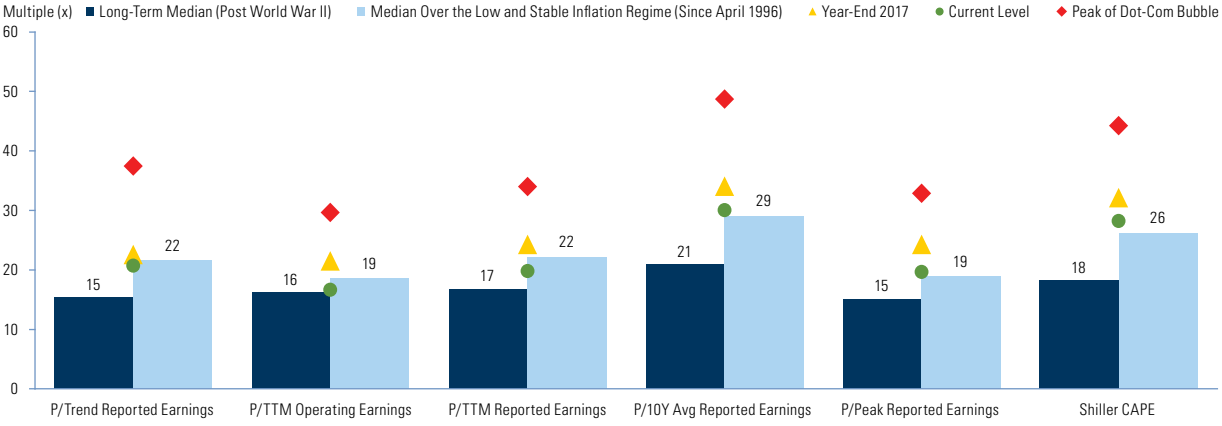
The US economy is much less vulnerable than it was before the dot-com bubble and the global financial crisis.



Data through Q3 2018.
Note: Red shading indicates periods of financial excess, blue shading indicates periods of benign conditions.
Source: Investment Strategy Group, Goldman Sachs Global Investment Research.

Exhibit 28: S&P 500 Valuation Multiples

Equity multiples are slightly below their median levels during low and stable inflation regimes.



Data as of December 31, 2018.
Source: Investment Strategy Group, Bloomberg, Robert Shiller.

Private Sector Financial Balance

A third metric that we follow is the private sector financial balance, which looks at household and corporate sector income minus total spending, i.e., savings. Our colleagues in Goldman Sachs Global Investment Research (GIR) have shown that it is one of the more reliable indicators of future GDP growth across 17 developed economies since the mid-1980s.[60]

As shown in Exhibit 26, this indicator currently stands at 3.8%, slightly above the long-term average of 3.5%—again, indicating a well-balanced economy. The favorable level of the private sector financial balance is partly attributable to the increase in household savings. As shown in the same exhibit, households increased their savings rates from a low of 2.5% before the GFC to a high of 10.2% thereafter, substantially repairing their balance sheets. As mentioned earlier, the US has deleveraged across the private sector, including the financial sector, more aggressively than other developed and emerging market countries.

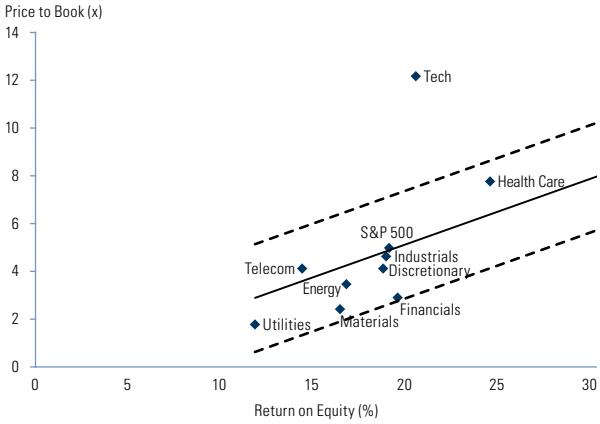
Turning to financial market imbalances, we focus on a series of broad and narrow indicators.

Financial Excess

Our colleagues in GIR have developed an indicator, the GIR Financial Excess Monitor,[61] that measures financial imbalances by looking at two sets of metrics:

Exhibit 29: S&P 500 Sector Dispersion in March 2000

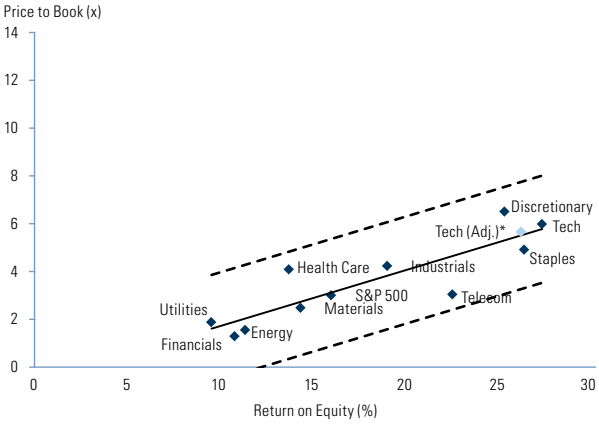
Information technology stood out as a bubble in 2000.



Data as of March 31, 2000.
Note: Dashed lines indicate 3 standard error bands.
Source: Investment Strategy Group, Bloomberg.

Exhibit 30: S&P 500 Sector Dispersion in December 2018

Today, the technology sector's price-to-book multiple is in line with its return on equity.



Data as of December 31, 2018.
Note: Dashed lines indicate 3 standard error bands.
Source: Investment Strategy Group, Bloomberg.
* Tech is adjusted to include Facebook and Google, which were reclassified into the Communication Services sector as of September 28, 2018.

1. A set that focuses on market valuations and level of risk taken by investors across housing, commercial real estate, consumer credit, business credit and the equity market
2. A set that focuses on debt of households/consumers, non-financial businesses, financial businesses and the government

As shown in Exhibit 27, this monitor shows that the US economy is not exposed to financial excesses, and the risk levels are lower than levels seen before the dot-com bubble and the GFC.

The Federal Reserve developed a somewhat similar indicator in 2015 called the overall index of systemic vulnerability.[62] That index shows that the financial system does not have any systemic imbalances and has a level of vulnerability in line with long-term trends.

Equity Market Valuations

Looking at some narrow indicators, we do not see the type of imbalances in equity markets that existed prior to the dot-com bubble or the GFC. In periods of low and stable inflation, US equities have maintained higher valuations relative to long-term medians. As shown in Exhibit 28, an exhibit that should be familiar to our clients, the S&P 500 is not at excessive valuations, especially given the strong earnings growth in 2018. In aggregate, equities are slightly below the median levels of low and stable inflation regimes and year-end 2017.

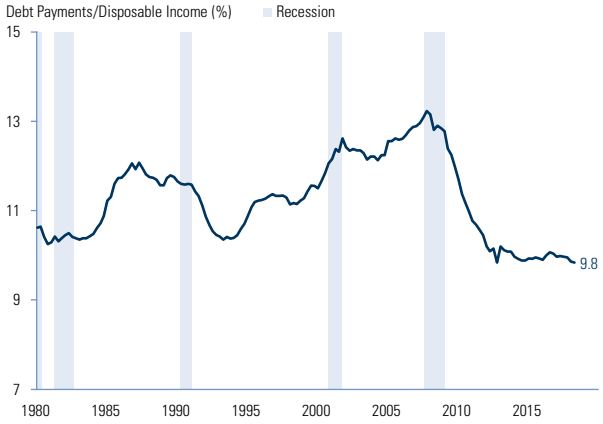
Of course, our clients can point out that we had a similar view of valuations at the end of 2017 and yet the market had a total return of -4.4% last year. Our view is that unless one has confidence that equities will see a significant decline based on valuations, fundamental backdrop, sentiment and positioning, and the technicals of price charts, one should remain invested. That is particularly important when the probability of our upside scenario is greater than that of our downside scenario—as is the case for 2019.

The FANGMAN Basket

Despite the outperformance of the FANGMAN stocks (Facebook, Apple, Netflix, Google, Microsoft, Amazon, and Nvidia) over the last several years, this basket of stocks, in aggregate, is not at an imbalanced valuation level. In March 2000, the information technology sector had a return on equity that was marginally higher than that of the S&P 500, and yet the sector's price-to-book ratio was four times that of the S&P 500. Today, the sector has a price-to-book ratio that is in line with its higher return on equity, as shown in Exhibits 29 and 30.

Exhibit 31: Household Debt Service Ratio

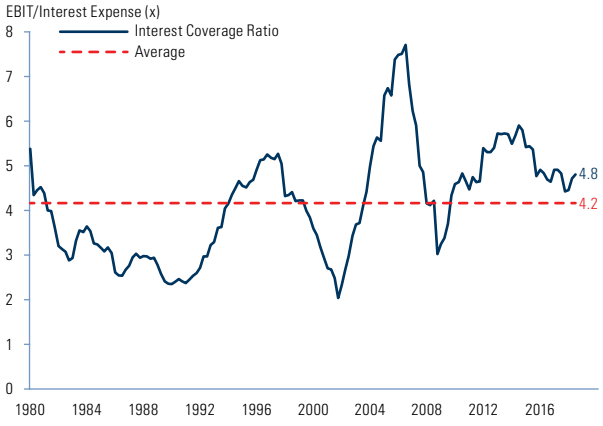
Households' debt service ratio stands at a historic low.



Data through Q2 2018.
Source: Investment Strategy Group, Haver, Datastream.

Exhibit 32: US Non-Financial Corporate Interest Coverage

Non-financial companies have ample capacity to cover their interest expenses.



Data through Q3 2018.
Source: Investment Strategy Group, Haver.

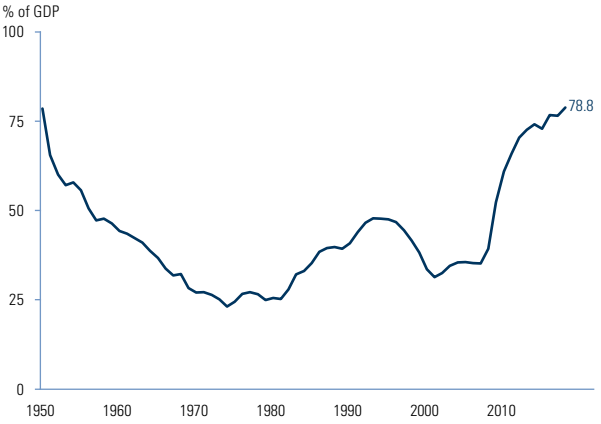
Burden of Debt Service

The burden of debt service in both the household and non-financial corporate sector is very low. This metric is already incorporated in the broader GIR Financial Excess Monitor, but we thought it would be helpful to compare current levels to those seen preceding the dot-com bubble and the GFC.

As shown in Exhibit 31, the household debt service ratio currently stands at 9.8%, substantially below prior peaks.

Exhibit 33: US Federal Debt

Federal debt as a share of GDP is at a post-WWII era high, but we do not see it as a near-term threat.



Data through Q3 2018.
Source: Investment Strategy Group, Haver, Datastream.

With respect to the non-financial corporate sector, we look at the extent to which corporate earnings cover interest expenses before interest expenses and taxes are paid: EBIT/interest expense. As shown in Exhibit 32, companies are generating about 4.8 times more earnings than their interest expense. This compares to a long-term average of 4.2. This ratio has been lower than the current level 70% of the time since 1980. This low interest rate burden partly reflects the lower level of interest rates at which companies have issued corporate debt. We should note that while the current level of interest coverage is well above average, we look at a host of other indicators to measure the health of US companies.

While the corporate sector in aggregate is not imbalanced, there are subsectors such as bank loans that are imbalanced. We see this subsector of the credit markets as imbalanced given its rapid growth, the light level of protection given by the borrower to the lender in the loan documents (hence the term "cov-lite"), and higher levels of overall debt relative to earnings for the issuers of bank loans.

Finally, one imbalance that has garnered some attention is the increase in federal debt. As shown in Exhibit 33, federal debt as a share of GDP is at a post-WWII high and is expected to rise further. While rising federal debt will be a source of risk in the future, given that the US dollar is the reserve currency of the world and the US is the preeminent country with respect to factors discussed earlier,

Exhibit 34: Characteristics of Benign Federal Reserve Tightening Cycles

The current tightening cycle shares characteristics with tightening cycles that did not lead to recession.

Start Date	End Date	Fed Funds at Start	Core CPI Inflation at Start (%)	Duration (Quarters)	Average Increase Per Quarter (bp)	Yield Curve At the End of Cycle (10Y–1Y) %
Aug-61	Nov-66	1.2	1.6	21	22	-0.38
Apr-71	Aug-71	3.7	5.0	2	111	0.78
Mar-83	Aug-84	8.5	4.6	6	52	0.90
Feb-94	Apr-95	3.0	2.8	5	60	0.79
Jun-99	Jul-00	4.8	2.0	5	38	-0.03
Current Cycle to-Date		0.3	2.1	12	18	-
Average of Benign Cycles		4.2	3.2	8	56	0.41
Average of Cycles That Preceded Recession		3.3	4.0	11	82	-0.40

Data through December 31, 2018.
Source: Investment Strategy Group, Bloomberg.
Past performance is not indicative of future results.

we think the current level of debt is not a near- or intermediate-term threat.

Federal Reserve Tightening and Flattening Yield Curve

The Federal Reserve's tightening of monetary policy by raising rates has been the second culprit in causing recessions. Of the last 11 recessions in the post-WWII period, Federal Reserve tightening was a contributing factor in nine.

However, not every tightening cycle has resulted in a recession. Of the past 14 tightening cycles in the post-WWII period, four have not led to a recession. Some have argued that the fifth tightening cycle (July 1999) did not lead to a recession either, because GDP declined for only one quarter, by 1.65%.[63] These five cycles are summarized in Exhibit 34.

Therefore, the key question is whether this tightening cycle that began in December 2015 and has increased the federal funds rate from 0–0.25% to 2.25–2.50% will be similar to the ones highlighted in Exhibit 34 or whether it is a harbinger of a recession in the foreseeable future.

The tightening cycles that did not lead to a recession were characterized by:

- Labor market slack at the onset of the tightening cycle
- Low inflation
- An early start to the tightening cycle

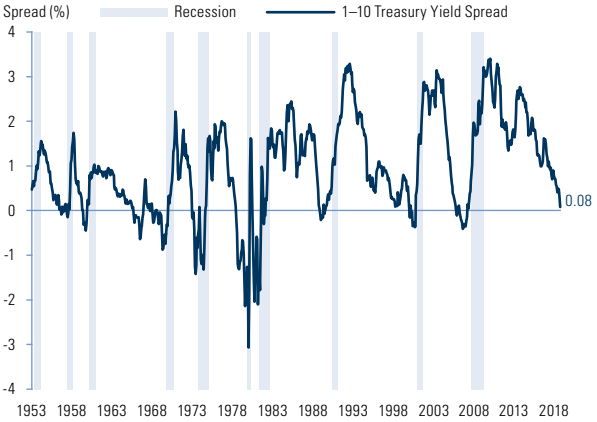
These three criteria all fit the present episode, suggesting this tightening cycle will be benign. Furthermore, this cycle has been characterized by an extremely slow pace and by very small incremental rate hikes: it has spanned three years thus far, and the average increase in the federal funds rate per quarter has been 0.18%. In that regard, it most resembles the nonrecessionary tightening cycle in the 1960s. It is also more similar to that cycle with respect to the flattening of the yield curve. This cycle has led to a relatively flat yield curve—in fact nearly inverted, where short-term rates are above long-term rates—which is more akin to the shape of the curve in the 1960s cycle.

As shown in Exhibit 35, the spread between one- and 10-year Treasuries is only a few basis points away from zero. Many market observers, including former Federal Reserve Chairs Ben

This cycle has been characterized by an extremely slow pace and by very small incremental rate hikes: it has spanned three years thus far, and the average increase in the federal funds rate per quarter has been 0.18%. In that regard, it most resembles the nonrecessionary tightening cycle in the 1960s.

Exhibit 35: US 1–10 Treasury Yield Spread

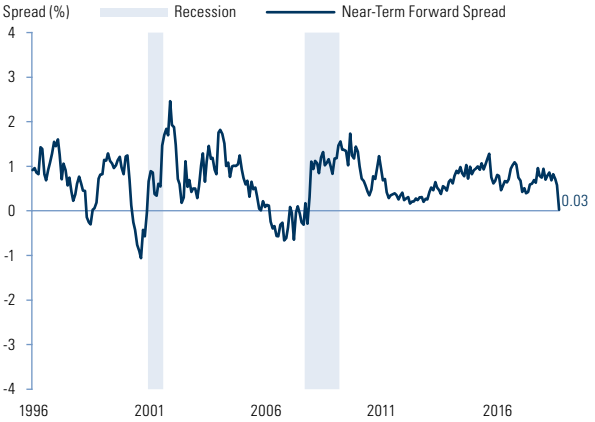
The spread between 1- and 10-year Treasuries is positive, but only a few basis points away from zero.



Data through December 31, 2018.
Source: Investment Strategy Group, Bloomberg.

Exhibit 36: Near-Term Forward Spread

This yield curve mitigates the impact of the decline in the term premium by using only short-term rates.



Data through December 31, 2018.
Note: The near-term forward spread is defined as the implied 3-month forward yield 18 months from now minus the current 3-month yield.
Source: Investment Strategy Group, Bloomberg.

Bernanke[64] and Janet Yellen,[65] have correctly pointed out that this spread may not be as reliable an indicator as in the past because the term premium, the incremental compensation for taking maturity risk as reflected in the 10-year Treasury, has declined owing to low inflation and the central bank bond-buying programs.

This shortcoming of the one- to 10-year Treasury yield spread was addressed by a recent Federal Reserve Board study by using only short-term rates implied by the forward curve.[66] This curve is referred to as the "near-term forward spread." As shown in Exhibit 36, this indicator has also been a reliable harbinger of recessions. Currently neither curve is inverted, but they are certainly quite close to the "red line." This declining spread has been one of the factors that has prompted some investors to reduce equity exposure in anticipation of an inverted curve. Investors have extrapolated that the decline in the spread will continue until the curve is inverted and a recession ensues.

Why we have not followed suit:

1. An inverted curve does not imply an immediate peak in US equities. The peak may be more than a year away from when the yield curve actually inverts.
   - In the near-term spread model, the shortest period to an equity market peak was two months, the longest was 20 months, and the median was 13 months. Most of the observations were 13 months or longer. We exclude the 1973 tightening cycle because of the shock from the Arab oil embargo.
   - In the one- to 10-year spread model, the shortest period to an equity market peak was one month (the equity market peaked before the inversion in 2001), the longest was 22 months, and the median was 16 months.
2. The curve is not inverted.
3. The economic and earnings growth backdrop continues to be favorable.
4. This tightening cycle most resembles the 1960s cycle, in which:
   - Inflation remained very low, as it has today.
   - The tightening cycle started from a very low level of federal funds rate.
   - The tightening cycle lasted a long time.
5. The Federal Reserve has been cautious throughout this cycle, and if financial conditions tighten further, it could delay further hikes.
6. The economic and financial market imbalances that are typical of market peaks and recessions are not present.

We now turn to the third factor that has historically caused recessions.

Exogenous Shocks

The third cause of recessions in the US in the post-WWII period has been exogenous shocks, such as the Arab oil embargo of 1973 and the Iran-Iraq War of 1980, both of which led to spikes in world oil prices. While we cannot predict the source or timing of an exogenous shock, the list of possible contenders is not short.

From the domestic side, the most likely source of an exogenous shock in the near term is the fallout from one of the large, and growing, number of investigations—by the special counsel, multiple state attorneys general and the Democrat-controlled House of Representatives—of President Trump, including his campaign, his businesses, his direct or indirect interactions with foreign entities, and even his policies. The ebb and flow of these investigations will inevitably lead to great market volatility.

But there is greater likelihood that exogenous shocks will come from external sources, rather than domestic ones. Here are some possibilities.

China

The single largest risk to the US economy is a protracted trade war with China. As we highlighted in our October 14, 2018, *Sunday Night Insight: The Unsteady Undertow Commands the Seas (Temporarily)*, the trade war with China has continued to escalate, and we believe that it cannot be resolved simply through China importing more US goods. The issues include:

- A large and growing trade deficit with China that stands at $405 billion for goods and $364 billion after including the surplus from services.
- Industrial policies and unfair trade practices that reduce competition, such as subsidies and "dumping goods at below-market prices."[67]
- "Made in China 2025" policies that "harm US companies."[68]
- Uneven tariff rates and Chinese bans on certain US imported goods.
- Intellectual property (IP) theft, which the National Bureau of Asian Research has estimated costs the US economy between $225 billion and $600 billion per year.[69] Over the span of 10 years, the value of the IP stolen would be equivalent to 10–30% of the entire GDP of the US.
- Forced technology transfer.
- Strategic US technology acquisitions by China.
- Outright cyber theft.
- Foreign ownership restrictions.

Since the meeting of the two presidents in Argentina in early December 2018 and follow-on contacts, the overall tone of the negotiations appears to have improved. However, members of the US administration have been sending mixed messages. Treasury Secretary Steven Mnuchin and National Economic Council Director Larry Kudlow have expressed optimism that some "palpable changes"[70] will be made by China: in December, the Chinese approved US rice imports, resumed buying US soybeans and suspended the higher tariffs on US-made autos and auto parts. On the other hand, US Trade Representative Robert Lighthizer has stated that China has not "fundamentally altered its unfair, unreasonable and market-distorting practices."[71]

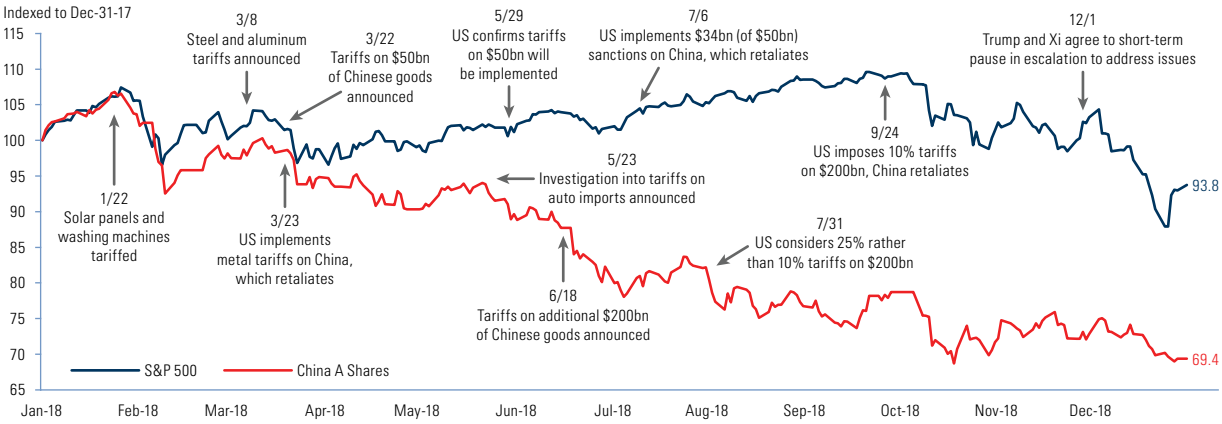
The incertitude over how the negotiations might evolve is best captured by Craig Allen, the president of the US-China Business Council, who said, "Where we are right now is in a place of considerable uncertainty. Clearly, there's a lot of jockeying going on within the administration with pretty sharp contrasts between the positions that people are taking. That's what makes this so unpredictable. We don't know where it will end up."[72]

Both leaders are inclined to reduce tensions and show some real progress in order to avoid further pressures on their own economies and equity markets. As shown in Exhibit 37, the Chinese equity market was under steady pressure in 2018, while the US better withstood the trade war but was not completely unscathed. US exposure to

The trade war with China has continued to escalate, and we believe that it cannot be resolved simply through China importing more US goods.

Exhibit 37: Impact of 2018 US Trade Actions on Equity Markets

Escalation of trade frictions has had the most negative impact on Chinese equities.



Data through December 31, 2018.
Source: Investment Strategy Group, Bloomberg.

China is limited—merchandise exports, corporate profits and foreign bank claims are all less than 1% of GDP—so we can hypothesize that China has a greater incentive to accommodate US demands for a more level playing field between the two countries.

We are likely to see China introduce some real policy measures to reduce its trade surplus with the US, fully open its markets to selected US companies and make the same commitments that President Xi Jinping made to President Barack Obama with respect to cyber theft and IP theft.[73] While these measures will reduce tensions and provide some relief to financial markets, the Chinese are unlikely to change their goal of eventually achieving dominance in certain strategic sectors. The risks may abate in 2019, but we believe that the longer-term concerns regarding Chinese goals and the means by which the Chinese pursue those goals will persist.

Escalating tension between the US and China over Taiwan is also a greater risk in 2019 than it was in 2018. Although the likelihood of military engagement this year is low, the rhetoric from China regarding unification will increase. At some point in the future, the US will face the very difficult decision of whether and how to confront or engage with China to protect Taiwan's independence. If the US decides to confront China, financial markets across developed and emerging markets will wobble, if not tumble. However, we do not believe the timing of such confrontation is imminent.

Brexit

There is tremendous uncertainty about how Brexit will unfold over the first quarter of 2019, given the Brexit deadline on March 29. The UK Parliament is scheduled to vote on the Draft Withdrawal Agreement in the week of January 14, 2019. If the UK Parliament approves the deal, the European Parliament will follow suit. Such approvals would allow the two sides to finalize an agreement during a transition period lasting until December 2020. Investors would view such an outcome favorably, and financial assets in the UK and elsewhere could rally.

If the UK Parliament does not approve the Draft Withdrawal Agreement or some tweaked version, the UK can simply exit out of the EU Single Market, or ask for an extension. An extension would allow the British to opt for an EU membership that is similar to that of Norway (member of the Single Market but not the Customs Union, and not a voting member of the EU), a second referendum or even new elections. Since markets do not like uncertainty, we are likely to see turmoil in financial markets, especially if the general European economic backdrop is not favorable.

There is no consensus among geopolitical experts on whether the UK will approve the Draft Withdrawal Agreement or some variation of it. We often turn to the Eurasia Group, the Peterson Institute for International Economics (PIIE) and Teneo for their insights on such topics. Eurasia Group assigns a low probability of 20% to an approval of this agreement,[74] PIIE is squarely in

Brexit will be a source of volatility in the first quarter of this year.

the middle at 50%,[75] and Teneo is at 80%.[76] We in the Investment Strategy Group are certain only that Brexit will be a source of volatility in the first quarter of this year.

While the headlines with respect to Brexit are likely to be shrill and even alarming over the next several months, we recommend our clients keep Brexit in perspective. The UK GDP is 3.3% of world GDP on a nominal basis and 2.2% when adjusted for purchasing power parity. This compares to Japan at 6.0%, China at 15.9%, the Eurozone at 16.2% and the US at 24.2%—all on a nominal basis. The US has a trade surplus in both goods and services with the UK that amounts to 0.1% of US GDP. Foreign direct investment and portfolio flows into the US from the UK are less than 0.1% of US GDP. Only 1.1% of S&P 500 revenues are sourced in the UK. In sum, a slowdown in the UK due to Brexit should not have a material effect on the US economy. Any significant impact will come from a tightening of financial conditions that results from a misplaced focus on the importance of the UK relative to other major countries and regions of the world. The sun has already set on the British Empire.

Auto Tariffs

The Trump administration initiated an investigation in May 2018 into auto imports under Section 232 of the Trade Expansion Act of 1962, citing national security concerns.[77] The US imported $341 billion in autos and auto parts in 2017, with net imports of $197 billion, accounting for 24% of the US goods deficit. President Trump has indicated he might impose tariffs—some have suggested tariffs as high as 25%—on auto and auto parts imports, primarily affecting Japan, South Korea and the Eurozone.[78]

Auto tariffs are unlikely to pose a significant threat to the US economy. The US is expected to reach an agreement with Japan based on quotas. South Korea will be exposed to auto tariffs only if the US trade deficit with South Korea widens after the recently revised US-Korea Free Trade Agreement. An agreement with the Eurozone will be harder to achieve. The US and Europe have many more items on their list of topics to renegotiate, including sensitive topics such as US sanctions on countries that buy Iranian oil. Should these negotiations occur at a time of slowing growth in the US and the Eurozone, the threat of tariffs from both sides will rattle investors, but is unlikely to tip the US into recession.

As mentioned earlier, the US Court of International Trade is expected to rule on whether Congress delegated too much power to the president in the Trade Expansion Act of 1962. The issue at hand is whether this power has been abused by the president to impose tariffs on trading partners. Whether a ruling curbs presidential powers with respect to trade tariffs remains to be seen; in the interim, the president could proceed with high auto tariffs.

Other Potential Exogenous Shocks

Five other geopolitical concerns may be a source of rattling headlines but are unlikely to morph into a shock to the US economy. We discuss each of the five below.

While the headlines with respect to Brexit are likely to be shrill and even alarming over the next several months, we recommend our clients keep Brexit in perspective.

- Russia will continue to leverage its cyber capabilities to interfere in Western elections and destabilize the West, as it has in the US, the UK, France, Germany, Italy, Spain and Greece over the last several years. However, we are unlikely to see military moves like the invasion of Georgia in 2008 and the annexation of Crimea in 2014. Russia is probably going to take advantage of the withdrawal of US forces from Syria by establishing a stronger beachhead in the Middle East.
- The Middle East will continue to simmer as it has for the last several years.
  - The only serious threat to the US economy and financial markets would come from a US military engagement with Iran, but that is highly unlikely. Iran is not expected to restart its nuclear activities, including significant increases in uranium enrichment, because it would not want to jeopardize its support from Europe, Russia and China. Given the Trump administration's preference for lower oil prices, the US may renew the waivers it has given importers of Iranian oil, thereby reducing pressure on Iran to act rashly.
  - Syria will continue to make headlines following the Trump administration's announcement that the US will withdraw troops from Syria. Militia leaders of the Kurdish People's Protection Unit, or YPG, invited the Syrian military to enter Manbij to minimize the risk of attacks by Turkey, while Turkey-backed Syrian rebels also said they were moving toward Manbij.[79] The current civil war is likely to continue as Russia, Iran, Turkey and their proxies maneuver to fill the vacuum created by the eventual withdrawal of US troops.
  - We expect little change in Saudi Arabia. The war in Yemen is a costly war for Saudi Arabia. Bruce Riedel of the Brookings Institution estimates a cost of $50 billion a year;[80] others have estimated the number to be closer to $25 billion a year. To put these numbers in perspective, Saudi Arabia's budget deficit was $64 billion in 2017. The US Senate has voted to end American military assistance to Saudi Arabia for the war in Yemen, a reflection of its growing outrage over the impact of the war on civilians and of the gruesome murder of the journalist Jamal Khashoggi.
- With respect to North Korea, our external advisor, former Secretary of Defense Ash Carter, believes that "nothing much will happen."[81] Of course, given the unpredictability of North Korean leader Kim Jong Un, who in his New Year's address warned the US against "sanctions and pressure,"[82] there is always some probability of inflammatory speeches or missile launches that could roil the financial markets.
- Cyberattacks will continue around the world but are unlikely to threaten the US economy in 2019:
  - China and Russia (as discussed above) will continue to be the most egregious nation-states to regularly attack the US through cyber means. The FBI has stated that Chinese espionage "is the most severe counterintelligence threat facing the US."[83] Chinese hackers were also reported to have breached US navy contractors' computer systems.[84]
  - Breaches such as the ones exposing the personal data of more than 300 million Marriott International customers,[85] 150 million Under Armour customers[86] and 30 million Facebook users[87] will also continue.

The city of Manbij is likely to become a hotbed of military conflict as US troops withdraw from Syria.

- According to the Global Terrorism Index, produced by the Institute for Economics and Peace, terrorism has been declining after reaching a peak in economic terms and deaths in 2014.[88] While one can never anticipate such a shock, there is no reason to assume this trend will reverse in 2019.

The lack of major economic imbalances, the flat but not inverted yield curve and our assessment of exogenous shocks lead us to believe that although the risk of a recession has increased, it has not yet reached a level at which we would recommend an underweight to US and non-US equities, given our one- and five-year expected returns for equities and fixed income, as discussed below.

One- and Five-Year Expected Total Returns

Forecasting one- and five-year total returns across a broad range of asset classes at times like these is certainly not an agreeable endeavor. We take some comfort from the words of Voltaire when he wrote to Frederick the Great in 1767: "Doubt is not an agreeable condition, but certainty is an absurd one."[89] Certainty would certainly be absurd at this time.

Even though we expect the US economy to grow at above-trend levels and do not see any material imbalances in the economy or the financial markets, the level of fear in the financial markets is high. Such fear can create its own downdrafts; as mentioned earlier, a decline in equities feeds into measures such as the Financial Conditions Index and points to lower future growth. We have considered the risk of further equity market downdrafts in assigning probabilities to our base case, good case and bad case, and have provided our best estimate of asset class returns over the next one and five years with this risk in mind.

In our base case, with a 55% probability, we expect a total return of 9% for the S&P 500 in 2019. Should our good case materialize, which has a 25% probability, we expect a total return in the high teens. In our downside case, with a 20% probability, we expect a total return of -18%. The downside scenario could occur because of a recession caused by further Federal Reserve tightening, an exogenous shock or simply investor fear of staying invested too long.

The rationale for a 9% expected total return is detailed in Section III of this *Outlook*. Strong earnings growth in 2018 and a market drop of 4% for the year have resulted in a 15% average compression in the six market multiples shown earlier in Exhibit 28. Equities are therefore much cheaper than they were at the end of 2017.

We have similar return expectations for Eurozone and UK equities and slightly lower return expectations for Japanese and emerging market equities.

Returns across fixed income assets are likely to be more modest. We expect returns of 1% across US short- and intermediate-term high-quality bonds, 2.5% (rounded to 3% in Exhibit 38) for cash, and 4–5% for emerging market local debt and municipal and corporate high yield bonds. We expect moderate-risk portfolios for taxable and tax-exempt clients to provide a total return of 5.9% and 5.8%, respectively, in our base case scenario.

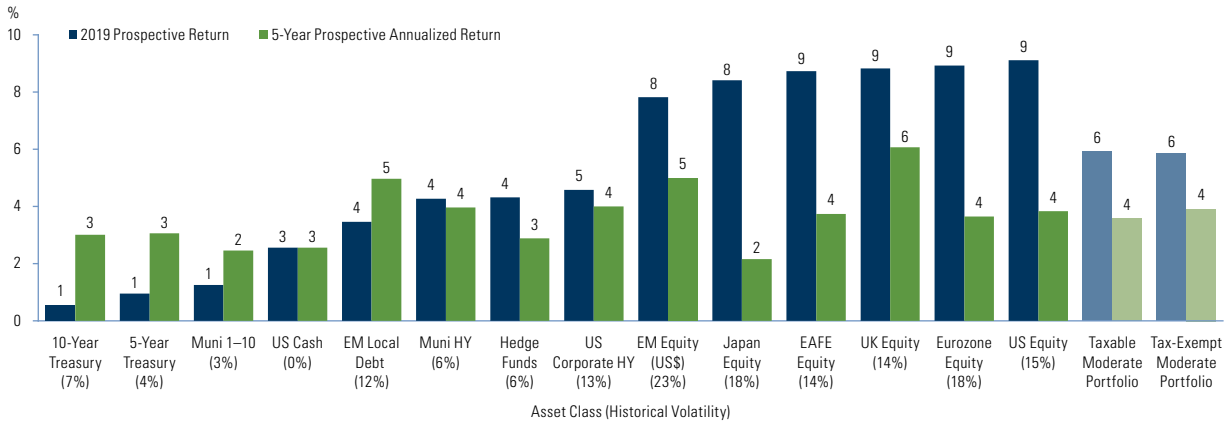
Our five-year forecasts are in line with our forecasts of prior years. We have assumed that economies around the world will likely experience a recession sometime over the next five years. While we assumed a 60% probability of a recession over the next five years in our 2018 *Outlook*, that probability has now increased to 75%. We have not assumed any mean reversion, because all our analysis across nine different valuation metrics in the US, Europe and Japan supports the conclusion that mean reversion of valuation metrics is a myth.

For example, the current statistical significance of mean reversion in the Shiller CAPE is 63%. In other words, there is only 63% confidence that there is mean reversion in the Shiller CAPE and 37% confidence that it is not a mean-reverting time series.

Even though we expect the US economy to grow at above-trend levels and do not see any material imbalances in the economy or the financial markets, the level of fear in the financial markets is high.

Exhibit 38: ISG Prospective Total Returns

We expect equities to offer above-average returns in 2019, while our five-year forecasts are in line with prior years.



Data as of December 31, 2018.

Source: Investment Strategy Group. See endnote 90 for list of indices used.

Note: Forecasts have been generated by ISG for informational purposes as of the date of this publication. There can be no assurance the forecasts will be achieved.

Furthermore, even if someone chose to proceed with 63% confidence in a valuation metric, the time it would take for current valuations to revert to the long-term mean is about 28 years. Thus, we cannot use a long-term average valuation metric and mean reversion to determine where equity valuations will be in the next one or five years.

The five-year expected returns are our best attempt to provide a general framework for expected returns across asset classes in the intermediate term. These are designed to provide a broad picture of the overall direction of returns so that our clients can make better-informed decisions about allocating their assets over the next five years in an environment of low expected returns and rising political and geopolitical risks whose occurrence, duration and impact are uncertain.

Our Tactical Tilts

We reduced our tactical tilts in the early part of 2018. However, over the course of the year, especially in the last few months of 2018, we increased the total risk exposure of the tactical tilts as opportunities presented themselves. The overall level of risk allocated to tactical tilts is still well below the peak levels of prior years. These tactical tilts are driven by our expected returns across asset classes, our forecasts of 2.5% year-over-year growth in the US and 3.0% globally, and a 15–20% probability of a US recession in 2019.

Underweight Fixed Income: We continue to recommend underweighting US fixed income securities for two reasons. As shown in Exhibit 38, we expect returns of about 1% across high-quality intermediate-duration government securities and near zero returns for the 10-year Treasury. We expect the 10-year Treasury bond yield to range between 2.75% and 3.25% by the end of 2019, partly driven by our expectation of one to two 0.25% increases in the federal funds rate. Of course, if financial conditions were to tighten further owing to a continued drop in equity markets, the Federal Reserve might well stop hiking rates. Given the modest returns in bonds, we recommend underweighting investment grade fixed income to fund our tactical tilts, as outlined below.

Modest Increase in S&P 500 Exposure: The free fall in equities that began in late September 2018 and gained momentum in December was not commensurate with our view of 2019 macroeconomic and earnings fundamentals. Extreme negative investor sentiment combined with positive technical indicators led us to increase our allocation to the S&P 500 on December 21 in a conservative, measured approach with some downside protection.

Modest Overweight to High Yield: Although we have been reducing the size of our tactical allocation to high yield assets in recent years as spreads have tightened, we continue to recommend

a small overweight to high yield bonds. We have an even smaller allocation to high yield energy bonds. We eliminated our prior allocation to high yield bank loans in 2018. High yield spreads are about 70 basis points above their long-term median. Given our corporate default expectations of about 2% on a par-weighted basis, we expect returns of about 5% for high yield corporate bonds. We expect a similar return, about 5%, for high yield energy bonds, given our assumption that oil prices will remain in a $45–65 per barrel range for the West Texas Intermediate (WTI) marker.

Modest Overweight to US Banks: We maintain a modest overweight to US banks. US banks underperformed the S&P 500 by about 15% in 2018, and we added to our US bank tilt in late October 2018 given the magnitude of underperformance. Investors have been concerned that a flat yield curve, slow loan growth and rising defaults late in the economic cycle would dampen earnings, but current prices seem to have already incorporated a 20% drop in earnings. Based on our assumptions for banks' return on equity, an adjustment to price-to-book ratios to reflect the level of return on equity and a low probability of recession, we forecast a total return in the low teens for US banks. We expect banks to continue benefiting from a more favorable regulatory environment under the Trump administration.

Overweight US Energy Infrastructure Master Limited Partnerships (MLPs): MLPs became one of our larger tactical tilts after we added to our position in late 2018. The addition followed the drop in oil prices and the underperformance of MLPs relative to the S&P 500. MLPs now offer a distribution yield of 8.8%. We think MLPs are well positioned to deliver a high-teens tax-advantaged return based on:

- Attractive valuations that are below historical averages, both in absolute terms and relative to the S&P 500.
- Continued growth in US oil and gas production that supports growing cash flows.
- Some upside to oil prices given production cuts from OPEC.
- The Federal Energy Regulatory Commission's rulings in 2018 that were less onerous than initially perceived by investors.
- Mid-single-digit distribution growth rates.
- An 8.8% yield that we believe is well covered by distributable cash flow.

Allocation to Our Systematic Downside Mitigation Tilt: We have increased the allocation to our systematic downside mitigation tilt. This is the only purely systematic, entirely rules-based strategy employed within tactical asset allocation. The approach ranks stocks in the US large-cap universe each month across 15 different fundamental and technical factors and then shorts the 100 poorest-ranking stocks against a long position in equal size in the broader market. The tilt seeks to capture the underperformance of these companies relative to the market, an approach that has generated attractive risk-adjusted returns in both up and down markets historically and that is especially effective when equity returns are negative. We feel this approach is a valuable addition to the tactical portfolio when valuations are elevated, but we are not yet comfortable recommending an outright underweight position in equities. The tilt outperformed the S&P 500 by about 11% in 2018.

Modest Overweight to Spanish Equities: We maintain an overweight to Spanish equities on a currency-hedged basis. This tactical tilt was first introduced in August 2013, and we have adjusted the size of this tilt multiple times. We recommend Spanish equities because:

- Their valuations are among the most attractive across developed equity markets. Spain's price-to-10-year-average-cash-flow multiple stands at 5.4 times; this is 32% below the long-term average of 7.9 times.
- Banks make up the largest sector of this equity market and stand to benefit from gradually rising interest rates.

We expect the 10-year Treasury bond yield to range between 2.75% and 3.25% by the end of 2019, partly driven by our expectation of one to two 0.25% increases in the federal funds rate.

- They have an attractive dividend yield of 4% that is well covered by cash flow.
- We expect a low-double-digit total return, which is quite attractive compared to all other broad asset classes.

There is a high likelihood of new elections in Spain given the fragmented coalition of the Socialist Party, and the Catalan movement for independence will also contribute to some headlines, but we do not expect either to have a material impact on this tilt.

Overweight to Eurozone Banks: We recommend an overweight to Eurozone banks. They declined by 31% in 2018 compared to a decline of 11% for the Euro Stoxx 50 Index. Valuations compressed by 42%, and banks are among the largest underweight sectors in actively managed equity portfolios. We expect a mid-teens total return—obviously with commensurate volatility. The rationale for this tactical tilt is:

- Improving credit quality and modest increase in loan growth
- Increased capital ratios
- Better-than-expected European Banking Authority 2018 stress test results
- Scope for earnings surprises given the likely increase in European Central Bank rates in the second half of 2019

Allocation to a South Africa Relative Value Tilt: We recommend a modest allocation to South African equities partially funded by an underweight to emerging market (EM) equities. We expect a high-single-digit total return. The rationale for this tactical tilt is:

- Corporate earnings growth is far outpacing that of other EM countries.
- Economic momentum has been improving since the third quarter of 2018.
- Increasing support for the African National Congress should strengthen President Cyril Ramaphosa and allow him to gradually deliver on structural reforms.
- Investor sentiment toward South Africa is too pessimistic in our view relative to sentiment toward the rest of EM countries.
- The media group Naspers, which accounts for 30% of the MSCI South Africa Index, owns a 31% stake in Chinese technology company Tencent, and therefore stands to benefit from the resumption of game-license approvals in China.

Allocation to Crude Oil: We initiated a tactical tilt to oil on December 19, 2018, after WTI prices had dropped 37% from their 2018 peak of $75 per barrel. This tilt is implemented with downside protection. As noted earlier, our target price range for 2019 is $45–65 per barrel for WTI, with a midpoint at $55. We expect a mid-single-digit return for this tilt, based on above-trend economic growth, some probability of supply disruptions following the expiration of waivers for importers of Iranian oil if they are not renewed, and muted capital expenditures on US shale production at current prices.

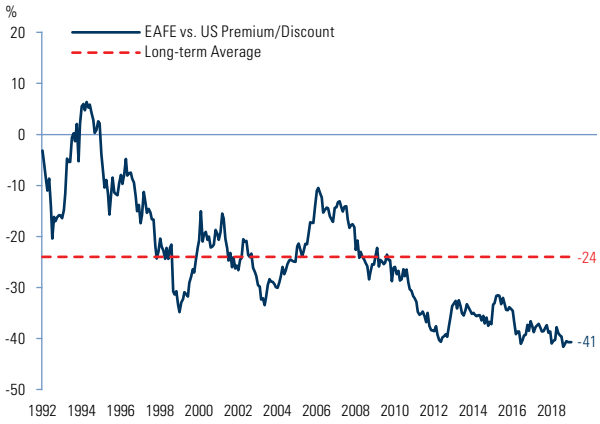
Allocation to Two Developed Market Currency Tilts: We recommend two currency trades, based on our views that:

- The Japanese yen will likely depreciate versus the US dollar as the Bank of Japan maintains a highly accommodative monetary policy, while the Federal Reserve hikes once or twice in 2019. We expect this tilt to be further supported by the flow of funds out of Japan as Japanese corporations sell yen-denominated assets to invest in the US and elsewhere. We expect a mid-single-digit depreciation of the yen relative to the dollar.
- The UK pound will likely appreciate versus the US dollar because we expect the UK to avoid a hard Brexit, even though the path to this outcome will be disruptive. While our experts have differing views on the likelihood of the Draft Withdrawal Agreement passing

The Japanese yen will likely depreciate versus the US dollar as the Bank of Japan maintains a highly accommodative monetary policy, while the Federal Reserve hikes once or twice in 2019.

Exhibit 39: EAFE Equity Valuation Premium/ Discount to US Equities

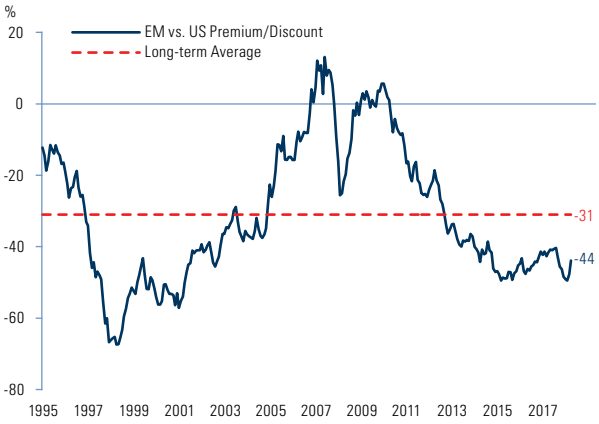
EAFE equities' valuation discount to the US stands near its widest historical level.



Data through December 31, 2018.
Note: EAFE and US market valuations are based on an average of the following metrics: price to 10y earnings, price to 10y cash flow, price to book, price to peak earnings, price to peak cash flow and price to dividend.
Source: Investment Strategy Group, Datastream.

Exhibit 40: EM Equity Valuation Premium/ Discount to US Equities

EM equities continue to trade at a large valuation discount to US equities.



Data through December 31, 2018.
Note: EM and US market valuations are based on an average of the following metrics: price to 10y earnings, price to 10y cash flow, price to book, price to peak earnings, price to peak cash flow and price to dividend
Source: Investment Strategy Group, Datastream.

the UK Parliament, they all agree that the probability of the UK falling out of the EU on March 29, 2019, without a deal or extension is very low. It is also likely that the Bank of England will raise interest rates given wage growth of 3.3%, the highest in a decade. Finally, the pound is undervalued relative to our valuation models, providing a tailwind to our expected high-single-digit return.

A question that has been raised frequently over the last few years is why not underweight US equities in favor of equities from Europe, Australasia and the Far East (EAFE) and emerging markets. There is no doubt that EAFE and EM equities are at an extreme valuation discount to US equities after nearly 10 years of US equity outperformance. As shown in Exhibits 39 and 40, EAFE equities are trading at a 41% discount to US equities, compared to a historical average discount of 24%, and EM equities are trading at a 44% discount, compared to a historical average of 31%.

There are several reasons we do not favor a tactical tilt to EAFE and EM equities funded out of US equities.

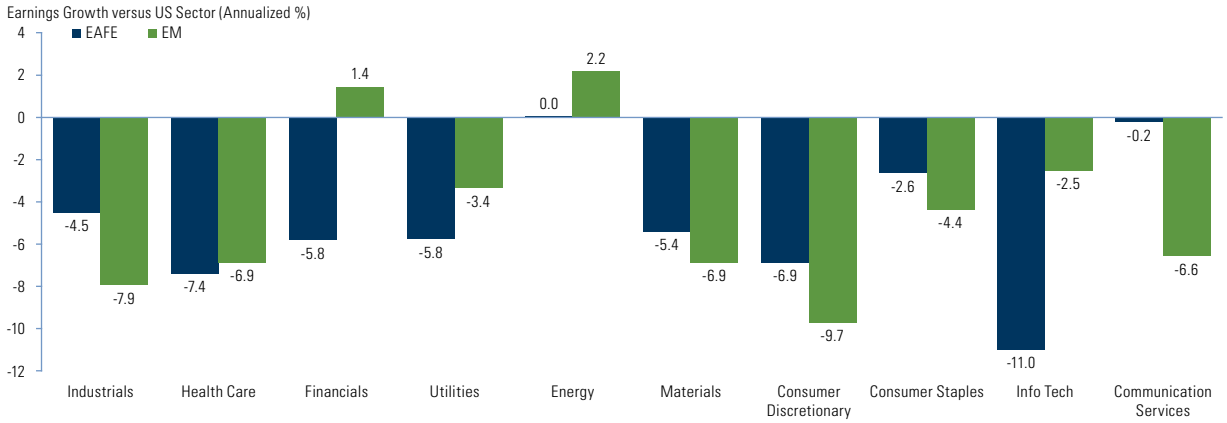
First, there is absolutely no evidence that significant discounts to US equities have led to outperformance over the subsequent one and five years. We used six valuation metrics with data going back to 1977. We examined the performance of EAFE and EM equities relative to that of US equities at different valuation levels. The magnitude of the premium or discount of EAFE and EM equities to US equities had no bearing on their subsequent performance relative to US equities. For example, following many periods in which EAFE equities were particularly cheap, they underperformed US equities. At the extreme, when EAFE equities were at their cheapest relative to US equities, they underperformed by 9% a year for the subsequent five years. At the other extreme, when they were particularly expensive, they outperformed US equities by 9% a year for the subsequent five years.

Second, underlying fundamental factors do not present any compelling rationale to overweight EAFE equities. Specifically:

- EAFE equities have less exposure to faster-growing sectors such as technology.
- EAFE equities have higher financial leverage, higher earnings growth volatility and lower profit margins.
- Earnings growth in EAFE sectors has lagged that of US sectors across the board, with the one exception of the energy sector, where it has matched the earnings growth in the US. Exhibit 41 shows the extent of the lag.

Exhibit 41: US vs. Non-US Earnings Growth Since 2007

Earnings growth across almost all EAFE and EM sectors has lagged that of US peers.



Data through December 31, 2018.
Note: Indices are based on annual MSCI data, beginning in 2007. Analysis uses 12-month forward earnings in order to mitigate the impact of negative earnings periods.
Source: Investment Strategy Group, Datastream.

The lag occurs whether the starting point of the analysis is based on peak earnings levels before the GFC or trough levels in 2009. We do not anticipate this relationship to change meaningfully in the foreseeable future.

As also shown in Exhibit 41, earnings growth in most EM equity sectors has also lagged that of the US. Given our long-term concerns about China's growth trajectory and high levels of leverage, as well as our concerns about the structural fault lines of emerging markets discussed in greater detail in our December 2013 *Insight* report *Emerging Markets: As the Tide Goes Out*, we do not believe the current valuation discount of EM equities to US equities offsets the risks and instabilities of most EM countries.

Third, EAFE and EM equities do not typically outperform US equities on a downdraft. Since 1988, EAFE equities have actually declined by a greater magnitude. As our colleagues in GIR wrote, "In a US drawdown there is nowhere to hide."[91]

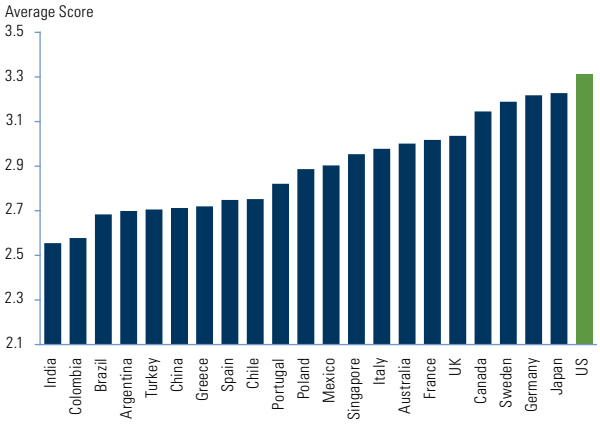
Finally, according to the latest analysis from our GIR colleagues including David Kostin, Goldman Sachs' chief US equity strategist, 30% of the sales of S&P 500 companies is sourced from outside the US, so a portfolio of US multinationals already has significant exposure to growth outside the country.[92] Given that the US ranks highest in the world in corporate management practices, according to a National Bureau of Economic Research study by Nicholas Bloom of Stanford University and others[93] (see Exhibit 42), and that among US companies the multinationals are the best-managed, we think our clients are better served getting additional exposure to non-US investment opportunities through US multinationals.

Our 2019 return expectations are based on the continuation of this nearly 10-year economic expansion and bull market. While the economic data points to steady growth, the financial markets—as evidenced by the recent equity downdraft and the flattening yield curve—seem to price in a recession. Although our estimate of the probability of a recession has increased, and this

Although our estimate of the probability of a recession has increased, and this higher probability has been incorporated into our expected returns, we believe it is too early to underweight equities at this time.

Exhibit 42: Average Management Scores by Country

The US ranks highest in the world in corporate management practices.



Data as of 2014.
Source: Investment Strategy Group, World Management Survey.

higher probability has been incorporated into our expected returns, we believe it is too early to underweight equities at this time.

As usual, we recommend clients ensure that their portfolios are sufficiently well diversified and have the right allocation to high-quality fixed income to withstand a recession or market volatility caused by exogenous shocks.

Key Takeaways

Every year over the past decade, the Investment Strategy Group has recommended clients stay invested in equities, not just in these annual *Outlook*s but in client calls and *Sunday Night Insight*s. We counted over 70 such recommendations and make the same recommendation once again this year.

And while every year we cautioned in these *Outlook*s that forecasting economic growth and asset class returns is difficult under the best of circumstances, the task has become more challenging with each passing year of this economic expansion and bull market. The challenge is greater still in 2019, given slowing global growth, a flattening yield curve, and high and rising domestic US and global geopolitical uncertainties and risks.

There are nine key takeaways from our 2019 *Outlook*:

- US preeminence is intact: US preeminence has endured changes in this country's policies regarding immigration and trade, shifting attitudes between isolationism and engagement, and disruptive challenges to its institutions. It will do so again. We recommend our clients remain watchful but refrain from adjusting their portfolios with every batch of alarming headlines and disconcerting tweets.
- Modest slowdown in global growth: We expect global economic activity to slow across most countries and regions, including the US, to about 3.0%. Brazil and the UK are two key countries where growth is expected to accelerate.
- Waning fiscal policy stimulus: In the US, the contribution to growth from the Tax Cuts and Jobs Act of 2017 will wane over the course of 2019. In Japan, the consumption tax will be increased later in the year, which will be slightly contractionary owing to some offsetting measures. The UK will also have a modestly contractionary stance. Germany will have a slightly expansionary stance given a decrease in its budget surplus. China will pursue an expansionary policy to limit the current slowdown in growth.

- Less accommodative monetary policy: The Federal Reserve is nearing the end of its tightening policy, especially since 2018 exited with a relatively flat yield curve. It is likely that this tightening cycle may go down as one of the few that did not trigger a recession. The European Central Bank has ended its quantitative easing program (but is still reinvesting the principal from maturing bonds) and is expected to start raising interest rates later in 2019. The Bank of Japan is unlikely to change its policy. The People's Bank of China will be the exception that pursues an easing policy to limit the current slowdown in growth.
- Rising recession risk: The risk of recession has notched up in the US and the rest of the world but is still relatively modest at 15–20% in developed economies.
- Remain vigilant: There is no shortage of economic and geopolitical risks, including the risk of excessive tightening of monetary policy in the US, increasing domestic political tensions between the White House and a Democrat-controlled House of Representatives, and uncertain outcomes with respect to Brexit.
- China concerns: China remains the biggest source of uncertainty over the short and intermediate terms. US-China trade tensions have escalated at a time of slowing Chinese growth and a more imbalanced economy. Although President Donald Trump and President Xi Jinping may reach an agreement early in the year to address some immediate trade, cybersecurity and intellectual property theft issues, the US administration has raised other long-term concerns that will not be easily allayed.
- Attractive returns: We expect equities to offer above-average returns relative to the long-term returns suggested by our strategic asset allocation models. With US equities expected to return about 9% and high-quality US bonds about 1%, we expect that a moderate-risk and well-diversified taxable portfolio will return about 6% in 2019.
- Stay invested: While we remain vigilant about the broad range of risks that could undermine this recovery and bull market, we continue to recommend staying invested in equities. We recommend some tactical tilts to certain US equity sectors and high yield bonds, Spanish equities, Eurozone banks, South African equities, oil and currencies, funded largely out of fixed income securities.

2019 Global Economic Outlook: Reduced to Simmer

IF GLOBAL ECONOMIES STARTED 2018 AT A FULL BOIL, the heat certainly receded late last year. Consider that the Goldman Sachs Global Current Activity Indicator—a high-frequency proxy for real global GDP growth—slumped from 5% in January to 3.4% by year-end.[94] A similar downtrend was evident in global manufacturing PMIs, with one widely followed measure weakening from 54.5 to 51.5 over the course of last year.[95]

While mounting trade tensions were certainly a key contributor to slower growth, country-specific factors also played a sizable role. In the US, political discord intensified just as investors began to worry about the waning tailwind from tax reform and fiscal stimulus in the year ahead. Meanwhile, lingering uncertainty around Brexit weighed on economic activity in Europe, as did the election of a populist government in Italy. Japan was not immune either, as inclement weather and natural disasters contributed to a larger-than-expected slowdown there. And higher global interest rates and reduced capital inflows only exacerbated already slowing growth in emerging economies.

Still, we should not equate slowing growth with the onset of recession. After all, 83% of the economies that collectively represent about 87% of the world's GDP had positive sequential growth last quarter. In fact, most economies are still experiencing above-trend growth, even after last year's slowdown. This is particularly true in the major developed economies, which are still estimated to be expanding nearly one percentage point above their potential growth.[96]

Of equal importance, this cooling of economic activity was arguably necessary to keep the world's largest economies from overheating. Put simply, when the unemployment rate stands near 50-year lows, the US economy cannot sustain real growth of 3%—well above its potential pace—without eventually creating problematic inflation that forces the Federal Reserve to tighten aggressively. The situation is similar in the euro area, where unemployment now stands at levels that have been lower only 13% of the time historically,[97] and in China, which has already reached the point of diminishing returns on further debt-fueled growth.

Of course, a modest economic slowdown always runs the risk of metastasizing into an outright recession. But as we discuss next, we think that risk remains low. Said differently, although global economic activity may no longer be blazing, it is far from extinguished (see Exhibit 43).

United States: Seeking Goldilocks

Like the porridge in the classic children's fairy tale "Goldilocks and the Three Bears," the US economy seems to be either too cold or too hot for most market participants' taste. Consider that for the majority of its 9.5-year existence, the expansion's tepid 2.3% average real GDP growth was bemoaned as a sign of fragility. Yet rather than celebrate the arrival of firmly above-trend 2.9% annual growth last year, investors shifted their worries to economic overheating. More recently, the slowdown in US growth—ostensibly a welcome reprieve from overheating concerns—is being viewed as a harbinger of recession.

Such fickleness notwithstanding, the growing fears of a US recession are not completely groundless. This expansion is set to become the longest on record by the middle of this year. Although expansions do not die of old age, they do become more susceptible to ailments over time. This is particularly likely to be the case now that much of the US economy's slack has been exhausted, evident in the unemployment rate recently falling to its lowest level in 49 years. Moreover, last year's notable tightening in financial conditions—coupled with less fiscal stimulus this year and ongoing trade frictions—increases the risk that a modest economic slowdown could devolve into an outright contraction (see Exhibits 44 and 45).

While we certainly acknowledge these risks, there are a number of reasons why we think recession risk remains low during 2019. The most important of these is our expectation for continued

Exhibit 43: ISG Outlook for Developed Economies

		United States		Eurozone		United Kingdom		Japan	
		2018	2019 Forecast	2018	2019 Forecast	2018	2019 Forecast	2018	2019 Forecast
Real GDP Growth*	Annual Average	2.90%	2.25–2.75%	1.90%	1.00–1.90%	1.30%	1.25–2.25%	0.90%	0.70–1.50%
Policy Rate**	End of Year	2.50%	2.75–3.00%	(0.40%)	(0.25%)	0.75%	1.00–1.25%	(0.10%)	(0.10%)
10-Year Bond Yield***	End of Year	2.68%	2.75–3.25%	0.24%	0.50–1.00%	1.28%	1.75–2.25%	0.00%	0.00–0.20%
Headline Inflation****	Annual Average	2.20%	1.50–2.25%	1.90%	1.00–1.80%	2.30%	1.25–2.25%	0.80%	0.50–1.50%
Core Inflation****	Annual Average	2.20%	2.00–2.50%	1.00%	1.00–1.50%	1.80%	1.50–2.00%	0.90%	0.50–1.50%

Data as of December 31, 2018.
Source: Investment Strategy Group, Goldman Sachs Global Investment Research, Bloomberg.
* 2018 real GDP is based on Goldman Sachs Global Investment Research estimates of year-over-year growth for the full year.
** The US policy rate refers to the top of the Federal Reserve's target range. The Eurozone policy rate refers to the ECB deposit facility. The Japan policy rate refers to the BOJ deposit rate.
*** For Eurozone bond yield, we show the 10-year German Bund yield.
**** For 2018 CPI readings, we show the latest year-over-year CPI inflation rate (November). Japan core inflation excludes fresh food, but includes energy.
Note: Forecasts have been generated by ISG for informational purposes as of the date of this publication. There can be no assurance the forecasts will be achieved.

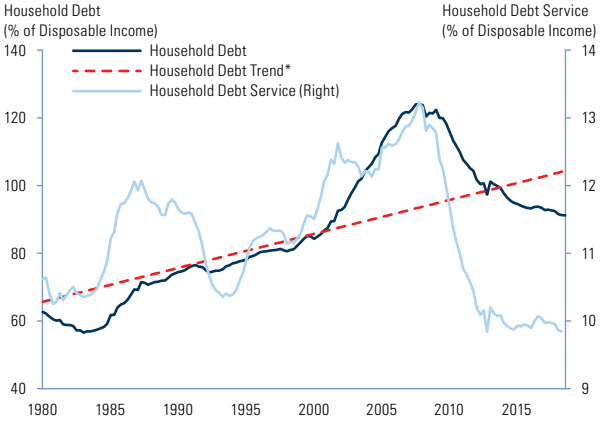
Exhibit 44: Goldman Sachs US Financial Conditions Index

Financial conditions tightened in 2018, reflecting lower equity prices, wider corporate spreads and a stronger US dollar.

Data through December 31, 2018.
Source: Investment Strategy Group, Goldman Sachs Global Investment Research.

Exhibit 46: US Household Debt and Debt Service

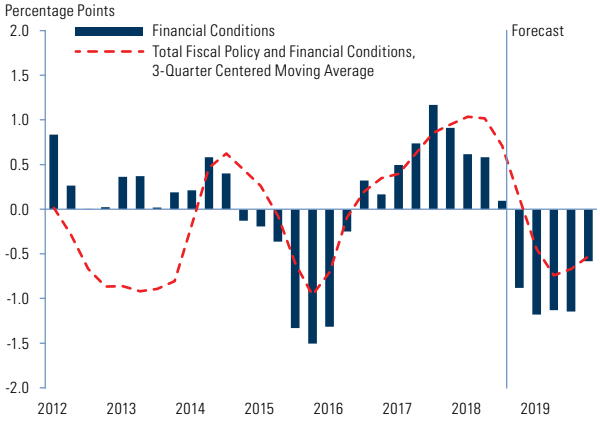
Consumers' lower debt burdens and debt-servicing costs help support consumption spending.



Data through Q3 2018.
Source: Investment Strategy Group, Datastream, Federal Reserve Board, US Commerce Department.
* Household debt trend defined up until 2006, the outset of the housing bubble.

Exhibit 45: US Real GDP Growth Impulse from Financial Conditions and Fiscal Policy

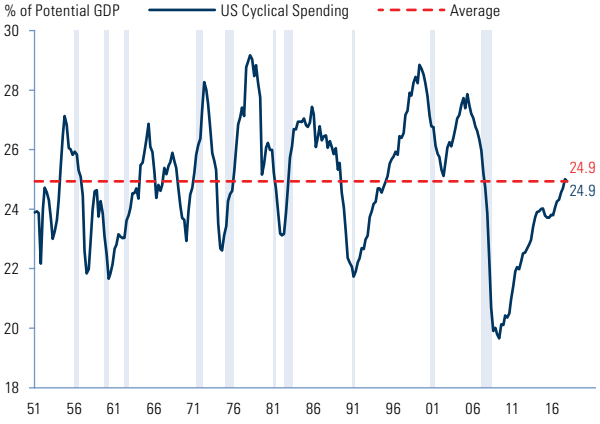
Tighter financial conditions and less fiscal stimulus will be a headwind to growth in 2019.



Data through Q3 2018, forecasts through Q4 2019.
Source: Investment Strategy Group, Goldman Sachs Global Investment Research.

Exhibit 47: US Cyclical Spending

Excessive cyclical spending, a typical precondition of recession, is notably absent today.

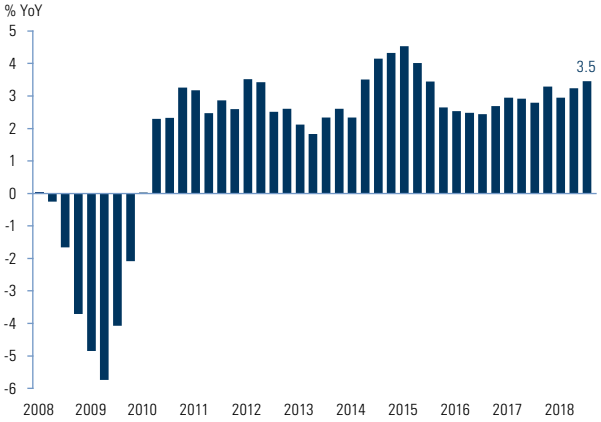


Data through Q3 2018.
Note: Cyclical spending is investment plus consumer durables spending. Blue shaded areas denote periods of US recessions.
Source: Investment Strategy Group, Datastream, Haver.

above-trend US growth this year. Our 2.25–2.75% real GDP growth forecast stands well above potential growth estimates of 1.5–2.0%. This forecast is supported by the fact that consumption spending—which accounts for 68% of GDP and is its most persistent driver—remains healthy, supported by rising wages, ongoing growth in the workforce, a personal savings rate that was recently revised higher and now stands at 6.3%,[98] consumers' lower debt burdens and debt-servicing costs, and scope for further durables spending (see Exhibits 46 and 47). We believe that, added up, these supports will provide some dry powder for future spending. This strength is clearly evident in the growth rate of real final sales to private domestic purchasers, a measure that removes the

Exhibit 48: Real Final Sales to Private Domestic Purchasers

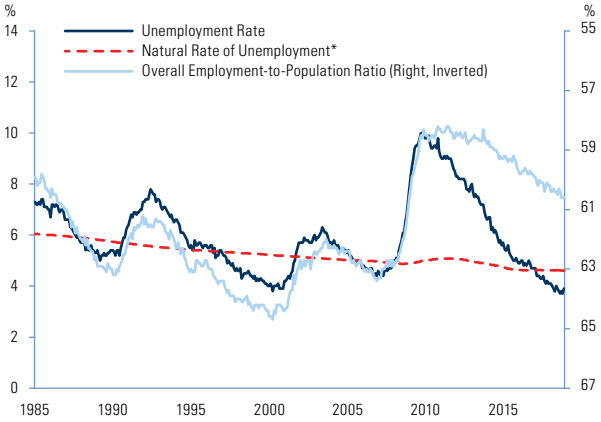
Household consumption and business investment have remained consistent drivers of US growth.



Data through Q3 2018.
Note: Real final sales to domestic purchasers are equal to GDP less net exports, government spending and inventories.
Source: Investment Strategy Group, Bureau of Economic Analysis, Bloomberg.

Exhibit 49: Measures of US Labor Market Slack

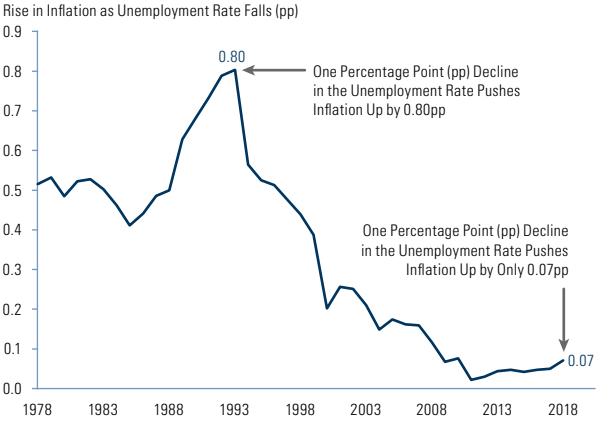
Alternative measures of unemployment suggest some remaining slack in the labor market.



Data through December 2018.
Source: Investment Strategy Group, Federal Reserve, Datastream.
* Long-term rate (NAIRU).

Exhibit 50: Impact of Declining Unemployment Rate on US Inflation

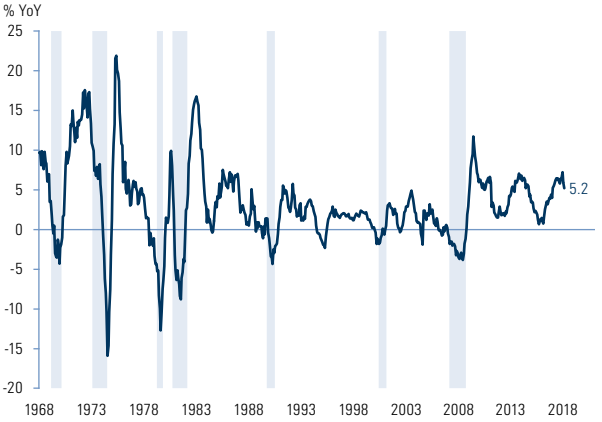
Inflation is less responsive to a falling unemployment rate than it was in the past.



Data through 2018.
Note: The exhibit shows the negative slope of the Phillips curve based on 20-year rolling estimates.
Source: Investment Strategy Group, Federal Reserve.

Exhibit 51: Conference Board US Leading Economic Index

Leading indicators are more consistent with continued growth than imminent recession.



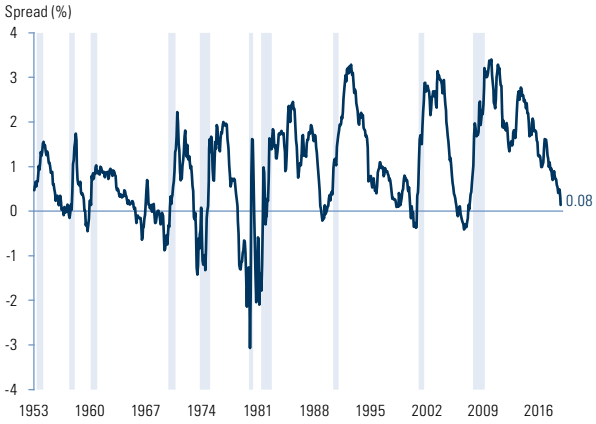
Data through November 2018.
Note: The yearly growth in the index is point-in-time, meaning it has not been revised or restated. Blue shaded areas denote periods of US recessions.
Source: Investment Strategy Group, The Conference Board, Bloomberg.

effects of inventory shifts, government spending and net trade from GDP. As seen in Exhibit 48, it remains near cycle highs.

Importantly, we do not expect inflation to be problematic despite our above-trend growth forecast. While it is true that the unemployment rate is near five-decade lows, other measures suggest some labor slack still exists (see Exhibit 49). At the same time, falling unemployment has a smaller pass-through to overall inflation than it has had in the past (see Exhibit 50), in part because inflation expectations are more firmly anchored today. We also forecast one-to-two 25-basis-point rate hikes from the Federal Reserve, which

Exhibit 52: US 1–10 Treasury Yield Spread

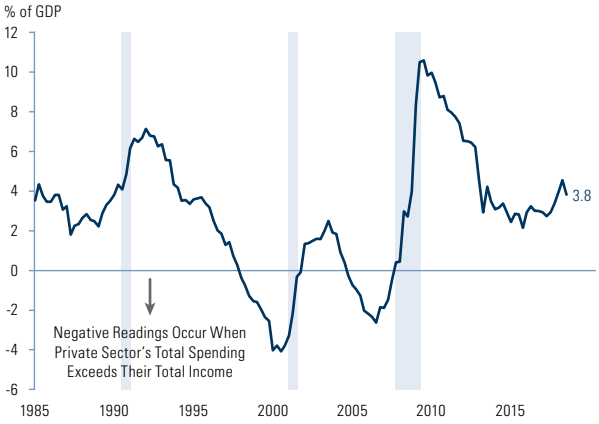
The spread between 1- and 10-year Treasuries is positive, but only a few basis points away from zero.



Data through December 31, 2018.
Note: Blue shaded areas denote periods of US recessions.
Source: Investment Strategy Group, Haver.

Exhibit 53: US Private Sector Financial Balance as a Share of GDP

Spending imbalances contributed to the past two recessions, but are notably absent today.



Data through Q3 2018.
Note: Private sector financial balance is defined as total savings minus total investment for all households and businesses. Blue shaded areas denote periods of US recessions.
Source: Investment Strategy Group, Haver, Goldman Sachs Global Investment Research.

should gradually slow growth to trend, stabilize unemployment and limit inflationary pressure. Finally, the collapse in oil prices in late 2018 is another drag on inflation.

The collective message from a variety of leading economic indicators we follow is also more consistent with continued above-trend growth than recession. Exhibit 51 shows the yearly point-in-time (i.e., not revised or restated) growth in the Conference Board's Leading Economic Index—a composite of 10 different leading indicators. When this index was above zero and the economy was not in recession during the prior year—both conditions that apply today—there were 80% odds of above-trend growth in the following year, and only 13% odds of recession. Both historical statistics corroborate our 2019 US economic forecasts.

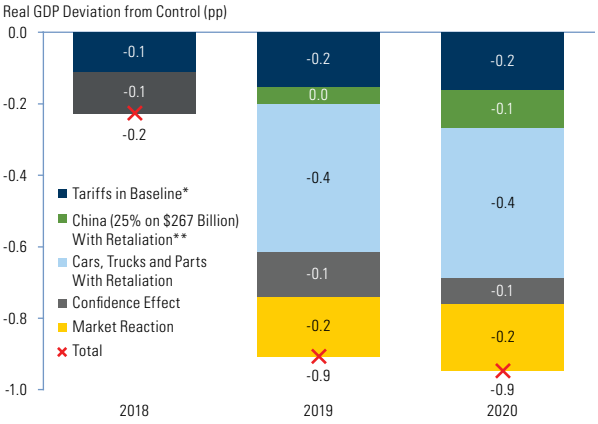
To be sure, recession worries intensified as the short end of the yield curve inverted in late 2018. Yet keep in mind that the more venerable and historically accurate yield curves for predicting recessions—such as the spread between the yield on 10-year and 1-year Treasuries—remain positively sloped (see Exhibit 52). Even if these curves did invert this year, it is important to remember their signals have typically preceded recession by an average of 16 months.

There are other reasons for a less alarmist view of recession risks. As we discuss at greater length in Section I, this cycle has many similarities with other long expansions both in the US and abroad, including firmly anchored inflation expectations, a weaker transmission mechanism from low unemployment and wage growth to broader inflation, stronger financial regulation and a lack of financial imbalances[99] (see Exhibit 53). Furthermore, the typical preconditions of recession—such as excessive durables and investment spending, and unsustainable debt-service costs—are notably absent today as shown earlier in Exhibits 46 and 47. Indeed, the lack of obvious excesses to expunge would likely temper the depth of any economic contraction, were one to occur.

Finally, the probabilities we assign to foreign or geopolitical shocks significant enough to topple the US expansion have not risen to a level that would alter our base case. Keep in mind that the total effect on US GDP growth from tariffs is estimated to be a modest 0.3 percentage point drag over two years, even if the US administration proceeds with threatened tariffs on all Chinese imports[100] (see Exhibit 54). The estimated impact on inflation is a similarly modest 0.1–0.2 percentage point increase, which the Federal Reserve is likely to look past. Thus, it would take a material escalation in trade tensions to meaningfully slow US growth through direct channels. That said, we are mindful that the indirect effects—such as growing risk aversion

Exhibit 54: IMF Estimates of Impact of Escalating Trade Tensions on US GDP

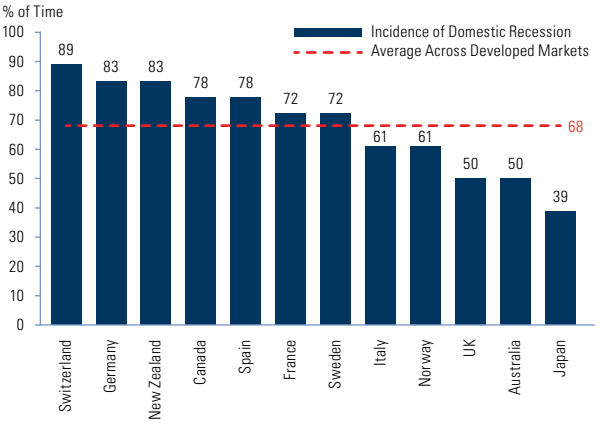
The total drag on US GDP growth from tariffs is modest in our base case.



Data as of December 31, 2018.
Source: Investment Strategy Group, IMF Fall 2018 World Economic Outlook.
* Includes the actual tariffs imposed (25% on $50 billion in imports and 10% on $200 billion in imports), as well as a threatened tariff increase from 10% to 25% on the aforementioned $200 billion in imports.
** Includes threatened tariffs of 25% on the remaining $267 billion of US imports of Chinese goods and China's associated retaliation.

Exhibit 55: Coincidence of Developed Market Recessions With US Recessions

When the US suffers a recession, other developed markets follow suit 68% of the time.



Data as of December 31, 2018.
Source: Investment Strategy Group, Goldman Sachs Global Investment Research.

and tighter financial conditions—could also weigh on economic activity. We focus primarily on US recession risks because when the US suffers an economic contraction, it typically spreads globally (see Exhibit 55).[101] Yet the causality does not generally work in reverse, which is evident in the US economy's continued growth during Europe's double-dip recession in 2011.

To be sure, US real GDP growth is likely to slow from its 2.9% pace last year as the drag from tighter financial conditions—namely higher interest rates, a stronger dollar and lower equity prices—is only partially offset by the waning boost from tax reform and government spending.

We must be careful not to equate slowing growth with recession. This GDP deceleration may actually lower the risk of economic overheating and enable the Federal Reserve to tighten policy slowly, thereby elongating the business cycle.

But we must be careful not to equate slowing growth with recession. This GDP deceleration may actually lower the risk of economic overheating and enable the Federal Reserve to tighten policy slowly, thereby elongating the business cycle. As a result, we assign still-low 15–20% odds to a recession over the next year.

While we can't say whether US growth will be "just right" in the eyes of the market in 2019, we do think it is likely to be slow enough to avoid stoking overheating pressures but fast enough to keep recession at bay.

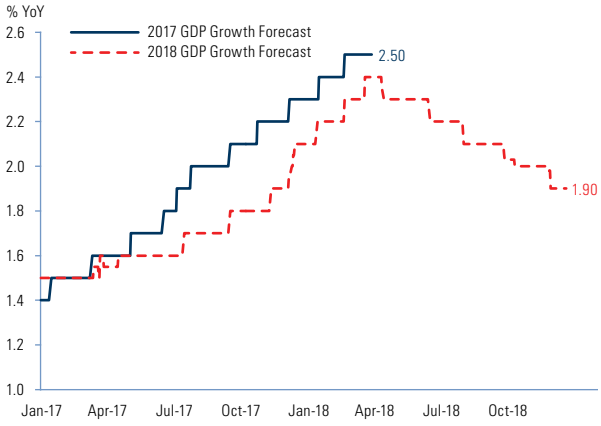
Eurozone: Far from a Smooth Ride

Just as quickly as the euro area economy regained its momentum in 2017, it stumbled anew in 2018 (see Exhibit 56). All told, trailing yearly GDP growth was halved, from nearly 3% in the fourth quarter of 2017 to around 1.5% in late 2018, returning to the sluggish pace that has plagued the area for most of the post-2009 crisis period.

Clearly the Eurozone's road to more stable economic growth has been

Exhibit 56: Evolution of Consensus Forecasts for Eurozone GDP Growth in 2017 and 2018

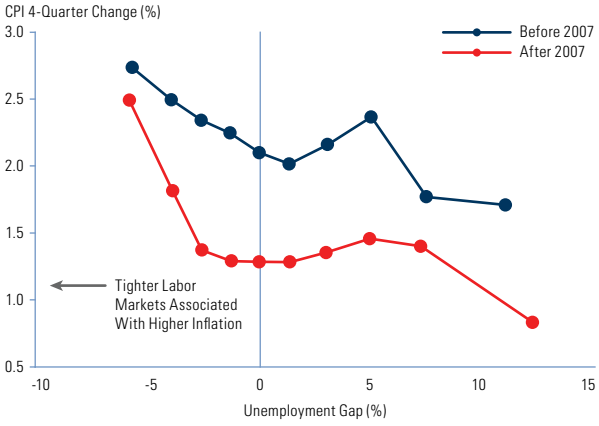
The euro area's stronger economic momentum in 2017 quickly faded throughout 2018.



Data through December 31, 2018.
Source: Investment Strategy Group, Bloomberg.

Exhibit 57: Unemployment and Inflation in Euro Area Regional Data

Euro area regional inflation remains responsive to tighter labor markets.



Data through December 2018.
Source: Investment Strategy Group, Haver.

littered with obstacles. While some of these are temporary—such as last year's drag from adverse weather and new emission standards that disrupted auto production—others are more intractable. These include lingering uncertainty around Brexit, unresolved trade tensions with the US and the rise of populist governments. Here, the proposed fiscal deficits of Italy's newly elected populist government and the upcoming European Parliament elections in mid-2019 represent the most recent sources of angst.

Although these potential roadblocks are likely to dampen the pace of the expansion, we do not expect them to stop it for several reasons. First, consumer spending should benefit from continued job gains, higher wages and declining headline inflation, which will likely be pushed lower by last year's decline in oil prices. Second, fiscal and monetary policies remain supportive, with still-negative European Central Bank (ECB) policy rates and an expected area-wide fiscal easing worth 0.3 percentage point of GDP. Third, the euro area economy shares many of the characteristics that have accompanied durable expansions in other developed countries, including tame inflation, a lack of obvious cyclical excesses, moderate levels of private debt and low government deficits—at least at the area-wide level. Finally, the backdrop for business and housing investment growth remains attractive, despite businesses' reluctance to spend freely in the face of lingering uncertainties. Were the political environment to improve, or at least not worsen materially, capital spending could ultimately exceed expectations. That said, we expect today's pent-up demand for capital spending to be smaller than it was earlier in the cycle given several years of steady investment growth.

Against this backdrop, our base case for 2019 real GDP growth is 1.0–1.9%, a slightly wider range than usual given the myriad uncertainties mentioned above. While the midpoint of this forecast represents a slower pace than last year, it nonetheless represents above-trend growth for the Eurozone.

This last point has important implications for inflation and hence monetary policy. Continued above-trend growth should further reduce economic spare capacity, supporting a modest increase in core inflation. Inflation should also benefit from last year's decline in the unemployment rate and the recent rise in labor costs to seven-year highs, because euro area core inflation has increased in the year following similar developments 65% of the time historically. Exhibit 57 corroborates this point, showing that euro area regional inflation remains responsive to tighter labor markets. Spain provides a case in point, as its rapid recovery since 2013 has been accompanied by one of the highest rates of inflation in the euro area.

Despite these favorable tailwinds, a more material reflation is unlikely in 2019. After all, the Eurozone still faces powerful disinflationary forces, including substantial labor market slack in some countries and fragile inflation expectations following

years of tepid price growth. As a result, we expect core inflation to tick only slightly higher in 2019, rising from its current 1.0% to a range of 1.0–1.5%.

While this is an admittedly small increase, it likely provides sufficient cover for the ECB to continue cautiously removing monetary accommodation, a topic we discuss at greater length in Section III of this *Outlook*.

United Kingdom: A State of Limbo

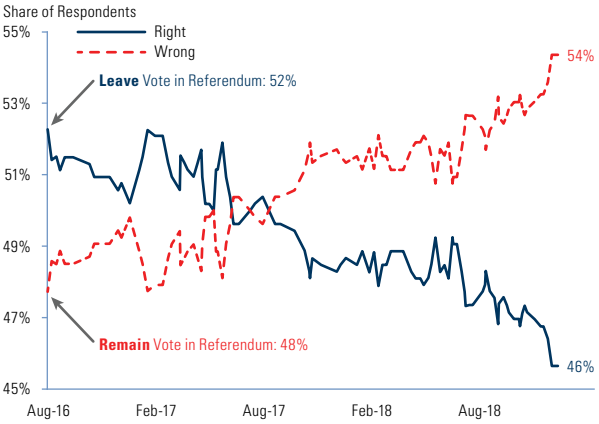
The fog of Brexit uncertainty continues to linger over the UK economy. Consumers have come to expect Brexit to hurt their finances,[102] business investment is estimated to be 15% lower than the Bank of England (BOE) had projected just prior to the referendum[103] and net migration from the European Union (EU) to the UK has nearly halved, slowing the growth of the UK's labor force. As a result, GDP growth has been lower and inflation higher for the UK than for its developed market peers since the 2016 Brexit referendum. Given this backdrop, perhaps it is not surprising that polls now show that a slight majority of UK respondents—especially those reporting they are concerned about the economy—believe the UK was wrong to leave the EU (see Exhibit 58).[104,105]

Needless to say, the outcome of ongoing Brexit negotiations looms large in our 2019 outlook. A multitude of possible political outcomes is in play, including acceptance of the deal negotiated by Prime Minister Theresa May, acceptance of a modified version thereof, a delayed Brexit on the back of new UK elections, a second referendum or simply no deal at all. Similarly, there is a range of economic outcomes that will ultimately be a function of whether the UK's transition outside the EU will be as smooth as promised (if it occurs at all) and of how consumers, businesses and financial markets react to the ultimate decision.

Our base case is that a smooth Brexit transition will ultimately prevail, but only after further political and possibly market volatility prompts a compromise.

Exhibit 58: UK Opinion Polls on Brexit

The polls now show a slight majority of UK respondents believe the UK was wrong to leave the EU.



Data through December 31, 2018.
Source: Investment Strategy Group, YouGov, whatukthinks.org.

The situation remains highly fluid. Our base case is that a smooth Brexit transition will ultimately prevail, but only after further political and possibly market volatility prompts a compromise. The underlying assumption of this view is that a "hard Brexit"—in which the UK falls out of the EU without a transition arrangement in place—would be so economically and politically disastrous that it makes an eventual negotiated settlement highly likely.

In this scenario, we expect a modest uptick in real GDP growth in 2019 to a range of 1.25–2.25%, as some of the deleterious Brexit impacts reverse: pent-up investment would be released, consumption would benefit from lower imported inflation as the currency recovers and fiscal policy would gain some room to support growth. The BOE would also likely deliver on its guidance and raise rates once or twice by year-end, given the UK's already tight labor market and near-target inflation.

Of course, there are significant, two-sided risks around this central case. On the upside, a speedier resolution to current negotiations, a unilateral decision by the UK to remain in the EU or an agreement that results in a closer UK-EU relationship could lead to a sharp rebound in confidence and economic activity. In contrast, a no-deal Brexit—whether disorderly or "managed"—would severely disrupt UK trade through new tariffs and higher customs costs.

Moreover, businesses would face significant adjustment costs, widespread legal uncertainty and likely tighter financial conditions. The result would be a dramatically less open UK economy, implying a much sharper slowdown than has been seen so far.[106] Finally, the implications of new elections or a second referendum would be a complex balance of positives (the prospect of a less economically damaging Brexit or none at all) and negatives (including a later resolution of Brexit uncertainty and higher odds of a less business-friendly Labour government).

Against this backdrop, it is easy to see why the UK economy, along with its economic trajectory, remains in a state of limbo.

Japan: Down but Not Out

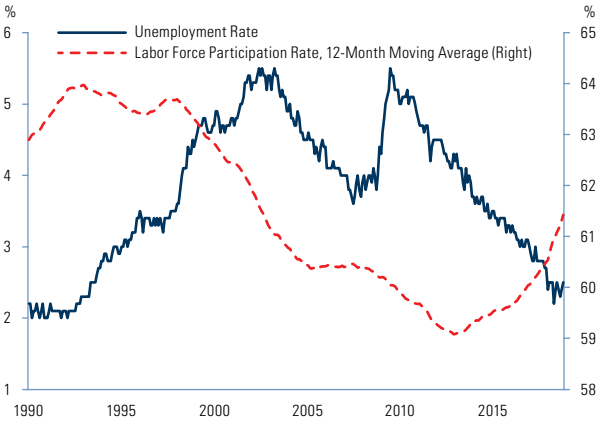
Japan's economy hit several air pockets last year—including those caused by inclement weather and a series of natural disasters—that resulted in a larger-than-expected slowdown in annual GDP. While these shocks ended Japan's eight-quarter streak of growth, they have not robbed the economy of its underlying momentum. Indeed, Japan's labor market remains quite strong, as evidenced in a further decline in the unemployment rate to 2.5%, somewhat faster wage growth and rising workforce participation rates (see Exhibit 59), especially among women. At the same time, business investment has seen a modest uptick on the back of yen weakness, positive sentiment and persistent labor shortages.

This underlying strength is likely to be tested again in 2019, as the economy faces a more challenging external environment. Japan's two major export markets—the United States and China—are projected to slow, albeit to a still-above-trend pace of growth. Meanwhile, Japanese car exports to the US could be hit with a 25% tariff that the International Monetary Fund (IMF) estimates could shave 0.25 percentage point off GDP growth over the next three years.[107]

The government is also planning to increase the consumption tax from 8% to 10% on October 1, 2019. While the tax hike will create volatility, we do not expect it to meaningfully affect GDP growth, for two reasons. First, it is being imposed late in 2019, limiting its full-year impact. Second, the government has already announced mitigating steps—such as temporarily suspending the tax on car purchases

Exhibit 59: Japan Unemployment and Labor Force Participation Rate

Japan's declining unemployment rate and rising workforce participation rate reflect a strong labor market.



Data through November 2018.
Source: Investment Strategy Group, Haver.

and offering free early-childhood education—and is actively considering additional measures.

In short, we see the Japanese economy rebounding from a series of transitory shocks last year, but also facing a combination of external and domestic challenges. These competing forces should result in only a small acceleration of GDP growth from an estimated 0.9% last year to the midpoint of our 0.7–1.5% forecast in 2019. Even so, we expect Japan's core inflation rate on goods to rise to 2.0% by year-end, driven largely by the increased consumption tax. Excluding the impact of the tax hike, however, we expect core inflation to remain stuck just below 1%, as lower oil prices offset the upward pressure on prices from reduced labor market slack.

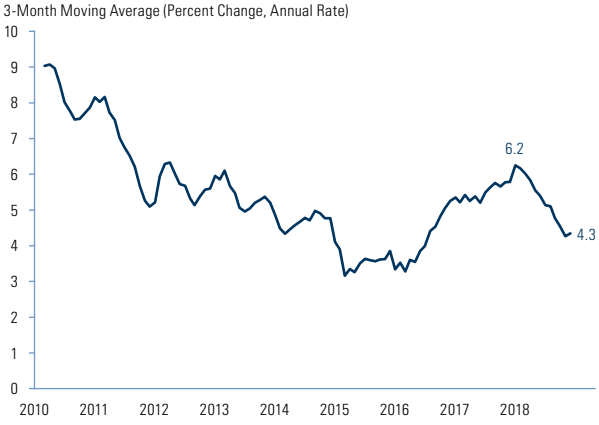
As GDP growth remains close to trend and core inflation is mired just below 1%, the Bank of Japan (BOJ) is likely to remain on hold, keeping the deposit rate at -0.1% and targeting a 10-year Japanese government bond (JGB) yield of close to zero. Still, we do not rule out additional tweaks to the BOJ's policy framework, such as allowing the 10-year yield to move in a wider range.

Emerging Markets: Losing Altitude

Emerging markets enjoyed a second consecutive year of above-trend GDP growth in 2018, expanding by 4.9% on a purchasing power

Exhibit 60: Goldman Sachs Emerging Markets Current Activity Indicator

Economic activity in emerging markets slowed notably last year.



Data through December 2018.
Source: Investment Strategy Group, Goldman Sachs Global Investment Research.

parity (PPP) basis. Yet this high-flying headline figure conceals a considerable loss of altitude that occurred in the second half of last year. As seen in Exhibit 60, the Goldman Sachs Emerging Markets Current Activity Indicator—a high-frequency proxy for real GDP growth—fell from 6.2% in January to 4.3% by December of last year. In addition, the December manufacturing PMIs in China, Korea and Taiwan all dipped below 50 for the first time since early 2016, when growth concerns in China and other emerging economies were roiling markets.

Several external factors contributed to this slowdown. Higher global interest rates and a stronger US dollar fostered wider emerging market (EM) credit spreads and reduced capital flows into EM countries, especially those with weaker macroeconomic fundamentals, such as Argentina and Turkey. Disappointing growth in the Eurozone further weighed on EM exports. Weakness in non-oil commodity prices was also a factor, causing terms of trade losses for countries such as South Africa, Malaysia and Chile. Lastly, the ongoing trade dispute between the US and China caused financial market volatility and likely dampened business sentiment across Asian supply chains, even if it stopped short of having a material impact on EM exports last year.

We expect emerging markets to face many of these same headwinds in 2019. As discussed earlier, GDP growth in developed markets is set to slow from 2.2% last year to 1.9% in 2019, placing downward pressure on EM exports. Furthermore, non-oil commodities are likely to be range-bound, while global interest rates are likely to rise as the ECB joins the Federal Reserve in lifting policy rates in the second half of the year. Finally, continued trade friction between the US and China is likely to dampen overall business sentiment and create more difficult external borrowing conditions for EM countries, particularly those with current account deficits, such as Turkey, India, Indonesia and South Africa.

How countries manage heightened volatility will depend on their macroeconomic situation. The orthodox response is to let the exchange rate absorb the shocks and use fiscal policy to support domestic demand. However, this is typically not feasible in countries that rely on external capital to fund their deficits, as they would need to tighten monetary policy to avoid large capital outflows and disorderly exchange rate depreciation.

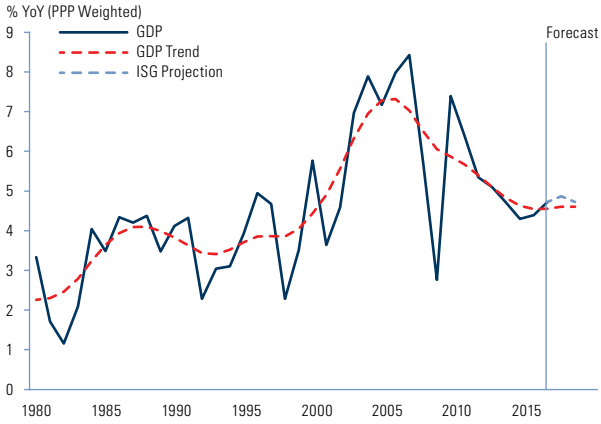
Against this backdrop, we project GDP growth in emerging markets to slow to 4.5–4.9% in 2019 (see Exhibit 61) and anticipate further differentiation in economic performance across countries. While the risks to our forecasts are tilted to the downside, we do acknowledge that a formal trade truce between the US and China—coupled with Chinese policy stimulus and a pause in the Federal Reserve's hiking cycle early this year that eases financial conditions—could improve the velocity of global trade and bolster foreign capital flows into emerging markets, leading to an upside growth surprise.

Despite an intensifying standoff with the US over trade policy, China's economy managed to grow 6.6% last year, registering only a moderate slowdown from 6.9% in 2017.

China

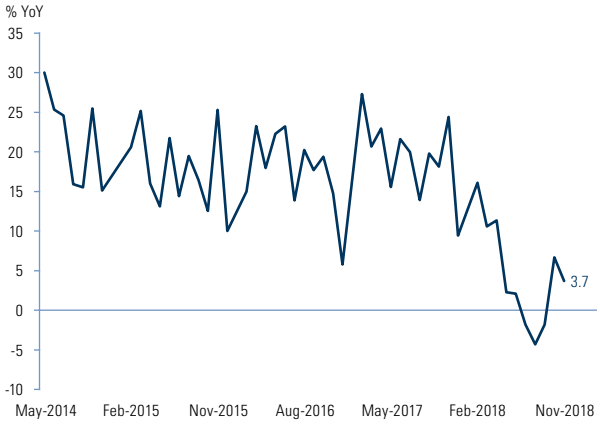
Despite an intensifying standoff with the US over trade policy, China's economy managed to grow 6.6% last year, registering only a moderate slowdown from 6.9% in 2017. In fact, the economy

Exhibit 61: Emerging Markets GDP Growth
We project GDP growth in emerging markets to slow to 4.5–4.9% in 2019, but remain above trend.



Data through 2017, forecasts through 2019.
Source: Investment Strategy Group, Datastream, Haver.

Exhibit 62: China Nominal Infrastructure Investment Growth
Infrastructure investment slowed sharply last year, reflecting stricter government policies.



Data through November 2018.
Source: Investment Strategy Group, Haver.

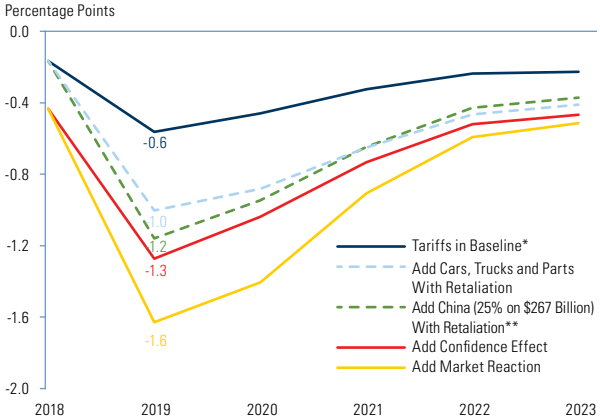
grew faster than consensus expectations at the start of 2018 and slightly above the government's own full-year target of around 6.5%. As was the case with broader emerging markets, however, the pace of activity in China was unevenly distributed across the year; early-year strength faded in the second half of 2018.

Although some were quick to credit US trade tensions for this slowdown, the primary culprit was actually the lagged effect of stricter government policy. In early 2017, the government began a deleveraging campaign aimed at decreasing the economy's reliance on debt-fueled, investment-led growth. The resulting implementation of this campaign—together with greater scrutiny of local government spending—produced a sharp decline in infrastructure investment, which had been one of the key drivers of Chinese GDP growth in recent years (see Exhibit 62).

While China's financial markets clearly suffered as a result of trade tensions last year, the impact on the real economy has been negligible so far. Investment in the manufacturing sector, for example, actually accelerated in 2018, despite a general softening in business sentiment. Moreover, export growth slowed only modestly last year; even shipments to the US have held firm so far.

That said, a continuation of the trade dispute will likely have a more visible impact in 2019. Keep in mind that much of the resilience of

Exhibit 63: Impact of Tariff War on China's GDP
The IMF estimates that US tariffs could shave 0.6 percentage point off China's GDP growth this year.



Data as of December 31, 2018.
Source: Investment Strategy Group, IMF Fall 2018 World Economic Outlook.
* Includes the actual tariffs imposed (25% on $50 billion in imports and 10% on $200 billion in imports), as well as a threatened tariff increase from 10% to 25% on the aforementioned $200 billion in imports.
** Add threatened tariffs of 25% on the remaining $267 billion of US imports of Chinese goods and China's associated retaliation.

Chinese exports had to do with US importers front-loading shipments ahead of potentially higher tariffs this year. With inventory levels now elevated, future export growth could slow. More broadly, the IMF estimates that US tariffs could shave 0.6 percentage point off China's GDP growth this year (see Exhibit 63).[108,109] Even worse,

IMF estimates show that the GDP drag could double if all threatened US tariffs are imposed, accompanied by retaliation from trading partners. This does not take into account the impact on business confidence and financial markets, which could further increase the total drag up to 1.6 percentage points.

Naturally, China's policymakers are acutely aware of these risks and have responded with a series of mitigating measures, including liquidity injections into the banking system, tax cuts, lower import tariffs and higher export tax rebates. We expect further policy-easing measures in 2019, with an emphasis on supporting small businesses, boosting household consumption and incentivizing infrastructure investment. Furthermore, the central bank is likely to keep policy accommodative to support the economy, particularly since we expect inflation to be 2–3%, broadly within the bank's comfort zone.

Against this backdrop, we believe GDP growth will slow to a range of 5.9–6.5% this year. The risks to our forecast reflect the interplay between trade negotiations with the US and China's resulting policy response. Our base case assumes that the US administration will ultimately increase the tariff rate on $200 billion in Chinese imports from 10% to 25% in 2019, but impose no additional tariffs thereafter. While an escalation of trade tensions would put additional downward pressure on Chinese growth, it would likely trigger more aggressive policy easing, too. That would certainly help cushion the growth impact, but would also worsen China's already high debt levels. Meanwhile, a trade truce or a compromise that lowers existing tariffs would no doubt boost growth and lift sentiment, but could also warrant a resumption of China's deleveraging campaign, which would dampen growth. Put simply, high debt levels remain China's Achilles' heel.

While an escalation of trade tensions would put additional downward pressure on Chinese growth, it would likely trigger more aggressive policy easing, too.

India

India's GDP growth rebounded in 2018 to 7.5%, as the drag from the previous year's self-inflicted wounds—a new tax on goods and services, and the prolonged cash shortages that followed the government's "demonetization" initiatives—abated.[110] Rapid credit growth provided fuel to this rebound, supporting strong consumption and investment growth. As a result, India achieved the top rank in the global GDP growth tables last year, overtaking even China.

However, the recovery now appears to be running out of steam. Troubles in the non-bank financial sector have started to squeeze liquidity. Meanwhile, last year's surge in domestic demand and the lagged effect of higher oil prices have widened India's current account deficit just as external funding conditions are tightening. Against this backdrop, we expect GDP growth to return to trend levels this year, slowing to 6.8–7.8%. In turn, headline inflation should be close to the central bank's 4% target, in a range of 3.7–4.7%.

The risks to this view are tilted to the downside. With presidential elections occurring in May, the government is unlikely to rein in India's large fiscal deficit. Because funding that deficit requires foreign capital flows, India is vulnerable to sudden bouts of risk aversion in global financial markets. This risk is being exacerbated by the government's recent challenges to its central bank's independence, providing foreign investors with yet another reason to question directing capital into India.

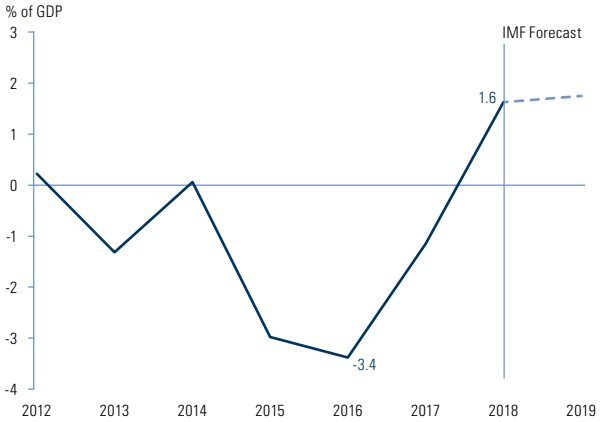
Brazil

While the Brazilian economy is still expanding after a deep recession in 2014–16, last year's 1.3% growth lagged broader EM performance on the back of a paralyzing truckers' strike and election-related uncertainty. The silver lining to last year's slowdown, however, is that the Brazilian recovery has ample runway before it exhausts the slack created during the last recession. In fact, real GDP still sits 5% below its pre-recession peak and unemployment remains elevated at almost 12%.

Based on the foregoing, we project GDP growth to accelerate to 1.8–2.8% in 2019 as last year's headwinds fade. Given the level of economic slack, inflation should remain steady at around 3.8–4.8%, well within the central

Exhibit 64: Russia's Fiscal Balance

Recent fiscal prudence provides the government with room to spend in response to negative shocks.



Data through 2018, forecasts through 2019.
Source: Investment Strategy Group, IMF, Haver.

bank's 2.8–5.8% target range. In turn, we do not expect restrictive central bank policy to hobble the recovery.

Even so, the inability of the new government to deliver on its market-friendly campaign promises—particularly implementation of much-needed pension reform—represents a downside risk. After all, these policies underpinned a surge in optimism among businesses and consumers alike. Failure to make progress on this front could therefore undermine confidence and foster market volatility, leading to lower growth and higher inflation.

Russia

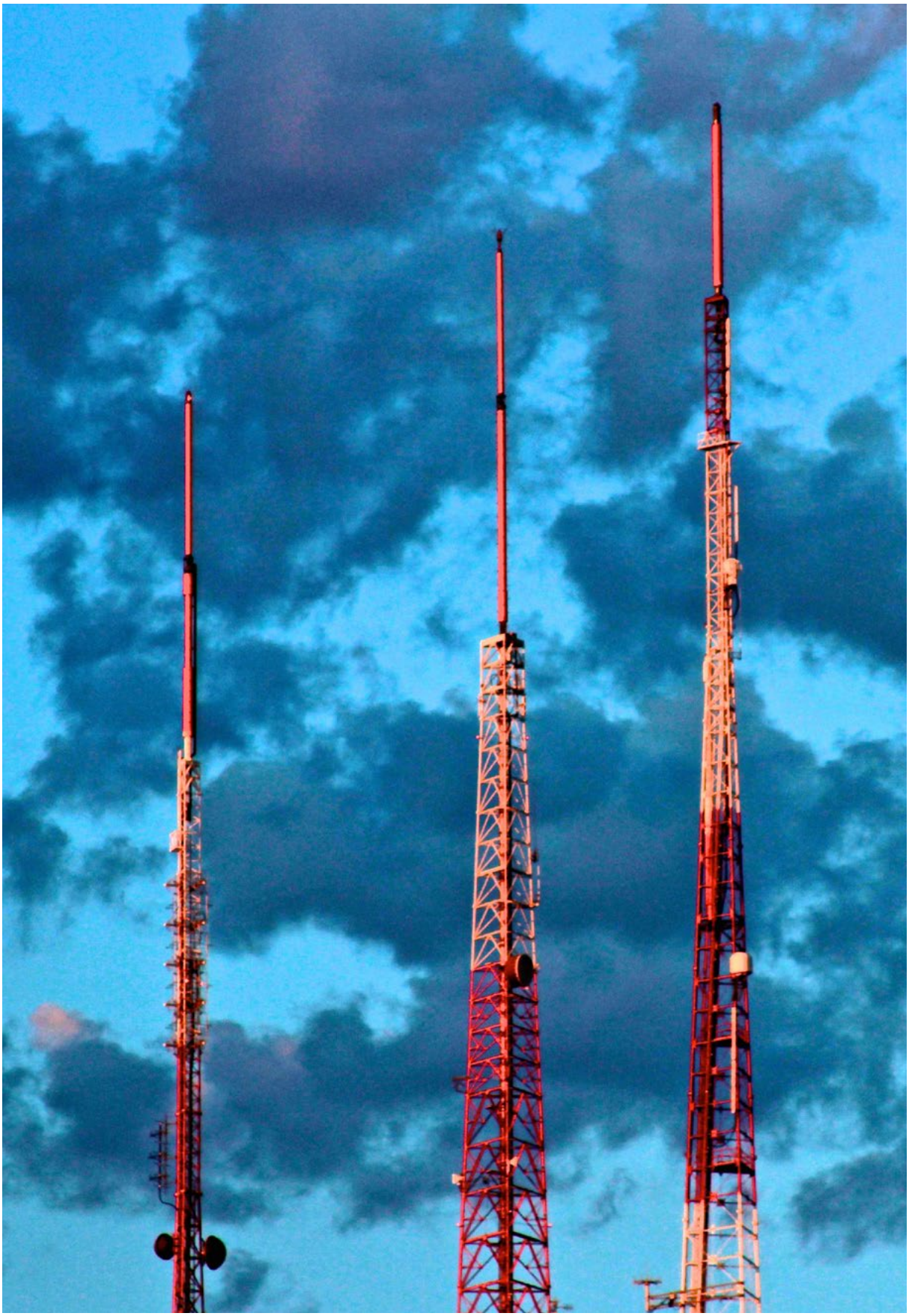
Russia's 1.7% GDP growth last year lagged broader EM, in a feeble recovery from its 2015–16 recession. This sluggishness is due in part to tight monetary policy. Consider that the central bank's real policy rate stands at 3.7%, among the highest rates across EM countries. The government's efforts to rebuild the fiscal coffers it drained during the recession have also weighed on growth. Indeed, Russia's fiscal budget went from a deficit of 3.4% of GDP in 2016 to a 1.6% surplus last year, a sizable fiscal consolidation over two years.

Given this shallow recovery, there is still a sizable amount of slack in the Russian economy, with real domestic demand still 6.4% below its pre-recession peak. Even so, we project real GDP growth to slow to 1.0–2.0% this year, as the tailwind from last year's higher oil prices fades. Moreover, the weaker ruble is likely to put upward pressure on inflation, which we expect to drift higher, toward 4.3–5.3%. While even lower oil prices and new sanctions pose important downside risks to this forecast, we note that recent fiscal consolidation provides the government with room to respond (see Exhibit 64).

2019 Financial Markets Outlook: Signal or Noise

LAST YEAR FEATURED AN EXODUS FROM RISK ASSETS on a scale that is typically seen only during recessions and financial crises. Consider that from their 2018 peak, global equities forfeited nearly $20 trillion of market capitalization, a staggering loss equivalent to the size of the US economy. Along the way, nearly three-fourths of US and global stocks fell at least 20% from their year-to-date highs, while the performance of global banks relative to the S&P 500 revisited lows not seen since the depths of the global financial crisis in 2008.[111]

What makes these statistics even more staggering is that 2018 had neither a recession nor a financial crisis. On the contrary, global GDP expanded at an above-trend pace, inflation in advanced economies remained benign at near 2% and corporate earnings grew at a healthy clip in most major economies, particularly the US. At the same time, par-weighted defaults in US corporate high yield were just 1.9%, well below their 3.6% long-term average.[112]



This glaring dichotomy seems to reflect a negative feedback loop between legitimate fundamental worries—such as slowing global growth—and a collapse of liquidity. Together, these factors are amplifying the worrisome signals being broadcast by the financial markets. For example, the liquidity of S&P 500 futures is 70% lower than it was a year ago, while the same measure for single stocks is 42% lower.[113] Similar dynamics are evident in the fixed income markets as well. In short, changes in market structure are making liquidity more negatively correlated with volatility than in the past.

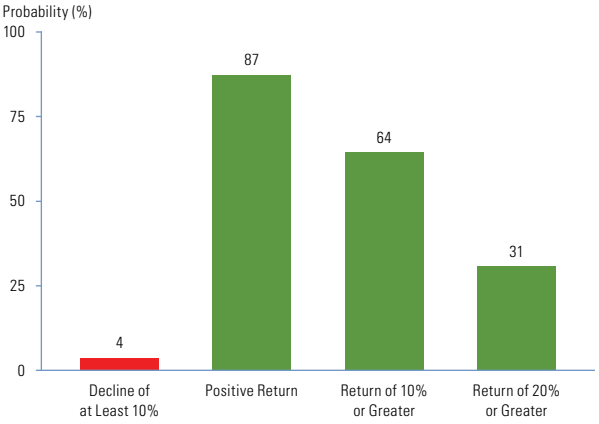
Being cognizant of this background is critical as we consider how much weight to give the recent market decline in shaping our views. While it is true that markets are forward-looking, they are also subject to the behavioral biases of their participants. As a result, prices can often become dislocated from underlying fundamentals.

We believe the recent downdraft is a case in point, as markets deteriorated more than fundamentals warranted. Accordingly, we expect risk assets to outperform cash and bonds this year and have tactically added risk as opportunities arose late last year. Put simply, growth scares are more common than recessions, and risk assets have delivered strong returns during episodes in which recession fears proved misbegotten.

Of course, fundamentals could always devolve in a way that makes today's worries look prescient. We are also not suggesting that recent market weakness is noise that should be entirely ignored. But as we survey our fundamental signals, we find they are still not consistent with a recession this year. As a result, we do not recommend that clients reduce their equity allocation. If those signals change, we stand ready to act upon them accordingly.

Exhibit 66: Odds of Various S&P 500 One-Year Total Returns During US Economic Expansions

Negative US equity returns are rare outside recessions.



Data as of December 31, 2018.
Note: Based on data since 1945.
Source: Investment Strategy Group, Bloomberg.

US Equities: Refueled

Last year witnessed a notable reversal of fortune for US equities. After advancing for 11 of the previous 12 quarters and reaching an all-time high in September, the S&P 500 plummeted nearly 20% in the final three months of 2018. Even worse, the decline left the S&P 500 down 4% for 2018 and down more than 10% year-over-year at its worst point on December 24, both rare occurrences when the economy is still expanding (see Exhibit 66).

Such an abrupt downdraft has understandably fostered concern that the longest bull market in history has run out of gas. That concern is not completely unwarranted. Today's confluence of macroeconomic headwinds—including slowing global growth, less accommodative policy and

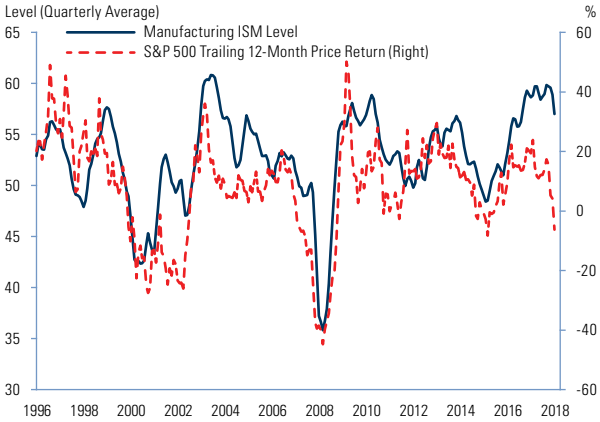
Exhibit 65: ISG Global Equity Forecasts—Year-End 2019

	2018 YE	End 2019 Central Case Target Range	Implied Upside from End 2018 Levels	Current Dividend Yield	Implied Total Return
S&P 500 (US)	2,507	2,640–2,740	5–9%	2.2%	7–11%
Euro Stoxx 50 (Eurozone)	3,001	3,100–3,190	3–6%	4.1%	7–10%
FTSE 100 (UK)	6,728	6,870–7,080	2–5%	5.1%	7–10%
TOPIX (Japan)	1,494	1,560–1,600	4–7%	2.6%	7–10%
MSCI EM (Emerging Markets)	966	985–1,045	2–8%	3.1%	5–11%

Data as of December 31, 2018.
Source: Investment Strategy Group, Datastream, Bloomberg.
Note: Forecasts have been generated by ISG for informational purposes as of the date of this publication. There can be no assurance the forecasts will be achieved. Indices are gross of fees and returns can be significantly varied. Please see additional disclosures at the end of this *Outlook*.

Exhibit 67: US Manufacturing ISM and Yearly S&P 500 Price Returns

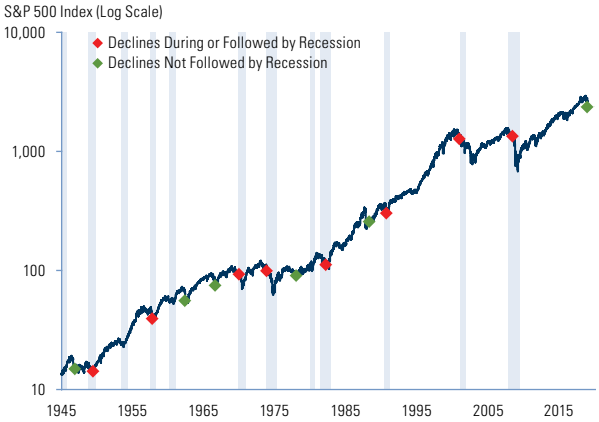
Equity markets are pricing in a higher probability of recession than we think is justified.



Data through December 31, 2018.
Source: Investment Strategy Group, Bloomberg.

Exhibit 68: One-Year Declines of at Least 10% in the S&P 500

Equity downdrafts of 10% or more have been far more frequent than recessions.



Data through December 31, 2018.
Note: Blue shaded areas denote periods of US recessions.
Source: Investment Strategy Group, Bloomberg.

rising geopolitical and domestic tensions—certainly increases the risk of a US recession. That same risk could arise from weakness in the equity market itself, which could ultimately bring about the very recession investors fear through a combination of tighter financial conditions, sagging business confidence and growing risk aversion. Already, some are pointing to the inversion of the short end of the Treasury yield curve—where 3-year yields briefly rose above 5-year yields—as evidence that a recession is imminent.

Still, we must be careful not to equate the *risk* of a recession with the *certainty* of one. While investors are justified in focusing on the risk of an economic slump—three-fourths of bear markets have occurred during such downturns—the recent equity rout implies a higher probability of a recession than we think is justified by the prevailing economic fundamentals (see Exhibit 67). As a very rough approximation, consider that the market typically declines by an average of 30% during a recession, so the recent decline of almost 20% implies 67% odds (20%/30%) of a recession. In contrast, we ascribe 15–20% odds to a recession in the next year, a topic we discuss at greater length in both Section I and Section II of this report.

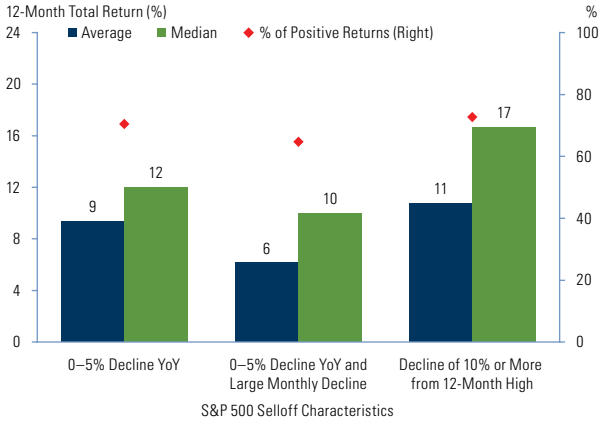
It is also worth highlighting that equity downdrafts of last year's magnitude—when the S&P 500 was down over 10% year-over-year at its worst point on December 24—have been far more prevalent than recessions, dispelling the notion that equity weakness invariably *causes* economic slumps. Exhibit 68 corroborates this point, showing that of the 13 episodes in the post-WWII period with a yearly decline in US equities of 10% or more, seven occurred *during* a recession. Of the other six episodes, only one was followed by a recession, in 2001. But at that time, unlike today, a variety of reliable indicators were already signaling recession. The remaining five instances were *not* followed by recession and every one of those generated a positive price return for US equities over the next 12 months, averaging 16%.

The positive skew of these equity returns likely reflects two dynamics that we think are relevant today. First, investors tend to overreact to slowing growth. When the slowdown is ultimately

Equity downdrafts of last year's magnitude have been far more prevalent than recessions, dispelling the notion that equity weakness invariably causes economic slumps.

Exhibit 69: S&P 500 Forward Returns Following Equity Selloffs When ISM Is in Expansion

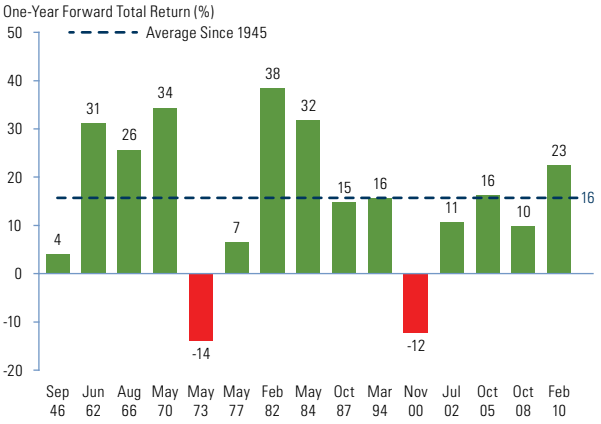
US equities tend to rebound from selloffs when the economy is expanding.



Data as of December 31, 2018.
Source: Investment Strategy Group, Bloomberg.

Exhibit 70: S&P 500 Returns Following 20% Declines in Trailing P/E Ratio

Subsequent returns are typically strong when P/E ratios decline as much as they did last year.



Data as of December 31, 2018.
Source: Investment Strategy Group, Empirical Research Partners.
Past performance is not indicative of future results.

shallower than feared, stocks typically rally in response. Second, forward returns tend to be above average when the market has fallen by as much as it had late last year because a significant amount of bad news has already been discounted (see Exhibit 69). For example, Exhibit 70 shows the forward returns following each instance when valuation multiples compressed by as much as they did late last year. Thirteen of the 15 episodes saw equities higher one year later, with an average total return of nearly 16%.

Several other observations are consistent with the idea that US equities might not yet be running on fumes:

Short-End Yield Curve Inversions Are an Early Signal: Inversion of the 5-year versus the 3-year yield spread has historically occurred an average of 19 months before the stock market peaks and more than two years prior to the onset of recession.

Investors tend to overreact to slowing growth. When the slowdown is ultimately shallower than feared, stocks typically rally in response.

In fact, six of the seven past market peaks occurred *after* the short-end curve inverted, implying new all-time highs for stocks in this cycle. Although the 1973 episode was an exception—the market peaked before the short-end curve inverted—a repeat of the OPEC-driven oil price spike that caused that recession is unlikely today given current oversupply concerns. Of equal importance, the average return from a short-end inversion to the subsequent market peak was 20–25%, while the worst drawdown over the same period was 7% (see Exhibit 71).

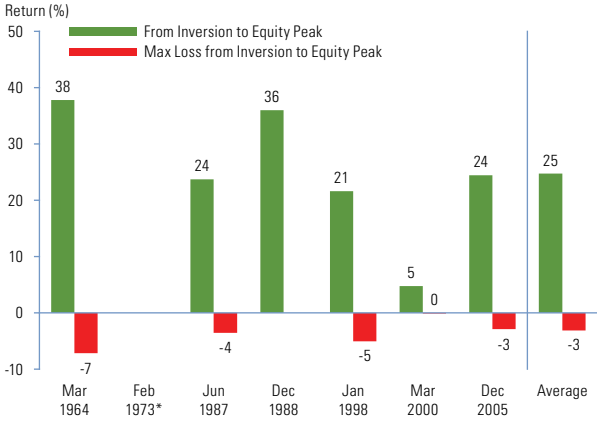
Other Yield Curves Are Positively Sloped: Although the more venerable and historically accurate recession-predicting yield curves—such as the spread between the yield on 10-year and 1-year Treasuries—have flattened significantly, they are currently positively sloped. Even if these curves do invert this year, their signals have historically preceded recessions by an average of 16 months.

This last point is important, because equity returns have typically remained favorable until about six months prior to a recession, highlighting the penalty for prematurely exiting the market (see Exhibit 72).

Other Post-Crisis Market Shocks Have Not Caused Recession: Last year's volatility is reminiscent of the 2011 and

Exhibit 71: S&P 500 Price Returns Following 5-Year/3-Year Yield Curve Inversions

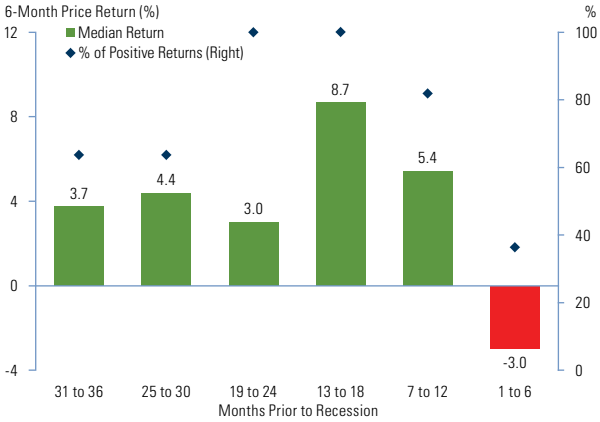
Stocks have had strong returns with a good risk profile after previous inversions of this curve.



Data as of December 31, 2018.
Note: Inversion dates are defined as the first date when the US Treasury 5-year/3-year yield spread became negative after being positive for at least one year.
Source: Investment Strategy Group, Bloomberg.
* The Feb 1973 signal came after the market peak.

Exhibit 72: S&P 500 Price Returns Leading Up to the Onset of Past Recessions

Equity returns have typically been favorable until about six months prior to a recession.

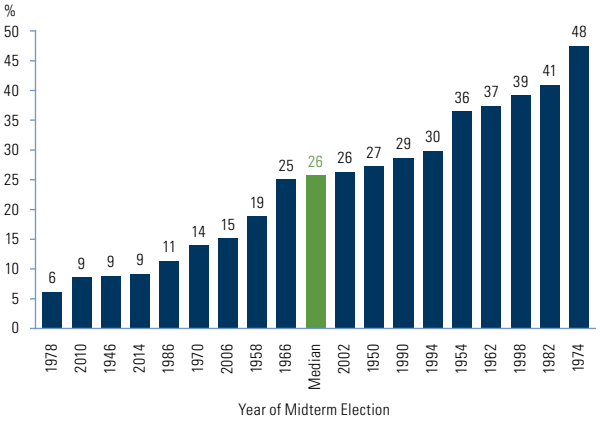


Data as of December 31, 2018.
Note: The start of recession is defined as the first of the NBER business cycle peak months.
Source: Investment Strategy Group, Bloomberg, NBER.

2015–16 market downdrafts, which saw volatility spike, the S&P 500 fall more than 15% from its peak and the initial market bottom eventually be undercut by lower prices. Yet crucially, neither of these three- to six-month episodes ultimately derailed the economic recovery or the bull market,

Exhibit 73: S&P 500 One-Year Forward Total Returns Following US Midterm Elections

Stocks have gained in every year following midterm elections in the post-WWII period.



Data as of December 31, 2018.
Note: Returns from the month before to 12 months after midterm elections.
Source: Investment Strategy Group, Bloomberg.

despite the fact that economic growth was slower, high yield spreads were wider and volatility was higher than today.

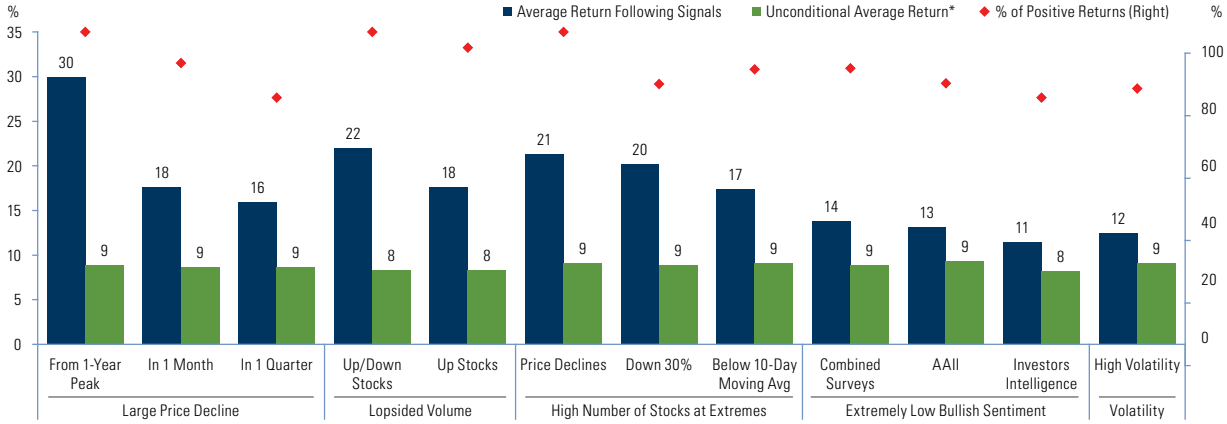
Odds Favor Remaining Invested in Expansions: Investors typically enjoy high odds of a positive return and low risk of large losses when the economy is expanding, as it is now (as shown earlier in Exhibit 66). Although last year's S&P 500 decline was a rare exception, the silver lining is that consecutive annual losses are uncommon historically. In fact, only three of the 15 annual declines recorded in the post-WWII period were followed by another year of losses: 1973, 2000 and 2001.

2019 Is the Sweet Spot of the Presidential Cycle: The pre-election year of the four-year presidential cycle has been the strongest for stocks in the past. Remarkably, stocks have gained in every year following midterm elections during the post-WWII period (see Exhibit 73). This tendency likely reflects the fact that the uncertainty associated with the election outcome dissipates over time.

Technical Extremes Suggest Favorable Risk/Reward from Current Levels: Even if we are wrong in our fundamental assessment and a recession is imminent, a number of technical market extremes

Exhibit 74: S&P 500 One-Year Forward Returns Following Various Extreme Technical Signals

A number of technical market extremes seen late in 2018 have been associated with well-above-average equity returns in the following year.



Data as of December 31, 2018.
Source: Investment Strategy Group, Bloomberg, SentimenTrader, Bespoke Investment Group, Lowry Research Corporation.
* Average return of any rolling one year over the same time period when the data of the respective technical signal exists.
Past performance is not indicative of future results.

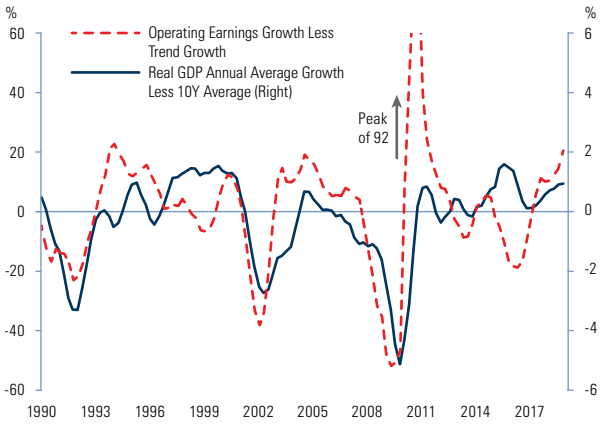
seen late in 2018—including the fact that more than a third of Russell 3000 stocks hit a 52-week low simultaneously, the paucity of stocks trading above their key moving averages and the lopsided volume flowing into declining stocks—have been associated with well-above-average equity returns in the following year (see Exhibit 74). Taken at face value, the average of these signals would imply an S&P 500 target of 2921 in 2019, with 89% odds of a positive return. Put simply, there are likely to be better market levels at which to reduce equity exposure even if one ascribes higher odds to recession than we do.

Slowing Growth ≠ Recession: While global growth has slowed, this trend is not tantamount to the onset of recession. After all, most economies are still experiencing above-trend growth. Arguably, the recent deceleration in activity lowers the risk of economic overheating and allows central banks to normalize policy gradually, elongating the business cycle.

This last point is important because the pace of US growth relative to its own trend is a key driver of US corporate earnings (see Exhibit 75). We expect earnings will continue to grow in 2019, albeit at a slower 3–6% pace reflecting mid-single-digit revenue growth and virtually unchanged profit margins. The low end of this range incorporates 2018's collapse in oil prices, which is likely to weigh on energy earnings this year (see Exhibit 76).

Exhibit 75: S&P 500 Operating Earnings Growth and US Real GDP Growth

Above-trend economic growth should continue to support US corporate earnings in 2019.

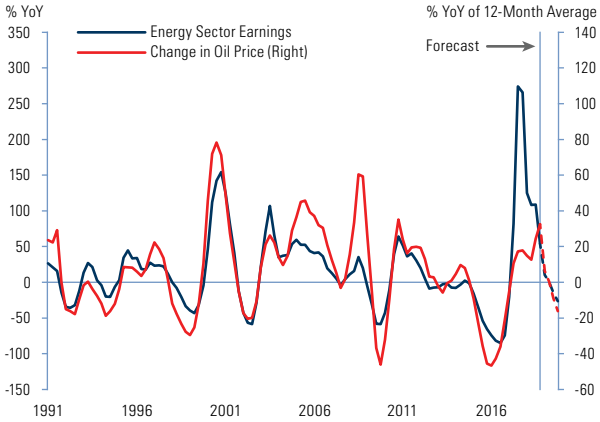


Data through September 30, 2018.
Note: Left axis is truncated; the series reached a peak of 92 in September 2010.
Source: Investment Strategy Group, Bloomberg, S&P, Haver.

Of course, slower earnings growth in 2019 implies that last year's third quarter may have represented the peak in earnings growth. It does not necessarily follow, however, that a peak in the S&P 500 is imminent. In fact, about three-

Exhibit 76: S&P 500 Energy Sector Earnings vs. Change in Oil Prices

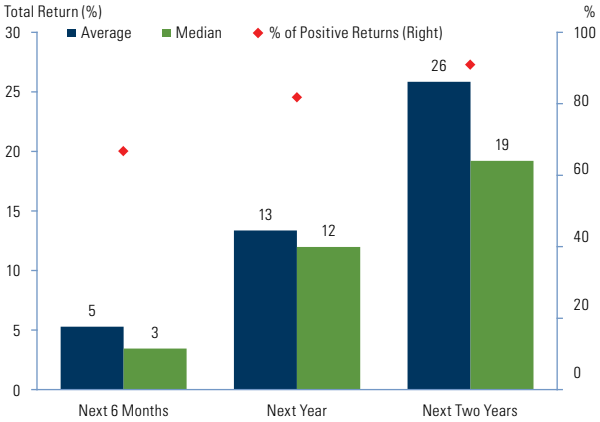
The 2018 collapse in oil prices will weigh on energy earnings growth this year.



Data through September 30, 2018, forecast through December 31, 2019.
Note: Oil price change is lagged by 2 months and explains 51% of the variance of the S&P 500 energy sector's earnings growth. Data past 2018 is a projection.
Source: Investment Strategy Group, Bloomberg, Intrinsic Research.

Exhibit 77: S&P 500 Forward Returns Following Peaks in Earnings Growth

Equity returns have remained healthy following a peak in the growth rate of earnings.



Data as of December 31, 2018.
Source: Investment Strategy Group, Bloomberg.

fourths of market peaks occurred more than two years after the peak in the growth rate of earnings. Moreover, stock market returns have remained healthy during this period, with high odds of a positive outcome over the subsequent 6–24 months (see Exhibit 77). In short, the market ultimately follows the path of earnings and while earnings' growth rate may be slowing, their absolute level is still rising.

Based on the foregoing, our central case envisions a 7–11% total return for US equities this year, reflecting 3–6% earnings growth, a 2% dividend yield and a modest increase in valuation multiples (see Exhibit 78). While it may appear overly optimistic to assume valuations will expand this late in the cycle, we note that trend P/E multiples currently stand *below* what our model suggests is justified by today's macroeconomic backdrop (see Exhibit 79). In addition, valuations have typically increased in environments of slower but still above-trend GDP growth (see Exhibit 80).

Although we have painted a less alarmist view of recent market weakness, we are by no means Pollyannaish. While bull markets do not die of old age, they do become more susceptible to ailments over time. This is particularly true in an environment of slower global growth, tighter financial conditions and visible geopolitical risks—all features of our 2019 forecast.

Yet as we survey these risks today, none appear material enough to topple the ongoing US expansion. Even if a recession materializes in 2019,

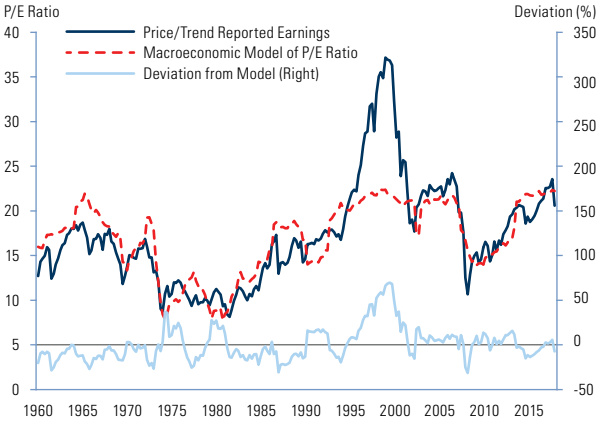
Exhibit 78: ISG S&P 500 Forecast—Year-End 2019

2019 Year-End	Good Case (25%)	Central Case (55%)	Bad Case (20%)
End 2019 S&P 500 Earnings	Op. Earnings $175 Rep. Earnings $158 Trend Rep. Earnings $133	Op. Earnings $166–171 Rep. Earnings $149–154 Trend Rep. Earnings $133	Op. Earnings ≤ $126 Rep. Earnings ≤ $96 Trend Rep. Earnings ≤ $133
S&P 500 Price-to-Trend Reported Earnings	22–24x	20–23x	15–16x
End 2019 S&P 500 Fundamental Valuation Range	2,860–3,125	2,590–2,990	1,990–2,125
End 2019 S&P 500 Price Target (Based on a Combination of Trend and Forward Earnings Estimate)	2,900	2,640–2,740	2,000

Data as of December 31, 2018.
Source: Investment Strategy Group.
Note: Forecasts and any numbers shown are for informational purposes only and are estimates. There can be no assurance the forecasts will be achieved and they are subject to change. Please see additional disclosures at the end of this *Outlook*.

Exhibit 79: S&P 500 P/E Ratio—Actual vs. Macroeconomic Model

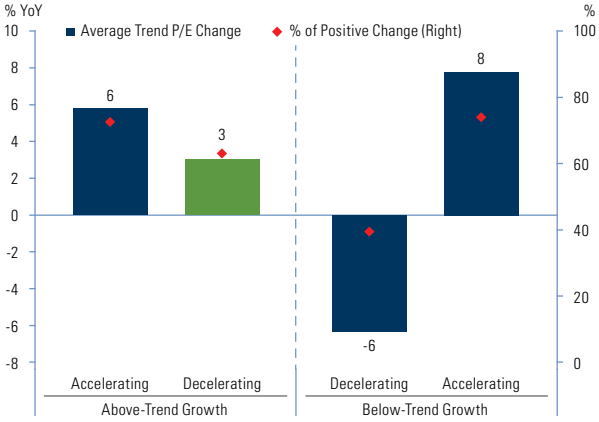
Today's valuation multiples stand below what the macroeconomic backdrop justifies.



Data through December 31, 2018.
Note: Macroeconomic model based on the US unemployment rate, inflation level and stability of inflation.
Source: Investment Strategy Group, Bloomberg, BLS, S&P Global.

Exhibit 80: S&P 500 Trend P/E Change in Different Economic Growth Regimes

Valuations have typically expanded in environments of slower, but still above-trend GDP growth.



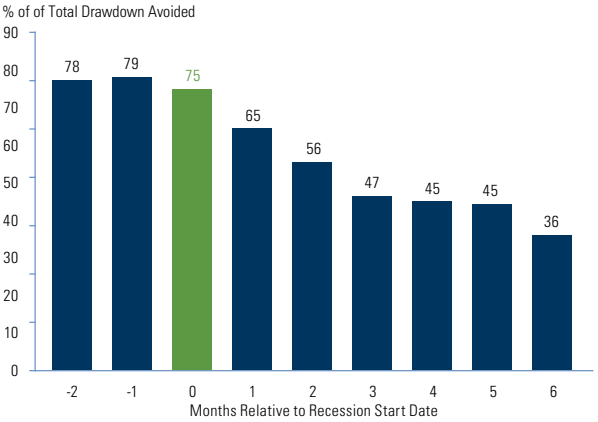
Data as of December 31, 2018.
Source: Investment Strategy Group, Bloomberg.

history has shown that around three-fourths of the total peak-to-trough decline in equities occurs *after* the recession has started (see Exhibit 81). This distinction is critical, because it is easier to identify when a recession has already begun than forecast the future arrival of one.

Given the lack of indicators signaling imminent recession and the improved upside potential

Exhibit 81: Percentage of S&P 500 Drawdown Avoided Relative to Recession Start Date

An investor who exited the market at the onset of a recession avoided about 75% of the total drawdown in the past.



Data as of December 31, 2018.
Note: Average across 11 post-WWII US recessions. Recession start date is defined as the first of the NBER business cycle peak months.
Source: Investment Strategy Group, Bloomberg, NBER.

of stocks after last year's downdraft, we have recommended that clients maintain their equity allocation. Should there be a significant increase in the odds of recession, it would likely provide the trigger—which has been lacking thus far—to tactically underweight equities.

Put simply, while last year's downdraft may have refueled the prospective returns of US equities, we need to keep a close eye on the gas gauge.

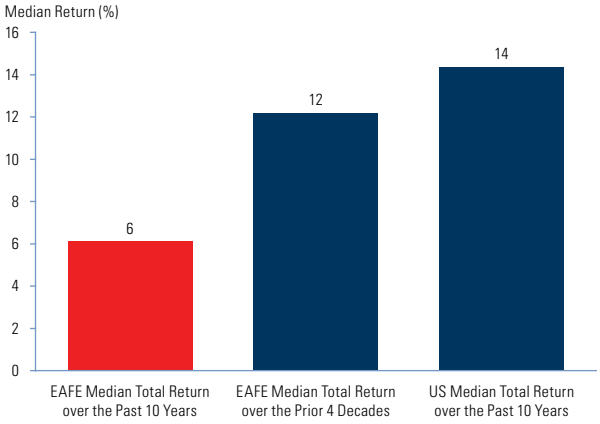
EAFE Equities: Growing Impatient

Patience among investors in Europe, Australasia and Far East (EAFE) equities is wearing thin. Despite strong earnings growth, EAFE equities nonetheless generated a negative total return last year, extending a decade-long period of disappointing performance. That's apparent in Exhibit 82, which shows that EAFE equities' 6% median annual total return over the last 10 years has been *half* that of the prior four decades.[114] Relative performance has been no better, as their median return has also lagged that of the S&P 500 by more than half over the same period.

Not surprisingly, investors are asking whether an allocation to EAFE equities is still justified, particularly given various downside risks. For example, the rise of populism across Europe could negatively impact the 62% of the index's market

Exhibit 82: EAFE Equities' Recent Returns in Context

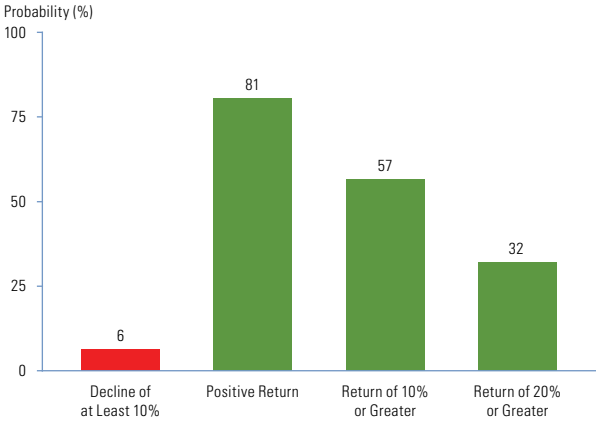
The median annual return in the last 10 years has been half that of the prior four decades.



Data as of December 31, 2018.
Note: Please see endnote 114.
Source: Investment Strategy Group, Datastream.

Exhibit 83: Odds of Various EAFE One-Year Total Returns During US Economic Expansions

EAFE equities have typically posted positive returns when the US economy is expanding.



Data as of December 31, 2018.
Note: Based on data since 1972.
Source: Investment Strategy Group, Datastream, Bloomberg, NBER.

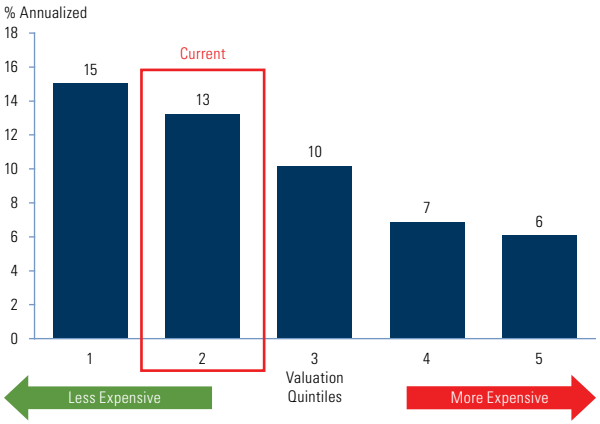
capitalization that is represented by European companies. Similarly, the third of the index's total revenue that is sourced internationally could come under further pressure from ongoing trade disputes. These concerns coupled with fears of slowing global GDP growth have already weighed on EAFE earnings growth expectations for 2019.

While these concerns are certainly legitimate, patience may yet prove to be a virtue this year for EAFE investors. Notably, the roughly 50% odds of a US recession implied by EAFE equities' 21% peak-to-trough decline last year seem high relative to our view of the underlying fundamentals.[115] Indeed, we place recession odds at a considerably lower 15–20% over the next year. This distinction is critical because EAFE equities have posted positive returns and upside surprises much more frequently than large losses when the US economy is still expanding (see Exhibit 83), partially a reflection of the economic spillover effect we discussed in Section II.

The current level of valuation has also rewarded investors with attractive returns historically (see Exhibit 84). Although valuations in EAFE equities have been less expensive than those in US equities for a number of years, last year's downdraft moved absolute EAFE valuations from their third to second quintile. This depressed level of valuation is typically seen only when EAFE countries are *already* in recession, again showcasing the degree of pessimism priced into these equities at present.

Exhibit 84: EAFE Equities' Valuation Quintiles and 5-Year Forward Total Return

Historical returns from current valuation levels have been attractive.

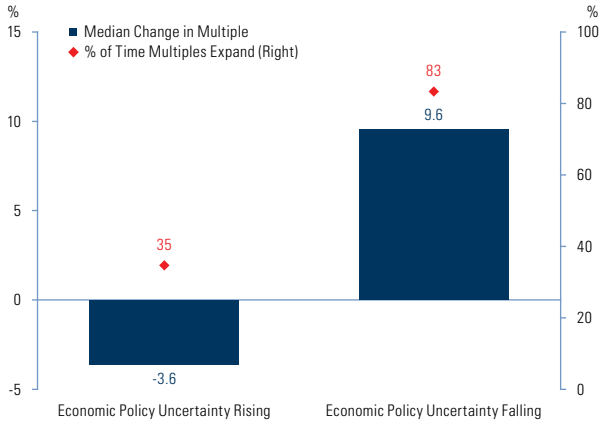


Data as of December 31, 2018.
Source: Investment Strategy Group, Datastream.
Note: Based on five valuation measures for the MSCI EAFE, beginning in 1982: price/book, price/10-year average cash flow, price/peak cash flow, price/10-year average earnings and price/peak earnings. These metrics are ranked from least expensive to most expensive and divided into five valuation buckets ("quintiles"). The subsequent realized, annualized five-year price return is then calculated for each observation and averaged within each quintile.
Past performance is not indicative of future results.

Our expectation of continued earnings growth this year should provide further fundamental support to EAFE equities. Even though global growth is set to slow in 2019, we nonetheless

Exhibit 85: Quarterly Change in EAFE Multiples When Economic Policy Uncertainty Is Elevated

Rising policy uncertainty could limit higher valuations in EAFE.



Data as of December 31, 2018.
Source: Investment Strategy Group, Datastream, Economic Policy Uncertainty Index (www.policyuncertainty.com).

expect it to remain above its trend pace. This is of particular importance for EAFE companies because they tend to have high fixed costs, which means profit growth typically exceeds sales growth when the latter is positive. Based on the historical relationship between EAFE earnings and global growth, the slowdown we expect in 2019 would still imply that earnings will expand by 4%.

Of equal importance, we found no statistical difference between EAFE equities' returns in all years compared to years in which global growth was slowing. This somewhat counterintuitive result likely reflects the fact that slowing global growth dampens investors' expectations for earnings growth and hence provides a boost to the stocks that subsequently exceed them. It may also capture the fact that modest earnings growth has been associated with expanding valuation multiples in the past. Given the current degree of pessimism priced into the stocks across the major EAFE markets (Eurozone, UK and Japan), we expect this historical tendency to recur in 2019, albeit to a lesser degree than in the past given lingering uncertainties (see Exhibit 85).

In short, our 4% earnings growth estimate, coupled with modestly higher valuation multiples and a 3.8% dividend yield, results in a high-single-digit total return expectation for 2019.

Eurozone Equities: Pockets of Opportunity

Last year was a challenging one for Eurozone equities and a disappointing one for their investors. Despite generating healthy 7% earnings growth, Eurozone equities were ultimately battered by a combination of slowing Eurozone activity, renewed political uncertainty in Italy and rising fears of a global trade war. The net result was an 11% decline in the Euro Stoxx 50 Index as measured in local currency terms, its worst annual performance since Europe's sovereign debt crisis and double-dip recession in 2011.

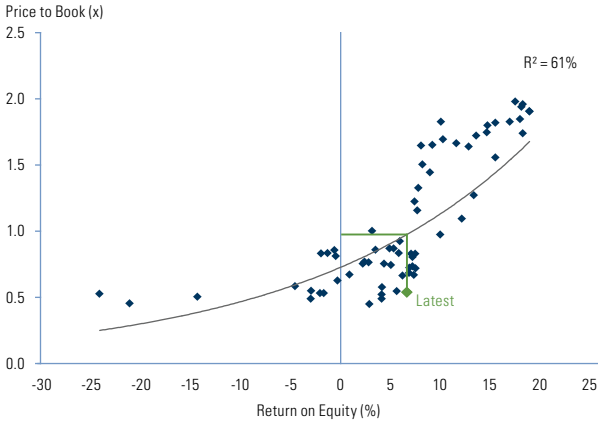
We are more optimistic about the Euro Stoxx 50's prospects in 2019. The decline in the Eurozone's valuation multiples in 2018 has typically been seen only during economic recessions, suggesting some insulation against further compression. At the same time, we expect earnings to grow by 4% on the back of GDP growth that is slowing but still above-trend. While this represents a slower pace of earnings growth than last year, it still implies a high-single-digit total return for the Euro Stoxx 50 when combined with the index's 4% dividend yield and our expectation for some improvement in valuation multiples.

We also see several pockets of tactical opportunity within Eurozone equities. As discussed in Section I, we are currently overweight Eurozone banks and Spanish equities (whose principal index has a 30% weight in financials). Both positions stand to benefit from the ultimate normalization of ECB monetary policy, even if that normalization consists only of the current ECB policy rate of -40 basis points becoming less negative. Moreover, valuations for both of these tactical views stand in the bottom quintile of their historical range, an area that has typically rewarded patient investors. As seen in Exhibit 86, this undervaluation signal is particularly compelling for banks.

We found no statistical difference between EAFE equities' returns in all years compared to years in which global growth was slowing.

Exhibit 86: Historical Relationship Between Eurozone Banks ROE and Price/Book Ratio

Eurozone banks are currently undervalued relative to their profitability levels.



Data as of September 30, 2018.
Note: Quarterly data since 2002.
Source: Investment Strategy Group, Bloomberg.

UK Equities: Separation Anxiety

The FTSE 100 was a victim of both its domestic and international exposures last year. At home, Brexit uncertainty had already dragged FTSE 100 returns into negative territory by last year's third quarter. Although weakness in the British pound would have typically provided a positive offset—given that three-fourths of FTSE 100 constituents' sales are derived internationally—this heavy foreign exposure became a liability late in the year as angst grew about slowing global growth. As a result, the FTSE 100 finished 2018 with a 9% loss.

These dual exposures could represent a double-edged sword for UK equities again this year. To be sure, a benign Brexit agreement that avoids the UK falling out of the European Union would be initially positive for FTSE 100 performance. Yet the ensuing acceleration in UK GDP growth, tightening of monetary policy by the BOE and sizable appreciation in the British pound would also raise the prices of UK exports and ultimately weigh on foreign demand for the goods and services of the FTSE 100's multinational constituents. After all, the FTSE 100 performed well in 2016 on the back of a collapsing British pound following the Brexit referendum. It therefore stands to reason that a reversal of that pound weakness could weigh on performance now.

Although the outcomes are somewhat binary, our base case assumes a benign Brexit outcome. Even so, we expect only a modest rise in the UK's currently depressed valuation multiples because uncertainty around the ultimate relationship between the UK and its trading partners will persist throughout the transition period. We also think the resulting appreciation in the British pound will weigh on FTSE 100 constituents' international sales, slowing earnings growth from 8% last year to 4% in 2019. Consequently, the FTSE 100's 5.1% dividend yield is the single largest contributor to our high-single-digit total return expectation.

Japanese Equities: Foreign Withdrawal

Although Japan may be a largely homogenous society, its equity market is surprisingly influenced by the whims of foreigners. That much is apparent in Exhibit 87, which shows that Japanese equity returns tend to be positively correlated with the net inflows or outflows of foreign investors. Last year was no exception, as Japanese equities' 16% decline in local currency terms coincided with the largest foreign outflows since the global financial crisis.

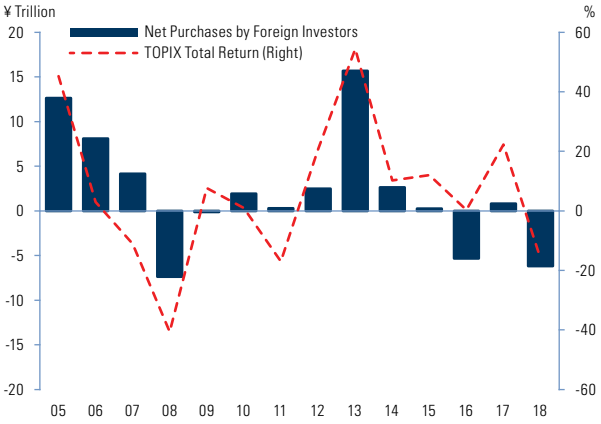
That exodus reflected foreign investors' concerns about Japan's vulnerability to slowing global growth and rising trade tensions. After all, nearly a fifth of Japan's exports go to China, making the visible deceleration of activity there a legitimate concern. Similarly, there is growing angst about the possible imposition of US auto tariffs on Japan, considering autos represent almost 40% of Japan's exports to the US.

Although these concerns are unlikely to vanish in early 2019, we think the bar is set relatively low for upside surprises. China has indicated a willingness to employ more easing measures to support growth this year, while the US has thus far been reluctant to enact auto tariffs given mixed support for them domestically. That Japan is also an important strategic ally in Asia—where the US is increasingly worried about Chinese hegemony—raises the hurdle for punitive auto tariffs even higher.

Against this backdrop, we expect foreign interest in Japanese equities to improve, helping to lift valuation multiples from their currently depressed second historical quintile. Combined with Japan's 2.6% dividend yield and our

Exhibit 87: Net Purchases of Japanese Equities by Foreigners and Japanese Equity Returns

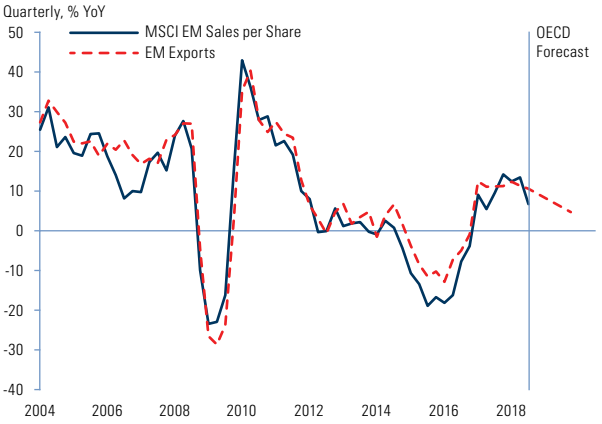
Japanese equity returns tend to be correlated with the net buying of foreign investors.



Data through December 31, 2018.
Source: Investment Strategy Group, Japan Ministry of Finance, Datastream.

Exhibit 88: MSCI EM Sales Growth vs. EM Export Growth

Waning export growth will weigh on EM sales growth this year.



Data through September 2018, forecast through December 2019.
Source: Investment Strategy Group, Bloomberg, OECD, Datastream.

expectation for about 3% earnings growth, these higher valuations result in a high-single-digit total return forecast this year.

Emerging Market Equities: The Eagle, the Dragon and the Bear

EM equities underperformed in 2018, declining 14% and ending the year 22% below their late-January highs. Several factors contributed to this selloff, including slowing EM economic growth, rising global interest rates and a more challenging financing environment for private companies in China amid the government's deleveraging campaign. Yet the most important driver of EM equities' bear market was undoubtedly the escalating trade conflict between the US and China. These frictions increased uncertainty, weighed on sentiment and dragged EM equity valuations lower.

We expect foreign interest in Japanese equities to improve, helping to lift valuation multiples from their currently depressed second historical quintile.

In fact, lower valuation multiples accounted for all of last year's losses, as EM earnings actually grew 8%. Not surprisingly, Chinese equities' 20% decline in 2018 was among the worst within emerging markets and the single largest drag on EM performance, given their 30% weight within the MSCI EM Index.

We believe US-China relations will remain a key driver of EM equity performance in 2019. In our base case, we expect EM earnings growth to slow to 4% this year, due to moderating economic growth across emerging markets and waning export growth (see Exhibit 88). Lower average oil and memory-chip prices in 2019 are also likely to weigh on the energy and technology sectors—the key drivers of EM earnings growth in recent years.

Even so, we think an increase in valuation multiples could partially offset this slower profit growth. After all, EM equity valuations contracted sharply last year on the back of escalating trade tensions, higher interest rates and a stronger US dollar. While we expect many of these macro headwinds to persist, their rate of change is likely to be less pronounced this year, providing scope for EM valuations to improve.

Based on the foregoing, we forecast that EM equities will generate a high-single-digit total return this year, including their 3% dividend yield. We see two-sided risks to this forecast,

largely driven by US-China relations. To wit, a rapid resolution of the trade conflict would likely support meaningfully higher valuations and hence stronger returns. In contrast, a further escalation in tensions would likely extend last year's underperformance. Needless to say, we expect developments around this multipronged conflict to continue to fuel headline-driven volatility in 2019.

Within EM equities, we are tactically overweight South African equities. Here, we are drawn to improving economic growth, strong earnings growth, attractive equity valuations, and favorable sentiment and positioning among institutional and foreign investors.

2019 Global Currency Outlook

The US dollar experienced a notable about-face in 2018. After weakening against every major currency in 2017 and the early part of last year, it staged a 9% rally beginning in February that reversed more than half of its cumulative losses. Both the breadth and magnitude of this outperformance were striking. The dollar's 4% gain last year bettered every major currency with the exception of the Japanese yen, which ended the year about 3% stronger against the dollar (see Exhibit 89).

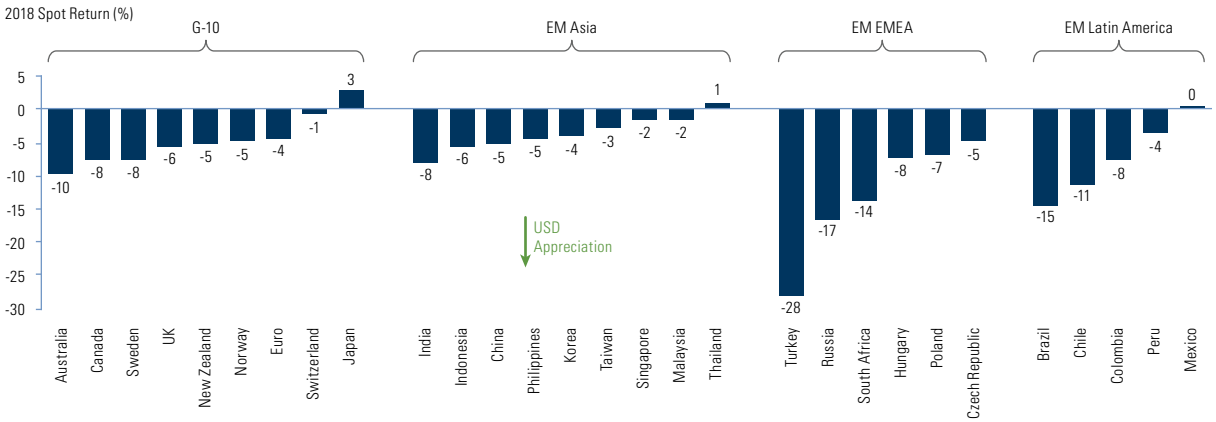
Although several factors underpinned this rise, stronger US GDP growth and tighter monetary policy were the primary drivers. Here, the US economy benefited from tax reform and other pro-cyclical fiscal stimulus measures that boosted growth and allowed the Federal Reserve to raise rates four times. In contrast, the rest of the world struggled to meet optimistic growth expectations set at the beginning of last year. The resulting GDP growth and policy rate differentials supported the greenback, as the markets repriced the ability of foreign central banks to keep pace with Federal Reserve hikes. This dynamic was particularly visible for the Swedish krona, which stood out as a clear underperformer.

Emerging market currencies were not spared either. Falling commodity prices, heightened tensions over global trade and several idiosyncratic political flare-ups weighed on EM currencies, reminding markets that growth and monetary policy are not the sole determinants of exchange rates. Against this backdrop, the Brazilian real, Turkish lira, Russian ruble and South African rand all suffered double-digit losses.

We expect the interplay of global growth and central bank policy to remain a critical driver of the US dollar this year, particularly as the positive impulse from last year's fiscal stimulus fades and the US economy grows at a slower rate. Importantly, we expect strength in certain currencies relative to the US dollar to be offset by weakness in others, yielding relatively flat returns for the greenback this year. Our tactical positioning reflects this view, as we are long the British pound but short the Japanese yen.

Exhibit 89: 2018 Currency Moves (vs. US Dollar)

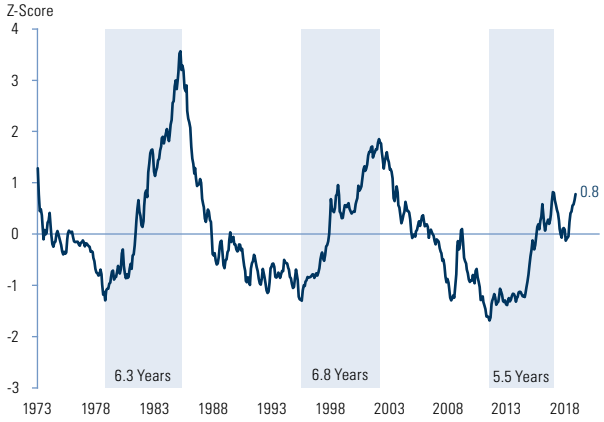
The dollar strengthened against nearly all major currencies in 2018.



Data as of December 31, 2018.
Source: Investment Strategy Group, Bloomberg.

Exhibit 90: US Dollar Real Effective Exchange Rate

Dollar valuations are back above their long-term average.



Data through November 30, 2018.
Note: Z-score is calculated on data since 1973 and represents the number of standard deviations from the mean. Shaded areas highlight periods of dollar strength.
Source: Investment Strategy Group, Datastream.

US Dollar

The US dollar has appreciated in five of the last six years. That run has left it 37% above the low it established at the onset of the global financial crisis. Moreover, its valuation now stands above its long-term average (see Exhibit 90). With such persistent outperformance spanning a half decade, it is reasonable to question the continued longevity of the dollar's bull market.

To be sure, several of the drivers behind this outperformance are likely to remain in place this year. For instance, we expect US growth to again outpace that of developed market peers in the Eurozone and Japan, even as it slows closer to its own trend level later in the year. In turn, the Federal Reserve will likely raise interest rates one or two times, resulting in a tighter monetary stance than either the ECB or BOJ is likely to take. These policy and growth differentials should again entice foreign investors to favor US-dollar assets at the expense of lower-yielding alternatives, providing a tailwind to the greenback. The dollar could also be pushed higher by an increase in the tariffs the US imposes on its trading partners' exports, as these put upward pressure on domestic inflation and thereby justify tighter monetary policy. Finally, while valuations are no longer depressed, they still have scope to reach the levels seen in previous dollar bull markets (see Exhibit 90).

That said, the risks are not completely one-sided. After all, much of the dollar's strength in recent years reflected investors' anticipation of tighter policy by the Federal Reserve. Yet with the Federal Reserve now within one to two hikes of its estimated neutral policy rate, that tailwind is fading rapidly. At the same time, investors are already long the US dollar, have low expectations for foreign GDP growth and doubt the potential for tighter policy in either the Eurozone or Japan, setting a high bar for dollar-friendly surprises. Lastly, it goes without saying that an economic contraction in the US would challenge the dollar's multiyear bull trend, although we think the odds of that outcome are only 15–20% this year.

In short, although we expect the dollar to rise in 2019, that appreciation is likely to be more modest and more dispersed against other global currencies than was the case last year.

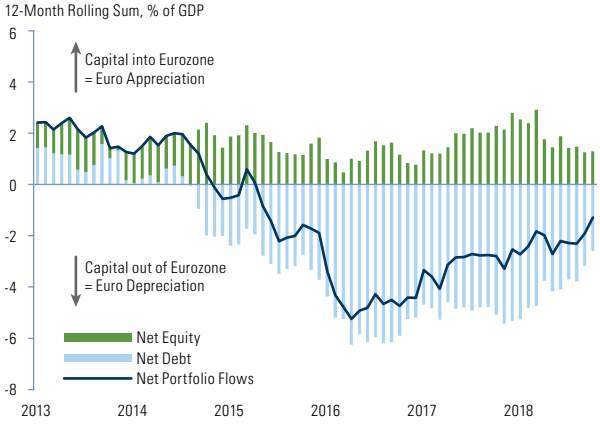
Euro

The euro was a prime casualty of the US dollar's strength in 2018, forfeiting nearly a third of the previous year's gains. In fact, last year's modest 4% annual decline actually masked a much larger 9% drop from the euro's intra-year peak. Although disappointing economic growth and increased political tensions after the Italian elections were key culprits, last year's weakness continues a trend of losses in four of the last five years since the ECB announced plans to cut its deposit rate to below zero for the first time in history.

The silver lining of this persistent weakness is that the euro—which now stands nearly 20% below its 2014 peak—offers a more attractive risk/reward profile this year. Indeed, because current market pricing reflects higher interest rates in the US, investors could flow back into the Eurozone if US growth disappoints and the Federal Reserve's tightening path is paused (see Exhibit 91). It is also possible that Eurozone

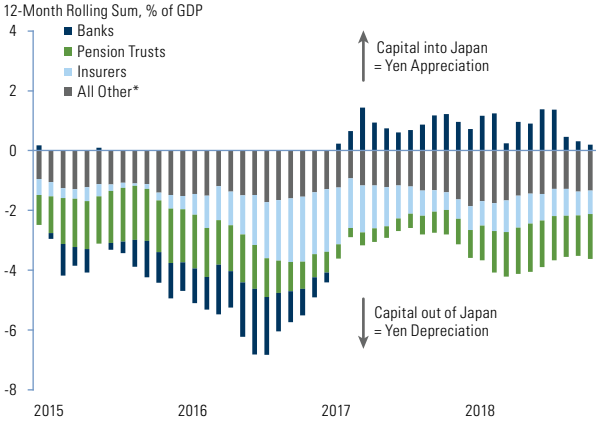
Although we expect the dollar to rise in 2019, that appreciation is likely to be more modest and more dispersed against other global currencies than was the case last year.

Exhibit 91: Eurozone Net Portfolio Flows
Investor flows could return to the Eurozone if US growth disappoints and the Fed's tightening path is paused.



Data through October 31, 2018.
Source: Investment Strategy Group, Haver.

Exhibit 92: Japanese Net Purchases of Foreign Securities by Investor Type
Additional selling of domestic assets by Japanese investors could put downward pressure on the yen.



Data through November 30, 2018.
Note: Bank transactions are typically currency-neutral and do not impact exchange rates.
Source: Investment Strategy Group, Haver.
* All Other defined as central bank, general government, financial instruments firms, investment trust management companies and others.

growth could surprise to the upside this year as political tensions are eased, justifying a less dovish stance by the ECB. Both scenarios would likely strengthen the euro. Already, recent flow data suggests European investors have slowed their sales of European assets in search of higher-yielding US alternatives, reducing a key drag on the euro.

Even so, we are also mindful of the numerous headwinds still facing the euro. Eurozone growth has disappointed expectations in three of the last five years. Even worse, that trend could persist this year on the back of ongoing political discord, whether related to Brexit, Italian politics or continued populist protests in France. Needless to say, it is difficult to imagine the ECB lifting policy rates without economic growth and inflation moving higher.

In light of these various cross-currents, we are tactically neutral on the euro at this time.

Yen

Last year frustrated yen bulls and bears alike. After climbing 18% versus the dollar during the first quarter, the yen forfeited nearly that entire advance by year-end. The net result was a modest 3% gain that clearly belied the currency's intra-year volatility.

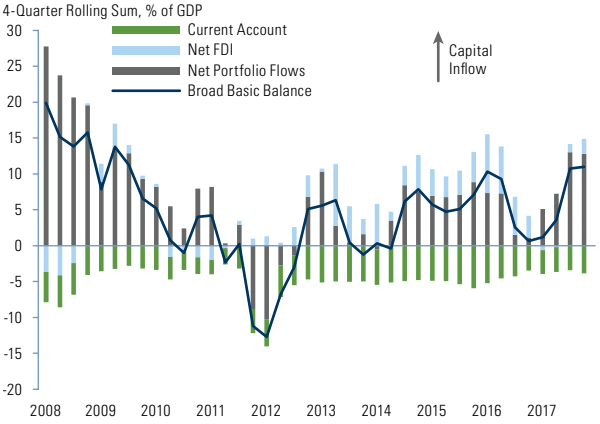
Although this marked the yen's second consecutive year of gains, there are several reasons to doubt further yen strength. First, the BOJ will likely keep policy rates negative or at least close to zero this year. After all, inflation remains far from its target and lower oil prices are only likely to worsen that differential. Furthermore, with a yield of close to 0% for 10-year Japanese government bonds, Japanese investors will continue selling low-yielding domestic assets—placing downward pressure on the yen—in order to fund purchases of higher-yielding offshore assets (see Exhibit 92).

Japan's Government Pension Investment Fund (GPIF)—which manages the world's largest public pension—is a case in point, as it has capacity within its stated portfolio targets to sell domestic fixed income assets in favor of foreign investments. Similarly, Japanese life insurers may increase their exposure to foreign currencies if interest rate differentials between the US and Japan remain wide. Finally, Japanese corporations are likely to sell yen to invest in foreign operations with better growth prospects and diversify their domestic risk if trade tensions rise, and this move will also place downward pressure on the Japanese currency.

Based on the foregoing, we remain tactically short the yen, but acknowledge that materially slower global growth and/or a notable rise in global uncertainty could lead investors back into the yen as a safe haven and highly liquid hedge.

Exhibit 93: UK Basic Balance

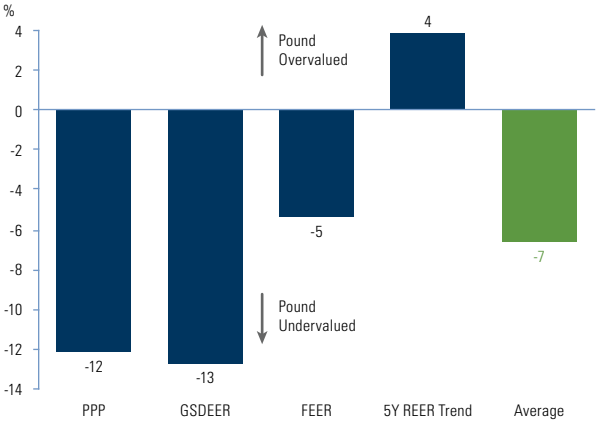
The UK relies on foreign investment to fund its sizable current account deficit.



Data through Q3 2018.
Source: Investment Strategy Group, Haver.

Exhibit 94: British Pound Long-Term Valuation Measures

The pound remains undervalued across a variety of metrics.



Data as of December 31, 2018.
Source: Investment Strategy Group, IMF, BIS, Goldman Sachs Global Investment Research, PIIE.

Pound

Along with most of its developed market peers, the British pound weakened against the US dollar last year, finishing 6% lower. This marked a continuation of the pound's volatile pattern of annual returns since it initially plunged 20% in the wake of the UK's 2016 vote to leave the European Union. With the official March 29 EU-withdrawal date quickly approaching, additional downside pressure on the pound cannot be ruled out.

Even so, we see scope for the pound to strengthen in 2019, albeit with continued volatility as Parliament debates the terms of separation during the early weeks of the new year. A core element of our constructive view is predicated on the UK avoiding a "hard Brexit." To be sure, there remain many unresolved issues even after more than two years of debate, including future access to the EU Single Market and frictionless movement within the island of Ireland. Moreover, ideological fissures within the ruling Conservative Party have hobbled Prime Minister Theresa May's political standing and undermined her ability to negotiate the UK's withdrawal goals with the European Union.

Still, we believe that either a withdrawal extension or an agreement that leaves the UK with preferred access to the European market is more likely than the UK falling out of the EU. The underlying assumption of this view is that a hard Brexit would be economically and politically disastrous, making an eventual negotiated settlement highly likely. It goes without saying that a disorderly breakup or early election that brings in a market-unfriendly Labour-led government would be negative for the pound, but the probability of such outcomes is low.

We believe the pound also benefits from several other tailwinds. For example, the Bank of England may need to raise interest rates sooner than markets now expect, as average wage growth has reached its highest level in over a decade amid the lowest jobless rate since the mid-1970s. Higher domestic yields would make pound-denominated assets more attractive to foreign investors, particularly from Japan and the Eurozone, where interest rates remain historically low. Moreover, foreigners continue to buy pounds to invest in UK-domiciled assets and firms, which are vital to funding a current account deficit that stands at 3.8% of GDP (see Exhibit 93). Market participants are also already well positioned for further pound weakness. Those positions may become vulnerable if the UK reaches a favorable withdrawal agreement with the European Union and the domestic UK economy remains resilient. Finally, the pound remains undervalued across a variety of metrics (see Exhibit 94).

Based on the foregoing, we maintain a tactical long position in the British pound.

Emerging Market Currencies

Not much went right for EM currencies last year. The US dollar weakness that had bolstered returns in 2017 reversed, triggering a nearly 10% decline (in trade-weighted terms) in the asset class in 2018.

At the same time, higher US yields increased the vulnerability of the EM economies most dependent on global capital flows, magnifying the negative impact of policy mistakes in Argentina and Turkey and of the election of populists in Mexico and Brazil. Furthermore, escalating trade tensions between the US and China—coupled with tighter sanctions on Russia, Iran and Venezuela—weighed on sentiment among EM investors.

The outlook for 2019 is mixed. On the one hand, EM currencies could benefit from the return to a weaker US dollar on the back of slower Federal Reserve rate hikes. They could also benefit from progress between the US and China on a trade deal, as this could reduce EM currencies' now-elevated risk premiums. In addition, a few vulnerable EM economies, like Turkey, have improved their resilience against future shocks by raising rates and allowing their currencies to depreciate. Finally, investor positioning is less of a headwind for the asset class this year, as the extreme overweight allocations that prevailed last year have been reduced.[116]

On the other hand, many emerging economies still face downside risk that will keep them vulnerable to "growing concerns about resilience and policy credibility."[117] We see four main challenges this year. First, the slowing global growth we expect is likely to dampen emerging market export growth, a key pillar of EM currency strength. Second, the additional US rate hikes we expect—albeit fewer than before—could weigh on EM currencies, as could modest dollar appreciation. Third, continued uncertainty around trade policy—particularly the trade war between China and the US—could exacerbate any downdraft. Finally, renewed concerns about depreciation of the Chinese renminbi on the back of the trade war and looser monetary policy in China could also pose a headwind.

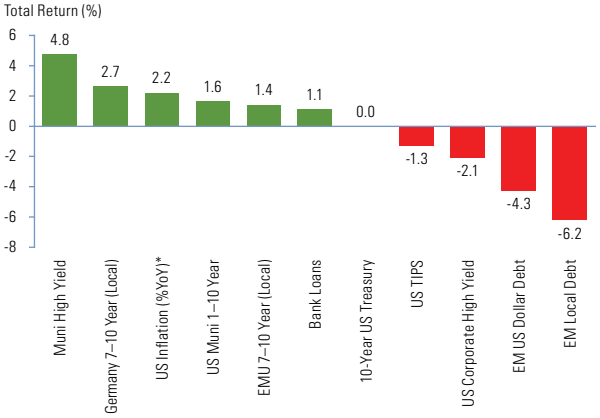
In light of these various cross-currents, we are tactically neutral on EM currencies at this time, but continue to watch these developments closely for potentially attractive opportunities.

2019 Global Fixed Income Outlook

Last year saw divergent paths emerge within fixed income. Whereas government bond yields increased in the US on the back of stronger growth and Federal Reserve rate hikes, they declined in the Eurozone as growth slowed and political risks intensified. Meanwhile, the same burgeoning recession fears that caused spreads to widen late last year also benefited high-quality, longer-duration fixed income as interest rates fell. These divergences—both across borders and within the asset class itself—are clearly evident in the distribution of last year's returns (see Exhibit 95).

Exhibit 95: Fixed Income Returns by Asset Class

Fixed income performance saw wide dispersion in 2018.



Data as of December 31, 2018.
Source: Investment Strategy Group, Datastream.
* Inflation data as of November 2018.

We expect global interest rates to recoup a portion of late last year's declines as 2019 progresses. This recovery will be aided by continued economic growth that further reduces already scant amounts of economic slack and lifts interest rates across the G-4. Meanwhile, the flight-to-safety premium currently embedded in sovereign bond yields is likely to compress as evidence emerges that the UK is achieving a smooth Brexit transition, US-China trade rhetoric is de-escalating and China is supporting growth through policy fine-tuning. Lastly, it is likely that G-4 central banks' declining bond purchases will gradually lift bond term premiums, just as their quantitative easing programs suppressed term premiums in recent years. This shift is already well underway: the Federal Reserve started shrinking its balance sheet more than a year ago, the ECB ended its purchase program in December and even the BOJ has slowed its pace of purchases, although it remains committed to buying up to ¥80 trillion in JGBs a year if needed.

Still, it is important to distinguish between a normalization of interest rates and a disorderly

backup. The recent collapse in oil prices, slowdown in global growth and risk aversion related to trade uncertainty are all disinflationary forces that are likely to keep price pressures at bay despite continued economic growth and low unemployment in many countries. After all, core inflation is already nearly one percentage point below the ECB and BOJ targets. Moreover, better-anchored inflation expectations have made consumer prices far less responsive to low unemployment rates in the US today than in the past. The net issuance of Treasuries is also expected to decline this year, alleviating a source of upward pressure on yields. Finally, ongoing concern about the longevity of the global expansion—evident in the continued flattening of global yield curves—will likely limit the extent to which currently depressed term premiums reprice higher.

Although we expect only a modest increase in global interest rates, bonds are still likely to underperform cash given today's meager coupon levels. We therefore favor credit risk over duration risk, expressed through a long position in US corporate high yield credit versus investment grade fixed income.

Even so, investors should not completely abandon their bond allocation in search of higher yields. As last year reminded us, high-quality bonds still offer attractive hedging properties against unexpected shocks, in addition to reducing portfolio volatility and generating income.

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

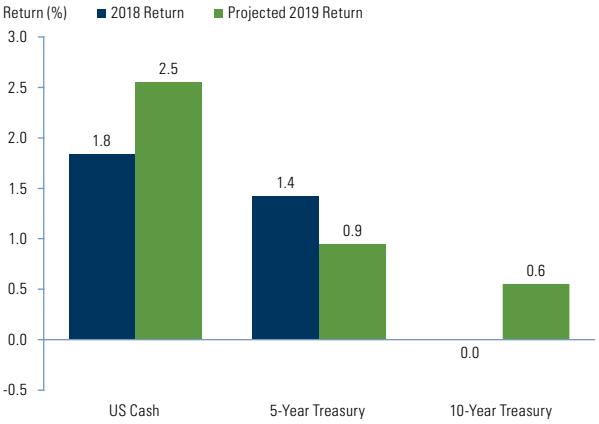
US Treasuries

Last year was a tale of two halves for US Treasury investors. Consider that the yield on 10-year Treasury bonds increased more than 70 basis points by mid-May, inflicting a 5.1% loss on bond holders. But a bout of global risk aversion in the last two months of 2018 saw bond yields fall sharply, generating a comparable 5.4% gain. The net effect of these swings was offsetting, leading to flat returns for the year and a year-end 10-year Treasury yield of 2.68%.

We expect the dramatic decline in 10-year yields that unfolded late last year to be at least partially reversed in 2019, with a year-end target range of 2.75–3.25%. A linchpin of this view is our expectation for US growth to continue at a pace that is above trend. In turn, the Federal Reserve will have justification to deliver one or two additional hikes this year, with the ultimate number dictated by the pace of US growth and the evolution of financial conditions. On the last point, it is also likely that some of the concerns that pushed yields lower last year—including trade tensions, slowing global growth and US recession fears—will recede over the course of the year. Indeed, the trade rhetoric between the US and China has softened in recent weeks, China has indicated a willingness to support growth through policy fine-tuning and US growth remains above trend, despite recent softening.

Exhibit 96: 2019 US Treasury Return Projections

We expect cash to outperform Treasuries again this year.



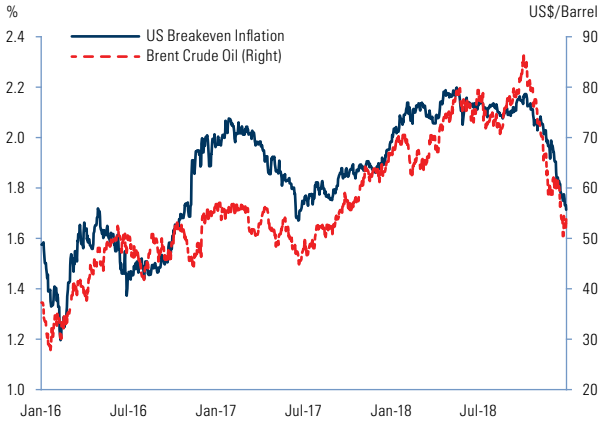
Data as of December 31, 2018.
Source: Investment Strategy Group, Bloomberg.

Of course, we are also mindful that events could evolve in a way that leads the Federal Reserve to abandon further hikes altogether. Here, we are acutely focused on the continued flattening of the various yield curves we follow, which in some cases are now just basis points above inversion. The bond market is clearly signaling its worries about the growing risks of recession. Still, with few other markers of recession currently flashing warning signals and the more venerable curves remaining positively sloped (albeit by a narrow margin), recession is a risk to our forecast, not our base case. Moreover, with markets pricing no hikes this year, there are upside risks to interest rates if growth conforms to the Federal Reserve's forecasts, which is our expectation.

Although we expect another year in which cash outperforms US Treasuries (see Exhibit 96), the hedging benefits of duration were evident in last year's late flight to quality as 5-year Treasuries

Exhibit 97: Oil Prices and 10-Year Inflation Breakeven Rates

Collapsing oil prices contributed to lower inflation expectations in the fourth quarter of 2018.



Data through December 31, 2018.
Source: Investment Strategy Group, Bloomberg.

returned nearly two percentage points more than 3-month bills in the fourth quarter. In turn, we encourage clients to gradually adjust their duration targets back toward their strategic benchmark this year as yields rise.

Treasury Inflation-Protected Securities (TIPS)

After benefiting from breakeven inflation rates that ground higher for most of last year, TIPS performance was undermined in the fourth quarter by collapsing oil prices and global growth concerns that pressured market-implied inflation expectations (see Exhibit 97). In fact, breakeven inflation rates finished last year at just 1.7%, while the Federal Reserve's preferred measure—five-year average inflation, five years from now—stands at just 1.8%. Both of these readings are below the Federal Reserve's formal inflation target as well as the consensus of professional forecasters, implying that there is a sizable negative inflation premium in the TIPS markets.

From these depressed levels, breakeven inflation rates will likely increase in 2019 on the back of modestly higher wages given continued US growth and the lagged effect of US tariff policies. Moreover, there is less scope for further oil price declines from current levels, particularly given OPEC's recent production cuts and stated willingness to do more to support prices. A stabilization of risk sentiment that boosts growth and inflation expectations should also support TIPS prices.

Based on the foregoing, we expect positive total returns from TIPS in 2019. That said, TIPS' absolute returns are expected to be modest, as their seven-year duration will make it difficult for coupon income to meaningfully exceed principal losses as rates rise. Furthermore, given TIPS' unfavorable tax treatment, we continue to advise US clients with taxable accounts to use municipal bonds for their strategic allocation.

US Municipal Bond Market

Municipal bonds were a relative bright spot in investor portfolios last year. Despite higher interest rates across maturities that weighed on Treasury returns, intermediate municipal bonds nonetheless delivered a 1.6% gain. Their outperformance was driven by a supportive supply-demand backdrop, characterized by a double-digit-percentage decline in issuance. Lower municipal-Treasury yield ratios also helped absorb some of the drag from rising interest rates.

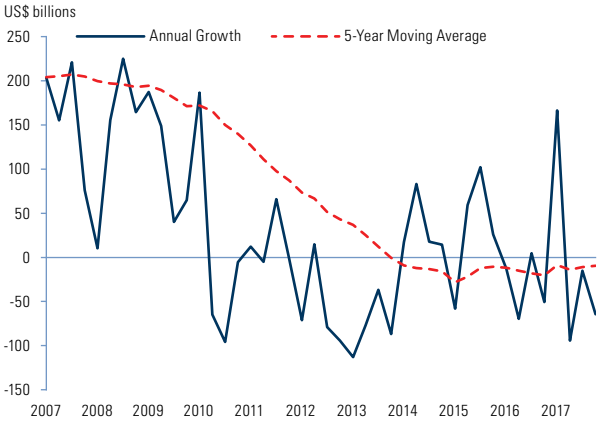
Many of the tailwinds that benefited municipal bonds last year are likely to persist in 2019. For instance, forecasts point toward muted net issuance this year—as new issuance will be largely offset by maturing debt—and thus to a continuation in the trend of limited supply that has supported municipal bond prices (see Exhibit 98). Retail demand for tax-efficient income is also likely to help, particularly since today's 2.2% yield for the intermediate strategy is the highest since 2011.

Meanwhile, municipal fundamentals remain supportive. State tax revenues are expected to grow 3.5–4.5%, according to Moody's, supported by continued above-trend US economic growth. At the same time, governments have exercised restraint in capital spending, with real-structures spending

The recent collapse in oil prices, slowdown in global growth and risk aversion related to trade uncertainty are all disinflationary forces that are likely to keep price pressures at bay.

Exhibit 98: Net Municipal Market Growth

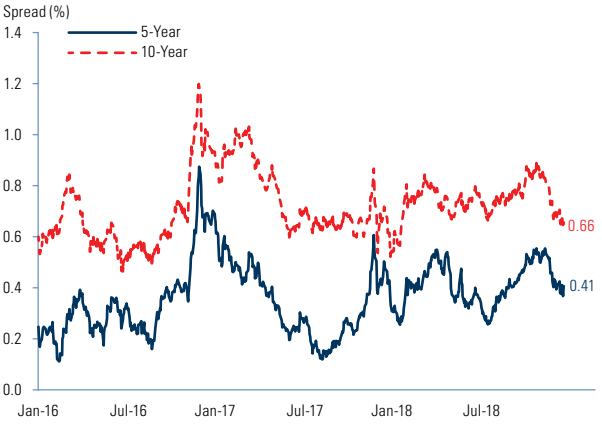
Muted new issuance of municipal bonds—as forecast for this year—could continue to support prices.



Data through December 31, 2018.
Source: Investment Strategy Group, Federal Reserve Board, Haver.

Exhibit 100: Incremental Yield of Municipal Bonds Over Treasuries

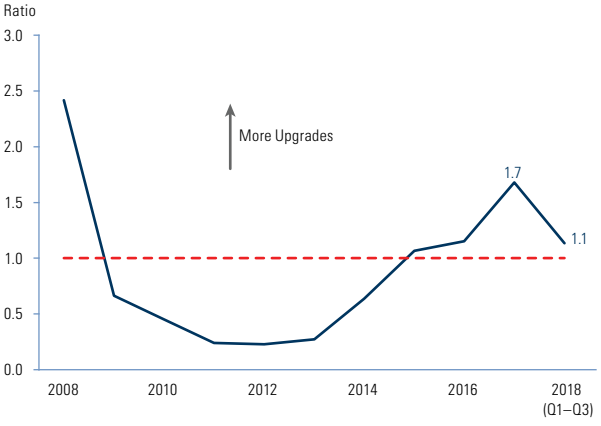
Current incremental after-tax yields of municipal bonds over Treasuries are below long-term levels.



Data through December 31, 2018.
Note: Spread of AAA municipal bond yields over after-tax Treasury yields.
Source: Investment Strategy Group, Bloomberg.

Exhibit 99: Moody's Municipal Issuer Rating Upgrade-to-Downgrade Ratio

Upgrades have outpaced downgrades for five consecutive quarters in the Moody's universe.



Data through September 30, 2018.
Source: Investment Strategy Group, Moody's.

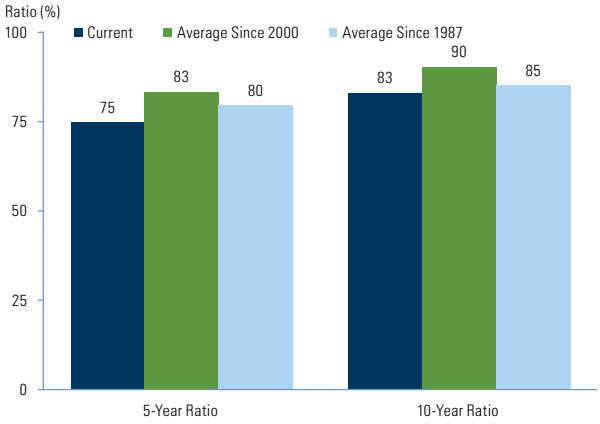
down 15% from 2007 levels. The combination of strong revenue growth and fiscal discipline has resulted in a steady trend of credit-rating upgrades, which have outpaced downgrades five quarters in a row (see Exhibit 99). Lastly, while underfunded long-term pension liabilities remain a source of concern, we do not think this will be a primary focus in 2019 given that aggregate funding levels are holding steady at around 72%. Moreover, we expect more states to implement cost-saving reforms along the lines of the cost of living adjustments (COLAs) made in Ohio, Colorado and Minnesota.

Of course, these positive attributes have not been completely overlooked by investors. The current after-tax yield pickup over Treasuries at the 5-year maturity is 2 basis points below the median since 2000 (see Exhibit 100). Furthermore, today's municipal-Treasury yield ratio is below average for both 5- and 10-year maturities and has limited room to fall given current tax rates (see Exhibit 101). Put simply, these already rich valuations offer less of a 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 a modest 1% total return in our base case.

Moving further out in duration and credit risk exposure, high yield municipals were one of the top-performing fixed income asset classes last year, delivering a nearly 5% gain. Last year's strength has left their incremental spread versus similar maturity investment grade bonds somewhat below the historical median at 1.8% (see Exhibit 102). Even so, we think there is scope for spread compression to partially offset higher Treasury yields this year, enabling the high yield municipal market to deliver a modest positive return of

Exhibit 101: Ratio of Municipal Bond Yields to Treasury Yields

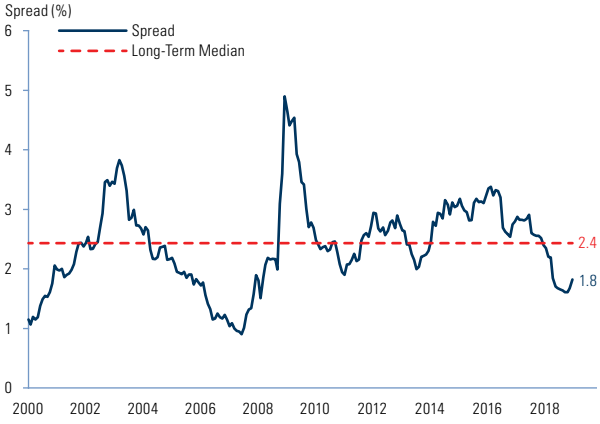
Municipal bonds now offer a smaller yield pickup versus Treasuries than they have in past periods.



Data as of December 31, 2018.
Source: Investment Strategy Group, Bloomberg.
Past performance is not indicative of future results.

Exhibit 102: High Yield Municipal Bond Spread

The incremental yield above that of investment grade bonds is below long-term levels.



Data through December 31, 2018.
Source: Investment Strategy Group, Bloomberg.

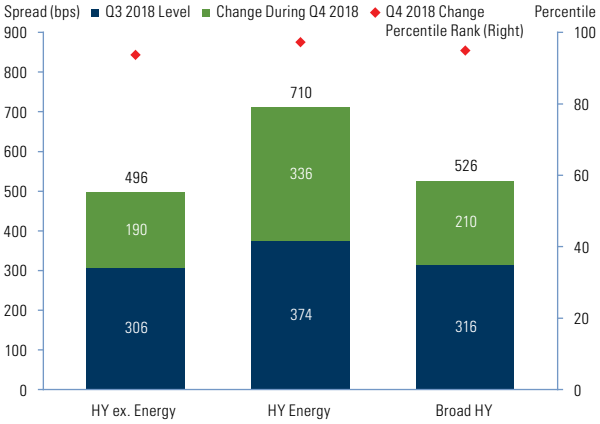
around 4%. While the additional return over investment grade bonds is uninspiring by historical standards, we think it is adequate compensation for the incremental default risk and consequently recommend clients retain their strategic allocation.

US Corporate High Yield Credit

Last year was a roller coaster ride for high yield investors. After spreads reached their tightest levels

Exhibit 103: Change in High Yield Spreads in the Fourth Quarter of 2018

The rapid rise in spreads in late 2018 has been exceeded only 5% of the time historically.



Data as of December 31, 2018.
Source: Investment Strategy Group, Bloomberg.

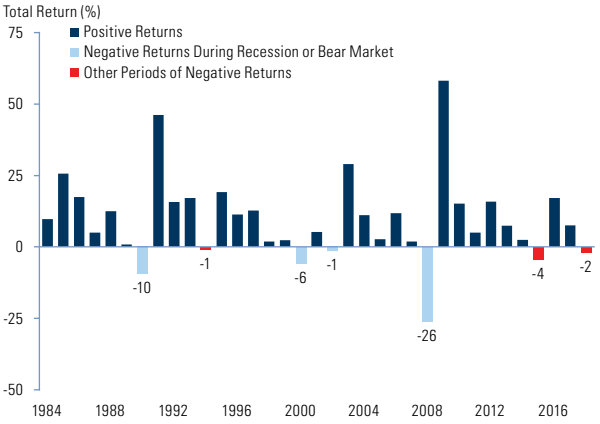
of the recovery in early October, a confluence of worries rapidly pushed spreads wider into year-end. In fact, the increase in spreads seen during the final three months of 2018 has been exceeded only 5% of the time over similar windows since 1994 (see Exhibit 103). The net result was a loss for the asset class last year, a rare nonrecessionary occurrence considering that four of the six previous annual losses since 1984 occurred during recessions or recession-related bear markets (see Exhibit 104).

Clearly investors are worried that the credit cycle is turning, evident in last year's abrupt about-face in spreads. While we are sympathetic to these concerns—we have raised our own recession odds from 10% last year to 15–20% this year—we note that the economy is the most important driver of defaults and that US GDP growth remains above trend. In addition, leading indicators of recession—such as the Conference Board Leading Economic Index (LEI)—stand at levels that are more consistent with continued economic growth than an imminent descent into recession. This last point is important, since high yield firms generate almost three-fourths of their sales domestically.

Leading indicators of credit risk remain equally benign. Moody's Liquidity Stress Index, which rose six months before the last default cycle, today stands below its long-run median of 5.3% and at a level that has been lower only 17% of the time

Exhibit 104: Annual High Yield Returns

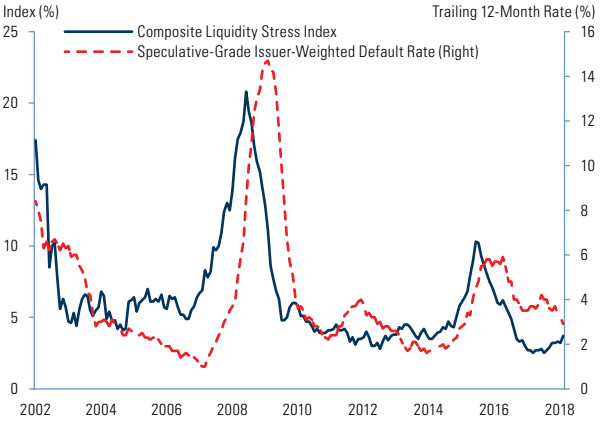
Negative high yield returns—as seen in 2018—are rare outside a recession or bear market.



Data through December 31, 2018.
Source: Investment Strategy Group, Bloomberg.

Exhibit 105: Moody's Liquidity Stress Index and High Yield Default Rates

Leading indicators are consistent with subdued high yield default rates going forward.

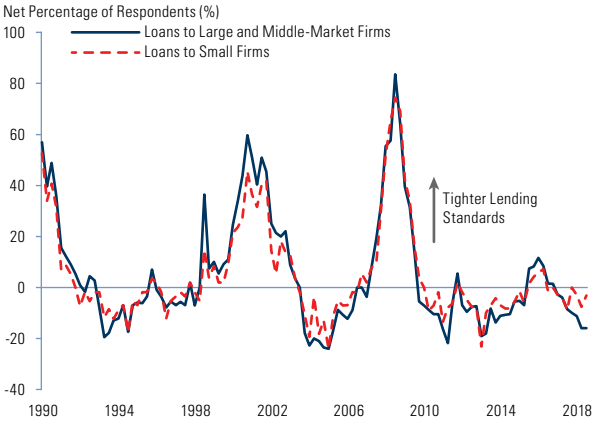


Data through November 30, 2018.
Note: Moody's Liquidity Stress Index falls when corporate liquidity appears to improve and rises when it appears to weaken.
Source: Investment Strategy Group, Moody's.

historically (see Exhibit 105). Meanwhile, the distress rate—another leading default indicator that measures the share of high yield bonds trading below $70—remains at innocuous levels today despite recent spread widening. Finally, tightening in bank lending standards has historically forewarned of higher future defaults, yet today banks continue to ease standards (see Exhibit 106).

Exhibit 106: Net Percentage of Banks Tightening Lending Standards

Banks continue to ease lending standards, which bodes well for future risk of defaults.



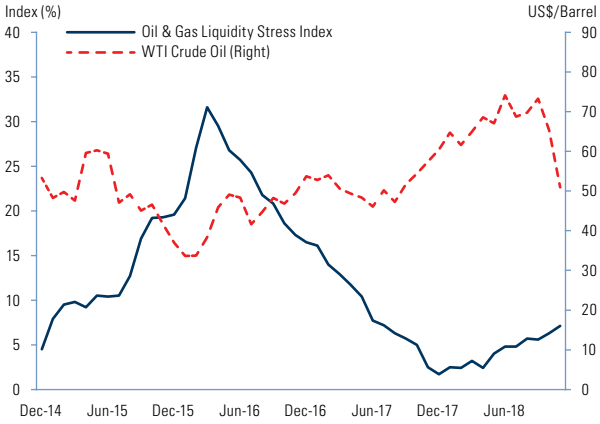
Data through December 31, 2018.
Source: Investment Strategy Group, Federal Reserve Senior Loan Officer Survey.

Of course, even if investors are not particularly worried about recession risk, they are acutely aware of the havoc that collapsing oil prices wreaked on high yield bonds in 2015 and 2016. While the energy sector is still about 15% of the high yield universe and oil prices have seen a notable decline, we think there are several key differences between today and that episode. Consider that OPEC and its allies have already announced production cuts aimed at balancing the market and have indicated a willingness to do more if necessary. This stands in stark contrast to the prior period, when OPEC members were flooding the market with supply in pursuit of market share. Furthermore, the high yield energy firms that survived that default cycle have since restructured their business models to be viable at $45–55 oil prices, whereas they were dependent on $100 oil prices previously. Finally, a recent analysis of exploration and production (E&P) high yield firms found that they had hedged about 50% of their oil production on a weighted average basis. The comparable number for natural gas hedging was even higher, at 69%.[118] For these reasons, we think cash flows will be better insulated this time around, a message that is echoed by the very modest increase in leading indicators of high yield energy defaults despite the sharp drop in oil prices (see Exhibit 107).

Based on the foregoing, we think that today's high yield spreads more than compensate investors

Exhibit 107: Moody's Oil & Gas Liquidity Stress Index and Crude Oil Prices

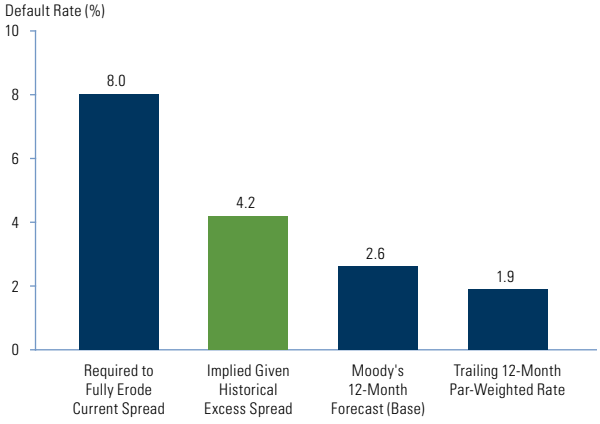
Unlike in 2016, leading indicators for high yield energy defaults remain benign despite the sharp drop in oil prices.



Data through November 30, 2018.
Source: Investment Strategy Group, Moody's, Bloomberg.

Exhibit 108: US Corporate High Yield Default Rates—Realized, Implied and Forecast

Markets are discounting default rates more than double the trailing 12-month rate and well above Moody's base case.

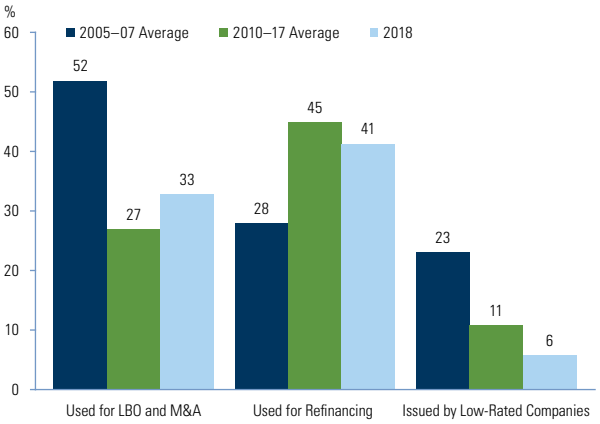


Data as of November 30, 2018.
Source: Investment Strategy Group, Bloomberg, Moody's.

for the likely path of defaults. Consider that the market seems to be discounting defaults of around 4% based on the excess spread over actual default losses that investors have demanded historically. As shown in Exhibit 108, this implied default level is more than double the actual trailing default rate and well above Moody's year-ahead base case forecast. Given our view that the US expansion

Exhibit 109: Characteristics of High Yield New Issuance

The characteristics of today's high yield issuance are much healthier than the pre-crisis cohort.



Data as of November 30, 2018.
Source: Investment Strategy Group, Bank of America Merrill Lynch, Bloomberg, Barclays.

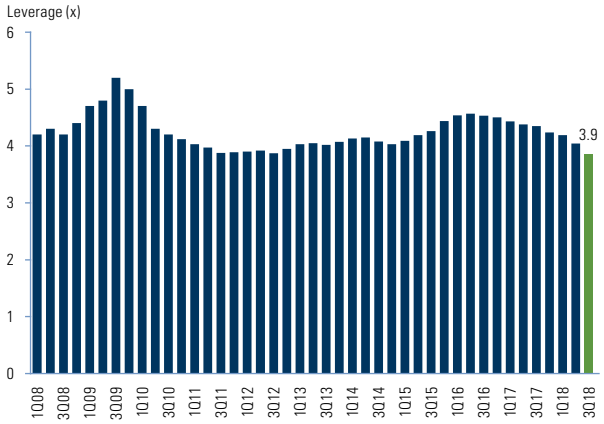
will continue in 2019, we see scope for spread compression as macroeconomic fears recede.

More broadly, market fundamentals seem less compromised than current spreads suggest. New issuance by lower-rated companies remains low relative to history. At the same time, the modest uptick in new issuance used for balance sheet-weakening M&A activity remains well below the levels seen prior to the financial crisis (see Exhibit 109). Of equal importance, new issuance represents a small inflow into a large stock of debt that was predominantly used for refinancing. Crucially, it is the credit characteristics of the aggregate pool of debt, not just of the recent issuance, that ultimately dictate the level of defaults. Similarly, we should examine aggregate par-weighted leverage and interest coverage ratios, as we think these are more representative of market-wide credit loss potential than median ones. Today, both measures are sending a less worrisome signal (see Exhibits 110 and 111).

Although we have painted a less pessimistic view of high yield bonds than recent spread widening implies, we are mindful that bank loans could be more vulnerable in the next credit cycle given rapid growth in recent years. Consider that since 1997, loans have grown at a 15% annualized pace compared with 6% for high yield bonds. Even more striking, the size of the high yield bond market has been roughly flat since 2014, while bank loan assets have grown 35% (see Exhibit 112). Much of this growth has come in

Exhibit 110: High Yield Par-Weighted Leverage

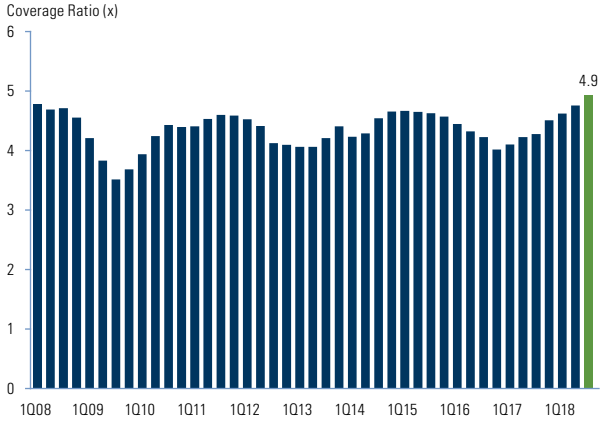
Financial leverage of high yield companies has declined to a post-crisis low.



Data through Q3 2018.
Source: Investment Strategy Group, JP Morgan.

Exhibit 111: High Yield Par-Weighted Interest Coverage Ratio

Interest coverage has risen steadily over the past several years.

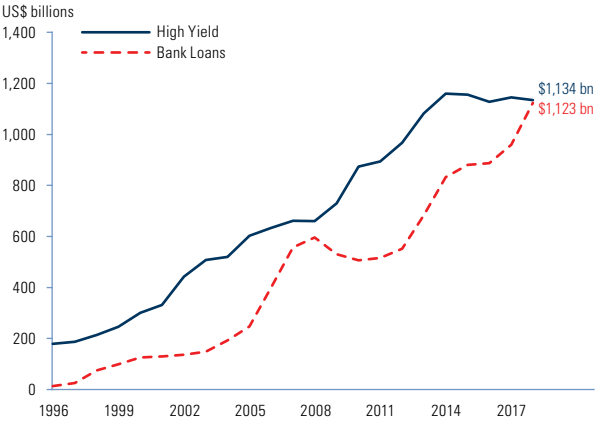


Data through Q3 2018.
Source: Investment Strategy Group, JP Morgan.

loan mutual funds, which today represent almost a quarter of the overall market. The inherent mismatch between these daily liquidity mutual funds and their more illiquid underlying loan holdings increases the risk of technical selling dislocations. That said, the declining share of hedge fund ownership and growth in collateralized loan obligations not subject to daily mark-to-market pricing of their holdings—as daily marks were a key driver of forced selling during the financial

Exhibit 112: High Yield Debt Outstanding

The bank loan market has grown substantially and is now as large as the high yield bond market.



Data through December 2018.
Source: Investment Strategy Group, S&P LCD, Bank of America Merrill Lynch.

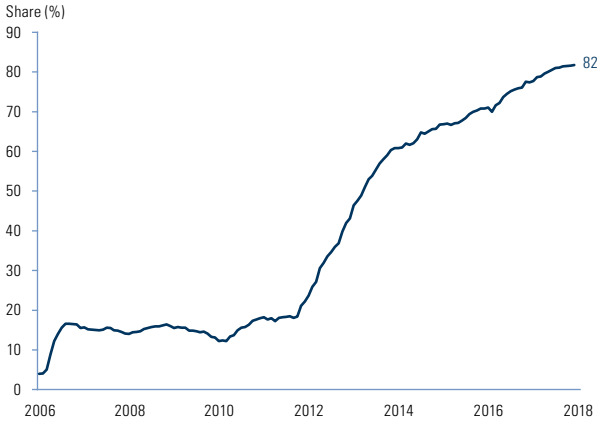
crisis—do provide a favorable offset to higher retail ownership.

There has also been a notable deterioration in leveraged loan covenants. About 82% of the leveraged loan market is now regarded as covenant-lite, and a quarter of the market has first lien only capital structures (compared to only 5% of deals during the 2005–10 period, as shown in Exhibit 113). Moreover, these weaker investor protections are occurring despite firms carrying more debt, with a third of newly issued bank loans having a debt-to-EBITDA ratio higher than the levels seen in 2007 and 2014 (see Exhibit 114). Even worse, these already-high leverage ratios may have been understated by covenants that allow EBITDA addbacks—such as potential future synergies and cost savings that may never be realized—in the leverage calculations.

To be sure, these are worrisome trends. Still, covenant-lite does not mean covenant-free, at least in the vast majority of cases. A study by the Federal Reserve Bank of Philadelphia found that more than 90% of firms were still subject to some form of covenants through their revolving loans. In fact, only 1.5% of revolving loans lack financial covenants.[119] Of equal importance, weak covenants are not likely to cause a default cycle, particularly since interest coverage among leveraged loan borrowers currently stands in its top historical decile. That said, today's weaker covenants will likely reduce recoveries in the next credit cycle. Indeed, Moody's estimates that

Exhibit 113: Share of Covenant-Lite Leveraged Loans

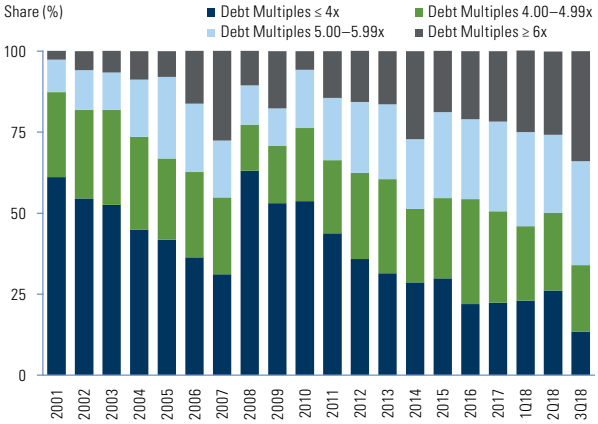
The vast majority of leverage loan issuance in recent years has featured lax covenants.



Data through November 30, 2018.
Note: Share is calculated using the JP Morgan Leveraged Loan Index.
Source: Investment Strategy Group, JP Morgan.

Exhibit 114: Distribution of Large Leveraged Loan Volumes by Debt-to-EBITDA Ratio

A third of newly issued bank loans had debt-to-EBITDA ratios above 6x, exceeding levels seen in 2007 and 2014.



Data through Q3 2018.
Source: Investment Strategy Group, JP Morgan.

recoveries could be closer to 61% than to the historical level of 77%.

Based on the foregoing, we have removed our tactical bank loan exposure but still retain a small overweight in synthetic high yield bonds and high yield energy bonds. In both cases, we expect 4–5% returns this year.

European Bonds

Intermediate-maturity euro bonds' 1.4% gain last year was less impressive than their 5.5% average return over the previous five years, but it was still superior to flat US Treasury returns. Gains were broad-based, with both core and peripheral bonds posting positive returns. A notable exception was Italy, where rising risks around the fiscal plans of its newly elected populist government led to a nearly 2% loss for its sovereign bonds. This marked the first calendar-year loss in a large peripheral market since 2011.

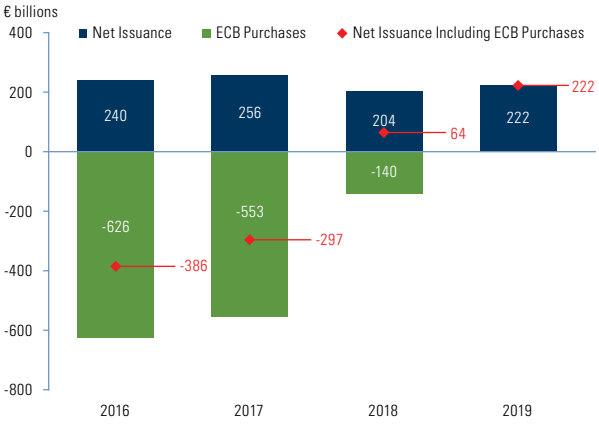
Last year's gains were underpinned by several trends that put downward pressure on interest rates, particularly late in 2018. Euro area growth repeatedly fell short of expectations and core inflation failed to increase. In turn, the ECB made clear at its June meeting that policy rates would not be increased before the fall of 2019. This guidance effectively anchored short-maturity interest rates, evident in the fact that the market-implied probability of an ECB hike before September 2019 hasn't risen above 20% since then. Finally, the emergence of global growth and trade worries late in the year, coupled with continued political risks in Italy and France, also weighed on bund yields. All told, 10-year bund yields finished the year at just 0.24%, significantly below their February high of 0.77%.

Although a complete reversal of last year's headwinds is unlikely, we do see several factors that should lift bund yields to within our 0.5–1.0% forecast range this year. We expect the ECB to increase the deposit rate in the second half of the year on the back of a small increase in core inflation. While an uptick in inflation may seem optimistic, consider that current market pricing implies euro area inflation will stay below 1.2% for the next three years even though inflation has exceeded that level 70% of the time since 1999. Recent additional evidence that negative interest rates are hurting European bank profitability is also likely to strengthen the ECB's resolve.[120] Moreover, the end of the ECB's bond buying last year should start to relieve the scarcity premium that has kept bund yields depressed, even though the still-sizable stock of bunds held by the ECB makes a disorderly backup in yields unlikely (see Exhibit 115).

Similarly, we expect UK gilt yields to rebound from 1.28% at the end of 2018 to 1.75–2.25% by year-end. A key driver of our forecast is predicated on a smooth Brexit transition, as

Exhibit 115: European Government Bond Issuance and ECB Purchases

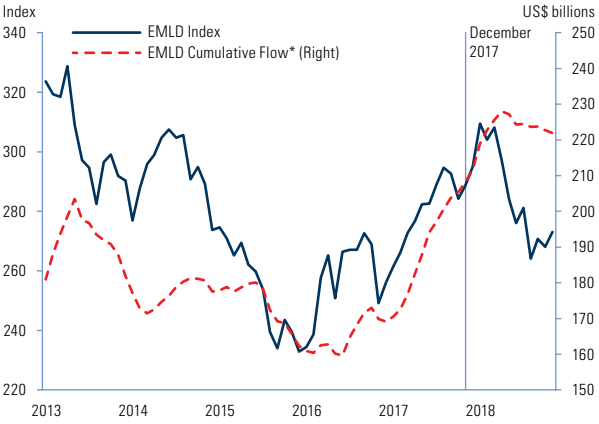
The market will absorb an increasing amount of Eurozone bond issuance given the end of ECB bond purchases.



Data as of December 31, 2018.
Source: Investment Strategy Group, JP Morgan.

Exhibit 116: Cumulative Flows into EMLD and EMLD Index Performance

Flows remained positive in 2018 despite poor returns.



Data through December 31, 2018.
Source: Investment Strategy Group, JP Morgan.
* Cumulative flow since January 2004.

this would reverse a portion of the Brexit risk embedded in UK interest rates today. As we have stated previously in this year's *Outlook*, the underlying assumption of this view is that a "hard Brexit" would be so economically and politically disastrous that it makes an eventual negotiated settlement highly likely. By avoiding the negative economic shock associated with this adverse outcome, a smooth transition would also enable the BOE to raise rates in response to still-firm domestic inflation pressures.

Based on the foregoing and the low margin of safety offered by the scant yields of these debt instruments, we remain underweight European and UK bonds for European investors. Even so, we advise clients to retain some exposure to high-quality European bonds to protect against periods of recession or disinflation.

Emerging Market Local Debt

After two years in which everything that could go right for emerging market local debt (EMLD) did, things took a turn for the worse in 2018. According to the IMF, "the combination of a stronger dollar, higher credit spreads, weaker equity prices, and higher domestic interest rates…led to a tightening of financial conditions that is similar…to the taper tantrum of 2013."[121] In response, Turkey and Argentina raised rates sharply, while EM countries hiked more than expected[122] or resorted to currency intervention.[123] Even so, these adjustments didn't preclude a 16% swoon for the asset class from its highest point last year and a full-year loss of 6.2%.

Such fragility leaves the outlook for 2019 on shaky footing. Higher US rates will continue to place downward pressure on EM currencies as only a few countries have kept pace with Federal Reserve rate hikes. Meanwhile, policies by newly elected populist governments in Brazil, Mexico and Turkey provide another source of uncertainty, as does the potential for adverse election outcomes this year in countries comprising almost half of the EMLD index. Lastly, dedicated EM investors continued to purchase the asset class last year despite poor returns (see Exhibit 116), suggesting that these positions could be vulnerable to further EMLD weakness.[124]

Still, we are mindful that last year's losses have already discounted some of these headwinds. Consider that the extreme overweight positions that were evident in EM rates have been reduced, suggesting less vulnerability going forward.[125] Furthermore, EMLD has typically rebounded following similar downdrafts in the past, delivering returns that exceeded their unconditional average by 2.3 percentage points over 12 months. Indeed, some easing in trade war tensions or global financial conditions could provide the catalyst for such a recovery.

Weighing these various crosscurrents, our central case calls for low-single-digit returns this

Exhibit 117: Commodity Returns in 2018

Headline GSCI and all underlying components saw negative excess returns in 2018.

	S&P GSCI	Energy	Agriculture	Industrial Metals	Precious Metals	Livestock
Spot Price Average, 2018 vs. 2017	16%	26%	1%	6%	0%	-3%
Spot Price Return	-15%	-21%	1%	-19%	-3%	-3%
Investor ("Excess") Return*	-16%	-19%	-10%	-20%	-5%	-3%

Data as of December 31, 2018.
Source: Investment Strategy Group, Bloomberg.
* Investor (or "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.
Past performance is not indicative of future results. Investing in commodities involves substantial risk and is not suitable for all investors.

year, but with considerable volatility. As a result, we do not think the expected risk-adjusted returns justify a tactical EMLD long position at this time.

Emerging Market Dollar Debt

Emerging market dollar debt (EMD) was not immune to the global risk aversion that gripped markets in late 2018. While Argentina's near sovereign collapse received a significant amount of media attention, the weakness was broad-based, with nearly all major constituents in the red. All told, last year's 4.3% loss represented EMD's first annual decline since 2013.

To be sure, last year's weakness has improved the allure of EMD. Consider that EMD spreads of 403 basis points stand above their post-crisis average, while yields of 6.85% have been lower 88% of the time over the same period. In addition, EMD has never experienced two consecutive years of losses, which augers well for 2019's prospects. And finally, higher funding costs are projected to limit issuance in 2019, which will relieve some of the pressure that recent record issuance was placing on bond prices.

Even so, EM sovereign bonds remain vulnerable to the higher US rates we expect this year. Moreover, the number of dedicated EMD investors with overweight positions now stands near its post-crisis highs, creating vulnerability to further EMD weakness.[126] As a result, we do not recommend a tactical position in EMD at this time.

2019 Global Commodity Outlook

Commodities could not escape the volatility that roiled financial markets last year. As shown in Exhibit 117, the S&P GSCI Excess Return Index fell 16%, with each of its components declining for the year. Such broad-based losses were even more jarring considering that commodity prices spent most of 2018 higher than their year-earlier levels, evidenced by their *average* spot price returns (see Exhibit 117). Even so, those gains were quickly eclipsed late in the year by a combination of trade war worries, stronger supplies, higher interest rates and a softer-than-expected demand environment.

Despite this more challenging fundamental backdrop, the depth of the recent oil selloff implies some upside to energy prices this year, although we acknowledge that oversupply risks remain. Meanwhile, gold's inability to provide a consistent hedge against market turmoil in 2018 should cast some doubt on its perceived safe-haven status going forward.

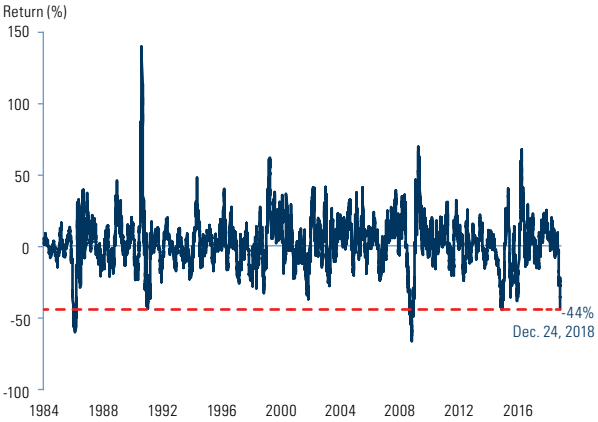
We discuss the specifics of both of these markets in the sections that follow.

We expect the ECB to increase the deposit rate in the second half of the year on the back of a small increase in core inflation.

Oil: Balancing Risks

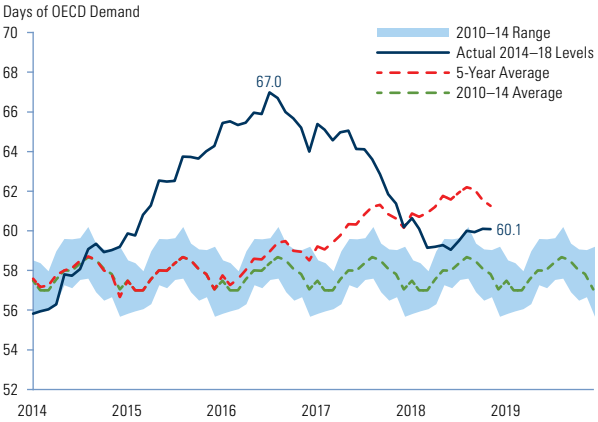
Within a generally weak commodity complex, oil's sharp decline in the fourth quarter of 2018 was a standout. From its October 3 peak, West Texas Intermediate (WTI) crude oil declined 44% by December 24. A downdraft of this speed and magnitude has been exceeded only twice historically (see Exhibit 118).

Exhibit 118: WTI Crude Oil Rolling 57-Day Returns
Late 2018 saw an exceptionally large and swift decline in oil prices.



Data through December 31, 2018.
Source: Investment Strategy Group, Bloomberg.

Exhibit 119: OECD Petroleum Inventories
Inventories fell below their five-year average levels in 2018.



Data through November 30, 2018.
Note: November 2018 data based on preliminary estimate. Inventories adjusted based on OECD demand.
Source: Investment Strategy Group, International Energy Agency.

What made the decline even more surprising is that the earlier part of 2018 featured several developments that put upward pressure on oil prices. As seen in Exhibit 119, inventories actually fell below their five-year average in the first half of the year. That pressure was bolstered by the anticipation of renewed sanctions on Iranian oil that forced several importers to look for alternative sources of supply. At the same time, temporary disruptions in Canada and Libya further curtailed supply, despite OPEC's decision to increase production at its June meeting.

Ultimately, however, these bullish factors proved much less potent than the market anticipated. Rising prices encouraged a surge in US shale output, which jumped 0.86 million barrels per day (mmb/d) higher between June and August. That represented the largest three-month increase ever recorded outside of hurricane-related recoveries (see Exhibit 120). In addition, the US administration's decision to grant six-month sanction waivers to most of Iran's largest oil customers blindsided an investor community that had been led to believe zero Iranian exports would be tolerated. Even worse, this policy shift arrived just as other OPEC producers had increased supply to compensate for lost Iranian production and as the demand outlook was weakening in the face of slowing global growth.

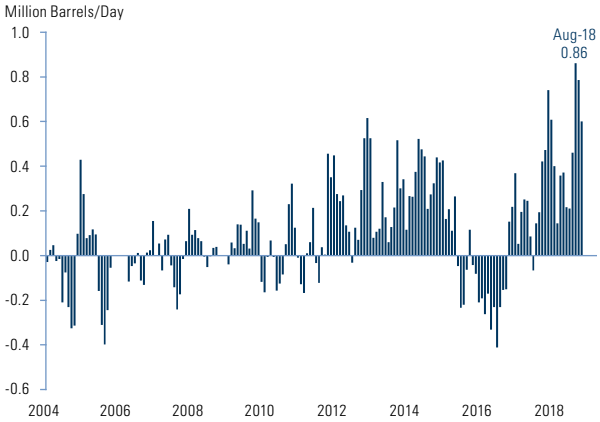
As a result, the market is once again grappling with too much oil. Absorbing this oversupply will require an increase in oil demand and/or a reduction in supply that eventually reduces inventories. Since a surge in oil demand is doubtful—the slowdown in global GDP growth we expect is likely to trim oil demand growth to around its 10-year average of 1.4%—declining supply will have to shoulder the bulk of the adjustment.

Although a reduction in shale supply was a key contributor to balancing the market during the 2014–16 oil supply glut, we think there are important differences between that episode and today. Unlike the earlier period, when OPEC and its allies were flooding the market with oil in pursuit of market share, today this bloc of oil producers has already agreed to *reduce* output by 1.2 mmb/d in the first half of 2019 and has indicated a willingness to do more. If fully implemented, the cut would reverse almost two-thirds of the group's supply increase in the second half of

The depth of the recent oil selloff implies some upside to energy prices this year, although we acknowledge that oversupply risks remain.

Exhibit 120: Rolling Three-Month Change in US Crude Oil Production

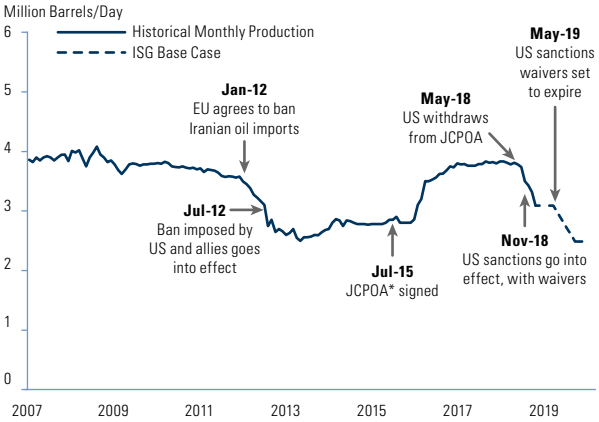
US oil production growth surged in mid-2018.



Data through October 31, 2018.
Note: Adjusted for hurricane disruptions.
Source: Investment Strategy Group, Energy Information Administration.

Exhibit 121: Iranian Crude Oil Production

We expect Iranian oil production to decrease in the second half of 2019.



Data through November 30, 2018; forecast through December 31, 2019.
Source: Investment Strategy Group, Bloomberg.
* "Joint Comprehensive Plan of Action" is an agreement between world powers and Iran to keep Iran's nuclear program exclusively peaceful.

2018. While failure to honor these cuts is a risk, compliance did exceed expectations in the wake of the 2014–16 episode. It is also worth mentioning that a further decrease in production could come from renewed disruptions. Indeed, today's lower oil prices leave exporters like Venezuela and Libya even more vulnerable to their already highly unstable social situations.

This shift in strategy is important because it suggests OPEC and its allies have little appetite for another market share battle with US shale producers. After all, it took more than two years and a more than 70% drop in oil prices for US production to decline by about 1 mmb/d in the prior episode. The wish to avoid a similarly unfavorable trade-off this time around will likely incentivize OPEC producers to honor their announced production cuts.

That is not to suggest that shale producers will be immune to the recent decline in oil prices. Already, US production *growth* is likely to slow this year as rig counts are being cut and focus is shifting toward covering drilling costs with existing cash flows. Even so, US output growth is still likely to exceed 1.5 mmb/d—more than the entire 1.4 mmb/d of global demand growth we expect—on the back of ongoing technological innovation, a large inventory of drilled-but-uncompleted wells and the startup of several pipelines aimed at relieving bottlenecks at Texas' Permian Basin.

With US shale output *growth* and OPEC production *cuts* largely offsetting, the main supply wild card is Iranian exports. Current sanction waivers expire at the end of April, and we expect Iranian production to remain around 3 mmb/d until then but fall to around 2.5 mmb/d by the end of 2019. That production level would be similar to what prevailed during the 2013 sanctions and would still be a meaningful decline from the 3.8 mmb/d produced in the first half of 2018 (see Exhibit 121). In turn, this decline in Iranian supplies should allow global supply and demand to come close to balance this year, which is our base case. Needless to say, there are meaningful risks to this forecast in both directions, particularly given the difficulty of predicting the US administration's foreign policy.

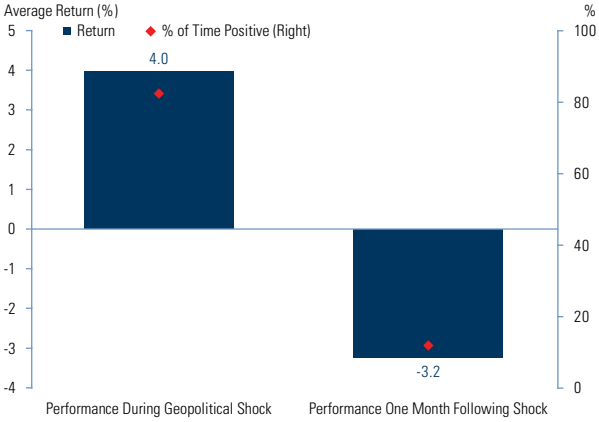
Given these dynamics, we expect oil prices to range from $45 to $65 per barrel by the end of 2019, with a volatile path along the way as the tug-of-war between higher US output and lower OPEC production continues. In this environment, we currently recommend long exposure to oil prices, implemented with some downside protection. We also continue to recommend an overweight to MLPs, as the midstream sector benefits from higher US production with relatively little oil price exposure over the long term.

Gold: Less Safe Than Advertised

Gold is often viewed as a safe-haven asset, particularly during turbulent times. This

Exhibit 122: Gold Performance During and After Major Geopolitical Shocks

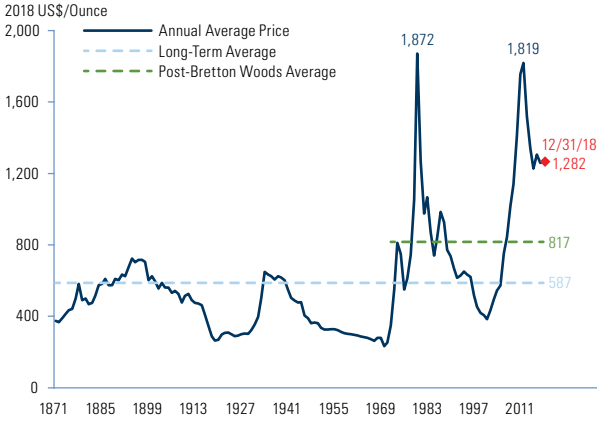
Gold tends to quickly forfeit any short-term gains seen during periods of heightened geopolitical risk.



Data through December 31, 2018.
Note: Based on 17 discrete events since 1985 as identified by a large rise in the Geopolitical Risk Index.
Source: Investment Strategy Group, Bloomberg, Dario Caldara and Matteo Iacoviello, "Measuring Geopolitical Risk," working paper, Board of Governors of the Federal Reserve Board, January 2018.

Exhibit 123: Average Annual Gold Prices

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



Data through December 31, 2018.
Source: Investment Strategy Group, Bloomberg.

reputation was further bolstered by last year's fourth quarter, when gold prices gained almost 8% despite a jarring 14% decline in the S&P 500. Notwithstanding these impressive gains, gold does not provide a consistent hedge during market downdrafts. Even worse, the losses borne while waiting for such adverse events often trump the gains accrued when they occur.

Such was the case last year. Gold failed to hedge the S&P 500's 4.4% loss as it finished the year down 1.6% itself. In fact, gold prices increased on fewer than half the days that equity prices fell. Nor did gold represent a stable store of value, considering its price suffered a 14% peak-to-trough decline between January and August last year, before jolting higher in the final quarter. Put simply, it is not realistic for gold investors to assume that they can consistently time these types of market swings.

More broadly, gold has not consistently hedged geopolitical shocks, and when it has the gains have typically been modest and quickly forfeited. That much is evident in Exhibit 122, which shows gold's performance during periods of major geopolitical stress, as measured by the Geopolitical Risk Index developed by trade economists at the Federal Reserve. Even when gold prices have reacted positively to large geopolitical shocks in the past, the gains were limited (4% on average) and typically forfeited in the following month (-3.2% on average).

Outside of their typically positive response to infrequent and large geopolitical shocks, gold prices' daily fate is far more likely to be driven by the US dollar and US real rates. In fact, gold has traded inversely to the dollar index on an annual basis 74% of the time since the end of the Bretton Woods system in 1971. While we currently have a neutral view on the dollar, it is worth mentioning that today's 1% real rates[127] do raise the opportunity cost of holding gold, given that gold generates no cash flow or coupon income and often requires additional insurance and storage costs.

Gold prices also still have significant downside to their long-term average prices. At almost $1,300 per ounce, the spot price of gold remains well above its inflation-adjusted, post-Bretton Woods average of $817 per ounce (see Exhibit 123).

The news is not all bad, of course. Given gold's strong finish last year, it is possible that momentum could carry prices higher in 2019, particularly since speculative positioning is not overextended. Yet given the many crosscurrents and unfavorable valuation discussed above, we remain tactically neutral on gold at this time.

In Closing

AFTER A YEAR THAT RATTLED INVESTORS ACROSS MANY FRONTS, many are questioning the longevity of this economic expansion and bull market. Concerns about slowing global growth, a flattening yield curve, and high and rising geopolitical risks will continue to fuel market volatility.

As unsettling as the free fall in financial markets has been, we do not believe it is justified by prevailing economic fundamentals. While the US is not immune to developments beyond its borders, the country is better positioned to weather future storms than virtually any other. The economic, social and institutional factors that account for US preeminence remain intact.

We therefore maintain our strategic asset allocation recommendation to overweight US assets and our tactical recommendation to stay invested, both of which have served our clients well over the past 10 years. That said, we remain vigilant about the broad range of risks that could undermine this recovery and bull market. While the risk of recession has risen, fundamental signals suggest that the likelihood of a recession in 2019 remains low. If those signals change, we stand ready to act upon them accordingly.

Abbreviations Glossary

BIS: Bank for International Settlements
BLS: [US] Bureau of Labor Statistics
BOE: Bank of England
BOJ: Bank of Japan
bps: basis points

CAGR: compound annual growth rate
[Shiller] CAPE: cyclically adjusted price-to-earnings ratio
COLA: cost-of living adjustment

DM: developed market
DXY: US Dollar Index

E&P: exploration and production
EAFE: Europe, Australasia and the Far East
EBIT: earnings before interest and taxes
EBITDA: earnings before interest, taxes, depreciation and amortization
ECB: European Central Bank
EM: emerging market
EMD: emerging market dollar debt
EMEA: Europe, the Middle East and Africa
EMLD: emerging market local debt
EMU: European Monetary Union
EU: European Union

FDI: foreign direct investment
FEER: fundamental equilibrium exchange rate
FTSE 100: Financial Times Stock Exchange 100 Index

G-4: Group of Four
G-10: Group of 10
GDP: gross domestic product
GFC: global financial crisis
GIR: [Goldman Sachs] Global Investment Research
GPIF: Government Pension Investment Fund
GS: Goldman Sachs
GSDEER: Goldman Sachs Dynamic Equilibrium Exchange Rate

HY: high yield

IMF: International Monetary Fund
IP: intellectual property
ISG: Investment Strategy Group
ISM: Institute of Supply Management

JCPOA: Joint Comprehensive Plan of Action
JGB: Japanese government bond

LBO: leveraged buyout
LEI: [Conference Board] Leading Economic Index

M&A: mergers and acquisitions
MLP: master limited partnership
mmb/d: million barrels per day
MSCI: Morgan Stanley Capital International
MSCI EM: MSCI Emerging Markets

NAIRU: non-accelerating inflation rate of unemployment
NBER: National Bureau of Economic Research

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

P/E ratio: price-to-earnings ratio
PIIE: Peterson Institute for International Economics
PPP: purchasing power parity

REER: real effective exchange rate
ROE: return on equity

S&P: Standard & Poor's

TIPS: Treasury Inflation-Protected Securities
TTM: trailing twelve months

WTI: West Texas Intermediate

YE: Year-end
YoY: Year over year
YPG: Kurdish People's Protection Unit

Notes

1. Ezra Vogel, *Japan as Number 1: Lessons for America*, Harvard University Press, 1979.
2. Karel van Wolferen, *The Enigma of Japanese Power*, Knopf, 1989.
3. Daniel Sargent, "RIP American Exceptionalism, 1776–2018," *Foreign Policy*, July 23, 2018.
4. David Frum, "America's Slide Toward Autocracy," *Atlantic*, October 2018.
5. Joel Dodge, "Trump's America: Smaller, Meaner, and Increasingly Unexceptional," *The Week*, June 20, 2018.
6. William A. Galston, "Trump and the Decline of Democracy," *Wall Street Journal*, January 16, 2018.
7. E.J. Dionne Jr., Norman J. Ornstein and Thomas E. Mann, *One Nation After Trump: A Guide for the Perplexed, the Disillusioned, the Desperate, and the Not-Yet Deported*, St. Martin's Press, 2017.
8. Stephen M. Walt, *The Hell of Good Intentions: America's Foreign Policy Elite and the Decline of U.S. Primacy*, Farrar, Straus and Giroux, 2018.
9. Ian Bremmer, "EG Update," Eurasia Group, February 27, 2017.
10. John Steele Gordon, *An Empire of Wealth: The Epic History of American Economic Power*, HarperCollins, 2004.
11. John Steele Gordon, "A Short History of American Immigration," *Wall Street Journal*, November 20, 2018.
12. "Know-Nothing Party," *Encyclopaedia Britannica*, www.britannica.com/topic/Know-Nothing-party.
13. "Chinese Exclusion Act," History.com, www.history.com/topics/immigration/chinese-exclusion-act-1882.
14. Office of the Historian, Bureau of Public Affairs, United States Department of State, "The Immigration Act of 1924 (The Johnson-Reed Act)," www.history.state.gov/milestones/1921-1936/immigration-act.
15. Brent Funderburk, "Operation Wetback," *Encyclopaedia Britannica*, www.britannica.com/topic/Operation-Wetback.
16. United States House of Representatives Archives, "Depression, War, and Civil Rights Hispanics in the Southwest," history.house.gov/Exhibitions-and-Publications/HAIC/Historical-Essays/Separate-Interests/Depression-War-Civil-Rights.
17. United States Immigration and Customs Enforcement, "Fiscal Year 2018 ICE Enforcement and Removal Operations Report," December 14, 2018.
18. Karl R. Bopp, Robert V. Rosa, Carl E. Parry, Woodlief Thomas and Ralph A. Young, "Federal Reserve Policy," Board of Governors of the Federal Reserve System, November 1947.
19. Robert L. Hetzel and Ralph F. Leach, "The Treasury-Fed Accord: A New Narrative Account," Federal Reserve Bank of Richmond, *Economic Quarterly*, Vol. 87, No. 1, 2001.
20. Ibid.
21. Kevin Granville, "A President at War With His Fed Chief, 5 Decades Before Trump," *New York Times*, June 13, 2017.
22. Ibid.
23. Paul Volcker and Christine Harper, *Keeping At It: The Quest for Sound Money and Good Government*, PublicAffairs, 2018.
24. Office of the Historian, Bureau of Public Affairs, United States Department of State, "Remarks of President Kennedy to the National Security Council Meeting," www.history.state.gov/historicaldocuments/frus1961-63v13/d168.
25. United States Congress, "Prohibition of the Importation of Certain Goods and Merchandise from the Kingdom of Great Britain," April 15, 1806.
26. United States Congress, "An Act Laying an Embargo on All Ships and Vessels in the Ports and Harbors of the United States," December 22, 1807.
27. Todd C. Frankel, "The Strange Case of Ford's Attempt to Avoid the 'Chicken Tax,'" *Washington Post*, July 6, 2018.
28. Peter Behr, "Quota Drive Ended by Japan's Promise to Curb Auto Sales," *Washington Post*, May 2, 1981.
29. Clyde H. Farnsworth, "U.S. Raises Tariff for Motorcycles," *New York Times*, April 2, 1983.
30. Sarah Churchwell, *Behold, America: The Entangled History of "America First" and "the American Dream,"* Basic Books, 2018.
31. United States National Archives and Records Administration, "Transcript of President George Washington's Farewell Address (1796)," www.ourdocuments.gov/doc.php? doc=15&page=transcript.
32. Robert W. Tucker and David C. Hendrickson, "Thomas Jefferson and American Foreign Policy," *Foreign Affairs*, Spring 1990.
33. Neta C. Crawford, "United States Budgetary Costs of the Post-9/11 Wars Through FY2019: $5.9 Trillion Spent and Obligated," Watson Institute for International and Public Affairs, Brown University, November 14, 2018.
34. World Intellectual Property Organization, "World Intellectual Property Indicators 2018," December 2018.
35. Arthur Kroeber, "How Much Risk of a US-China Economic Cold War?" Gavekal Research, March 2, 2018.
36. Robert J. Barro and Jong-Wha Lee, "Education Attainment for Population Aged 15–64, 2015–2040," www.barrolee.com/data/oup_download_c.htm.
37. Robert C. Feenstra, Robert Inklaar and Marcel P. Timmer, "The Next Generation of the Penn World Table," *American Economic Review*, Vol. 105, No. 10, October 2015.
38. Ibid.
39. "Understanding the Spike in China's Birth Rate," *Economist*, January 25, 2017.
40. Executive Order No. 13769, "Executive Order Protecting the Nation from Foreign Terrorist Entry Into the United States," January 27, 2017, www.whitehouse.gov/presidential-actions/executive-order-protecting-nation-foreign-terrorist-entry-united-states.
41. Adam Liptak and Michael D. Shear, "Trump's Travel Ban Is Upheld by Supreme Court," *New York Times*, June 26, 2018.
42. Proclamation No. 9705, "Presidential Proclamation Adjusting Imports of Steel Into the United States," March 8, 2018.
43. Proclamation No. 9704, "Presidential Proclamation on Adjusting Imports of Aluminum Into the United States," March 8, 2018.
44. William Mauldin, "Lawsuit Challenges Trump's Authority to Impose Tariffs," *Wall Street Journal*, June 27, 2018.
45. "President Trump Announces U.S. Withdrawal from the Paris Climate Accord," June 1, 2017, www.whitehouse.gov/articles/president-trump-announces-u-s-withdrawal-paris-climate-accord.
46. Don Thompson, "New Laws Are Putting California Further at Odds With Trump," *Washington Post*, December 29, 2018.
47. Timothy Cama, "Automakers Fight Trump's Auto Emissions Rollback," *The Hill*, October 29, 2018.
48. Rebecca Morin, "9th Circuit Rules White House Can't Withhold Money from 'Sanctuary Cities,'" Politico.com, August 1, 2018.
49. Miriam Jordan, "Federal Judge Blocks Trump's Proclamation Targeting Some Asylum Seekers," *New York Times*, November 20, 2018.
50. Andrew Chung and Lawrence Hurley, "Roberts, Liberal Justices Snub Trump Bid to Enforce Asylum Policy," Reuters, December 21, 2018.
51. Nicholas Confessore, "Koch Brothers' Budget of $889 Million for 2016 Is on Par With Both Parties' Spending," *New York Times*, January 26, 2015.
52. Jacob Pramuk and Brian Schwartz, "Sheldon Adelson Gives $30 Million in Bid to Save House GOP Majority—and Could Give More This Year," CNBC, May 10, 2018.
53. Anu Narayanswamy, Chris Alcantara and Michelle Ye Hee Lee, "Meet the Wealthy Donors Pouring Millions Into the 2018 Elections," *Washington Post*, October 26, 2018.
54. Stephanie Saul and Rachel Shorey, "How Michael Bloomberg Used His Money to Aid Democratic Victories in the House," *New York Times*, November 30, 2018.
55. Edward-Isaac Dovere, "How Tom Steyer Built the Biggest Political Machine You've Never Heard Of," *Atlantic*, October 19, 2018.
56. Kimberley A. Strassel, "The Trump 'Ethics' Resistance," *Wall Street Journal*, December 27, 2018.
57. Philip Elliott, "Koch Network Mounts Grassroots Effort to Support Immigration," *Time*, July 20, 2018.

58. William A. Galston, "Trump and the Decline of Democracy," *Wall Street Journal*, January 16, 2018.

59. Federal Reserve Board of Governors, "Transcript of Chair Yellen's Press Conference," December 16, 2015.

60. Jan Hatzius and Nicholas Fawcett, "Global Economics Analyst: The Private Sector Financial Balance: Mostly Clear Skies," Goldman Sachs Global Investment Research, August 23, 2018.

61. David Mericle, Avisha Thakkar and Marty Young, "US Economics Analyst: Monitoring Macro Risk from Financial Excess in the US Economy," Goldman Sachs Global Investment Research, March 11, 2018.

62. David Aikman, Michael Kiley, Seung Jung Lee, Michael Palumbo and Missaka Warusawitharana, "Mapping Heat in the U.S. Financial System: A Summary," Board of Governors of the Federal Reserve System, August 5, 2015.

63. Thomas F. Siems, "Branding the Great Recession," Federal Reserve Bank of Dallas, May 31, 2012.

64. Gillian Tett and Joe Rennison, "Bernanke Warns Against Reading Wrong Yield Curve Signal," *Financial Times*, July 18, 2018.

65. Dan Burns, "Flat U.S. Yield Curve Not Signaling Recession Risk: Yellen," Reuters, December 13, 2017.

66. Eric C. Engstrom and Steven A. Sharpe, "The Near-Term Forward Yield Spread as a Leading Indicator: A Less Distorted Mirror," Board of Governors of the Federal Reserve System, July 2018.

67. "President Donald J. Trump Is Confronting China's Unfair Trade Policies," May 29, 2018, www.whitehouse.gov/briefings-statements/president-donald-j-trump-confronting-chinas-unfair-trade-policies.

68. Ibid.

69. National Bureau of Asian Research, "The Theft of American Intellectual Property: Reassessments of the Challenge and United States Policy," February 2017.

70. Jeff Cox, "Kudlow Says Progress in US-China Trade Will Happen 'Very Quickly,'" CNBC, December 3, 2018.

71. David Lawder, "USTR Says China Has Failed to Alter 'Unfair, Unreasonable' Trade Practices," Reuters, November 20, 2018.

72. Donna Borak, "Trump and Xi's Hint at 'Good' Outcome to End US-China Trade War Ahead of G20 Dinner," CNN, December 1, 2018.

73. "Fact Sheet: President Xi Jinping's State Visit to the United States," September 25, 2015, https://obamawhitehouse.archives.gov/the-press-office/2015/09/25/fact-sheet-president-xi-jinpings-state-visit-united-states.

74. Mujtaba Rahman, "Eurasia Group Note—UK/EU/BREXIT—Thinking Through 2019 Brexit Risks (Again)," Eurasia Group, January 2, 2019.

75. Jacob Funk Kirkegaard (senior fellow at the Peterson Institute for International Economics), in a conference call with the Investment Strategy Group, November 29, 2018.

76. Carsten Nickel (deputy director of research at Teneo), in a conference call with the Investment Strategy Group, December 6, 2018.

77. United States Department of Commerce, "U.S. Department of Commerce Initiates Section 232 Investigation into Auto Imports," May 23, 2018.

78. David Shepardson, "Trump Studying New Auto Tariffs After GM Restructuring," Reuters, November 28, 2018.

79. Bethan McKernan, "Syrian Troops Mass at Edge of Kurdish Town Threatened by Turkey," *Guardian*, December 28, 2018.

80. Bruce Riedel, "After Khashoggi, US Arms Sales to the Saudis Are Essential Leverage," Brookings Institution, October 10, 2018.

81. Ash Carter (director of the Belfer Center for Science and International Affairs at the Harvard Kennedy School and former United States secretary of defense), in a conference call with the Investment Strategy Group, December 14, 2018.

82. Justin McCurry, "Kim Jong-un's New Year Message Warns of 'New Path' If Sanctions Stay," *Guardian*, December 31, 2018.

83. Dustin Volz and Aruna Viswanatha, "FBI Says Chinese Espionage Poses 'Most Severe' Threat to American Security," *Wall Street Journal*, December 12, 2018.

84. Gordon Lubold and Dustin Volz, "Chinese Hackers Breach U.S. Navy Contractors," *Wall Street Journal*, December 14, 2018.

85. Kirsten Grind and Dustin Volz, "Marriott Says Hackers Swiped Millions of Passport Numbers," *Wall Street Journal*, January 4, 2019.

86. Jim Finkle and Nivedita Balu, "Under Armour Says 150 Million MyFitnessPal Accounts Breached," Reuters, March 29, 2018.

87. Donie O'Sullivan, "Hackers Accessed Personal Information of 30 Million Facebook Users," CNN, October 12, 2018.

88. Institute for Economics and Peace, "Global Terrorism Index 2018: Measuring the Impact of Terrorism," November 2018.

89. Voltaire, Letter to Frederick II of Prussia, April 6, 1767.

90. These forecasts have been generated by ISG for informational purposes as of the date of this publication. Total return targets are based on ISG's framework, which incorporates historical valuation, fundamental and technical analysis. They are based on proprietary models and there can be no assurance that the forecasts will be achieved. The following indices were used for each asset class: Barclays Municipal 1-10Y Blend (Muni 1-10); BAML US T-Bills 0-3M Index (Cash); JPM Government Bond Index; Emerging Markets Global Diversified (Emerging Market Local Debt); Barclays High Yield Municipal Bond Index (Muni High Yield); HFRI Fund of Funds Composite (Hedge Funds); Barclays US Corporate High Yield (US High Yield); MSCI EM US$ Index (Emerging Market Equity); FTSE 100 (UK Equities); MSCI EAFE Local Index (EAFE Equity); Euro Stoxx 50 (Eurozone Equity); TOPIX Index (Japan Equity); S&P 500 (US Equity).

91. Peter Oppenheimer, "Strategy Matters: How Much Can Europe Outperform the US?" Goldman Sachs Global Investment Research, June 13, 2017.

92. David J. Kostin, Ben Snider, Arjun Menon, Ryan Hammond, Cole Hunter and Nicholas Mulford, "Portfolio Passport: Trade and Foreign Sales Exposure of US Companies," Goldman Sachs Global Investment Research, July 31, 2018.

93. Nicholas Bloom, Renata Lemos, Raffaella Sadun, Daniela Scur and John Van Reenen, "The New Empirical Economics of Management," National Bureau of Economic Research, May 2014.

94. Based on a three-month moving average.

95. JP Morgan Global Manufacturing PMI MPMIGLMA Index.

96. Jan Hatzius, "Global: GS Economic Indicators Update," Goldman Sachs Global Investment Research, December 11, 2018.

97. Based on Eurozone unemployment data since 1990.

98. Quarterly average, as of Q3 2018.

99. David Mericle, "US Daily: Long Expansions: Lessons from Abroad," Goldman Sachs Global Investment Research, July 19, 2018.

100. Actual tariffs include 25% on $50 billion in imports and 10% on $200 billion in imports. Threatened tariffs include an increase from 10% to 25% on the aforementioned $200 billion in imports as well as duties on the remaining $267 billion in Chinese exports to the US.

101. Jan Hatzius, "Global Economics Analyst: All Together Now? Taking Stock of Global Recession Risk," Goldman Sachs Global Investment Research, September 16, 2018.

102. Bank of England, "The Financial Position of British Households: Evidence from the 2017 NMG Consulting Survey," Q4 2017.

103. Bank of England, "Inflation Report" press conference, November 1, 2018.

104. Based on opinion polls reported by What UK Thinks: EU website, whatukthinks.org.

105. John Curtice, "Do Voters Still Want to Leave the EU? How They View the Brexit Process Two Years On," What UK Thinks: EU website, whatukthinks.org/eu, July 14, 2018.

106. Bank of England, "EU Withdrawal Scenarios and Monetary and Financial Stability," November 28, 2018.

107. International Monetary Fund, *World Economic Outlook,* October 2018.

108. IMF's baseline includes the actual tariffs imposed (25% on $50 billion in imports and 10% on $200 billion in imports), as well as a threatened tariff increase from 10% to 25% on the aforementioned $200 billion in imports.

109. International Monetary Fund, *World Economic Outlook*, October 2018.

110. Recall that the government replaced all old Rs 500 and Rs 1,000 banknotes with new ones in November 2016 to curtail the shadow economy and combat corruption. In June 2017, the government introduced a nationwide goods and services tax.

111. Michael Hartnett, "The Flow Show: Time to Buy," Bank of America Merrill Lynch, January 3, 2019.

112. JP Morgan Default Monitor, January 2, 2019.

113. John Marshall, Rocky Fishman, Katherine Fogertey, Vishal Vivek and Arun Prakash, "The Rising Importance of Falling Liquidity," Goldman Sachs Global Investment Research, December 18, 2018.

114. Median performance describes the distribution of returns over a given period and could differ from compounded, annualized performance.

115. We derive that 50% probability by dividing EAFE's 21% peak-to-trough decline by the 40% average decline it has experienced in past recessions.

116. JP Morgan EM Client Survey, December 2018; Exante, "With Nov data: Peak Pessimism in EM? Introducing a New Indicator of Crossover EM FX Positioning," November 29, 2018.

117. IMF, "Global Financial Stability Report: A Decade after the Global Financial Crisis: Are We Safer?" October 2018.

118. Paul Chambers and Christian DeSimone, "Updated 2019 Hedge Profiles," Barclays HY Research, December 17, 2018.

119. Edison Yu, "Banking Trends: Measuring Cov-Lite Right," Federal Reserve Bank of Philadelphia Research Department, Q3 2018.

120. See ECB, "Press Conference: Mario Draghi, President of the ECB, Luis de Guindos, Vice-President of the ECB, Frankfurt am Main, 13 December 2018"; ECB, "Bank Lending Survey," https://www.ecb.europa.eu/stats/ecb_surveys/bank_lending_survey/html/index.en.html.

121. IMF, "Global Financial Stability Report: A Decade after the Global Financial Crisis: Are We Safer?" October 2018.

122. Ibid. Countries already in a tightening cycle (including Indonesia, Mexico and the Philippines) hiked rates by more than markets had expected.

123. Ibid. Foreign exchange interventions were carried out in the spot market (Argentina, Indonesia) and via derivatives (Argentina, Brazil, India, Turkey).

124. Exante, "With Nov data: Peak Pessimism in EM? Introducing a New Indicator of Crossover EM FX Positioning," November 29, 2018.

125. JP Morgan EM Client Survey, December 2018.

126. Ibid.

127. Based on the 10-year maturity bond.

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