

# Outlook

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Consumer and Investment Management Division

## Room to Grow

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The majestic Baobab, known as the Tree of Life, lives for over a thousand years. But like all other trees, the Baobab does not grow to the sky.



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Dear Clients,

After more than 10 years of steady US economic growth and nearly 11 years of a US equity bull market as measured by the S&P 500 Index, it is hard to imagine that both have room to grow. Yet that is our 2020 base case. The US economy is likely to continue growing and US equities are likely to continue rising—albeit more slowly than in the last decade.

Since bottoming in June 2009, the US economy has grown by an average of 2.3% a year. While this rate of growth has been the slowest of all expansions in the post-WWII era, it has made up in length what it has lacked in strength. At 42 quarters and counting, this expansion is the longest in US history. US gross domestic product (GDP) has increased to over \$21 trillion, compared to \$14 trillion at the trough of the global financial crisis (GFC). Nearly 21 million US jobs have been created over this period, resulting in the country's lowest unemployment rate since 1969.

The US equity bull market has been similarly robust, exceeding the second-longest US bull market by about 1.5 years and generating a total return of 498%, or 18.0% annualized. Thus, every dollar invested in the trough of the market in March 2009 would have increased nearly sixfold by year-end 2019. This trails a total return of 545%, or 21.9% annualized, seen in the strongest bull market in US history, which spanned over nine years between October 1990 and March 2000.

Such steady growth and robust returns were achieved over the past decade notwithstanding a spate of domestic and non-US shocks in what the *Wall Street Journal* dubbed a “Decade of Disruption.”<sup>1</sup> Some of these shocks, such as the August 2011 downgrade of US sovereign debt by S&P, are a distant memory and did not send even a ripple through the US economy or its financial markets. More recently, as we warned in our *Outlook for 2019, American Preeminence in a Rattled World*, we have faced deteriorating US-China relations, constant threats of a disruptive Brexit, continued Russian adventurism, North Korea's taunting missile launches, the rise of populism across continents, alleged strikes by a heavily sanctioned Iran against maritime targets and even neighboring Saudi Arabia, and a very unconventional US presidency. While such developments have increased uncertainty or even resulted in short-lived volatility, they have neither derailed the US economy nor ended the US equity bull market.

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Elsewhere in the world, the European sovereign debt crisis that began to unfold in late 2009 has left a lasting impact and has raised further questions about the viability of the Eurozone as an economic and political union.

As we look over the horizon, we do not see risk factors that are likely to derail the US economy or end the US equity bull market in 2020. We expect somewhat slower growth in the US and moderately faster growth on a global basis, as a result of which we expect modest returns from US and non-US equity markets.

As many of our long-standing clients know, we have been mindfully optimistic about the length and strength of this bull market, particularly with respect to US equities. As early as January 2014, when we published our *Outlook: Within Sight of the Summit*, we stated that while we were within sight of the summit, we were not yet ready to call a peak in equity prices. We could not determine how far we were from the summit in terms of length of time and gain in altitude. In our *Outlook* for 2015, *US Preeminence*, we recommended clients maintain their strategic overweight to US equities because the gap between the US and other major developed and emerging market economies was continuing to widen. In our 2016 *Outlook* report, *The Last Innings*, we stated that this economic recovery and equity bull market had further innings to go. In our *Outlook* for 2017, *Half Full*, we were still looking at the glass optimistically as half full. In our 2018 *Outlook* report, *(Un)Steady as She Goes*, we recommended clients invest on the basis of a “steady as she goes” outlook, but noted the risks associated with an “unsteady as she goes” undertow. Finally, in our *Outlook* for 2019, *American Preeminence in a Rattled World*, we recommended that clients remain invested because the extensive rattling across multiple fronts was unlikely to lead to a recession, and we expected above-average returns relative to the long-term returns suggested by our strategic asset allocation models.

You may well be asking how we can continue with our investment theme of US preeminence and recommend clients remain invested in equities for another year. We acknowledge that our investment recommendation is very long in the tooth. We are also wary of overstaying our welcome with the same investment theme that has served our clients well.

Our recommendation is based on a simple premise: we expect this expansion to continue given the favorable monetary policy backdrop, a relatively balanced economy and the same steady stream of exogenous shocks that have threatened but not derailed this expansion over the last decade. Like the sturdy baobab tree, which lives far longer than most trees (reportedly up to 2,500 years), this expansion appears poised to continue beyond what is typical.

While bouts of volatility are inevitable, especially in a presidential election year, we show through data and analysis why we believe that the risks of recession, while

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relatively higher than those described in our 2019 *Outlook*, have not yet reached levels that warrant an underweight in equities. As in past *Outlook* publications, we also present our expected returns for the next one and five years. Most importantly, we provide a more extensive review of why valuation alone is not an effective signal for *underweighting equities*, but a far more useful signal for *overweighting equities*.

Of course, we remain vigilant. Investor sentiment can shift quickly in response to geopolitical headlines or negative economic surprises, leading to tighter financial conditions and negative impacts on consumer and business confidence, and ultimately to a vicious downward spiral in the economy and financial markets. We therefore recommend clients also reevaluate their strategic asset allocation in order to ensure that they can withstand the inevitable bouts of volatility that likely will emanate from the current geopolitical environment.

We take this opportunity to wish you a very healthy, happy and, as always, prosperous 2020.

The Investment Strategy Group



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We expect a broadly favorable global economic and policy backdrop in 2020, but there is no shortage of risks. We recommend clients stay invested in US equities and encourage our clients to weigh the risks of underweighting US equities early against the benefits of overweighting US equities early.



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# Room to Grow

SINCE NOVEMBER 2013, WHEN EQUITIES FIRST CROSSED into the ninth decile of valuations (defined as a level at which equities have been cheaper at least 80% of the time), we have recommended 58 times that clients stay invested, asserting that higher valuations alone were not a signal to underweight equities.

Our recommendation to clients to stay invested at their customized strategic allocation to equities has been driven primarily by our economic outlook: as long as the US is in an economic expansion and a recession is not imminent, the likelihood of a positive return is very high. Based on historical data, the probability is 87% over a one-year window. Given such favorable odds, and our view that US equities are only moderately expensive when viewed in the context of the current interest rate and inflationary backdrop, we continue to recommend clients stay invested.

Through most of the just-ended decade, we had assigned a probability of recession at 10%, raising it to 15–20% in our 2019 *Outlook*. We further raised this probability to 25–30% in September 2019 as trade tensions affected business investment and consumer confidence. At the same time, global growth across the Eurozone and in Japan was showing signs of weakness. However, this modest increase in our estimate of recession probabilities was not significant enough to warrant a change in our investment recommendation.





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As we enter 2020, we have, in fact, lowered our assessment of a recession and believe that the risks have declined slightly, to 20–25%. As some of our clients may remember, we prefer using ranges for our forecasts, whether for economic growth, market returns, yield levels, inflation levels or other such economic and financial market measures.

We begin with a review of the factors that account for our assignment of a low probability of recession, including the impact of the timely midcycle adjustment of the Federal Reserve to its tightening cycle. We explain why rising corporate debt issuance, increasing delinquencies in the subprime auto loan market and high delinquency rates in student loans are not a source of concern at this time. We also address the question of why rising national debt as a percentage of GDP is not a risk in the short or intermediate term.

Of course, our outlook for 2020 is not without risk, especially in an election year with an unconventional president—who is the only president in American history to run for reelection after having been impeached by the House of Representatives. We examine these risks and demonstrate why we believe they will be a source of volatility but are unlikely to trigger a recession.

As usual, we present our one- and five-year expected returns and our tactical tilt recommendations.

However, before we conclude Section I with our key takeaways, we address the most important issue on our clients' minds: how can we still recommend staying invested in the face of modest equity returns in 2020, slightly higher risk of recession than forecast in our 2019 *Outlook*, and increased risks of domestic and non-US exogenous shocks? We believe the analysis presented on this topic is probably the most pertinent analysis in the entire report—certainly more than any single forecast in our economic and financial market outlook.

Hopefully, it will help our clients reassess their investment philosophy toward tactical asset allocation, an investment process in which we firmly believe. Our goal is to demonstrate the penalty of exiting the equity market too early and compare it to the benefit of overweighting equities at times of stress, even if one is early by several quarters. The payoff of tactical asset allocation in US

equity markets is asymmetric: the likelihood of success in overweighting equities is substantially greater than the likelihood of success in underweighting equities.

## Low Risk of Recession

We believe that there are three recession triggers in the US, and none are being set off at this time:

- Aggressive tightening of monetary policy by the Federal Reserve
  - Tightening monetary policy contributed to nine of the 11 recessions in the post-WWII period.
- Economic and financial market imbalances
  - Real estate imbalances in the late 1980s; excessive valuations and leverage in the technology, media and telecommunications sectors in the late 1990s; and excessive leverage in the business and household sectors contributed to the three recessions since 1990.
- Significant domestic and non-US exogenous shocks
  - The Arab oil embargo in 1973 and the Iran-Iraq War in 1980 each led to supply shocks and a near-quadrupling of oil prices, triggering recessions.

## Federal Reserve Has Reversed Course

As many of our clients know, we believe that history is a useful guide to the future. That view is one of the key pillars of our investment philosophy.

In the past, not every tightening cycle has led to a recession. As we highlighted in last year's *Outlook*, of the 14 tightening cycles in the post-WWII period, four have not led to a recession. Those tightening cycles were characterized by:

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

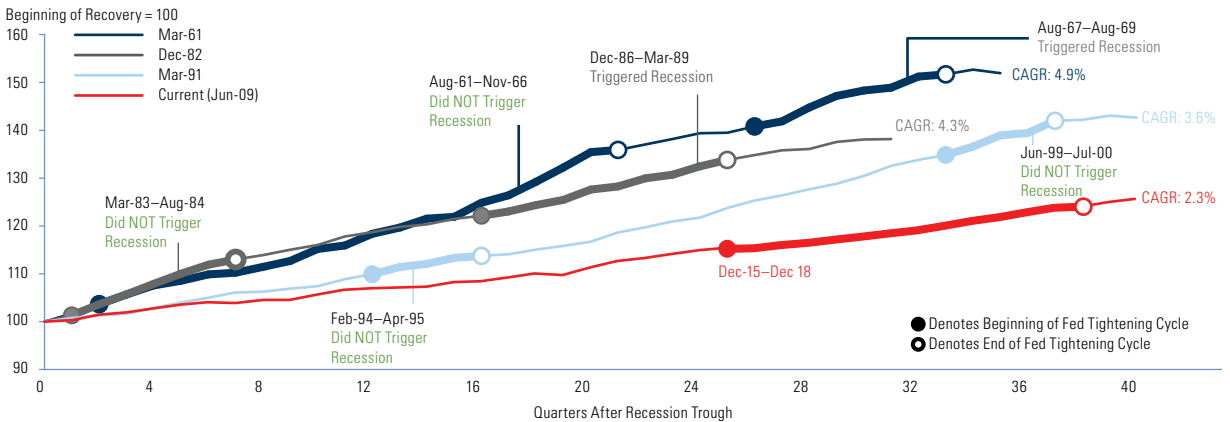
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## Exhibit 1: US Real GDP During the Longest Post-WWII Recoveries

We do not expect the latest tightening cycle to trigger a recession.



Data through Q3 2019, forecast through Q4 2019.  
Source: Investment Strategy Group, Bloomberg, The National Bureau of Economic Research.

All three criteria fit the current cycle, which prompted us to suggest that this tightening cycle was likely to be benign as well.

In addition, when the Federal Reserve has reversed course in a tightening cycle, it has extended the life of an expansion. Exhibit 1 shows the path of GDP during the four longest expansions in the post-WWII period, including the current expansion. In the three longest expansions preceding the current one, the expansion was extended when the Federal Reserve reversed course and lowered the federal funds rate.

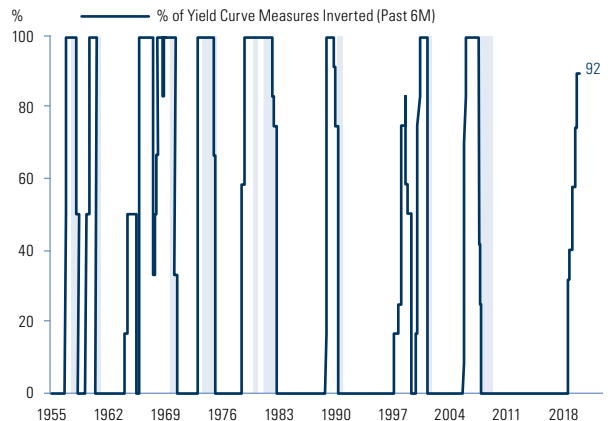
In the recent tightening cycle, the Federal Reserve raised rates by 2.25 percentage points between December 2015 and December 2018. It then reversed course in July 2019 and lowered rates by 0.75 percentage point through October 2019. In our view, this reversal, like the reversals in the post-WWII period, will extend the life of this expansion for at least another year and possibly beyond 2020.

This reversal in monetary policy has also avoided setting off one of our recession monitors: our proprietary Yield Curve Inversion Diffusion Index. This index measures the spread between a series of short- and long-term Treasury interest rates over the prior six months. In the past, when the Investment Strategy Group's Proprietary Yield Curve Inversion Diffusion Index reached 100%, a recession followed, on average, about 14 months later. The one exception was a false positive in 1965.

In the recent tightening cycle, this diffusion index peaked at 92% in late August (see Exhibit 2).

## Exhibit 2: ISG Proprietary Yield Curve Inversion Diffusion Index

Our diffusion index did not reach 100% in this tightening cycle.

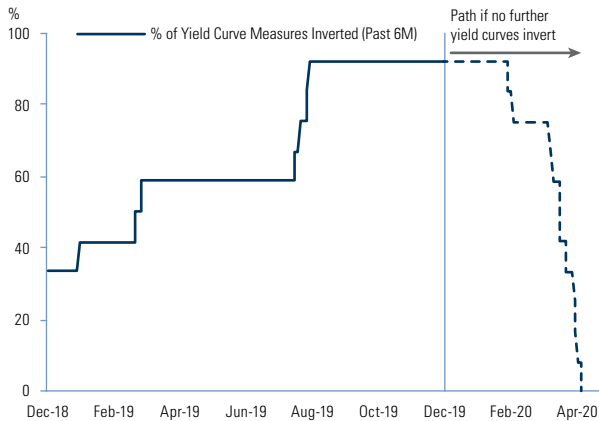


Data through December 31, 2019.  
Note: Shaded periods denote recessions. The diffusion index measures the percentage of yield curve measures inverted in the previous 6 months based on the total number of yield curve measures whose data was available at each point in time. Before 1962, only 2 yield curve measures were available (5Y/3Y and 10Y/1Y monthly). From 1962 to 1976, 6 yield curve measures were available (5Y/3Y and 10Y/1Y, daily/weekly/monthly). After 1976, all the 12 yield curve measures were available (5Y/2Y, 5Y/3Y, 10Y/1Y, 10Y/2Y, daily/weekly/monthly). This index is tracked internally by ISG and is not publicly available.  
Source: Investment Strategy Group, Bloomberg, Haver Analytics.

With the Federal Reserve holding rates steady for the foreseeable future, we expect this index to start declining in February 2020 and reach zero by May 2020, as shown in Exhibit 3. In sum, we do not expect Federal Reserve monetary policy to trigger a recession in 2020.

### Exhibit 3: ISG Proprietary Yield Curve Inversion Diffusion Index Projected Trajectory

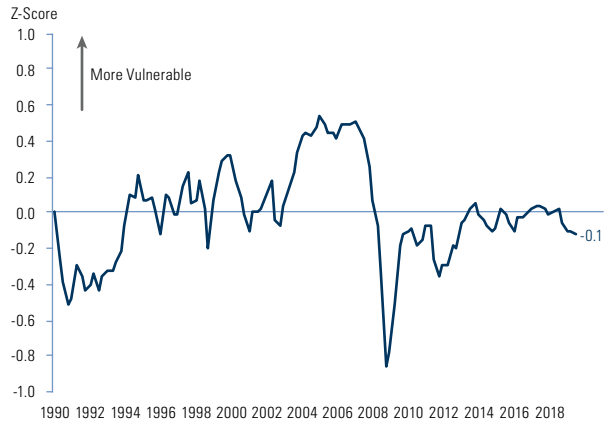
We expect our diffusion index to start declining in February and reach zero by May 2020.



Data through December 31, 2019, forecast through May 31, 2020.  
 Note: The diffusion index measures the percentage of yield curve measures inverted in the previous 6 months based on 12 yield curve measures (5Y/2Y, 5Y/3Y, 10Y/1Y, 10Y/2Y, daily/weekly/monthly). No curves are currently inverted.  
 Source: Investment Strategy Group, Bloomberg, Haver Analytics.

### Exhibit 4: GIR Financial Excess Monitor

Today's level is below the historical average and the levels seen prior to the last two recessions.



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

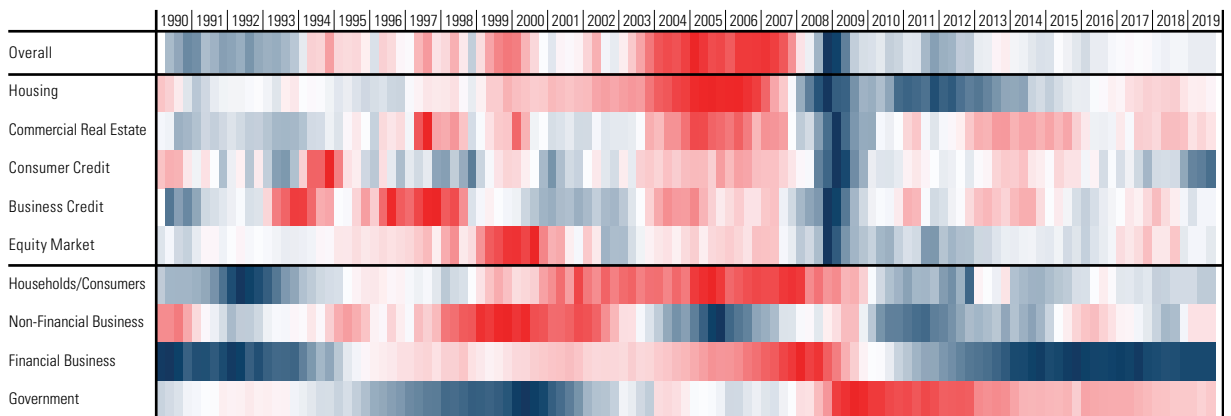
## Absence of Economic and Financial Market Imbalances

One of the most useful tools in our arsenal for measuring economic and financial market imbalances is the Goldman Sachs Global Investment Research (GIR) Financial Excess Monitor, developed by our colleagues in Economics Research.<sup>2</sup> The framework for the GIR

Financial Excess Monitor is largely similar to the framework designed by the Federal Reserve Board to monitor financial stability.<sup>3</sup> The goal of both frameworks is to identify vulnerabilities in the economy that reduce its ability to withstand the negative impact of destabilizing factors such as shifts in risk appetite, drops in asset prices and exogenous geopolitical shocks. If the financial system is plagued by excesses, the economy is

### Exhibit 5: Global Investment Research Financial Excess Monitor

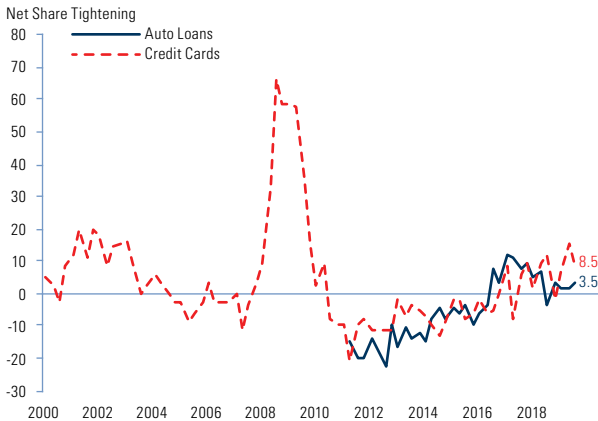
The types of economic and financial market imbalances that preceded the last two US recessions are notably absent today.



Data through Q3 2019.  
 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 6: Net Percentage of Lending Officers Tightening Consumer Lending Standards

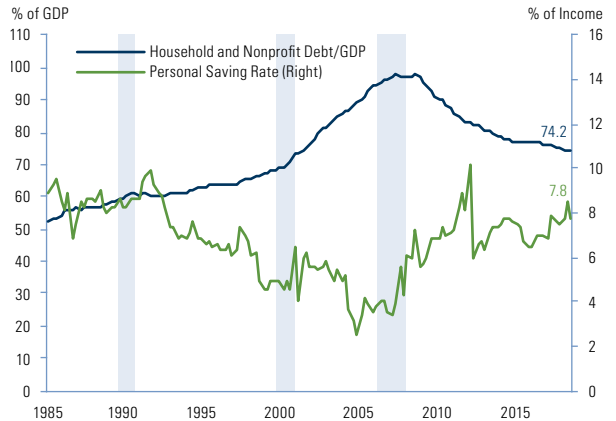
Lending standards in consumer credit have tightened over recent years.



Data through Q3 2019.  
Source: Investment Strategy Group, Haver Analytics.

## Exhibit 7: US Household Debt and Personal Saving Rate

Higher saving rates and household deleveraging have strengthened consumer balance sheets.



Data through Q3 2019.  
Note: Shaded periods denote recessions.  
Source: Investment Strategy Group, Haver Analytics.

more vulnerable and the risks of a recession increase.

As shown in Exhibit 4, the overall level of the GIR Financial Excess Monitor is currently slightly below its historical average and significantly below the levels seen in the 2000 dot-com bubble era or in 2007, prior to the GFC. The overall measure has actually declined since 2017, implying a decrease in economic and financial market imbalances over the last two years.

The key factors that are driving risks lower, shown in various shades of blue in Exhibit 5, are:

- Higher interest rates and tighter lending standards in consumer credit (see Exhibit 6)
- Higher saving rates and low levels of leverage in the household sector (see Exhibit 7)
- Low levels of leverage in the financial sector (see Exhibit 8)

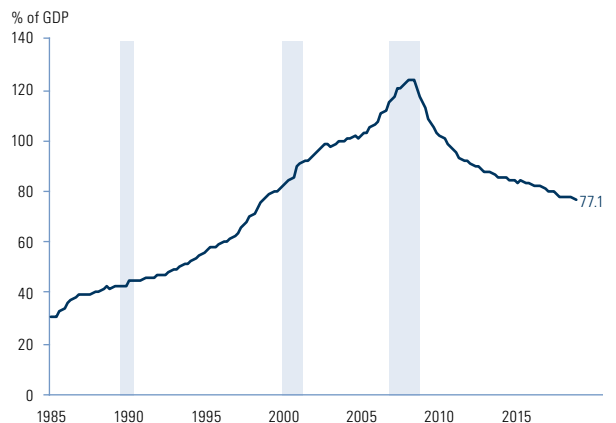
As we highlighted in last year's *Outlook*, the magnitude and speed of deleveraging in the household and financial sectors have been notable. The deleveraging trend continued in 2019, and both the household sector and the financial sector enter 2020 with strong balance sheets and favorable debt service ratios.

### Household Sector

More specifically, in the household sector, the debt service ratio, measured as payments on

## Exhibit 8: US Financial Sector Debt

The magnitude and speed of deleveraging in the financial sector have been notable.

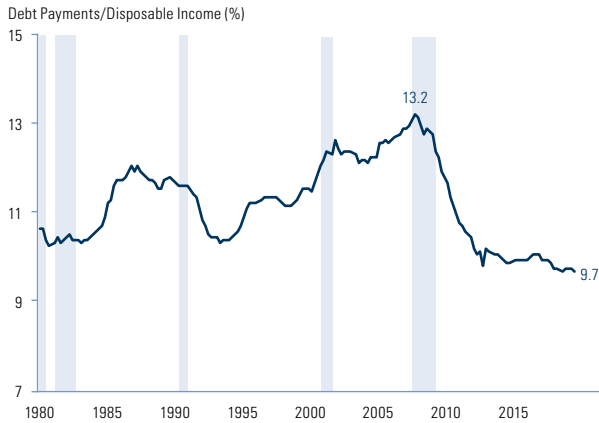


Data through Q3 2019.  
Note: Shaded periods denote recessions.  
Source: Investment Strategy Group, Haver Analytics.

outstanding mortgage and consumer debt divided by disposable personal income, declined from a high of 13.2% in late 2007 to a 40-year low of 9.7% in 2019 (see Exhibit 9). While there have been numerous headlines raising concerns about auto loans and student loans, we believe those concerns are overstated.

### Exhibit 9: Household Debt Service Ratio

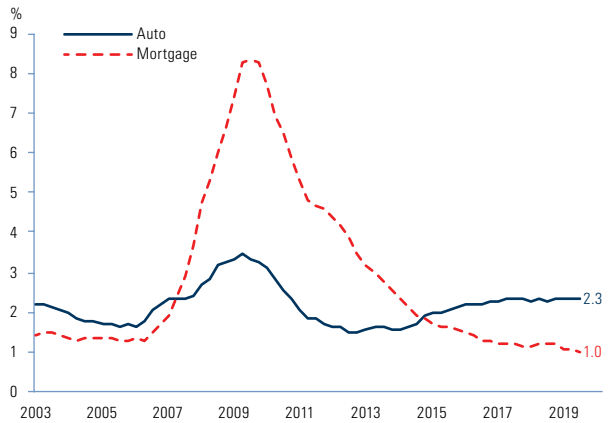
Households' debt payments as a share of disposable income stand at a historical low.



Data through Q3 2019.  
Note: Shaded periods denote recessions.  
Source: Investment Strategy Group, Haver Analytics, Datastream.

### Exhibit 11: Transition Into 90+ Day Delinquency by Loan Type

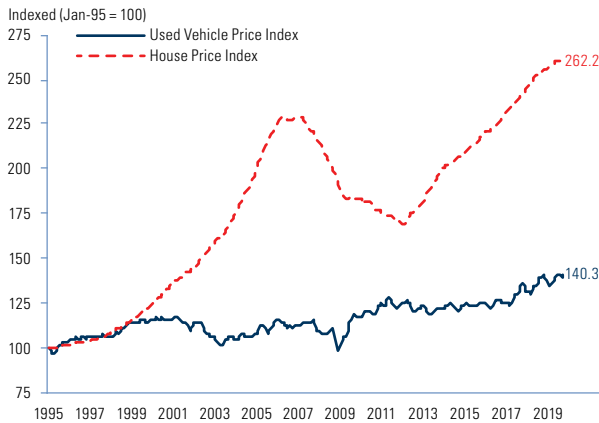
The auto loan market is less cyclical than the mortgage market.



Data through September 2019.  
Source: Investment Strategy Group, Goldman Sachs Global Investment Research.

### Exhibit 10: Used Vehicle Prices vs. Home Prices

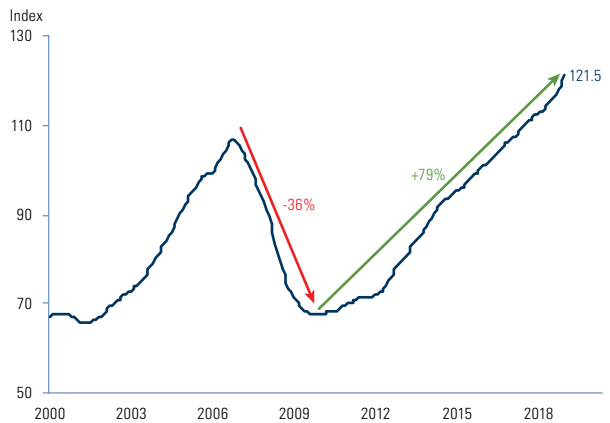
Used vehicle prices are more stable than residential house prices.



Data through October 2019.  
Source: Investment Strategy Group, Goldman Sachs Global Investment Research.

### Exhibit 12: US Core Commercial Real Estate Price Index

Commercial real estate prices stand above their pre-crisis highs.



Data through November 2019.  
Source: Investment Strategy Group, Datastream.

**Auto Loans:** Auto loans account for \$1.3 trillion, or 9%, of total household debt. Auto loan delinquencies have been rising steadily since 2013. About 7.8% of borrowers are more than 90 days delinquent, compared to a peak of 8.8% in late 2010, and the highest rates of delinquencies are seen among subprime borrowers with poor credit ratings. Inevitably, investors are asking whether the increase in delinquencies is a harbinger of

another subprime crisis that could spread to the rest of the economy.

We do not believe so, for the following reasons:

- At \$285 billion in late 2019, the subprime auto loan market is small in comparison to the subprime mortgage market, which peaked at \$1.3 trillion in 2007.

### Exhibit 13: US Capitalization Rates

The ratio of rental income to property purchase prices is at historically low levels.



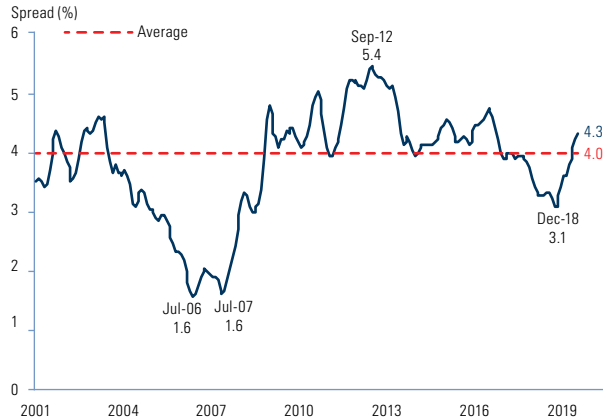
Data through September 2019.

Note: Showing the 3-month averages of weighted capitalization rates in the industrial, retail, office and multifamily sectors, based on national square footage in 2009.

Source: Investment Strategy Group, Datastream.

### Exhibit 14: US Capitalization Rate Spread to 10-Year Treasuries

The spread of capitalization rates to Treasury yields stands above the historical average.



Data through September 2019.

Source: Investment Strategy Group, Haver Analytics, Federal Reserve.

- Specialty auto finance companies and the captive financing arms of auto companies account for 45% of the subprime auto loans outstanding, so the risk is much less concentrated in the hands of large banks relative to the subprime mortgage market in 2007.
- Subprime auto loans have very high weighted average coupons (over 16% as of year-end) and have been priced to absorb high delinquency rates. This market pricing compares with a weighted average coupon of 8.5% for subprime mortgages prior to the GFC.
- The auto loan market is less cyclical than the mortgage market, as shown in Exhibits 10 and 11, and as highlighted by our colleagues in GIR in their auto loan credit report.<sup>4</sup>

While the subprime auto loan market is unlikely to be a catalyst for the next credit crisis or a recession, a decline in GDP would certainly affect both auto loan-backed securities and the auto industry itself.

**Student Loans:** Student loans account for \$1.5 trillion, or 10.7%, of total household debt. Delinquency rates for student loans are the highest across all types of consumer debt, including mortgages, autos, home equity loans and credit cards, thereby raising concerns about consumer balance sheets and the impact on the banking system.

Household balance sheets are strong and debt service ratios are low (see Exhibits 7 and 9), however, and rising delinquencies are not a risk to the banking sector because 92% of all student loans are backed by the US government.

The factors that are driving risks higher, shown earlier in Exhibit 5 in various shades of red, are elevated prices in commercial real estate, growth in non-financial business debt, and growing budget deficits and the rising ratio of government debt to GDP. We examine each of these factors below and conclude that they do not pose material risk to our view of continued GDP growth in 2020.

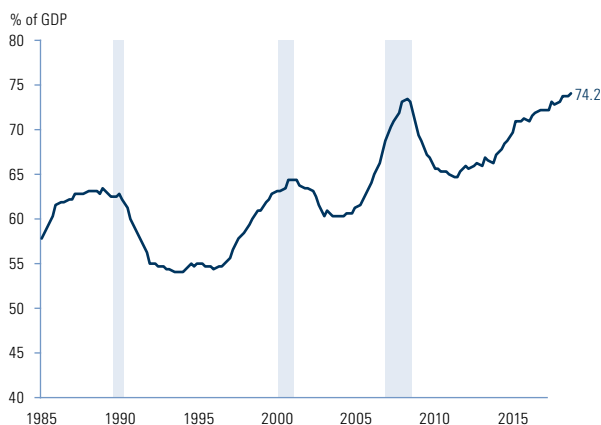
### Commercial Real Estate Sector

Prices of commercial real estate now exceed the high prices seen before the GFC, having risen 79% from their trough (see Exhibit 12). Similarly, capitalization rates, which measure rental income relative to the purchase price of a property, are at historically low levels (see Exhibit 13).

However, higher valuations are partly offset by the increase in the spread of capitalization rates to 10-year Treasury yields in 2019; the spread currently stands at above-average levels, as shown in Exhibit 14. Furthermore, the Senior Loan Officer Opinion Survey shows that the share of banks tightening lending standards for commercial real estate has risen to levels last seen in 2017, limiting real estate developers' access to easy credit.

### Exhibit 15: US Non-Financial Business Debt

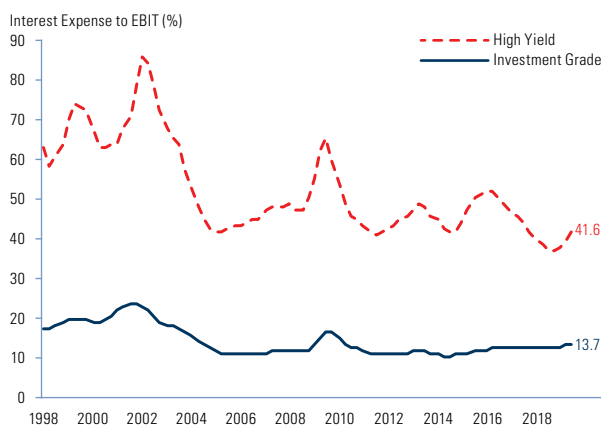
Corporate debt has risen rapidly over the past few years and stands at all-time highs.



Data through Q3 2019.  
Note: Shaded periods denote recessions.  
Source: Investment Strategy Group, Haver Analytics.

### Exhibit 17: US Non-Financial Corporate Interest Coverage

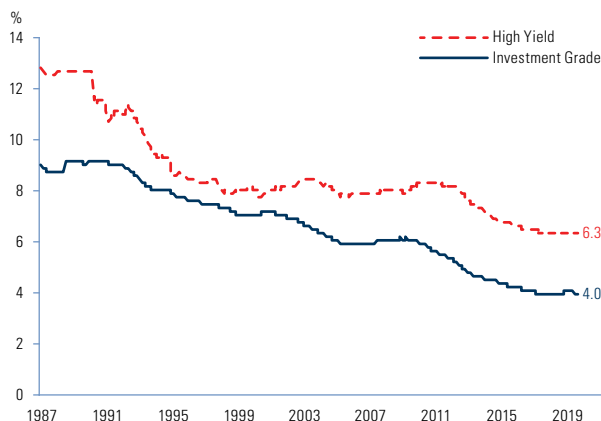
Corporations have ample capacity to cover their interest expenses.



Data through Q3 2019.  
Source: Investment Strategy Group, Haver Analytics.

### Exhibit 16: US Corporate Debt Average Coupon Rates

The average coupon for both investment grade and high yield corporate bonds stands at historical lows.



Data through December 31, 2019.  
Source: Investment Strategy Group, Bloomberg.

Both sets of data reveal the absence of exuberance on the part of real estate investors and lenders.

### Non-Financial Business Sector

Another sector that is flashing more pink than red in the GIR Financial Excess Monitor is the non-financial business sector. As shown in Exhibit 15, non-financial business debt has increased rapidly over the last several years and is now at

its historical high of 74.2% of GDP. The overall level of debt of this sector stands at \$16 trillion. The Federal Reserve Board’s “Financial Stability Report” of November 2019 also highlights the elevated risks emanating from the high debt levels of the non-financial business sector.<sup>5</sup>

While the rising level of debt is a concern, several facts mitigate the risks posed by it.

First and foremost, the interest burden of such leverage is at historically low levels because of very low interest rates and the low level of incremental yield between corporate bonds and Treasury bonds. As shown in Exhibit 16, the average coupon rates of both investment grade and high yield corporate bonds have steadily declined; they are now at their lowest levels since the inception of the respective indices. Similarly, interest expense relative to the earnings of the non-financial corporate sector is near historical lows for high yield corporations and bumping along the bottom for investment grade corporations (see Exhibit 17).

Second, corporations have taken advantage of low interest rates to issue longer-term debt. The average maturity of investment grade debt has increased by two years since 2004 (see Exhibit 18). As a result, only about 7% of the debt outstanding will mature by the end of 2020. Thus, investment grade issuers, which account for \$5.8 trillion of debt, do not face refinancing pressures and are less exposed to a liquidity crisis. Even the high yield



## Exhibit 18: US Investment Grade Index

### Average Maturity

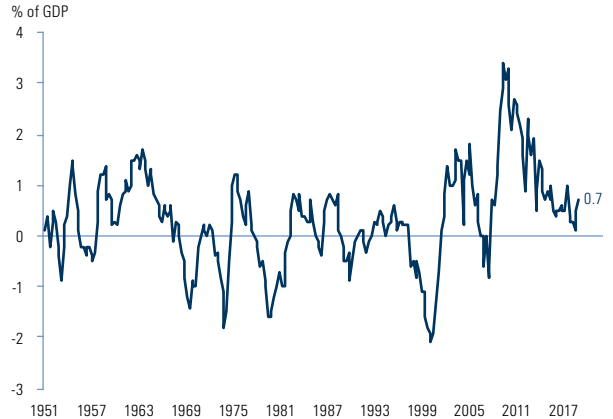
Corporations have taken advantage of low interest rates to issue longer-term debt.



Data through December 2019.  
Source: Investment Strategy Group, Bloomberg.

## Exhibit 19: US Corporate Financing Gap

Companies are generating enough earnings to cover dividends and capital expenditures.



Data through Q3 2019.  
Source: Investment Strategy Group, Haver Analytics, Goldman Sachs Global Investment Research.

bond universe does not pose a systemic risk at this time. The market is less than a quarter of the investment grade market, and only about 3% will mature by the end of 2020.

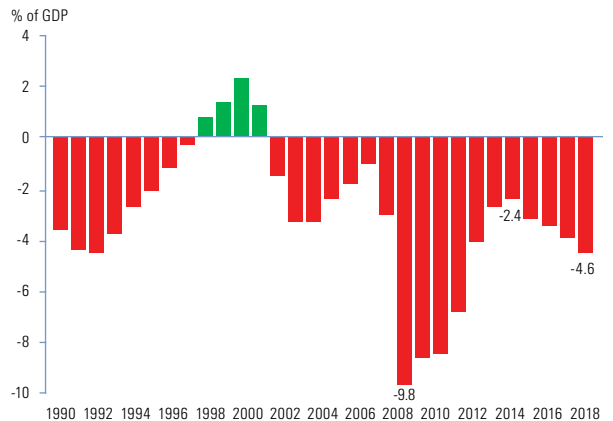
Third, the three sectors in the investment grade corporate bond universe that have experienced the highest growth rates in their debt levels have very favorable interest coverage ratios. The technology sector, for example, has increased its debt by 22% a year since the end of 2009, compared to about 8% for the investment grade universe, yet the sector's earnings before interest and taxes (EBIT) are 19 times as great as their interest expense. This ratio compares favorably to the 11 times coverage ratio for the S&P 500 Index broadly. Therefore, some of the increase in leverage has occurred in very well capitalized high-earning sectors.

Finally, our colleagues in GIR believe that the risks of higher levels of debt are partially offset by the positive financing gap of corporations, which has been weaker than current levels 67% of the time (see Exhibit 19). A positive financing gap matters because it means that a company generates enough earnings to cover dividends and capital expenditures and is unlikely to face financing pressures.

While these four facts mitigate the risks posed by the high level of non-financial business debt, we are not sanguine about possible risks. In February 2013, then Federal Reserve Governor Jeremy Stein warned of the risks of overheating in credit

## Exhibit 20: US Budget Deficit

Despite the long expansion and the lowest unemployment rate in 50 years, the budget deficit has been increasing.



Data as of December 2019.  
Source: Investment Strategy Group, Congressional Budget Office.

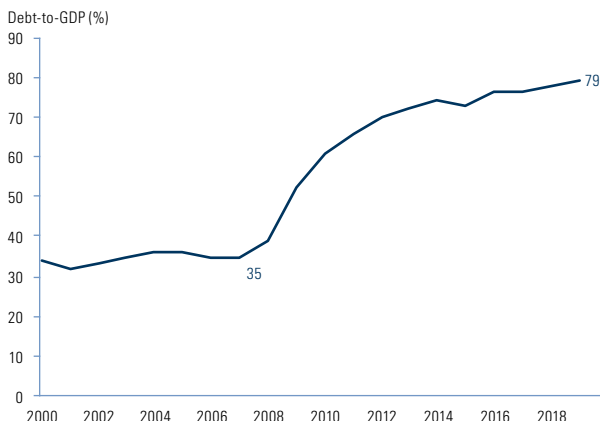
markets, stating that “waiting for decisive proof of market overheating” is not an effective approach to monitoring financial stability.<sup>6</sup> We, therefore, remain vigilant, watching for any sign of overheating.

## Government Debt

The third factor that is driving risks higher, the federal government sector, is flashing pink in the GIR Financial Excess Monitor as a result of rising deficits

### Exhibit 21: US Federal Government Debt-to-GDP Ratio

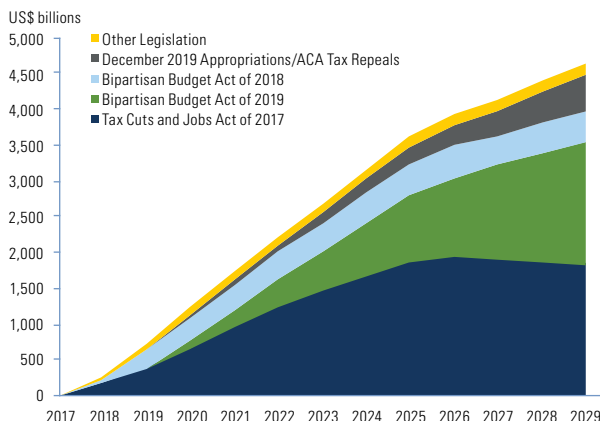
Fiscal stimulus and frequent budget deals have increased the federal debt burden since the GFC.



Data through 2019.  
Source: Investment Strategy Group, Haver Analytics.

### Exhibit 23: Projected Increase in US Government Debt Since 2017

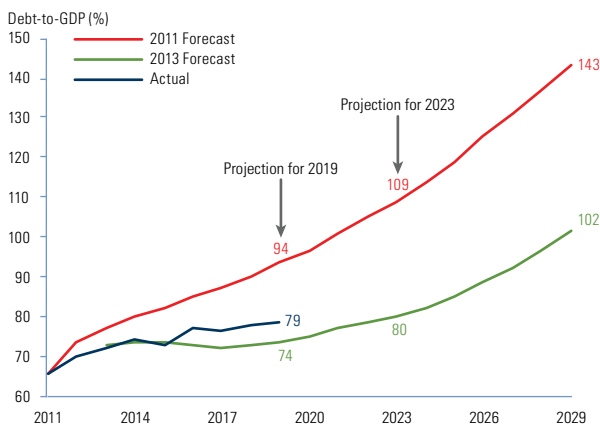
The TCJA and the two subsequent Bipartisan Budget Acts have added about \$4.7 trillion of debt.



Data as of December 2019.  
Source: Investment Strategy Group, Committee for a Responsible Federal Budget.

### Exhibit 22: US Fiscal Forecasts

The Budget Control Act and American Taxpayer Relief Act drove the downward shift in the debt trajectory.



Data as of 2019.  
Note: Forecasts refer to the Alternative Fiscal Scenario forecast for each year.  
Source: Investment Strategy Group, Congressional Budget Office, Haver Analytics, Committee for a Responsible Federal Budget.

and rising debt-to-GDP ratios. Despite a prolonged expansion and the lowest unemployment rate in 50 years, the budget deficit has been increasing from its most recent low of 2.4% of GDP in 2015 and is estimated to have reached 4.6% in 2019, as shown in Exhibit 20. Under the Alternative Fiscal Scenario issued by the Congressional Budget Office (CBO), which assumes that current policies will continue

and tax laws that automatically cut spending will be overridden, the deficit is projected to reach 7.0% of GDP by 2029.<sup>7</sup>

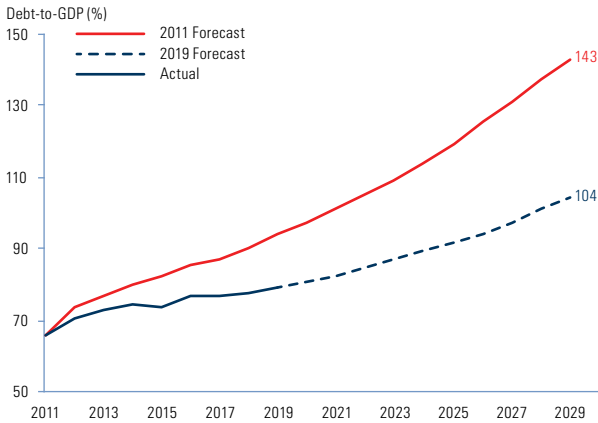
The rising level of US federal debt relative to GDP has been a source of concern since the GFC. The debt-to-GDP ratio stood at 35% in 2007. The fiscal stimulus after the GFC and frequent budget deals that have raised spending relative to revenues have increased debt-to-GDP to its current level of 79% (see Exhibit 21). While the GIR Financial Excess Monitor is currently flashing a warning sign, it is important to note that the current deficit and debt-to-GDP trajectory are far below the alarming levels of 2009 and 2011. In 2009, the deficit stood at 9.8% of GDP, and in June 2011, debt-to-GDP was forecast by the CBO based on prevailing spending and tax policies to reach 94% by 2019, well above the current 79%.

The key driver of the downward shift in the debt trajectory earlier in the decade was President Barack Obama’s Budget Control Act (BCA) of 2011 and American Taxpayer Relief Act (ATRA) of 2012, which themselves were the result of the Simpson-Bowles fiscal commission. As shown in Exhibit 22, the two Acts shifted the debt-to-GDP trajectory down significantly (visible in the change from the red line forecast in 2011 to the green line forecast in 2013). The blue line is the actual debt-to-GDP ratio over the last decade.

President Donald Trump’s Tax Cuts and Jobs Act (TCJA) of 2017 and the Bipartisan Budget

### Exhibit 24: US Government Debt-to-GDP Forecasts

Debt-to-GDP is now expected to increase at a slower pace than was forecast a decade ago.



Data as of 2019.

Note: Forecasts refer to the Alternative Fiscal Scenario forecast for each year. Source: Investment Strategy Group, Congressional Budget Office, Haver Analytics, Committee for a Responsible Federal Budget.

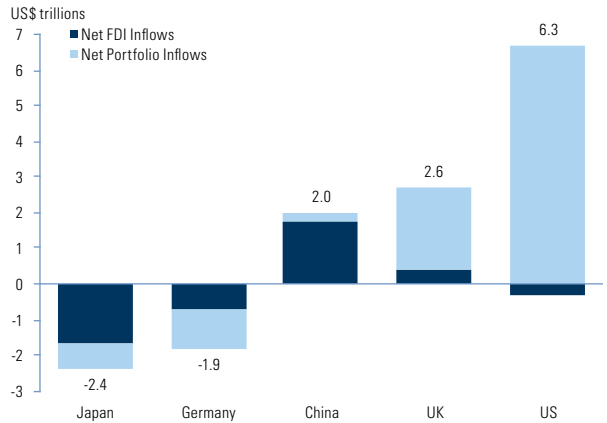
Acts of 2018 and 2019, in turn, have added about \$4.7 trillion of debt. Exhibit 23, from the Committee for a Responsible Federal Budget (CRFB), shows the components of the increase in the overall debt burden under the Trump administration.

This increase has driven the debt-to-GDP trajectory upward; if it stays on course, it will reach about 104% by 2029. However, to keep the latest debt trajectory in perspective and compare it to the pre-BCA and pre-ATRA forecasts, consider that the debt-to-GDP forecast a decade ago for 2029 was 143% (see Exhibit 24).

The current level of debt-to-GDP is not a short- or intermediate-term concern that could create a financial crisis, given the preeminence of the US. In the interest of brevity, we will not review all the structural advantages of the US that account for its preeminence but will instead direct our clients to our 2015 *Outlook: US Preeminence* and our 2019 *Outlook: American Preeminence in a Rattled World*. As a result of its preeminence, the US has been a magnet for capital flows, capturing more than three times the flows reported by the next-largest recipient (see Exhibit 25). Given the widening gap between the US and other developed and emerging market countries across metrics such as GDP per capita growth, earnings per share growth, innovation, productivity and demographics, it is unlikely that this flow to the US will abate.

### Exhibit 25: Cumulative Foreign Direct Investment and Portfolio Inflows Since 2000

The US has attracted the lion's share of global capital inflows for the last 20 years.

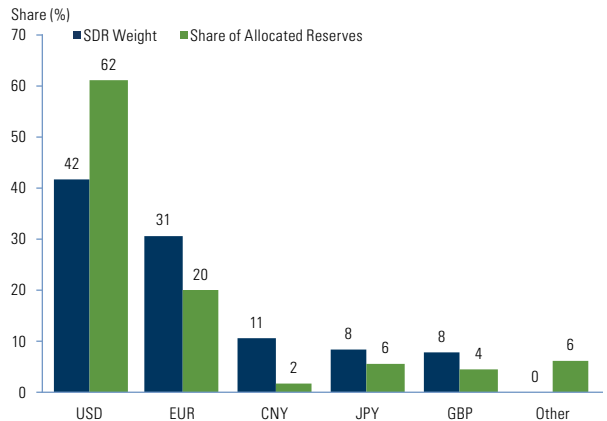


Data as of Q2 2019.

Source: Investment Strategy Group, IMF.

### Exhibit 26: Allocation of Global Foreign Reserves vs. IMF Special Drawing Rights Basket

Reserve managers continue to allocate most of their assets to US dollar-denominated assets.



Data as of Q3 2019.

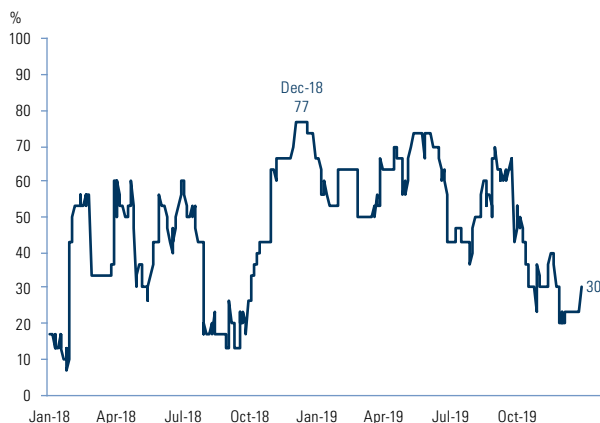
Note: The IMF's Special Drawing Rights Basket is composed of only five currencies: USD, EUR, CNY, JPY and GBP.

Source: Investment Strategy Group, IMF.

The incremental yield of 150 to 200 basis points between US interest rates and those of Europe and Japan will also support the demand for US assets. As of year-end 2019, about \$11.3 trillion of bonds had negative yields. Even though the size of the market of negative-yielding bonds

## Exhibit 27: Share of ISG Recession Indicators Deteriorating

Only 30% of ISG's recession indicators deteriorated in the last month, compared to 77% in December 2018.

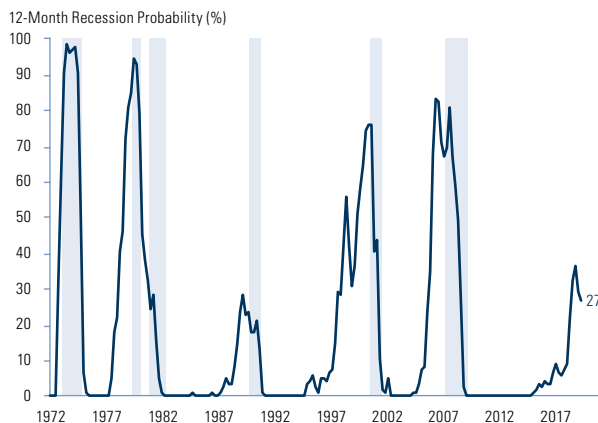


Data through December 31, 2019.

Note: The chart shows a breadth index based on a total of 30 ISG recession indicators. It measures the percentage of indicators that have been deteriorating relative to the previous month. A lower value means fewer recession indicators have been deteriorating. Source: Investment Strategy Group.

## Exhibit 28: ISG Proprietary Recession Risk Indicator

Our recession indicator has trended lower recently.



Data through December 2019.

Note: The chart reflects the median reading of a number of ISG proprietary recession models that are based on different economic and financial market variables, which we combine into a composite. Shaded periods denote recessions. Source: Investment Strategy Group.

has decreased from the peak level of \$17.0 trillion in August 2019, the yield advantage of US bonds is unlikely to diminish in the near future.

Furthermore, the US dollar remains the dominant reserve currency of the world, and there is no other currency that will threaten its reserve status in the foreseeable future, in our view. Reserve managers who are mostly free to allocate their country's reserves as they see fit put an overwhelming 62% of their assets in US dollar-denominated assets, a portion substantially greater than the allocation of the International Monetary Fund (IMF) Special Drawing Rights of 42%, as shown in Exhibit 26. As Eswar Prasad, professor at Cornell University and previously chief of the Financial Studies Division of the IMF, wrote in *The Dollar Trap: How the U.S. Dollar Tightened Its Grip on Global Finance*, published in 2014, the dollar will remain the dominant reserve currency of the world for the foreseeable future.<sup>8</sup>

Funding the deficit and growing debt is, therefore, not a short- or intermediate-term problem. The longer-term trajectory is what raises some concern.

No one knows the exact tipping point in the debt-to-GDP level at which the US economy will be negatively affected by higher interest rates or the crowding out of private investment by higher government debt. What we know with some

confidence is that we are currently nowhere near a tipping point that would trigger a recession.

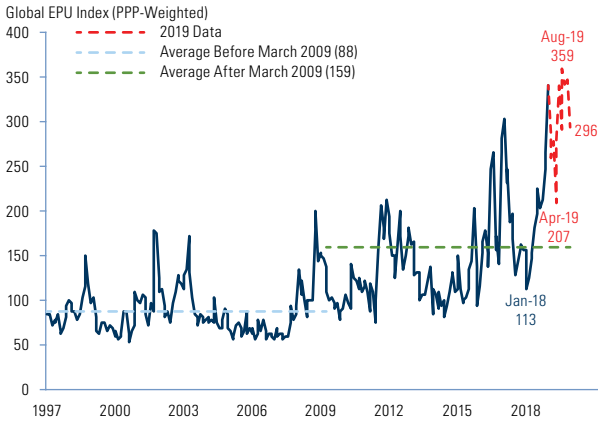
There are also a number of policy measures that can reduce the debt trajectory. For example, the CRFB has shown that gradually reducing the funding of the Iraq and Afghanistan wars from the current level of \$77 billion to \$10 billion per year by 2024 would reduce debt-to-GDP by \$630 billion by 2030, or 7% by 2050, helping push the tipping point out further.

## The Signals from Other Recession Monitoring Tools

In addition to our proprietary Yield Curve Inversion Diffusion Index and GIR's Financial Excess Monitor, we have developed several other tools to monitor a range of economic and financial market indicators, including the Conference Board Leading Economic Index; housing market measures; employment data; and equity, credit and bond market data. Early in 2019, our models indicated a rising risk of recession, but the risk has trended lower more recently, as shown in Exhibits 27 and 28. Importantly, we continue to rely on a series of tools since no one model has a solid enough track record to reliably predict the start of a recession.

## Exhibit 29: Global Economic Policy Uncertainty (EPU) Index

Economic policy uncertainty remained elevated throughout 2019.



Data through November 2019.

Note: Global EPU Index uses PPP-adjusted GDP weights.

Source: Investment Strategy Group, Economic Policy Uncertainty Index ([www.policyuncertainty.com](http://www.policyuncertainty.com)).

We should note that among the external resources we leverage to formulate our investment recommendations, the range of probability forecasts for a 2020 recession is very wide at this time. The lowest forecast is 10% and the highest is 45%. Jan Hatzius and his team in GIR Economics Research estimate the probability of recession in 2020 at below 20%,<sup>9</sup> and the Bloomberg survey of recession risk estimates it at 30%. The Investment Strategy Group's current estimate is 20–25%.

To put these numbers in context, the probability of recession occurring in the next 12 months when the economy is in expansion is 14% based on data since 1960. If we look at data since 1981, the probability declines to 10%.

### Risk of Domestic and Non-US Exogenous Shocks

Historically, the third trigger of recessions (after aggressive tightening of monetary policy and economic and financial market imbalances) has been exogenous shocks. We cannot predict shocks—if we could—they would not be shocks per se. Furthermore, as stated in our 2018 *Outlook: (Un)Steady as She Goes*, we cannot make investment recommendations based on the unsteady undertow of geopolitical risks; we must stay focused on steady economic and earnings

growth and the continuation of low and stable inflation.

Nevertheless, it is important to carefully monitor likely sources of such shocks. The list is even longer than last year's list because in the US, the upcoming elections and the presidential impeachment have added more uncertainties to the list of possible shocks.

It is also important to note that not only is the geopolitical landscape a potential source of exogenous shocks that could trigger a recession, but it also creates economic policy uncertainty, which in turn hampers growth. As shown in Exhibit 29, the Economic Policy Uncertainty (EPU) Index is at its 98th percentile on a global basis, driven to higher levels primarily by an increase in economic policy uncertainty in China. In the US, the EPU Index has dropped from its August highs and is now at the 85th percentile. An increase of 90 points in the EPU Index reduces gross fixed investment in the US by about 6% within two quarters and lowers GDP by just over 1%.<sup>10</sup> As trade war tensions began to abate in the fall of 2019, the EPU declined.

The geopolitical landscape also has an impact on how monetary policymakers adjust policy. John Williams, president of the Federal Reserve Bank of New York, referred to the issue at a November 14, 2019, Asia Economic Policy Conference when he said:

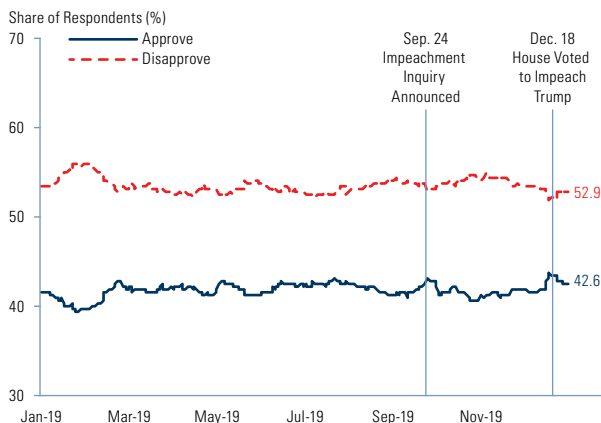
*It's striking that in almost every corner of the world geopolitical tensions are threatening to put the brakes on growth ... The uncertainty created by current events is no doubt having a lasting effect on the economic conditions we're experiencing today.<sup>11</sup>*

### Domestic Contenders

President Trump continues to face a slew of investigations including congressional, federal, and state and local investigations. The *New York Times* reported in September 2019 that there were as many as 30 such investigations, only a few of which have been concluded.<sup>12</sup> These investigations cover his presidency, his campaign, his inauguration, his businesses, his taxes, his family and his associates. For his part, the president continues to push back aggressively. While the ebb and flow of these investigations may contribute to some market volatility, it is unlikely that the outcome or lack of outcome of these investigations will destabilize the US economy.

### Exhibit 30: President Trump Approval Ratings

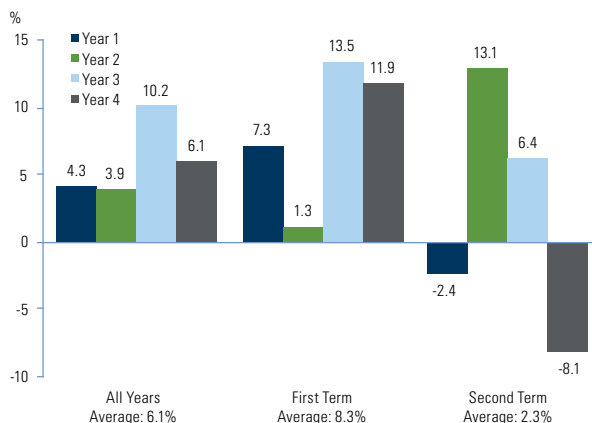
The impeachment process barely registers in Trump's approval ratings.



Data through December 31, 2019.  
Source: Investment Strategy Group, FiveThirtyEight.

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

The third year of the presidential cycle has historically had the highest equity returns.



Data as of December 31, 2019.  
Note: Based on data since 1873. Second term refers to consecutive terms served by presidents who were elected for both terms. It excludes the second term served non-consecutively by Grover Cleveland and years of second terms when the vice president took over office. It includes the third term served by Franklin D. Roosevelt.  
Source: Investment Strategy Group, Bloomberg, Robert Shiller.

Two new developments have been added to the list of domestic contenders that might destabilize the US economy or financial markets. In our view, both are unlikely to do so.

**Impeachment:** The first new development is the impeachment of President Trump. The president was impeached by the Democratic Party-controlled House of Representatives on December 18, 2019, on charges of abuse of power and obstruction of Congress. The impeachment process is now supposed to move to the Republican Party-controlled Senate for a trial that will be presided over by Supreme Court Chief Justice John Roberts. While the trial will generate interesting headlines, it is considered highly unlikely that a two-thirds majority of senators will vote to convict the president. Of the two prior presidents who were impeached, neither was convicted and removed from office. Richard Nixon resigned rather than face certain impeachment and conviction. The current impeachment process has not had a material impact on President Trump's approval and disapproval ratings, according to major polls (see Exhibit 30).

Unexpectedly, on December 23, 2019, the general counsel for the House Judiciary Committee argued, in a brief filed with the US Court of Appeals, that the testimony of former White House

Counsel Donald McGahn was needed, including for "consideration of whether to recommend additional articles of impeachment."<sup>13</sup>

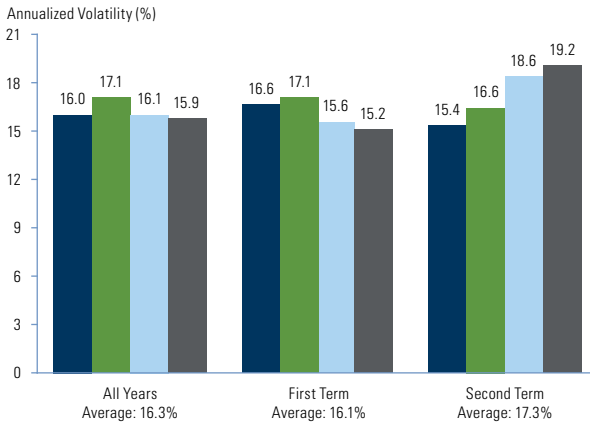
**Elections:** The second possible domestic exogenous shock to the economy and financial markets may come from the national presidential and congressional elections slated for November 3, 2020. Myths abound about S&P 500 Index returns and market volatility during election years. We thought it would be helpful to provide some facts, keeping in mind that the sample set is somewhat limited; there are simply not enough observations from which to conclude any pattern with high statistical significance.

We first examine the price returns in every year of a presidency, separating the first term from the second term. We exclude dividends since we want to focus on the differences from year to year and eliminate the dampening effect of steady dividends.

As shown in Exhibit 31, since 1873, the third year of all presidential terms has been the strongest, with a 10.2% price return in the S&P 500 Index compared to an annual average of 6.1%. The fourth year is in line with the long-term average. However, the averages belie sizable differences between the first and second terms. The strong returns in the third and fourth years are all concentrated in the first term of

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

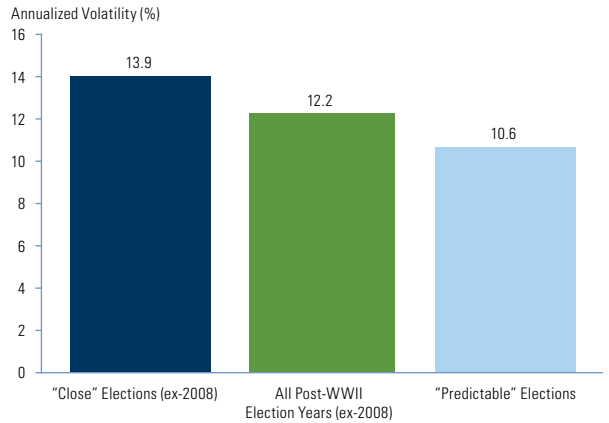
Volatility has generally been lower in the fourth year of a first term of a presidential cycle.



Data as of December 31, 2019.  
 Note: Based on data since 1929. Second term refers to consecutive terms served by presidents elected for both terms. This excludes years when the vice president took over office. It includes the third term served by Franklin D. Roosevelt.  
 Source: Investment Strategy Group, Bloomberg.

**Exhibit 33: Average S&P 500 Annualized Volatility by Election Cohort**

Election years with close preelection polling have exhibited greater equity market volatility on average.



Data as of December 31, 2019.  
 Note: Based on data since 1945. "Close" election years are those in which the average difference of all available Gallup polling for the top two presidential candidates is less than the post-war median of 6.5 percentage points.  
 Source: Investment Strategy Group, Gallup, Bloomberg.

a presidency. The returns for the fourth year of the first term are significantly higher than the returns of the first two years, and close to those of the third year. As history is a useful guide, the fourth year of a first-term president provides a tailwind to our recommendation to stay invested.

We must also examine the volatility in election years to see whether our clients should brace themselves for greater volatility emanating from election rhetoric. As shown in Exhibit 32, volatility has actually been the lowest in an election year in the first term of a presidency, at 15.2%.

However, as we dissect the data further, election years when preelection polling predicts a "close" election exhibit greater volatility than election years that are "predictable." We have defined close elections as elections in which the preelection polling gap is less than the post-WWII period median gap of 6.5 percentage points; the preelection gap is measured as the average difference of all Gallup polls for the top two presidential candidates in that election year. All other elections are defined as predictable. We have excluded 2008 from the data as an outlier given the 41% volatility of the S&P 500 during the downdraft of the GFC. We also excluded pre-WWII results because of less comprehensive polling data.

As shown in Exhibit 33, average volatility is higher in close elections, at 13.9%, compared to volatility in predictable elections, at 10.6%.



*The Keys to the White House: A Surefire Guide to Predicting the Next President, Allan Lichtman, Rowman & Littlefield, all rights reserved.*

## Exhibit 34: 13 Keys to the White House

#	Key	Descriptor	Status
1	Party mandate	After midterm elections, the incumbent party holds more seats in the House than it did after the previous midterm elections	FALSE
2	Contest	No serious contest for incumbent-party nomination	TRUE
3	Incumbency	Incumbent-party candidate is sitting president	TRUE
4	Third party	No significant third-party or independent campaign	TRUE
5	Short-term economy	Economy is not in recession during the campaign	TRUE
6	Long-term economy	Real per capita growth during the term equals or exceeds mean growth during previous two terms	TRUE
7	Policy change	Incumbent administration effects major changes in national policy	TRUE
8	Social unrest	No sustained social unrest during the term	TRUE
9	Scandal	Incumbent administration is untainted by major scandal	FALSE
10	Foreign/military failure	Incumbent administration suffers no major failure in foreign or military affairs	FALSE*
11	Foreign/military success	Incumbent administration achieves a major success in foreign or military affairs	FALSE*
12	Incumbent charisma	Incumbent-party candidate is charismatic or a national hero	FALSE
13	Challenger charisma	Challenging-party candidate is not charismatic or a national hero	TRUE*

Source: Investment Strategy Group, Allan Lichtman.

\* Some possibility of change.

The next inevitable question is whether this upcoming presidential election will be close or predictable. Some observers, such as Ray Fair, a professor at Yale University who has built mathematical models for predicting elections, expect a Trump victory barring a recession in 2020,<sup>14</sup> as do Oxford Economics Ltd. and Moody's Analytics Inc.<sup>15</sup> Other observers, such as *Politico*<sup>16</sup> and Nate Silver of FiveThirtyEight,<sup>17</sup> characterize the election as too close or too early to call.

Another predictor of presidential elections who believes this one is too early to call is Allan Lichtman, professor at American University and author of *The Keys to the White House: A Surefire Guide to Predicting the Next President*, published in 2008.<sup>18</sup> Lichtman predicted, in September 2016, that Trump would win the election<sup>19</sup>—and, in November 2016, that he would be impeached!<sup>20</sup>

Lichtman uses 13 keys based on the view that presidential elections are “a vote up or down on the strength and performance of the party in power. And virtually all our keys gauge those factors.”<sup>21</sup>

If five or fewer of the keys are false, the incumbent party wins. The keys and their current status are shown in Exhibit 34. Using this analysis,

the coming election is deemed too early to call because the outcome of various foreign policy measures dealing with geopolitical hot spots is unknown and the challenger candidate may not emerge until the Democratic Party convention in July 2020.

In fact, it is quite remarkable that political observers believe there is a higher-than-usual probability that the Democrats will have a contested convention in which no presidential candidate has sufficient pledged delegates at the time of the convention to win a majority in the first ballot. In a second ballot, the so-called superdelegates may decide the nominee. In his December 16, 2019, note to his clients, Ian Bremmer, founder and president of Eurasia Group, reported that the Democratic candidates he had spoken to had themselves assigned high probabilities to a contested convention, “ranging from 33–70% in their estimates.”<sup>22</sup> The last contested convention took place in 1952, when Adlai Stevenson became the Democratic nominee.

Such uncertainty persisting until mid-July, and the prospect of a close election, are likely to lead to higher volatility during 2020.

Another concern that could lead to greater volatility and policy uncertainty is the possible election in November 2020 of one of the Democratic presidential candidates proposing higher corporate tax rates and relatively high wealth taxes, especially if such a victory is combined with a Democratic majority in the Senate. While the presidential election is considered a close call, the betting market, as measured by PredictIt, a prediction market sponsored by Victoria University of Wellington, assigns roughly a 70% probability to a Republican majority and 30% probability to a Democratic majority in the Senate.<sup>23</sup>

As unlikely as this outcome may appear at this time, the election of a left-leaning president and a Democratic majority in both the Senate and the House of Representatives is possible, and such a result would send some initial shock waves through the financial markets. The prospects for higher corporate tax rates would depress earnings growth expectations while the introduction of wealth taxes would increase risk premia across asset classes.

### Investment Implications of a Divided Government:

As we approach the election, we are frequently asked whether financial markets perform differently when the US government is divided—



### Exhibit 35: S&P 500 Average One-Year Price Returns Following Elections

There is no difference in US equity returns between divided and single-party government that is statistically significant unless we exclude recessions.

	Since 1928			Since 1945	
	All			All	Excl. Recessions
	1931 Divided	1931 Single Party	Excl. Recessions		
Divided	6.0%	6.9%	13.6%	7.8%	13.6%
Single Party	8.1%	7.1%	7.6%	9.0%	7.5%
Divided Minus Single Party	-2.1%	-0.2%	6.0%	-1.2%	6.0%
Statistical Confidence Level of Different Return Averages	45%	5%	94%	29%	95%

Source: Investment Strategy Group, Bloomberg.

meaning the executive branch, the majority in the Senate, and the majority in the House of Representatives are not all from the same party—than when there is a single-party government, in which the president’s party also controls the two arms of the legislative branch. In fact, the 2020 outlook report from David Kostin, chief US equity strategist in Goldman Sachs’ GIR, is titled “United We Fall, Divided We Rise.”<sup>24</sup> In it, he reviews the equity market implications of a single-party government controlled by the Democrats.

Given that the Senate is likely to retain its Republican majority and the House is likely to retain its Democratic majority, the US will most likely have a divided government irrespective of the presidential election’s outcome. On average, US equities have had higher returns during single-party governments, but the difference is not statistically significant, which means the difference could be largely due to chance.

We examined data as far back as 1928 to see whether we could identify discernible patterns. For example, we looked at return data based on calendar years as well as return data incorporating post-election returns for part of November and December to see whether market moves immediately after an election impacted the conclusions. We looked at data since 1928 and since 1945 to see whether markets in the post-WWII period behaved differently. We used price return data as well as total return data. We used median returns and average returns. We also examined data with and without recessions given that recessionary periods have an overwhelming impact on returns and could distort the conclusion.

We conclude that the data does not reveal any difference in the various measured US equity returns between divided and single-party government that is statistically significant unless we exclude recessions.

As shown in Exhibit 35, the difference in returns if one examines the entire data set since 1928 or 1945 is not statistically significant; the confidence levels are all below 50%. For example, the data shows that since 1928, equity returns during a single-party government were 2.1 percentage points higher. However, the confidence level is only 45%. That means there is a 55% chance that the difference in returns is due to chance.

The first two columns of Exhibit 35 best illustrate the absence of any conclusive evidence in the data. The first column shows the returns since 1928 but assumes that 1931 was a year of divided government because a number of special elections held that year to replace members of both parties who passed away resulted in shifting the House majority from Republican to Democratic. The second column shows the same period assuming that 1931 remained a single-party government. Over this 90-year span, the two averages are now different with only 5% confidence. Those two sets of data alone should convince our readers that there is no difference in equity returns between divided and single-party government rule.

However, when we exclude 12-month periods that experienced a recession, the difference in returns between divided and single-party government increases substantially and becomes statistically significant with 94% confidence. We conclude that in nonrecessionary periods, equity returns are higher under divided governments and the difference is statistically significant.

Since we are not expecting a recession in 2020 or 2021 and are more likely to end up with a divided government, our recommendation to stay invested should be further supported by the tailwind of divided government.

## Exhibit 36: US Bonds Average Calendar-Year Total Returns

Bonds outperform during divided governments relative to single-party governments with 99% confidence.

	Since 1928			Since 1945	
	All			All	Excl. Recessions
	1931 Divided	1931 Single Party	Excl. Recessions		
Divided	7.4%	7.6%	7.1%	7.5%	7.1%
Single Party	3.8%	3.6%	3.3%	2.8%	2.4%
Divided Minus Single Party	3.6%	3.9%	3.8%	4.7%	4.7%
Statistical Confidence Level of Different Return Averages	> 99%	>99%	99%	> 99%	> 99%

Note: References the Bloomberg Barclays US Aggregate Bond Index.  
Source: Investment Strategy Group, Bloomberg.

The data for bonds is much more statistically significant. Bonds outperform during divided governments relative to single-party governments with 99% confidence, as shown in Exhibit 36.

### Non-US Contenders

We believe that exogenous shocks that could destabilize the US economy and other regions of the world are more likely to emanate from outside the US than from within the country. Since last year's *Outlook*, the risk of some potential shocks has abated but that of others has increased. Unsurprisingly, the list of culprits is the same; borrowing a memorable line from the movie "Casablanca," we have rounded up the usual suspects.

**China:** On October 11, 2019, President Trump made the initial announcement of a Phase One trade agreement with the People's Republic of China, with a subsequent announcement on December 13. He also said that negotiations for Phase Two would begin once the Phase One agreement was signed. While the agreement is yet to be signed by the parties, both President Trump and President Xi Jinping have moved to avoid further escalation of the trade war, as it was having a negative impact on growth and financial market sentiment. For now, the trade war has de-escalated and we expect the status quo to hold for most of 2020, at least through the November elections.

As shown in Exhibit 37, the US had implemented tariffs through four tranches in both 2018 and 2019 and was scheduled to increase tariffs on another \$162 billion of US imports from China on December 15, 2019. The agreement suspended implementation of the last tranche of tariffs (Tranche 4B in the exhibit) and reduced the September 2019 tariffs of 15% on \$120 billion of US imports to 7.5% (Tranche 4A in the exhibit).

The key elements of the agreement address some but not all of the issues raised by the Trump administration:

- Most importantly, China has committed to increase its imports of goods and services, including manufactured goods, agricultural and seafood products and energy products, by at least \$200 billion over the next two years, relative to 2017 levels. To put this number in context, China's surplus with the US will need to decrease by 40%, as its net trade balance of goods and



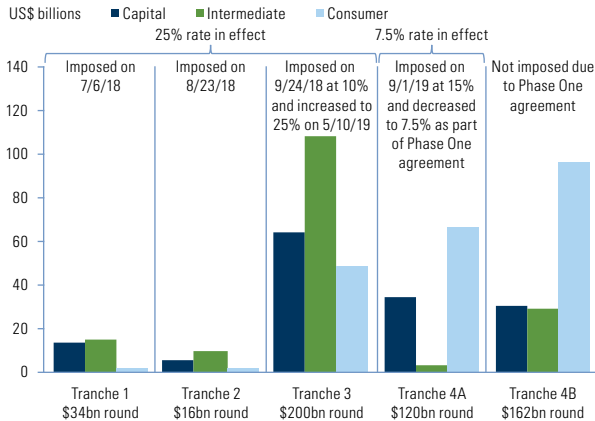
For now, the US-China trade war has de-escalated and we expect the status quo to hold for most of 2020.

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## Exhibit 37: US Tariff Rounds by Broad

### Economic Category

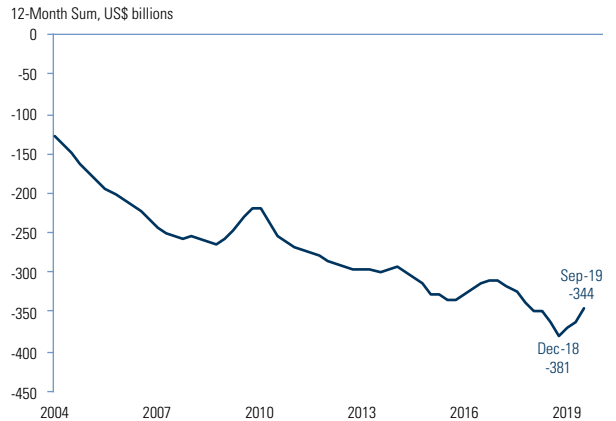
The Phase One agreement suspended implementation of the last tranche of tariffs and reduced the September tariffs.



Data as of December 31, 2019.  
Source: Investment Strategy Group, Goldman Sachs Global Investment Research.

## Exhibit 38: US Trade in Goods and Services with China

The US trade deficit with China has narrowed, but remains wide.



Data through Q3 2019.  
Source: Investment Strategy Group, Datastream.

services currently stands at about \$340 billion and was closer to \$380 billion only a year ago (see Exhibit 38). Some experts such as Derek Scissors of the American Enterprise Institute have suggested that these goals will be hard to meet,<sup>25</sup> since they imply an annual growth rate of more than 50% in US exports to China over the next two years.

- China agreed in principle to address intellectual property theft, but no details have been offered. The National Bureau of Asian Research has estimated intellectual property theft costs the US economy between \$225 billion and \$600 billion per year.<sup>26</sup>
- China has committed to end its practice of forced technology transfer and adopt market practices for acquiring technology and license transfers.
- China is expected to open its markets to financial services, including banking, insurance, securities and credit-rating services.
- China will provide greater transparency on its currency policy and refrain from competitive devaluations and targeting of exchange rates, and in return the US will not label China a currency manipulator. It is unimaginable, however, that China will actually allow its currency to float freely in the foreseeable future.
- The US and China agreed to have strong procedures including bilateral discussions to address disputes.

Some of the more sensitive issues, such as dealing with Huawei and industrial subsidies, were not addressed by this agreement. Tariffs of 25% also remain in place on \$250 billion of imports from China.

While the risk of an exogenous shock from China has diminished in the short term, especially in a US election year, longer-term risks remain, including a failed Phase One agreement, the failure to reach a Phase Two agreement and other geopolitical flare-ups. Vice President Michael Pence's speech at the Woodrow Wilson International Center for Scholars in October 2019 provides a glimpse into the changing views in the US toward China:

*All that Beijing is doing today, from the Party's great firewall in cyberspace or that great wall of sand in the South China Sea, from their distrust of Hong Kong's autonomy, or their repression of people of faith all demonstrate that it's the Chinese Communist Party that has been "de-coupling" from the wider world for decades.<sup>27</sup>*

The recent enactment of the Hong Kong Human Rights and Democracy Act of 2019, which was signed by President Trump on November 27, 2019, is another example of the shift in sentiment toward China among both Democrats and Republicans. While China-related risks may have abated for 2020, we believe that the longer-term concerns



Protesters clashing with riot police officers in November 2019 on the campus of the Chinese University of Hong Kong.

about Chinese goals and the means by which the Chinese pursue those goals have increased.

**Brexit:** After a decisive victory by Prime Minister Boris Johnson and the Conservative Party on December 12, 2019, it is now certain that the UK will leave the European Union (EU) on January 31, 2020. The uncertainties that prevailed in 2019—regarding whether the UK would have another Brexit referendum, whether former Prime Minister Theresa May would survive in office and whether the Tory party was at risk of being replaced—have all been removed. Uncertainty remains with respect to key aspects of the agreement:



While the UK is now certain to leave the EU on January 31, 2020, uncertainty remains with respect to the type of relationship that will exist between the parties.

- Length of the transition period
- Nature of the UK’s relationship with the EU
- Ultimate resolution of what type of border will exist between the Republic of Ireland and Northern Ireland

Under the current timetable—which of course is subject to change—a transition period commences once the UK leaves the EU; this period may last until December 31, 2020. However, both parties can agree to a 12- or 24-month extension and have until July 1, 2020, to do so. Prime Minister Johnson has been adamant that there will not be an extension, and the Parliament will vote in January on the Withdrawal

Agreement Bill, which also prohibits any extension to the transition period. The European Commission president, Ursula von der Leyen, and many geopolitical experts believe that the January-December window is too short to design and agree upon a new relationship.<sup>28</sup>

With respect to the type of relationship that will exist between the UK and EU, many models have been discussed in the years since the Brexit referendum in June 2016. These models are summarized in Exhibit 39. The model at the far right of the exhibit, figuratively here and literally politically, will apply in the absence of an agreement between the UK and EU. In such a scenario, referred to as a hard Brexit, the UK-EU relationship will fall under the World Trade Organization most-favored-nation status. At the far left of the exhibit is the softest Brexit model, the Norway model, which allows Norway full access to the European Single Market; abides by free movement of goods, services, capital and people; follows the European Court of Justice rulings; and contributes to the EU budget. The Norway model was not acceptable to Theresa May; it is even less likely to be acceptable to Prime Minister Johnson.

Finally, a long-term solution to the border between Ireland and Northern Ireland seems beyond reach. The Tory Party does not want Northern Ireland to be under the EU customs and regulatory

## Exhibit 39: UK-EU Relations—Post-Brexit Options

Many models exist with respect to the type of relationship that will prevail between the UK and EU.

	Brexit						
	SOFT					HARD	
	Comprehensive Access to Single Market	Extensive Bilateral Agreements			Customs Union	Free Trade Agreement	World Trade Organization Most-Favored-Nation Status
	Norway	Switzerland	Ukraine	Turkey	Canada	World Trade Organization	
Tariff-Free Trade in Goods	✓	✓	✓	✓*	✓	×	
Single Market Access for Services	✓	✓*	✓	×	×	×	
Accept EU Workers	✓	✓	×	×	×	×	
Make EU Budget Contributions	✓	✓	×	×	×	×	
Follow European Court of Justice Rulings	✓*	×	✓*	×	×	×	
Independent Trade Policy	✓*	✓*	✓	×	✓	✓	
Speed of Negotiating	✓	×	×	×	×	✓	

Source: Investment Strategy Group.  
\* Partial/Limited.

structure separate from the rest of the UK, and the EU does not want the UK to use an open border to export goods to the EU via Ireland. A hard border, on the other hand, will be extremely disruptive to the economies of both Northern Ireland and Ireland. There is also concern that a hard border will bring back the violent clashes between Protestants and Roman Catholics that occurred from 1968 to 1998. The interim solution of an Irish Sea border, which has been agreed to by Prime Minister Johnson, is politically expedient and expected to last for at least four years after the transition period has ended. But it is not a permanent solution.

As Jacob Kirkegaard, senior fellow at the Peterson Institute for International Economics and frequent guest speaker on our client calls, told us, “Brexit will happen, but what kind of Brexit remains unknown.”<sup>29</sup> Some other experts assign the highest probability to a free trade agreement deal, which would be a variation of the Canada model and which could eventually move closer to the Switzerland model shown in Exhibit 39.

While Brexit will garner headlines throughout 2020 because of the likely longwinded nature of any resolution on this front, we believe it poses very few risks to the US economy and the rest of the world’s economies.

**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.<sup>30</sup> The US imported \$379 billion in autos and auto parts in the 12 months through November 2019, with net imports at \$217 billion, accounting for 24% of the US goods deficit.

The Commerce Department reported the results of its investigation in February 2019 but the final deadline to impose tariffs passed on November 13, 2019, and no action was taken. South Korea and Japan had already signed bilateral trade agreements with the US in September 2018 and September 2019, respectively. Canada and Mexico were to be covered under the US-Mexico-Canada Agreement (USMCA) that was passed by the House of Representatives and awaits passage by the Senate. That basically leaves Europe, which accounts for net US auto and auto part imports of only \$45 billion.

It is unlikely that tariffs on European automobiles and auto parts will become a significant concern in 2020. It is more likely that overall trade relations with Europe covering a broader array of industries will become a topic on the campaign trail.

**“Brexit will happen, but what kind of Brexit remains unknown.”**

– Jacob Kirkegaard, senior fellow at the Peterson Institute for International Economics

## Other Potential Exogenous Shocks

For our 2019 *Outlook*, we examined five other geopolitical concerns that could have been sources of rattling headlines: Russia, the Middle East, North Korea, cyberattacks and terrorism. We wrote that none of them were likely to morph into a shock to the US economy in 2019.

We believe that the risks from all five are higher in 2020, partly because this is an election year in the US and partly because the sanctions on Iran and North Korea have created tremendous domestic pressures in both countries, elevating them to the top of the list. We have also added a new potential risk to the list this year, stemming from public backlash against technology companies.

**Iran:** Since President Trump withdrew the US from the Joint Comprehensive Plan of Action—the Iran or so-called Obama nuclear deal—in May 2018, the US administration has increased economic pressure on Iran through escalating sanctions and canceling all waivers for purchases of Iranian oil. The US has also stepped up military measures by dispatching an aircraft carrier group and 14,000 troops to the Persian Gulf region, including the recent deployment of troops to Saudi Arabia.

As a result, Iran's oil exports have dwindled to less than 300,000 barrels a day, GDP declined by nearly 10% in 2019 alone, and inflation has been hovering over 30%. Anti-government protests have erupted in over 54 Iranian cities and towns, and hundreds of protestors have been killed or injured and several thousand imprisoned.<sup>31</sup>

Iran has also been blamed for a series of missile and other attacks in the region, including surprise



In our view, the threat of an exogenous shock to the US economy and financial markets from a US military engagement with Iran has increased.

attacks on Saudi Arabian oil facilities. Iran has denied any involvement.

The current economic environment may not be sustainable for much longer. The key concern is that Iran could lash out in an effort to bring the US to the negotiating table and get some relief from the sanctions. Harvard University Professor Ash Carter, a former secretary of defense who is a frequent guest speaker on our geopolitically oriented client calls and one of our external advisors, has warned that Iran, with a 100% probability, will initiate some form of an attack that is a few steps above the attack on Saudi Arabian oil facilities.<sup>32</sup> His view is that Iran needs to go far enough to get the attention of the US but not so far as to trigger a “dust-up” with the US. That may be too fine a line for the Iranians to walk, and a miscalculation on either side could transform a skirmish with the US into a more significant military engagement that could spin out of control.

Karim Sadjadpour, a senior fellow at the Carnegie Endowment for International Peace who focuses on Iran and US foreign policy toward the Middle East, also believes that we should “expect more acts of sabotage” in 2020.<sup>33</sup>

However, not everyone shares the view that Iran will intentionally create a skirmish. Richard Nephew, senior research scholar at Columbia University and lead sanctions expert for the US team negotiating with Iran under the Obama administration, believes that Iran will not deliberately want to engage with the US.<sup>34</sup> However, he also states that with US forces in close proximity to Iranian forces in Iraq and Syria, the “risk of stumbling upon each other” is quite high.

In our view, the threat of an exogenous shock to the US economy and financial markets from a US military engagement with Iran has increased.

With respect to the rest of the Middle East, we expect the risk of a shock in Syria and Yemen will continue to only simmer, as it has for the last several years, but believe it may start to build up in Iraq.

**North Korea:** North Korea is another hot spot where the risk of a shock that could roil the financial markets has increased substantially. Last year, we quoted former Secretary Carter as saying “nothing much will happen.”<sup>35</sup> This year, his message has shifted: it is “unclear what Kim Jong Un’s playbook is for next year.”<sup>36</sup> He believes that North Korea is as likely to stay quiet as it is to “ratchet up rhetoric if not provocative action.”



Meeting of North Korea's Supreme People's Assembly. North Korea is another hot spot where the risk of a shock that could roil the financial markets has increased substantially.

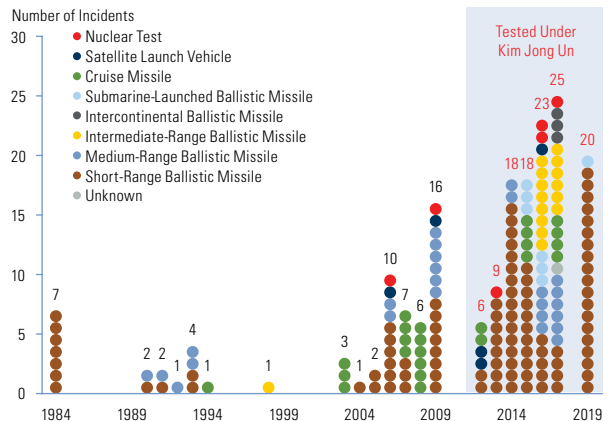
In April 2019, Kim Jong Un gave the US an end-of-year deadline to return to the negotiating table. An October meeting was held but the talks stalled. This was the second time when a meeting yielded no progress. Since then, Kim Jong Un's regime has threatened a Christmas gift (none seemingly came) and he convened a meeting of government party officials. While speculation is that he may go beyond testing short-range missiles and test an intercontinental ballistic missile, China may urge restraint as the US and China put the finishing touches on the Phase One trade agreement.

On the other hand, there is also significant risk of escalation of tensions given the unpredictability of the North Korean leader. Andrew Bishop of Signum Global Advisors, a firm that specializes in geopolitical issues, wrote "North Korea: It's all downhill from here" in his October 7, 2019, note.<sup>37</sup> As shown in Exhibit 40, the trajectory of the frequency and type of North Korean missile launches is not favorable. Clients should brace themselves for market volatility set off by North Korea.

**Former Secretary of Defense Ash Carter has warned that Iran, with a 100% probability, will initiate some form of an attack that is a few steps above the attack on Saudi Arabian oil facilities.**

## Exhibit 40: North Korean Missile Launches and Nuclear Tests

Kim Jong Un has aggressively ramped up the pace of missile tests.



Data as of December 2019.

Note: Includes full flight tests of ballistic and cruise missiles, both successful and unsuccessful, and nuclear tests. It does not include partial tests of missile subsystems or tests of air defense systems, short-range rocket and artillery firings.

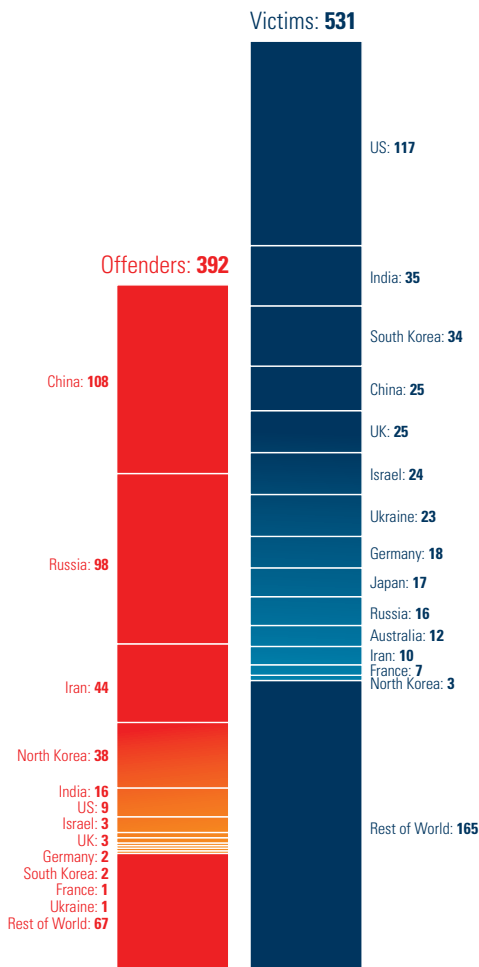
Source: Investment Strategy Group, Center for Strategic and International Studies.

**Russia:** From a geopolitical perspective, Russia seems to have achieved most of its immediate goals in its widening neighborhood. The Russians have established a stronger presence in Syria and have sold S-400 air defense systems to Turkey, a NATO member, in spite of US warnings; and they remain firmly ensconced in Crimea and parts of eastern Ukraine. While we do not foresee any serious military engagements, we believe the Russians will continue to use cyberattacks and social media to spread disinformation and possibly interfere once again in US elections, as discussed below.

**Cybersecurity:** The report of the director of national intelligence on the US intelligence community's assessment of worldwide threats identifies cyber threats as one of the most important threats, if not the most important, to US and world security. It states that "US adversaries and strategic competitors will increasingly use cyber capabilities—including cyber espionage, attack, and influence—to seek political, economic, and military advantage over the United States and its allies and partners" and "to steal information, to influence our citizens, or to disrupt critical infrastructure."<sup>38</sup>

### Exhibit 41: Perpetrators and Targets of Significant Cyberattacks Since 2006

China and Russia are the most significant perpetrators of cyberattacks, while the US is the largest target.



Data as of 2019.  
Source: Investment Strategy Group, Center for Strategic and International Studies, GZERO Media.

As shown in Exhibit 41, China and Russia are the most significant perpetrators of cyberattacks and the US is the largest target. The US intelligence community believes that China and Russia pose the greatest espionage and cyberattack threats, followed by Iran and North Korea.<sup>39</sup> While China is more focused on cyber espionage and has become a growing threat to the US military and infrastructure, Russia pursues influence operations in addition to cyber espionage and cyberattacks.

All four countries are expected to attempt to interfere in US elections. As Special Counsel Robert Mueller III warned in his testimony before the House Intelligence Committee in July 2019,

election interference in 2016 “wasn’t a single attempt”; the Russians are “doing it as we sit here.”<sup>40</sup> The US intelligence community believes that Russia in 2016 and “unidentified actors” in 2018 tried to target US election infrastructure, but it does not have any intelligence that the election infrastructure was compromised.<sup>41</sup>

Cybersecurity is also a growing concern for corporations. Accenture, through its research on 355 companies in 11 countries, estimates that the average cost of cybercrime for companies increased to a new high of \$13 million in 2018, which represents a 72% increase over the prior five years.<sup>42</sup> Accenture also estimates that the total value at risk from cybercrime over the next five years is a staggering \$5.2 trillion.

The risk of cyberattacks on public and private institutions continues to increase globally. While the Global Cybersecurity Index for the International Telecommunication Union ranks the US second (after the UK) in its commitment to cybersecurity,<sup>43</sup> the growing cyber capabilities among friends and foes alike increase the risks that could threaten the US economy and unsettle the financial markets in the short, intermediate and long terms.

**Terrorism:** According to the Global Terrorism Index, produced by the Institute for Economics and Peace, terrorism measured by number of deaths and economic impact has steadily declined since 2014.<sup>44</sup> The most significant developments, positive and negative, have been these:

- Terror-related deaths have declined due to military successes against Islamic State of Iraq and the Levant (ISIL) and Boko Haram in Africa. Iraq recorded the largest decline in deaths and for the first time since 2003 is no longer the country most impacted by terrorism.
- Afghanistan has experienced the largest increase in number of deaths due to the civil war, and the Institute for Economics and Peace now considers the Taliban as the “world’s deadliest terrorist group.”<sup>45</sup>
- There has been a surge in far-right political terrorism measured by deaths and number of incidents in North America and Western Europe. The report of the director of national intelligence refers to these perpetrators as violent “ethno-supremacist and ultranationalist groups.”<sup>46</sup>



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While one can never predict an exogenous shock from terrorism, the recent overall decline in terrorism could be reversed through various means. For example:

- The partial US withdrawal from Syria and the Turkish incursion into northern Syria might have resulted in the escape of ISIL prisoners who could resume their terrorist activities.
- US withdrawal from Afghanistan could not only exacerbate terrorism in Afghanistan but also allow terrorist groups to establish bases in that country.
- According to the US intelligence community, “global jihadists” in Africa and Asia, including ISIL and al Qaeda, have expanded their abilities to strike local US interests and remain intent on striking the mainland US.<sup>47</sup>

**Techlash:** A new term, first coined by the *Economist* in 2013, has entered our discussions on risks with a broad range of external geopolitical experts: “techlash.”<sup>48</sup> Rana Foroohar of the *Financial Times* describes it as “the growing public animosity toward large Silicon Valley platform technology companies and their Chinese equivalents.”<sup>49</sup> The use of Facebook by the Russians to interfere in US elections, the misuse of Facebook user data by Cambridge Analytica, the impact on adolescent mental and physical health from growing use of social media, and the difficulty of separating real news from fake news on social media platforms (among other factors) have generated a notable backlash against technology companies from both individuals and governments.

Policymakers in the US and Europe are trying to develop regulations and tools, including substantial fines, to address these valid concerns. The issues are complicated and it will be some time before such regulations and tools are fully



There is growing public animosity toward large technology companies.

developed. In the meantime, the FANGMAN stocks (Facebook, Apple, Netflix, Google, Microsoft, Amazon and Nvidia) continued their march upward in 2019. These stocks account for 14.9% of S&P 500 earnings and 18.7% of its market capitalization. In 2019, they returned 49.6%, significantly outperforming the 31.5% return of the S&P 500. Lest anyone think the FANGMAN stocks account for the bulk of S&P 500 returns, we note that an S&P 500 Index that excluded these stocks would have returned 27.9% in 2019. Even so, increased regulation and higher fines for technology companies could act as a drag on the broader US equity market.

The reversal of Federal Reserve monetary policy, the absence of major economic imbalances and our assessment of exogenous shocks all lead us to believe that the risk of recession in the US remains low. They underpin our recommendation to remain invested in US and non-US equities given our one- and five-year expected returns for equities and fixed income, as discussed in greater detail below.

### One- and Five-Year Expected Total Returns

After a 31.5% return in 2019 and a cumulative return of 498% since the trough of the market, it is hard to put forth yet another forecast of positive total returns for US equities. We faced a similar dilemma last year; nevertheless, we put forth a base case total return of 9% with a 55% probability, and a good case of 18% with a 25% probability. This year, our

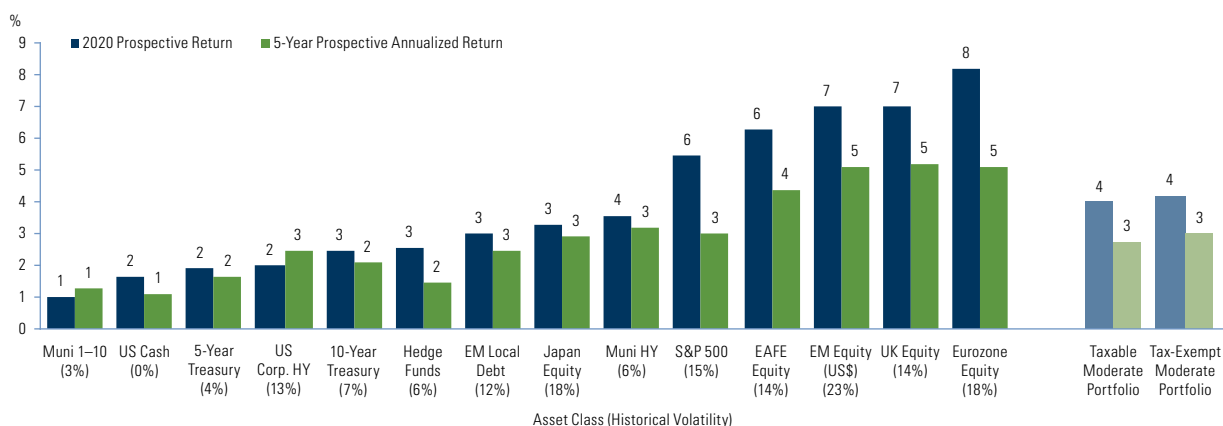
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**The reversal of Federal Reserve monetary policy, the absence of major economic imbalances and our assessment of exogenous shocks all lead us to believe that the risk of recession in the US remains low.**

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## Exhibit 42: ISG Prospective Total Returns

Our one- and five-year forecasts are somewhat lower than our forecasts from prior years.



Data as of December 31, 2019.

Source: Investment Strategy Group. See endnote 50 for list of indices used. For more information on the model portfolios, please see the disclosures.

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.

expectations are more modest (see Exhibit 42). We expect, in our base case, a total return of 6% with a 55% probability, and in our good case, a return of 12% with a 25% probability.

A detailed rationale for our 6% expected total return is provided in Section III of this *Outlook*. We expect slightly better earnings growth than last year, driven by modestly higher global growth and a lesser drag from escalating trade wars, supported by robust corporate buybacks. Our colleagues in GIR expect \$675 billion of gross buybacks, contributing about 1% to our earnings per share growth forecast.<sup>51</sup> Corporate buybacks and foreign investors have been the sole sources of positive demand for US stocks compared to sales by pension plans, insurance companies, mutual funds and households, as shown in Exhibit 43.

Since 2009, S&P 500 companies have bought back \$5.6 trillion of their stock (see Exhibit 44), prompting investors who are skeptical of this bull market to call it a buyback-driven equity market rally. In reality, net buybacks have contributed only one percentage point of the 9.4% compounded annual growth rate of earnings per share over this period.<sup>52</sup>

We expect slightly higher returns for Europe, Australasia and the Far East (EAFE) and emerging market (EM) equities. While our base case returns are about one percentage point higher, we do not recommend an overweight to international equities beyond the few select tactical tilts outlined below.

## Exhibit 43: Net Demand for US Equities by Participant Type

Corporate buybacks and foreign investors have been the sole sources of positive demand for US stocks since 2009.

Category	Net US Equity Demand (\$ billions)	
		Cumulative Since 2009
Corporations		\$4,095
Foreign Investors		\$229
Households		-\$253
Mutual Funds		-\$30
Pension Funds		-\$1,604
Life Insurance		-\$18
Other		-\$161
<b>Less</b>		
Foreign Equities by US		\$1,426
Credit ETF Purchases		\$832
<b>Included Among Holders Above</b>		
Equity ETF Purchases		\$1,723

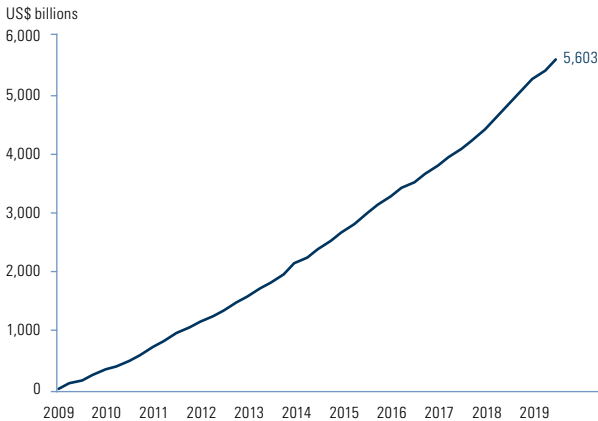
Data through Q3 2019.

Source: Investment Strategy Group, US Flow of Funds.

As shown in Exhibits 45 and 46, both EAFE and emerging market equities are valued at a significant discount to US equities. EAFE equities are valued at a 42% discount to US equities, compared to 41% last year and a historical average of 25%. Emerging market equities are valued at a 48% discount, compared to 44% last year and a historical average of 32%.

### Exhibit 44: Cumulative S&P 500 Buyback Executions Since 2009

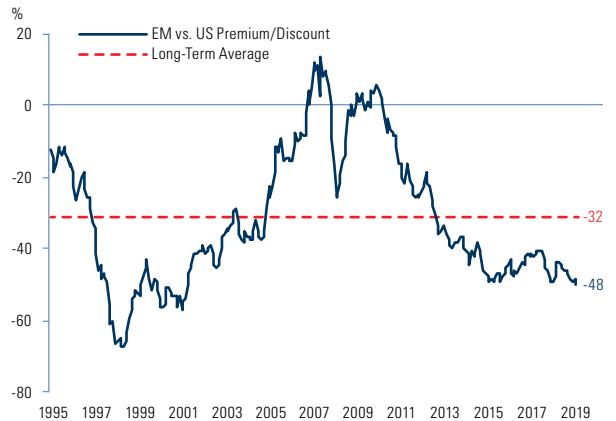
S&P 500 companies have bought back \$5.6 trillion of their stock over the last decade.



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

### Exhibit 46: EM Equity Valuation Premium/Discount to US Equities

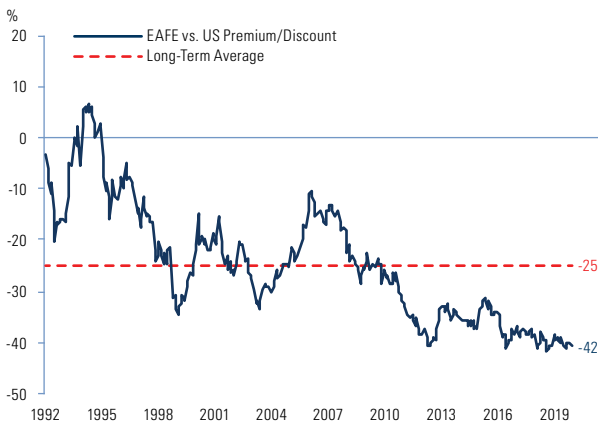
EM equities continue to trade at a large valuation discount to US equities.



Data through December 31, 2019.  
Note: EM and US market valuations are based on an average of the following metrics: price to 10-year earnings, price to 10-year cash flow, price to book, price to peak earnings, price to peak cash flow and price to dividend.  
Source: Investment Strategy Group, Datastream.

### Exhibit 45: EAFE Equity Valuation Premium/Discount to US Equities

EAFE equities trade at a sizable valuation discount to US equities, although they have done so since 2012.



Data through December 31, 2019.  
Note: EAFE and US market valuations are based on an average of the following metrics: price to 10-year earnings, price to 10-year cash flow, price to book, price to peak earnings, price to peak cash flow and price to dividend.  
Source: Investment Strategy Group, Datastream.

There are three key reasons why we have refrained from overweighting EAFE and emerging market equities over the last several years despite such significant discounts.

First, there is no evidence that such discounted valuations to US equities have led to outperformance over the subsequent one- and five-year periods. Witness 2019, when even with such enormous discounts, EAFE and emerging market equities underperformed US equities, returning 22.8% and 18.6%, respectively, compared to US equities at 31.5%.

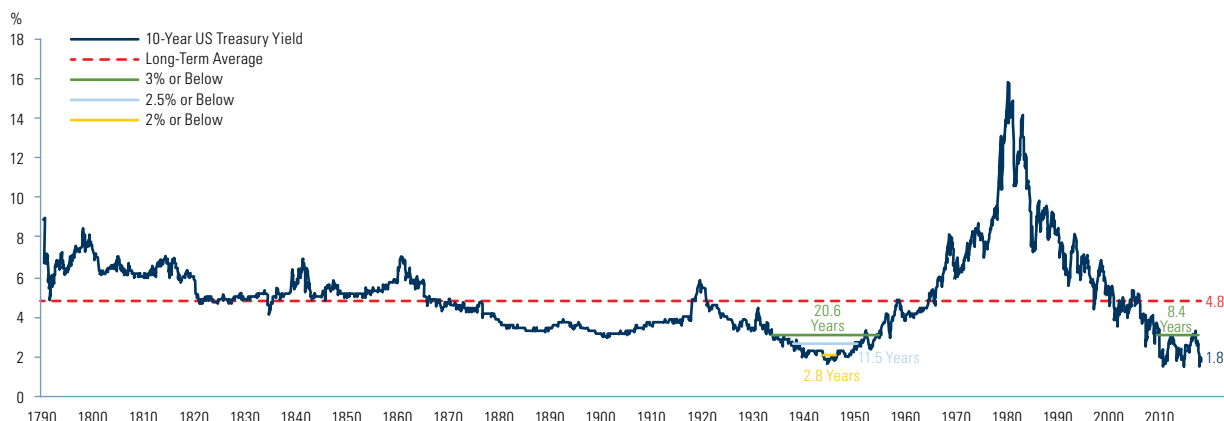
Second, EAFE and emerging market companies have lagged the earnings growth rates of US companies across most sectors for over a decade, and that lag is unlikely to change.

And third, we continue to have significant concerns about the structural fault lines of emerging market countries. For example, in China, which is the largest of the emerging market countries, growth rates are on a declining trend, partly driven by the irreversible decline in the Chinese working-age population. As growth slows, the debt burden becomes increasingly burdensome. Furthermore, in the US and Europe, the view of doing business with and in China is slowly changing. In turn, slower growth in China will have a domino effect on commodity-producing economies and other Asian exporters that have relied on their exports to China.

Returns across fixed income assets are likely to be more modest as well. We expect returns of 1% for high-quality intermediate municipal bonds, 2%

## Exhibit 47: US 10-Year Treasury Yield Since 1790

Interest rates can remain low for a long time.



Data through December 31, 2019.

Source: Investment Strategy Group, Global Financial Data.

for US cash and US short- and intermediate-term Treasury bonds, 2% for corporate high yield and about 3–4% for municipal high yield and emerging market local debt.

We expect interest rates to remain in a narrow range. As shown in Exhibit 47, which we first used in our 2013 *Outlook* some seven years ago, interest rates can stay low for a very long time. The 10-year Treasury yield stayed below 3.0% for nearly 21 years between 1935 and 1955 and below 2.5% for nearly 12 years between 1939 and 1951. We used this exhibit to make the case that interest rates can stay low for a very long time and clients should not fear a rapid rise in interest rates.

We recognize that during some of those years, the US government placed a cap on interest rates to prevent buyers of war bonds from suffering any losses on their securities. While quantitative easing is not the same as an explicit cap on Treasury bonds, the impact is similar. In fact, since 2011, the 10-year Treasury yield has been at 2.5% or lower 66% of the time.

We expect moderate-risk portfolios for taxable and tax-exempt clients to provide a total return of 4.1% and 4.3%, respectively, in our base case scenario for 2020.

Our five-year forecasts are somewhat lower than our forecasts from prior years. We have assumed that economies around the world will likely experience a synchronized 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 was increased to 75% in 2019, and we are assuming the same for the next five years. Returns are also lower given higher equity valuations and relatively low fixed income rates.

### Our Tactical Tilts

After the nearly 20% decline in US equities in late 2018, we increased the allocation to tactical tilts to take advantage of investment opportunities that presented themselves. Over the course of 2019, as the equity market rallied, we reduced the overall risk levels and are close to the lowest levels we have had in place over the last decade.

**Underweight Fixed Income:** We continue to recommend underweighting US fixed income securities. As shown earlier in Exhibit 42, we expect returns of about 1–2% across high-quality government securities. We expect the 10-year Treasury bond yield to be between 1.6% and 2.1% by the end of 2020, partly driven by our view of no change in the federal funds rate over the course of the year, and partly driven by the very low and declining volatility of the 10-year yield. Given the modest returns in bonds, we recommend underweighting investment grade fixed income to fund our tactical tilts, as outlined below.

**Overweight to Eurozone Banks:** We continue to recommend an overweight to Eurozone banks. We initiated this tilt in June 2018, and with an annualized volatility of 22% it has been one of our most volatile tilts. Eurozone banks rallied 17.6% in

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2019 and we expect double-digit returns in 2020. The rationale for continuing to hold this tilt is:

- Improving credit quality and a significant decline in nonperforming loans
- 3.7% year-on-year loan growth, the strongest in the post-crisis period
- Strong capital position and potential for buybacks
- A high dividend yield of 5.7%
- Attractive valuations with a 0.6x price-to-book ratio that does not reflect the current profitability of the banks
- The tiered deposit rate structure announced at the September European Central Bank (ECB) meeting, which reduces the amount of banks' excess reserves subject to a negative deposit rate and mitigates the headwind imposed by negative rates on banks' earnings

#### Overweight to a Select Eurozone Cyclical Basket:

We recommend a tactical allocation to a select basket of Eurozone stocks designed to benefit from a sequential pickup in Eurozone growth. The basket is hedged through an underweight position in the Euro Stoxx 50 Index. We expect double-digit returns in 2020. The rationale for this tilt is:

- This basket of stocks leveraged to Eurozone growth has been trading at a 31% valuation discount to the Euro Stoxx 50 Index as a result of the slowdown in the Eurozone and fears of an impending recession.
- The improvement in global manufacturing purchasing managers' indices (PMIs) should benefit the cyclically sensitive companies and lead to a positive shift in investment sentiment toward these stocks.

**Allocation to South African Equities:** We continue to recommend a modest allocation to South African equities. However, we have changed the funding of this tilt from emerging market equities to fixed income. This tilt was also initiated in 2018 and we expect double-digit returns. The rationale for this tactical tilt is:

- South Africa's corporate earnings growth is far outpacing that of overall emerging markets.
- President Cyril Ramaphosa appears to be gradually consolidating power so that he can deliver on structural reforms, without which

South Africa faces a credit rating downgrade by Moody's.

- Investor sentiment toward South Africa remains overly pessimistic with below-average buy ratings and underweight investor positioning relative to equity indices.
- The appointment of the new CEO of Eskom and the placement of South African Airways into bankruptcy point to the seriousness of the reform agenda.

#### Allocation to South Korean Equities Tilt:

We initiated an allocation to Korean equities in mid-2019, partially funded out of fixed income and partially funded out of Taiwanese equities, with an expectation of midteen returns. The rationale for this tilt is:

- Korea offers the strongest earnings growth among major emerging market countries.
- Korean equities trade at a large valuation discount to Taiwanese equities. Such discount is not justified by fundamentals, particularly given the recent stabilization in memory chip prices.
- Negative investor sentiment has led to a far greater share of outflows from Korean equities relative to outflows from emerging market funds, while Taiwanese equities have experienced inflows.

**Overweight to US Energy Infrastructure Master Limited Partnerships (MLPs):** The allocation to MLPs has been one of our longer-standing tilts, with several adjustments to its weight since 2016. This tilt should benefit from growth in oil and gas production in the US without some of the risks associated with exploration and production companies. The current rationale is:

- Valuations are attractive at one standard deviation below historical averages, both in absolute terms and relative to the S&P 500.
- A high tax-advantaged 9.3% distribution yield is well covered by cash flows, allowing patient investors to stay in the asset class while waiting for valuations to normalize. We expect the distribution yield to be supplemented by some modest price appreciation.
- Continued growth in US oil and gas production supports growing cash flows.
- Management is likely to reduce capital expenditures in an effort to improve valuations,

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since investors have favored allocation of excess earnings to distributions and potential buybacks rather than capital expenditures.

#### Allocation to Three Systematic Strategies:

We deploy three systematic strategies as a way to provide uncorrelated sources of alpha by taking advantage of market dislocations. We target modest mid-single-digit returns in each strategy. They are:

- A relative-value fixed income strategy across 10-year bond futures in the US, Canada, Australia, Germany and Japan. This strategy is driven by economic indicators, yield differentials across markets, the shape of yield curves and price momentum in each market.
- An equity strategy we call Systematic Downside Mitigation Tilt, which is designed to hedge some of the risk of the overall portfolio without incurring the expensive cost of buying put options or allocating to a defensive sector like utilities. The strategy is particularly timely now because equity valuations are elevated yet the hurdle to underweight remains high, given low odds of recession.
- An equity strategy we call Systematic Upside Improvement Tilt, which is designed to take advantage of dislocations in value versus growth investment styles. Value has underperformed growth by 11% a year over the last three years, as measured by the Russell indices. We believe that this strategy is a more effective way of capturing the cheapness of value while mitigating the exposure of the portfolio to the full underperformance of value stocks relative to growth stocks.

#### Allocation to Two Developed Market Currency

**Tilts:** We currently recommend two developed market currency trades, driven by our views of unchanged monetary policy at the Federal Reserve, the ECB and the Bank of Japan (BOJ), and by the flow of funds that impact the marginal demand for each currency. Return expectations are for modest single-digit returns.

- We are long the dollar versus the yen, a view primarily driven by the outflow of funds from Japanese investors in search of better returns outside of Japan, and by Japanese life insurance companies' continued reduction of

the percentage they hedge back to yen of their dollar-denominated investments.

- We are short the dollar versus the euro, a view driven by the more recent inflow of foreign direct investment and portfolio flows into the Eurozone. We expect that a modest pickup in sequential growth in the Eurozone due to limited fiscal policy will help reverse some of the more speculative currency positions.

#### Allocation to Emerging Market Debt and

**Currency:** Latin America has been affected by social unrest directed against governments and by ineffective public policies in many countries, including Venezuela and Argentina. We have initiated two tactical tilts, a long position in Mexican 10-year rates and a long position in the Chilean peso versus the dollar. We expect modest mid-single-digit returns.

- Tight fiscal and monetary policy in Mexico has led to a steady decline in inflation since mid-2017. As a result, we believe real rates in Mexico are too high. We expect that the central bank will lower policy rates, leading to a drop in 10-year rates.
- Social unrest in Chile in November led to a currency depreciation of 15%. Given Chile's institutional and fiscal strengths, a shrinking current account deficit and rapid intervention by the central bank, we believe that this decline is unwarranted.

#### Allocation to a Relative-Value Eurozone Bond

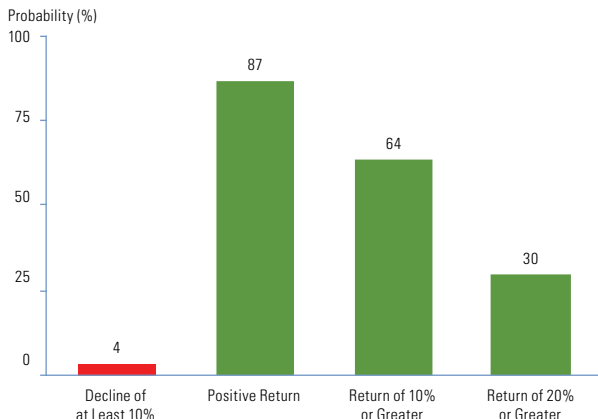
**Position:** We are long 10-year Italian BTPs versus short 10-year German bunds. The incremental yield of Italian bonds relative to German bonds has averaged about 150 basis points over the last four months. We believe that this incremental spread is too high given the search for yield in the Eurozone and an ECB that is on hold (i.e., holding rates at current levels and maintaining its newly restarted asset purchase program at a monthly rate of €20 billion). We also expect Italy to avoid an early general election in 2020. We expect mid-single-digit returns. There is further upside if rating agencies upgrade their outlook or rating on Italy's sovereign debt.

#### Allocation to a Relative-Value Energy Position:

We initiated a short-term tactical allocation to a long position in gasoline relative to a short position

### Exhibit 48: Odds of Various S&P 500 One-Year Total Returns During US Economic Expansions

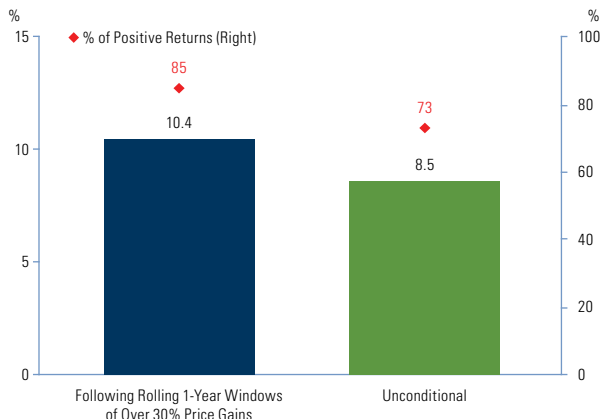
Investors enjoy high odds of a positive return and a greater likelihood of large gains when the economy is expanding.



Data as of December 31, 2019.  
 Note: Based on data since 1945.  
 Source: Investment Strategy Group, Bloomberg.

### Exhibit 49: Average S&P 500 Price Returns in the Year Following Past 30% Annual Gains

The S&P 500's positive price momentum has typically persisted in the year after 30% gains.



Data as of December 31, 2019.  
 Note: Based on data since 1945.  
 Source: Investment Strategy Group, Bloomberg.

in Brent crude oil. This trade was designed to take advantage of some seasonal patterns that generally occur toward the end of the calendar year and through January.

### “Stay Invested”

How, in the face of modest equity returns forecast for 2020, slightly higher risk of recession and increased geopolitical risks—and following a 31.5% return in US equities, a 22.8% return in EAFE equities, and an 18.6% return in emerging market equities—could we possibly repeat our recommendation to stay invested?

The analysis that follows is divided into two parts. In Part I, we make the case for staying invested, focusing on the cyclical drivers of that view. Some of the exhibits, notwithstanding the updates, will be familiar to longtime clients. After all, we have made the “stay invested” recommendation 80 additional times since we first did so in 2010.

In Part II, we focus on the structural factors that we think our clients should consider in pursuing a strategy of overweighting and underweighting equities relative to their customized strategic asset allocation. As mentioned earlier in this report, we believe the key takeaways from this discussion are among the most important takeaways presented in

all our *Outlook* and *Insight* publications and client calls over the past decade.

We begin with Part I and the more immediate question of why we recommend staying invested now.

### “Stay Invested” Part I

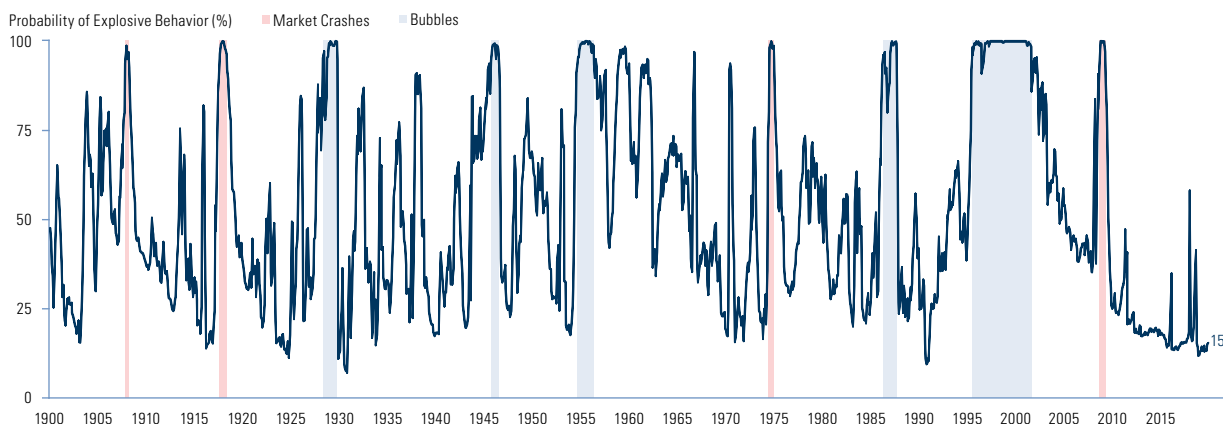
As shown in Exhibit 48, the probability of a positive one-year return in US equities in an expansion is 87%. Furthermore, the probability of having a return greater than 10% is 64%, whereas the probability of a decline of at least 10% is only 4%. Given our view of a low probability of recession, as detailed earlier in this report, the economic and policy backdrop favors staying invested.

We now turn to three observations to show why the very strong returns of 2019 need not hinder the “stay invested” recommendation.

First, historically, when the S&P 500 has had a 30% price return on a rolling 12-month basis—as it did in 2019—the subsequent one-year returns have averaged 10.4%, with a positive price return 85% of the time. As shown in Exhibit 49, this return exceeds the average price return of the S&P 500 in the post-WWII period. Similarly, the frequency of positive returns is higher following a 30% price return. Such a pattern of above-average price returns following a 30% price return illustrates the value of the momentum factor widely used in investing.

## Exhibit 50: S&P 500 Bubble Indicator

The probability that the price return of 2019 reflected irrational exuberance is only 15%.

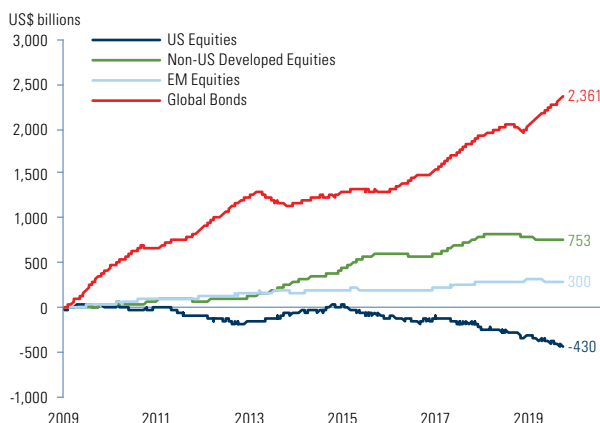


Data through December 31, 2019.

Source: Investment Strategy Group; Bloomberg; Robert Shiller; Peter C.B. Phillips, Shu-Ping Shi and Jun Yu, "Testing for Multiple Bubbles: Historical Episodes of Exuberance and Collapse in the S&P 500," Cowles Foundation for Research in Economics at Yale University, September 2013.

## Exhibit 51: Cumulative Mutual Fund and ETF Flows

Investors have favored bonds and non-US equities throughout this bull market.



Data through November 25, 2019.

Note: Based on ICI weekly estimates.

Source: Investment Strategy Group, Investment Company Institute (ICI).

Second, we do not see signs of irrational exuberance as measured by an “explosive price behavior” indicator that measures “explosive” price moves based on the price-to-dividend ratio of the S&P 500. A price move is considered explosive when prices are moving exponentially faster than fundamentals, as measured by dividends. This indicator, developed by Peter C.B. Phillips of Yale University, Shu-Ping Shi, then of the Australian National University, and Jun Yu of Singapore

Management University, estimates the probability that the movement in prices—both up and down—has been explosive.<sup>53</sup> As shown in Exhibit 50, the probability that the price return of 2019 has been explosive, reflecting irrational exuberance and bubble-like investor sentiment, is 15%.

Third, the sizable flow of funds out of US equities into bonds and non-US equities confirms our view that we have not reached “euphoric and greedy”<sup>54</sup> levels—a frequent harbinger of negative returns. As shown in Exhibit 51, over \$2.3 trillion has gone into US bond funds, while more than \$400 billion has been taken out of US equities. In fact, 2019 had the highest level of outflows from US equity mutual funds and ETFs over this just-ended decade. As shown earlier in Exhibit 43, the only significant buyer of US equities has been corporate America, through buybacks.

While this data points to the absence of excessive euphoria toward US equities on a long-term basis, shorter-term sentiment indicators point to more speculative optimism. As discussed in greater detail in Section III, the high equity exposure of non-dealers and depressed put-to-call ratios make the market vulnerable on a shorter-term basis and could exacerbate a market pullback in early 2020.

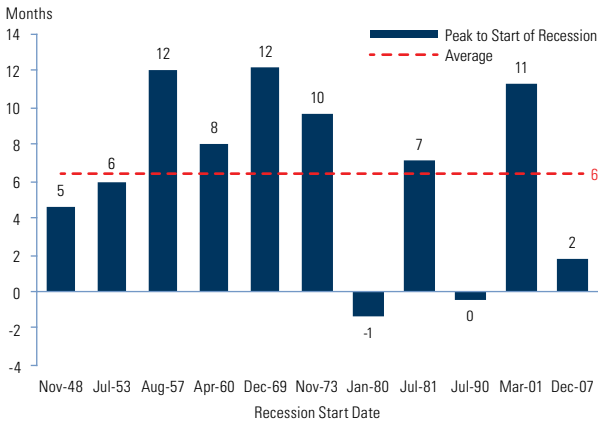
### Triggers for Underweighting Equities

In our view, the most important trigger for underweighting equities is a high probability of recession that is less than a year away. As shown



### Exhibit 52: Number of Months from Equity Peak to Start of Recession

The S&P 500 has historically peaked on average six months prior to the onset of recession.

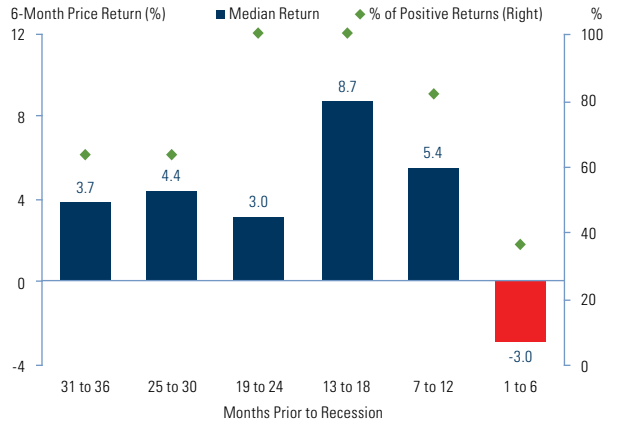


Data as of December 31, 2019.

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

### Exhibit 53: S&P 500 Price Returns Relative to Onset of Next Recession

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



Data as of December 31, 2019.

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

in Exhibit 52, the equity market has peaked, on average, six months before a recession, with a low of two months and high of 12 months. On two occasions—in January 1980 and July 1990—the market peaked about one month after the onset of recession.

The returns preceding the onset of recession by more than six months have been very attractive, as shown in Exhibit 53. Furthermore, the frequency of positive returns, marked by green diamonds in the exhibit, has been 100% when the recession is 13 to 24 months away. Exiting the market too far ahead of a recession may have a significant opportunity cost of forgone returns. It is better to be a little late than early in exiting the market. In fact, as detailed in Section III, investors have avoided on average three-fourths of the decline in equities if they underweighted equities at the onset of a recession.

Another trigger for underweighting equities is the probabilities we assign to our base case, good case, and bad case of expected equity returns. Since the GFC, the probabilities we assigned to our base case have ranged between 55% and 65%, and the probabilities we assigned to our downside scenario have ranged between 10% and 20%, with the exception of 2012, when we increased the probability of the downside to 25%

as the European sovereign debt crisis unfolded. Such low probabilities of a downside scenario do not call for underweighting equities.

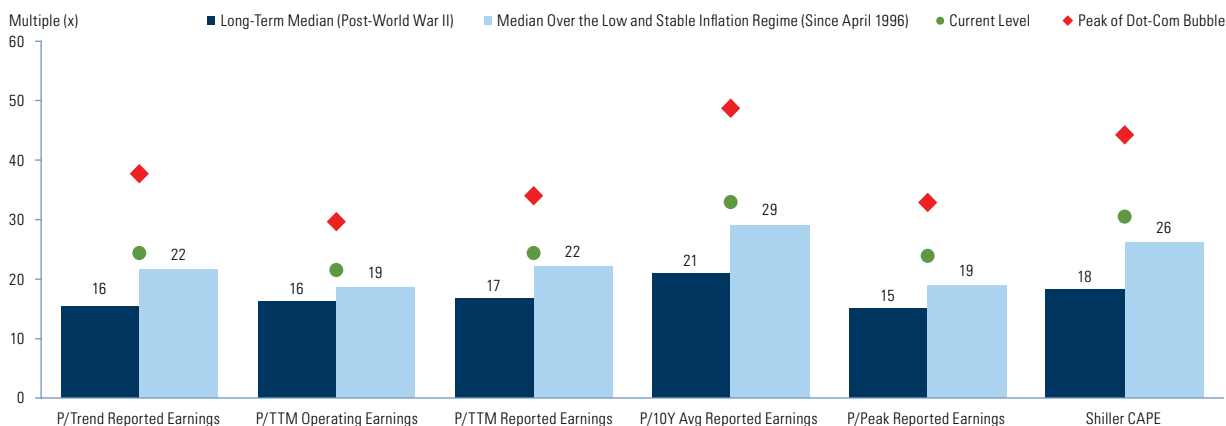
Excessive valuations are a third trigger for underweighting equities. The key question is what differentiates “excessive” from “high.” We believe that valuations should be viewed in the context of the macroeconomic backdrop at the time.

Long-term valuation metrics look quite different when viewed in the context of periods of low and stable inflation. In analyzing the post-1957 period (the inception of core inflation data), we relied on our Strategic Asset Allocation team, who used a Hidden Markov Model to identify regime shifts in core inflation. The model identified three inflation regimes: low and stable inflation, moderate inflation with moderate volatility, and high inflation with high volatility.

**Exiting the market too far ahead of a recession may have a significant opportunity cost of forgone returns. It is better to be a little late than early in exiting the market.**

## Exhibit 54: S&P 500 Valuation Multiples

Equity multiples are not demanding relative to their median levels during low and stable inflation regimes.



Data as of December 31, 2019.  
Source: Investment Strategy Group, Bloomberg.

## Exhibit 55: S&P 500 Forward Returns After Crossing Ninth and 10th Deciles of Valuations

The S&P 500 has rallied more than 100% since we first entered the ninth decile in November 2013.



Data through December 31, 2019.  
Note: Green arrows denote total returns.  
Source: Investment Strategy Group, Bloomberg.

As shown in Exhibit 54, median valuations are much higher during periods of low and stable inflation than the median levels over the post-WWII period. In the context of the low and stable inflation regime that has existed since April 1996, current valuations are about 13% above median levels. They are substantially below the peak levels of the dot-com era. We conclude that they are high but not excessive.

Of course, as we have reiterated many times over the last several years, high valuations alone are not an effective signal to exit the market.

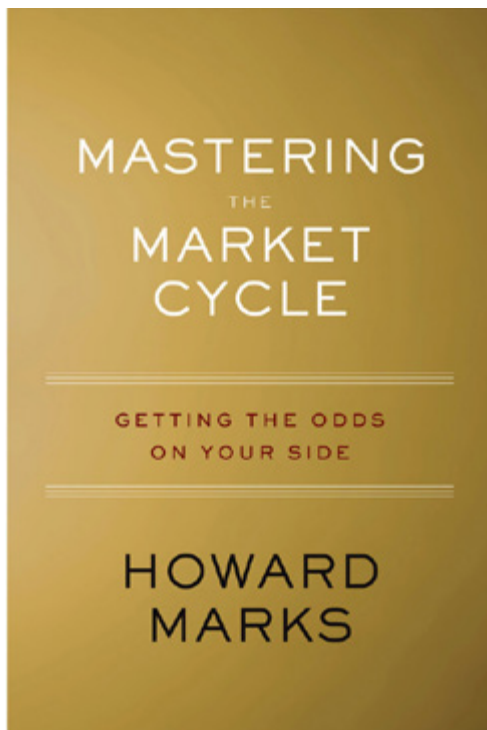
We first entered the ninth decile of valuations in November 2013, and the S&P 500 has rallied more than 100% since, as shown in Exhibit 55. We first entered the 10th decile of valuations in December 2016, and the S&P 500 has rallied 53% since. We should note that the S&P 500 has fluctuated between the eighth, ninth and 10th deciles since November 2013.

The penalty for exiting the equity market prematurely has been significant—hence the importance of having a framework and understanding the factors that we believe should drive a tactical asset allocation (TAA) investment philosophy and process for overweighting and underweighting equities. We turn to Part II to discuss our framework.

### “Stay Invested” Part II

As Howard Marks, a highly respected investor and prolific writer on the principles of investing, eloquently wrote in his most recent book, *Mastering the Market Cycle: Getting the Odds on Your Side*, one should “calibrate” the level of “aggressiveness” and “defensiveness” of a portfolio to outperform a passive benchmark.<sup>55</sup> That is the goal of our TAA process.

The purpose of Part II is to provide sufficient data and analysis to show that the probability of success in outperforming a passive benchmark is much greater with a one-way strategy of



From *MASTERING THE MARKET CYCLE* by Howard Marks. Used by permission from the publisher, HMH Media & Books, all rights reserved.

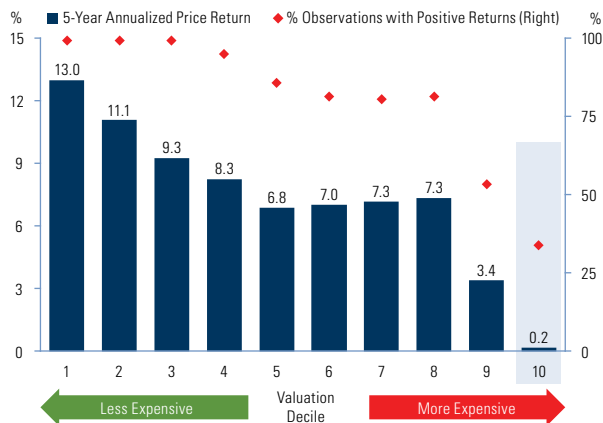
overweighting equities when they are cheap than it is with a strategy of both overweighting and underweighting equities.

To further quote Marks, there are two risks that have to be considered: “the likelihood of permanent capital loss” and “the likelihood of missing out on potential gains.”<sup>56</sup> We believe that the likelihood of permanent capital loss is much lower if one is early in overweighting equities. If one buys the S&P 500 Index as it gets progressively cheaper, one can hold it until the market recovers. Conversely, the likelihood of missing out on potential gains permanently is much higher if one is early in underweighting equities. There is an asymmetry to TAA.

Turning now to an examination of some of the data, Exhibit 56 is the Investment Strategy Group’s frequently used decile chart. We use a series of equity valuation metrics that are put into 10 buckets and plotted from the cheapest to the most expensive decile. From the first decile, the five-year annualized price return has been 13%, as shown in the blue bar. Price returns have been positive 100% of the time, as shown by the red diamond. As equities get cheaper, forward returns increase and the frequency of positive returns increases. For example, as

### Exhibit 56: US Equity Price Returns from Each Valuation Decile

Subsequent returns from high valuation levels have been muted historically.



Data as of December 31, 2019.

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

Note: Based on five valuation metrics for the S&P 500, beginning in September 1945: Price/Trend Earnings, Price/Peak Earnings, Price/Trailing 12m Earnings, Shiller Cyclically Adjusted Price/Earnings Ratio (CAPE) and Price/10-Year Average Earnings. These metrics are ranked from least expensive to most expensive and divided into 10 valuation buckets (“deciles”). The subsequent realized, annualized 5-year price return is then calculated for each observation and averaged within each decile.

Past performance is not indicative of future results.

equities move from the fifth decile toward the lower deciles, returns get steadily higher.

As valuations rise above median levels, however, the returns do not decrease monotonically. In fact, returns stay steady at 7% annualized until valuations reach the ninth decile. The payoff for going overweight in the third decile, for example, adds more value toward outperforming a benchmark than going underweight in the eighth decile, which has no benefit, on average.

We developed a back test to see whether a TAA strategy benefited from underweighting equities as much it did from overweighting equities. We started with a symmetric strategy that underweights equities by the same magnitude and at the same distance from the midpoint as it overweights equities. The strategy moves from a neutral position relative to a 50% bond/50% equity portfolio to a 5 percentage point overweight or underweight in equities at the third and eighth deciles, respectively. The deviation increases to 10 percentage points at the second and ninth deciles. The strategy reaches a maximum deviation in the equity weight of 20 percentage points at the first and 10th deciles.

### Exhibit 57: Overweight and Underweight Strategies Based on S&P 500 Valuations

Strategy C, which only overweights equities, has generated superior returns in the past.

	Strategy A	Strategy B	Strategy C
<b>Strategy</b>			
Pre-Tax Return	8.79%	8.96%	8.97%
Volatility	7.77%	8.29%	8.50%
<b>Benchmark</b>			
Pre-Tax Return	8.50%	8.50%	8.50%
Volatility	7.83%	7.83%	7.83%
<b>Strategy vs. Benchmark</b>			
Excess Return	0.29%	0.46%	0.47%
Tracking Error	2.30%	1.53%	1.37%
Information Ratio	0.12	0.30	0.34
<b>After-Tax Excess Returns</b>	<b>-0.03%</b>	<b>0.17%</b>	<b>0.29%</b>
<b>Probability of Underperforming Benchmark</b>	<b>53%</b>	<b>48%</b>	<b>42%</b>

Data through December 31, 2019.

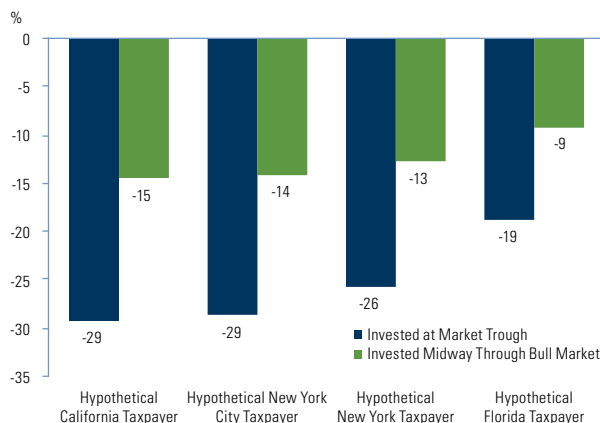
Source: Investment Strategy Group, Bloomberg.

Note: Based on data since 1945. These hypothetical strategies are described in the text and are for illustrative purposes only. Returns are gross of fees. See the disclosures for a discussion on how fees can affect the returns. Federal tax rates are assumed: Stocks' dividends are taxed at the long-term capital gains federal tax rate of 23.8%. Stocks' long-term (short-term) capital gains are taxed at the long-term (short-term) capital gains federal tax rate of 23.8% (40.8%). Bonds are assumed to be tax-exempt. Excess return refers to the return of the hypothetical strategy versus the benchmark.

Past performance is not indicative of future returns.

### Exhibit 58: Required Decline in US Equities to Offset Tax Consequences of Selling

Potentially sizable taxes on capital gains raise the hurdle for underweighting US equities.



Data through December 31, 2019.

Source: Investment Strategy Group, Bloomberg.

The results are shown in Exhibit 57:

- Strategy A: A symmetric TAA strategy of overweighting and underweighting equities based on valuations. This strategy added 29 basis points of value above the passive 50/50 benchmark with a tracking error relative to the benchmark of 2.30%.
- Strategy B: An asymmetric TAA strategy designed with the benefit of hindsight (or, for the quantitative experts, designed and tested “in sample”) that would underweight equities only after they crossed into the 10th decile. The 10th decile was chosen because of the negligible forward returns from this valuation level. As expected, this strategy outperformed the symmetric strategy: it was better to delay underweighting equities given what we now know about the dot-com bubble and the length and strength of this bull market. The strategy added 46 basis points with a tracking error of 1.53%. We recognize that Strategy B was designed with the benefit of hindsight and is not realistic, since most value investors would not wait until the 10th decile to underweight

equities. Still, it does illustrate the penalty of being early.

- Strategy C: A TAA strategy that never underweights equities and overweights equities in the same manner as Strategy A. This strategy is superior to Strategies A and B. It outperformed the passive 50/50 benchmark by 47 basis points and had a lower tracking error, at 1.37%. The strategy also has the lowest probability of underperforming the benchmark, while Strategy A has the highest.

The results are even more compelling if we add the tax impact of selling equities. Using only federal taxes, Strategy A underperforms a passive portfolio, Strategy B adds only 17 basis points of alpha, and Strategy C adds 29 basis points. Overcoming the tax consequences of realizing sizable capital gains for taxable clients simply makes the hurdle to sell equities in order to underweight them even higher.

Exhibit 58 shows the drop in equities required to offset the tax consequences of selling US equities based on S&P 500 levels at the end of 2019. The blue bars show how much equities would have to

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fall before an investor could offset the tax burden on a dollar invested at the trough of the market in March 2009. The green bar assumes the dollar was invested midway through this bull market, and therefore has a higher cost basis. At prevailing state and local tax rates, New York City and California residents with low-cost-basis stock acquired in March 2009 would break even by selling those equities only if the market decreased 29%.

While this analysis is not an endorsement of a buy-and-hold TAA process that does not underweight equities, it illustrates the enormous hurdle of underweighting US equities and the

benefits of overweighting equities. US equities have generated positive one-year returns 79% of the time since WWII and 87% of the time if we exclude recessions. Betting against a rising asset class that has had negative returns only 21% of the time is a low-odds undertaking.

We remain vigilant, constantly assessing the likelihood of a recession, valuation levels and downside probabilities. We stand ready to pull the trigger on underweighting equities if we believe an underweight is warranted, but we do not believe it is so at this time.

## “Stay Invested” Key Takeaways

**Market cycles:** The mission of our Tactical Asset Allocation team is to time the extremes of the market cycle and take advantage of market dislocations. Yet we also fully acknowledge that consistently timing market cycles successfully is extremely difficult. It requires art, science and years of experience, and even then, one can still miss important turning points.

**Asymmetry of market timing:** We believe there is asymmetry to market timing. The likelihood of adding value to a portfolio by overweighting equities when they are cheap is much higher than the likelihood of adding value by underweighting them when they are expensive. The penalty of exiting the market too early is a permanent opportunity cost, while the penalty of entering the market too early is a temporary mark-to-market loss. We believe this asymmetry to be only relevant for US equities, given US preeminence.

**Catalysts for underweighting equities:** Considering this market timing asymmetry, market conditions have to clear a very high bar for us to recommend underweighting equities. Forecasts of an imminent recession or the actual onset of a recession, as measured by our recession indicators, are the most likely such catalysts. Excessive valuations, beyond the merely high valuations seen today, are another catalyst.

## Key Takeaways

We know our two key investment themes of “US preeminence” and “stay invested” have served our clients well over these past 11 years. US preeminence will be an enduring theme, living on and on like the baobab tree. Our recommendation to stay invested also has staying power for the foreseeable future.

Every year we have cautioned in these *Outlooks* that forecasting economic growth and asset class returns is difficult under the best of circumstances. The task is even more challenging after 10 years of economic growth and nearly 11 years of a bull market. The challenge is especially great in 2020, when geopolitical uncertainties, both domestic and foreign, are rising.

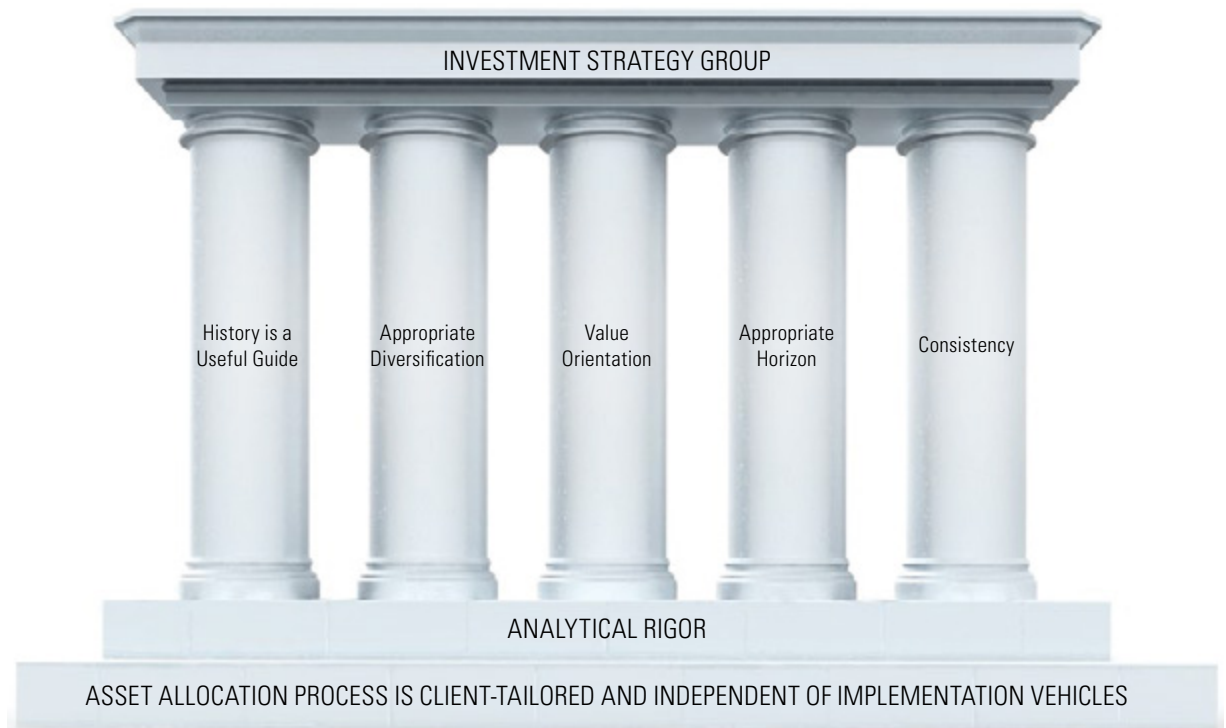
With this in mind, we offer the following key takeaways from our 2020 *Outlook*:

- **Modest pickup in global growth:** We expect global economic activity to be modestly higher than it was last year, driven by a rebound in Brazil, Russia and India, a modest pickup in sequential growth in the Eurozone, and partially offset by slower growth in the US, China and Japan.
- **Accommodative monetary policy:** Central banks will maintain their current monetary policy in the US, Europe and Japan. The Bank of England may be the only major central bank of a developed economy to ease further. China will use a number of monetary policy tools to ease the pace of the inevitable slowdown in its growth rate.
- **Mixed fiscal policies:** China is likely to provide some additional fiscal policy stimulus. We expect the Eurozone to provide some limited fiscal stimulus as well. As we noted during the European sovereign debt crisis, Europe will continue to be incremental, reactive and inconsistent in responding to the slowdown in the Eurozone. Japan will be the most aggressive in pursuing fiscal stimulus, having announced additional real spending of 1.4% of GDP.
- **Low risk of recession:** In the US and the Eurozone, the risk of recession remains low, at 20–25%, which is modestly higher than it was last year. We expect an even lower likelihood of recession in most emerging markets. Japan, however, may experience negative growth for a quarter.
- **Geopolitical concerns:** There is no dearth of geopolitical concerns, with a high likelihood of disruptions from a more adventurous or aggressive Iran and North Korea. Their economies are under intense pressure from punitive sanctions and they have limited options to bring the US to the

negotiating table. The ongoing US-China trade negotiations, specifically the implementation of the Phase One agreement and the launching of Phase Two, are another source of uncertainty and potential volatility. Finally, US elections and Brexit may introduce some additional volatility.

- **Attractive returns:** We expect equities to offer modest returns, with US equities expected to return about 6%, non-US equities about 7% and high-quality US bonds about 1–2%. We expect moderate-risk and well-diversified taxable and tax-exempt portfolios to return about 4% in 2020.
- **Remain vigilant:** There is no shortage of economic risks. We heed the first pillar of our investment philosophy: history is a useful guide. The current US expansion has exceeded all others in length, and the current US equity bull market has exceeded all others in length and all but one in strength. Neither run will continue indefinitely.
- **Stay invested:** While we remain vigilant about the broad range of risks that could undermine this expansion and bull market, we continue to recommend staying invested in equities. We also encourage our clients to weigh the risks of underweighting US equities early against the benefits of overweighting US equities early.

#### Pillars of the Investment Strategy Group's Investment Philosophy

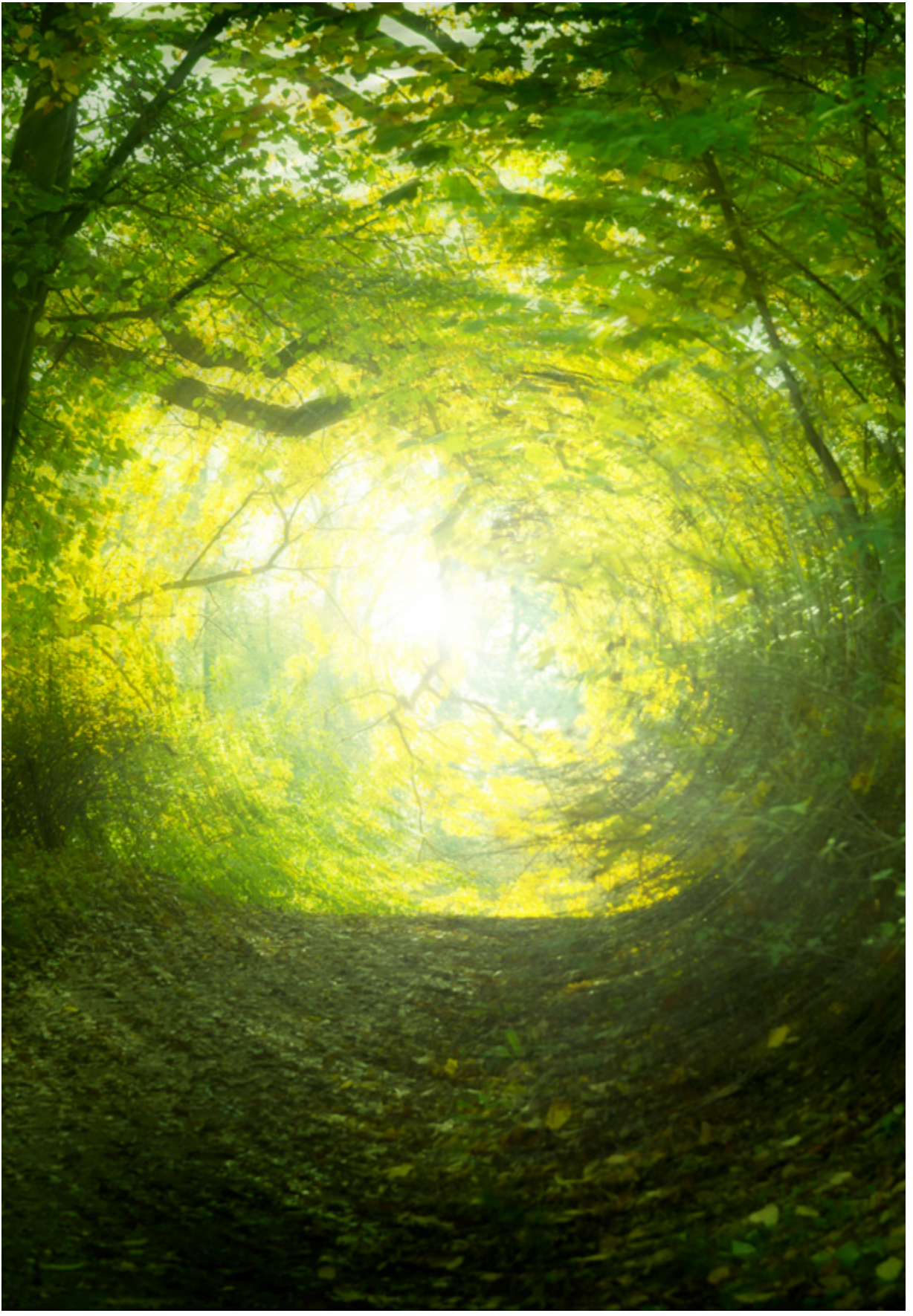


# 2020 Global Economic Outlook: Out of the Thicket

There was no shortage of thorny issues encumbering global growth last year. Increasing brinkmanship between the US and China on trade issues prompted businesses to curtail investment and rethink their supply chains. The specter of Britain crashing out of the European Union further impeded growth, as did higher borrowing costs at the start of last year resulting from central bank rate hikes in 2018. Japan played a role too, as a consumption tax hike coupled with a natural disaster late in 2019 contributed to a sharp slowdown there. These headwinds were only exacerbated by flaring geopolitical hot spots in the Middle East and Asia, as well as populist uprisings in a number of European and emerging market countries.

Economic activity across the globe slowed markedly in response. The worldwide version of Goldman Sachs' Current Activity Indicator (CAI)—a proxy for real-time GDP growth—





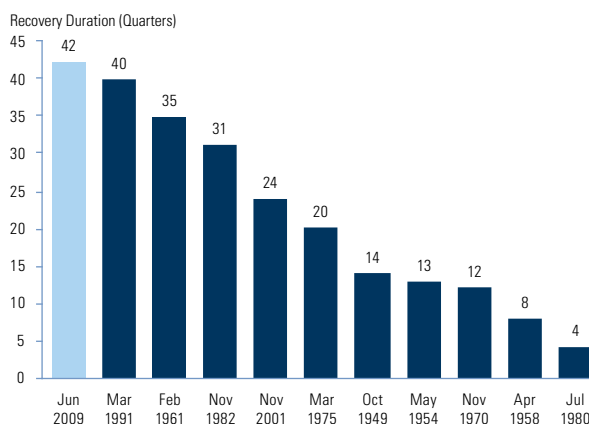
plummeted from 3.6% in late 2018 to a low of just 2.1%. Industrial production was particularly hard hit, with manufacturing in 75% of the largest countries in the Markit Global Purchasing Managers' Index (PMI) in contraction during the summer of last year.<sup>57</sup> Business sentiment was further dampened by the recessionary signals emanating from the bond market, evident in widespread yield curve inversions. Even the more resilient US economy saw survey-based measures of recession risk spike to the highest levels of this expansion.<sup>58</sup>

Yet as we survey the economic landscape for 2020, there are several reasons to believe the path for global growth will be less hindered. Last year's substantial monetary policy stimulus—evident in more than 80% of global central banks lowering their policy rates—contributed to a 1.4 percentage point easing in US financial conditions. That reduction could increase US GDP growth by more than 0.7 percentage point over the next four quarters.<sup>59</sup> In parallel, governments in Japan, China and parts of Europe have instituted or are at least considering fresh fiscal stimulus measures to help accelerate private sector spending. In addition, the Phase One trade agreement between the US and China that is set to be signed in January of this year breaks a pattern of escalation that has weighed on global growth since 2018. Already, there is some evidence of improvement, with the OECD Total Composite Leading Indicator recording its first sequential increase after 21 consecutive months of contraction.

Our forecast for 2020 calls for neither a meaningful pickup in global growth nor the

## Exhibit 60: Duration of Post-WWII US Expansions

The current recovery is now the longest since 1945.



Data as of Q4 2019.

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

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

material rise in interest rates that would come with it (see Exhibit 59). There is also a bounty of risks that could uproot the green shoots discussed above. Still, while the global economy may not yet be out of the woods, it has perhaps moved out of the thicket.

## United States: Defying the Odds

The US economic expansion continues to defy the odds. At nearly 11 years, it is now the longest in post-WWII history (see Exhibit 60). Its longevity is even more remarkable when we consider the numerous headwinds the US economy has

## Exhibit 59: ISG Outlook for Developed Economies

		United States		Eurozone		United Kingdom		Japan	
		2019	2020 Forecast	2019	2020 Forecast	2019	2020 Forecast	2019	2020 Forecast
Real GDP Growth*	Annual Average	2.3%	1.75–2.5%	1.2%	1.0–1.4%	1.3%	0.9–1.3%	1.1%	0.1–0.9%
Policy Rate**	End of Year	1.75%	1.75%	(0.5%)	(0.5%)	0.75%	0.25–0.5%	(0.1%)	(0.1%)
10-Year Bond Yield***	End of Year	1.9%	1.6–2.1%	(0.2%)	(0.4)–0.2%	0.8%	0.6–1.2%	0.0%	(0.2)–0.2%
Headline Inflation****	Annual Average	2.1%	2.0–2.5%	1.0%	1.0–1.4%	1.5%	1.5–1.9%	0.5%	0.3–0.9%
Core Inflation****	Annual Average	2.3%	2.1–2.6%	1.3%	1.1–1.3%	1.7%	1.7–2.0%	0.5%	0.4–0.8%

Data as of December 31, 2019.

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

\* 2019 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.

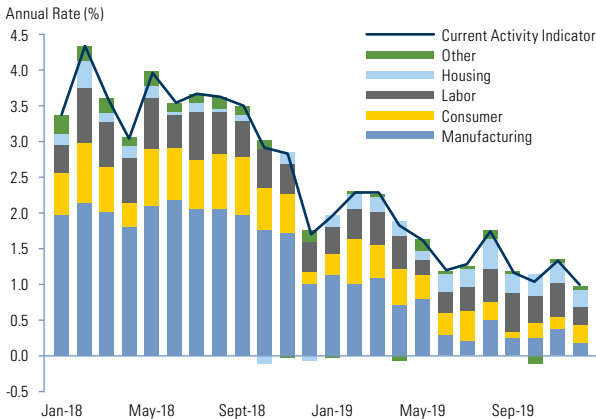
\*\*\* For Eurozone bond yield, we show the 10-year German bund yield.

\*\*\*\* For 2019 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 61: Goldman Sachs US Current Activity Indicator

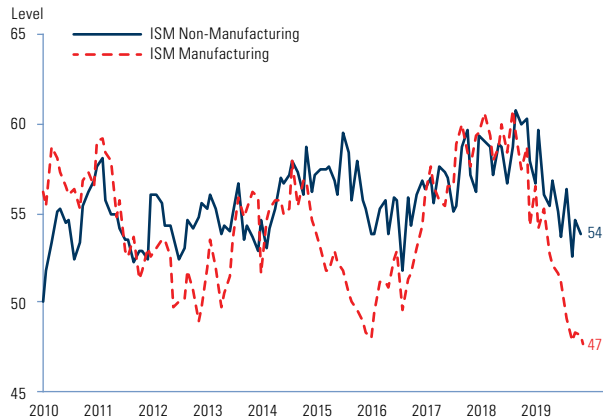
Trade tensions weighed on US growth and particularly manufacturing activity in 2019.



Data through December 2019.  
Source: Investment Strategy Group, Goldman Sachs Global Investment Research.

### Exhibit 62: US Manufacturing and Non-Manufacturing ISM Indices

Both manufacturing and service sector indices declined to near their worst levels of this expansion last year.



Data on manufacturing through December 2019; non-manufacturing through November 2019.  
Source: Investment Strategy Group, Haver Analytics.

faced over that span, starting with the European sovereign debt crisis of nearly a decade ago. More recent challenges have included a tightening cycle by the Federal Reserve, two sharp manufacturing recessions and a burgeoning US-China trade war.

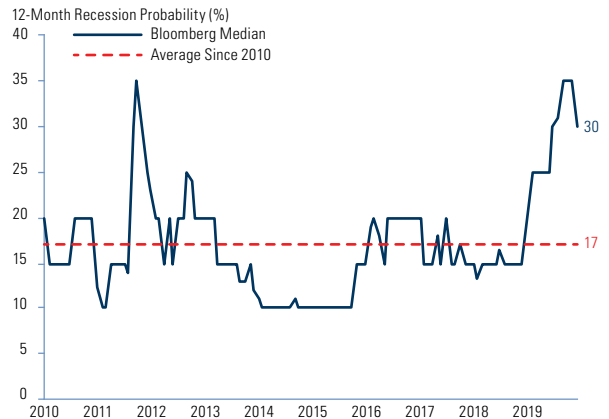
The question facing investors is whether this impressive resilience can continue, particularly with signs of fatigue emerging. As seen in Exhibit 61, the US economy was not immune to growing trade tensions and rising geopolitical strife last year. Although most of the weakness was concentrated in manufacturing, it was also evident in services, as surveys of the sector fell to the bottom third of their historical range (see Exhibit 62). The resulting growth worries pushed survey-based measures of recession risk to the highest levels of this expansion (see Exhibit 63).

Still, we think it is premature to conclude that the expansion’s advanced age has finally undermined its vigor. As we have argued in the past, and as former Federal Reserve Chair Janet Yellen noted, “it’s a myth that expansions die of old age.”<sup>60</sup> Instead, US post-war business cycles are typically extinguished by one or more of three culprits: excessive Federal Reserve tightening, economic and financial market imbalances, and exogenous shocks (most commonly in the form of spiraling oil prices).

As we examine these risks today, none looks like a reasonable base case. It’s worth remembering that the pace of interest rate hikes during the

### Exhibit 63: Bloomberg Analyst Survey of US Recession Probability

Survey-based measures of recession risk spiked to the highest levels of this expansion last year.

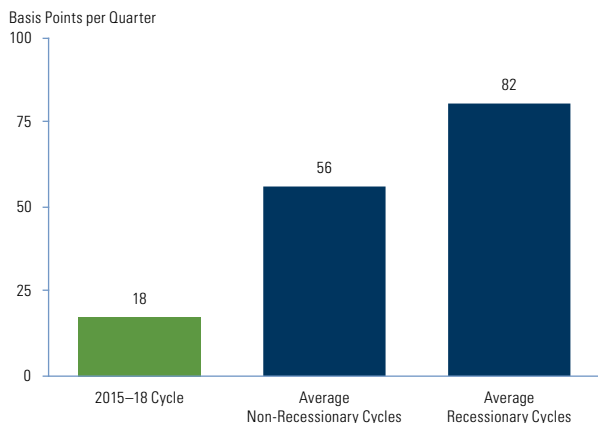


Data through December 2019.  
Source: Investment Strategy Group, Bloomberg.

Federal Reserve’s 2015–18 tightening cycle was the slowest in the last 60 years (see Exhibit 64). Although there were growing worries that even this measured pace of hikes pushed US monetary policy to restrictive levels—evident in widespread inversions along the US yield curve last year—the Federal Reserve has since cut policy rates three times, helping reverse significant tightening in financial conditions (see Exhibit 65).

### Exhibit 64: Average Quarterly Policy Rate Increases During Federal Reserve Tightening Cycles

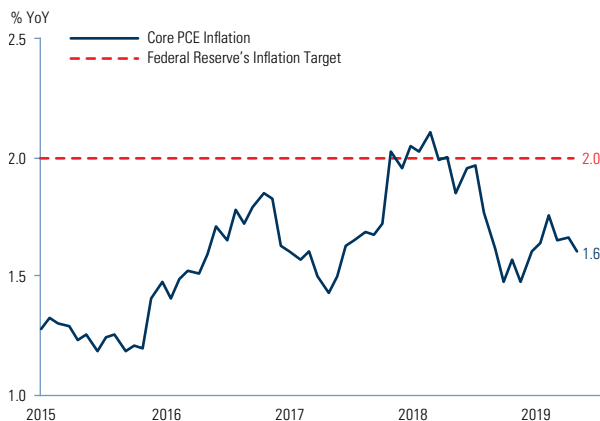
The pace of rate hikes during the 2015–18 cycle was slow compared to that of other US tightening cycles.



Data as of December 2019.  
 Note: The analysis is based on Federal Reserve tightening cycles from 1946.  
 Source: Investment Strategy Group, Datastream.

### Exhibit 66: US Core PCE Inflation

Core PCE inflation is currently running below the Federal Reserve’s target.



Data through November 2019.  
 Source: Investment Strategy Group, Haver Analytics.

### Exhibit 65: Goldman Sachs US Financial Conditions Index

Financial conditions eased meaningfully in 2019, partially reversing 2018’s large tightening.



Data through December 31, 2019.  
 Source: Investment Strategy Group, Goldman Sachs Global Investment Research.

price index—currently running 0.4 percentage point below the Federal Reserve’s target, and Powell’s view that “there’s actually more [labor] slack out there” despite a 3.5% unemployment rate,<sup>62</sup> we find such an acceleration in inflation unlikely this year (see Exhibit 66). Of equal importance, the Federal Reserve is likely to tolerate inflation slightly above its target to compensate for undershooting it throughout much of this expansion. Against this backdrop, we expect the Federal Reserve to remain on hold this year.

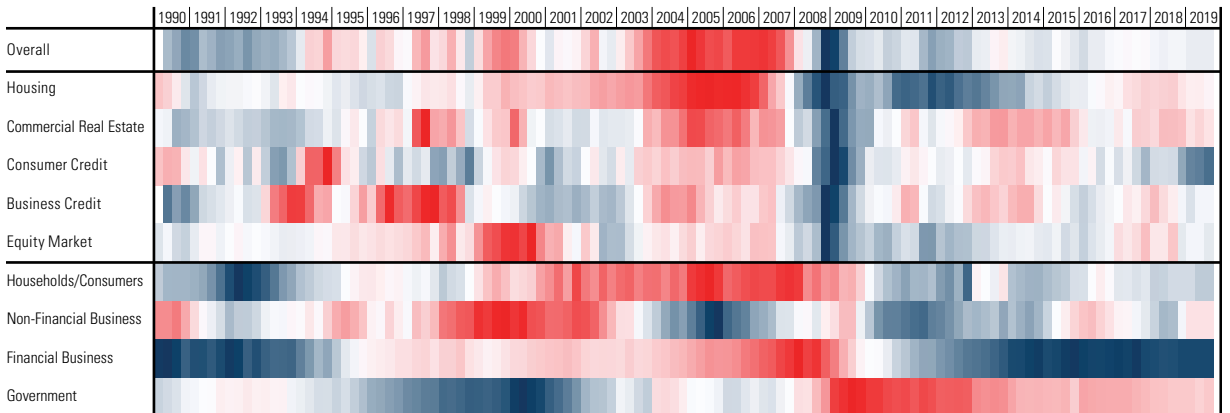
There is also scant evidence of the type of financial and economic imbalances that normally precede a recession (see Exhibit 67 and Section I of this report). Although this expansion is now the longest on record, it has also been the slowest (see Exhibit 68). Its lackluster pace—coupled with the sizable economic slack created by the financial crisis—has enabled the current expansion to avoid the excesses that typically ended past business cycles. If anything, there is scope for spending in cyclical parts of the US economy to reach above-average levels before this expansion has run its course (see Exhibit 69).

Lastly, while we cannot predict the source or timing of an exogenous shock, the risk of a persistent oil price spike is significantly lower today than in the past given the current levels of Saudi Arabian spare capacity and the short lead time of

The Federal Reserve has also made clear that the hurdle for any additional rate increases is high, with only four of 17 FOMC participants believing a hike is appropriate this year. Similarly, Chair Powell has stipulated that a “significant move up in inflation that is also persistent” is required to tighten policy.<sup>61</sup> With core inflation—as measured by the Personal Consumption Expenditures (PCE)

## Exhibit 67: Global Investment Research Financial Excess Monitor

The types of economic and financial market imbalances that preceded the last two US recessions are notably absent today.



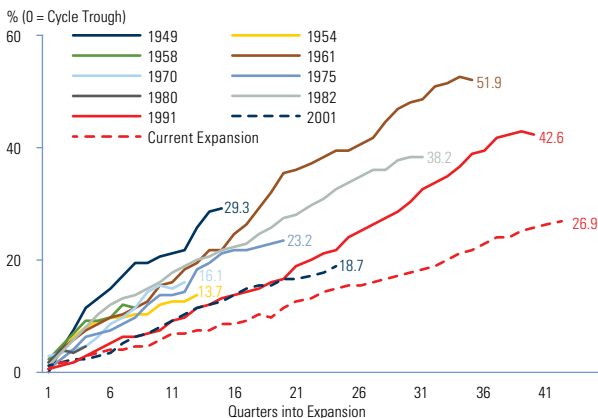
Data through Q3 2019.

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 68: Cumulative Real GDP Growth During US Economic Cycles

The current expansion has been the longest, but also the slowest in the past 70 years.



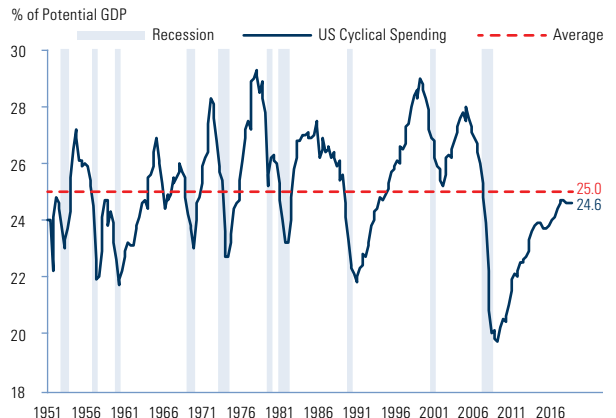
Data through Q3 2019, forecast through Q4 2019.

Note: Q4 2019 GDP growth is based on a Goldman Sachs Global Investment Research estimate.

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

## Exhibit 69: US Cyclical Spending as a Share of Potential GDP

Today's cyclical spending is not at the excessive levels that typically precede recessions.



Data through Q3 2019.

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

Source: Investment Strategy Group, Datastream.

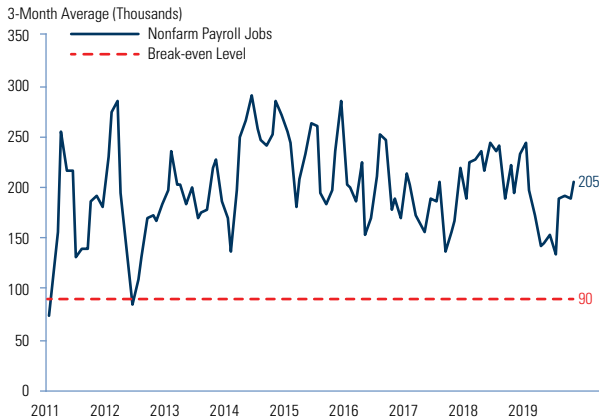
additional oil supply from US shale (see Section III, Global Commodities).

Our less alarmist view on recession risks is also informed by our above-trend economic growth forecast. Here, resilient private consumption—which represents about 70% of GDP—should benefit from a briskly expanding pool of employed consumers. As seen in Exhibit 70, nonfarm payroll growth is running at twice the level required to keep the

unemployment rate flat. The resulting decline in the number of available workers is helping to lift wages, particularly among lower-paid workers, who tend to spend more of their income (see Exhibits 71 and 72). Consumption also stands to benefit from last year's strong equity gains and modest home price appreciation—which together pushed consumer net worth to all-time highs—as well as historically low debt-servicing costs and ample savings. Overall, we

### Exhibit 70: US Nonfarm Payroll Jobs

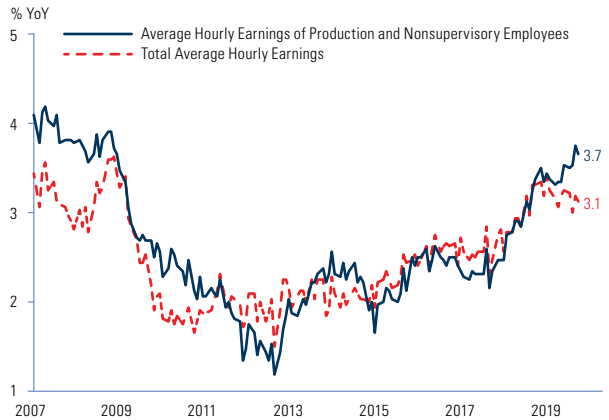
Nonfarm payroll growth is running at more than twice the level required to keep the unemployment rate flat.



Data through November 2019.  
 Note: Break-even level as estimated by Goldman Sachs Global Investment Research.  
 Source: Investment Strategy Group, Haver Analytics.

### Exhibit 72: US Average Hourly Earnings Growth

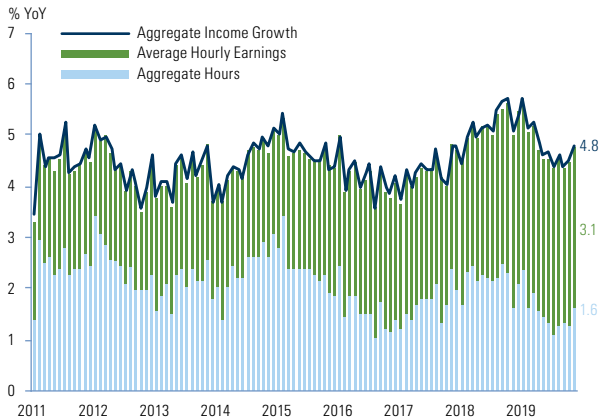
Wage growth has accelerated materially, especially among lower-paid employees.



Data through November 2019.  
 Source: Investment Strategy Group, Haver Analytics.

### Exhibit 71: Aggregate US Income Growth Implied by Payrolls

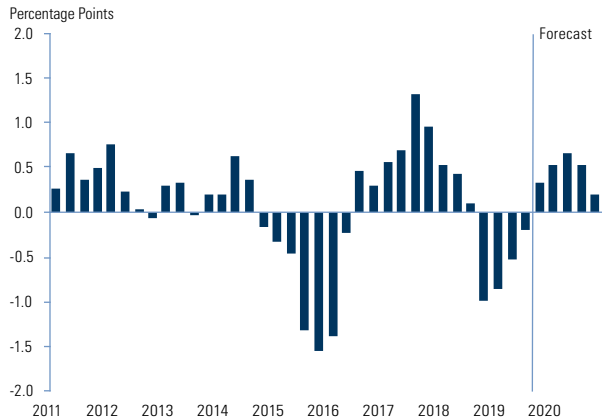
Strong employment growth and reduced slack are helping to lift wages.



Data through November 2019.  
 Source: Investment Strategy Group, Haver Analytics.

### Exhibit 73: US Real GDP Growth Impulse from Financial Conditions

The sizable easing in financial conditions last year will be a tailwind to growth in 2020.



Data through Q3 2019, forecasts through Q4 2020.  
 Source: Investment Strategy Group, Goldman Sachs Global Investment Research.

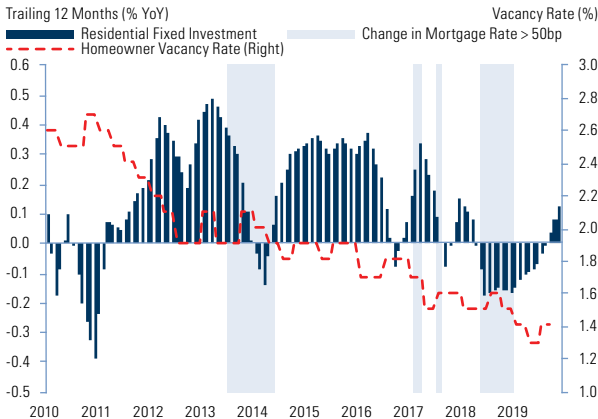
expect private consumption to expand at a solid 2–3% pace.

The sizable easing in financial conditions last year should also help boost activity, just as tighter conditions in 2018 slowed activity in 2019 (see Exhibit 73). Indeed, our colleagues in Goldman Sachs Global Investment Research estimate that a one percentage point easing in financial conditions leads to a 0.7 percentage point increase in GDP

growth over the next four quarters. Already, measures of housing activity—such as new home sales and broader residential investment—have begun expanding again in response to lower interest rates after more than a year of contraction. We expect this recent housing strength to continue on the back of low vacancy rates and new construction catching up to demographics-based demand trends (see Exhibit 74).

### Exhibit 74: US Residential Investment and Homeowner Vacancy Rate

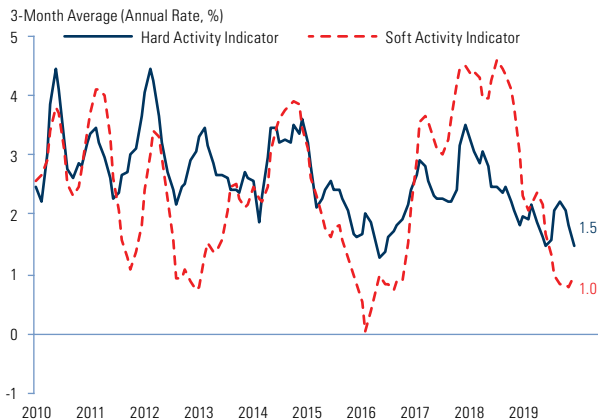
Low vacancy rates should support residential fixed investment.



Data through November 2019.  
Source: Investment Strategy Group, Haver Analytics.

### Exhibit 75: Goldman Sachs US Current Activity Indicators

Recent progress on US-China trade negotiations should lift sentiment-based or “soft” measures of growth.

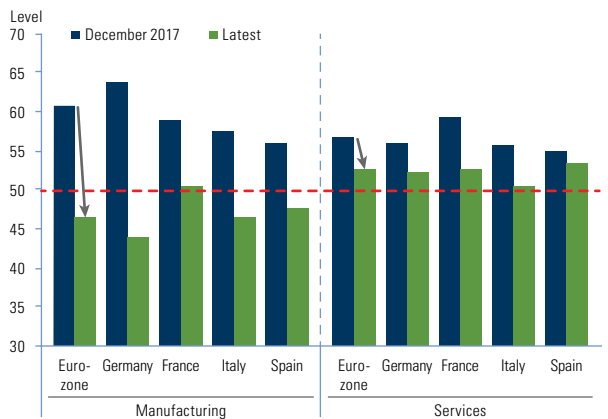


Data through December 2019.  
Source: Investment Strategy Group, Goldman Sachs Global Investment Research.

Finally, recent progress on US-China trade negotiations should improve growth and lift sentiment-based measures of economic activity (see Exhibit 75). Although the Phase One trade agreement between the US and China leaves many questions unanswered, it nonetheless breaks a pattern of escalation that has weighed on global

### Exhibit 76: Eurozone Manufacturing and Services Sector PMI Indices

Economic performance diverged substantially across countries and sectors in the Eurozone last year.



Data as of December 2019 for all indicators except Italy and Spain services PMIs, which are as of November 2019.  
Note: PMI readings above 50 indicate an increase compared to the previous month; readings below 50 indicate a decrease.  
Source: Investment Strategy Group, Haver Analytics.

growth since 2018. As a result, it could reduce the drag on US GDP growth rates by as much as 0.4 percentage point by the end of 2020.<sup>63</sup>

With the expansion in its 11th year, it is natural to question its durability. After all, even we have increased the probability of a recession this year to 20–25% from 15–20% in the beginning of 2019. Yet we must be careful to distinguish the risk of a recession from the certainty of one. Crucially, the US economy shows little evidence of the cyclical excesses that typically portend the end of a business cycle. With our forecast calling for another year of above-trend growth of 1.75–2.5%, we think this expansion is set to defy the odds once again.

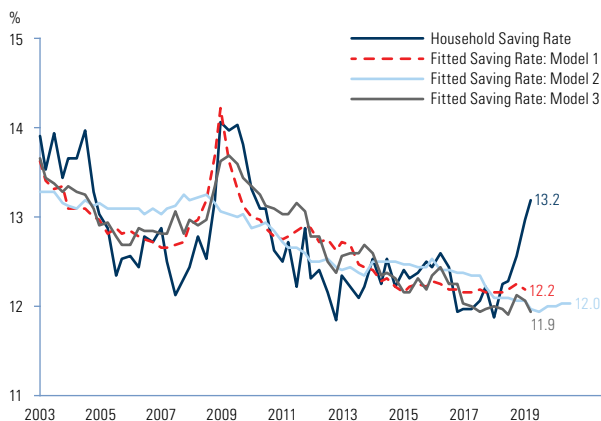
### Eurozone: Still Muddling, Not Yet Through

The Eurozone’s tepid 1.2% growth last year belied significant dispersion across countries and sectors. While Germany, Italy and the industrial complex flirted with recession, France, Spain and the services sector recorded healthy growth rates, at least by Eurozone standards (see Exhibit 76). Although we expect more uniformity in 2020 growth rates, it is still likely to be another year of trend-like GDP growth (see Exhibit 59).

Private consumption should remain the primary engine of growth, supported by ongoing

## Exhibit 77: Eurozone Households' Saving Rate

Consumer savings stand well above levels justified by the macroeconomic environment alone.



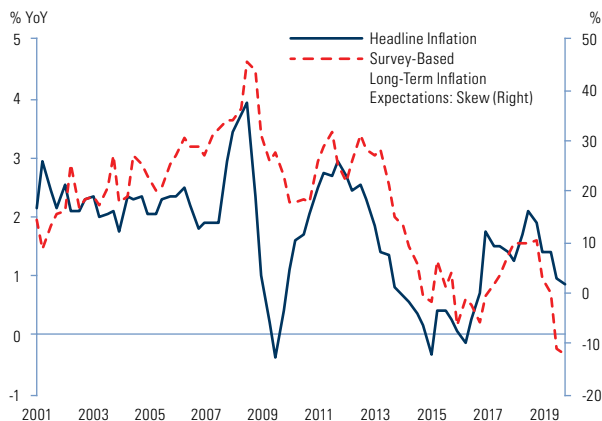
Data through Q2 2019, forecasts through Q4 2020.

Note: Saving rate is estimated as a function of: net wealth and unemployment rate in model 1; share of population >65, unemployment rate and interest rate in model 2; disposable income, net worth and interest rate in model 3.

Source: Investment Strategy Group, Haver Analytics.

## Exhibit 78: Eurozone Inflation and Long-Term Inflation Expectations

Soft current and expected inflation require continued monetary accommodation by the ECB.



Data through November 2019.

Note: The skew is computed as the difference between the probability of inflation >2% and the probability of inflation <1.5%.

Source: Investment Strategy Group, European Central Bank, Eurostat.

job creation, rising wages, and government transfer payments to low- and middle-income households. There is also ample scope for consumers to draw down their savings, which stand well above levels justified by the macroeconomic environment alone (see Exhibit 77). At the same time, very easy financial conditions should continue to provide a tailwind to business and residential investment.

Although this continued growth is likely to keep upward pressure on wages—particularly with the unemployment rate standing at the lowest level in over a decade—the European Central Bank (ECB) is unlikely to tighten policy. Keep in mind that the pass-through from wages to broader Eurozone inflation is muted. Moreover, long-term inflation expectations stand at all-time lows, while inflation

is likely to fall well short of the ECB's target for the foreseeable future (see Exhibit 78). Taken together, these factors argue for the ECB's policy rate and asset purchases to remain at current levels.

More broadly, the persistent weakness of inflation has renewed focus on the limits of monetary policy. Indeed, there is growing concern among investors that the economic boost from negative policy rates does not compensate for their deleterious impact, particularly on the financial sector and savers. Although this could prompt the ECB to consider new unconventional tools<sup>64</sup> as part of its strategy review in 2020, we think its continued reliance on forward guidance is more likely.

With the effectiveness of monetary policy in question, calls for fiscal spending—including from the ECB itself—have only grown louder.

This solution has intuitive appeal, as the aggregate Eurozone debt-to-GDP ratio is healthier than those of the US, UK and Japan. Yet a closer examination reveals two key impediments. First, public debt has already increased substantially in many Eurozone countries over the last decade (see Exhibit 79). In turn, capacity for high fiscal spending is concentrated in Germany and a few smaller northern European countries that have prioritized balanced budgets in the past. Second

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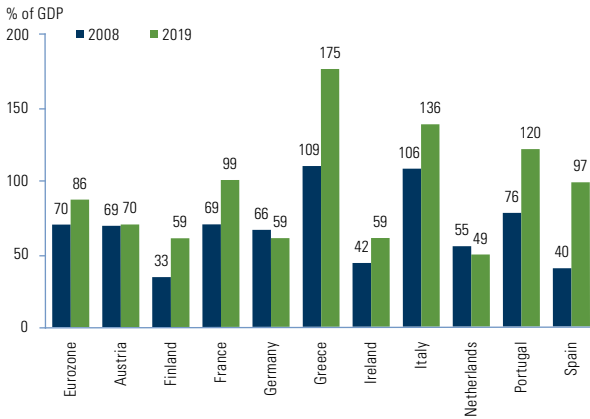
**There is growing concern among investors that the economic boost from negative policy rates does not compensate for their deleterious impact, particularly on the financial sector and savers.**

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### Exhibit 79: Eurozone Public Debt Level by Country

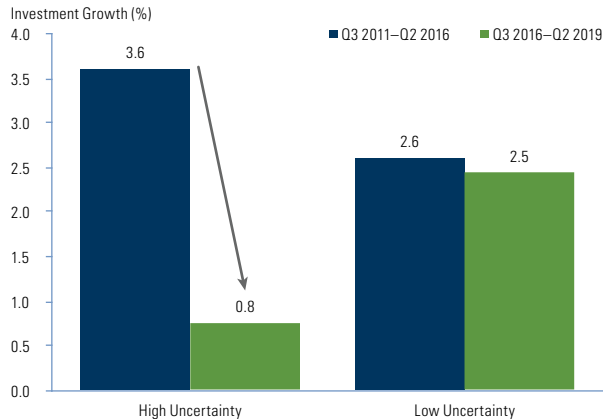
Public debt has risen substantially in many Eurozone countries, limiting the potential for future fiscal spending.



Data as of November 2019.  
Source: Investment Strategy Group, European Commission.

### Exhibit 80: UK Investment Growth by Firms with Different Opinion on Brexit Uncertainty

Investment growth by firms that are more uncertain about Brexit has declined since the EU referendum.



Data as of Q2 2019.  
Note: "High" uncertainty refers to firms placing Brexit in the top three sources of uncertainty as part of the DMP survey.  
Source: Investment Strategy Group, Bank of England.

and perhaps more importantly, there is neither a common Eurozone budget nor an established mechanism for redistributing resources across countries. As a result, the growth impulse of fiscal policy is likely to remain limited this year, although our forecasts do incorporate larger fiscal easing in all major European countries.

Despite these institutional shortcomings, we do agree with those who argue “the euro is irreversible.”<sup>65</sup> While undertaking much-needed institutional reforms—such as forming a banking union, coordinating unified defense spending and issuing a common safe asset—will likely remain a politically unsavory and protracted process, we believe the sizable benefits of deeper fiscal and political integration will ultimately bring those improvements to fruition. In the interim, the Eurozone is likely to just muddle through, consistent with our expectation for trend-like growth this year.

### United Kingdom: Uncertainty Is the Only Certainty

The more things change, the more they stay the same. Such is the case with Brexit in the UK, where many hoped the landslide victory of Prime Minister Boris Johnson would mark the end of

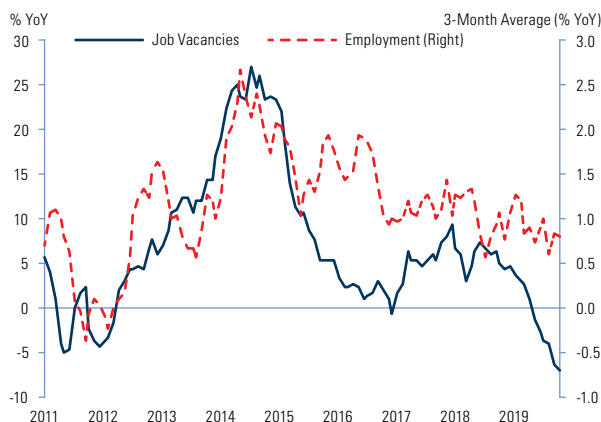
Brexit ambiguity. Instead, the uncertainty has simply shifted to what form a trade deal between the UK and the European Union (EU) will ultimately take.

To be sure, negotiations on the future trade relationship with the EU will likely prove lengthy and challenging. Already, the Withdrawal Agreement Bill has been amended to preclude the UK from requesting an extension at the end of the transition period in December 2020, effectively reintroducing the risk of a disorderly Brexit at that time. While this does not preclude the UK from revising the legislation to provide for an extension, it nonetheless keeps uncertainty elevated.

This lack of clarity is likely to weigh further on UK economic activity, which just recorded its third consecutive year of underperformance relative to its developed market peers. While weak business and residential investment has been common over this period (see Exhibit 80), there is growing risk that private consumption may also be negatively impacted. Consider that in the past three years, UK firms have preferred hiring new workers to spending money on new capital equipment, given that the cost of firing these workers is relatively modest. That preference helped push the UK unemployment rate to its lowest level in more than 40 years. Yet more recently, firms have begun scaling back their hiring plans, and wage growth

## Exhibit 81: Growth in UK Job Vacancies and Employment

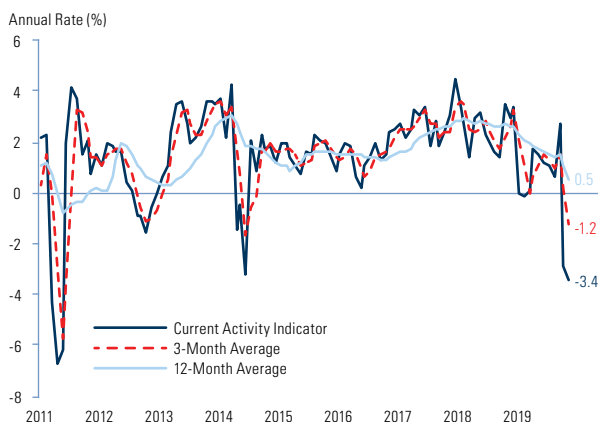
The UK labor market is showing signs of cooling.



Data through October 2019.  
Source: Investment Strategy Group, Haver Analytics.

## Exhibit 82: Japan Current Activity Indicator

Homegrown and foreign headwinds weighed on economic activity in Japan in late 2019.



Data through November 2019.  
Source: Investment Strategy Group, Haver Analytics..

is also showing signs of moderation (see Exhibit 81). The combination of moderating employment growth and moderating wages—coupled with low saving rates and negative wealth effects from declining real home prices—suggests that household consumption is vulnerable.

The silver lining to these growth challenges is that they make stimulative policies highly likely. Here, we expect increased government spending to contribute positively to economic activity in 2020. Similarly, we think a combination of soggy headline inflation, ongoing Brexit uncertainty and tepid growth will provide cover for the Bank of England to cut interest rates in the first half of 2020, with an additional cut possible depending on the evolution of Brexit risks.

Based on the net effect of these various positive and negative economic impulses, we forecast modestly below-trend UK GDP growth in the range of 0.9–1.3% this year.

## Japan: On to the Next Recovery

The Japanese economy has faced its share of economic challenges, both homegrown and foreign. Last year was no exception, as weak global trade, a consumption tax hike in October and a devastating typhoon late in the year amounted to stiff headwinds (see Exhibit 82). The result was an economy that ended the year with

a sharp downturn. Were it not for strong business spending on labor-saving technologies—and robust household consumption ahead of the October tax hike—its full-year GDP growth of around 1.1% would have been even weaker.

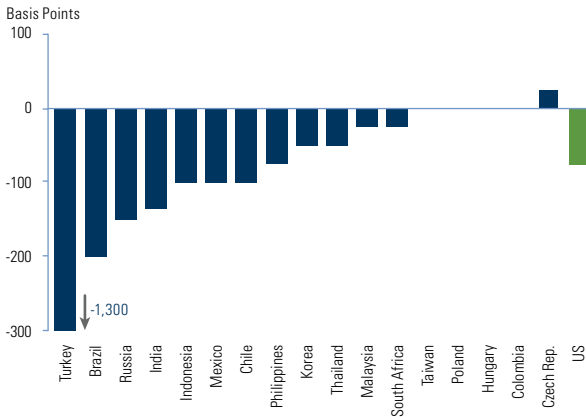
In response to this lackluster finish, Japan's government announced a large fiscal stimulus package worth ¥26 trillion in December. As is typical of such packages, the headline number includes indirect impacts, and is therefore much bigger than the actual increase in government spending that directly affects the economy.<sup>66</sup> Our colleagues in Goldman Sachs Global Investment Research estimate that actual spending will be a much smaller ¥8 trillion, or 1.4% of GDP, distributed over several years. Even so, the package should provide a modest boost to growth this year as its outlays are designed to be front-loaded.

Other economic forces are less supportive of growth. Household consumption is likely to

**We think a combination of soggy headline inflation, ongoing Brexit uncertainty and tepid growth will provide cover for the Bank of England to cut interest rates in the first half of 2020.**

### Exhibit 83: Emerging Market Central Bank Policy Rate Changes Over the Past 12 Months

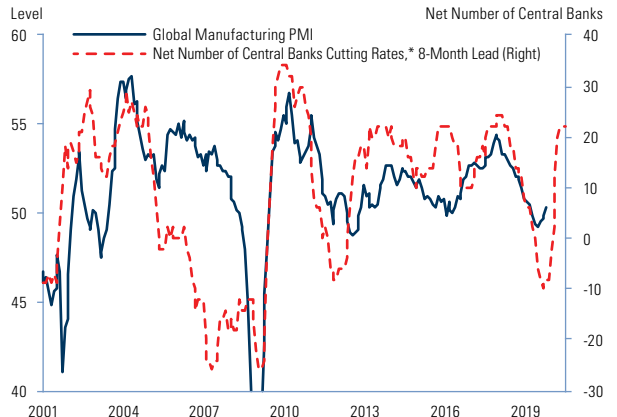
Easier monetary policies enacted in response to last year's weakness are a tailwind for growth.



Data as of December 2019.  
Source: Investment Strategy Group, Bloomberg.

### Exhibit 84: Global Manufacturing PMI vs. Monetary Stimulus

The large number of central banks across the globe that cut rates last year is a tailwind to global manufacturing.



Data through November 2019.  
Source: Investment Strategy Group, Haver Analytics.  
\* Number of central banks whose last move was a cut minus number of central banks whose last move was a hike, from a total of 36 central banks.

remain depressed as it will take time for consumers to adjust to the higher tax rate. Meanwhile, business investment is set to moderate from last year's blistering pace, reflecting still-temperid global trade and some payback later in 2020 from businesses that increased spending in preparation for the Summer Olympics.

Against this backdrop, we expect the Japanese economy to stage a gradual recovery over the course of 2020. That said, full-year GDP growth is likely to slow to a range of 0.1–0.9%, largely because of a weak start to the year. Given this tepid recovery, inflation pressures are likely to remain subdued and the Bank of Japan is set to remain on hold, yet with a bias toward additional easing should the economy weaken anew or the USD/JPY exchange rate decline toward 100.

### Emerging Markets: Green Shoots

Emerging market (EM) economies faced a daunting macroeconomic environment last year. While weak external demand was a key headwind, uncertainty created by rising tariffs and the slowdown in global manufacturing also curbed fixed investment in many EM countries. The result was below-trend GDP growth for emerging markets as a whole and a collapse in export growth.

The prospects for 2020 look brighter for several reasons. Many EM countries stand to benefit from the easier monetary and fiscal policies that were enacted in response to last year's weakness (see Exhibit 83). For those countries whose currencies depreciated, more competitive exports are an additional benefit. Furthermore, the recent de-escalation of US-China trade tensions has helped ease US recession fears, which ought to boost global trade. Already, our leading indicator of global manufacturing activity has inflected higher, providing a likely tailwind to EM exports (see Exhibit 84).

These green shoots should be nurtured further by additional monetary and fiscal easing, thanks to still-low inflation pressures across most countries. Indeed, central banks in several countries have room for additional rate cuts, especially in Mexico where economic growth is slowing, the real policy rate is elevated and the central bank has only just begun an easing cycle. Many large EM countries also have room for additional fiscal easing, including China, Russia and Korea.

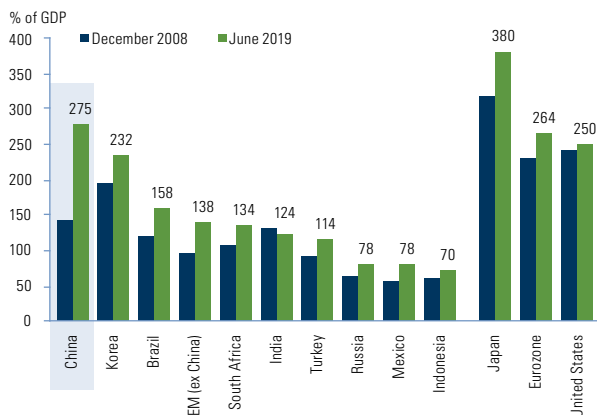
All told, we expect a modest rebound in EM GDP growth to 4.4%, just shy of trend growth.

### China

The Chinese economy came under pressure on a number of fronts last year. Indeed, a burgeoning trade war with the US, a global manufacturing

## Exhibit 85: Selected Countries' Debt-to-GDP Ratios

China's total non-financial debt burden as a share of GDP is second only to that of Japan.

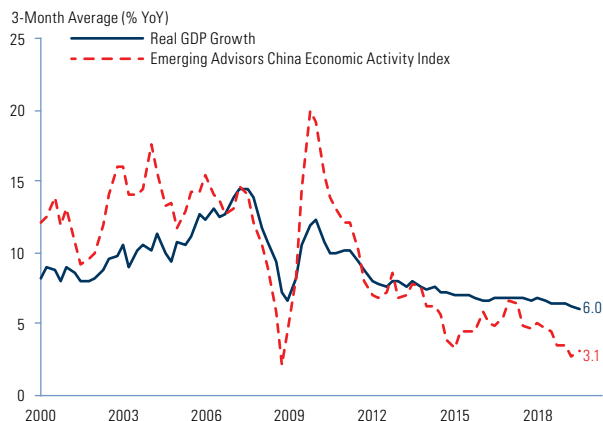


Data as of June 2019.

Note: China includes central and local government debt and the debt of LGFVs.  
Source: Investment Strategy Group, BIS, CEIC, Haver Analytics.

## Exhibit 86: Measures of Chinese Economic Activity

Alternative measures of Chinese economic activity show lower, more volatile growth.



Data through Q3 2019.

Source: Investment Strategy Group, Emerging Advisors Group.

recession, periodically tight financial conditions and rising corporate bankruptcies represented a severe drag on economic activity. Even the Chinese consumer reined in spending in response to softening labor markets and broader uncertainty. Against this backdrop, GDP growth slowed to 6.1% from 6.6% in 2018.

Although the central bank responded with reductions in banks' reserve requirements and lending rates, these policy adjustments have been more measured than usual. The same could be said for fiscal policy, despite last year's reduction in taxes and accelerated issuance of special local government bonds. Looking ahead, officials in Beijing face a delicate balancing act, as the easier policy necessary to support growth risks worsening a total non-financial debt burden that has already reached a staggering 275% of China's GDP, second only to that of Japan (see Exhibit 85).

Partly because of these constraints, we expect official GDP growth to slow further to 5.6–6.2% in 2020. While the Phase One trade agreement with the US will help stabilize fixed investment and export growth, lingering uncertainties about the future of US-China relations are likely to prevent a meaningful rebound. Meanwhile, fiscal and monetary policy will likely remain accommodative, just not highly stimulative. This will leave the onus on consumption, which will continue to be the main engine of growth.

The risks to our forecast are predominantly tilted to the downside for several reasons. First, the recent trade détente with the US could collapse, leading to even higher tariffs and new constraints on Chinese companies. Second, actual economic growth could be as much as *three percentage points* weaker than official GDP statistics (see Exhibit 86). This distinction is critical, because policy errors—such as failing to provide adequate stimulus—could result from misjudging the strength of the economy. Such mistakes could lead to more stress in the corporate sector and worsen broader risks in the financial system. Finally, today's more adversarial relationship between the US and China—at a time when Chinese growth is already slowing because of structural factors—increases the potential for adverse economic outcomes.

### India

India suffered from both domestic and external shocks last year. At home, problems in the non-bank financial sector led to liquidity constraints that weighed on fixed investment. At the same time, household consumption sagged on the back of a weaker labor market. Externally, slower growth among India's trading partners contributed to a significant deceleration in export growth. Taken together, these shocks led GDP growth to fall from 7.3% in 2018 to just 5% last year, well below our forecasts.

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### Exhibit 87: Brazil's Unemployment Rate

Against the backdrop of a weak economic recovery, Brazil's unemployment rate remains elevated.



Data through November 2019.  
Source: Investment Strategy Group, Haver Analytics.

For 2020, we project a recovery in GDP growth to 5.7–6.7%. While external demand will likely remain subdued in the year ahead, domestic demand is likely to benefit from several factors. Chief among these is a cut in the corporate tax rate from 30% to 22%, which was made effective retroactively from April 1, 2019 (the start of the current fiscal year). Accommodative policy from the Reserve Bank of India—with the potential for further rate cuts given still-below-target inflation—is a further tailwind. Finally, plans to stabilize the non-bank financial sector should also help, as these entities facilitate the transmission of easier monetary policy to bank lending.

#### Brazil

Although Brazil is still recovering from its 2014–16 recession, it was not immune to the broader EM slowdown last year. At issue was a contraction in exports and weak fixed investment, which together drove GDP growth to just 1.1%. As a result of this weak recovery, GDP remains

nearly 4% below its pre-recession peak, while the country's 11.8% unemployment rate is almost double the low it reached prior to the recession (see Exhibit 87).

Given this sizable economic slack and some improvement in fixed investment toward the end of 2019, we expect Brazilian GDP growth to improve to a range of 1.5–2.5% this year. While weakness among Brazil's neighbors suggests local trade will remain a headwind, we think a combination of easier policy from the central bank and optimism about structural reforms will sustain the recent momentum in fixed investment growth. Here, recent passage of long-awaited pension reform has boosted sentiment and represents an important step toward addressing Brazil's high public debt. That said, it falls short of solving the problem entirely, necessitating tight fiscal policy until public debt is on a more sustainable path.

#### Russia

Like Brazil's recovery, Russia's recovery from its recent recession suffered a setback last year. A sharp contraction in exports—owing to a combination of weak global demand and transportation problems in the oil sector—saw GDP growth halve to just 1.1%. The slowdown would have been even worse had it not been for a combination of fiscal stimulus and a fresh easing cycle by the Central Bank of Russia (CBR).

We expect this easy policy backdrop to be a key support for growth again this year. Not only is the government set to provide additional fiscal stimulus, but the CBR is also likely to deliver further rate cuts given that inflation is likely to remain below its target. Even so, ongoing Western sanctions will continue to constrain economic activity.

Against this mixed backdrop, we project GDP growth to rise slightly, to a range of 0.7–1.7%.

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Although Brazil is still recovering from its 2014–16 recession, it was not immune to the broader emerging market slowdown last year.

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# 2020 Financial Markets Outlook: Still Climbing

In our 2013 *Outlook*, we referred to the old Wall Street adage that “markets often climb a wall of worry,” referring to financial markets’ impressive gains despite a litany of uncertainties at the time. While investors’ worries have changed in the interim—with last year’s focus on US-China trade tensions and rising recession risks—markets are still making that ascent seven years later. If anything, their advance became even broader and more spirited in 2019.

The S&P 500’s 29% price gain last year was nearly twice the almost 16% annualized pace of appreciation it has generated since the trough of the financial crisis more than a decade ago. The magnitude of this gain was second only to its persistence, as the S&P 500 rose on nearly 60% of last year’s trading days. Such impressive performance was not limited to the US, evident in the 18% price gain of the MSCI All Country World Index excluding the United States. Nor were the gains exclusive to equities, as nearly every asset class—including corporate bonds, government bonds and commodities such as gold and oil—advanced last year.



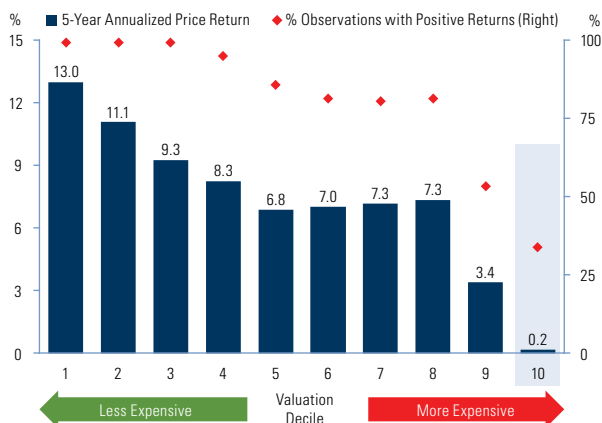
Several factors support continued gains in 2020. Last year's substantial monetary policy stimulus—evident in more than 80% of global central banks lowering their policy rates—contributed to a substantial easing in financial conditions that should buttress global growth and corporate earnings alike. The same could be said for the sentiment-boosting effects of the trade detente between the US and China, as well as receding risks of a disorderly Brexit. Fresh fiscal stimulus measures by the governments in Japan, China, and parts of Europe should also help lift private sector spending. The recent resumption of growth in the JP Morgan Global Manufacturing PMI—after a lengthy period of contraction last year—is particularly encouraging. As discussed later in Section III of this report, past inflections of this index have been followed by above-average returns for US and global equities alike.

While this bull market can continue, we recognize that even the tallest trees don't grow to the sky. Strong erstwhile returns have borrowed from future gains, leaving S&P 500 valuations in their 10th historical decile. This narrower margin of safety applies even to bondholders, as today's historically low interest rates and scant spreads provide little compensation for assuming credit or inflation risk. Consider that there are now \$11.3 trillion of global bonds with negative yields and more than half of all government bonds yield less than 1%. As a result, investors have less of a buffer to absorb adverse developments and prospective returns across asset classes are likely to be more modest and come with higher volatility.

In short, while there is still room to climb, we need to be increasingly mindful of our footing.

### Exhibit 89: US Equity Price Returns from Each Valuation Decile

Subsequent returns from high valuation levels have been muted historically.



Data as of December 31, 2019.

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

Note: Based on five valuation metrics for the S&P 500, beginning in September 1945: Price/Trend Earnings, Price/Peak Earnings, Price/Trailing 12m Earnings, Shiller Cyclically Adjusted Price/Earnings Ratio (CAPE) and Price/10-Year Average Earnings. These metrics are ranked from least expensive to most expensive and divided into 10 valuation buckets ("deciles"). The subsequent realized, annualized 5-year price return is then calculated for each observation and averaged within each decile.

Past performance is not indicative of future results.

### US Equities: The Investor's Dilemma

Few would blame investors for wanting to cash out of US equities. Including last year's 29% price gain, the S&P 500 has generated nearly 16% annualized price appreciation since the trough of the financial crisis more than a decade ago. The resulting cumulative returns have been exceeded only 1% of the time in the past, and even volatility-adjusted returns stand in the top 10% of all observations since 1945.

### Exhibit 88: ISG Global Equity Forecasts—Year-End 2020

	2019 YE	End 2020 Central Case Target Range	Implied Upside from End 2019 Levels	Current Dividend Yield	Implied Total Return
S&P 500 (US)	3,231	3,300–3,400	2–5%	1.8%	4–7%
Euro Stoxx 50 (Eurozone)	3,745	3,870–3,990	3–7%	3.3%	7–10%
FTSE 100 (UK)	7,542	7,600–7,900	1–5%	4.5%	5–9%
TOPIX (Japan)	1,721	1,710–1,760	-1–2%	2.3%	2–5%
MSCI EM (Emerging Markets)	1,115	1,130–1,195	1–7%	2.7%	4–10%

Data as of December 31, 2019.

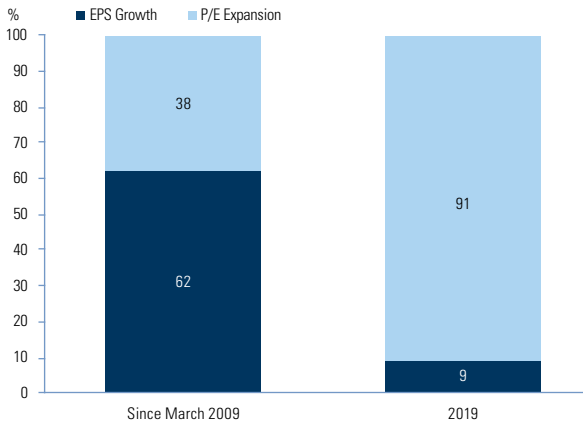
Source: Investment Strategy Group, Datastream, Bloomberg.

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 90: Share of S&P 500 Price Return Contributed by Earnings and Multiples

The bulk of last year's returns came from higher valuations.



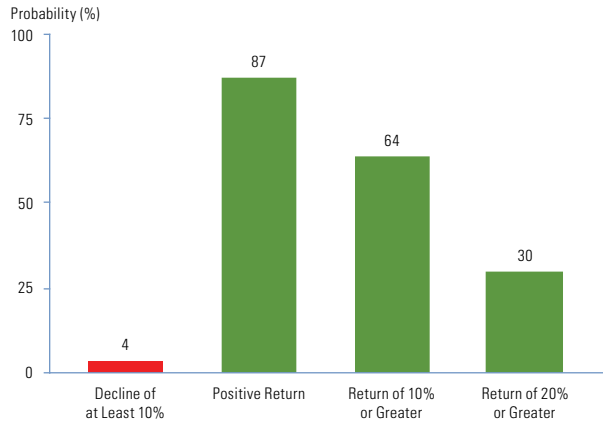
Data as of December 31, 2019.

Note: Return contribution is calculated based on forward earnings in order to avoid the distortion from base effects of negative earnings and the mismatch between the market price and earnings known at any point in time.

Source: Investment Strategy Group, FactSet, Bloomberg.

### Exhibit 91: Odds of Various S&P 500 One-Year Total Returns During US Economic Expansions

Investors enjoy high odds of a positive return and a greater likelihood of large gains when the economy is expanding.



Data as of December 31, 2019.

Note: Based on data since 1945.

Source: Investment Strategy Group, Bloomberg.

Such remarkable gains have made US stocks expensive by historical standards, leaving investors with less of a buffer to absorb adverse developments. As seen in Exhibit 89, valuations now stand in their 10th decile, indicating equities have been cheaper at least 90% of the time. Such elevated valuations in past periods have weighed on equity returns over the subsequent five years and lowered the odds of positive outcomes. That the bulk of last year's returns came from higher valuations, and not growth in earnings, only compounds investors' concerns (see Exhibit 90).

Even worse, this narrower margin of safety arrives at a time of prevalent downside risks. The current US economic expansion and corresponding bull market are now the longest in post-WWII history. While neither is likely to die of old age, both are more vulnerable to maladies over time. This vulnerability is particularly pronounced now, given that growth has slowed globally and the manufacturing sector is still contracting in many parts of the world. The outcome of the US presidential election and the evolution of various geopolitical risks only add to this year's potential hazards.

Against this backdrop, US investors face an uncomfortable dilemma: either bear the risk of loss that comes with

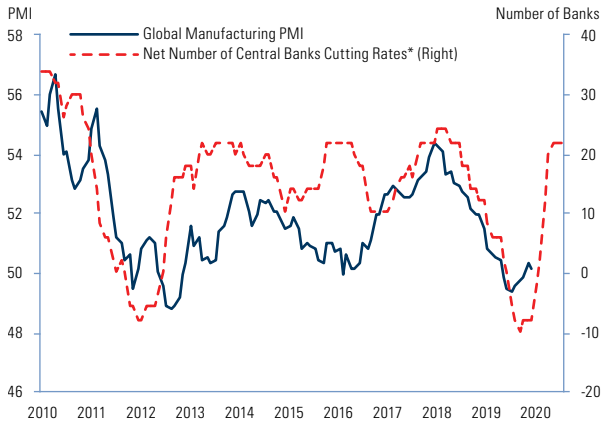
staying invested or forgo the potential for further upside by exiting the market. While the choice is admittedly difficult, we still think it is premature to underweight US equities.

The linchpin of this view is our expectation of a continued US economic expansion (see Section II, United States). As we have argued in past *Outlook* publications, bull markets are most frequently put out to pasture by recessions. Indeed, nearly three-fourths of historical equity declines in excess of 20% occurred during US economic contractions. This close relationship between economic growth and market performance is evident in Exhibit 91, which shows that investors have enjoyed 87% odds of a positive return and a much greater likelihood of large gains than large losses when the economy is expanding.

**US investors face an uncomfortable dilemma: either bear the risk of loss that comes with staying invested or forgo the potential for further upside by exiting the market.**

## Exhibit 92: Global Manufacturing PMI vs. Monetary Stimulus

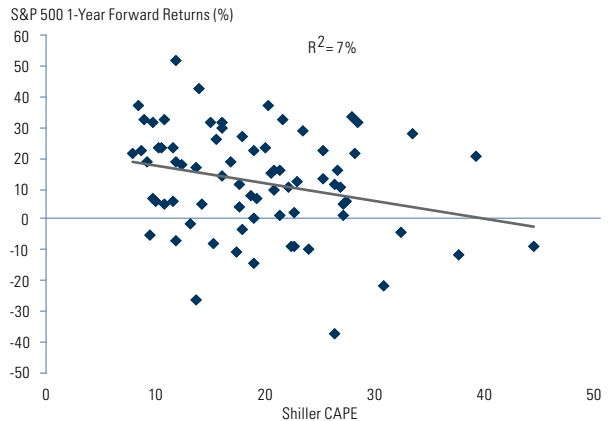
Monetary easing since the start of last year should support the rebound in global manufacturing.



Data through December 31, 2019.  
Source: Investment Strategy Group, JPMorgan, Markit, BIS, Haver Analytics.  
\* Advanced by 8 months.

## Exhibit 94: S&P 500 Shiller CAPE vs. Subsequent Calendar-Year Total Return

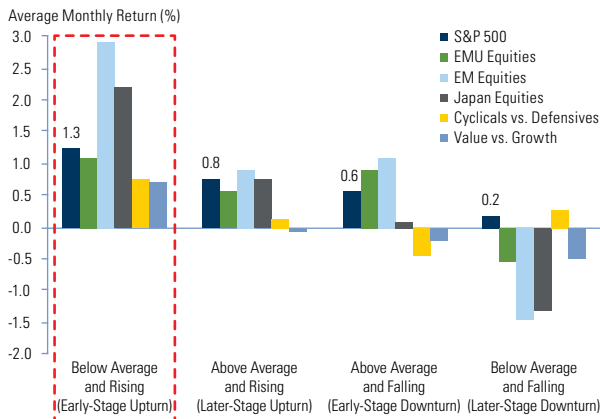
Starting valuation multiples tell us little about potential returns over the next year.



Data as of December 31, 2019.  
Note: Based on data since 1945.  
Source: Investment Strategy Group, Bloomberg, Robert Shiller.

## Exhibit 93: Equity Returns by Market and Style in Each PMI Phase

Today's early-stage upturn in global manufacturing has been the most positive state for risky assets in the past.



Data as of December 31, 2019.  
Source: Investment Strategy Group, Bloomberg, JPMorgan, Markit, Haver Analytics.

With our forecast placing just 20–25% odds on a recession this year, we think the economic backdrop remains favorable for stocks. In fact, today's unusual combination of highly accommodative monetary policy and improving economic momentum results in a potent elixir for risky assets, especially given the incipient upturn in global manufacturing that we saw late last year (see Exhibits 92 and 93).

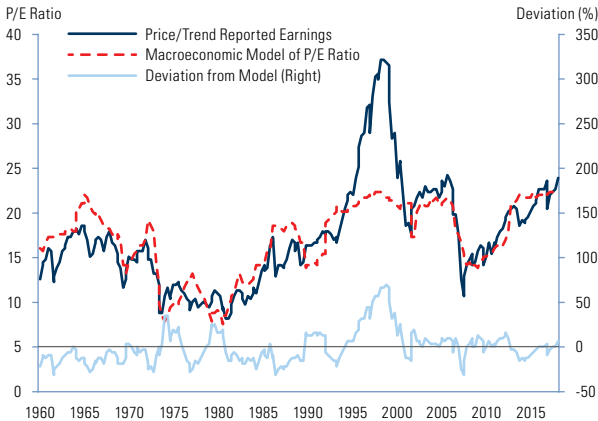
History also teaches us that high valuations alone are not a good reason to underweight stocks, especially over shorter holding periods. Recall that the beginning price-to-earnings ratio has told us very little about potential returns over any given year, explaining only 7% of their variation historically (see Exhibit 94). Moreover, a strategy of selling equities solely on the basis of expensive valuations has been a losing one over time (see Section I, “Stay Invested”).

Valuations must also be considered in the context of the prevailing macroeconomic backdrop. A simple model based on inflation and unemployment—which has explained about 70% of the past variation in P/E ratios—shows that today's valuations should be in their 10th decile based on the low level of inflation and its stability (see Exhibit 95). In contrast to the situation during the technology bubble of the late 1990s, the current P/E ratio is only slightly above that justified by today's benign economic environment, rather than significantly above it.

The fact that equity markets frequently surprise to the upside—even at high valuations—further raises the hurdle to underweight stocks. The S&P 500 has generated a total return of more than 100% since first entering its ninth valuation decile in November 2013, a time when many observers were already suggesting that US equities were in a bubble.<sup>67</sup> It's also worth

### Exhibit 95: S&P 500 Trend P/E Ratio—Actual vs. Macroeconomic Model

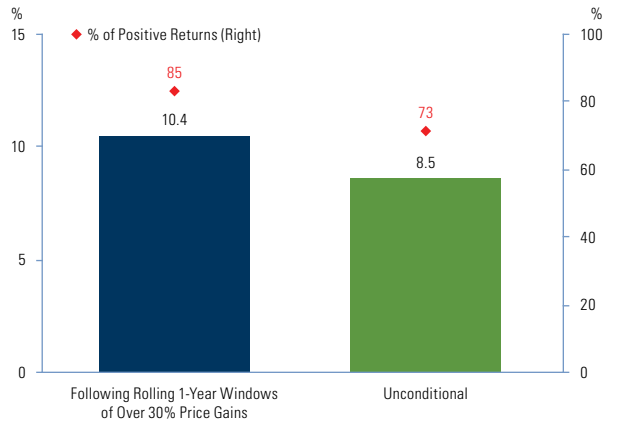
Today's valuations should be in their 10th decile based on the low level of inflation and its stability.



Data through December 31, 2019.  
 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 96: Average S&P 500 Price Returns in the Year Following Past 30% Annual Gains

The S&P 500's positive price momentum has typically persisted in the year after 30% gains.



Data as of December 31, 2019.  
 Note: Based on data since 1945.  
 Source: Investment Strategy Group, Bloomberg.

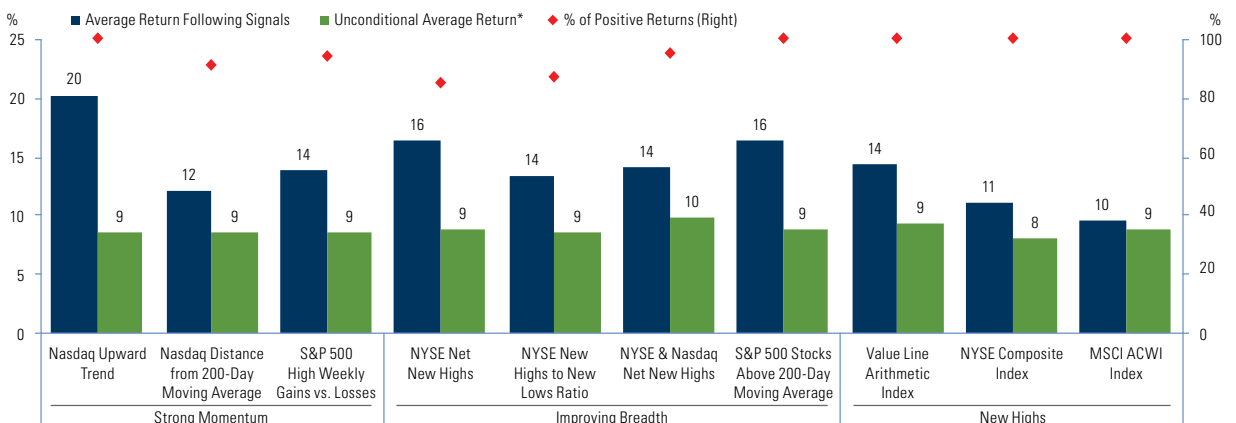
noting that a quarter of past episodes that started with valuations similar to today's still generated annualized total returns of 5% or greater over the subsequent five years.

A number of market-based technical signals also suggest potential for continued equity upside this year. An equity advance of the magnitude of last year's—coupled with the breadth of

stocks participating in it—has historically been a harbinger of above-average equity returns. Consider that price returns in the year after the market gained 30% on a rolling 12-month basis—as it did in 2019—were positive 85% of the time and averaged a gain in excess of 10% (see Exhibit 96). More broadly, the bounty of technical signals shown in Exhibit 97 implies an average gain of

### Exhibit 97: S&P 500 Price Returns in the Year Following Past Market-Based Technical Signals

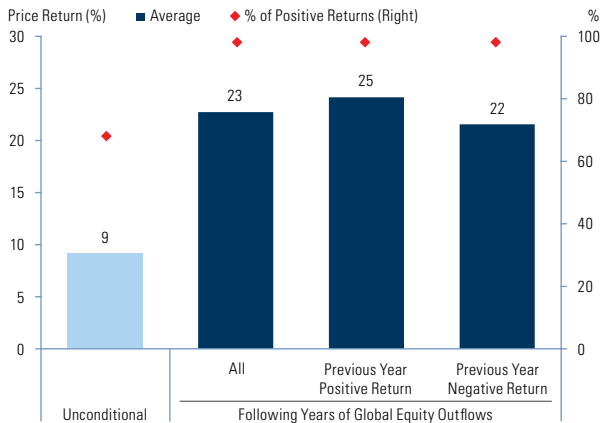
A number of technical signals seen late in 2019 have been associated with well-above-average equity returns in the following year.



Data as of December 31, 2019.  
 Source: Investment Strategy Group, Bloomberg, SentimenTrader.  
 \* Unconditional 1-year average returns may vary across signals because not all signals have the same length of historical data.  
 Past performance is not indicative of future results.

### Exhibit 98: S&P 500 Price Returns in the Year Following Past Outflows from Global Equities

Past years that experienced outflows from global equities were followed by above-average US equity returns.



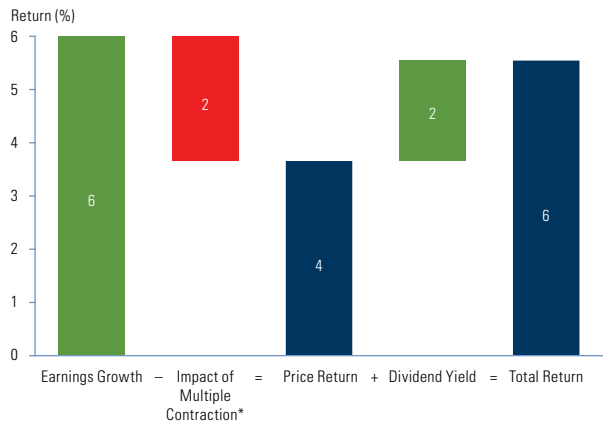
Data as of December 31, 2019.

Note: The flows include both mutual fund and ETF flows into global equities.

Source: Investment Strategy Group, Bloomberg, Investment Company Institute (ICI).

### Exhibit 100: ISG Central Case Return Decomposition for S&P 500 at 2020 Year-End

We expect earnings growth to be the main driver of S&P 500 returns this year.



Data as of December 31, 2019.

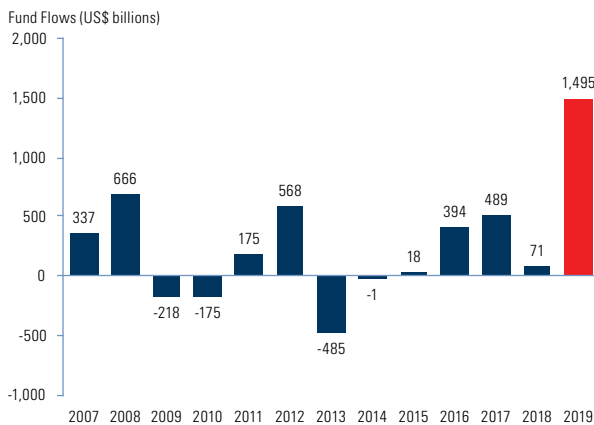
Note: The returns and decomposition are based on the midpoint of ISG's central case forecast range.

Source: Investment Strategy Group, Bloomberg.

\* Includes the compounding effect between earnings and multiples.

### Exhibit 99: Global Flows into Bond and Cash Funds Less Those into Equity Funds

Investor's fondness for cash and bond funds shows sentiment toward risk-taking is far from excessive.



Data as of December 31, 2019.

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

13% for the S&P 500 this year, with 95% odds of a positive return.

Last year's massive equity outflows paradoxically convey a similarly bullish message. Far from embracing the market rally with typical bull market exuberance, investors cashed out of stocks in record numbers. The resulting \$200

billion outflow from global equity mutual funds and ETFs last year even exceeded that seen during the financial crisis; in fact, it was the largest yearly outflow since the data began in 1993.<sup>68</sup> Yet crucially, every year following such sizable outflows—regardless of whether the market had been up or down in the year of outflows—saw equities generate returns well above average (see Exhibit 98).

Last year's conspicuous equity outflows only partially explain the even larger inflows into cash and bonds. All told, the \$1.5 trillion difference between these flows was more than twice as large as that seen during the financial crisis (see Exhibit 99). Such relative disdain for equities has been a contrarian indicator in the past, typically followed by returns that are much better than average. Such was the case following the second-largest flow imbalance in 2008, which saw about \$1 trillion redeemed from money market funds over the following two years.<sup>69</sup> The record-breaking size of today's imbalance provides ample scope for rebalancing into equities going forward.

Even without the upside implied by these historical precedents, we expect stock returns to exceed those of cash and bonds this year. Our central case forecast implies a 4–7% total return for US equities in 2020, reflecting a 2% dividend yield, a slightly lower P/E multiple and 5–8%

## Exhibit 101: ISG S&P 500 Forecast—Year-End 2020

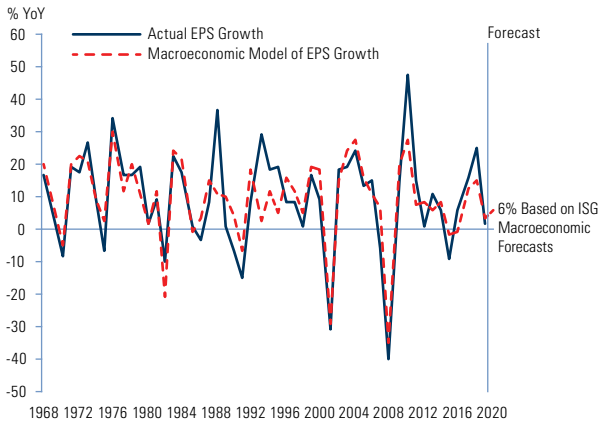
2020 Year-End	Good Case (25%)	Central Case (55%)	Bad Case (20%)
End 2020 S&P 500 Earnings	Op. Earnings \$182 Rep. Earnings \$164 Trend Rep. Earnings \$141	Op. Earnings \$173–178 Rep. Earnings \$156–160 Trend Rep. Earnings \$141	Op. Earnings ≤ \$140 Rep. Earnings ≤ \$106 Trend Rep. Earnings ≤ \$141
S&P 500 Price-to-Trend Reported Earnings	23–25x	21–24x	17–18x
End 2020 S&P 500 Fundamental Valuation Range	3,250–3,590	2,970–3,420	2,400–2,560
End 2020 S&P 500 Price Target (Based on a Combination of Trend and Forward Earnings Estimate)	3,550	3,300–3,400	2,550

Data as of December 31, 2019.  
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 102: S&P 500 Annual Operating EPS Growth—Actual vs. Macroeconomic Model

The midpoint of our earnings growth forecast range is consistent with our broader macroeconomic assumptions.



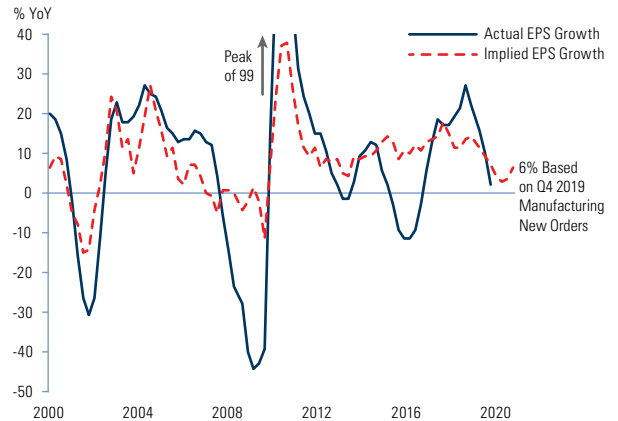
Data through 2019, forecast through 2020.

Note: The macroeconomic model is based on GDP growth, lagged GDP growth, USD return and oil price return. The 2020 forecast is based on ISG's 2020 assumptions of these variables.

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

## Exhibit 103: S&P 500 Operating EPS Growth in 2020 Implied by Markit PMI New Orders

The recent improvement in manufacturing new orders suggests a pickup in earnings growth in 2020.



Data through December 2019.

Note: The implied EPS growth is based on lagged Markit US manufacturing PMI new orders and starting EPS deviation from trend.

Source: Investment Strategy Group, Markit, S&P Global, Bloomberg.

earnings growth (see Exhibits 100 and 101). The midpoint of that earnings growth range is consistent with our broader macroeconomic assumptions (see Exhibit 102); recent economic momentum (see Exhibit 103); and our bottom-up expectations for 5% revenue growth, flat profit margins and a 1% boost from stock buybacks. If recent progress on US-China trade relations continues, it could even make that forecast too conservative, as some analysts estimate this conflict reduced 2019 earnings growth by seven to eight percentage points.<sup>70</sup>

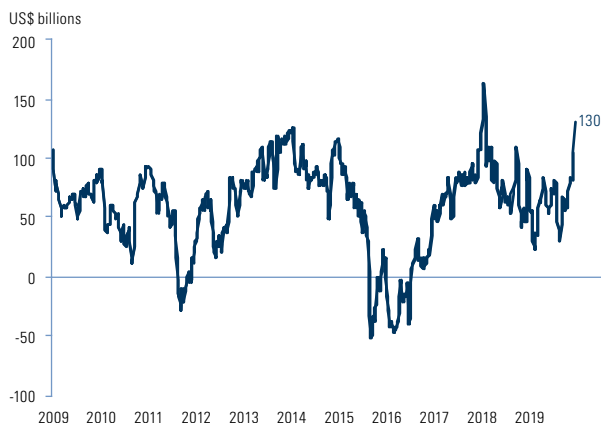
Despite our more constructive equity outlook, we are by no means Pollyannaish. There are

several legitimate risks to our forecast, not the least of which is this year's US presidential election. Several of the candidates have proposed at least a partial rollback of the 2017 Tax Cuts and Jobs Act (TCJA), with every one percentage point increase in the effective corporate tax rate reducing S&P 500 EPS by 1%.<sup>71</sup> In turn, fully repealing the TCJA could lower 2021 EPS growth by as much as 11 percentage points.<sup>72</sup> More broadly, the election of a progressive, far-left Democratic candidate could introduce far-reaching policy changes that would likely push equity valuations lower.

Still, the election of a more market-friendly, centrist Democrat or the reelection of President

### Exhibit 104: Non-Dealers Position in US Equity Index Futures

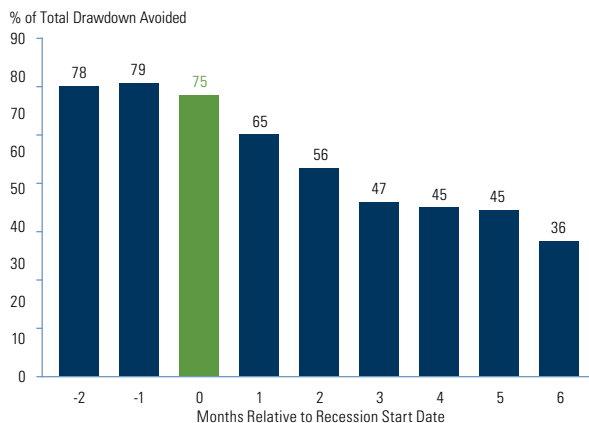
The equity exposure of non-dealers stands near its all-time highs.



Data through December 24, 2019.  
Source: Investment Strategy Group, US Commodity Futures Trading Commission (CFTC).

### Exhibit 105: Percentage of S&P 500 Drawdown Avoided Relative to Recession Start Date

Around three-fourths of the total peak-to-trough decline in equities occurred after past recessions started.



Data as of December 31, 2019.  
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.

Donald Trump appears more likely based on prediction markets, nationwide polls and the views of political experts. The election of a far-left candidate, in contrast, would require swing voters who formerly elected President Trump to pivot from the far right to the far left, an unlikely development given that unemployment is at 50-year lows.<sup>73</sup>

Moreover, prediction markets assign only a one-in-three chance of a Democratic majority in the Senate.<sup>74</sup> As a result, a newly elected progressive Democrat would likely face a divided Congress that would greatly limit his or her ability to pass contentious or sweeping changes. Finally, we note that at least historically, equity returns in election years have not been statistically different than any other year.

We are also mindful of other downside risks. Renewed escalation of US-China trade tensions is

chief among these, although the recent Phase One trade agreement breaks a pattern of brinkmanship that has weighed on global growth since 2018. With reelection now the primary focus, President Trump is likely to prefer continued negotiation over further escalation this year, according to political experts. Already, President Trump has raised his reputational stake in the success of the agreement by announcing he would hold a signing ceremony with Chinese officials in January 2020.<sup>75</sup>

Of course, these favorable developments have started to stoke investor optimism, which has been a contrarian indicator for stock prices in the past. As shown in Exhibit 104, the equity exposure of non-dealers is already high by historical standards, having been lower 99% of the time in the post-crisis period. Further evidence of investor optimism is visible in depressed put-to-call ratios and surveys that show bullish investors vastly outnumbering bearish ones. While investor bullishness makes the market more vulnerable to disappointment, we think it is a better reason to expect a pullback in stocks over the next few months than an end to this bull market. After all, we still place low odds on a cycle-ending recession and last year's sizable equity outflows remind us that investor exuberance has not become irrational.

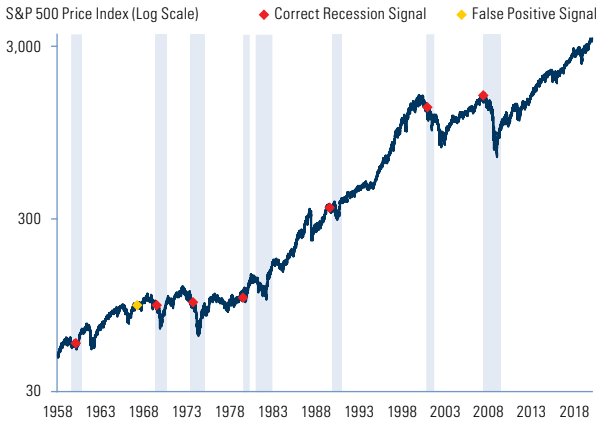
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**While investor bullishness makes the market more vulnerable to disappointment, we think it is a better reason to expect a pullback in stocks over the next few months than an end to this bull market.**

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### Exhibit 106: One of Many ISG Recession Indicators

This recession indicator has helped identify the start of past recessions using only data that was available at that time.



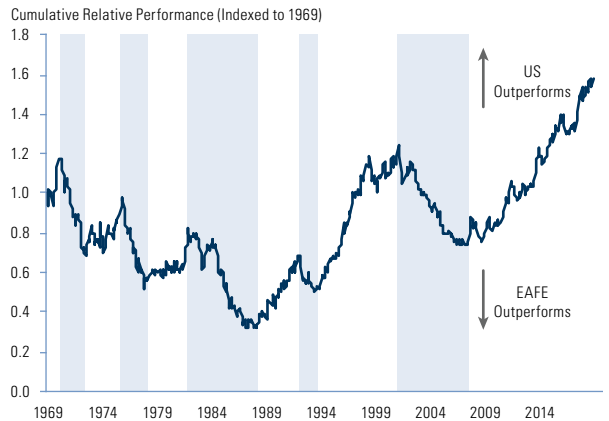
Data through December 31, 2019.

Note: The approach uses a combination of yield curve and labor market indicators, based on point-in-time data that has not been revised or restated. Blue shaded areas denote periods of US recessions.

Source: Investment Strategy Group, BLS, Bloomberg, Haver Analytics.

### Exhibit 108: Relative Performance of US vs. EAFE Equities

The performance of US equities relative to EAFE equities stands at a record high.



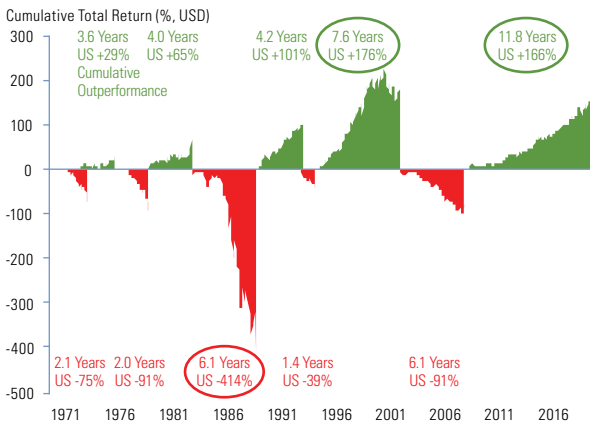
Data through December 2019.

Note: Exhibit shows MSCI USA US\$ vs. MSCI EAFE US\$ total return indices. Blue shaded areas highlight periods of EAFE outperformance.

Source: Investment Strategy Group, Datastream.

### Exhibit 107: Cumulative Total Return Differential Between US and EAFE Equities

US equities' outperformance vs. EAFE this cycle is second only to that seen during the technology bubble.



Data through December 2019.

Note: Exhibit shows MSCI USA US\$ vs. MSCI EAFE US\$ total return indices.

Source: Investment Strategy Group, Datastream.

While we have also noted several other worrisome developments in this year's *Outlook*, we do not think their collective impact is sufficient to topple the ongoing US expansion. Even if a recession does materialize, history has shown that around three-fourths of the total peak-to-trough

decline in equities occurred after past recessions started (see Exhibit 105). This distinction is critical, because our tools for identifying the onset of a recession have been more consistently reliable than those for forecasting a future one (see Exhibit 106).

Given the lack of indicators signaling imminent recession, we think investors should resolve their dilemma in favor of remaining invested. But as always, we remain vigilant about the broad range of risks that could undermine this recommendation.

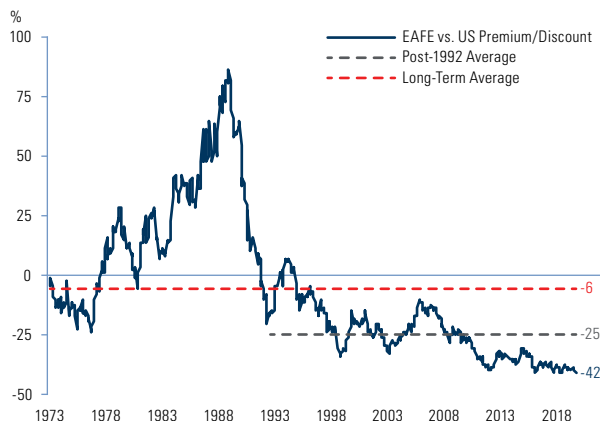
### EAFE Equities: Still Waiting in the Wings

Europe, Australasia and the Far East (EAFE) equities extended their streak of underperformance versus their US counterparts to a 12th year in 2019. This now marks the longest period of relative underperformance for either region in the history of the data. Over this long stretch, US equities have cumulatively outperformed EAFE equities by a staggering 166% in US dollar terms (see Exhibit 107).

As a result, the performance of US equities relative to EAFE equities stands at a record high (see Exhibit 108). Such a large divergence naturally raises the question of whether investors should

### Exhibit 109: EAFE Equity Valuation Premium/Discount to US Equities

EAFE equities trade at a sizable valuation discount to US equities, although they have done so since 2012.



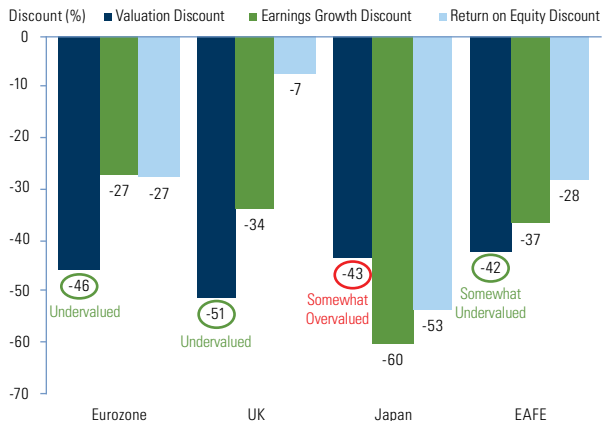
Data through December 2019.

Note: EAFE and US market valuations are based on an average of the following metrics: price to 10-year earnings, price to 10-year cash flow, price to book, price to peak earnings, price to peak cash flow and price to dividend.

Source: Investment Strategy Group, Datastream.

### Exhibit 110: EAFE Equity Valuation and Fundamental Discounts to US Equities

EAFE valuations are really a mix of undervalued Eurozone and UK equities and overvalued Japanese equities.



Data as of December 2019.

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

rotate a portion of their public equity allocations out of the US and into EAFE. While we find attractive tactical opportunities in various EAFE sectors and countries, in our view, a broader EAFE overweight is still unwarranted.

The cornerstone of that conclusion rests on the comparative fundamentals and valuations of EAFE and US companies. To be sure, EAFE equities trade at a sizable valuation discount to US equities (see Exhibit 109). But our analysis suggests that discount is largely vindicated by inferior fundamentals. Here, we are referring to EAFE’s lower earnings growth and return on equity. In turn, we find that EAFE’s current 42% valuation discount to the US is within the margin of error of the 28–37% discount that is fundamentally justified (see Exhibit 110).

**Our 6% return expectation for EAFE equities in 2020 is similar to that of US equities, implying the currently large performance differential between the two will remain for another year.**

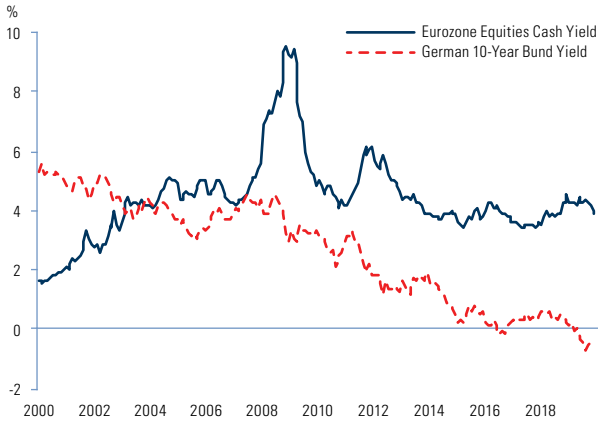
The same cannot necessarily be said for EAFE’s individual markets, which offer a mix of relative valuation discounts and premiums. On the inexpensive side, the Eurozone and UK—two of EAFE’s largest markets—are priced at a discount to their fundamentals. In fact, these attractive valuations are the bedrock of two Eurozone tactical tilts (see Section I, Our Tactical Tilts). In contrast, Japan is actually slightly overvalued relative to the US, although the level of overvaluation varies significantly across metrics. This showcases the importance of looking beneath the surface of broad indices such as EAFE equities, as the constituents are far from homogenous.

Against this backdrop, our 6% return expectation for EAFE equities in 2020 is similar to that of US equities, implying the currently large performance differential between the two will remain for another year. While there is precedent for this cumulative differential to widen further—US stocks outperformed EAFE equities by 176% going into the technology bubble peak (see Exhibit 107)—shifting fundamentals could eventually cause it to reverse. Until that point, we are still waiting in the wings to overweight EAFE equities.



### Exhibit 111: Eurozone Equities Cash Yield vs. German Bund Yield

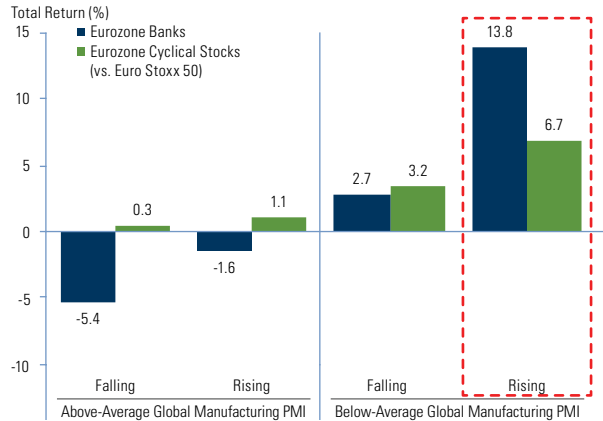
The gap between the yields of Eurozone equities and bonds is near its widest historical level.



Data through December 2019.  
 Note: Cash yield is the sum of the dividend and gross buyback yields.  
 Source: Investment Strategy Group, Goldman Sachs Global Investment Research.

### Exhibit 112: Returns in the Year Following Past Upturns in the Global Manufacturing PMI

Both Eurozone banks and cyclical stocks stand to benefit from last year's upturn in the global manufacturing PMI.



Data as of December 31, 2019.  
 Source: Investment Strategy Group, Bloomberg, JPMorgan, Markit, Haver Analytics.  
 Past performance is not indicative of future results.

## Eurozone Equities: Opportunities Available, Inquire Within

Eurozone equities were a key beneficiary of last year's global stock market rally. A combination of dissipating trade and Brexit uncertainty—coupled with accommodative monetary policy—propelled the Euro Stoxx 50 Index nearly 30% higher, its strongest performance since 1999. This striking gain was made all the more notable by its lopsided composition, with higher valuation multiples driving the lion's share of the total return.

After such a notable increase, valuations are likely to remain largely unchanged this year. As a result, we expect earnings growth to fuel this year's Euro Stoxx 50 returns. Here, stabilization in Eurozone GDP growth should benefit the half of Eurozone sales that are domestically exposed, and the remaining half should benefit from an uptick in global GDP growth. On this point, it's worth noting that Euro Stoxx 50 firms are highly sensitive to small changes in sales because their expenses are dominated by fixed costs.

Based on the foregoing, our central case calls for an 8% total return this year, composed of mid-single-digit earnings growth, flat valuations and a 3% dividend yield. In addition to this attractive absolute return, investors are likely to be enticed by the wide gap between the Euro Stoxx 50's

generous cash yield and Europe's still negative policy rates (see Exhibit 111).

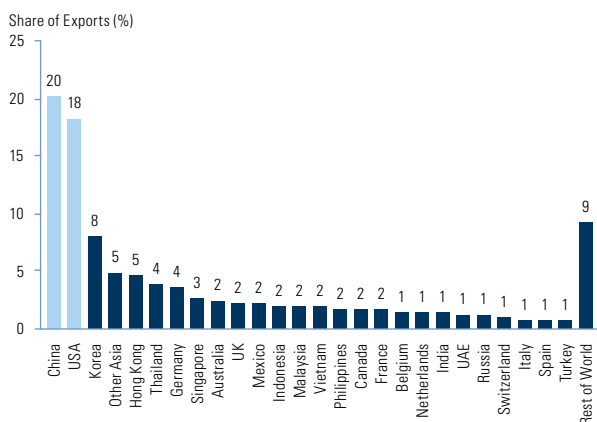
As discussed in Section I of this report, we are currently overweight Eurozone banks and a basket of Eurozone cyclical stocks. Both of these tactical views stand to benefit from last year's upturn in the global manufacturing PMI after a period of weakness (see Exhibit 112). The same could be said for any upside surprises on fiscal policy, since both of these positions are highly sensitive to domestic growth. Finally, valuations for each position stand at double-digit discounts to broader Eurozone equities, providing a sizable margin of safety against adverse developments and miscalculations in our forecasts.

## UK Equities: Undervalued, Seeking a Catalyst

A combination of Brexit uncertainty and high exposure to the lagging energy sector stifled investor appetite for UK stocks last year, with the FTSE 100 lagging the S&P 500 by double digits. A byproduct of this underperformance, however, is that UK equities now trade at a larger valuation discount to US equities than we think is justified by their relative earnings growth and return on equity. The question facing investors is what catalysts are likely to unlock this value in 2020.

### Exhibit 113: Share of Japanese Exports

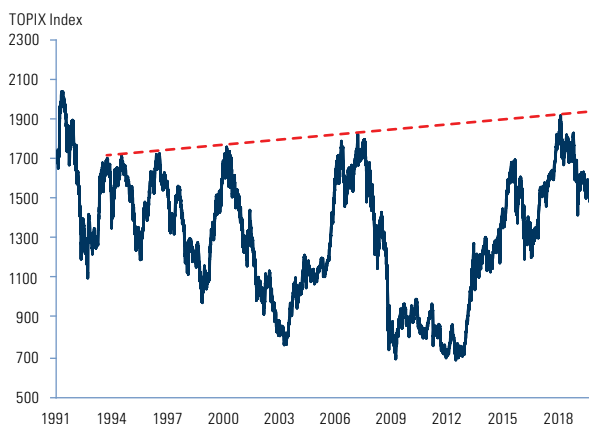
The Chinese and US economies account for nearly 40% of Japan's exports.



Data as of 2017.  
Source: Investment Strategy Group, The Observatory of Economic Complexity.

### Exhibit 114: TOPIX Price Index

Japan's equity index is approaching a trend line that has capped past equity advances since the early 90's.



Data through December 31, 2019.  
Source: Investment Strategy Group, Bloomberg.

Unfortunately, the answer is not clear-cut. To be sure, there are potential tailwinds for UK stocks. The FTSE 100's 25% market capitalization exposure to energy and material sectors could benefit from some catch-up in performance this year, given how significantly these sectors lagged in 2019. In addition, the UK's financial sector—which accounts for nearly a fifth of the FTSE 100's market capitalization—stands to benefit from modestly rising 10-year interest rates this year.

Yet there are also offsetting headwinds. While global demand is expected to improve, UK GDP growth is forecast to weaken slightly this year. Meanwhile, our forecast for further modest British pound appreciation represents a drag on the hefty portion of FTSE 100 sales denominated in other currencies.

These crosscurrents leave us tactically neutral on UK stocks at the moment, although we expect a combination of low-single-digit earnings growth and a hefty 4.5% dividend yield to generate 7% prospective returns for the FTSE 100 this year.

### Japanese Equities: At Risk of Disappointment

The 18% return generated by Japanese equities last year was accomplished no thanks to their earnings, which actually contracted 6%. In fact, the primary driver of Japan's equity performance was not domestic fundamentals but rather positive

trade developments and signs of green shoots in global growth. The resulting late-year ascent in equities was also remarkably swift, having been exceeded only 10% of the time in Japan's post-bubble history.

Such rapid gains on the back of largely external developments make Japanese equities more vulnerable as we start the year. To be sure, Japanese equities' positive reaction to improving US-China trade relations last year makes intuitive sense, given these two economies account for nearly 40% of Japan's exports (see Exhibit 113). Yet regardless of the trajectory of trade tensions, slower growth in the US and China compared with that of last year will likely be a headwind to Japanese earnings growth. The same could be said for Japan's ongoing trade frictions with South Korea, its third-largest trade partner. Finally, while the Abe administration's recent fiscal package should stimulate domestic economic activity, last October's increase in the consumption tax will likely weigh on corporate profits.

Against this backdrop, our expected returns for Japan are the lowest among the major equity markets we follow. More specifically, a combination of 2% earnings growth, 2% dividend yield and slightly lower valuation multiples implies just 3% total returns for 2020. Worse still, we see several headwinds that reduce the likelihood of upside surprises.

As mentioned earlier, Japan already trades at a premium to the valuation justified by its earnings

### Exhibit 115: MSCI Emerging Markets Annual Earnings per Share Growth

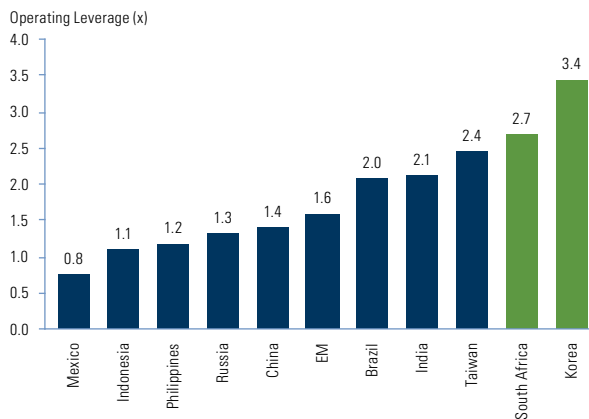
We expect EM earnings growth to recover in 2020.



Data through December 2019, forecast through December 2020.  
Source: Investment Strategy Group, Bloomberg, I/B/E/S, FactSet.

### Exhibit 116: Operating Leverage: Percent Change in Profits per 1% Change in Revenue

Korean and South African stocks should benefit from the pickup in sales we expect given their high operating leverage.



Data as of December 2018.  
Note: Defined as 2013–18 EBIT growth divided by 2013–18 revenue growth.  
Source: Investment Strategy Group, Worldscope.

growth and return on equity, limiting the scope for valuations to expand further. Meanwhile, a recently passed law aimed at curbing activism in selected sectors may repel inflows from foreign investors, which are the key source of incremental demand for Japanese equities. Finally, Japan's equity index is approaching a trend line of technical resistance that has held for nearly three decades (see Exhibit 114). In short, we think investors in Japanese equities are at risk of disappointment.

### Emerging Market Equities: Reemerging Earnings

Even after a strong year-end rally that saw EM equities generate a 19% total return in 2019, they underperformed their developed market peers for a second consecutive year. A key driver of this underperformance was the 7% decline in EM earnings last year (see Exhibit 115), which was much worse than consensus expectations of 8% growth coming into the year.

Several factors contributed to last year's earnings disappointment. First, EM economic growth slowed more than was expected in 2019. Second, decelerating global growth on the back of US-China trade tensions hit EM exports particularly hard. Third, supply-demand imbalances pressured prices in both commodities

and memory chips, resulting in meaningfully weaker earnings for the energy, materials and technology companies that together account for 30% of EM earnings. In fact, these three sectors alone subtracted an estimated 10 percentage points from EM profit growth last year.

Fortunately, some of these headwinds are set to subside in 2020. More specifically, this year EM earnings should benefit from more favorable base effects, improving export growth and faster economic growth across emerging markets. Stabilization in oil prices and an undersupplied memory market should also support energy and technology profits. In turn, we expect EM earnings growth to rebound to 8% this year.

That said, we think a decline in valuation multiples will partially offset this faster earnings growth. EM equity valuations, after all, expanded by more than 20% in 2019, and all of last year's returns can be attributed to higher multiples. As a result, we see limited potential for higher valuation multiples this year, particularly given the still uncertain global trade developments and upcoming US elections.

Based on the foregoing, we forecast that EM equities will generate a mid- to high-single-digit total return this year inclusive of their attractive 2.7% dividend yield. Within EM equities, we are tactically overweight South African and Korean equities. Here, we are drawn to these countries'

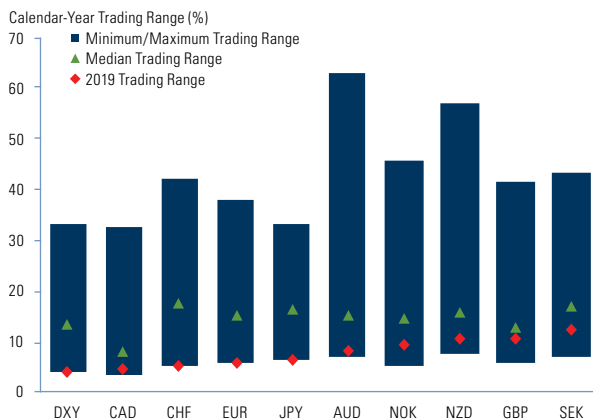
high operating leverage (see Exhibit 116), strong earnings growth, attractive equity valuations and underweight positioning among foreign investors. We also note that part of our position in Korean equities is a relative value trade against Taiwanese equities, which aims to capitalize on the currently large dislocation in this pair that is not justified by fundamentals, in our view.

## 2020 Global Currency Outlook

After besting most major currencies in 2018, the US dollar delivered a far more nuanced performance last year (see Exhibit 117). Its uneven showing was the result of a variety of macroeconomic crosscurrents. On the one hand, the greenback benefited from demand for safe-haven assets—given worsening US-China trade tensions and slowing global growth—as well as easier monetary policy outside US borders. On the other hand, the carry of the dollar was made less attractive to foreign investors by the three rate cuts delivered by the Federal Reserve after two years of progressively tighter policy. As a result of these offsetting forces, the US dollar appreciated just 0.2%, emerging market currencies delivered mixed performance and nearly every other major currency traded in the tightest calendar-year range since the 1985 Plaza Accord (see Exhibit 118).

## Exhibit 118: Calendar-Year Trading Range of G-10 Currencies Since the Plaza Accord

Nearly every major currency traded in the tightest calendar-year range last year since the 1985 Plaza Accord.

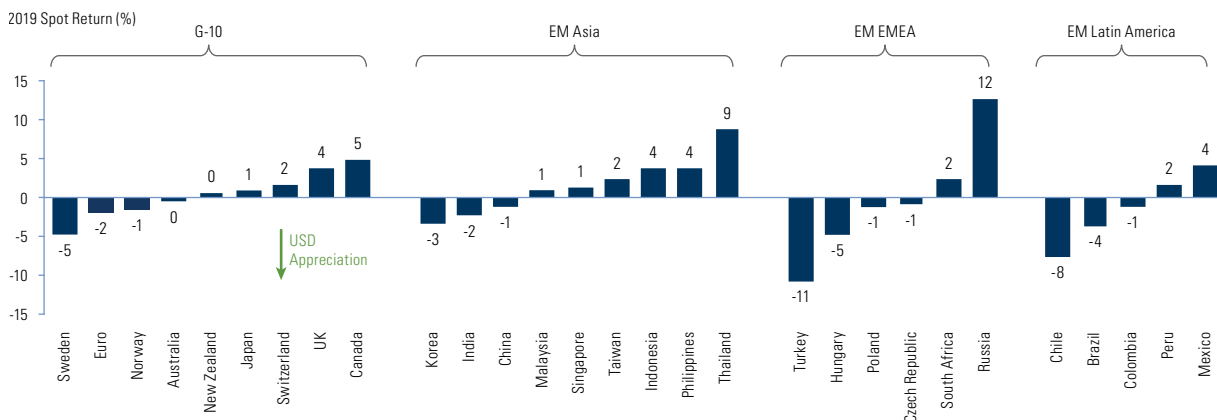


Data as of December 31, 2019.  
Source: Investment Strategy Group, Bloomberg.

We expect the interplay of these themes to continue to be the differentiator among currencies in 2020. Because these factors do not universally align with a clear dollar direction, we expect a range-bound dollar this year, with modest appreciation in some foreign currencies offsetting weakness in others. Our tactical positioning reflects this view, as we are long the euro and Chilean peso but short the yen.

## Exhibit 117: 2019 Currency Moves (vs. US Dollar)

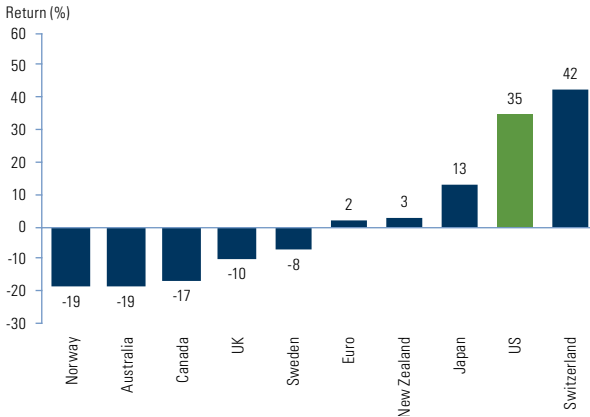
The US dollar posted a mixed performance in 2019.



Data as of December 31, 2019.  
Source: Investment Strategy Group, Bloomberg.

### Exhibit 119: Currency Performance Since the Global Financial Crisis

The dollar has outperformed every major currency except the Swiss franc since the financial crisis.



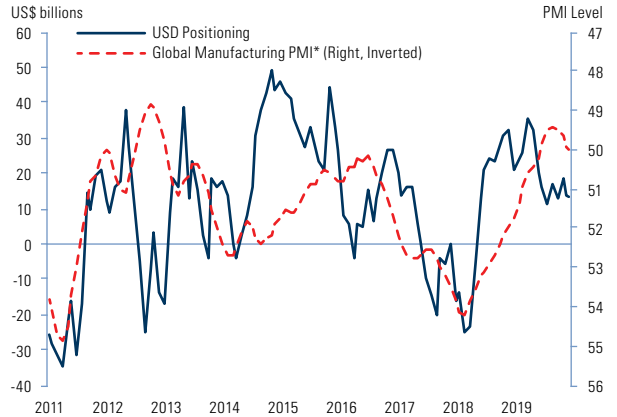
Data as of December 31, 2019.

Note: Performance is measured since July 15, 2008, the bottom of the trade-weighted US dollar index. Each currency's return is based on the respective trade-weighted index from Goldman Sachs Global Investment Research.

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

### Exhibit 120: US Dollar Non-Commercial Positioning vs. Global Manufacturing PMI

Long dollar positioning could be vulnerable to a pickup in global growth.



Data through December 2019.

Source: Investment Strategy Group, Bloomberg, Haver Analytics.

\* Three-month average.

### US Dollar

Few would question the hegemony of the US dollar in the last decade. Not only has it appreciated in eight of the last 10 years, but it has also advanced 35% since the lows of the financial crisis. As seen in Exhibit 119, the dollar has outperformed every major currency except the Swiss franc over this period.

After such a spirited run, investors are worried the US dollar's advance may be on its last legs. These fears are not unwarranted, as many of the dollar's tailwinds are fading. The Federal Reserve has stopped hiking policy rates and shrinking its balance sheet, lessening upward pressure on the greenback. At the same time, the dollar's erstwhile gains have left its valuation above its long-term average. Moreover, macro risks that preoccupied markets last year—and drove investors to seek the safety of dollar assets—appear to be receding. That investors are still positioned for further dollar gains only adds to the greenback's vulnerability this year (see Exhibit 120).

Even so, we need to differentiate between fading tailwinds and outright dollar depreciation. Exchange rates are determined by the relative fundamentals between economies, not their absolute local level. Our view that US economic

growth and central bank policy rates are likely to be higher than those in the Eurozone, Japan and the UK should prevent foreign investors from fleeing US dollar assets en masse. The same could be said for relative central bank actions, where we expect broadly unchanged policy settings to keep interest rate differentials stable this year. The dollar could also climb higher on renewed tensions between the US and China, as such tensions would likely renew demand for safe-haven dollar assets.

As a whole, these opposing crosscurrents will likely leave the dollar range-bound in 2020.

### Euro

The euro was on the wrong side of the US dollar's strength again in 2019, marking its second

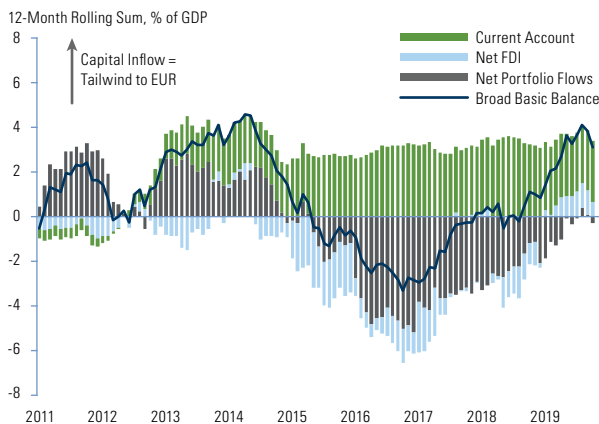
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**Our view that US economic growth and central bank policy rates are likely to be higher than those in the Eurozone, Japan and the UK should prevent foreign investors from fleeing US dollar assets en masse.**

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### Exhibit 121: Eurozone Broad Basic Balance

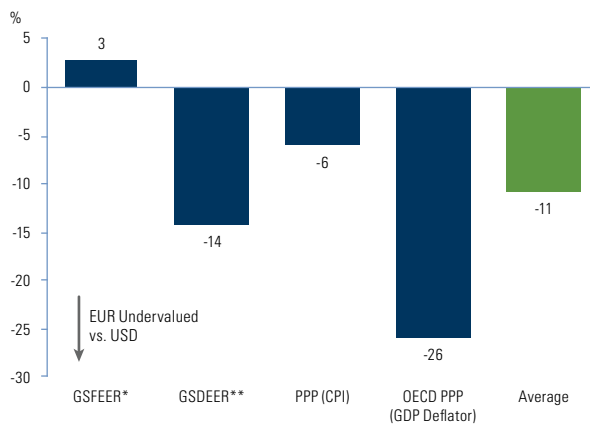
The euro should benefit as foreigners buy assets denominated in the currency.



Data through October 2019.  
Source: Investment Strategy Group, Haver Analytics.

### Exhibit 122: Euro Long-Term Valuation Measures

The euro remains undervalued across a variety of metrics.



Data as of December 31, 2019.  
Source: Investment Strategy Group, Bloomberg, Goldman Sachs Global Investment Research.  
\* Goldman Sachs Fundamental Equilibrium Exchange Rates Model.  
\*\* Goldman Sachs Dynamic Equilibrium Exchange Rate Model.

consecutive year of underperformance. Last year's modest 2% decline reflected a near-recession in Germany, a growth slowdown in the broader Eurozone and the ECB's decision to both restart its asset purchase program and reduce its policy rate, going deeper into negative territory. As a result, the US Federal Reserve's dovish rate cuts last year were not enough to push the euro higher.

Although there has been no shortage of false dawns for euro bulls in recent years, we see several factors conspiring to sustain euro strength in 2020. Chief among these are signs that the Eurozone economy is bottoming, evident in a nascent upturn in German auto production and the larger manufacturing sector. This growth inflection should be further buttressed by receding fears about a hard Brexit and a global trade war, as well as modest increases in fiscal spending across many Eurozone countries (see Section II, Eurozone). Crucially, better growth should help reverse the

slide in Eurozone inflation, which has been a key driver of euro weakness.

The currency should also benefit as we expect foreigners will continue to buy assets denominated in euros (see Exhibit 121). Indeed, euro-denominated assets have become more attractive as the currency has depreciated 20% from its 2014 peak and is now attractively valued (see Exhibit 122). Already, net foreign direct investment into the Eurozone has turned positive after years of outflows. Similarly, foreign investors who have steadily sold euro-denominated portfolio assets—such as European equities—are beginning to repurchase them.

To be sure, a bounty of risks could place renewed downward pressure on the currency (see Section I, Risk of Domestic and Non-US Exogenous Shocks). But given the balance of probabilities, we expect modest euro appreciation this year and hold a tactical long position in the currency as a result.

**Although there has been no shortage of false dawns for euro bulls in recent years, we see several factors conspiring to sustain euro strength in 2020.**

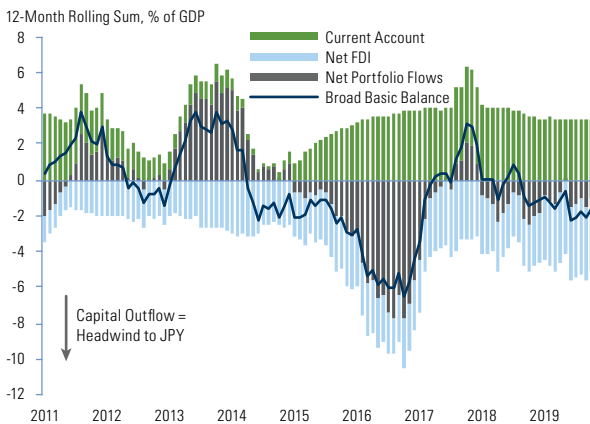
#### Yen

Despite being the second most actively traded currency against the dollar, the yen nonetheless traded in its narrowest range in more than 40 years in 2019. When all was said and done, the yen appreciated just 1% by year-end.

This year is likely to be more eventful, with several factors pointing toward

### Exhibit 123: Japan Broad Basic Balance

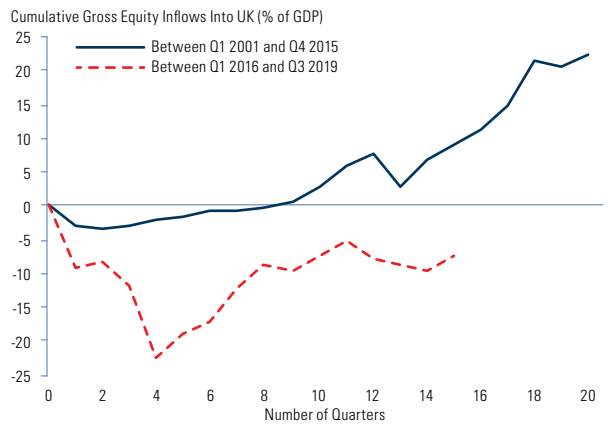
Japan continues to export capital, a headwind for the yen.



Data through October 2019.  
Source: Investment Strategy Group, Haver Analytics.

### Exhibit 124: Foreign Purchases of UK Equities

Foreigners have been net sellers of UK equities since 2016.



Data through Q3 2019.  
Source: Investment Strategy Group, Haver Analytics, Office for National Statistics.

yen depreciation. The most important of these is currency flows, as we expect Japanese investors to continue seeking higher-yielding offshore assets in response to the BOJ's negative policy rate. The sale of these lower-yielding domestic assets should place downward pressure on the yen. For instance, Japan's Government Pension Investment Fund (GPIF)—which manages the world's largest public pension plan—announced that it will increase its allocation to non-Japanese government bonds.<sup>76</sup> Similarly, Japanese life insurers, which manage more than \$4 trillion of financial assets, have indirectly increased their exposure to foreign assets by steadily decreasing the amount of currency risk they hedge. We also expect Japanese firms to continue selling yen to invest in foreign operations with better growth prospects, as they have in recent years. Against this backdrop, it's not surprising that Japan's foreign direct investment outflows surged to over 4% of GDP last year, their highest level on record (see Exhibit 123).

This is not to suggest that the prospects for the yen are completely one-sided. Negative policy rates are facing increasing resistance in Japan given their deleterious impact on both savers and the banking sector. As a result, any shift away from the BOJ's near-zero interest rate policy could place upward pressure on the yen. The many sources of global uncertainty in the year ahead could also lead investors back into the yen as a liquid hedge, as we saw in the first half of 2019. Lastly, after depreciating approximately 25% since the onset of Abenomics in 2012,<sup>77</sup> the yen is now undervalued.

Even so, we do not think these upside risks are compelling enough to undermine our expectation of a weaker yen this year. As a result, we hold a tactical short position in the yen.

### Pound

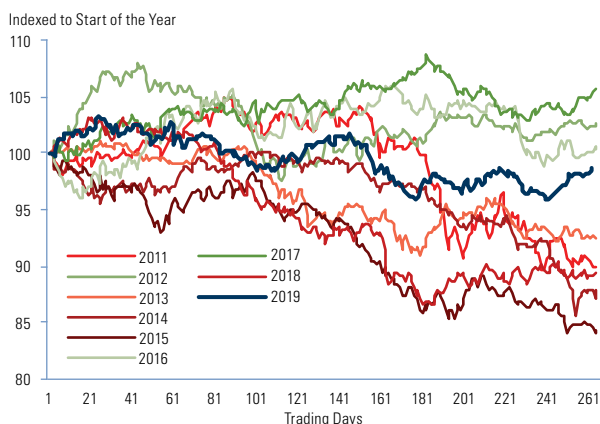
Although 3.5 years have passed since the United Kingdom's referendum on European Union membership, Brexit developments are still the primary driver of the UK currency. Last year, the receding risk of a "no-deal" Brexit led the pound to strengthen by 4% relative to the US dollar and by 6% relative to the euro. In fact, the pound's appreciation last year was second only to that of the Canadian dollar among the most actively traded developed market currencies (see Exhibit 117).

Despite last year's gains, the pound has scope to appreciate further this year. Keep in mind that Prime Minister Johnson's landslide victory came at the expense of a Labour Party whose policies were widely believed to be a headwind to both the economy and the currency. Moreover, Prime Minister Johnson's commanding majority in Parliament increases the likelihood that the UK can secure a favorable trade agreement with the EU. Finally, an orderly Brexit could generate inflows into the UK that would benefit the currency, particularly since foreigners are underweight pound-denominated assets after years of selling based on Brexit uncertainty (see Exhibit 124).

Still, many of these potential tailwinds are political in nature, increasing the risk of

## Exhibit 125: EM Currency Spot Returns

EM currency appreciation could easily be derailed by any number of risks, as seen in six of the last nine years.



Data through December 31, 2019.  
Source: Investment Strategy Group, JPMorgan, Bloomberg, Macrobond.

disappointment. Moreover, numerous unresolved issues remain regarding the future trading relationship between the EU and the UK, and there is a relatively short one-year transition period in which to address them. Further political uncertainty is likely to arise this year between the Scottish National Party (SNP) and the Conservative majority in London, which has promised to reject Scottish demands for a second referendum on independence.

Against this backdrop of difficult-to-handicap political developments, we are tactically neutral on the pound.

### Emerging Market Currencies

Like most other asset classes last year, emerging market currencies were beholden to the vagaries of US-China trade developments. After a strong start to the year in response to a trade detente between the world's two largest economies, EM currencies suffered a notable reversal of fortune as US-China

brinkmanship resumed in May. The resulting uncertainty and slowdown in global growth led EM central banks to cut rates aggressively, which, along with anti-government protests in many emerging economies, pushed EM currencies down more than 4% at their lowest point. Yet the likely ratification of the United States-Mexico-Canada Agreement (USMCA) and progress on a Phase One trade agreement between the US and China underpinned a rally late last year, leaving EM currencies down just 1.4% in 2019.

Looking ahead, we expect a moderate recovery in EM currencies in 2020 on the back of a range-bound US dollar and somewhat firmer EM export activity. A stronger Chinese renminbi relative to the US dollar—in response to easing trade tensions—could also help. But because this would make China's exports less competitive, we don't expect China to tolerate the kind of appreciation that would lift all EM currencies.

Despite these tailwinds, a few factors temper our enthusiasm for a broad tactical overweight. First, we expect the US dollar to be range-bound in 2020, and global growth to pick up only modestly. In turn, EM currency appreciation is likely to be modest, and it could easily be derailed by any number of risks, as we have seen in six of the last nine years (see Exhibit 125). Second, we expect wider current account deficits that will weigh on the currencies of some EM countries, especially Brazil. Finally, several countries face material event risk, including the presentation of South Africa's budget, Argentina's debt restructuring, Brazil's local elections, and Turkey's Halkbank case as well as its risk of being subjected to US sanctions.

That said, we do think there are pockets of opportunity within EM currencies, such as our tactical long position in the Chilean peso. Here, we believe the peso's 15% decline over the course of a month and a half in response to social unrest last year grossly overstated the fundamental impact of those protests. Keep in mind that the Chilean peso is supported by a rapidly shrinking current account deficit,<sup>78</sup> ample US dollar liquidity from the Central Bank's foreign exchange (FX) intervention package and the government's FX sales, contained outflows from residents, and Chile's institutional strength. Of equal importance, the government's willingness to increase pensions and hold

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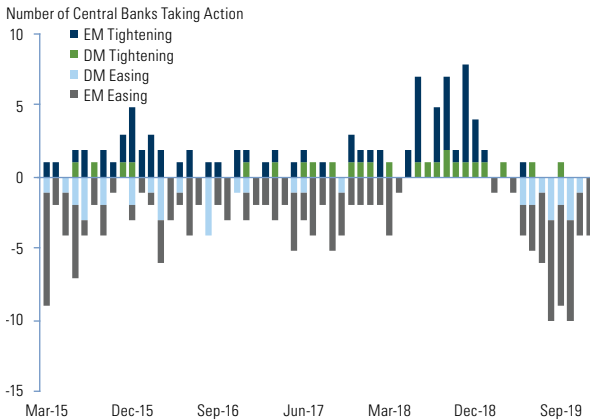
**Looking ahead, we expect a moderate recovery in EM currencies in 2020 on the back of a range-bound US dollar and somewhat firmer EM export activity.**

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## Exhibit 126: Monetary Policy Changes Across Global Central Banks

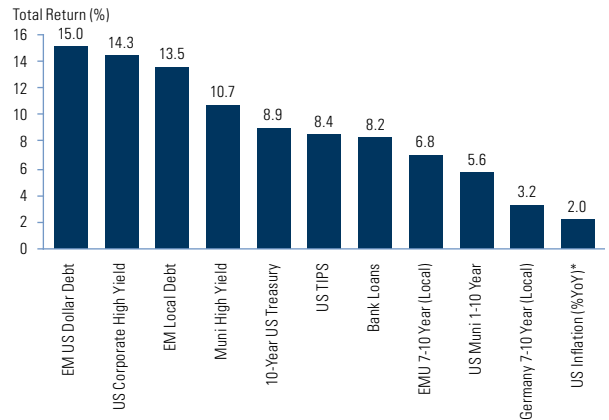
Central banks around the world cut interest rates in 2019.



Data through December 2019.  
Source: Investment Strategy Group, Haver Analytics.

## Exhibit 127: Fixed Income Returns by Asset Class

The sizable decline in bond yields produced a positive return in every major fixed income category in 2019.



Data as of December 31, 2019.  
Source: Investment Strategy Group, Datastream.  
\* Inflation data as of November 2019.

a referendum to change the constitution has largely quelled the social unrest that gave rise to the peso's depreciation in the first place.

## 2020 Global Fixed Income Outlook

Interest rates defied almost universal expectations of a further increase last year and instead declined significantly around the globe. This unexpected drop was driven by mounting recession fears that fostered demand for the safety of bonds and cajoled central banks worldwide into easing monetary policy (see Exhibit 126). Although bond yields rose from their lows in late 2019 on better US-China relations, their still sizable decline last year produced a positive return in every major fixed income asset class (see Exhibit 127).

Unfortunately for bondholders, an encore is unlikely. Already-low policy rates and receding trade tensions should help to stabilize economic growth this year, reducing the need for further monetary easing that would exert downward pressure on rates. This is particularly true for the ECB and BOJ, which face growing scrutiny about the costs associated with their negative policy rates. Continued near-trend growth should also firm inflation expectations in many of the developed economies, providing a further support to rates.

Despite these factors, the likelihood of a material backup in yields is low. While inflation

may firm this year, a pickup large enough to significantly lift bond term premiums would require much faster global growth than we expect. Furthermore, major central banks—including the ECB, Federal Reserve and BOJ—have either continued or resumed growing their balance sheets, which places downward pressure on rates. The willingness of central banks in developed markets to more aggressively ease policy rather than tighten it is a similar headwind to rates. The Federal Reserve, for example, has stated it would tolerate inflation rising above its target, but stands ready to quickly reduce rates further if the outlook deteriorates.

These competing tensions are likely to keep interest rates and credit spreads range-bound this year. While we expect high-quality bonds to provide uninspiring returns as a result, they still serve a vital strategic role in portfolios by providing a hedge against recession risk and generating income. Thus, investors should maintain their strategic bond allocation.

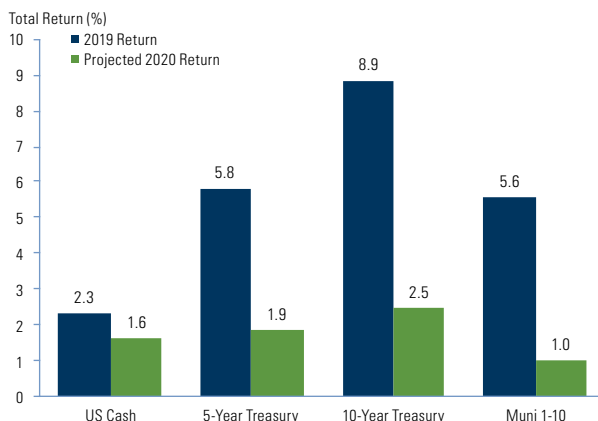
In the sections that follow, we will review the specifics of each fixed income market.

### US Treasuries

Treasury investors had few complaints in 2019. At the worst of last year's recession fears, the year-to-date gain for the 10-year US Treasury approached 13%—a remarkable feat considering the note's scant 2.7% bond yield at the start of 2019. Despite

## Exhibit 128: 2020 US Treasury and Municipal Bond Return Projections

We do not expect Treasury returns to do much better than cash this year.



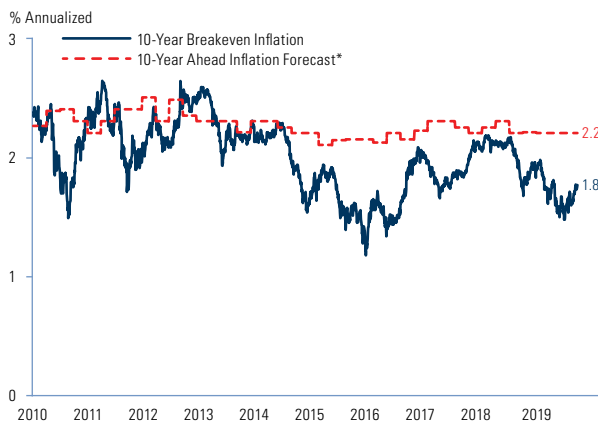
Data as of December 31, 2019.

Source: Investment Strategy Group, Bloomberg.

Past performance is not indicative of future results.

## Exhibit 129: US 10-Year Breakeven Inflation Rate and Consensus Inflation Rate Forecasts

Breakeven inflation rates remain stubbornly below the estimate of professional forecasters.



Data through December 31, 2019.

Source: Investment Strategy Group, Haver Analytics.

\* Based on the Survey of Professional Forecasters.

retracing a portion of these gains, the 10-year note still generated an almost 9% total return last year.

We expect more muted returns and far less rate volatility in 2020, with the midpoint of our 1.6–2.1% target range for 10-year US Treasury yields little changed from current levels. This subdued volatility reflects the offsetting impact of several crosscurrents. On the one hand, growing confidence of an economic soft landing should put upward pressure on yields, particularly as inflation firms in response to reduced economic slack. This upward pressure is compounded by the fact that bond term premiums—or the compensation for bearing interest rate risk—have been higher 95% of the time historically. Rates could also be lifted by larger budget deficits, whose funding requires the Treasury to issue more debt.

On the other hand, our stable inflation outlook implies that the Federal Reserve is unlikely to change its policy rates, which should anchor real yields near current levels. The hurdle for the Federal Reserve to adjust policy actually appears quite high, requiring either a “material” change in the economic outlook or a “significant and persistent” move-up in inflation,<sup>79</sup> neither of which seems likely this year. The hurdle is even higher to adopt negative policy rates in the US, as doing so might require congressional approval and there are other tools that would be deployed first. Meanwhile, the Federal Reserve’s decision

to stop shrinking its long-maturity bond holdings and resume expanding its balance sheet partially ameliorates the impact of larger deficits on rates, because the central bank can purchase more of the resulting debt issuance. In fact, issuance net of Federal Reserve purchases is projected to be lower this year than in 2019.

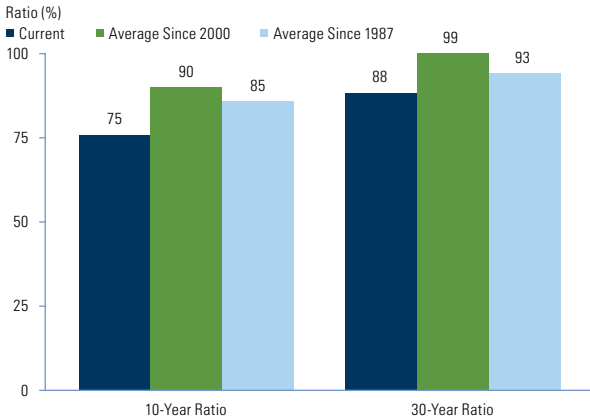
Although we do not expect Treasury returns to do much better than cash this year, we still recognize the hedging benefits of duration (see Exhibit 128). These benefits are particularly evident in the US, where there is greater scope for yields to decline given their higher absolute values. Last year’s second and third quarters were a case in point, as 5-year Treasuries returned three percentage points more than shorter-duration Treasury bills during that period. While we think that clients should moderately underweight their high-quality bonds to fund various tactical tilts, we do not recommend below-benchmark duration.

### Treasury Inflation-Protected Securities (TIPS)

The primary driver of TIPS’ more than 8% return last year was their sensitivity to interest rates (i.e., their seven- to eight-year duration), not significant changes in inflation. Indeed, 10-year breakeven inflation rates were little changed, ending at 1.8%, close to the level where they began the year. Even so, TIPS generated performance that was in line

### Exhibit 130: Ratio of Municipal Bond Yields to Treasury Yields

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



Data as of December 31, 2019.  
Source: Investment Strategy Group, Bloomberg.  
Past performance is not indicative of future results.

### Exhibit 131: Incremental Yield of Municipal Bonds Over Treasuries

The current incremental after-tax yields of municipal bonds over Treasuries stand near their all-time lows.



Data through December 31, 2019.  
Note: Spread of AAA municipal bond yields over after-tax Treasury yields.  
Source: Investment Strategy Group, Bloomberg.

with the returns of comparable nominal bonds (see Exhibit 127).

With current breakeven levels and the Federal Reserve’s preferred inflation expectations measure—five-year average inflation, five years from now—both below the estimate of professional forecasters, the bond market is implying that the economic expansion is likely to end before inflation sustainably reaches the Federal Reserve’s 2% target (see Exhibit 129). In contrast, we expect breakeven inflation rates to drift modestly higher this year, which should allow TIPS to match the small positive returns we expect from nominal bonds.

Yet given the unfavorable tax treatment of TIPS, we advise US clients with taxable accounts to instead use municipal bonds for their strategic allocation.

#### US Municipal Bonds

The stars were aligned for municipal bonds last year. The Federal Reserve’s three rate cuts helped push 10-year AAA yields down by nearly a full percentage point, lifting municipal bond prices across the curve. At the same time, the rush for the safety of bonds generated a record \$100 billion of inflows into fixed income mutual funds. The combination produced a 5.6% total return, one of the best performances by municipal bonds in a decade.

While we expect another year of positive returns, the backdrop for municipal bonds is less favorable this year. As seen in Exhibit 130, the yield ratios of municipal bonds to Treasury rates stand below their long-term averages, highlighting less attractive relative valuations. The same message is evident in yield differentials. Investors earn just 9 basis points of incremental after-tax yield by owning 5-year AAA-rated municipal bonds instead of Treasuries, a scant yield pickup that has been lower 3% of the time historically (see Exhibit 131). As a result, municipal bonds offer less of a buffer to absorb a large increase in interest rates.

Still, valuations are likely to be less of a concern in the year ahead, as we expect municipal yields to mirror our range-bound expectations for broader interest rates. Moreover, other factors are more supportive. As Exhibit 132 reminds us, mutual fund flows tend to be sticky in this asset class. Given last

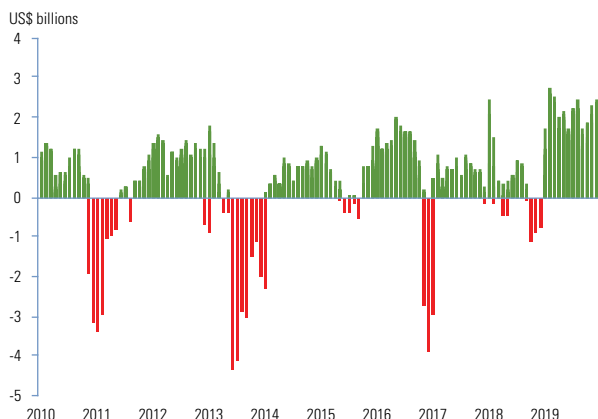
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**The bond market is implying that the economic expansion is likely to end before inflation sustainably reaches the Federal Reserve’s 2% target.**

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## Exhibit 132: Municipal Bond Mutual Fund Net Flows

Municipal bond mutual funds saw record inflows in 2019.



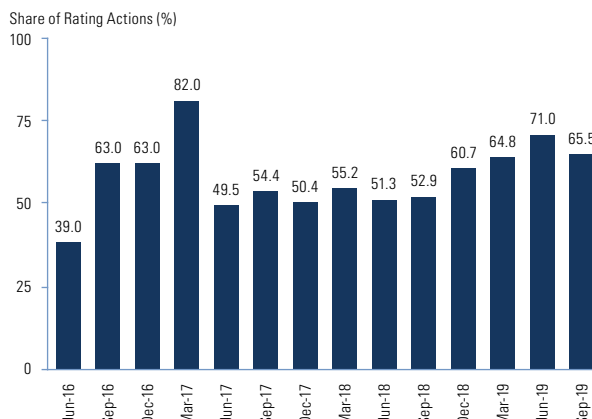
Data through December 2019.

Note: Showing 4-week average flows.

Source: Investment Strategy Group, Investment Company Institute (ICI), Barclays.

## Exhibit 133: Public Finance Upgrades as a Share of Ratings Actions

Credit-rating upgrades have outpaced downgrades for nine straight quarters.



Data through Q3 2019.

Source: Investment Strategy Group, Moody's.

year's strong investor demand, there is scope for inflows to extend further. This is particularly true now that the 2017 tax reform has capped deductions for certain filers, increasing the appeal of municipal bonds' tax-exempt status in high income tax states.

Municipal fundamentals are also improving. The combination of a record-long economic expansion and fiscal discipline has lifted the median state's general fund reserve balance to an all-time high of 7.6% of annual spending.<sup>80</sup> This improving fortune is further evident in the fact that credit-rating upgrades have outpaced downgrades for nine straight quarters (see Exhibit 133). And while long-term pension liabilities remain a concern, recent stock market gains have helped lift aggregate funding levels a full percentage point to 73%.<sup>81</sup> Based on these favorable developments, Moody's noted: "Most states are in a position to weather a moderate recession without significant adverse credit impact."<sup>82</sup>

In addition, the supply and demand picture remains favorable. The size of the municipal bond market has been shrinking since 2011 as new supply has not kept pace with redemptions. The 2017 tax law has further constrained supply by tightening the rules for tax-exempt issuance. As a result, 2020 issuance forecasts are estimated to be 10% below the five-year average.<sup>83</sup>

In our base case, we expect intermediate municipal bond indices to return around 1% this

year. While the 2020 presidential election may introduce policy uncertainty, the risks of disruptive changes to the municipal bond tax exemption appear muted at least for the next year.

### US High Yield Municipal Bonds

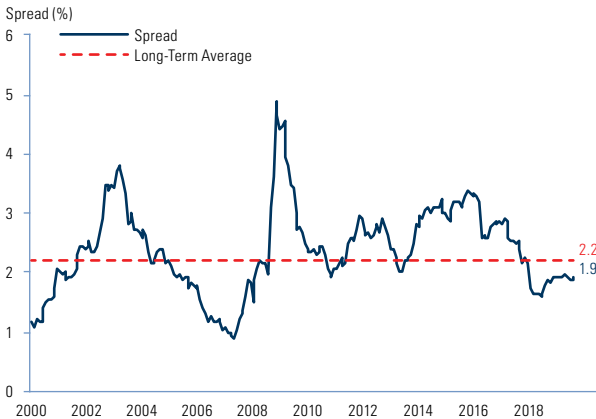
Like TIPS, high yield municipal bonds benefited from their longer duration in last year's falling rate environment, generating a more than 10% return. Last year's strength has left their 1.9% incremental spread versus high-quality bonds with similar maturity below the 2.2% long-term average (see Exhibit 134). Similarly, the yield ratio between 30-year maturity Treasuries and AAA-rated municipal bonds now stands at 88%, a full 11 percentage points below its average since 2000. These richer valuations inform our more modest expectation of a 3–4% return in 2020—a return that is likely to outperform investment grade bonds and that provides adequate compensation for taking incremental default risk. As a result, we continue to recommend clients retain their strategic allocation.

### US Corporate High Yield Credit

High yield credit continued to defy its skeptics last year, with leveraged loans gaining around 8% and high yield bonds delivering a notable 14% gain. This performance was even more remarkable considering the plethora of concerns surrounding corporate credit, including rising debt burdens,

### Exhibit 134: High Yield Municipal Bond Spread

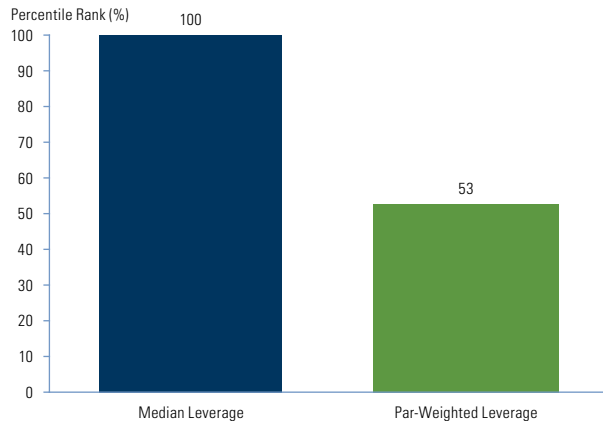
The incremental yield above that of investment grade bonds is below the long-term average.



Data through December 31, 2019.  
Source: Investment Strategy Group, Bloomberg.

### Exhibit 135: Percentile Rank of US Corporate High Yield Net Leverage Metrics Since 1998

Par-weighted leverage sends a less worrisome message than the median leverage for high yield.



Data as of Q3 2019.  
Source: Investment Strategy Group, JPMorgan, Bank of America, Goldman Sachs Global Investment Research.

the sizable underperformance of the lowest-rated credits and the growing prevalence of lax covenants. Taken together, these worries have even rekindled fears of a credit bubble.

To be sure, the concerns are not meritless. The leveraged loan market has grown at an 8.6% annualized pace since 2009 and is now equal to the size of the high yield market, at around \$1.2 trillion. Along the way, borrowers have been assuming more debt, with a third of newly issued leveraged loans having a debt-to-EBITDA ratio greater than the levels seen in either 2007 or 2014. Even worse, these higher debt burdens come with fewer protections for creditors in the case of default. Consider that about 82% of the leveraged loan market is now regarded as covenant-lite.

Still, lax covenants do not imply that companies are free from all constraints. Quite

to the contrary: these issuers are still subject to incurrence covenants, which limit how much debt the company can incur before triggering default. A company's revolving credit lines also contain financial covenants that apply broadly across its capital structure, including to covenant-lite loans. As a result, the Federal Reserve Bank of Philadelphia concluded that more than 90% of firms were subject to some form of covenants.<sup>84</sup>

Today's balance sheet concerns also appear less ominous on closer inspection. Here, we think it is important to look at par-weighted statistics rather than those for the median firm for two reasons. First, they are more representative of industry-level fundamentals because they account for the different size of debt issuance among high yield firms. Second, they better represent potential credit losses because they reflect the total par value of debt that could default.

On this point, par-weighted leverage today is in line with its long-term average, sending a less worrisome message than the more frequently cited median ratios (see Exhibit 135). The rise in median ratios, in fact, does not even reflect higher new debt issuance per se, but rather weakening earnings in recent years.

Other credit metrics are equally benign. As seen in Exhibit 136, interest coverage is not far from its all-time

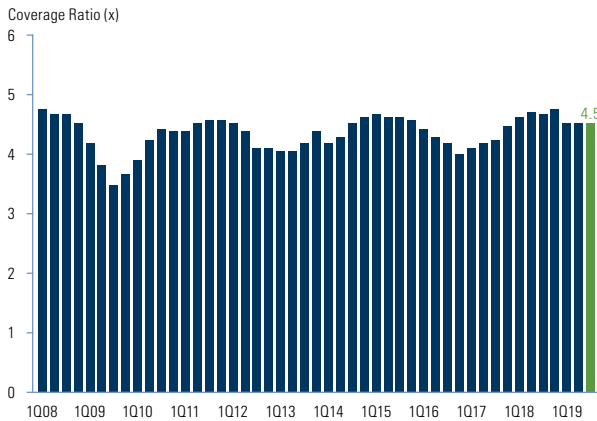
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**While issuance in 2019 featured more debt-intensive merger and acquisition (M&A) activity, it represents a small inflow into a large stock of debt whose quality today is higher than prior to the last credit cycle.**

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### Exhibit 136: High Yield Par-Weighted Interest Coverage Ratio

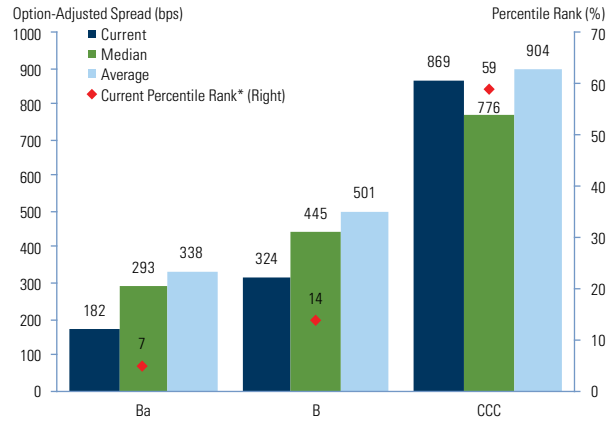
Interest coverage for high yield companies is not far from its all-time highs.



Data through Q3 2019.  
Source: Investment Strategy Group, JPMorgan.

### Exhibit 138: High Yield Spreads by Credit Rating

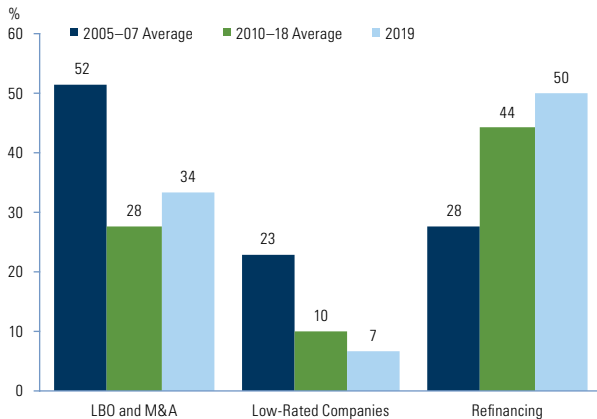
CCC spreads are above median levels but actually below their long-term average.



Data as of December 31, 2019.  
Source: Investment Strategy Group, Bloomberg, Barclays.  
\* Since 1994.

### Exhibit 137: 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, 2019.  
Source: Investment Strategy Group, Bank of America Merrill Lynch, Barclays, JPMorgan, Bloomberg.

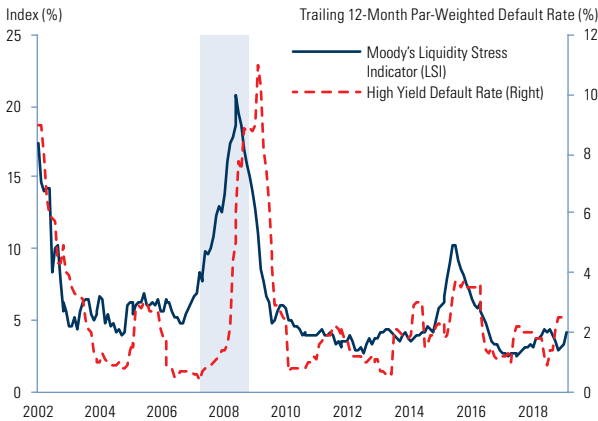
highs. While issuance in 2019 featured more debt-intensive merger and acquisition (M&A) activity, it represents a small inflow into a large stock of debt whose quality today is higher than prior to the last credit cycle (see Exhibit 137). This last point is important, as it is the credit characteristics of the aggregate pool of debt—not the recent issuance—that ultimately dictate the level of defaults.

We also don't view last year's CCC underperformance as a harbinger of an imminent default cycle. As shown in Exhibit 138, CCC spreads are above median levels but slightly below their long-term average, while spreads for higher-quality junk bonds are tighter than both their long-term median and average levels. Thus, last year's performance differential between the two was driven as much by tighter spreads in B/BB bonds as it was by spread widening in CCCs. Rather than portending a default cycle, CCCs' underperformance last year more likely reflects their exposure to struggling energy companies coupled with some company-specific concerns.

The low risk of an imminent default cycle is echoed by several leading measures of credit. Moody's Liquidity Stress Indicator—which rose about six months before the last default cycle—today stands below its long-run median and at a level that has been lower only a third of the time historically (see Exhibit 139). The low percentage of bonds trading at distressed prices today also points to low risk, as this ratio has historically led the path of defaults. Defaults should also be kept in check by the continued US economic expansion we expect this year, considering the vast majority of high yield companies' revenues originate domestically. Finally, we note that although bank lending standards did tighten late last year, they have done so before during this expansion without an ensuing default cycle

### Exhibit 139: Moody's Liquidity Stress Indicator and Default Rates

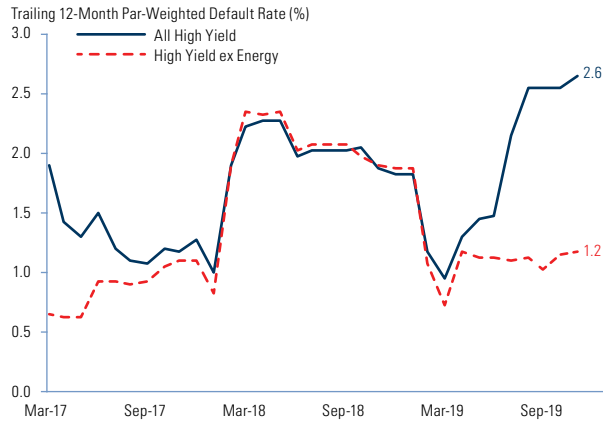
Leading indicators are not consistent with a material pickup in default activity.



Data through November 2019.  
 Note: Moody's Liquidity Stress Indicator falls when corporate liquidity appears to improve and rises when it appears to weaken. Blue shaded area denotes US recessions.  
 Source: Investment Strategy Group, Moody's, JPMorgan.

### Exhibit 141: High Yield Default Rate with and without Energy Firms

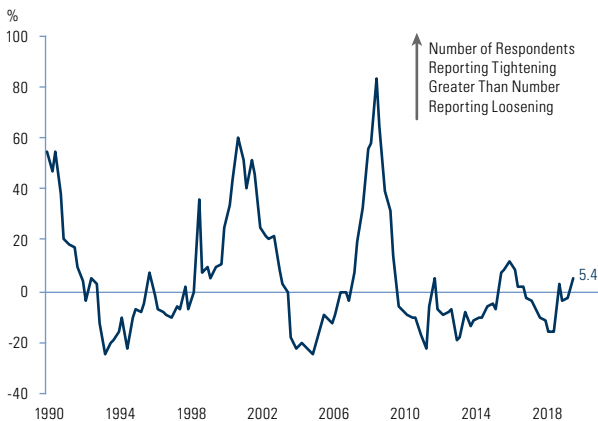
The rise in default activity has been largely concentrated in the energy sector with little signs of contagion elsewhere.



Data through November 2019.  
 Source: Investment Strategy Group, JPMorgan.

### Exhibit 140: Net Percentage of Banks Tightening Standards for Commercial and Industrial Loans

Although lending standards did tighten late last year, they have done so before during this expansion without an ensuing default cycle.



Data through Q4 2019.  
 Source: Investment Strategy Group, Federal Reserve Senior Loan Officer Survey.

(see Exhibit 140). We would be more concerned if a broader array of leading default indicators was corroborating today's tighter lending standards, but that is not yet the case.

What modest default stress we have seen has been largely concentrated in the energy sector. Commodity sectors represented nearly half of last

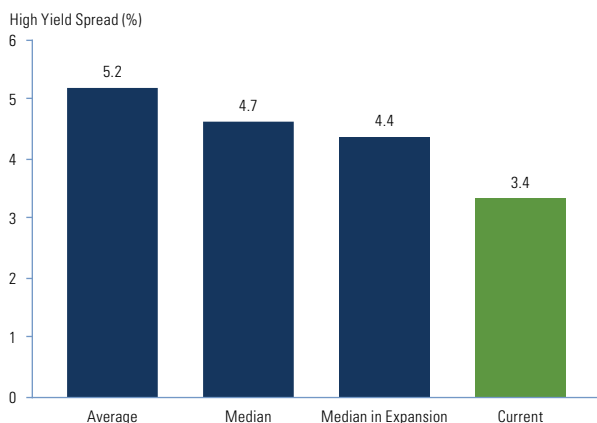
year's total high yield default volume on a par-weighted basis. In turn, the overall par-weighted high yield default rate of 2.6% last year was just 1.2% excluding commodities. Both figures stand comfortably below the 3.5% long-term average default rate. While there is always a risk that weakness in the energy patch will metastasize into broader credit weakness, so far there is little evidence of contagion (see Exhibit 141).

Of course, a more sanguine view of fundamentals does not necessarily equate to robust returns. Spreads—which compensate investors for the risk of default losses—stand well below their long-term median levels, even during economic expansions. In fact, the level of spreads has been lower only 19% of the time in the last 30 years (see Exhibit 142), limiting potential future gains. Similarly, the demand for high yield credit by investors searching for attractive absolute returns has also diminished, as yields have fallen from above 8% early last year to around just 5.5% now.

In short, today's below-average high yield spreads imply a narrower margin of safety for investors than in recent years. In fact, our estimate of the incremental return that high yield bond investors earn above risk-free Treasuries after accounting for default losses is about two percentage points below average today and at a level that has been lower only 1% of the time historically (see Exhibit 143).

## Exhibit 142: High Yield Spreads Relative to History

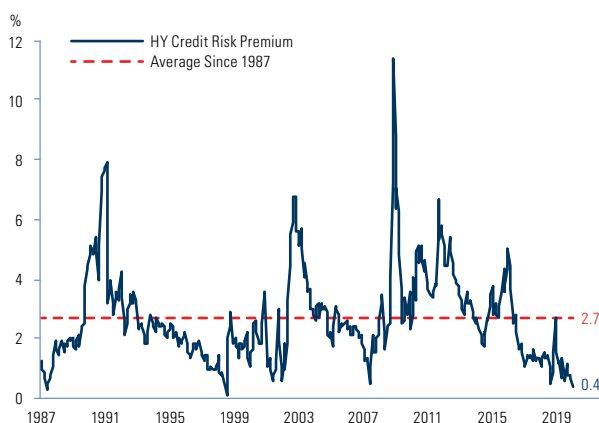
Spreads stand well below their long-term median levels, including those seen during economic expansions.



Data as of December 31, 2019.  
Source: Investment Strategy Group, Bloomberg.

## Exhibit 143: ISG High Yield Credit Risk Premium Estimate

Today's well-below-average compensation for taking credit risk implies a narrower margin of safety for investors.



Data through December 2019.  
Source: Investment Strategy Group.

Against this backdrop, we expect high yield returns of around 2% and bank loan returns of around 4%. While these returns are likely to exceed those of investment grade bonds, we do not think they are large enough to compensate investors for the additional default risk. As a result, we have a neutral tactical stance in both asset classes at the moment.

### European Bonds

Last year was a banner year for European fixed income. Not only were bond returns better than average for the core countries of the Eurozone, but peripheral bond markets outperformed the core, with Greek and Italian bonds generating 26% and 12% gains, respectively.

This solid performance was underpinned by a combination of factors that put downward pressure on interest rates. Eurozone growth fell short of expectations, core inflation failed to increase and measures of long-term inflation expectations recorded new lows. Concerns around global growth, trade tensions between the US and China, and Brexit also contributed.

Against this backdrop, central banks worldwide eased monetary policy to stimulate their respective economies. The ECB was no exception, as it cut its deposit rate by 10 basis points to -0.50% and relaunched an open-ended asset purchase program of €20 billion per month. In addition, the ECB committed to maintaining accommodative monetary

policy for a longer time period. Taken together, these measures pushed market expectations for the first deposit rate hike out to 2022–23.

Partly because of these monetary policy actions supporting economic activity, we expect interest rates in 2020 to retrace some of last year's declines. Already, German 10-year bund yields have increased 50 basis points from 2019's lowest levels, finishing the year at -18 basis points.

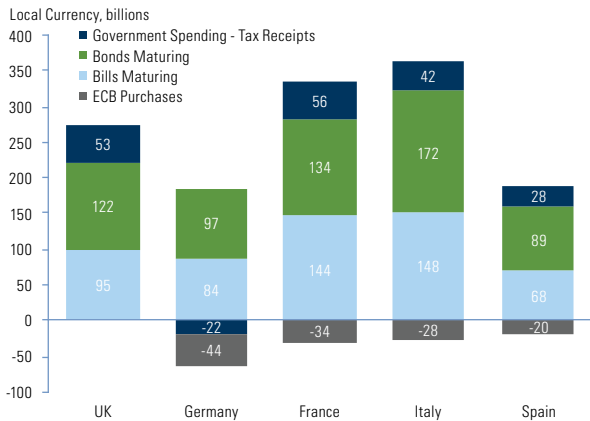
We think this upward momentum is likely to continue—albeit at a slower pace—for two reasons. First, inflation is likely to tick modestly higher, as firms eventually increase prices to reflect higher nominal wages. While the transmission from wages to inflation has been weak so far, the ongoing reduction in economic slack makes a firmer pass-through more likely now. In turn, current market expectations for short-maturity interest rates to remain negative until 2026 are likely to reset higher. Second, more expansionary fiscal policy in Germany will increase the supply of bonds, putting upward pressure on interest rates. In contrast, ECB bond purchases are likely to weigh on German rates (see Exhibit 144). We expect the net result of these influences to lift German 10-year bund yields this year, but not outside our forecast range of -40 to +20 basis points.

UK 10-year gilt yields should also rise but our expectations are modest, with only a 10bps rise from their 2019 year-end level to the midpoint of our 0.60–1.20% target range. In addition to the



### Exhibit 144: 2020 European Bond Supply

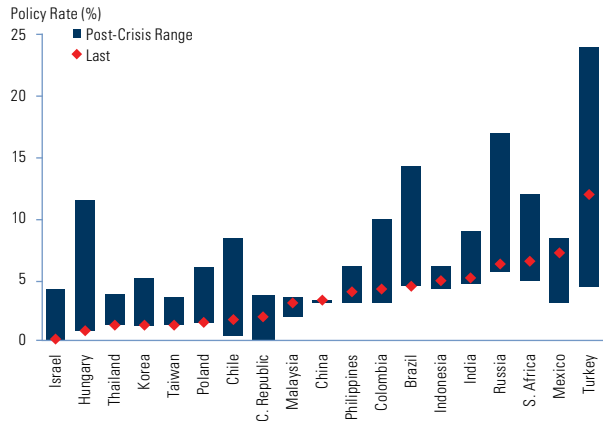
ECB bond purchases are likely to weigh on German rates.



Forecasts through 2020.  
Source: Investment Strategy Group, European Commission, UK Office for Budget Responsibility.

### Exhibit 145: Emerging Market Central Bank Policy Rates

Most major EM policy rates stand close to their post-crisis lows.



Data through December 2019.  
Source: Investment Strategy Group, Macrobond.

global factors putting pressure on UK intermediate and long-dated yields, expansionary fiscal policy in the UK will substantially increase the supply of bonds this year, which should result in higher yields. That said, the expected increase in rates is likely to be limited by continued political uncertainty and our expectation that the Bank of England will ease monetary policy this year.

The current low-yielding fixed income environment should continue to favor European peripheral bonds, as we expect their higher coupon rates to appeal to investors in search of yield. Of course, these higher yields reflect greater risks, which in the case of Italy revolve around the potential for a highly disruptive early general election in 2020. While far from our base case, this risk is likely to keep the spread between 10-year Italian bonds and German bunds range-bound between 150 and 170 basis points until regional elections in the first quarter provide some clarity, after which we expect the spread to narrow.

Based on the foregoing and the low yields offered by European debt instruments, we advise our clients to moderately underweight their high-quality bonds to fund various tactical tilts. We also recommend being long 10-year Italian BTPs versus short 10-year German bunds.

### Emerging Market Local Debt

Emerging market local debt (EMLD) posted a spectacular 13.5% total return in USD terms in

2019, its third double-digit gain since 2012. Given the magnitude of last year's decline in global interest rates, the bulk of EMLD's return came not from its attractive 5.2% yield, but rather from its sensitivity to interest rates (i.e., duration). In fact, the contribution from duration to the index's return last year was the largest since 2012.

A more nuanced market backdrop in 2020 makes a repeat performance unlikely. There is less scope for EM central banks to ease monetary policy as extensively as they did in 2019 given our expectation for unchanged policy at the Federal Reserve. One reason for this reduced scope is that many emerging market central banks already cut policy rates to post-crisis lows during last year's midcycle adjustment by the Federal Reserve (see Exhibit 145). But some EM central banks are still expected to deliver one or two more cuts to their policy rates, and Mexico is likely to lower rates at least five more times in 2020. In response to some remaining policy easing, a modest recovery in economic activity and inflation remaining under control, we expect EMLD inflows to be positive again this year, but well below those seen in 2019. Given our view that EM currencies will be range-bound, we expect EMLD's return this year to be slightly below its 5.2% yield.

While we are not recommending a directional view on broad EMLD, we do think there are opportunities at the individual-country level. In particular, we recommend a position that receives

## Exhibit 146: Commodity Returns in 2019

Performance across commodity groups was uneven in 2019.

	S&P GSCI	Energy	Agriculture	Industrial Metals	Precious Metals	Livestock
Spot Price Average, 2019 vs. 2018	-8%	-11%	-3%	-10%	9%	3%
Spot Price Return	17%	24%	6%	2%	19%	5%
Investor ("Excess") Return*	15%	27%	-2%	0%	15%	-8%

Data as of December 31, 2019.

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.

10-year fixed rates and pays floating rates in Mexico, thereby benefiting from the decline in interest rates we expect there. Catalysts for lower rates include a widening output gap, inflation close to the central bank's 3.0% (+/- 1.0%) target, real rates that are too high because of tight fiscal and monetary policy, and an easing cycle that we expect will reduce the central bank's policy rate from 7.25% to a neutral level estimated to be around 6.0%.<sup>85</sup>

### Emerging Market Dollar Debt

Emerging market dollar debt (EMD) was among the best-performing asset classes in 2019. The same factors that were beneficial for EMD—a global decline in interest rates coupled with tighter spreads—produced an extraordinary 15.0% total return for EMD.

These strong gains have come at a cost, however, as EMD now stands in overvalued territory. The 4.9% yield on emerging market dollar debt has been lower only 8% of the time in the post-crisis period. Its spread similarly stands in the bottom quartile of its historical distribution.

Even worse, this narrower valuation buffer arrives at a time when EMD investors should be requiring higher risk premiums. After all, the deep structural fault lines of many major EM economies leave them vulnerable to negative shocks, as recent years' developments in Turkey and Argentina reminded us. Moreover, we are particularly concerned about higher debt issuance in some emerging market countries in response to wider fiscal deficits and their government's desire to take advantage of cheap US dollar funding. This borrowing is likely to put upward pressure on credit spreads, weighing on EMD returns.

Although we do not recommend a tactical underweight to broad EMD based on the above,

we are currently evaluating several country-specific opportunities.

### 2020 Global Commodity Outlook

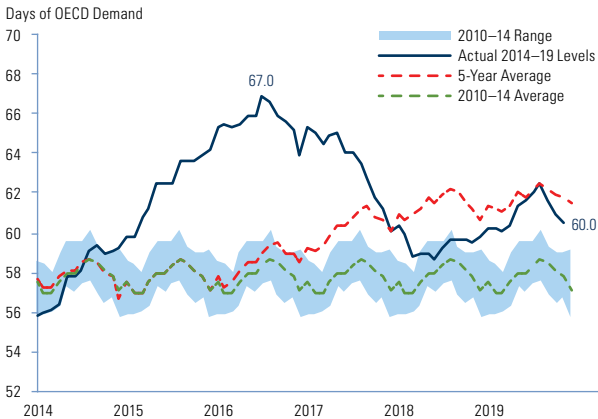
It is often said that timing is everything in investing, a notion that commodities did little to refute last year. The bulk of the S&P Goldman Sachs Commodity Index's (GSCI) 15% annual return was realized in the first four months of the year. The same was true for gold, whose 18% price gain was also concentrated within a few months. Even worse, investors who poorly timed their entry lost money in specific commodities despite the GSCI delivering its best annual performance since 2007. Such was the case for energy and base metals, whose prices actually weakened after the early-year rebound. As a result, their average annual prices declined last year by 11% and 10%, respectively (see Exhibit 146).

While we do not expect such narrow time periods to dictate returns again this year, uneven performance across commodities is likely to persist. In the case of base metals, recent improvements in trade tensions and the global growth backdrop should support demand and lift prices. In contrast, oil prices are likely to struggle for direction within our \$50–70 target price range, reflecting still-high oil inventories, renewed production growth from several countries and continuing reliance on restraint from the Organization of the Petroleum Exporting Countries (OPEC) to balance the market. Meanwhile, gold begins the year with investors already holding near-record long positions and interest rates near all-time lows, leaving it vulnerable and with less room for price appreciation.

We discuss the main elements of the oil and gold outlooks in the sections that follow.

### Exhibit 147: OECD Petroleum Inventories

OECD petroleum inventories remain above their historical range.



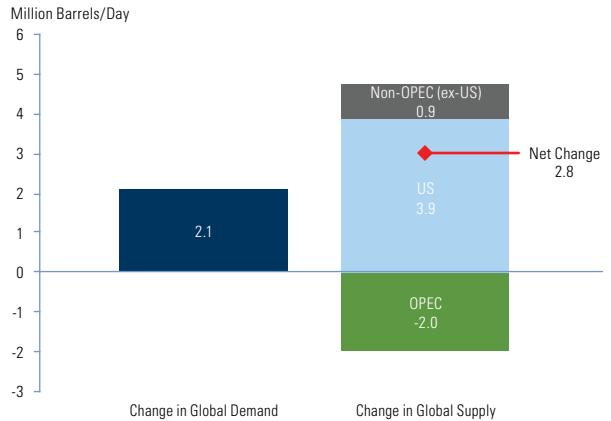
Data through November 30, 2019.

Note: November 2019 data based on preliminary estimate. Inventories adjusted based on OECD demand.

Source: Investment Strategy Group, International Energy Agency.

### Exhibit 148: 2018–19 Cumulative Oil Supply and Demand Growth

The growth of US production has been running at nearly twice the rate of global demand growth for the past two years.



Data as of December 2019.

Source: Investment Strategy Group, International Energy Agency.

### Oil: Searching for Direction

To the casual observer, last year's 34% gain in West Texas Intermediate (WTI) crude oil prices suggests a banner year for oil. Yet digging beneath the surface, there is less than meets the eye to this performance. Oil's collapse in late 2018 created a low starting point for last year, flattering the full year return. In reality, oil prices peaked in May of last year, and 2019's average oil price was actually 12% lower than that of the year before.

What makes this weakness noteworthy is that it took place despite a number of large supply disruptions that normally would have boosted oil prices more dramatically. Sanctions on Iranian exports alone removed over 1 million b/d from the market last year, while the continuing collapse in Venezuelan production reduced supplies by a further 0.5 million b/d. Even more notably, the September 2019 attacks on some of Saudi Arabia's main oil facilities temporarily disrupted 5 million b/d of production capacity, or about 5% of the global total.

The failure of prices to sustainably rally on these developments suggests investors are worried about some combination of weaker demand and stronger supply. As seen in Exhibit 147, the supply concerns are not groundless, given the currently elevated state of global oil inventories. Moreover, the completion of several offshore oil facilities in Brazil and Norway could help bring close to 1

million b/d of new non-OPEC production outside the US to the market this year. Rampant shale production is a final source of angst, as the growth of US production has been running at nearly twice the rate of global demand growth for the past two years (see Exhibit 148).

Still, there are some mitigating supply considerations. History teaches us that large and complex oil projects—such as those in Brazil and Norway—invariably face delays and production hiccups. As a result, the anticipated supply from non-OPEC sources may be smaller than feared and could be partially or completely offset by disruptions elsewhere.

The specter of excess supply is also affecting producers' behavior, evident in recent efforts to rein in output. OPEC and Russia, for example, agreed to deepen their 2019 production cuts by 0.5 million b/d for at least the first quarter of 2020, and Saudi Arabia is implementing an additional and unilateral production cut of 0.4 million b/d. Similarly, newfound capital discipline among shale producers—which are facing higher borrowing costs (see Exhibit 149) and investor demands for positive cash flow—is likely to slow their output growth to below 1 million b/d. Already, the number of active US drilling rigs has fallen about 25% from a year ago.

Ultimately, the strength in demand will determine how much net supply can be absorbed

### Exhibit 149: Implied Cost of Capital for US Exploration and Production Companies

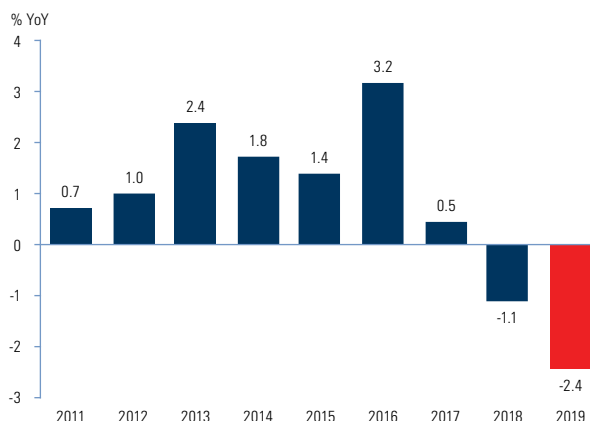
The rising cost of capital and investors' demand for positive free cash flow are likely to slow US crude oil production growth.



Data through December 2019.  
Source: Investment Strategy Group, Goldman Sachs Global Investment Research.

### Exhibit 150: Annual Growth in Chinese Auto Sales

The large decline in Chinese car sales weighed on Asian oil demand growth in 2019.



Data through November 2019, forecasts through December 2019.  
Source: Investment Strategy Group, Bloomberg.

without putting downward pressure on oil prices. Last year's demand proved surprisingly weak, as growing trade tensions and a contraction in global manufacturing pulled demand growth well below the 1 million b/d mark and close to the slowest pace in five years. Asian oil demand growth was particularly disappointing, no doubt reflecting the large slump in Chinese car sales (see Exhibit 150).

The growing popularity of electric cars only compounds these oil demand concerns. To be sure, electric vehicles are gaining traction. Last year's global sales grew by 34% through the third quarter, a nearly 10-fold increase in units sold over the past five years.<sup>86</sup> This momentum could accelerate further in 2020, as most mainstream carmakers are now marketing new electric and hybrid vehicles.

Yet despite their rapid growth, electric vehicle sales account for only about 2% of global car sales. Even using very optimistic assumptions, analysts estimate that it would take at least 12 years for electric vehicles to displace even 10% of US gasoline demand.<sup>87</sup> As a result, we expect oil demand to remain primarily driven by macro fundamentals, not electric vehicle penetration. On this score, our outlook calls for a reacceleration in oil demand growth, as is typical following a year of weak demand that did not accompany a recession.

Combining these supply and demand fundamentals implies there will be only a modest

oil surplus this year. In turn, oil is likely to remain searching for direction within our \$50–70 target range. The risks to our view are two-sided. Further price upside could be realized if supply disruptions prove more potent than they did last year, especially since several large oil producers—including Libya, Iraq and Nigeria—remain plagued by political instability. Growing tensions with Iran pose a further upside risk to oil prices. In contrast, increased oil supplies could result from a more conciliatory stance by the US toward Iran or Venezuela, although such a policy shift seems unlikely in an election year.

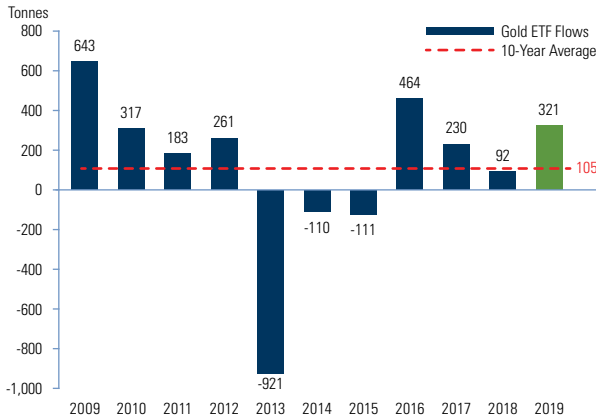
In this range-bound environment, we continue to recommend an overweight to the US midstream sector (see Section I, Tactical Tilts), which we expect to benefit from still-increasing oil and gas production but with limited direct oil price exposure.

### Gold: A Tough Act to Follow

While commodity performance was mixed last year, gold shined. Not only did it deliver an equity-like 16% excess return, but its \$1,393 average price for the year was its highest since 2013. Such spirited performance did not go unnoticed by investors, whose purchases of gold ETFs were three times as great as the average over the past decade (see Exhibit 151). The resulting ETF exposure of investors to gold now stands near a historical high (see Exhibit 152).

### Exhibit 151: Annual Inflows into Gold-Backed Exchange-Traded Funds

Inflows into gold-backed ETFs in 2019 were three times as large as the average over the past decade.



Data through December 2019.  
Source: Investment Strategy Group, Bloomberg.

### Exhibit 152: Gold Exchange-Traded Fund Holdings

Inflows in 2019 brought gold ETF holdings close to all-time highs.



Data through December 31, 2019.  
Source: Investment Strategy Group, Bloomberg.

Unfortunately, the prospects for gold’s performance in 2020 are far less lustrous. A key driver of last year’s return was declining interest rates, which reduce the opportunity costs of holding gold—an asset with no cash flows that must be physically stored at a cost (see Exhibit 153). Given our expectations for an upturn in global growth and a pause by major central banks, a further decline in interest rates that lifts gold prices is unlikely this year.

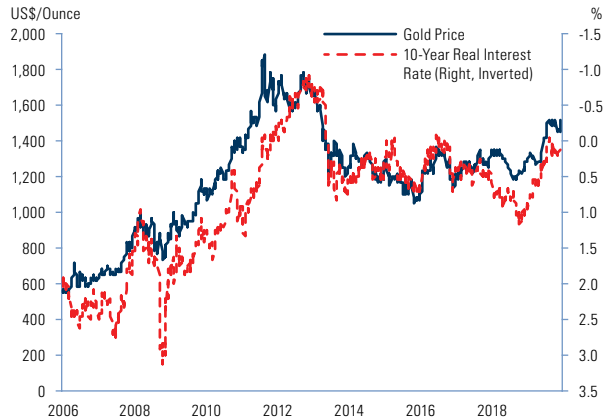
The same could be said for depreciation of the US dollar. Recall that a weaker dollar has historically been positive for gold prices, because gold is often purchased as a hedge against the debasement of fiat currencies. Yet our outlook for a stable US dollar this year removes another potential upside catalyst for gold prices, all else being equal.

Despite these macroeconomic headwinds, there are a number of idiosyncratic factors that could still support gold prices this year. Given gold’s perceived safe haven appeal, any further escalation of geopolitical tensions could lift prices, as various events of last year reminded us. Elsewhere, the firmer global growth we expect this year could boost jewelry demand, particularly in Asian markets, which account for the bulk of gold consumption. Finally, emerging market central banks could continue to accumulate gold reserves this year, as they have done for the last several.

Yet these idiosyncratic factors are difficult to predict; we would not make an investment

### Exhibit 153: Gold Price and US 10-Year Real Interest Rates

The decline in interest rates was a key driver of gold’s strong performance in 2019.



Data through December 31, 2019.  
Source: Investment Strategy Group, Bloomberg.

decision on their basis alone. We are also mindful that a long position in gold is vulnerable to a reversal of last year’s inflows, given the record size of investors’ gold ETF positions. With no strong directional view, we remain tactically neutral on the yellow metal at today’s levels.

## Abbreviations Glossary

**ACWI:** all country world index

**ATRA:** American Taxpayer Relief Act of 2012

**Avg.:** average

**BCA:** Budget Control Act of 2011

**BIS:** Bank for International Settlements

**BLS:** US Bureau of Labor Statistics

**BOE:** Bank of England

**BOJ:** Bank of Japan

**CAPE:** cyclically adjusted price/earnings ratio

**CBR:** Central Bank of Russia

**CEIC:** CEIC Data

**CFTC:** US Commodity Futures Trading Commission

**CPI:** consumer price index

**CRFB:** Committee for a Responsible Federal Budget

**DMP:** decision maker panel

**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

**EMU:** European Economic and Monetary Union

**EPS:** earnings per share

**EPU:** Economic Policy Uncertainty (index)

**ETF:** exchange-traded fund

**EU:** European Union

**ex:** excluding

**FANGMAN:** Facebook, Apple, Netflix, Google, Microsoft, Amazon and Nvidia

**FDI:** foreign direct investment

**FOMC:** Federal Open Market Committee

**FTSE 100:** Financial Times Stock Exchange 100 Index

**FX:** foreign exchange

**GDP:** gross domestic product

**GFC:** global financial crisis

**GIR:** (Goldman Sachs) Global Investment Research

**GPIF:** Government Pension Investment Fund (Japan)

**GSDEER:** Goldman Sachs dynamic equilibrium exchange rates

**GSFEER:** Goldman Sachs fundamental equilibrium exchange rates

**I/B/E/S:** Institutional Brokers' Estimate System

**IMF:** International Monetary Fund

**ISG:** (Goldman Sachs) Investment Strategy Group

**ISIL:** Islamic State of Iraq and the Levant

**ISM:** Institute of Supply Management

**LGFV:** local government financing vehicle (China)

**MLP:** master limited partnership

**MSCI:** (formerly Morgan Stanley Capital International and MSCI Barra)

**NBER:** National Bureau of Economic Research

**NYSE:** New York Stock Exchange

**OECD:** Organisation for Economic Co-operation and Development

**PCE:** personal consumption expenditure

**P/E:** price-to-earnings

**PMI:** purchasing managers' index

**PPP:** purchasing power parity

**S&P:** Standard & Poor's

**SNP:** Scottish National Party

**TAA:** tactical asset allocation

**TCJA:** Tax Cuts and Jobs Act

**TIPS:** Treasury Inflation-Protected Securities

**TOPIX:** Tokyo Price Index

**USD/JPY:** US dollar/Japanese yen

**USMCA:** United States-Mexico-Canada Agreement

**YoY:** year over year

## Notes

1. Matt Murray, "Decade of Disruption," *Wall Street Journal*, December 18, 2019.
2. 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.
3. Board of Governors of the Federal Reserve System, "Financial Stability Report," November 20, 2019.
4. Marty Young and Lotfi Karoui, "The Auto Loan Market: A Risky But Fairly Priced Sector Story," Goldman Sachs Global Investment Research, March 4, 2019.
5. Board of Governors of the Federal Reserve System, "Financial Stability Report," November 20, 2019.
6. Jeremy Stein, "Overheating in Credit Markets: Origins, Measurement and Policy Responses," speech at the "Restoring Household Financial Stability After the Great Recession: Why Household Balance Sheets Matter" research symposium sponsored by the Federal Reserve Bank of St. Louis, February 7, 2013.
7. Congressional Budget Office, "Budgetary Outcomes Under Alternative Assumptions About Fiscal Policy," August 29, 2019.
8. Eswar Prasad, *The Dollar Trap: How the U.S. Dollar Tightened its Grip on Global Finance*, Princeton University Press, 2014.
9. David Mericle, Alec Phillips and Jan Hatzius, "US Economics Analyst: 10 Questions for 2020," Goldman Sachs Global Investment Research, December 27, 2019.
10. Scott R. Baker, Nicholas Bloom and Steven J. Davis, "Measuring Economic Policy Uncertainty," *Quarterly Journal of Economics*, March 2016.
11. John Williams, "No Man Is an Island," remarks at the 2019 Asia Economic Policy Conference, Federal Reserve Bank of San Francisco, November 14, 2019.
12. Larry Buchanan and Karen Yourish, "Tracking 30 Investigations Related to Trump," *New York Times*, updated September 25, 2019.
13. Kevin Breuninger, "House Judiciary Committee Says It Could Draft 'New Articles of Impeachment' Against Trump," CNBC, December 23, 2019.
14. Katia Dmitrieva, "Trump's Re-Election Likely if Economy Stays on Course," Bloomberg, November 3, 2019.
15. Rick Newman, "The Economy Still Favors Trump's Reelection," Yahoo Finance, October 9, 2019.
16. Zach Montellaro, "Politico's 2020 Election Forecast," *Politico*, November 20, 2019.
17. Patty Housman, "Follow the Numbers: Nate Silver Analyzes 2020 Presidential Election," American University, October 21, 2019.
18. Allan Lichtman, *The Keys to the White House: A Surefire Guide to Predicting the Next President*, Rowman & Littlefield Publishers, 2008.
19. Peter W. Stevenson, "Trump Is Headed for a Win, Says Professor Who Has Predicted 30 Years of Presidential Outcomes Correctly," *Washington Post*, September 23, 2016.
20. Peter W. Stevenson, "'Prediction Professor' Who Called Trump's Big Win Also Made Another Forecast: Trump Will Be Impeached," *Washington Post*, November 11, 2016.
21. Benjamin Wofford, "He Predicted Both Trump's Election and Impeachment. What Else Does He Know?" *Washingtonian*, November 14, 2019.
22. Ian Bremmer, "eg update," Eurasia Group, December 16, 2019.
23. PredictIt, "Which Party Will Control the Senate After 2020 Election?" accessed on December 31, 2019.
24. David Kostin, "2020 US Equity Outlook: United We Fall, Divided We Rise," Goldman Sachs Global Investment Research, November 25, 2019.
25. Josh Zumbrun and Kirk Maltais, "China's Farm-Purchase Targets Under Trade Deal Face Skeptics," *Wall Street Journal*, December 18, 2019.
26. National Bureau of Asian Research, "Update to the IP Commission Report: The Theft of American Intellectual Property: Reassessments of the Challenge and United States Policy," February 2017.
27. "Remarks by Vice President Pence at the Frederic V. Malek Memorial Lecture," October 24, 2019, [www.whitehouse.gov/briefings-statements/remarks-vice-president-pence-frederic-v-malek-memorial-lecture/](http://www.whitehouse.gov/briefings-statements/remarks-vice-president-pence-frederic-v-malek-memorial-lecture/).
28. Jim Brunsten, "Brussels Warns UK Will Suffer More from Lack of EU Trade Deal," *Financial Times*, December 18, 2019.
29. Jacob Funk Kirkegaard, in a conference call with the Investment Strategy Group, December 13, 2019.
30. United States Department of Commerce, "U.S. Department of Commerce Initiates Section 232 Investigation into Auto Imports," May 23, 2018.
31. Farnaz Fasshi and Rick Gladstone, "With Brutal Crackdown, Iran Is Convulsed by Worst Unrest in 40 Years," *New York Times*, December 1, 2019.
32. Ash Carter, in a conference call with the Investment Strategy Group, December 6, 2019.
33. Karim Sadjadpour, in a conference call with the Investment Strategy Group, December 18, 2019.
34. Richard Nephew, in a conference call with the Investment Strategy Group, December 4, 2019.
35. Ash Carter, in a conference call with the Investment Strategy Group, December 14, 2018.
36. Ash Carter, in a conference call with the Investment Strategy Group, December 6, 2019.
37. Andrew Bishop, "North Korea: It's All Downhill from Here," Signum Global, October 7, 2019.
38. Daniel R. Coats, "Statement for the Record: Worldwide Threat Assessment of the US Intelligence Community," Senate Select Committee on Intelligence, January 29, 2019.
39. Ibid.
40. Editorial Board, "'They're Doing It as We Sit Here,'" *New York Times*, July 24, 2019.
41. Daniel R. Coats, "Statement for the Record: Worldwide Threat Assessment of the US Intelligence Community," Senate Select Committee on Intelligence, January 29, 2019.
42. Accenture, "Ninth Annual Cost of Cybercrime Study: Unlocking the Value of Improved Cybersecurity Protection," March 6, 2019.
43. International Telecommunication Union, "Global Cybersecurity Index 2018," July 31, 2019.
44. Institute for Economics & Peace, "Global Terrorism Index 2019: Measuring the Impact of Terrorism," November 2019.
45. Ibid.
46. Daniel R. Coats, "Statement for the Record: Worldwide Threat Assessment of the US Intelligence Community," Senate Select Committee on Intelligence, January 29, 2019.
47. Ibid.
48. Adrian Wooldridge, "The Coming Tech-lash," *Economist*, November 18, 2013.
49. Rana Foroohar, "Year in a Word: Techlash," *Financial Times*, December 16, 2018.
50. 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). A moderate risk portfolio is allocated among equities, fixed income and additional asset classes and designed to track 8% volatility.
51. Cole Hunter, David Kostin, Ben Snider, Arjun Menon, Ryan Hammond, Nicholas Mulford and Jamie Yang, "Global Strategy Paper No. 36: How Companies Spend Cash," Goldman Sachs Global Investment Research, October 17, 2019.
52. Based on forward earnings in order to avoid negative earnings around the time of the crisis.

53. Peter C.B. Phillips, Shu-Ping Shi and Jun Yu, "Testing for Multiple Bubbles: Historical Episodes of Exuberance and Collapse in the S&P 500," Cowles Foundation for Research in Economics at Yale University, September 2013.
54. From MASTERING THE MARKET CYCLE by Howard Marks. Used by permission from the publisher, HMH Media & Books, all rights reserved.
55. Ibid.
56. Ibid.
57. The diffusion index includes 20 countries with the largest weights in the Markit Global Purchasing Managers' Index.
58. Bloomberg analyst survey of US recession probability.
59. Jan Hatzius, "The FCI Impulse: It's the Tails that Matter Most," December 21, 2018.
60. Federal Reserve Board Chair Janet Yellen, exchange with ABC News reporter Rebecca Jarvis, December 16, 2015.
61. Federal Reserve Board Chair Jerome Powell, press conference, December 11, 2019.
62. Ibid.
63. Goldman Sachs Global Investment Research, "US Views: An Easier Job," December 9, 2019.
64. Elga Bartsch, Jean Boivin, Stanley Fischer and Philipp Hildebrand, "Dealing with the Next Downturn: From Unconventional Monetary Policy to Unprecedented Policy Coordination," Blackrock Investment Institute, Global Macro Outlook, August 2019.
65. Mario Draghi, Global Investment Conference, London, July 26, 2012.
66. Measures announced by the government amount to ¥13.2 trillion. When government loans, credit guarantees and private sector spending are included, the package comes to ¥26 trillion.
67. Investment Strategy Group, *Outlook: Within Sight of the Summit*, January 2014.
68. Based on actual flows data through October 2019 and weekly estimates through December 24, 2019, reported by Investment Company Institute (ICI).
69. Scott Rubner, Goldman Sachs Securities Division, "GS Tactical Fund Flows," December 20, 2019.
70. Dubravko Lakos-Bujas, Bhupinder Singh, Narendra Singh, Kamal Tamboli, Arun Jain and Marko Kolanovic, "US Equity Markets, 2020 Outlook," JPMorgan, December 9, 2019.
71. David J. Kostin, Ryan Hammond, Ben Snider, Arjun Menon, Cole Hunter, Nicholas Mulford and Jamie Yang, "US Equities and the 2020 Election: Rhetoric vs. Probability," Goldman Sachs Global Investment Research, November 1, 2019.
72. Ibid.
73. Marko Kolanovic, "2020 Equity Derivatives Outlook," JPMorgan, December 9, 2019.
74. PredictIt, "Which Party Will Control the Senate After the 2020 Election?"
75. "Trump Says He and Xi Will Sign China Trade Deal," Reuters, December 24, 2019.
76. Chikafumi Hodo, "World's Largest Pension Fund May Have \$19 Billion a Year to Buy Foreign Bonds," Bloomberg, October 2, 2019.
77. Measured from the Japanese 2012 general election.
78. In its latest Monetary Policy Report, the Central Bank revised the projected current account deficit from \$8.2 billion in 2019 to \$600 million in 2020 and \$2.5 billion in 2021. Central Bank of Chile, "Monetary Policy Report," December 2019.
79. Federal Reserve Board of Governors, "Transcript of Chair Powell's Press Conference," December 11, 2019.
80. National Association of State Budget Officers, "Summary: Fall 2019 Fiscal Survey of States," December 17, 2019.
81. Jean-Pierre Aubry and Caroline V. Crawford, "Update on the Funded Status of State and Local Pension Plans—FY 2018," Center for State & Local Government Excellence and Center for Retirement Research at Boston College, October 2019.
82. Moody's, "State Government—US: 2020 Outlook Stable with Continued Revenue Growth and Record Reserve Levels," December 2019.
83. Relevant forecasts are by Citi Research Municipal Outlook, J.P. Morgan Municipal Outlook, Barclays Muni Outlook, and Morgan Stanley Muni Outlook.
84. Edison Yu, "Banking Trends: Measuring Cov-Lite Right," Federal Reserve Bank of Philadelphia Research Department, Q3 2018.
85. Bank of Mexico Board of Governors, "Quarterly Inflation Report," August 28, 2019.
86. Bloomberg New Energy Finance.
87. Bloomberg New Energy Finance, ISG Calculations.





## Investment Risks

Risks vary by the type of investment. For example, investments that involve futures, equity swaps, and other derivatives, as well as non-investment grade securities, give rise to substantial risk and are not available to or suitable for all investors. We have described some of the risks associated with certain investments below. Additional information regarding risks may be available in the materials provided in connection with specific investments. You should not enter into a transaction or make an investment unless you understand the terms of the transaction or investment and the nature and extent of the associated risks. You should also be satisfied that the investment is appropriate for you in light of your circumstances and financial condition.

Any reference to a specific company or security is not intended to form the basis for an investment decision and are included solely to provide examples or provide additional context. This information should not be construed as research or investment advice and should not be relied upon in whole or in part in making an investment decision. Goldman Sachs, or persons involved in the preparation or issuance of these materials, may from time to time have long or short positions in, buy or sell (on a principal basis or otherwise), and act as market makers in, the securities or options, or serve as a director of any companies mentioned herein.

*Alternative Investments.* Alternative investments may involve a substantial degree of risk, including the risk of total loss of an investor's capital and the use of leverage, and therefore may not be appropriate for all investors. Private equity, private real estate, hedge funds and other alternative investments structured as private investment funds are subject to less regulation than other types of pooled vehicles and liquidity may be limited. Investors in private investment funds should review the Offering Memorandum, the Subscription Agreement and any other applicable disclosures for risks and potential conflicts of interest. Terms and conditions governing private investments are contained in the applicable offering documents, which also include information regarding the liquidity of such investments, which may be limited.

*Commodities.* Commodity investments may be less liquid and more volatile than other investments. The risk of loss in trading commodities can be substantial due, but not limited to, volatile political, market and economic conditions. An investor's returns may change radically at any time since commodities are subject, by nature, to abrupt changes in price. Commodity prices are volatile because they respond to many unpredictable factors including weather, labor strikes, inflation, foreign exchange rates, etc. In an individual account, because your position is leveraged, a small move against your position may result in a large loss. Losses

may be larger than your initial deposit. Investors should carefully consider the inherent risk of such an investment in light of their experience, objectives, financial resources and other circumstances. No representation is made regarding the suitability of commodity investments.

*Currencies.* Currency exchange rates can be extremely volatile, particularly during times of political or economic uncertainty. There is a risk of loss when an investor has exposure to foreign currency or are in foreign currency traded investments.

*Derivatives.* Investments that involve futures, equity swaps, and other derivatives give rise to substantial risk and are not available to or suitable for all investors.

*Emerging Markets and Growth Markets.* Investing in the securities of issuers in emerging markets and growth markets involves certain considerations, including: political and economic conditions, the potential difficulty of repatriating funds or enforcing contractual or other legal rights, and the small size of the securities markets in such countries coupled with a low volume of trading, resulting in potential lack of liquidity and in price volatility.

*Equity Investments.* Equity investments are subject to market risk, which means that the value of the securities may go up or down in respect to the prospects of individual companies, particular industry sectors and/or general economic conditions. The securities of small and mid-capitalization companies involve greater risks than those associated with larger, more established companies and may be subject to more abrupt or erratic price movements.

*Fixed Income.* Investments in fixed income securities are subject to the risks associated with debt securities generally, including credit/default, liquidity and interest rate risk. Any guarantee on an investment grade bond of a given country applies only if held to maturity.

*Master Limited Partnerships ("MLPs").* MLPs may be generally less liquid than other publicly traded securities and as such can be more volatile and involve higher risk. MLPs may also involve substantially different tax treatment than other equity-type investments, and such tax treatment could be disadvantageous to certain types of retirement accounts or charitable entities.

*Futures.* Security futures involve a high degree of risk and are not suitable for all investors. The possibility exists that an investor could lose a substantial amount of money in a very short period of time because security futures are highly leveraged. The amount

they could lose is potentially unlimited and can exceed the amount they originally deposited with your firm. Prior to buying a security future you must receive a copy of the Risk Disclosure Statement for Security Futures Contracts.

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Period	Gross Return	Net Return	Differential
1 year	6.17%	4.61%	1.56%
2 years	12.72%	9.43%	3.29%
10 years	81.94%	56.89%	25.05%

A description of fees is available in Part 2A of the GS&Co. Form ADV. Past performance does not guarantee future results.

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