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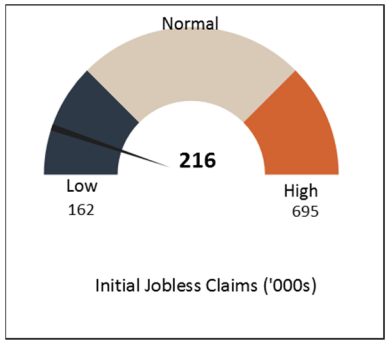
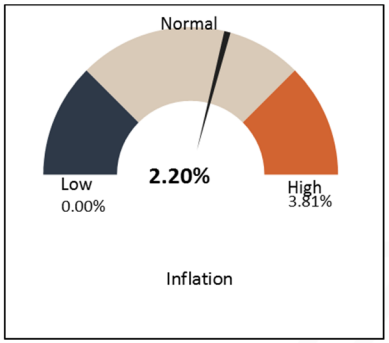
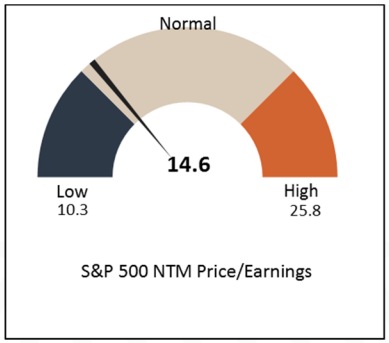
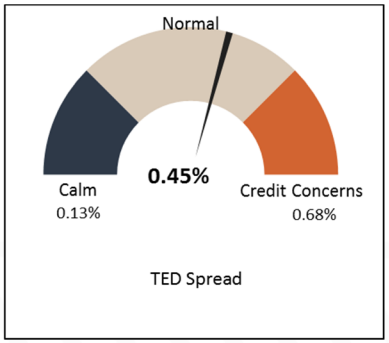
2019 Economic & Market Outlook

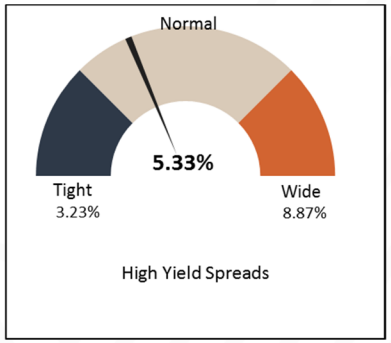
January 2019











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2019 Economic & Market Outlook

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2019 Economic & Market Outlook

Executive Summary

Global markets ended 2018 on a dismal note, with many major asset categories posting negative returns for the year after a challenging fourth quarter. Foremost on investors' minds are two pressing questions: One, now that the Fed has taken away the proverbial punch bowl, is the party over for investors? And two, are we now about to experience a damaging recession?

In our view, the recent market gyrations reflect unease over the uncertain direction of economic policy and fear of a global trade war, rather than any deterioration in the underlying economic fundamentals. Indeed, the most recent economic data confirm that the U.S. economy remains firmly on track for continued growth in 2019 and even 2020. As a result, we are optimistic about the outlook for 2019, although we expect it will be another year of decoupling between positive economic fundamentals and negative market sentiment in reaction to political uncertainty here and abroad.

We also enter 2019 with what might be considered a clean slate. Equity valuations have recalibrated lower and now offer considerably more upside to investors. Spreads on high-yield bonds and EM debt have widened to where investors are fully compensated for being in these asset classes, while default risk remains low and there is no sign of a recession on the horizon. If anything, the key risk investors face today is being too conservatively positioned in reaction to the recent market sell-off to take full advantage of these opportunities.

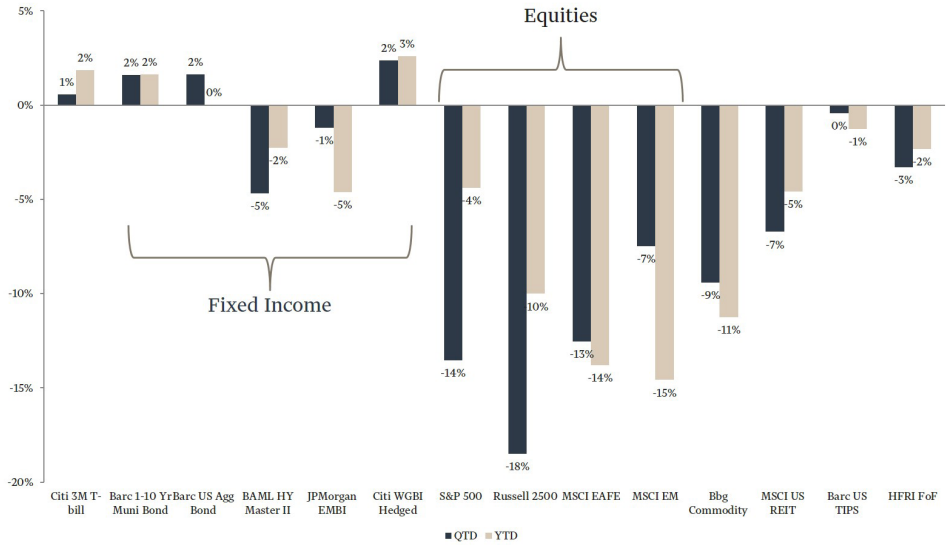
Our Key Investment Themes for 2019

1. The global growth expansion continues.
2. Volatility is back in the picture.
3. The dollar's bull run may be finally ending.
4. Cash is competitive again. And bonds are not just for income.
5. In bonds, favor credit over duration.
6. Equities are likely to rebound and offer compelling value at current levels.
7. Favor emerging markets over developed markets.
8. There's limited upside for commodities in 2019.
9. Alternative investments have a bigger role in portfolios.
10. Diversification remains a critical tool for risk control.

2018 Wrap-Up

Let's begin with a review of how the major asset classes performed in 2018. Chart 1 provides a pictorial depiction of Q4 and full-year results. The underlying performance data can be found in the dashboard at the back of this report.

Chart 1: 2018 Q4 and Full-Year Asset Class Returns



Source: Bloomberg, FactSet, MSCI, Vanguard Source: FactSet

In our 2018 outlook, we cautioned investors that 2018 was likely to be a challenging year and not to expect a repeat of 2017's stellar returns. We cited a number of reasons for caution:

- The potential for policy missteps by central banks
- The disruptive impact of rising populist movements around the world
- The impact of growing protectionist sentiment on global trade
- The economic slowdown in China and its effect on emerging markets

Through Q3, it seemed our concerns were unfounded. Investors were buoyed by signs that the synchronized global growth trend was continuing into 2018. The steep cut in corporate tax rates from 35% to 21% helped fuel a strong rally in U.S. equity markets. Emerging markets appeared to shrug off challenges from the strong dollar, a slowdown in China and weak commodity prices. As the year progressed, markets powered ahead to hit new highs in September, and it appeared that 2018 would be another good year for investors.

However, Q4 brought a dramatic shift in market sentiment, leading to widespread market sell-offs in October and December. A few reasons were cited for the abrupt change.

1. The Federal Reserve unnerved markets by signaling a new and considerably more hawkish stance on future interest rate hikes. A steep fall in U.S. and global equity markets forced the Fed to issue a clarification that it had not abandoned its pledge of a measured and gradual path to raising rates.

2. Q3 corporate earnings reports indicated that a number of industrial companies were seeing margins squeezed by the strong dollar, rising wages and higher materials prices at the same time protectionist measures were impacting business conditions. Markets grew increasingly nervous that the escalating rhetoric between the U.S. and China would bring about punitive tariffs, which could also affect other countries and lead to a broader global slowdown.

3. High-flying technology companies that had propelled markets to new highs in 2018 faced a slew of negative headlines about their business practices, sparking fears of a crackdown by regulators that could impede their future growth. With investors already rattled by headlines, the subsequent disclosures of weakening business conditions in China, a key export market, helped spark a massive sell-off across the sector.

As highlighted in Chart 1, virtually all asset classes posted negative returns for the year, giving the impression that diversification provided little benefit to investors in 2018. However, for the first time since the global financial crisis, bonds were the best performing asset class and helped protect investor capital. And if we look more closely at the data for Q4 and December (the worst month for equities), we see that diversification across equity markets was helpful to investors:

Chart 2: Global Equity Performance

Category	Benchmark	2018	4th Qtr.	December
U.S. Large Cap	S&P 500	-4.38%	-13.52%	-9.03%
U.S. SMID	Russell 2000	-11.01%	-20.20%	-11.88%
Developed non-U.S.	MSCI EAFE	-13.79%	-12.54%	-4.85%
Emerging Markets	MSCI EM	-14.98%	-7.56%	-2.70%
Global Equities	MSCI ACWI	-9.42%	-12.75%	-7.04%

Source: FactSet

Economic Outlook

Global GDP growth is expected to slow in 2019, mainly due to lower growth in the U.S. and China. U.S. GDP growth is predicted to fall from an above-trend 2.9% in 2018 to 2.6% in 2019, which many economists now view as a more accurate measure of the economy's long-term growth potential. GDP growth for China is forecasted to fall to 6.2% this year. Besides the continuing trade conflict with the U.S., the drop reflects a recalibration of growth expectations as part of the ongoing transition from a manufacturing-driven, centrally planned economy to a more consumer-driven economic model. Chart 3 is a summary of the latest forecasts from the International Monetary Fund (IMF), World Bank, Organization for Economic Cooperation and Development (OECD) and Bloomberg:

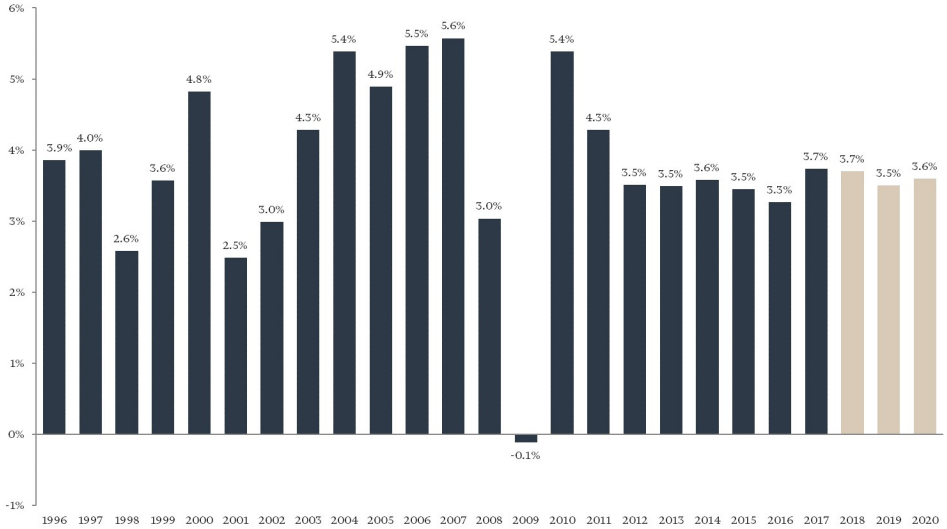
The foremost concern for investors is whether the current global expansion is finally ending. While economic growth has slowed from the torrid pace of early 2018, it's still forecasted to stay strong over the next couple of years:

Chart 3: Latest Global GDP Forecasts

	IMF - 1/19		World Bank - 1/19		OECD - 11/18		Average	
	2018	2019	2018	2019	2018	2019	2018	2019
World	3.7	3.5	3.0	2.9	3.7	3.5	3.9	3.6
Developed Markets	2.3	2.0	2.2	2.0	2.4	2.1	2.4	2.1
USA	2.9	2.5	2.9	2.5	2.9	2.7	2.9	2.6
Japan	0.9	1.1	0.8	0.9	0.9	1.0	1.1	1.1
Eurozone	1.8	1.6	1.9	1.6	1.9	1.8	1.9	1.7
UK	1.4	1.5	1.3	1.4	1.3	1.4	1.3	1.4
Emerging Markets	4.6	4.5	4.2	4.2	4.7	4.7	5.1	4.9
Brazil	1.3	2.5	1.2	2.2	1.2	2.1	1.2	2.3
Russia	1.7	1.6	1.6	1.5	1.6	1.5	1.6	1.5
India	7.3	7.5	7.3	7.5	7.5	7.3	7.4	7.4
China	6.6	6.2	6.5	6.2	6.6	6.3	6.6	6.2

Source: IMF. World Bank, OECD

Chart 4: Global Economic Growth Prospects



Source: World Economic Outlook, International Monetary Fund, October 2018

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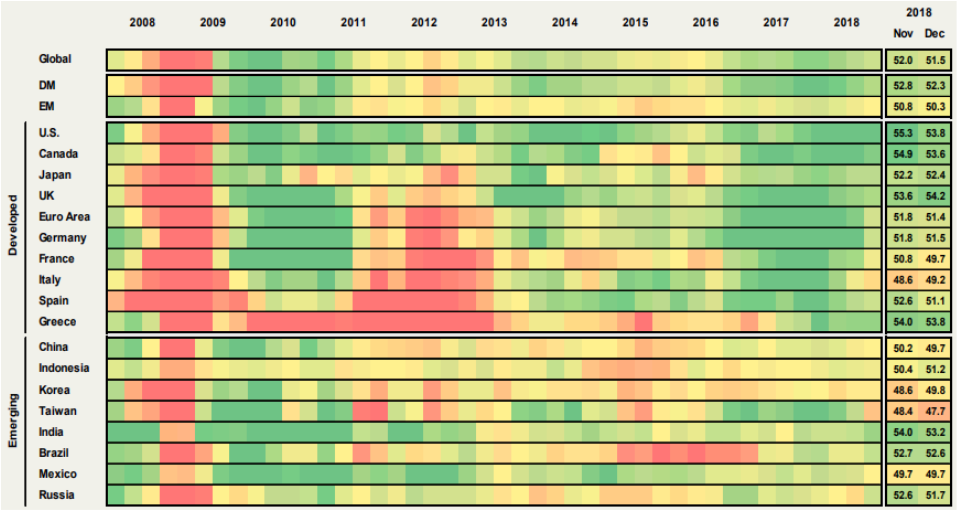
Although global manufacturing activity slowed in 2018, the latest readings from manufacturing purchasing managers show they remain broadly optimistic about their business prospects going into 2019:

Chart 5: Global Purchasing Managers Index - Manufacturing

Data as of 12/31/2018

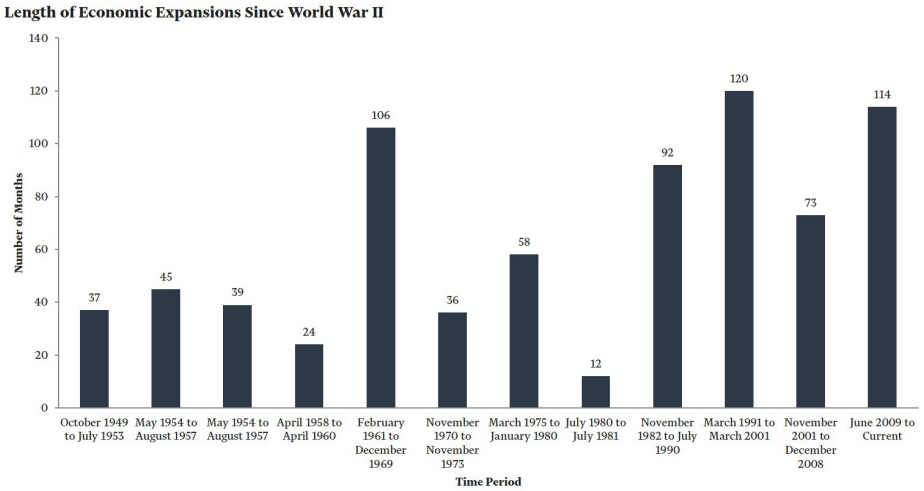


Source: 1Q 2019 Guide to The Markets, JP Morgan Asset Management, January 2019

A big question for investors is the outlook for the U.S. economy, which has been a key contributor to higher global growth in recent years. Many worry that the current expansion, now the second longest on record, cannot continue indefinitely and that after a nearly 10-year advance, the economy is overdue for a recession.

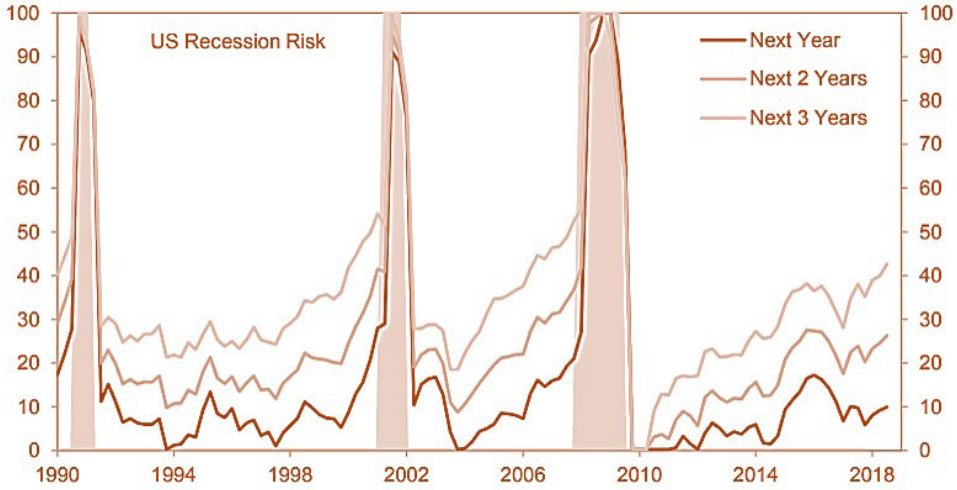
In our view, the long duration of the current cycle is irrelevant. A recession is usually triggered by higher interest rates that lead to a sharp slowdown in the economy or a steep rise in borrowing costs. With GDP growth below 2% for much of the post-crisis period, the anemic nature of the expansion and the unusual late-cycle fiscal boost from the 2017 tax cuts point to a continuation of the current expansion. An absence of traditional recession indicators, such as an inverted yield curve or a blowout of high-yield spreads, confirms this expectation. A recent Goldman Sachs study puts the likelihood of a U.S. recession at 10% over the next 12 months, rising to 25% over the next two years and 43% over the next three years (Chart 7). We believe the odds of a recession before 2021 are low as policymakers will be keen to avoid a downturn going into the presidential election.

Chart 6: Nearing the End of the Economic Cycle



Source: National Bureau of Economic Research

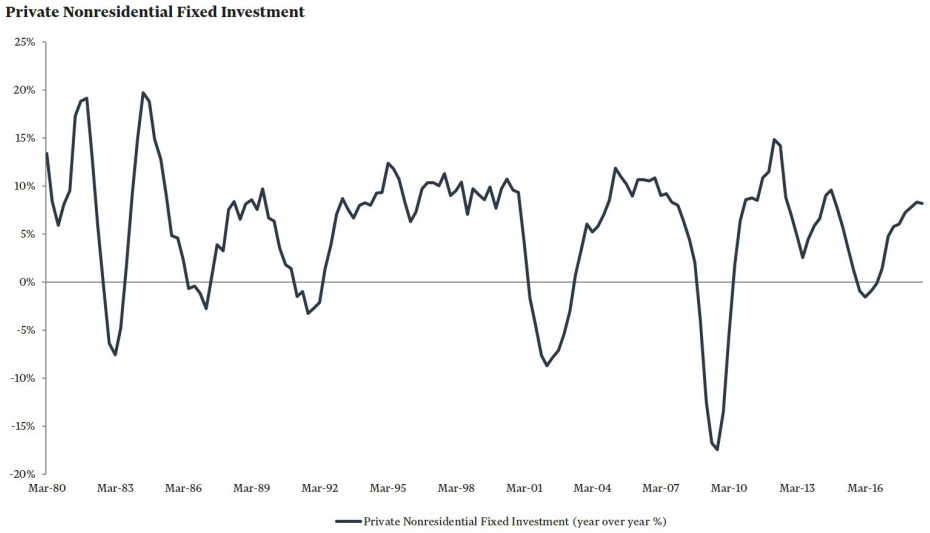
Chart 7: U.S. Recession Risk Estimates



Source: J. Hatzius, 2019 Outlook: The Home Stretch, Goldman Sachs Economics Research, November 2018

Capital investment and productivity increases will be crucial drivers for a continuation of the current expansion. In the uncertain economic environment of the post-crisis era, businesses were reluctant to make large capital investments and preferred to hold cash in reserve or execute share buy-backs. As a result, many businesses have been operating with aging or obsolete machinery, which prevents them from taking full advantage of recent technical and technological advances to improve operating efficiency. The 2017 corporate tax cuts have greatly improved business profitability, and we believe corporations should now be comfortable investing in new capital equipment:

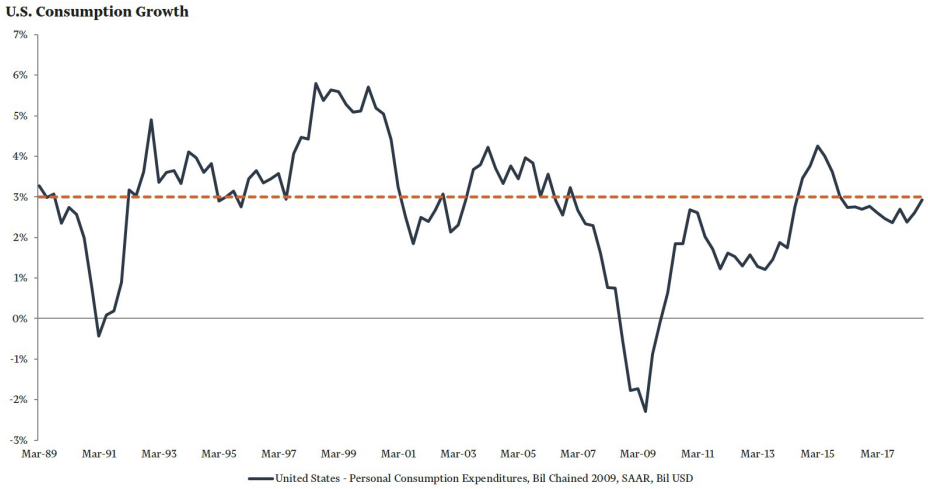
Chart 8: Capital Investment by Businesses: A Key Driver of GDP Growth



Source: Federal Reserve Economic Data, Federal Reserve Bank of St Louis, December 2018

Consumer spending accounts for nearly two-thirds (2/3) of U.S. GDP, which makes it a key determinant of economic health. We're reassured that the overall backdrop for this critical segment remains solidly positive: national unemployment stands at historically low levels, aided by strong jobs growth. Workers have seen their purchasing power boosted by a combination of wage growth, subdued inflation and a sharp fall in energy prices. Deleveraging has left consumer balance sheets in good shape, and savings rates have gone up. And, despite the recent drop in investment markets, consumer sentiment remains very healthy. All this bodes well for the U.S. economy as we enter 2019.

Chart 9: The Health of the U.S. Consumer



Source: FactSet

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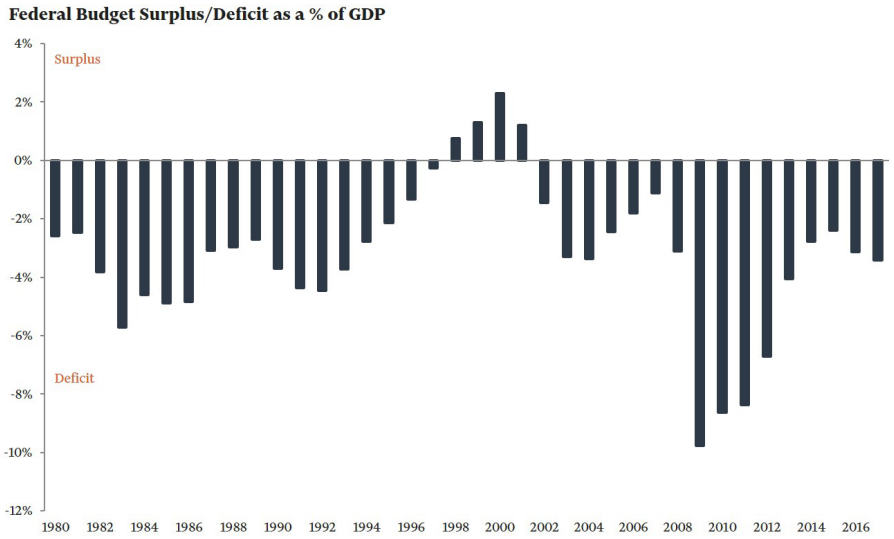
Key Risks to Our Forecast

United States

Policy missteps by the Federal Reserve are a significant risk to our forecast. Monetary policy is now considered tight, with real interest rates above zero. As it continues to shrink its balance sheet, the Fed is, in effect, withdrawing liquidity from the financial system. With an already tight monetary policy, a growing budget deficit and the potential pause in further rate hikes, the Fed will have limited room to maneuver if economic conditions deteriorate down the line, unlike other developed markets.

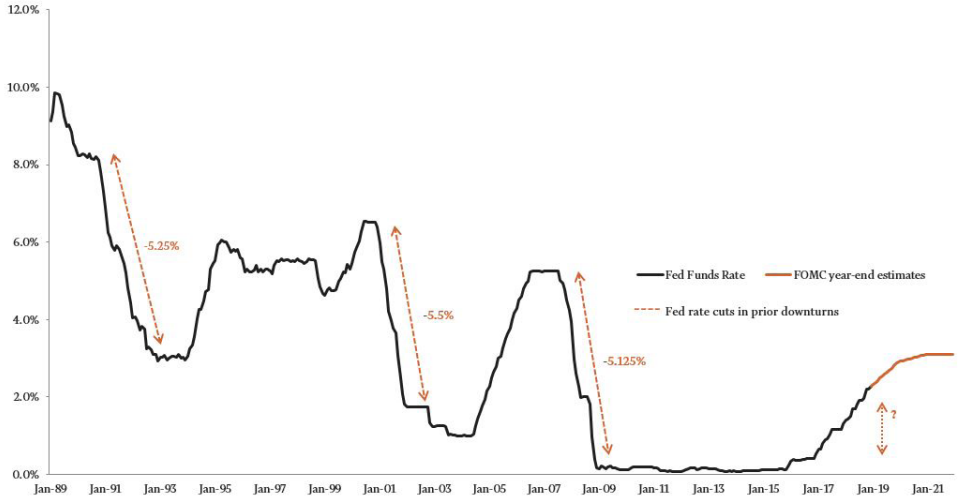
Chart 10: Impact of Fiscal Policy on Budget Deficits



Source: Federal Reserve Economic Data, Federal Reserve Bank of St Louis, December 2018

One of the unusual aspects of the current tightening cycle is the virtual absence of inflationary pressures. We think the Fed was compelled to hike rates; otherwise, it would have little ability to cut them in the future. Markets are currently pricing in one rate hike in 2019. U.S. rates will still be low by historical levels, and policymakers will still be restricted in their ability to cut interest rates in the event of a downturn, unlike prior downturns when rates were cut by more than 5%.

Chart 11: Federal Funds Rate Expectations



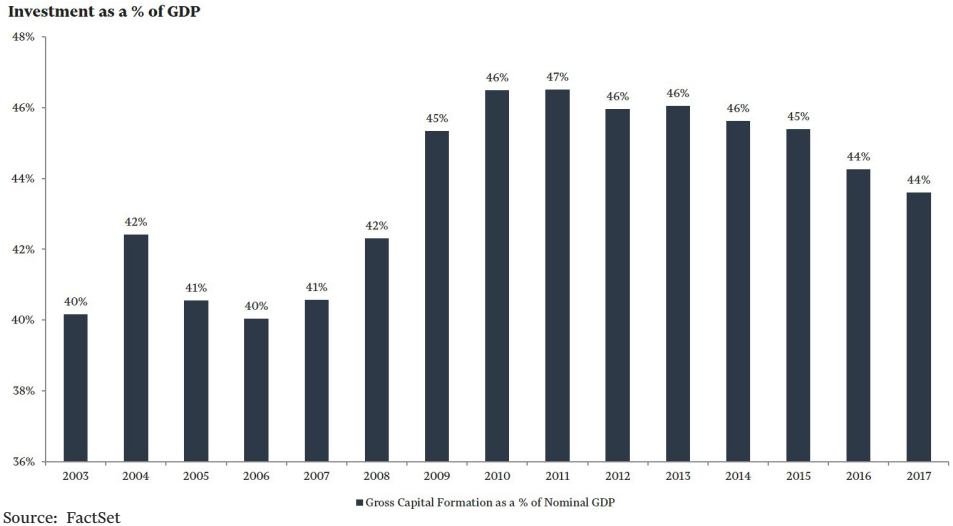
Source: U.S. Recession Rundown, Goldman Sachs Macro Research, October 2018

The other aspect of the Fed's normalization policy is the ongoing reduction of its balance sheet to unwind actions taken following the financial crisis (quantitative easing). At a runoff rate of $50 billion per month, the impact of the contraction is relatively small in comparison to the overall $4.06 trillion balance sheet at the end of 2018.

China

As shown in Chart 12 on the following page, China is attempting a delicate transition from a centrally-planned economy based on manufacturing to a more consumer-driven economic model. This transition has been hampered by the government's periodic need to reverse course and loosen restrictions on industrial production to maintain economic and market stability. Just recently, the government reduced reserve requirements and loosened restrictions on bank lending. It also stated its readiness to implement other stimulus measures to help stabilize growth.

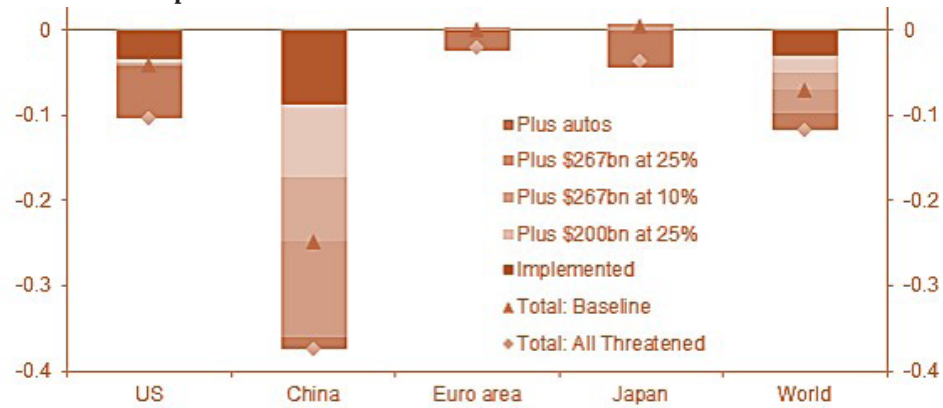
Chart 12: China's Rebalancing Act



Source: FactSet

The U.S.-China trade dispute is another major risk to our 2019 outlook. It has already caused a slowdown in the Chinese economy even before all of the sanctions have taken effect. As highlighted in Chart 13, if all the threatened tariffs are implemented, a contraction equal to 0.4% of China's GDP is expected in the region:

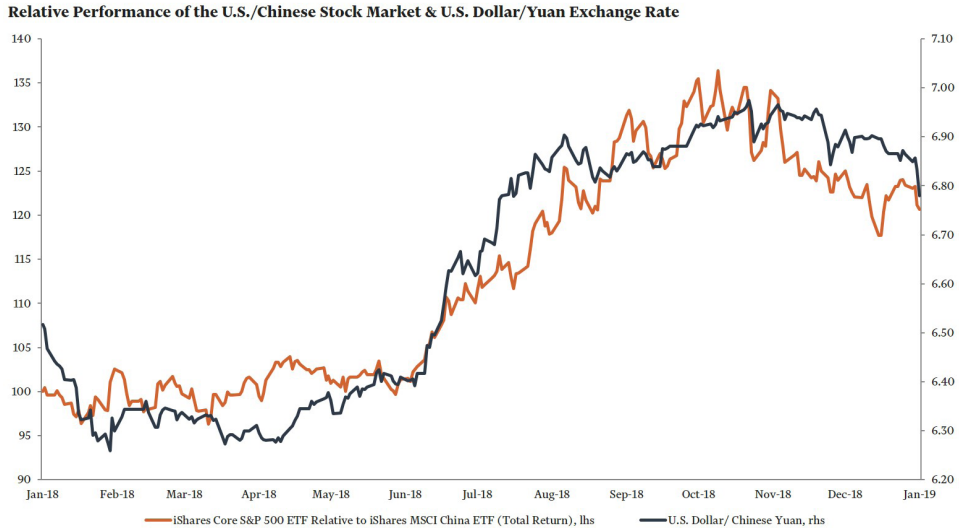
Chart 13: GDP Impact of Tariffs



Source: J. Hatzius, Landing the Plane, Goldman Sachs Economic Research, November 2018

If we look at the relative performance of equity markets and currency rates, the U.S. looks to be "winning" the early stages of the trade dispute. However, it's not in either country's interest to have the trade tensions escalate into a protracted trade war. U.S. companies are already seeing steeper prices for essential materials and components obtained from China. Thus, just as with the European Union (EU) and Mexico/Canada conflicts, we expect a behind-the-scenes compromise that partially addresses some of the most critical issues and allows each side to claim victory.

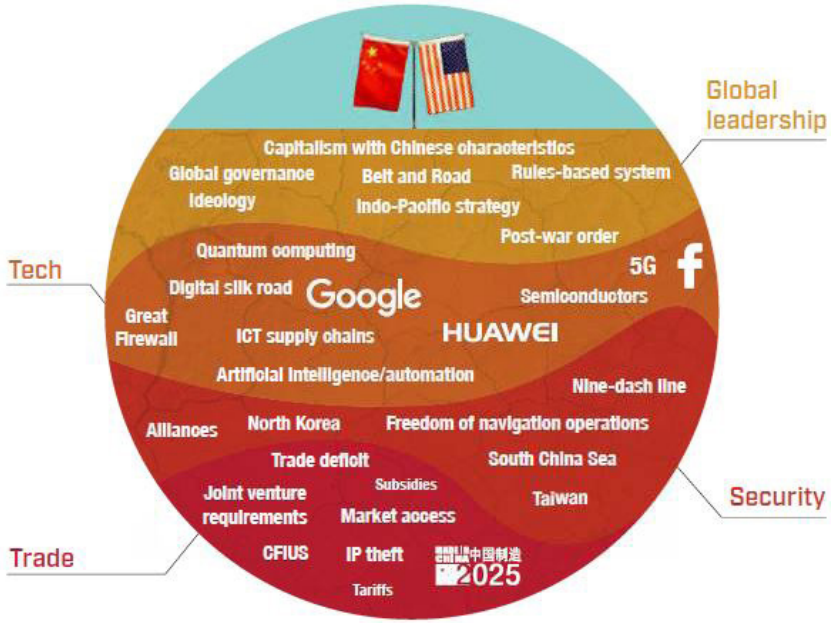
Chart 14: U.S., China and Tariffs



Source: FactSet

In its Top Risks 2019 report, the Eurasia Group explained that the U.S.-China dispute is not merely about trade barriers or intellectual property, but rather a fight over global dominance by two competing ideologies. With the U.S. stepping back from its traditional role as the enforcer of world order, China is eager to fill the void. Even if the current trade issues are resolved, the potential for a longer-term conflict between the two countries will remain. Here's a snapshot of the many contentious issues causing the conflict.

Chart 15: The Many Layers of U.S.-China Trade Tensions



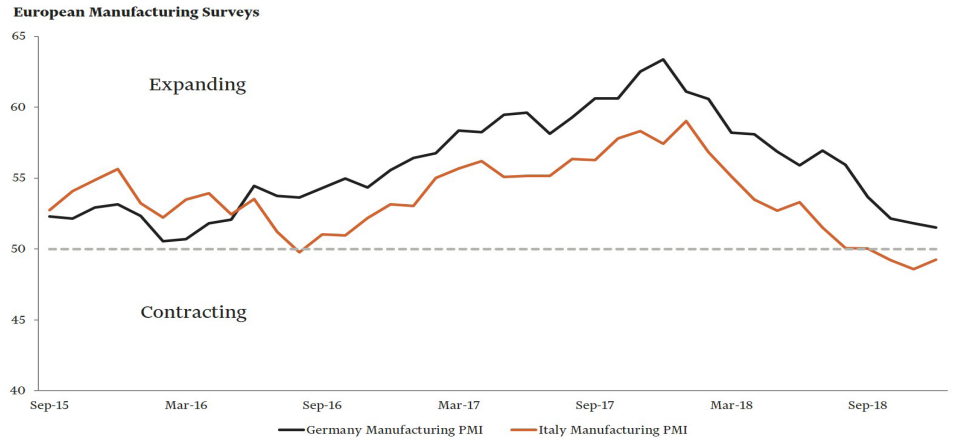
Source: Top Risks 2019, The Eurasia Group, January 2019

Europe

Turning to Europe, we see two major risks affecting our 2019 outlook. Since late 2017, European economic growth has been falling, with Italy at the epicenter. As the third largest economy in the Eurozone, Italy has a strong bearing on the overall performance of the entire region. The Italian government and the European Commission are at odds over how much the Italian budget deficit can rise to accommodate earlier pledges for higher government aid. If they're unable to come to terms, other populist regimes in Europe may demand a similar relaxation of deficit targets for their own countries.

The other major risk facing Europe is the fast-approaching March 29 deadline for Britain's exit from the European Union. On January 15, the withdrawal agreement was defeated by the biggest margin in parliamentary history. The next day, Prime Minister May's government survived a vote of confidence likely because the alternative, a Corbyn-led Labour government, is considered worse. However, the odds of a hard Brexit with no withdrawal agreement in place may be rising.

Chart 16: Europe Slowing

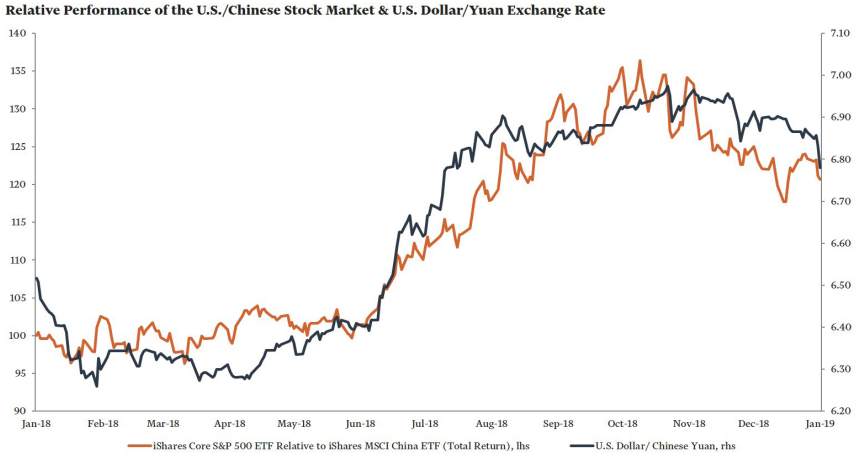


Source: FactSet

Emerging Markets

The strong dollar, higher U.S. interest rates and economic slowdown in China all had a profound impact on emerging markets (EM) last year. Countries with high levels of dollar-denominated debt saw sharply higher interest costs as U.S. rates rose and the dollar strengthened. Importers of oil and other commodities traded in dollars faced large price increases in their local currencies. Economies reliant on commodity exports were hurt by the falloff in demand from China and overall low worldwide demand for commodities and natural resources.

Chart 17: EM Headwinds



Source: FactSet

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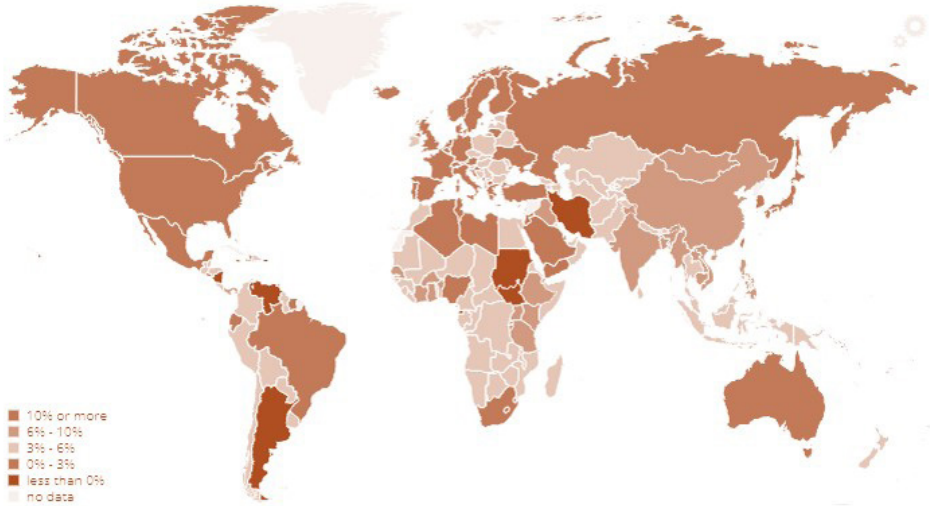
Our Key Investment Themes For 2019

1. The global growth expansion continues.

Although we may be in the later stages of a nearly 10-year expansionary cycle and global growth is slowing, the overall outlook for 2019 remains promising. As highlighted in Chart 18, except for well-documented trouble spots such as Argentina, Venezuela, Iran and Sudan, most of the world is expected to generate positive economic growth. Inflation remains in check, and central banks are still in accommodative mode. Additionally, consumers should benefit from low commodity prices.

Chart 18: IMF 2019 GDP Growth Outlook

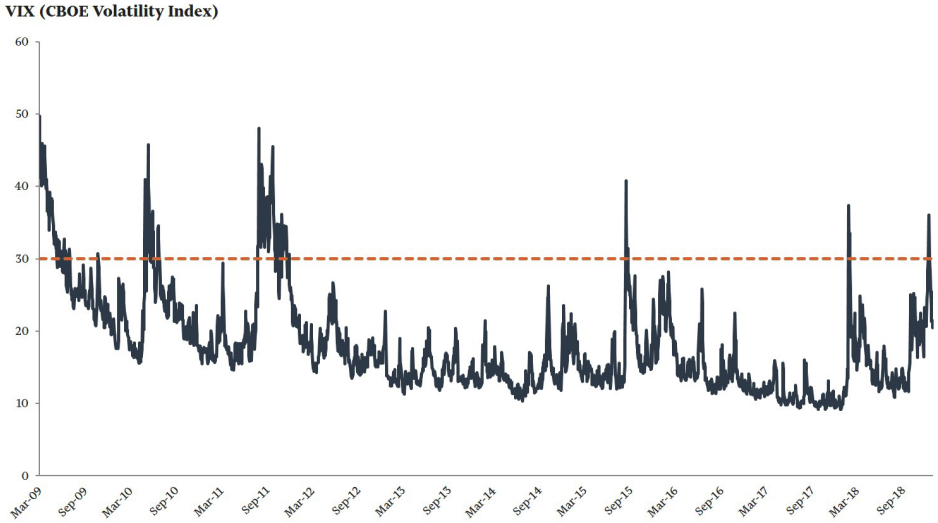


Source: IMF DataMapper, World Economic Outlook, IMF, October 2018

2. Volatility is back in the picture.

After several years of abnormally low interest rates and expansionary monetary policy, policy- normalization measures by the Federal Reserve and other central banks contributed to a sharp rise in market volatility in 2018. Unresolved tensions over global trade, along with disruptive populist and nationalist forces, all point to the continuation of a more volatile macro environment in 2019, with a continued decoupling of markets from their underlying economic fundamentals. Investors should embrace, rather than be deterred by, the rising volatility. It may provide opportunities for skilled managers to profitably pursue differentiated strategies that were less effective when market volatility was suppressed.

Chart 19: Volatility has Re-Emerged

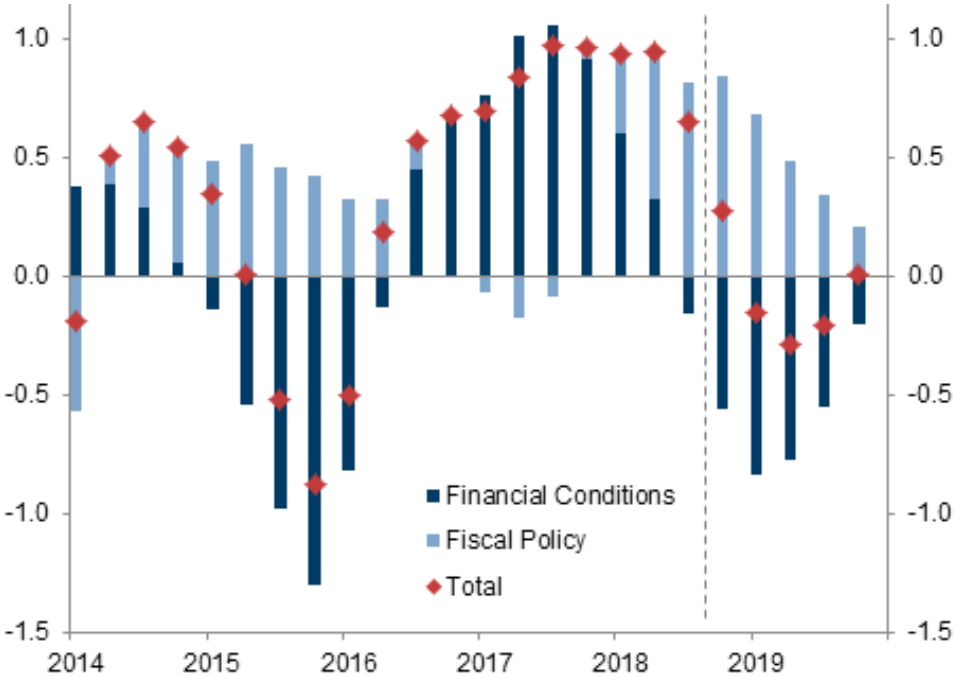


Source: FactSet

3. The dollar's bull run may finally be coming to an end.

Stalling international growth combined with strong U.S. growth fueled the resumption of the dollar's bull market in 2018. With rate hikes likely on hold, there is less impetus for the dollar to continue rising in 2019, given that we're already experiencing tighter financial conditions and diminishing impact from the recent tax changes. A stable to weaker dollar will not only aid U.S. exports, but also benefit global buyers of commodities priced in dollars. It will also provide some welcome respite to emerging market debt and currencies that have been under siege from the strong dollar.

Chart 20: Impact of Tighter Financial Conditions and Waning Fiscal Stimulus on Dollar



Source: J. Hatzius, 2019 Macro Outlook: The Home Stretch, Goldman Sachs Economics Research, November 2018

4. Cash is competitive again. And bonds are not just for income.

After nearly a decade, cash and bond yields have risen to the point where they now offer a tangible alternative to riskier assets.

More importantly, 2018 demonstrated that cash and bonds remain valuable buffers during periods of market turmoil. In a year when virtually all asset classes lost value, the best performing assets were cash (+1.86%) and municipal bonds (+1.64%). (See Chart 1.)

Chart 21: Tangible Yields on Cash and Fixed Income

Source: Federal Reserve Economic Data, Federal Reserve Bank of St Louis, January 2019

5. In bonds, favor credit over duration.

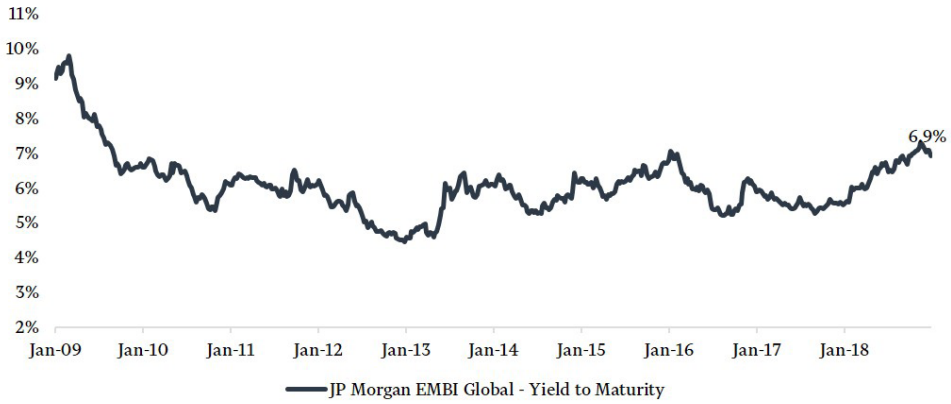
After the 2018 sell-off, high-yield bonds and emerging markets debt now offer good value. With defaults well below historical levels and no signs of an impending recession, wider high-yield spreads going into 2019 offer attractive total returns (Chart 22). We see comparable opportunities in EM debt.

Chart 22: High Yield Spreads Reflect Benign Economic Conditions

Source: FactSet

Although full-year returns for both local currency and hard currency debt were negative, this was largely due to sell-offs in Turkey, Argentina and South Africa early in the year. During the heightened volatility in Q4, EM debt was one of the bright spots. This category, which currently offers yields close to 7%, should benefit from the anticipated end to Fed tightening, the positive outlook for global growth and expected fiscal stimulus measures in China.

Chart 23: EM Debt Attractive at Current Levels



Source: FactSet

6. Equities are likely to rebound and offer compelling value at current levels.

Per Chart 24, global equity markets underwent a significant contraction in price/earnings multiples when stocks sold off in December:

Chart 24: Equity Multiple Contraction
12-month forward P/E

Source: P. Oppenheimer, Bear Necessities, Goldman Sachs Investment Research, January 2019

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Breaking it out a little further, Chart 25 shows that P/E multiples for U.S. large-cap stocks have retracted five years to their January 2014 levels. While we used U.S. large-cap stocks as an example, we see comparable re-ratings in small- and mid-cap stocks, developed international equities and emerging market equities.

Chart 25: Multiple Contraction for U.S. Large-Cap Stocks

Source: FactSet

Since the last financial crisis, markets have disproportionately rewarded stocks of companies that have demonstrated solid revenue and earnings growth in a low-growth/low-inflation environment. As a result, value stocks have greatly underperformed growth stocks over this period. The disparity in relative valuations approached extremes last seen during the early 2000s tech bubble. In the Q4 sell-off, however, the highest-flying growth stocks experienced the greatest losses, while value stocks held up better. It appears value stocks may be poised for a turnaround. However, investors must be careful not to get caught in a value trap and buy cheap stocks that are deservedly cheap.

Chart 26: Value vs. Growth Underperformance for Stocks in MSCI World Index

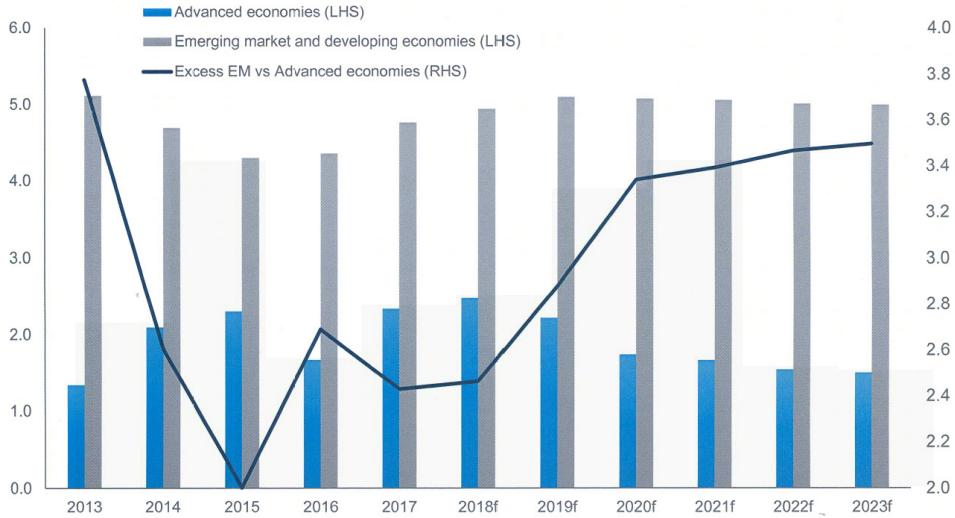
Source: P. Oppenheimer, Bear Necessities, Goldman Sachs Investment Research, January 2019

7. Favor emerging markets over developed markets.

As shown in Chart 27 on the following page, developed markets (DM) are forecasted to have decelerating GDP growth in the coming years, due mainly to the combined challenges of disruptive forces in Europe and chronic fiscal, structural and demographic problems in Japan.

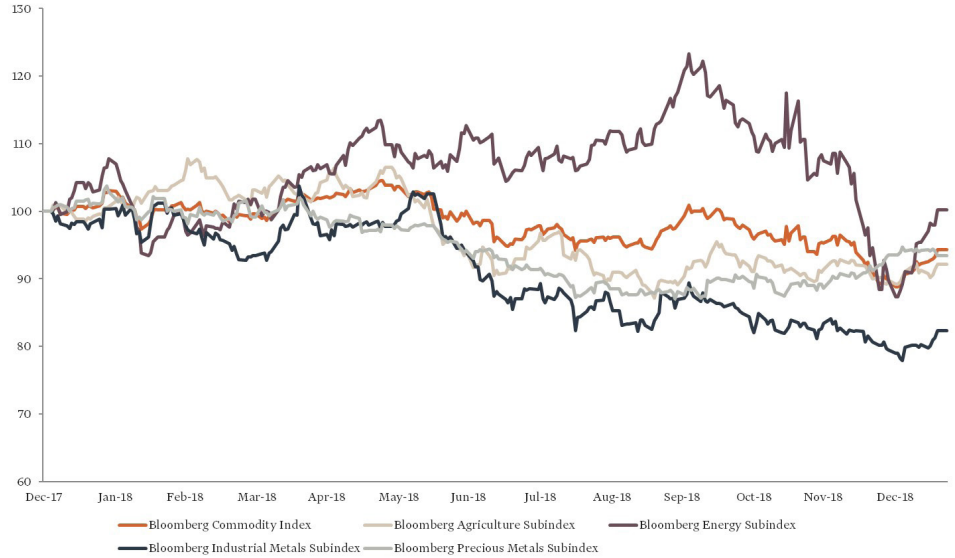
Conversely, emerging markets offer superior economic prospects in the long run, plus less risky debt burdens and lower political risk than developed countries. Valuations today for EM equities, developed markets equities and EM debt all provide compelling opportunities for investors. Current valuation multiples for international equities suggest attractive upside, despite the lowered growth expectations.

Chart 27: EM vs. DM Real GDP Growth



Source: Emerging Markets 2019 Outlook: Back in Black, Ashmore Investment Management, December 2018

Chart 28: 2018 Price Movements for Major Commodity Sectors



Source: 2019 Global Commodities Outlook, JP Morgan, November 2018

8. There's limited upside for commodities in 2019.

With the outlook for slower global growth in 2019, the potential for commodity prices to appreciate from their depressed levels at year-end appears limited (Chart 28). The decline followed the sharp drop in oil prices and continued pressure on industrials metals in the wake of U.S.-China trade tensions. With the possible exception of gold, which might see prices rise in the event of a flare-up, we don't see any catalyst for overall prices to appreciate. Oil prices should be kept range bound, with production cuts by OPEC and Russia offset by U.S. shale producers, who want to keep production flowing to cover their marginal costs.

9. Alternative investments have a bigger role in portfolios.

Over the past decade, investors have benefited greatly from the abnormally low interest rates, stimulative monetary policy and copious liquidity. As the global central banks now take steps to normalize interest rates and reduce their balance sheets, it will be harder for investors to reap large returns from traditional assets such as stocks and bonds. After a period of above-average returns from equities, their expected future returns are likely to be lower, and the outlook for bonds is less favorable when rates are rising.

Hence, investors will need to look beyond the traditional asset classes for opportunities to generate attractive returns. Additionally, the recent market gyrations reinforced the necessity to include risk reduction strategies in the portfolio mix.

For these reasons, we expect alternative asset categories, such as hedge funds, private equity and private debt, will have an important role in client portfolios in the coming period. A relatively small number of firms have the capital, global reach and intellectual resources to address these demands. We are fortunate to work with many of them, and we intend to utilize their expertise to develop tailored solutions that help our clients meet their portfolio goals.

10. Diversification remains a critical tool for risk control.

Throughout the post-crisis era, U.S. equities have consistently outperformed other asset categories, leading many clients to question the benefits of portfolio diversification. We believe the market events of Q4 2018 reinforce the case for asset allocation. Stocks, the best performing asset class for the last decade, gave back all of their gains for the year and then some within a short period of time. During Q4, U.S. equities vastly underperformed non-U.S. equities.

Real Estate Investment Trusts (REITs), which had been punished by rising interest rates and the disruptive transformation of the retail landscape, turned in better performance than most stocks. And after a decade of punishingly low yields, cash and bonds turned out to be the only assets that preserved capital in 2018. All of which leads us to reiterate that diversification is the single best tool for controlling portfolio risk. It can be painful to stay the course in periods of declining markets, but as we saw last quarter, extreme market shifts are unpredictable, and when they occur, well-diversified portfolios can help weather the storm.

Chart 29: Historical Performance by Asset Class (1999-2018)

1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Non-U.S. Equity 27.92%	Real Estate 13.84%	U.S. Fixed Income 8.43%	Non-U.S. Fixed Income 22.37%	Emerging Market Equity 55.82%	Real Estate 37.96%	Emerging Market Equity 34.00%	Real Estate 42.12%	Emerging Market Equity 39.38%	U.S. Fixed Income 5.24%	Emerging Market Equity 78.51%	Small Cap Equity 26.85%	U.S. Fixed Income 7.84%	Real Estate 27.73%	Small Cap Equity 38.82%	Real Estate 15.02%	Large Cap Equity 1.38%	Small Cap Equity 21.31%	Emerging Market Equity 37.28%	Cash Equivalent 1.87%
Small Cap Equity 21.26%	U.S. Fixed Income 11.63%	High Yield 5.28%	U.S. Fixed Income 10.26%	Small Cap Equity 47.25%	Emerging Market Equity 25.55%	Real Estate 15.35%	Emerging Market Equity 32.17%	Non-U.S. Equity 12.44%	Non-U.S. Fixed Income 4.39%	High Yield 58.21%	Real Estate 19.63%	High Yield 4.98%	Emerging Market Equity 18.23%	Large Cap Equity 32.39%	Large Cap Equity 13.69%	U.S. Fixed Income 0.55%	High Yield 17.13%	Non-U.S. Equity 24.21%	U.S. Fixed Income 0.01%
Large Cap Equity 21.04%	Cash Equivalent 6.18%	Cash Equivalent 4.42%	Real Estate 2.82%	Real Estate 40.69%	Non-U.S. Equity 20.38%	Non-U.S. Equity 14.47%	Non-U.S. Equity 25.71%	Non-U.S. Fixed Income 11.03%	Cash Equivalent 2.06%	Real Estate 37.13%	Emerging Market Equity 18.88%	Non-U.S. Fixed Income 4.36%	Non-U.S. Equity 16.41%	Non-U.S. Equity 21.02%	U.S. Fixed Income 5.97%	Cash Equivalent 0.05%	Large Cap Equity 11.96%	Large Cap Equity 21.83%	High Yield -2.08%
Real Estate 8.87%	Small Cap Equity -3.02%	Small Cap Equity 2.49%	Cash Equivalent 1.78%	Non-U.S. Equity 39.42%	Small Cap Equity 18.33%	Large Cap Equity 4.91%	Small Cap Equity 18.37%	U.S. Fixed Income 6.97%	High Yield -26.16%	Non-U.S. Equity 33.67%	High Yield 15.12%	Large Cap Equity 2.11%	Small Cap Equity 16.35%	High Yield 7.44%	Small Cap Equity 4.89%	Real Estate -0.79%	Emerging Market Equity 11.19%	Small Cap Equity 14.65%	Non-U.S. Fixed Income -2.15%
Cash Equivalent 4.85%	Non-U.S. Fixed Income -3.91%	Emerging Market Equity -2.61%	High Yield -1.37%	High Yield 28.97%	Non-U.S. Fixed Income 12.54%	Small Cap Equity 4.55%	Large Cap Equity 15.79%	Large Cap Equity 5.49%	Small Cap Equity -33.79%	Small Cap Equity 27.17%	Large Cap Equity 15.06%	Cash Equivalent 0.10%	Large Cap Equity 16.00%	Real Estate 3.67%	High Yield 2.45%	Non-U.S. Equity -3.04%	Real Estate 4.06%	Non-U.S. Fixed Income 10.51%	Large Cap Equity -4.38%
High Yield 2.39%	High Yield -5.86%	Non-U.S. Fixed Income -3.75%	Emerging Market Equity -6.16%	Large Cap Equity 28.68%	High Yield 11.13%	Cash Equivalent 3.07%	High Yield 11.85%	Cash Equivalent 5.00%	Large Cap Equity -37.00%	Large Cap Equity 26.47%	Non-U.S. Equity 8.95%	Small Cap Equity -4.18%	High Yield 15.81%	Cash Equivalent 0.07%	Cash Equivalent 0.03%	Small Cap Equity -4.41%	Non-U.S. Equity 2.75%	Real Estate 10.36%	Real Estate -5.63%
U.S. Fixed Income -0.83%	Large Cap Equity -9.11%	Real Estate -3.81%	Non-U.S. Equity -15.80%	Non-U.S. Fixed Income 19.36%	Large Cap Equity 10.88%	High Yield 2.74%	Non-U.S. Fixed Income 8.16%	High Yield 1.87%	Non-U.S. Equity -43.56%	Non-U.S. Fixed Income 7.53%	U.S. Fixed Income 6.54%	Real Estate -6.46%	U.S. Fixed Income 4.21%	U.S. Fixed Income -2.02%	Emerging Market Equity -2.19%	High Yield -4.47%	U.S. Fixed Income 2.65%	High Yield 7.50%	Small Cap Equity -11.01%
Non-U.S. Fixed Income -8.83%	Non-U.S. Equity -13.37%	Large Cap Equity -11.89%	Small Cap Equity -20.48%	U.S. Fixed Income 4.10%	U.S. Fixed Income 4.34%	U.S. Fixed Income 2.43%	Cash Equivalent 4.85%	Small Cap Equity -1.57%	Real Estate -48.21%	U.S. Fixed Income 5.93%	Non-U.S. Fixed Income 4.95%	Non-U.S. Equity -12.21%	Non-U.S. Fixed Income 4.09%	Emerging Market Equity -2.60%	Non-U.S. Fixed Income -3.09%	Non-U.S. Fixed Income -6.02%	Non-U.S. Fixed Income 1.49%	U.S. Fixed Income 3.54%	Non-U.S. Equity -14.09%
		Non-U.S. Equity -21.40%	Large Cap Equity -22.10%	Cash Equivalent 1.15%	Cash Equivalent 1.33%	Non-U.S. Fixed Income -8.65%	U.S. Fixed Income 4.33%	Real Estate -7.39%	Emerging Market Equity -53.33%	Cash Equivalent 0.21%	Cash Equivalent 0.13%	Emerging Market Equity -18.42%	Cash Equivalent 0.11%	Non-U.S. Fixed Income -3.08%	Non-U.S. Equity -4.32%	Emerging Market Equity -14.92%	Cash Equivalent 0.33%	Cash Equivalent 0.86%	Emerging Market Equity -14.58%

Source: Periodic Table of Investment Returns, Callan LLC, January 2019

2019 Portfolio Positioning

2019 Tactical Weightings	
Bonds/Cash	
Cash	Equal Weight
Taxable Bonds	Underweight
Tax-Exempt Bonds	Underweight
High Yield	Equal Weight
Global Bonds	Underweight
EM Debt	Equal Weight
Equities	
US Large Cap	Overweight
US Small/Mid Cap	Overweight
Europe	Overweight
Japan	Equal Weight
Pacific ex-Japan	Equal Weight
Emerging Markets	Overweight
Real Return & Specialty	
Commodities	Underweight
TIPS	Underweight
REITs	Underweight
Real Estate/Infrastructure	Equal Weight
Hedge Funds	Equal Weight
Private Assets	Equal Weight

Conclusion

Last year was a notably difficult year for investing. Investors focused on risk reduction and capital preservation found themselves too conservatively positioned for strongly positive markets in the first three quarters of 2018. And investors who discounted the probability of a downturn as markets continued to rise found themselves fully exposed during the severe decline in Q4.

We enter 2019 with the outlook for another year of positive economic growth, albeit at a slightly lower rate than in 2018. While we expect more of the volatility and uncertainty that roiled markets in 2018, we also enter the year with what might be considered a clean slate: Equity valuations have recalibrated lower and now offer considerably more upside to investors. Spreads on high-yield bonds and EM debt have widened to where investors are fully compensated for being in these asset classes, while default risk remains low and there is no sign of a recession on the horizon. If anything, the key risk investors face today is being too conservatively positioned in response to the recent market sell-off to take full advantage of these opportunities.

2018 Scorecard

In our 2018 Outlook, our Investment Committee presented the themes we expected to drive markets last year. Here's how our predictions turned out:

MSCI ACWI	S&P 500	R2000	MSCI EAFE	MSCI EM	BC AGG	BC MUNI 1-10	BAML HY
-9.42%	-4.38%	-11.01%	-13.79%	-14.58%	0.01%	1.64%	-2.26%

Theme: Policy normalization will influence markets in 2018.	**Theme: The dollar's recent bull cycle still has room to run in 2018.**
What we said: The Fed will continue the path to normalization in 2018. We expect the ongoing impact of these moves will be restrained, and the actual trajectory of rate hikes will be lower than the Fed indicates.	**What we said:** We're not convinced the dollar's bull cycle has run its course. U.S. interest rates are higher than those in other countries. The Fed is determined to proceed with policy normalization, while other central banks remain accommodative. This should help support the dollar in 2018.
Were we right? Yes	**Were we right?** Yes
What really happened: The Fed raised the Fed Funds rate 0.25% four times in 2018 for a cumulative increase of 1.0%. By comparison, the benchmark 10-year Treasury yield rose by just 0.27%, from 2.42% at the beginning of 2018 to 2.69% at year-end.	**What really happened:** The U.S. Dollar Index, which measures the value of the dollar relative to a basket of currencies of major trade partners, rose from 91.87 at the beginning of 2018 to 96.17 at year-end. Aside from higher U.S. rates, the dollar also benefited from its safe haven status during periods of market turmoil.
Theme: Abnormally low market volatility may be behind us.	**Theme: International equities are likely to outperform U.S. equities.**
What we said: As the Fed reverses course, the abnormally low market volatility of recent years will revert to more normal levels.	**What we said:** U.S. equities are trading at a premium to their long-term valuations while international equities are priced at a discount. We see an opportunity for international markets to outpace U.S. markets as other countries regain economic momentum.
Were we right? Yes	**Were we right?** No
What really happened: VIX began the year at 9.77 and ended the year at 25.42, a 160% rise. During the February and December market sell-offs, the index registered interim spikes to 37.32 on February 5 and 36.07 on December 24. (VIX is the CBOE Volatility Index. It reflects investors' expectations of fluctuations in the S&P 500 index over the next 30 days. Readings below 20 are considered low, while readings above 30 reflect higher expected risk.)	**What really happened:** Non-U.S. stocks performed considerably worse in 2018. The MSCI EAFE Index was down for the year (-13.79%) due to declining growth in Europe, turmoil over Brexit, the Italian deficits and structural weakness in Japan. And the slowdown in China, the U.S.-China trade conflict and spillover impact on emerging markets took a toll on MSCI EM. These macro issues overshadowed the wide disparity in valuations between U.S. and non-U.S. equities.

Index Key for Benchmarks can be found on page 20.

2018 Scorecard (continued)

Citi WGBI	JPM EMBI	MSCI REIT	BC TIPS	BCOM	Oil WTI	Gold	HFRI
2.60%	-4.61%	-4.57%	-1.26%	-11.25%	-20.70%	-2.70%	-3.92%

Theme: Emerging market (EM) equities should outperform developed markets (DM).	**Theme: Inflation will re-emerge.**
What we said: The big growth differential between developed and emerging markets, coupled with cheaper valuations and higher earnings growth for EM equities, all favor emerging markets.	**What we said:** We're finally seeing signs of a pickup in inflation globally, and commodities and real assets could help protect purchasing power. However, with global demand still weak, we don't see a catalyst for commodity prices to rise, absent a big U.S. infrastructure program.
Were we right? Partly	**Were we right?** Yes
What really happened: EM momentum was hurt by fears that the U.S.-China trade conflict could exacerbate the slowdown in China and cause disproportionate collateral damage to EM economies. However, we'll take some credit because EM equities (-7.56%) performed considerably better than DM (-12.75%) during the critical Q4 selloff.	**What really happened:** Allocations to real estate investment trusts, also known as REITS (-4.57%), helped offset bigger declines in equities last year, while illiquid investments in real estate and infrastructure helped to buffer portfolios from the market disruptions. As expected, without a catalyst to spur demand, the Bloomberg Barclays Commodity index fell 11.25% in 2018. The 20.7% drop in WTI crude oil helped to keep inflation in check.
Theme: Bonds are an effective diversifier within portfolios.	**Theme: Hedge funds are finally getting some respect.**
What we said: Global bonds remain our least-favored asset class because a significant portion still trade at negative yields. Conversely, we view U.S. Treasuries and municipal bonds as key safe havens for U.S. investors during periods of market distress.	**What we said:** Current market conditions call for continued exposure to hedge fund strategies. With equity valuations stretched and bond markets subject to higher interest rates and central bank actions, hedge funds may be a useful tool to control portfolio risk.
Were we right? Partly	**Were we right?** Yes
What really happened: We had minimal exposure to global bonds (+2.6%), which turned out to be a top-performing asset category for 2018 due to the safe haven role of the euro, yen and Swiss Franc. However, we certainly benefited from widespread allocations to municipal bonds (+1.64%), which also acted as a safe haven and helped preserve investor capital..	**What really happened:** The 3.9% drop in the Hedge Fund Research Index (HFRI) was smaller than the losses registered by global equity markets for calendar 2018. In the critical month of December, HFRI fell just 1.6% versus drops of 9.0% in the S&P 500, 11.0% in the Russell 2000, 4.8% in MSCI EAFE and 2.7% in MSCI EM.

2018 Scorecard (continued)

Theme: Private markets offer continued opportunity.	**Theme: Asset allocation remains critical to wealth creation.**
What we said: We're focused on the public debt and equity markets for our core offerings, but we'll also look to the private markets for attractive opportunities.	**What we said:** Markets are inherently unpredictable, and a disciplined approach to asset allocation is the best tool for long-term wealth c**reation**.
Were we right? Yes	**Were we right?** Yes
What really happened: Investments in private equity and debt provided exposure to investment themes that are not accessible in public markets. They also served as a welcome buffer from the daily market gyrations during a turbulent year	**What really happened:** The wide variation in returns during the most disruptive market periods in 2018 demonstrated conclusively that asset allocation is a vital tool, both for controlling portfolio risk as well as for creating long-term wealth.

Index Key

MSCI ACWI	MSCI All Countries World Index (global equity benchmark)
R2000	Russell 2000 Index (U.S. small-cap equities)
MSCI EAFE	MSCI Europe Australia Far East Index (developed non-U.S. equities)
MSCI EM MSCI	Emerging Markets Index (emerging market equities)
BC AGG	Barclays Capital U.S. Aggregate (U.S. taxable bonds)
BC MUNI	Barclays Capital U.S. Municipal 1-10 year Index (1 to 10-yr U.S. municipal bonds)
BAML HY	Bank of America Merrill Lynch High Yield (high-yield bonds)
Citi WGBI	Citigroup World Government Bond Index (developed country sovereign bonds)
JPM EMBI	JP Morgan Emerging Market Bond Index (USD emerging country bonds)
MSCI REIT	MSCI U.S. Real Estate Investment Trust Index (U.S. publicly traded REITs)
BC TIPS	Barclays Capital Treasury Inflation Protected Securities Index
BCOM	Bloomberg Commodity Index
WTI Crude	West Texas Intermediate Crude Oil price
HFRI	Hedge Fund Research Index Fund-of-Funds Composite Index

Fourth Quarter Performance Summary

Asset Class	Benchmark	4Q18	YTD Return	Performance Summary
Cash	Citi 3-month T-bill	0.57	1.86	Yields on cash are finally starting to rise in response to the Fed tightening. With most other asset categories experiencing large drawdowns in the turbulent markets of 2018, cash was the best-performing asset class last year.
Domestic Tax-Exempt	Bloomberg Barclays Municipal Bond 1-10 Year	1.61	1.64	Along with other fixed-income categories, municipal bonds benefited from the massive move by investors into safer assets. This shift led to high quality/lower-yielding bonds outperforming lower quality/higher-yielding assets, a reversal of the preference for lower credit over quality in the first three quarters of the year. Reflecting improvements in the broader economy, municipal credit quality improved across the board, with Standard & Poors issuing 2 upgrades and 2 downgrades, compared to 2 upgrades and 17 downgrades in 2017.
Investment-Grade Debt	Bloomberg Barclays U.S. Aggregate	1.64	0.01	Q4 marked a turnaround for the category as investors sold risky assets and moved into safer ones. As would be expected, Treasury bonds were the biggest gainer, with the Barclays U.S. Government Bond index rising 2.5%. Conversely, the Barclays U.S. Credit index was flat for the quarter. Credit spreads widened over concerns of rising corporate indebtedness and the deteriorating credit quality of U.S. investment-grade bonds, with nearly 50% of all outstanding debt now rated BBB, the lowest investment-grade rating.
High-Yield Debt	Merrill Lynch High Yield Master II	(4.67)	(2.26)	The Q4 sell-off extended to high-yield bonds as part of the broader flight to quality. Credit spreads jumped from a low of 3.03% over Treasury bonds in early October to 5.26% at year-end, the biggest quarterly rise since 2011. Energy bonds were hit particularly hard by the 40% drop in oil prices from October to December. With investors shunning risky assets, no new high-yield bonds came to market in December, which helped mitigate the impact of that month's sell-off. At 1.8%, defaults remain low by historical levels, with only one energy-related default in December.
Global Bonds	Citi World Government Bond Index (Hedged)	2.38	2.60	Global sovereign bonds performed well in Q4 and 2018 despite slowing economic growth and abnormally low yields in Europe and Japan. As with U.S. Treasury bonds, the category benefited from the global flight to quality. Yields on 10-year Japanese government bonds (JGBs) fell from 0.13% to below zero, while 10-year German bond yields fell from 0.47% to 0.24% and 10-year U.K. gilt yields fell from 1.57% to 1.28%. The European Central Bank (ECB) confirmed its bond purchase program would end on December 31, 2018.
Emerging Markets Debt	JPMorgan EMBI Global	(1.19)	(4.61)	Although hard currency bonds gained 1.4% in December, Q4 and 2018 returns were negative. Investor concerns about several issues hurt performance, including the effect of proposed U.S. tariffs on the already-slowing Chinese economy, the combined impact of U.S. sanctions and low energy prices on the Russian economy, and unsustainably high external debt levels for Turkey, Argentina and South Africa.
Large-Cap Equity	S&P 500	(13.52)	(4.38)	Q4 was a punishing period for large-cap stocks. The S&P 500 index fell 7% in October amid fears of a looming trade war with China and signs of an overheating U.S. economy that could force the Fed to raise rates more aggressively. After regaining ground in November on weaker economic data, the index fell a further 9% in December over worries about rising interest rates, signs of slowing global growth and unresolved trade tensions. The index was down 4.38% for the year, its worst showing since the financial crisis. P/E multiples have now retracted to January 2014 levels.

Fourth Quarter Performance Summary (continued)

Asset Class	Benchmark	4Q18	YTD Return	Performance Summary
Small/Mid Cap Equity	Russell 2000	(20.20)	(11.01)	Contrary to expectations, the domestic focus of smaller stocks did not afford much protection during the sell-off. The Russell 2000 index dropped 11.88% in December for a 20.2% loss for Q4, the worst quarterly performance since Q3 2011. The index's 11.01% loss for the year was its worst annual showing since 2015.
International Equity	MSCI EAFE	(12.54)	(13.79)	International stocks fell in unison with the global sell-off in Q4, with investors unnerved by deteriorating global growth,intensifying trade conflicts and higher U.S. interest rates. The MSCI EAFE's full-year loss of 13.79% was considerably worse than the 4.38% drop in the S&P 500. However, the roles were reversed in Q4 and December. In Q4, MSCI EAFE lost 12.54%, slightly better than the S&P 500's 13.52% loss. In December, MSCI EAFE fell 4.85% compared to the 9.0% drop in the S&P 500.
Emerging Markets Equity	MSCI Emerging Markets	(7.47)	(14.58)	With China a major component of the EM index, the US-China trade dispute and the country's deteriorating growth further dampened investor sentiment. Although the 14.58% full-year loss for MSCI EM was worse than losses for other global markets, MSCI EM materially outperformed other global markets in the Q4 sell-off, with losses of 7.47% for Q4 and just 2.70% for December.
TIPS	Bloomberg Barclays TIPS	(0.42)	(1.26)	The global flight to quality raised demand for Treasury Inflation-Protected Securities (TIPS) in Q4 and helped to minimize losses on longer-dated bonds. The spread between 10-year Treasuries and 10-year TIPS, a gauge of investor expectations for future inflation, fell sharply from 2.15% at the beginning of the quarter to 1.71% at year-end. Lower expectations for inflation will influence the Fed's approach to tightening in 2019.
Commodities	Bloomberg Commodity Index	(9.41)	(11.25)	Low global demand for commodities, the strong U.S. dollar, rising global trade tensions and plunging energy prices all served to depress commodity returns in 2018. WTI crude oil prices fell 37.5% in the quarter on reports of rising U.S. stockpiles and uncertain prospects for supply cuts by OPEC and Russia. Gold rose 7.2% in Q4, benefiting from the market turbulence and indications that further rate hikes from the Fed were put on hold.
Real Estate	MSCI US REIT	(6.72)	(4.57)	Real Estate Investment Trusts (REITs) were considerably less affected by the Q4 market sell-off due to their lower correlations to equiities. Among REITs, leaders for 2018 included free-standing retail (+13.93%), manufactured homes (+11.43%), health care (+7.58%) and infrastructure (+6.99%), while laggards included timber (-31.96%), shopping centers (-14.55%), data centers (-14.11%) and lodging (-12.82%).
Private Equity/Private Debt	No Benchmark	n/a	n/a	Preqin reports that fundraising for private equity (PE) and private debt remained strong in 2018, although below the torrid levels of 2017. Committed funds awaiting deployment (dry powder) reached a record $1.2T for PE and $280B for private debt by year-end. PE fundraising is increasingly a two-tier market, with $1B+ funds taking in the majority of capital and a growing share going to the very largest funds. The sharp equity market sell-off in Q4 has reduced P/E multiples, which should adjust private market valuations to more reasonable levels and help future capital deployment. In private debt, capital was diverted from direct lending and distressed managers to fund a surge in mezzanine funding to finance robust buyout activity.
Hedge Funds	HFRI FOF Composite Index	(4.85)	(3.92)	Although returns for both Q4 and 2018 were negative, hedge funds outperformed global equities over both periods, the category's best relative outperformance since February 2009. For the critical month of December, the category fell just 1.60%, compared to losses of 9.03% for the S&P 500 and 7.04% for the MSCI ACWI global benchmark. As expected, equity and event-driven strategies were hurt by falling equity markets in Q4, but defensive and idiosyncratic strategies, such as market neutral, global macro and managed futures, all generated positive results.

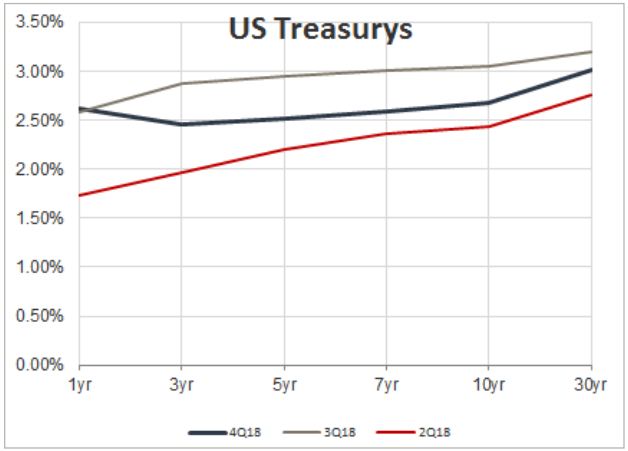
Fourth Quarter Market Summary

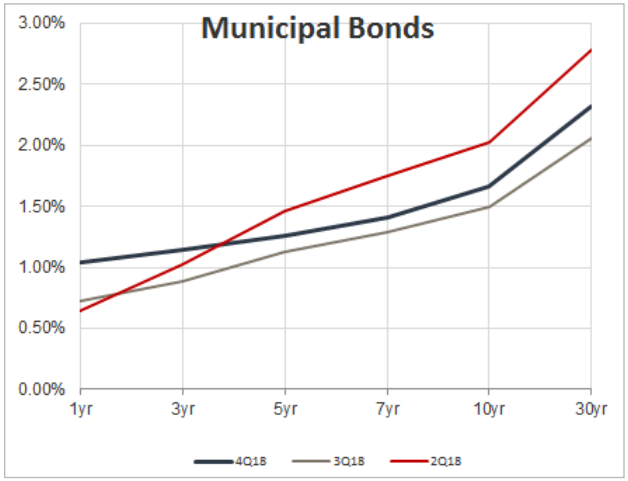
							Annualized			
		1Q18	2Q18	3Q18	4Q18	YTD	1-Year	3-Year	5-Year	10-Year
US Equity Benchmarks	**Price**									
Dow Jones Industrial	23,327.46	(1.96)	1.26	9.63	(11.31)	(3.48)	(3.48)	12.94	9.70	13.16
Nasdaq Index Composite	6,635.28	2.59	6.61	7.41	(17.29)	(2.84)	(2.84)	11.10	10.97	16.76
S&P 500	2,506.85	(0.76)	3.43	7.71	(13.52)	(4.38)	(4.38)	9.26	8.49	13.12
Russell 1000 (Large Cap)	1,384.26	(0.69)	3.57	7.42	(13.82)	(4.78)	(4.78)	9.09	8.21	13.28
Russell 1000 Growth	1,314.62	1.42	5.76	9.17	(15.89)	(1.51)	(1.51)	11.15	10.40	15.29
Russell 1000 Value	1,093.64	(2.83)	1.18	5.70	(11.72)	(8.27)	(8.27)	6.95	5.95	11.18
Russell Mid Cap	1,857.30	(0.46)	2.82	5.00	(15.37)	(9.06)	(9.06)	7.04	6.26	14.03
Russell Mid Cap Growth	915.18	2.17	3.16	7.57	(15.99)	(4.75)	(4.75)	8.59	7.42	15.12
Russell Mid Cap Value	1,760.98	(2.50)	2.41	3.30	(14.95)	(12.29)	(12.29)	6.06	5.44	13.03
Russell 2000 (Small Cap)	1,348.56	(0.08)	7.75	3.58	(20.20)	(11.01)	(11.01)	7.36	4.41	11.97
Russell 2000 Growth	852.68	2.30	7.23	5.52	(21.65)	(9.31)	(9.31)	7.24	5.13	13.52
Russell 2000 Value	1,608.84	(2.64)	8.30	1.60	(18.67)	(12.86)	(12.86)	7.37	3.61	10.40
S&P GICS Sectors	**Weight**									
Consumer Discretionary	12.6%	3.09	8.17	8.18	(16.42)	0.83	0.83	9.55	9.69	18.35
Consumer Staples	9.7%	(7.12)	(1.54)	5.70	(5.21)	(8.38)	(8.38)	3.09	6.26	10.96
Energy Sector	8.0%	(5.88)	13.48	0.61	(23.78)	(18.10)	(18.10)	1.07	(5.56)	3.50
Financials	16.2%	(0.95)	(3.16)	4.36	(13.11)	(13.03)	(13.03)	9.28	8.16	10.92
Health Care	14.9%	(1.22)	3.09	14.53	(8.72)	6.47	6.47	8.14	11.12	14.65
Industrials	10.4%	(1.56)	(3.18)	10.00	(17.29)	(13.29)	(13.29)	7.65	5.95	12.68
Information Technology	19.7%	3.53	7.09	8.80	(17.34)	(0.29)	(0.29)	16.37	14.93	18.36
Materials	3.2%	(5.52)	2.58	0.36	(12.31)	(14.70)	(14.70)	7.22	3.84	11.07
Telecommunication Services	2.3%	(7.48)	(0.94)	9.94	(13.19)	(12.53)	(12.53)	2.17	2.58	7.51
Utilities	3.0%	(3.30)	3.74	2.39	1.36	4.11	4.11	10.72	10.74	10.46
Global Equity Benchmarks	**Price**									
MSCI ACWI	1,883.90	(0.96)	0.53	4.28	(12.75)	(9.42)	(9.42)	6.60	4.26	9.46
MSCI AC World x-USA	255.40	(1.18)	(2.61)	0.71	(11.46)	(14.20)	(14.20)	4.48	0.68	6.57
MSCI EAFE	1,719.88	(1.53)	(1.24)	1.35	(12.54)	(13.79)	(13.79)	2.87	0.53	6.32
MSCI EAFE Growth	1,428.83	(1.04)	0.11	1.53	(13.33)	(12.83)	(12.83)	2.89	1.62	7.07
MSCI EAFE Value	2,522.38	(2.03)	(2.64)	1.18	(11.70)	(14.78)	(14.78)	2.82	(0.61)	5.50
MSCI Emerging Markets	965.67	1.42	(7.96)	(1.09)	(7.47)	(14.58)	(14.58)	9.25	1.65	8.02
MSCI BRIC	283.76	2.22	(6.71)	(4.12)	(5.32)	(13.43)	(13.43)	11.22	2.95	7.63
MSCI Japan	2,935.72	0.83	(2.84)	3.68	(14.23)	(12.88)	(12.88)	3.41	3.06	5.33

Global Equity Valuation Summary	3Q18	4Q18	QoQ
S&P 500			
Price	2,913.98	2,506.85	(407.13)
Trailing P/E	20.47	16.55	(3.92)
Est P/E	16.91	14.47	(2.43)
Trailing 12m Earnings	135.06	143.65	8.59
Est Forward 12m Earnings	172.67	173.21	0.54
Implied 1yr Earnings Growth	27.85%	20.58%	-7.3%
Russell Mid Cap			
Price	55.13	46.48	(8.65)
Trailing P/E	18.65	14.94	(3.71)
Est P/E	16.84	14.25	(2.59)
Trailing 12m Earnings	2.57	2.73	0.16
Est Forward 12m Earnings	3.28	3.26	(0.02)
Implied 1yr Earnings Growth	27.39%	19.37%	-8.0%
Russell 2000			
Price	168.55	133.90	(34.65)
Trailing P/E	17.60	13.54	(4.06)
Est P/E	22.10	17.91	(4.19)
Trailing 12m Earnings	4.84	5.00	0.16
Est Forward 12m Earnings	7.71	7.48	(0.24)
Implied 1yr Earnings Growth	59.24%	49.57%	-9.7%
MSCI EAFE			
Price	67.99	58.78	(9.21)
Trailing P/E	14.33	12.44	(1.90)
Est P/E	13.57	11.85	(1.72)
Trailing 12m Earnings	4.61	4.59	(0.02)
Est Forward 12m Earnings	5.01	4.96	(0.05)
Implied 1yr Earnings Growth	8.75%	8.11%	-0.6%
MSCI EM			
Price	42.92	39.06	(3.86)
Trailing P/E	12.71	11.69	(1.02)
Est P/E	11.11	10.58	(0.53)
Trailing 12m Earnings	3.24	3.22	(0.02)
Est Forward 12m Earnings	3.87	3.69	(0.18)
Implied 1yr Earnings Growth	19.44%	14.65%	-4.8%

Fourth Quarter Market Summary (continued)

							Annualized			
		1Q18	2Q18	3Q18	4Q18	YTD	1-Year	3-Year	5-Year	10-Year
Interest Rates	**Yield**									
Prime Rate	5.50	1.10	1.17	1.24	1.31	4.91	4.91	4.17	3.80	3.53
3m Treasury Bill	2.45	0.38	0.46	0.51	0.59	1.96	1.96	1.07	0.66	0.38
US LIBOR 3m	2.81	0.47	0.58	0.58	0.66	2.31	2.31	1.44	0.97	0.69
US Treasury 3m	2.46	0.56	0.64	0.68	0.71	2.62	2.62	1.73	1.42	1.12
US Treasury 10yr	2.68	0.67	0.72	0.73	0.76	2.91	2.91	2.36	2.35	2.51
US Treasury 30yr	3.01	0.74	0.76	0.76	0.81	3.11	3.11	2.87	2.96	3.34
Fixed Income	**Price**									
Citi 3-month T-bill	641.30	0.35	0.44	0.50	0.57	1.86	1.86	0.99	0.60	0.35
BC U.S. Gov't & Related 5-7	101.20	(1.36)	(0.37)	0.42	2.03	0.70	0.70	2.55	2.74	3.72
BC Municipal Bond 1-10 Year	109.03	(0.71)	0.81	(0.07)	1.61	1.64	1.64	1.67	2.42	3.30
BC TIPS	99.03	(0.79)	0.77	(0.82)	(0.42)	(1.26)	(1.26)	2.11	1.69	3.64
BC Aggregate	100.09	(1.46)	(0.16)	0.02	1.64	0.01	0.01	2.06	2.52	3.48
ML High Yield Master II	92.31	(0.91)	1.00	2.44	(4.67)	(2.26)	(2.26)	7.27	3.82	10.99
Citi World Gov't Bond Index	857.90	0.59	0.19	(0.56)	2.38	2.60	2.60	2.83	3.60	3.25
JPMorgan EMBI Global	770.70	(1.78)	(3.51)	1.87	(1.19)	(4.61)	(4.61)	4.74	4.18	7.79
Real Estate	**Price**									
MSCI US REIT	1,057.28	(8.09)	10.10	1.09	(6.72)	(4.57)	(4.57)	2.88	7.80	12.17
FTSE EPRA/NAREIT Europe	1,644.37	(0.81)	0.09	(1.95)	(10.04)	(12.42)	(12.42)	1.52	3.97	9.29
Commodities										
Bloomberg Commodity Index	76.72	(0.40)	0.40	(2.02)	(9.41)	(11.25)	(11.25)	0.30	(8.80)	(3.78)
Energy	32.54	1.76	10.73	4.39	(25.78)	(12.70)	(12.70)	(0.97)	(18.47)	(13.14)
Agriculturals	41.55	3.15	(8.66)	(5.45)	0.15	(10.79)	(10.79)	(6.78)	(9.10)	(2.88)
Livestock	29.41	(10.03)	5.47	2.88	0.69	(1.71)	(1.71)	(0.45)	(2.23)	(2.79)
Softs	31.87	(10.10)	(1.86)	(12.52)	0.73	(22.26)	(22.26)	(9.16)	(9.49)	(2.48)
Industrial Metals	109.34	(6.23)	0.98	(6.88)	(8.69)	(19.48)	(19.48)	7.69	(3.19)	1.60
Precious Metals	162.84	(0.53)	(4.45)	(6.00)	6.82	(4.57)	(4.57)	5.05	(0.86)	3.10
Private Equity / Hedge Funds	**Price**									
S&P Listed Private Equity Index	10.04	(1.24)	0.64	5.08	(18.56)	(14.93)	(14.93)	5.21	2.57	10.10
HFRI FOF Index	5,989.63	0.27	0.46	0.24	(4.85)	(3.92)	(3.92)	1.34	1.42	3.13
Currencies	**Price**									
ICE Dollar Index	96.17	(2.14)	4.97	0.52	1.09	4.40	4.40	(0.86)	3.74	1.69
Euro / US Dollar	1.14	2.42	(5.07)	(0.52)	(1.58)	(4.80)	(4.80)	1.71	(3.67)	(1.94)
Pound / US Dollar	1.27	3.70	(5.88)	(1.23)	(2.34)	(5.85)	(5.85)	(4.75)	(5.12)	(1.21)
US Dollar / Yen	109.72	(5.59)	4.15	2.55	(3.41)	(2.61)	(2.61)	(3.02)	0.86	1.93





Source: FactSet, Cerity Partners. Reflects 5-year tenor, broad composite and generic returns.
Municipal bond yields are shown on a comparable, adjusted basis using a 35% tax rate.

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