



Global Macroeconomic Outlook September 2018

Global Economic Outlook

Risk continues to increase for the global economy causing the IMF to reduce their projections for the next two years.

- The IMF's forecast for 2018 and 2019 global growth declined by 0.2% to 3.7%, similar to the 2017 level.
- In the IMF's October update, growth projections for advanced economies remained constant for 2018 (2.4%) and fell slightly for 2019 (2.1% versus 2.2%). Growth in the U.S. is projected to be the strongest with the tax cuts expected to be supportive, while tariffs weighed on growth forecasts for next year (-0.2%). Surprises to the downside in early 2018 led the IMF to further lower its growth projections for the euro area in 2018 (2.0% versus 2.2%).
- Projections for growth in the emerging and developing economies declined for 2018 (4.7% versus 4.9%) and 2019 (4.7% versus 5.1%). Trade tensions, higher oil prices, a stronger U.S. dollar, and higher yields in the U.S. have varied projected impacts across countries. Growth in China is expected to continue to be strong but moderate over time with recent trade policies hurting growth in the short-term. The IMF projects improved growth in India, Brazil, Russia, and Mexico in 2018 and 2019 despite some recent downward revisions.
- Overall, inflation is expected to increase slightly over the next two years to levels around long-term averages.

	Real GDP (%) ¹			Inflation (%) ¹		
	IMF 2018 Forecast	IMF 2019 Forecast	Actual 10 Year Average	IMF 2018 Forecast	IMF 2019 Forecast	Actual 10 Year Average
World	3.7	3.7	3.3	3.7	3.8	3.7
U.S.	2.9	2.5	1.4	2.4	2.1	1.7
Euro Area	2.0	1.9	0.7	1.7	1.7	1.4
Japan	1.1	0.9	0.5	1.2	1.3	0.3
China	6.6	6.2	8.2	2.2	2.4	2.6
Emerging Markets (ex. China)	3.5	3.7	3.8	6.8	7.0	6.9

¹ Source: IMF. World Economic Outlook. October 2018 Update. "Actual 10 Year Average" represents data from 2008 to 2017.

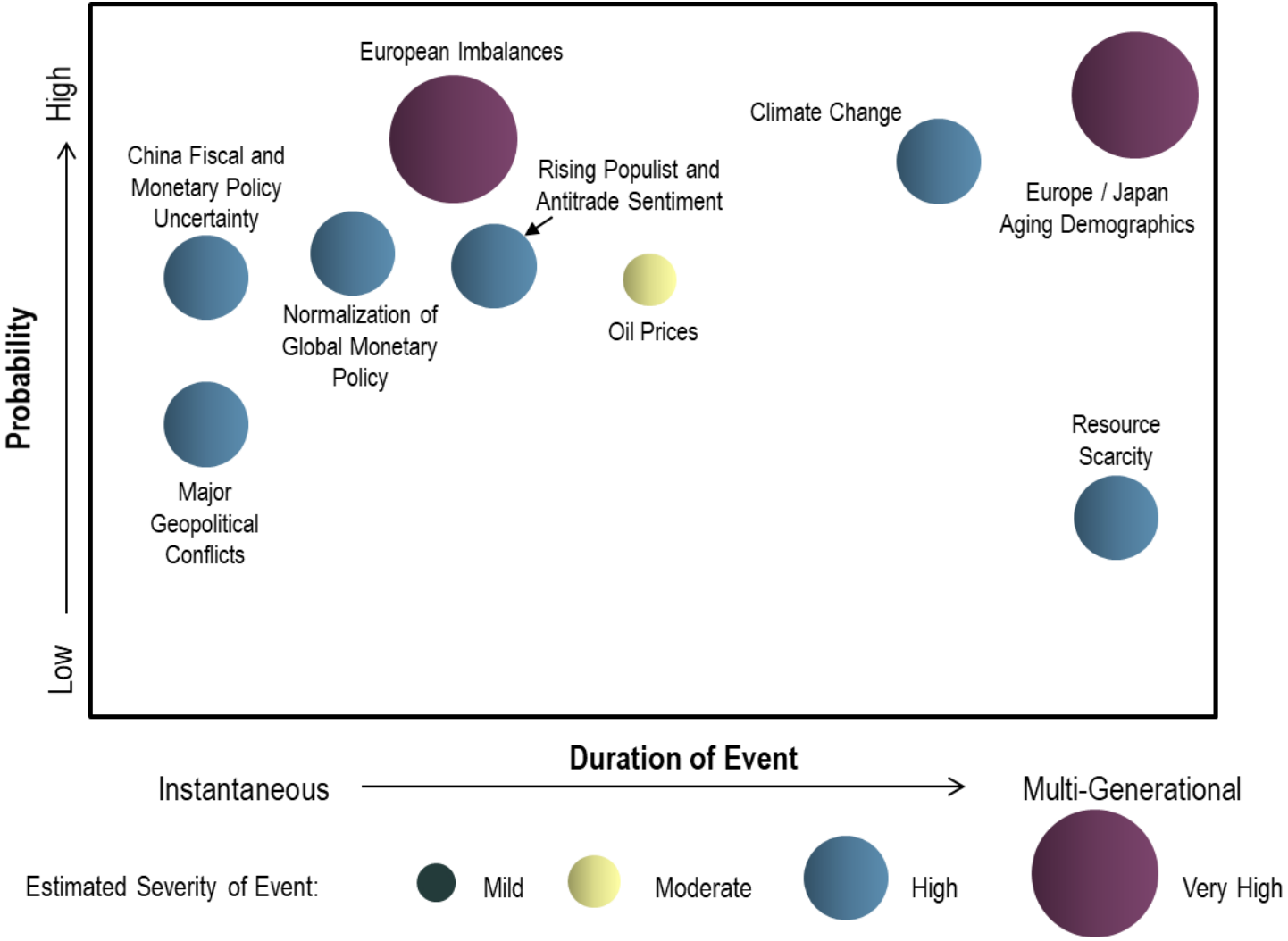
Global Economic Outlook (continued)

The boost to growth from recent U.S. tax cuts will likely be short lived. We could be moving into a period of coordinated monetary tightening across central banks.

- In September, the Federal Reserve increased interest rates for the eighth time. It is possible that the Fed will increase rates one more time in 2018 and three to four more times through 2020. They also continue to reduce their balance sheet. Tax cuts and recent changes to the complexion of the Fed could lead to additional tightening. A further pick-up in inflation driven by tariffs, or otherwise, could speed up the pace of tightening.
- Of all the major central banks, the Bank of Japan (BOJ) is showing no signs of pulling back from its unprecedented monetary stimulus, as inflation remains well below target. At their September meeting the BOJ made no changes to their stimulative efforts keeping bank deposit rates negative (-0.1%), and continuing to target a 0% yield on the 10-year government bond.
- In September, the European Central Bank held low rates steady and indicated that they could remain unchanged into the summer of 2019. Asset purchases (i.e., quantitative easing) will continue to wind down and will likely stop by the end of the year. If conditions in Italy turn negative, given the political changes and budget discussions, the ECB could reconsider its policies.
- China's central bank, the People's Bank of China (PBOC), decided to keep interest rates steady despite the Federal Reserve's announced rate increase. The benchmark interest rate remains at 4.35% and the rate for 7-day reverse repurchase agreements at 2.55%.

Several issues are of primary concern: 1) the potential for simultaneous monetary tightening globally; 2) uncertainty related to the U.S. economy and policies; 3) declining growth in China, along with uncertain fiscal and monetary policies; and 4) political uncertainty in Europe and risks related to the U.K.'s exit from the European Union.

Macroeconomic Risk Matrix



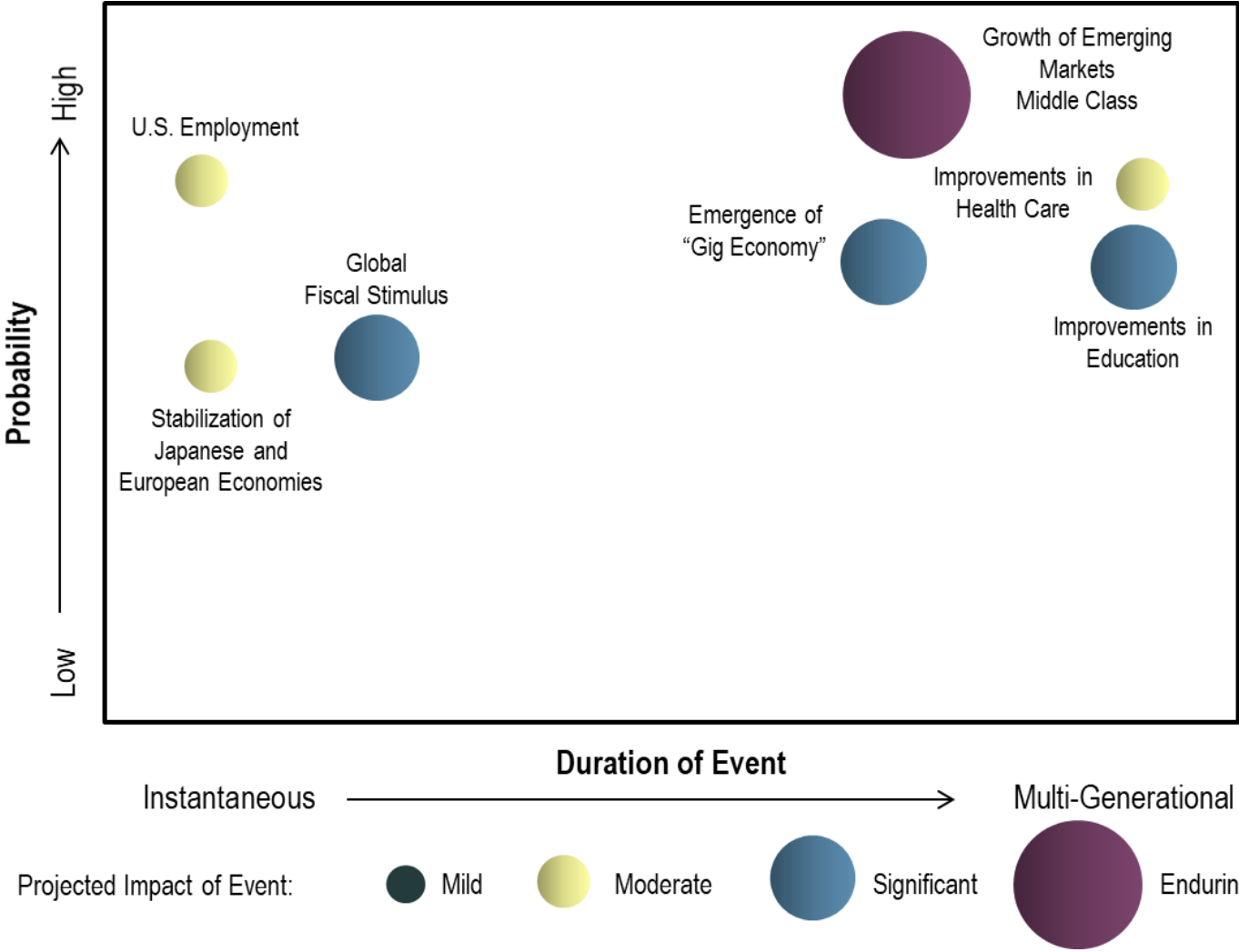
Macroeconomic Risk Overviews

China Fiscal and Monetary Policy Uncertainty	<p>The process of transitioning from a growth model based on fixed asset investment by the government to a model of consumption-based growth will be difficult. Recent tariffs between the U.S. and China could further weigh on the already slowing growth, as the U.S. is the largest destination for China's exports. The management of capital outflows is another key issue in China. They have made some efforts to tighten regulations to stem outflows, but higher rates and growth in the U.S., and elsewhere, could add to outflow pressures. Were China to abandon its support for the yuan, the resulting major devaluation of the currency could prove particularly disruptive to global markets and trade. The hot property market and the growing mountain of debt in the corporate sector remain other key risks.</p>
Climate Change	<p>The earth's average temperature has been increasing since preindustrial times with the pace accelerating over the last 35 years. Increased levels of greenhouse gases like carbon dioxide have been the main cause of higher temperatures as they trap heat in the atmosphere. Warmer temperatures have led to the melting of glaciers and polar ice and increased precipitation in wet regions and reduced it in dry regions. The economic impacts of climate change are many including declining crop yields, effects on livestock health, shifts in tourism, damage to infrastructure (rising sea levels and more extreme weather), and higher levels of disease and malnutrition.</p>
Europe/Japan Aging Demographics	<p>In Japan and Europe, birth rates have declined for decades, resulting in populations becoming older and smaller relative to the rest of the world. These demographic trends will have negative long-term impacts on GDP growth and fiscal budgets, amplifying debt problems.</p>
European Imbalances	<p>The crisis is rooted in structural issues in the Eurozone related to the combination of a single currency and monetary authority combined with 17 fiscal authorities. Within the European Union, tensions exist, as highlighted by political changes in Italy and the prior U.K. referendum, related to policies on immigration, laws, and budgetary issues. Given the size of Italy's bond market and economy within the euro area a sovereign debt crisis or departure from the euro would have significant consequences.</p>

Macroeconomic Risk Overviews (continued)

Major Geopolitical Conflicts	<p>Tensions with North Korea have softened, while new tensions with Saudi Arabia have emerged. After heightened rhetoric from the U.S. and North Korea, progress has been made, with a meeting between North and South Korea, a visit by U.S. CIA Director, Michael Pompeo, and a meeting between President Trump and Kim Jong Un. Recently, the death of Saudi journalist and U.S. resident, Jamal Khashoggi, in the Saudi Arabia consulate in Turkey has led to tensions between the countries. This has led to calls for sanctions including on weapons. Given that Saudi Arabia is the number one customer for weapons from the U.S. sanctions in that area could be impactful to the relationship. Other outstanding issues include the ongoing conflicts in Syria, Yemen, and Afghanistan, along with tensions between the U.S. and Iran.</p>
Normalization of Global Monetary Policy	<p>After the Global Financial Crisis, major central banks injected massive amounts of liquidity into the market by purchasing bonds from banks (i.e., quantitative easing). They also reduced short-term interest rates to record lows. The U.S. central bank has ended its bond-buying program, started to increase interest rates, and began reducing its balance sheet. In Europe (ECB), they are also planning to end their quantitative easing by the end of this year. If major central banks start to tighten their policies at the same time it could lead to higher rates, less liquidity, and overall lower economic activity.</p>
Oil Prices	<p>Oil prices have rallied significantly from their recent low driven by OPEC's cuts and growing demand globally. If the price of oil continues to increase it could choke off the growth in developed economies.</p>
Resource Scarcity	<p>The growing world population, urbanization, and a growing middle class, particularly in emerging economies, could all lead to a scarcity of resources, including food, water, land, energy, and minerals. As demand continues to grow and supply declines, rising commodity prices may hurt the living standards of many and increase the risk of geopolitical conflicts.</p>
Rising Populist and Antitrade Sentiment	<p>Tariffs started by the U.S. against China and some of its allies, along with elections/votes in the U.S., Europe, U.K., and Mexico highlight the growing populist/antitrade sentiment. Stagnant wages, growing inequality, and the perception of jobs being lost abroad are key contributors. Reducing trade and imposing tariffs will likely lead to higher inflation, reduced efficiencies, and heightened tensions between countries.</p>

Positive Macroeconomic Trends Matrix



Positive Macroeconomic Trends Overviews

Emergence of “Gig Economy”	The “gig economy” continues to grow with over a third of workers considering themselves working independently. The new structure allows workers flexibility in the jobs they take, their schedules, and offers the ability to work outside of a traditional office. For companies, it has led to lower labor and overhead costs (more employees are working remotely), flexibility in hiring workers temporarily, and lower recruiting and training costs.
Global Fiscal Stimulus	Given the slow growth globally, and the likely tightening of monetary stimulus, there could be a shift to fiscal stimulus. Recent U.S. tax cuts should help growth domestically and abroad, particularly for key trading partners barring any overwhelming headwinds from tariffs. With interest rates still relatively low, borrowing for infrastructure investments is affordable. Increased fiscal stimulus could help growth while reducing the reliance on monetary policy.
Growth of Emerging Markets Middle Class	In emerging economies, the middle class is projected to grow significantly over the next twenty years. This growing middle class should increase consumption globally, which in turn will drive GDP growth and create jobs.
Improvements in Education/Healthcare	Literacy rates and average life spans have increased globally, particularly in emerging economies. Higher literacy rates will drive future growth, helping people learn new skills and improve existing skills. Longer lives increase incentives for long-term investments in education and training, resulting in a more productive work force and ultimately more growth.
Stabilization of Japanese and European Economies	Despite the ECB’s plans to end its quantitative easing, the Japanese and European central banks continue to have relatively accommodative monetary policy compared to the U.S. Unemployment has come down in both areas and Japan has moved from deflation to inflation. Continued improvements in economic conditions in Europe and Japan could also be beneficial for global trade.
U.S. Employment	The U.S. unemployment rate has steadily declined since its post Global Financial Crisis peak. Hourly earnings growth has not reached levels that it has in prior recoveries, but has increased from its lows. Improvements in the U.S. labor market, along with the recent tax cuts, should stimulate consumption and growth for both U.S. and foreign goods. A lower unemployment rate and higher consumption will also lead to higher tax revenue that should partly offset the deficit pressures from tax reforms.

Global Nominal Gross Domestic Product (GDP) Growth¹



- We have recently been in a period of synchronized global economic growth.
- The impacts of trade tariffs, higher inflation, and policy tightening remain headwinds to the global economy.

¹ Source: Oxford Economics. Updated September 2018. GDP data after Q2 2018 are estimates.

Trade Tariffs

U.S. and China Tariffs

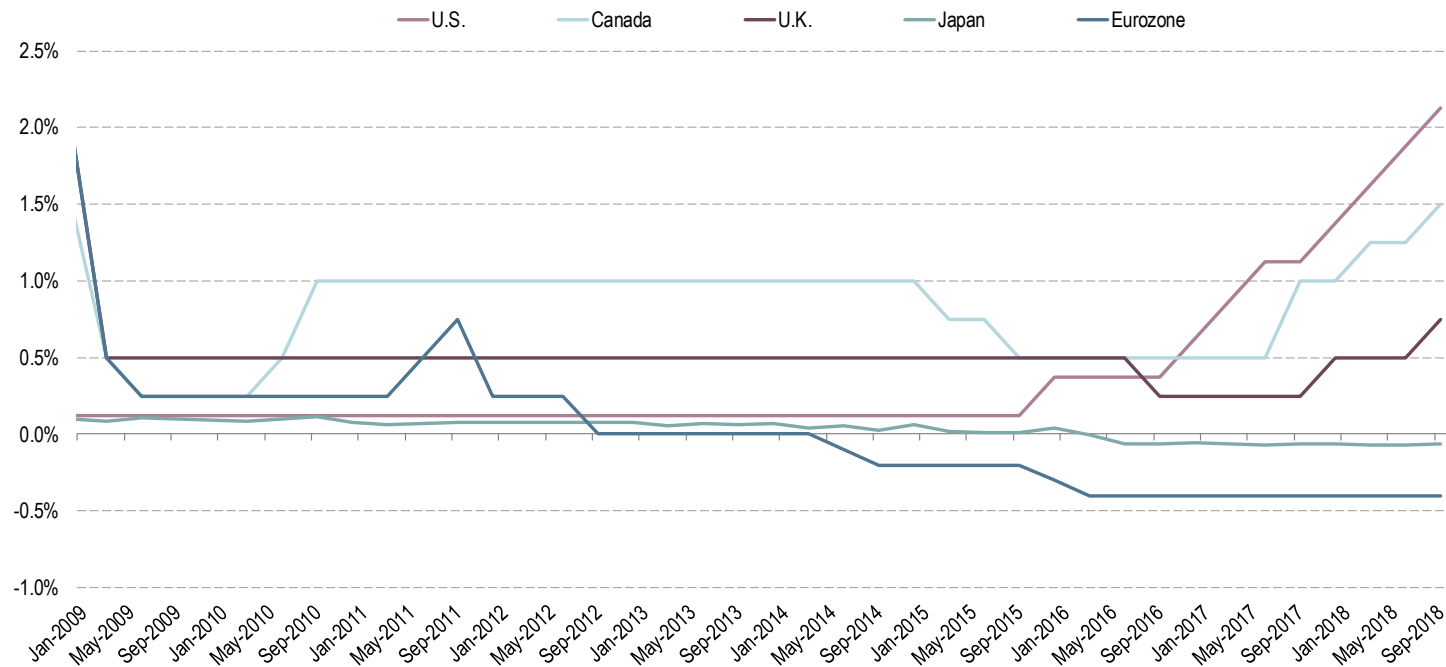
- The U.S. and China, the world's two largest economies, are locked in a volley of trade tariffs with potentially more on the horizon.
- The tension started as the U.S. administration looked to make good on its promise to bring jobs back to the U.S., particularly in the manufacturing sector.
- A prolonged trade battle with the U.S. would disproportionately hurt China as the U.S. represents a much larger part of their exports than China does of the U.S. The recent decline in the yuan versus the dollar could provide some relief though if it persists.

Other Tariffs

- In early June, the U.S. imposed a 25% tariff on steel and a 10% tariff on aluminum particularly impacting Canada and Mexico, as they are two of the largest suppliers of steel to the U.S.
- In response, the EU, Mexico, and Canada enacted tariffs on a variety of U.S. goods including agricultural products, steel, aluminum, and a variety of other items.
- The United States-Mexico-Canada Agreement (USMCA) was recently negotiated to replace NAFTA, but still needs to be ratified. It includes an extension of copyright terms, an increase in the country of origin rules for cars, higher labor protections, and more access to Canadian dairy markets for U.S. farmers.

Economic Impacts

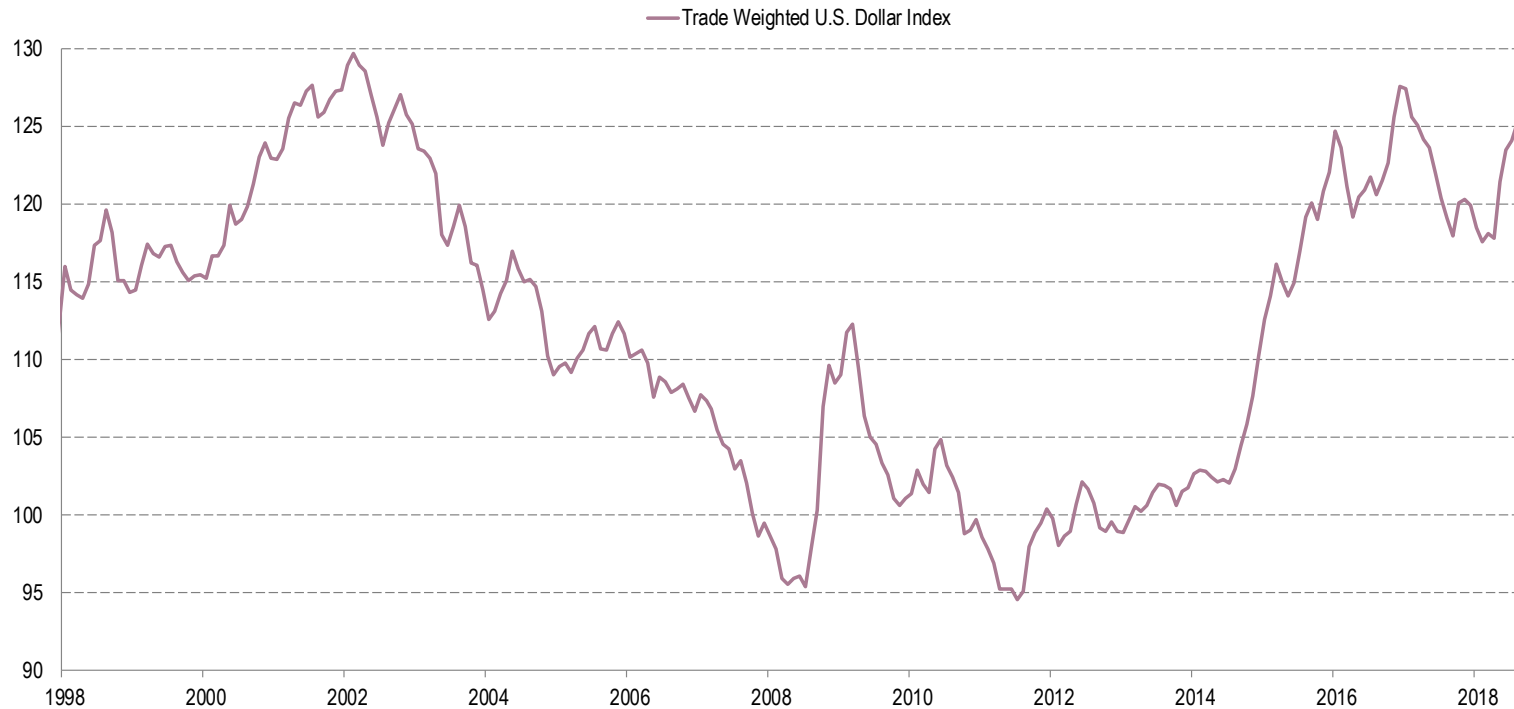
- Tariffs typically result in inflation and weigh on growth. This could particularly affect emerging economies.
- In addition to the retaliatory tariffs on the U.S., tariffs targeted to protect domestic producers will also hurt companies that use the items as an input weighing on margins and potentially leading to higher prices.
- Already tariffs have had impacts on segments of the U.S. economy.

Central Bank Interest Rates¹

- After the Global Financial Crisis, major central banks, in addition to expanding their balance sheets, dramatically lowered interest rates in an effort to stimulate growth.
- Since, central banks have started to tighten policy, with the U.S. reducing its balance sheet and increasing rates. The U.K. and Canada have also increased rates and it is likely that the ECB will end its asset purchases by the end of this year, barring significant disruptions in Italy.
- Higher rates and less demand from central banks for bonds could weigh on overall economic activity and risk assets going forward.

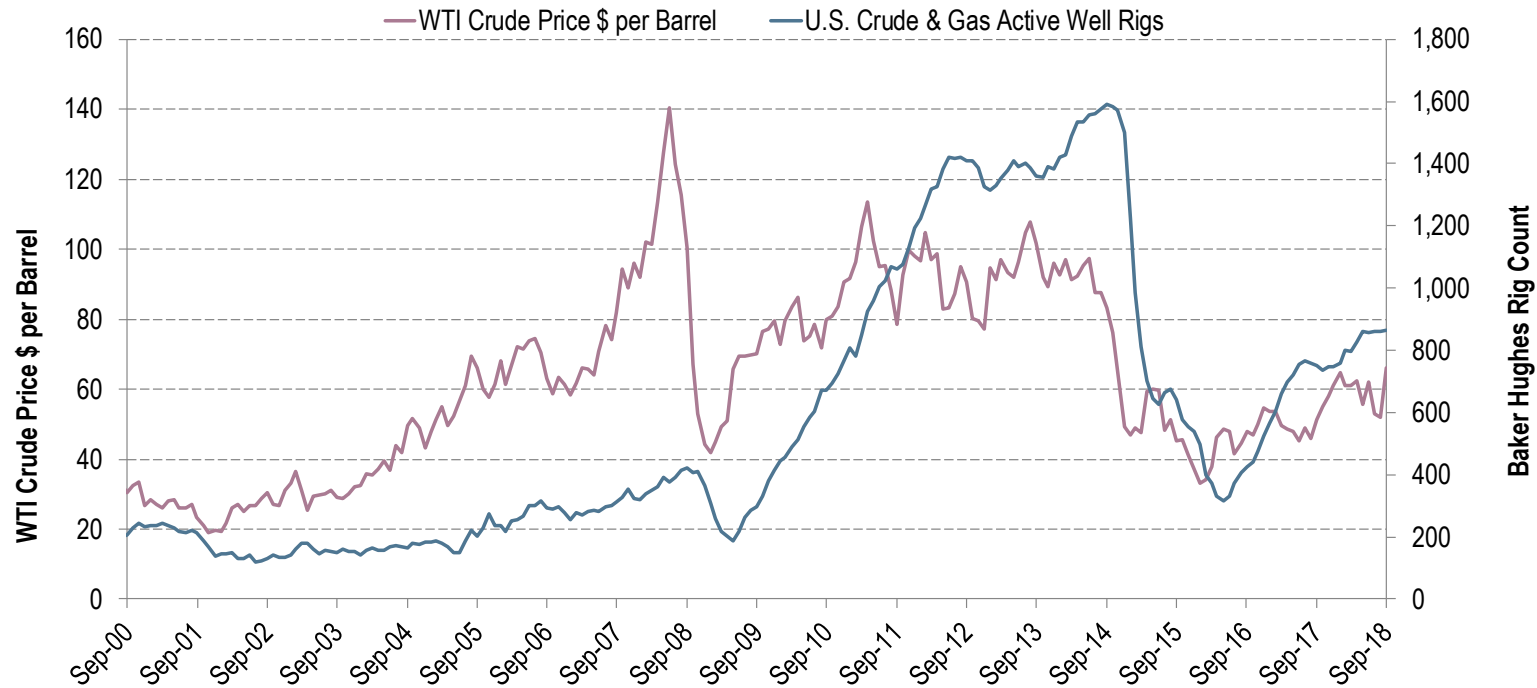
¹ Bloomberg. Data is as of September 30, 2018.

Major Currency Values versus the U.S. Dollar¹



- In the third quarter, the U.S. dollar continued to strengthen increasing over 2.1% against a basket of its peers.
- Relative strength in the U.S. economy and higher interest rates have been supportive to the dollar.
- Previously, the decline in the dollar helped international equity returns for U.S. investors. The reversal has weighed on returns, particularly in emerging markets.

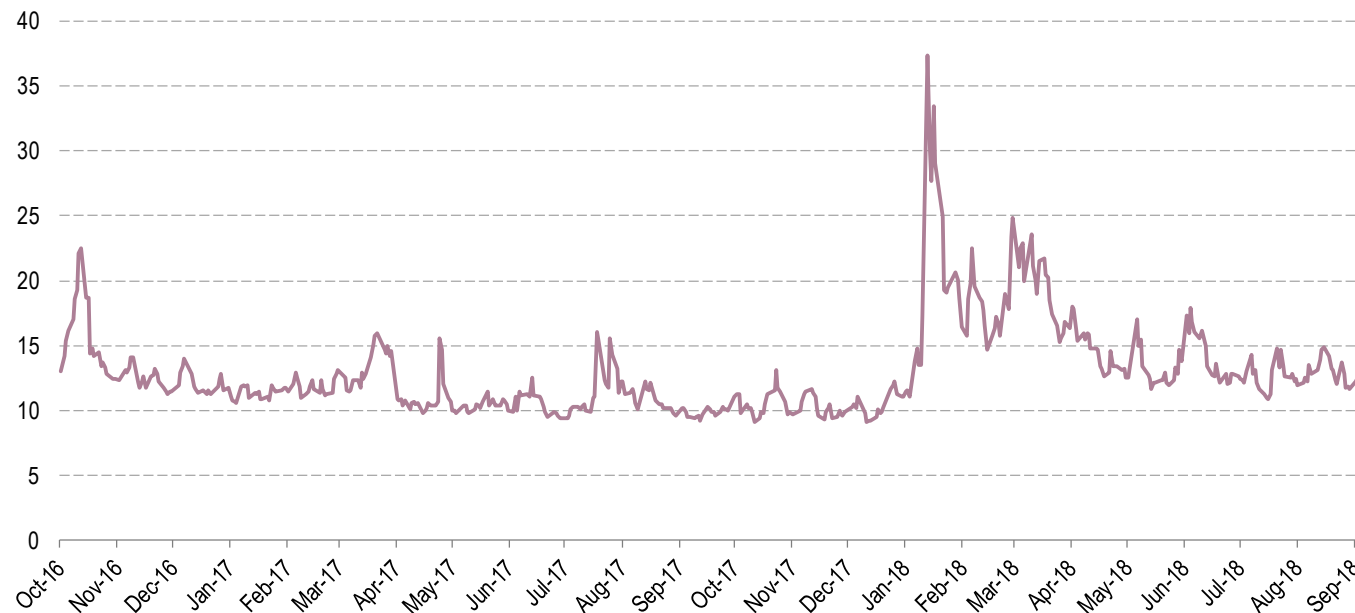
¹ Source: Federal Reserve Bank of St. Louis. Data is as of September 30, 2018.

Oil Price and Rig Activity¹

- Oil prices have almost doubled from their recent lows with a similar rise in drilling activity.
- Synchronized global growth and cuts by OPEC have contributed to rising prices.
- Continued price increases could eventually weigh on consumption and on import focused countries.

¹ Source: Bloomberg. Data is as of September 30, 2018.

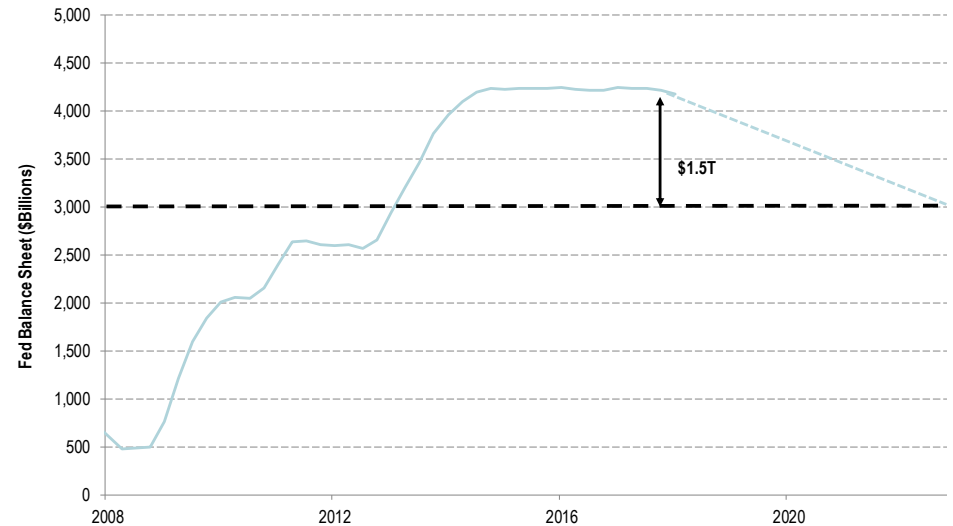
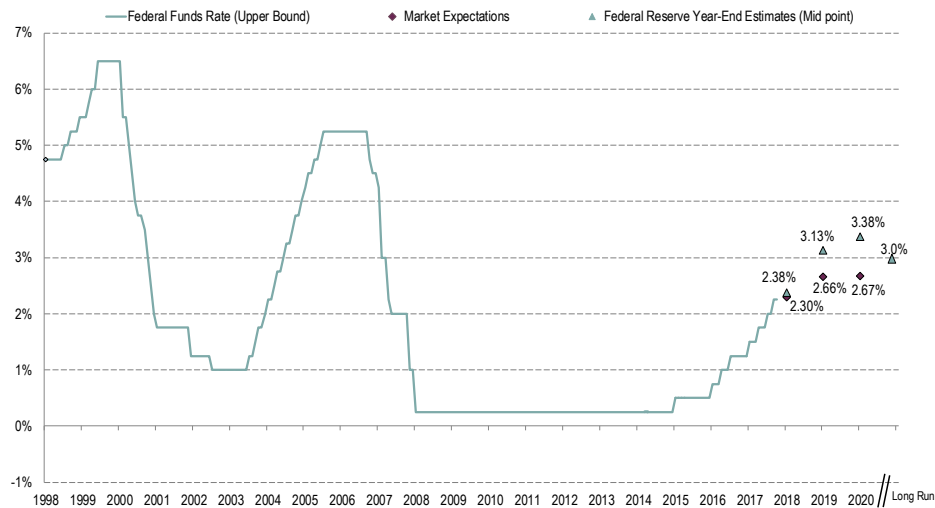
Volatility¹



- After the spike in volatility earlier this year, volatility since declined and finished the quarter well below its historical average.
- After quarter-end, markets declined and volatility spiked with the VIX reaching over 25. It did not appear that this particular market decline was caused by a clear event, but it was largely reported that investors were coming to terms with rising rates.
- With the long economic and market expansion, we could see heightened volatility as investors are on watch for the event(s) that tip the scales.

¹ Bloomberg. Represents daily VIX data and is as of September 30, 2018.

U.S. Monetary Policy^{1, 2}

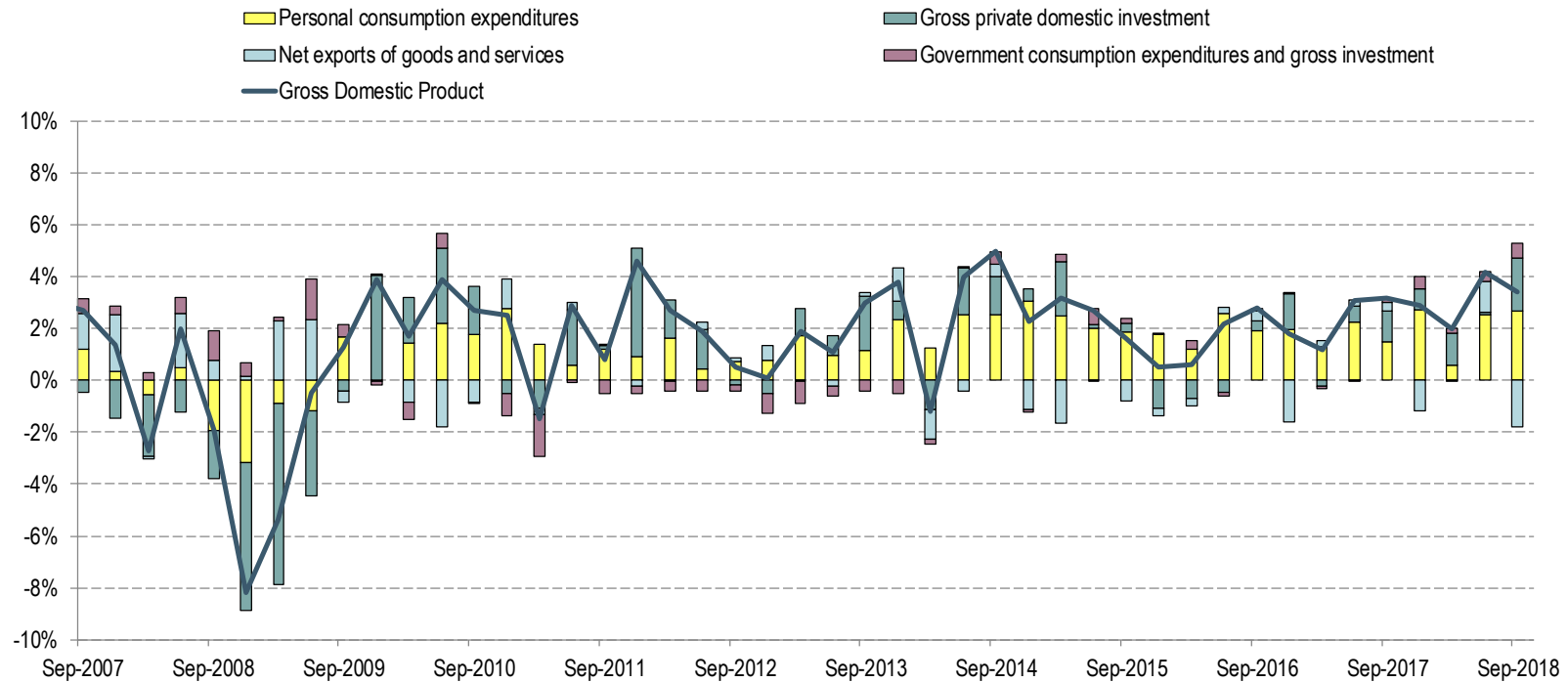


- The U.S. Federal Reserve continued its path of raising rates given strong economic conditions and higher inflation. They increased rates for the third time this year in September, to a range of 2.00% to 2.25%.
- Going forward, expectations are for possibly one more rate hike this year and three to four more in 2019. The trend persists of market expectations being lower than the central bank's estimates.
- The Fed recently began the process of reducing their \$4 trillion balance sheet, with a target of reducing it by \$1.5 trillion by 2022.
- Less demand for bonds by the Fed could lead to further interest rate increases.

¹ Source for Monetary Policy: Bloomberg. Data is as of September 30, 2018.

² Source for Balance Sheet: Oxford Economics.

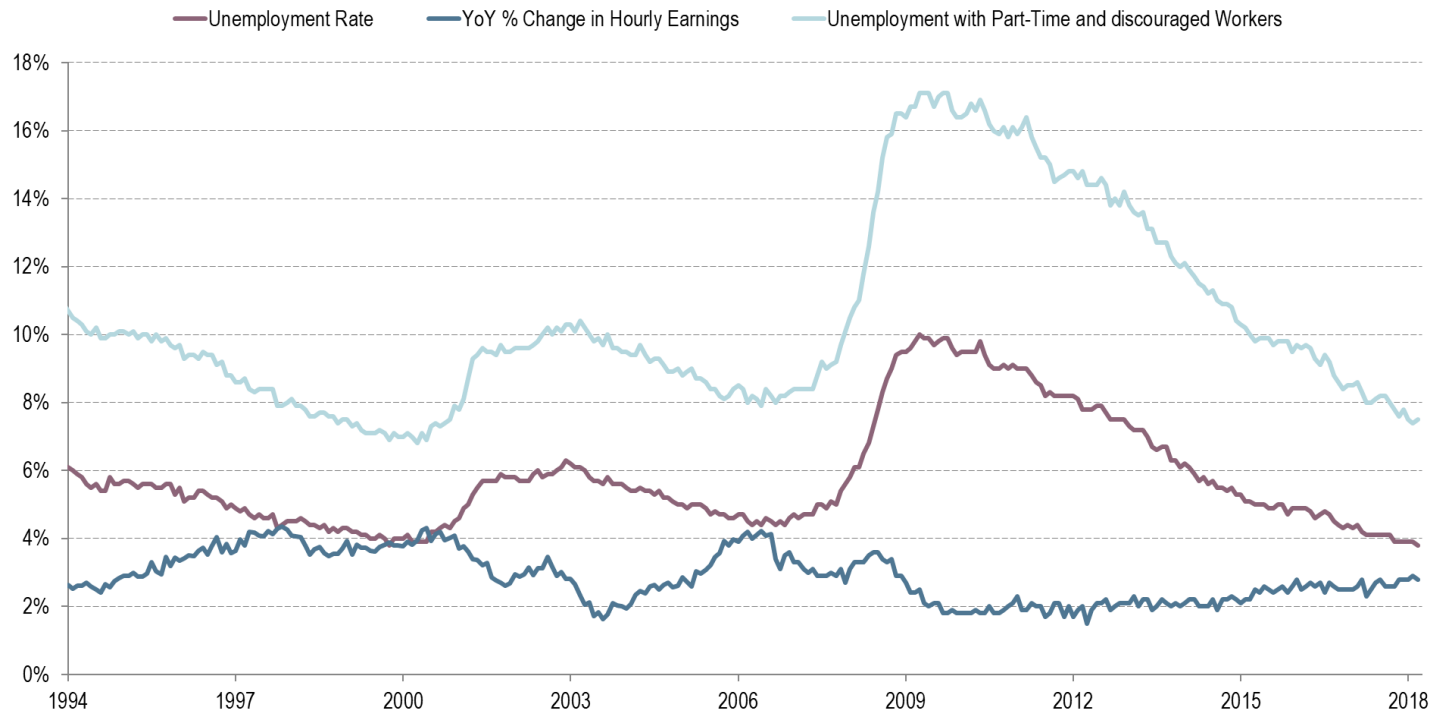
U.S. Real Gross Domestic Product (GDP) Growth¹



- The final reading of third quarter U.S. GDP growth came in at an annualized rate of 3.4%, slightly below the prior reading of 3.5%. Over the last year, GDP grew at a rate of 3.0%.
- Consumer spending continues to be a big driver of growth as the impact of the tax cuts lingers. Imports outpaced exports possibly due to a rush to purchase foreign goods ahead of any additional tariffs.

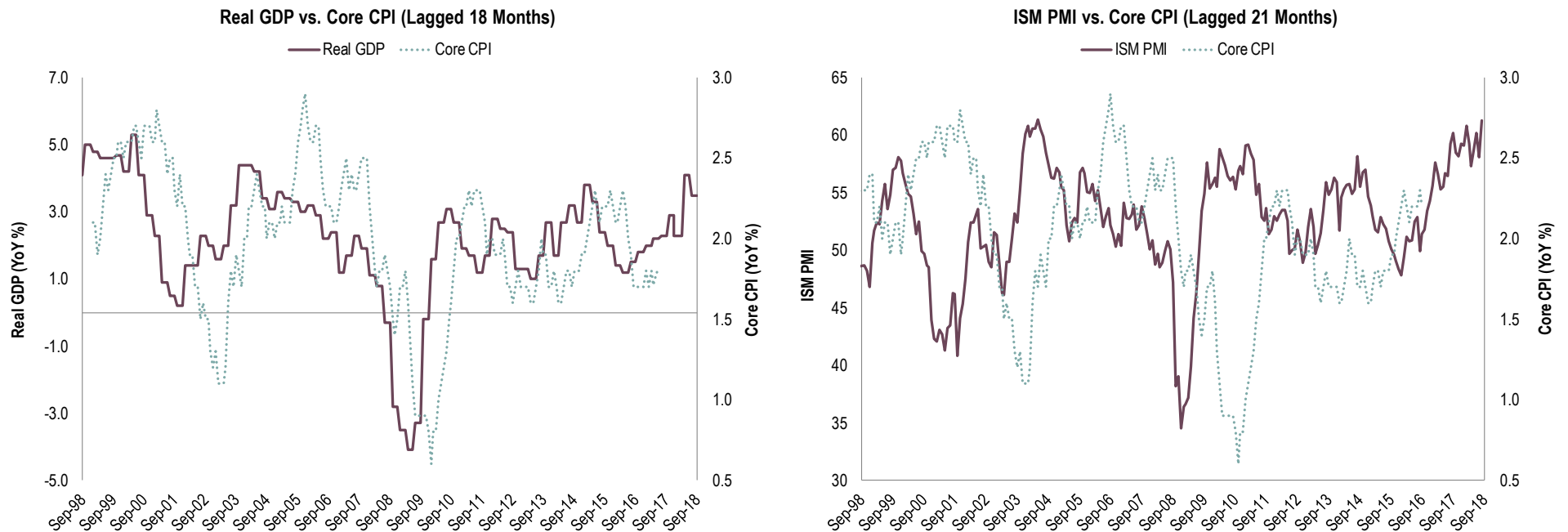
¹ Source: U.S. Bureau of Economic Analysis. Data is as of the third quarter of 2018 and represents the third estimate.

U.S. Employment & Wages¹



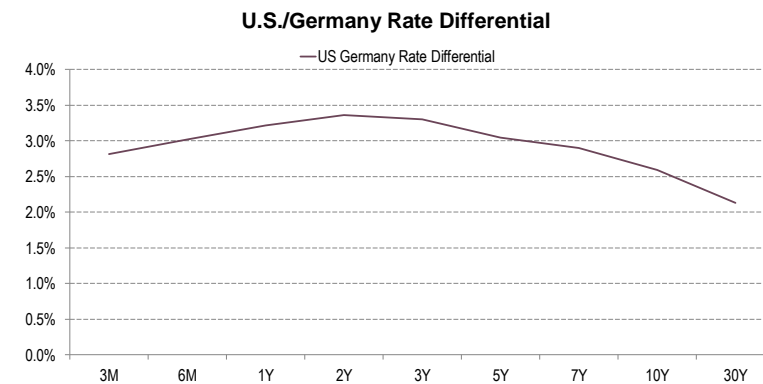
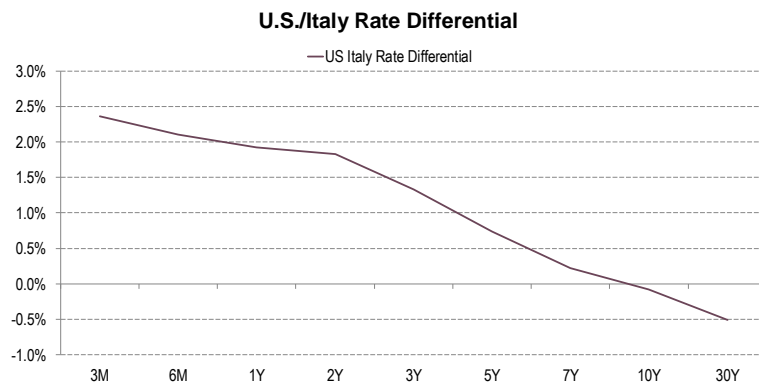
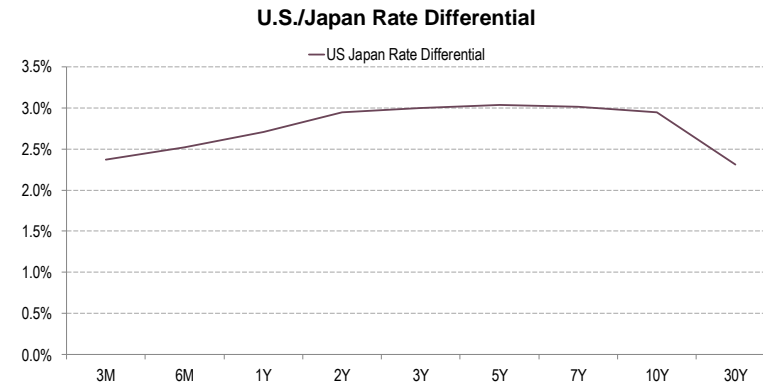
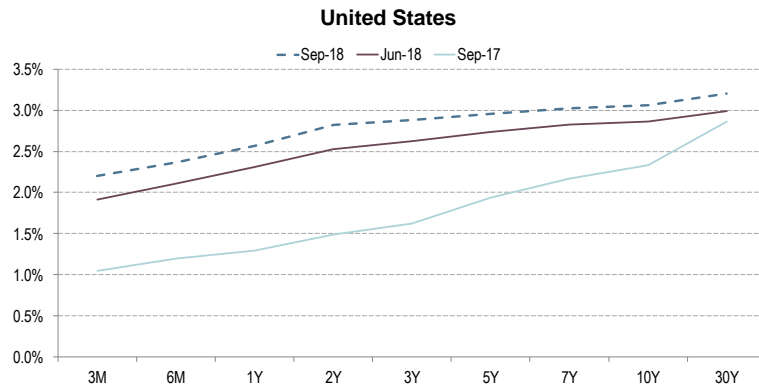
- The unemployment rate fell further in the third quarter to 3.8%, a level last seen in 2000.
- The broader measure of unemployment (U6) that includes discouraged and underemployed workers came in at 7.5%.
- Despite improvements in the labor market, companies are not sharing higher profits with workers. Wage growth (2.8%) has plateaued at a level well below prior cycles, partly due to automation, the “gig economy,” and globalization.

¹ Source: Bureau of Labor Statistics. Data is as of September 30, 2018.

U.S. Inflation¹

- Inflation is considered a lagging indicator representing the economic conditions of the past.
- This leads to economic conditions today being a means of forecasting future inflation levels.
- Real GDP and manufacturing indicators, like the ISM Purchasing Managers Index, have historically been reasonable indicators of future inflation and are both pointing to rising inflationary pressures.
- Despite the projected pick-up in prices, inflationary pressures have been modest due in part to the low wage growth.

¹ Source: Bloomberg. Data is as of September 30, 2018.

Government Bond Yield Curves¹

- In the U.S., the entire yield curve rose in the third quarter due to fears that a pick-up in inflation could lead to the Federal Reserve increasing the pace of its rate hikes. From a year prior, the U.S. yield curve has significantly flattened.
- Rates remain higher in the U.S. across the yield curve compared to Germany and Japan, and for most of Italy. Rates spiked dramatically in Italy given uncertainties related to the election of anti-establishment parties and budget negotiations with the European Union.

¹ Source: Bloomberg. Data is as of September 30, 2018. Rate differential data represents the differences in the yield for a U.S. Treasury at each maturity versus the respective similar bond for each country.

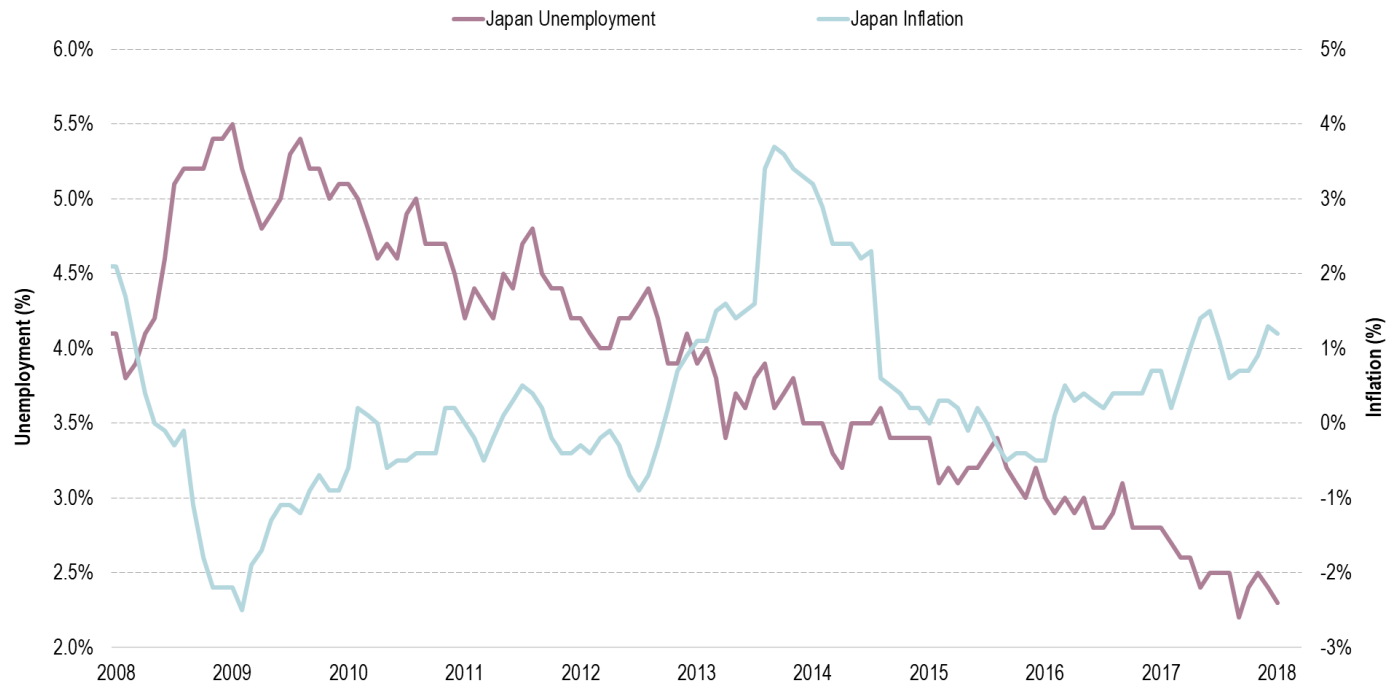
European Economic Conditions¹



- In Europe, unemployment has declined and inflation picked up, but further room for economic improvements remain. With the unemployment rate at over 8%, there is a lot of space for improvements in the labor market allowing the ECB some flexibility with its policies.
- Growth has been uneven in Europe with Germany experiencing much stronger growth after the Global Financial Crisis, and lower lows in 2012 and 2013, compared to Italy. High debt burdens have weighed on the Italian economy given the inability to devalue their currency and the limits on fiscal expansion.
- A majority of seats were won in the Italian parliament by two anti-establishment parties, the Northern League and the Five-star Movement. Both groups are euro sceptics and anti-immigration.
- Their fiscal expansionary plans have caused concerns of debt and deficits increasing further in Italy, potentially leading to a sovereign debt crisis.

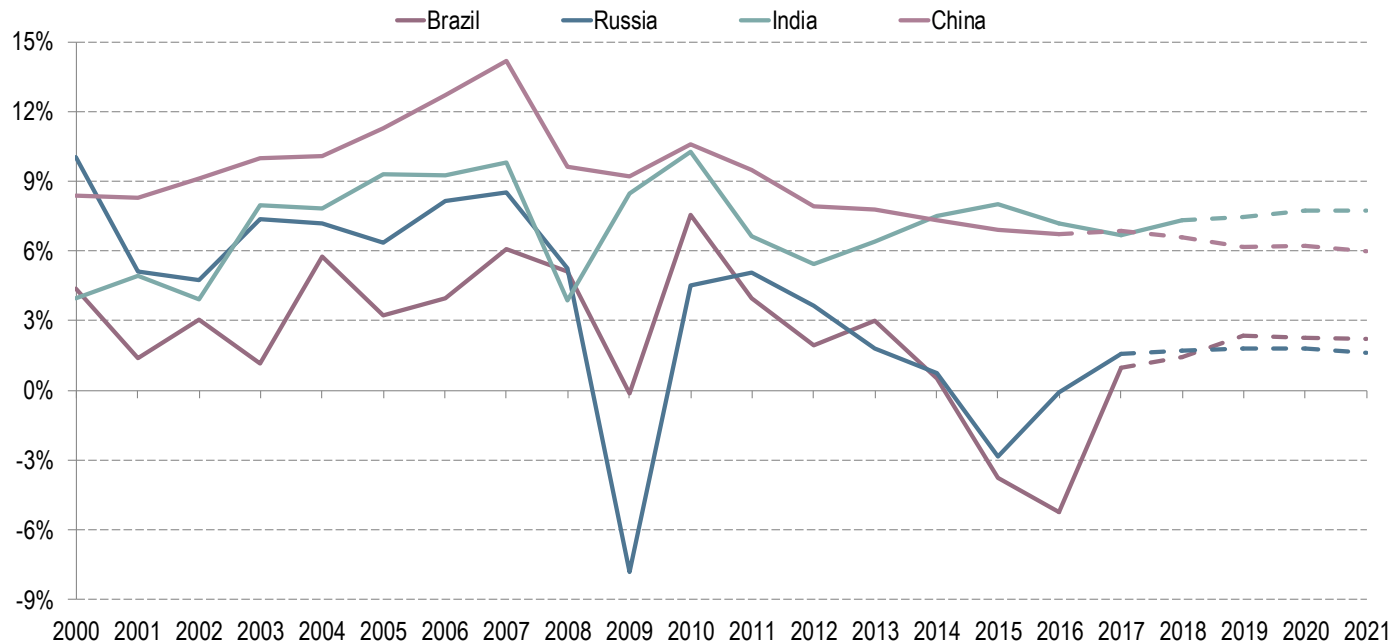
¹ Source: Bloomberg. Unemployment and inflation data is as of September 30, 2018. GDP data is as of June 30, 2018.

Japanese Economic Conditions¹



- Rising demand abroad and sustained monetary policy support have helped the Japanese economy with unemployment falling and inflation picking up.
- Of all the major economies, Japan's central bank maintains the largest stimulative effort with no signs of pulling back.

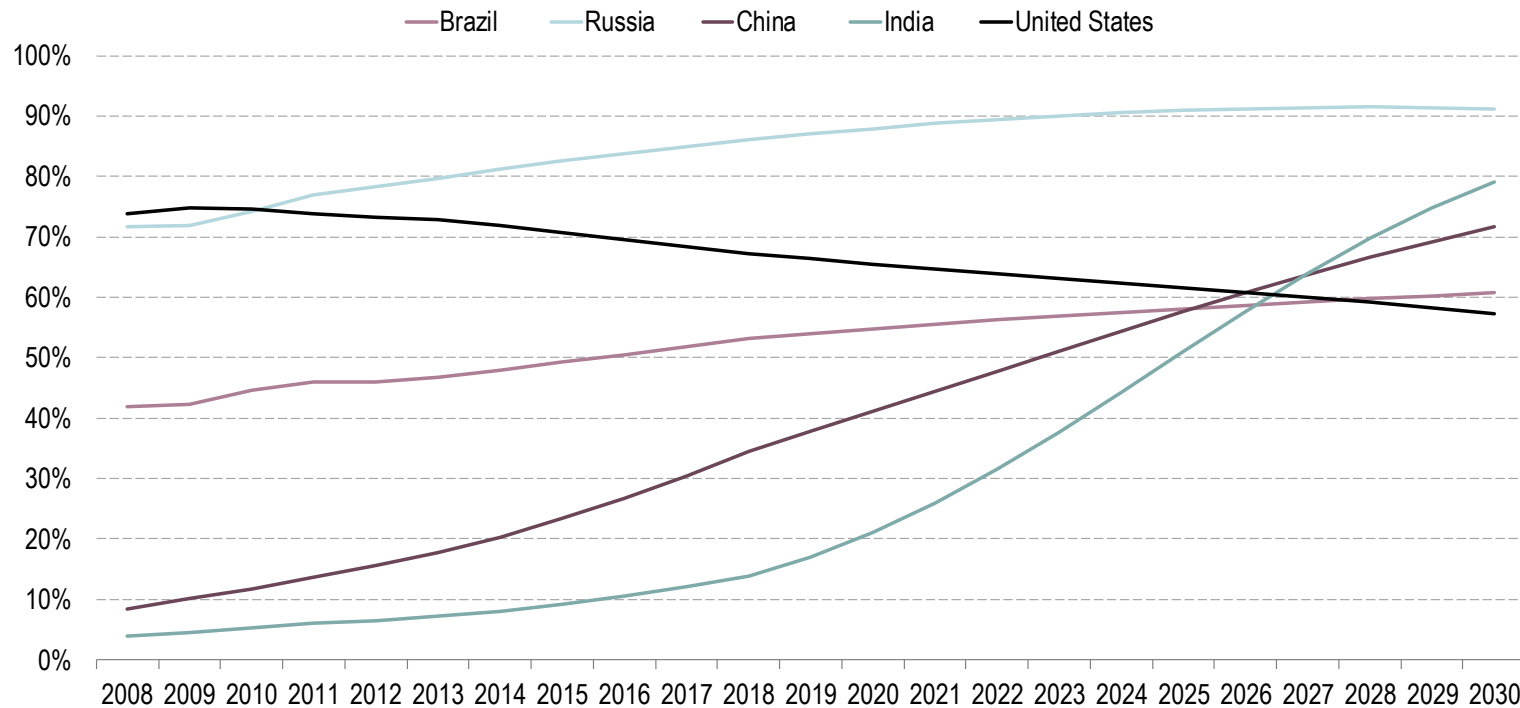
¹ Source: Bloomberg. Data is as of September 30, 2018.

Emerging Market GDP¹

- Growth in emerging economies generally remains higher than developed economies but uneven, with debt levels remaining a key risk.
- China's stimulus, along with stable growth in developed economies, has helped export-focused countries.
- China is forecasted to slow as they reposition the economy and deal with lingering debt issues. India remains a bright spot, with higher growth forecasted. The IMF projects growth from Russia and Brazil, an improvement from the contraction in 2015 and 2016.
- Going forward, higher rates and a stronger dollar in the U.S., antitrade policies, higher oil prices, and heightened geopolitical tensions could weigh on emerging markets.

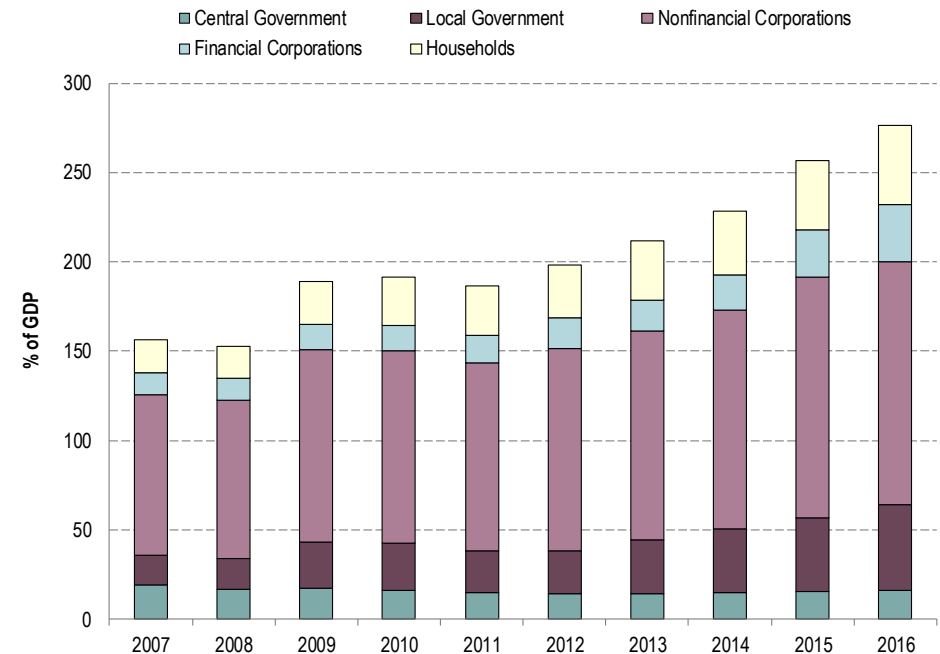
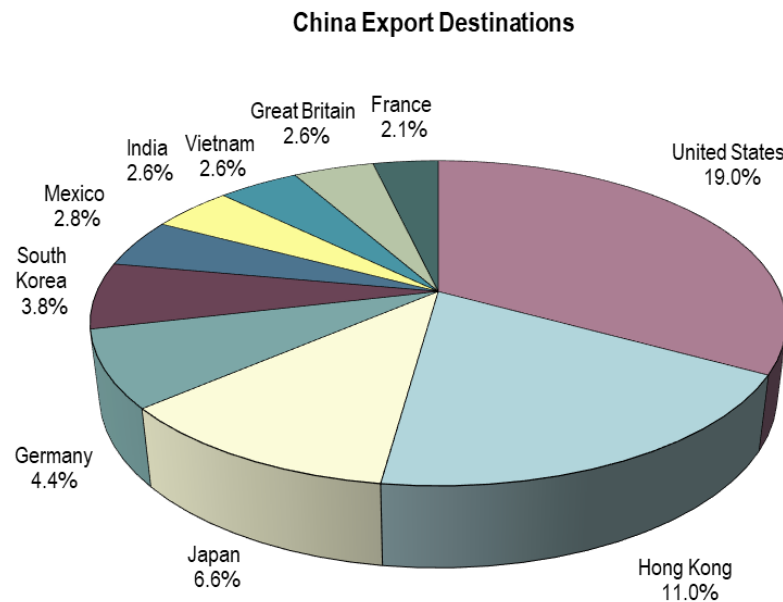
¹ Source: IMF. World Economic Outlook. October update. Estimates start after 2017.

Growth of the Middle Class¹ (% of Total Population)



- A large part of the long-term emerging market story is the growth of the middle class.
- In advanced economies, like the U.S., the middle class segment has matured, while in emerging markets it is expected to grow at a high rate.
- The expanding middle class, particularly in China and India, is projected to lead to much higher consumption going forward and should help the global economy.

¹ Source: Brookings Institute.

China^{1,2}

- Trade tensions between the U.S. and China continue to escalate with each country announcing several rounds of tariffs against the other.
- Although the percentage of China's exports going to the U.S. has declined over time, the U.S. remains their largest trading partner.
- In the coming years, China will need to manage the process of transitioning to an economy based on consumption and not investment, while reducing debt levels and dealing with financial risks. A prolonged trade fight with the U.S. could make this process difficult and further diminish already slowing growth.

¹ Source for China export Destinations: BACI World Trade Data Base. Data as of December 31, 2016.

² Source for China Debt: Oxford Economics/Haver Analytics.

Summary

Four primary concerns face the global economy: 1) the potential for simultaneous monetary tightening globally; 2) uncertainty related to the U.S. economy and policies; 3) declining growth in China, along with uncertain fiscal and monetary policies; and 4) political uncertainty in Europe and risks related to the U.K.'s exit from the European Union.

- Since the Global Financial Crisis, central banks worldwide attempted to support markets and the economy through low interest rates and bond-purchasing programs (i.e., quantitative easing). The U.S. and several others have already started increasing rates and the U.S. has started reducing its balance sheet. Simultaneous tightening across central banks could lead to higher interest rates, less liquidity, and slower economic activity.
- The U.S. has experienced largely stable growth since the end of the financial crisis, but at levels below prior recoveries. Unemployment has declined, but wage growth has been tepid. Inflationary pressures are building, given where we are in the economic cycle, tax legislation, and the recent tariffs. An acceleration in prices could lead the Fed to increase its pace of tightening. Policy uncertainty related to tariffs, immigration, and strategic alliances remain other key issues.
- China continues to manage a repositioning and slowing of its economy, which could have a meaningful impact on countries that depend on its trade. High debt, particularly in the corporate sector, and recent tariffs between China and the U.S. remain key issues. The U.S. is one of China's largest export destinations, making a prolonged trade battle impactful with potential to further slow growth. Another devaluation of the yuan could disrupt capital markets, weigh on domestic demand, and hurt countries with competing exports.
- Elections in Italy following the prior elections in Germany show that political uncertainties remain in Europe. Given that Italy is the world's fourth largest bond market and the third largest economy in Europe, what happens there matters, with a debt crisis or departure from the euro having far-reaching effects. The ongoing negotiations of the U.K. to leave the EU is another key issue. Moves by other countries to leave the EU, or the Eurozone, would be disruptive to markets and growth.