

# Economic Outlook

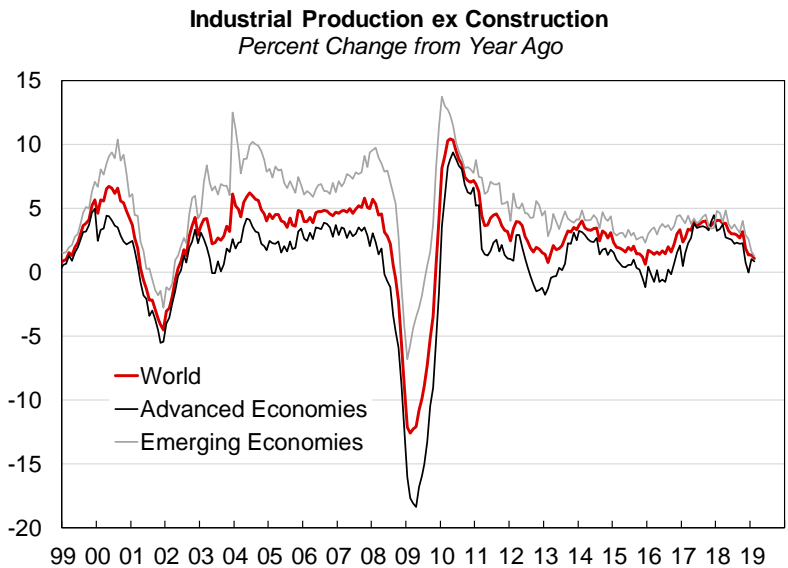
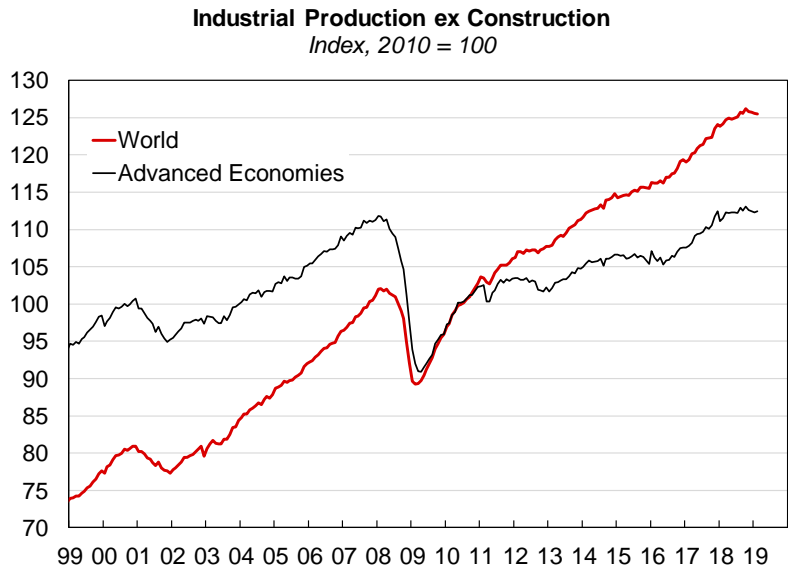
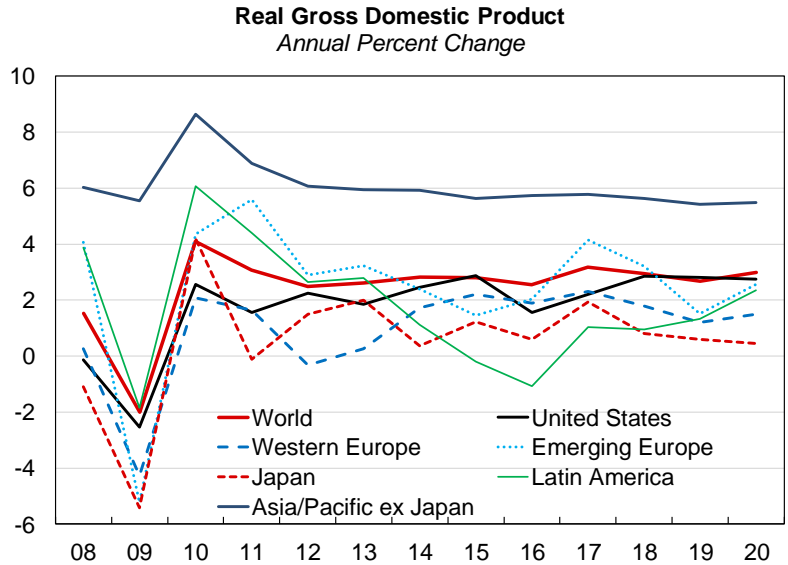
Robert C. Fry, Jr., Ph.D.

May 3, 2019

- The global economy slowed in 2018. Year-over-year growth in global industrial production peaked at 4.1% in the first two months of 2018; by February 2019, it had fallen to 1.1%. The slowdown was most pronounced in Europe and China, which were hurt by a rebound in oil prices and perhaps by a geographical shift in economic activity in response to U.S. tax reform. Growth also slowed in the United States, but much less and much later than in Europe and China. There are signs that growth has begun to pick up in the United States and China, but weakness in late 2018 and early 2019 means that annual growth in global Gross Domestic Product and industrial production will be lower in 2019 than in 2018.
- Real Gross Domestic Product in the United States rose at a surprisingly strong 3.2% annual rate in the first quarter after rising at a 2.2% rate in the fourth quarter of 2018. Year-over-year growth rose to 3.2%, a 15-quarter high. Much of the growth was due to a big inventory build and a decline in the net-export deficit, two sources of growth that are not sustainable. Consequently, growth is likely to slow in the second quarter even if consumer spending and business fixed investment are strong. Nevertheless, the strength of the first quarter and the quick rebound in monthly data after the weakness of the December-to-February period suggest that the underlying growth rate of the U.S. economy is significantly stronger than pessimists assume. I expect GDP growth to slow to a (higher-than-consensus) 2.5% rate in mid-2020 after stronger growth, led by business investment and residential construction, in the second half of 2019 and first half of 2020. Annual growth is expected to slow gradually, from 2.9% in 2018 to 2.8% in 2019 and 2.7% in 2020.
- Growth in China, which slowed through most of 2018, is showing signs of picking up. Value Added of Industry, China's official measure of industrial production, was up 8.5% year-over-year in March. That was the highest growth rate since July 2014 and up from 5.3%, a 10-year low, in January and February. My preferred measure of growth in industrial production, the median growth rate of 100 industrial products, rose to 6.9% in March, up from 0.1% last June. Despite the ongoing reacceleration, which is driven by fiscal stimulus, the longer-term trend is towards slower growth.
- Real GDP for the European Union rose a better-than-expected 0.5% (1.9% annual rate) in the first quarter, after rising 0.3% in each of the prior two quarters. Year-over-year growth remained at 1.5%. Industrial production in European Union manufacturing rose for a second straight month in February but was still down 0.6% from the record high reached in January 2018. Despite the pick-up in GDP growth, it is too soon to call an end to the economic slowdown caused by Brexit concerns, domestic political strife related largely to immigration, oil prices that rose high enough to hurt growth, and a shift in economic activity to the United States.
- Industrial production in Japanese manufacturing was down 2.9% year-over-year in March.
- Real Gross Domestic Product for India was up 6.6% year-over-year in the fourth quarter of 2018, down from 8.0% two quarters earlier.
- Global real Gross Domestic Product (based on market exchange rates, not purchasing power parity) is expected to grow 2.7% in 2019, down from 3.0% in 2018. Growth is expected to return to 3.0% in 2020. Global industrial production is expected to grow 1.7% in 2019, down from 3.1% in 2018. Growth is expected to rise to 3.0% in 2020. My forecast assumes a trade agreement is reached between the United States and China. A re-escalation of their trade dispute would push my growth forecast down.

## Global Macroeconomic Overview

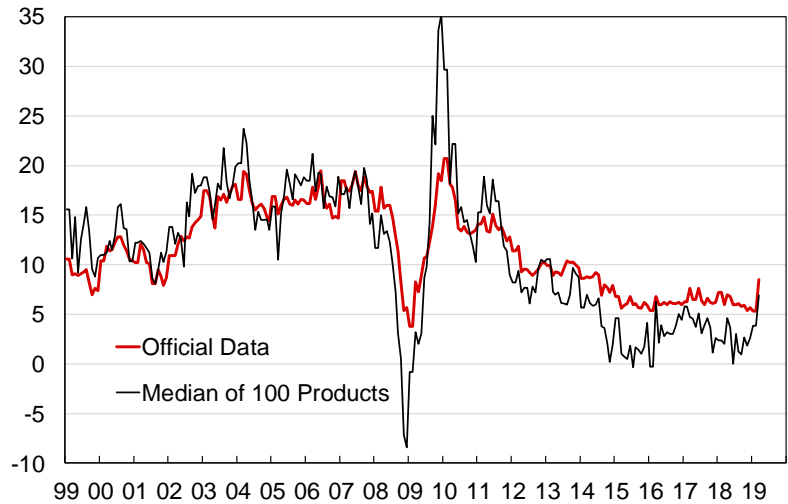
- Global real Gross Domestic Product (based on market exchange rates, not purchasing power parity) is expected to grow 2.7% in 2019, down from 3.0% in 2018. Growth is expected to return to 3.0% in 2020.
- Growth remains strongest in the emerging economies of the Asia/Pacific region and weakest in the advanced economies of Western Europe and Japan. Growth in the United States typically lies somewhere in between, close to the global growth rate.
- Global industrial production, as measured by the CPB Netherlands Bureau for Economic Policy Analysis, grew at a slowing rate through most of 2018 before declining from October 2018 through February 2019.
- Industrial production in the Advanced Economies was at the same level in February 2019 as it was in December 2017.
- Year-over-year growth in global industrial production declined from 4.1 % in the first two months of 2018 to 1.1% in February 2019.
- Economic growth has generally been faster in Emerging Economies than in Advanced Economies. Growth slowed in both Emerging Economies and Advanced Economies in 2018.
- Growth in this measure of industrial production, which includes mining, slowed much less in the United States than in other parts of the world because of strong growth in oil and gas production.



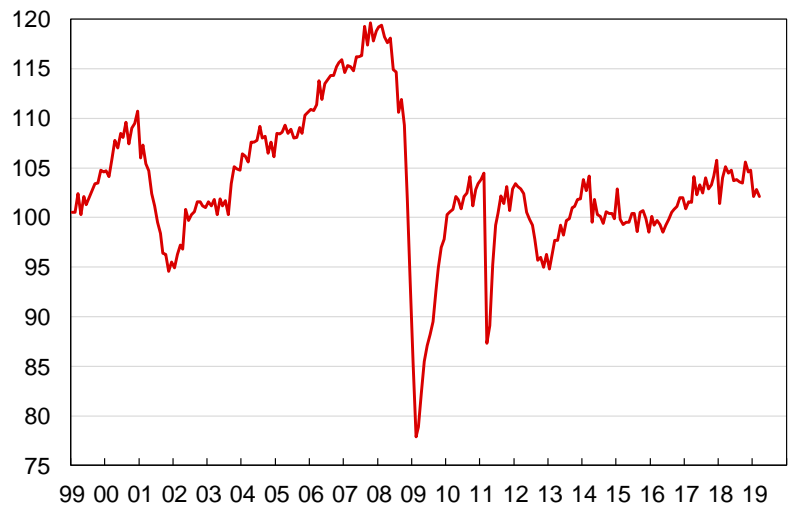
## Asia

- Growth in China slowed in 2017 and 2018 but seems to have bottomed.
- Value Added of Industry, China's official measure of industrial production, was up just 5.3% year-over-year in January and February combined. This was the slowest growth rate in 10 years and second slowest ever. Growth rebounded to 8.5% in March.
- My preferred measure of growth in industrial production, the median growth rate of 100 industrial products, rose to 6.9% in March, the highest since 2013 and up from 0.1% last June.
- Industrial production in Japanese manufacturing has declined since nearing its post-2008 high last October.
- Production was down 2.9% year-over-year in March.
- Weakness in Japanese manufacturing reflects the slowdown in China in 2018.
- Year-over-year growth in Indian industrial production (manufacturing), which surged in late 2017, slowed through most of 2018 and was slightly negative in February 2019.
- Real Gross Domestic Product for India was up 6.6% year-over-year in the fourth quarter of 2018, down from 8.0% two quarters earlier.
- Despite the recent slowing, GDP growth in India has surpassed the growth rate in China. Growth is expected to remain faster in India than in China, largely for demographic reasons. India's population will surpass China's in the next decade.

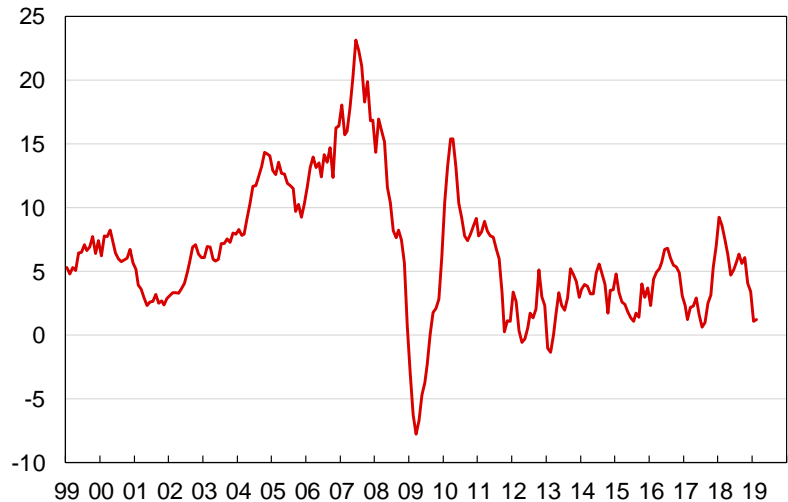
**Value Added of Industry (Industrial Production): China**  
Percent Change from Year Ago



**Industrial Production, Manufacturing: Japan**  
Index, 2015 = 100



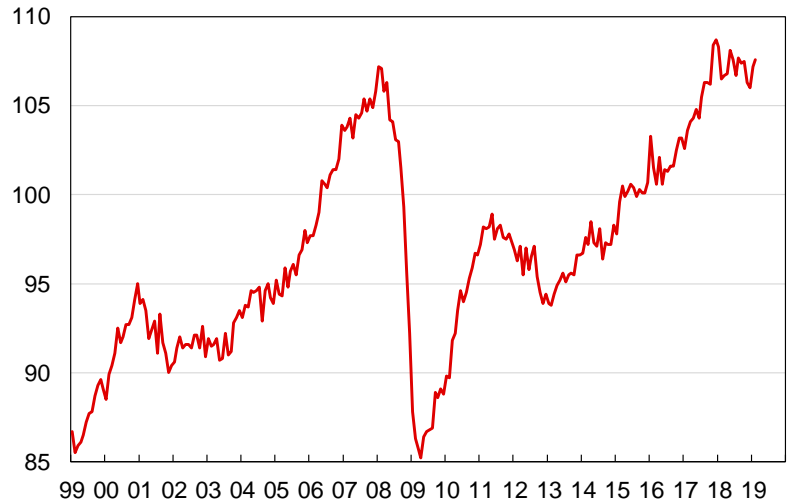
**Industrial Production, Manufacturing: India**  
Percent Change from Year Ago, Smoothed



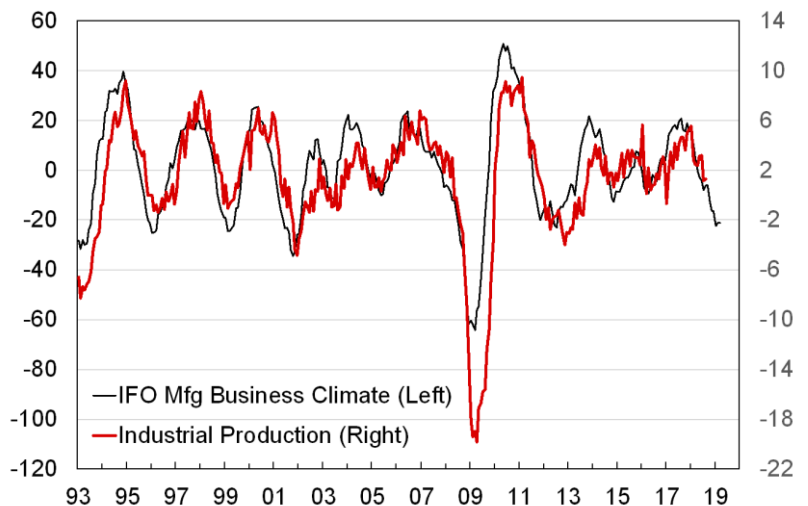
## Europe

- Industrial production in European Union manufacturing rose for a second straight month in February but was still down 0.6% from the record high reached in January 2018 after five years of solid growth. Year-over-year growth rose to 1.0% after three months in negative territory.
- Production rose in anticipation, then fell in response, to U.S. tax reform.
- Real GDP in the EU rose a better-than-expected 0.5% (1.9% annual rate) in the first quarter after rising 0.3% in each of the prior two quarters. Year-over-year growth held steady at 1.5%.
- The 12-month change in the German IFO manufacturing business climate index has historically led year-over-year growth in European Union manufacturing production by three months and is reported in a timelier manner.
- The IFO index has fallen sharply since late 2017, but its 12-month change has stabilized. This suggests that year-over-year growth could turn negative again in coming months, but that it is near a bottom.
- Industrial production in manufacturing stands at record highs in Poland and Hungary. From a manufacturing standpoint, these have been among the best-performing economies in the world over the last several years.
- Production was up 8.7% year-over-year in Poland in March. It was up 6.3% in Hungary in February but up only 1.6% in the Czech Republic, which has been more affected by slow growth in Western Europe.

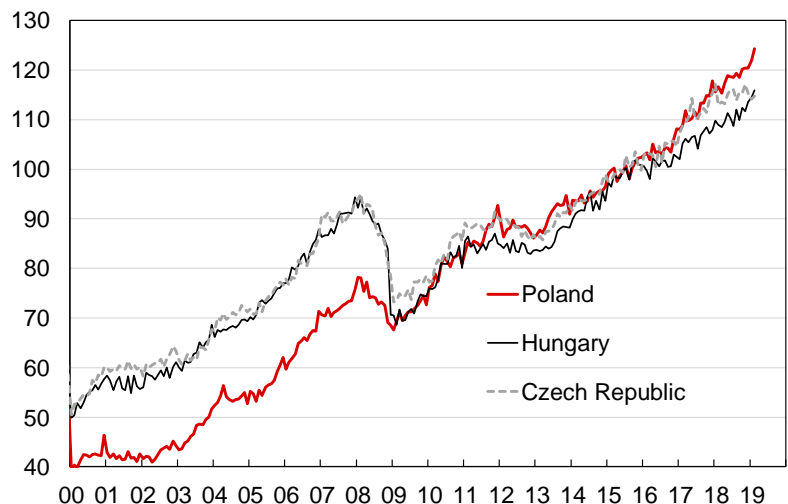
**Industrial Production, Manufacturing: European Union**  
Index, 2015 = 100



**Industrial Production, Manufacturing: European Union**  
Change/Percent Change from Year Ago



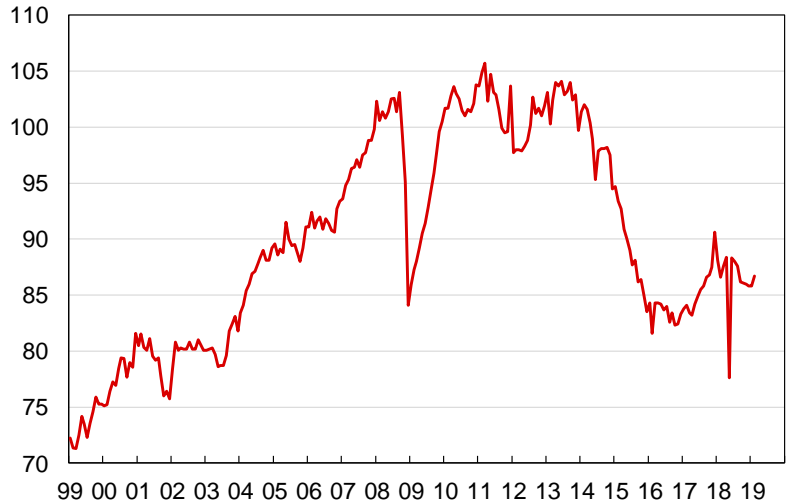
**Industrial Production, Manufacturing: Central Europe**  
Index, 2015 = 100



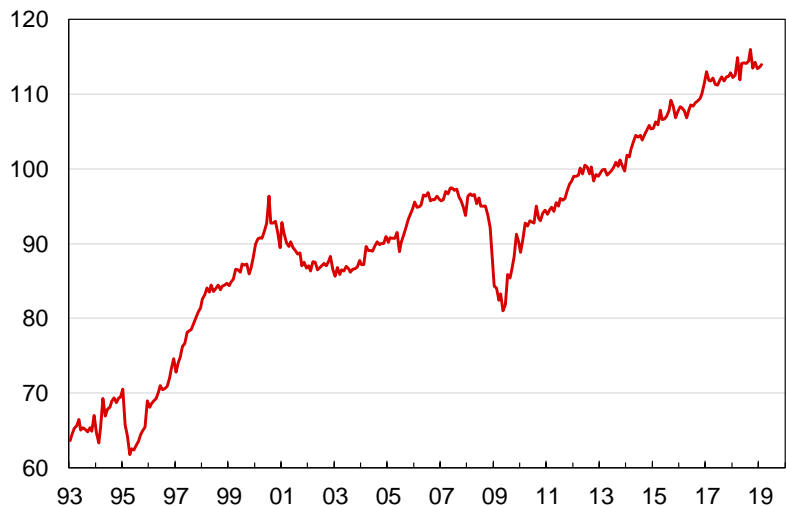
## Americas

- Industrial production in Brazilian manufacturing rose in February, but it is much too soon to declare that the Brazilian economy has bottomed.
- Despite the February increase, production was up just 0.1% year-over-year.
- Better growth in Brazil is dependent on a change in economic policies following last October's Presidential election.
- Industrial production in Mexican manufacturing softened after an unusually strong reading in September 2018.
- Despite the recent weakness, production was up 1.2% year-over-year in February.
- Failure to ratify the new U.S.-Mexico-Canada Agreement (USMCA) would do serious damage to all three North American economies. It would be especially harmful to those who make, sell, and buy motor vehicles.
- Industrial production in U.S. manufacturing was flat in March after declining in January and February. It was up just 1.0% year-over-year.
- Despite the recent weakness, production has grown at a 2.0% annual rate since May 2016. It had declined 2.8% over the prior 18 months.
- With motor vehicle production past its peak and aircraft production likely to fall near-term, faster growth will rely on increased production of building materials as housing rebounds, increased production of capital goods as business investment accelerates again, and stronger chemical production.

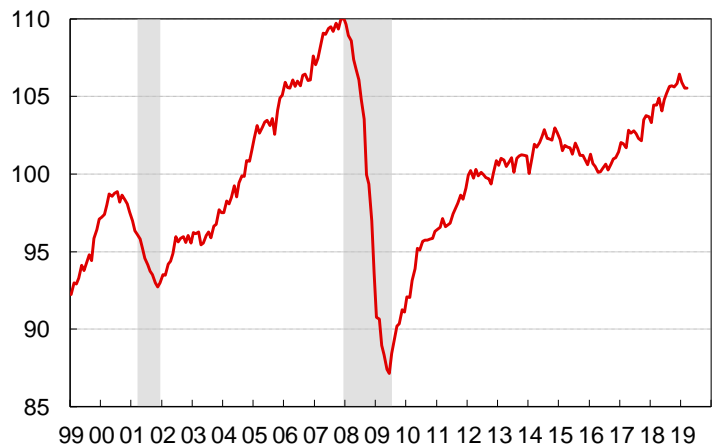
**Industrial Production, Manufacturing: Brazil**  
Index, 2012 = 100



**Industrial Production, Manufacturing: Mexico**  
Index, 2008 = 100



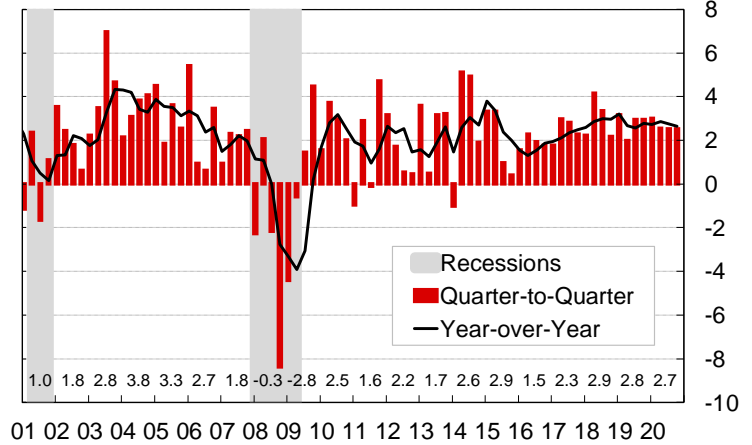
**US Industrial Production: Manufacturing**  
Index, 2012=100



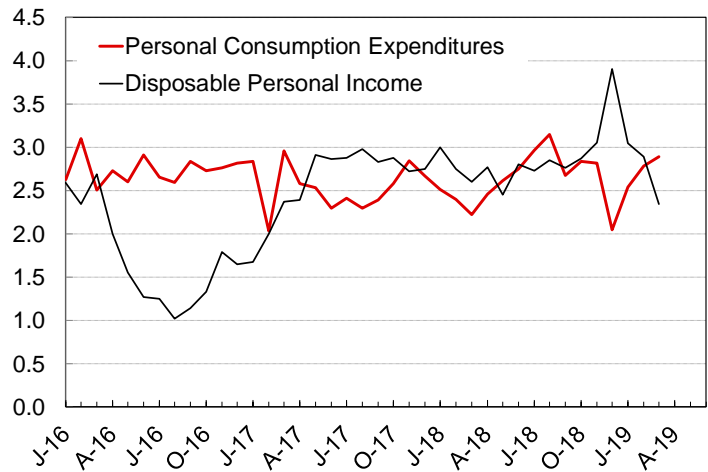
## US Macroeconomic Overview

- Real Gross Domestic Product in the United States rose at a 3.2% annual rate in the first quarter after rising at a 2.2% rate in the fourth quarter of 2018. Year-over-year growth rose to 3.2%, a 15-quarter high.
- Much of the growth was due to a big inventory build and a decline in the net-export deficit, two sources of growth that are not sustainable. Growth is likely to slow in the second quarter even if consumer spending and business fixed investment are strong, but underlying growth in the U.S. economy is stronger than pessimists believe.
- Real personal consumption expenditures, which fell 0.6% in December and failed to fully recover in January and February, surged 0.7% in March. Year-over-year growth rose to 2.9%. Real PCE has grown at a moderate 2.5% annual rate since the month before the Tax Cuts and Jobs Act took effect. This suggests that most of tax reform's impact on growth has come from a supply-side boost to business investment, not a demand-side boost to consumption.
- Real disposable personal income fell 0.2% in March. Wages and salaries grew, but interest, dividends, and farm income fell.
- Light vehicles sales, which exceeded 17 million for a fourth straight year in 2018, fell sharply in January. They rose back above a 17 million seasonally adjusted annual rate in March but fell to a four-year low in April.
- With employment growth expected to slow and some consumers waiting for next-generation technology (electric, self-driving) before buying their next car, sales are likely to trend downward from last year's levels. However, given the advanced age of the current vehicle fleet, strong replacement demand will keep vehicle sales from declining significantly until the economic expansion nears its end.

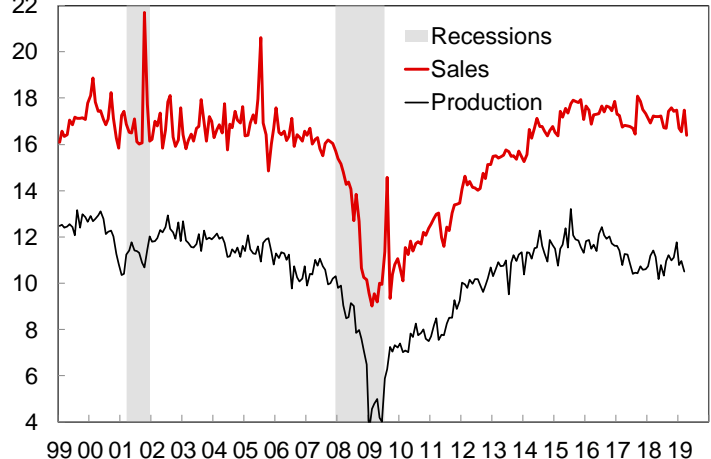
**US Real Gross Domestic Product**  
*Annualized Growth Rates*



**US Real Consumer Spending & Disposable Income**  
*Percent Change from Year Ago, Chained 2012 Dollars*

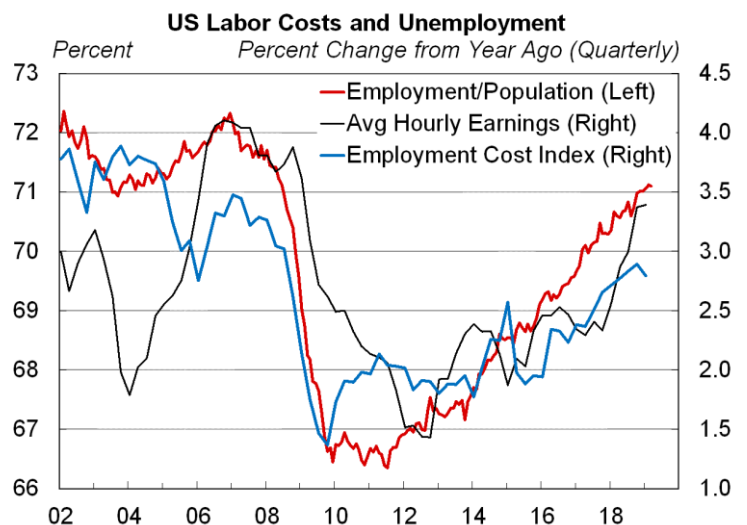
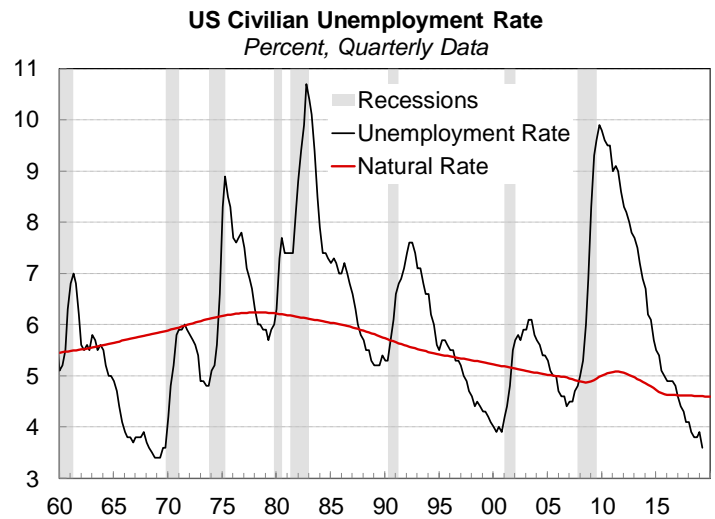
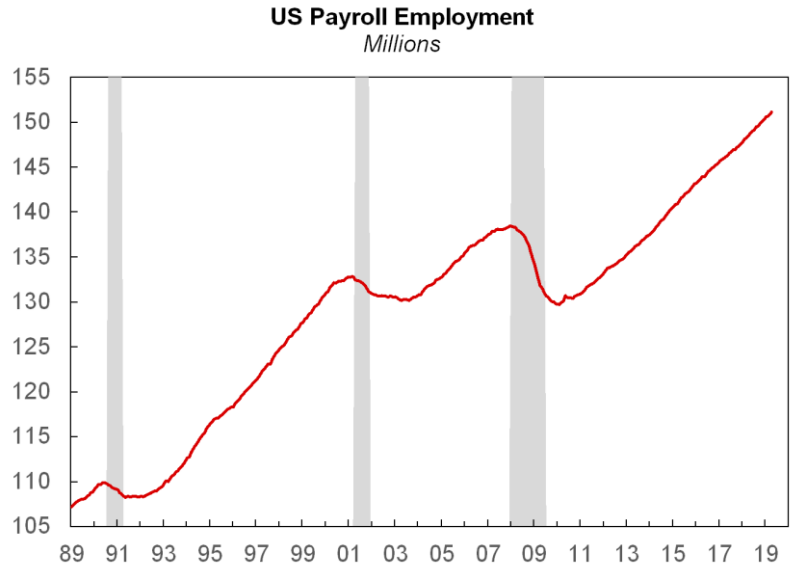


**US Light Vehicle Sales & Production**  
*Millions, Seasonally Adjusted Annual Rate*



## US Labor Market

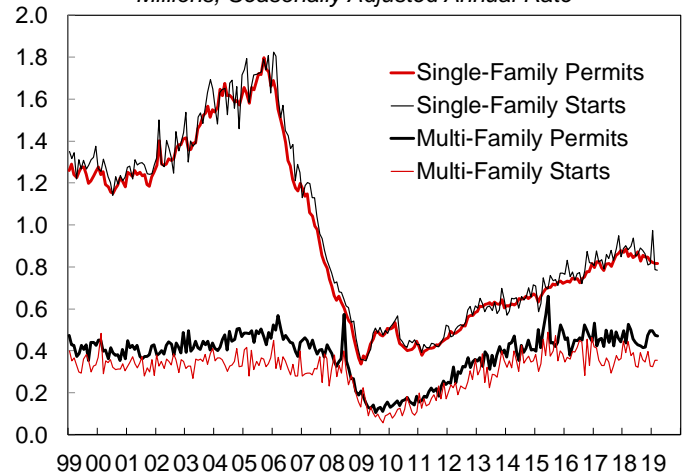
- Nonfarm payrolls increased by 263,000 in April. Payroll growth continues to average about 200,000 per month, far more than the 80,000-100,000 needed to absorb growth in the adult population.
- The return of discouraged, retired, and formerly disabled workers to the labor force is allowing employment growth to remain strong. When that source of growth is gone, growth in payroll employment will have to slow sharply unless immigration is increased significantly.
- The civilian unemployment rate fell to 3.6% in April, the lowest since December 1969 and well below the Congressional Budget Office's 4.6% estimate for the natural rate of unemployment.
- According to the Phillips Curve theory used by many economists, inflation accelerates when the unemployment rate is below the natural rate. I believe that higher inflation requires tight markets for goods and services; tight labor markets cause labor costs to rise. Without tight product markets, higher labor costs are more likely to squeeze margins than to boost inflation.
- Average Hourly Earnings for production and nonsupervisory workers accelerated sharply in 2018, but the acceleration has slowed. AHEs were up 3.4% year-over-year in April. (Chart shows quarterly data.)
- The Employment Cost Index, which is not affected by changes in the age or job composition of the workforce, accelerated slowly from 2015 to 2018, but year-over-year growth fell slightly, to 2.8%, in the first quarter.
- The Employment/Population ratio (ages 15-64) shows a little more slack in the labor market than does the unemployment rate.



## US Housing

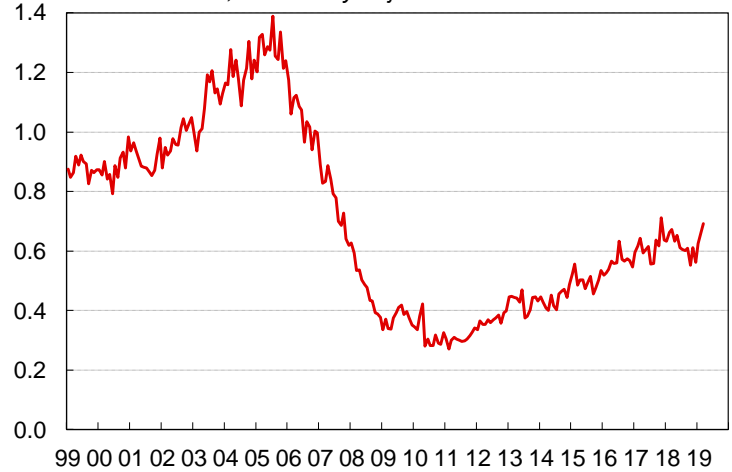
- Building permits for single-family homes (a better indicator of housing market activity than housing starts because they are less sensitive to weather) have declined steadily from February 2018's post-recession high.
- Even before the recent downturn, the slow recovery in construction of single-family homes was one of the primary reasons this economic expansion has been so much weaker than previous expansions.
- Despite the decline, total housing starts were higher in 2018 than in 2017.
- In response to lower mortgage interest rates, new home sales rose strongly for a third straight month in March. This should trigger a strong rebound in starts and permits over the next few months. Despite this rebound, starts for the year will about the same as in 2018. A large increase is expected for 2020.
- Existing-home sales (not shown) jumped in February after hitting a 38-month low in January but fell back in March. Pending home sales rose in March to their highest level since last July.
- Tax reform will boost potential growth in the U.S. economy if and only if it causes businesses to boost investment in plant and equipment and intellectual property products (e.g., software).
- Business investment boosts productivity (output per hour worked). Productivity growth is the only sustainable source of higher living standards.
- Investment in intellectual property products has grown at an extremely strong 9.9% annual rate since tax reform was enacted. Investment in equipment has stagnated in response to uncertainty about trade policy, but capital goods orders surged in March.

**US Housing Starts & Building Permits**  
Millions, Seasonally Adjusted Annual Rate

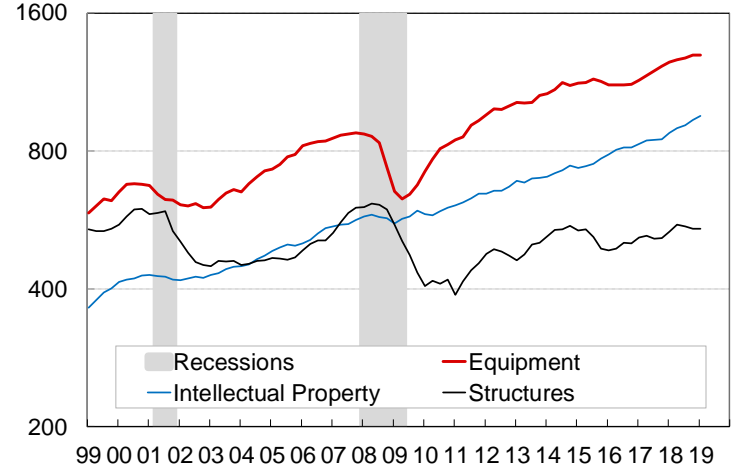


**US New Home Sales**

Millions, Seasonally Adjusted Annual Rate



**US Nonresidential Fixed Investment**  
Billion Chained 2012 Dollars

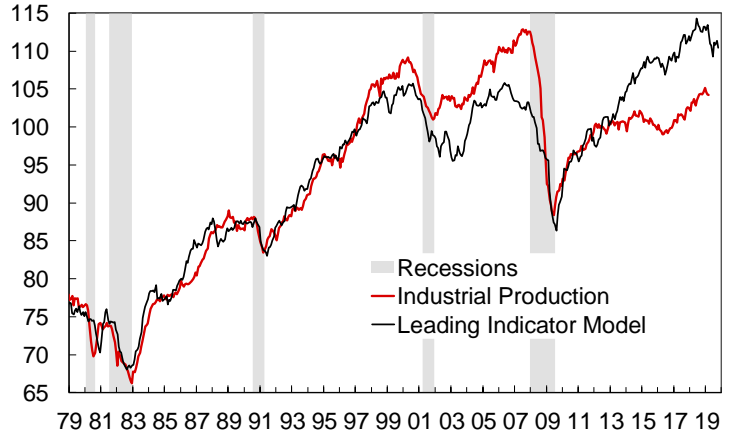




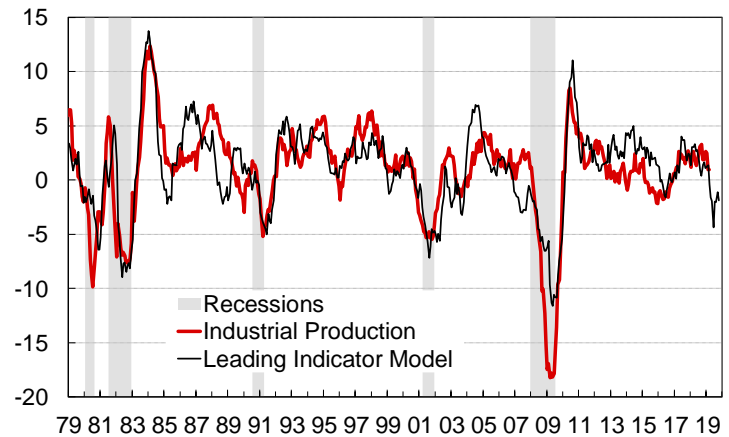
## Industrial Production & Leading Indicators

- Despite declines in the first three months of 2019, industrial production in U.S. manufacturing (excluding computers, communication equipment, and semiconductors) has risen 5.2% since May 2016.
- After a year of stagnation (except for an abnormally strong reading in December 2017), my leading index fell sharply in the last four months of 2018, pulled down by a decline in stock prices and some softening in orders. It hit bottom in December, but its recovery was interrupted by an April decline. Manufacturing is likely to underperform GDP in the first half of 2019.
- Industrial production for manufacturing (excluding the high-tech sectors) was up just 1.0% year-over-year in March.
- My leading indicator model for industrial production suggests that year-over-year growth will turn negative within the next few months.
- With stock prices back at record highs, Baa bond yields down, and new home sales likely to lift building permits, I expect my leading index to rise sharply in coming months.
- The Organization for Economic Cooperation and Development (OECD) publishes leading indicators for OECD members and six non-member developing countries. Their broadest leading indicator is highly correlated with year-over-year growth in global industrial production.
- The OECD “leading” indicator doesn’t lead by much, if at all, but because it doesn’t change direction often, it can confirm whether an apparent turning point in growth in industrial production is a true turning point or just “noise” in the data. The indicator has been declining since 2017 and is consistent with slowing, below-trend, growth, but the rate of decline is slowing.

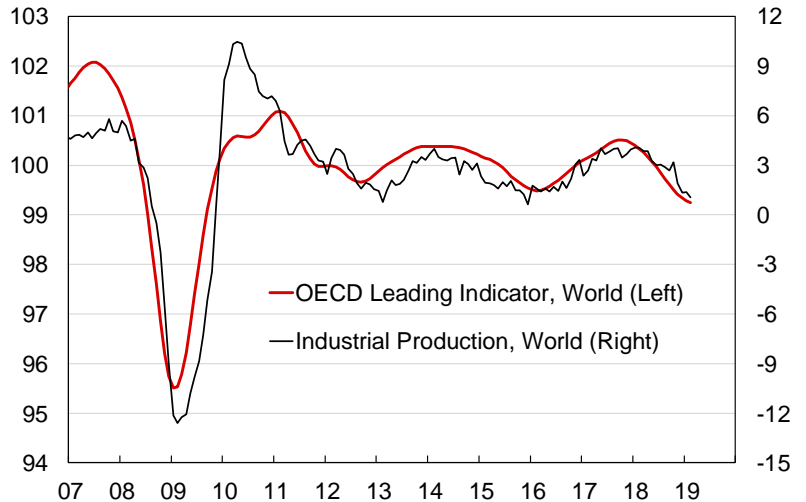
**US Industrial Production: Manufacturing ex high-tech**  
*Index 2012 = 100*



**US Industrial Production: Manufacturing ex high-tech**  
*Percent Change from Year Ago*



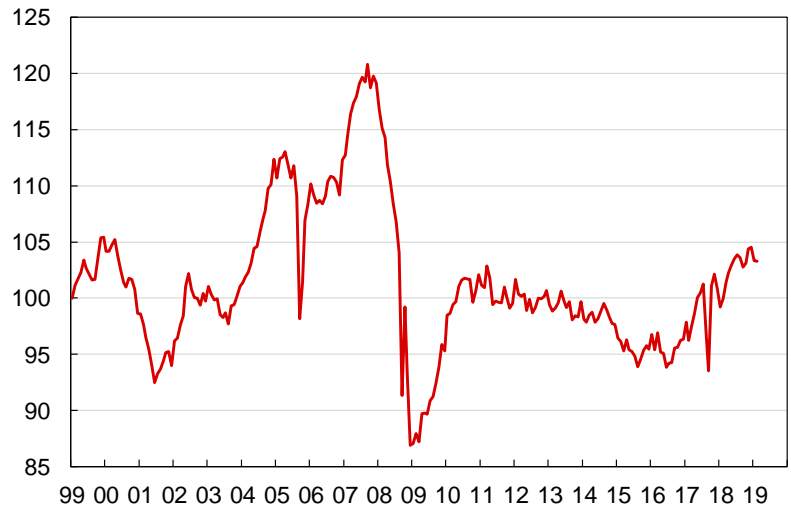
**OECD Leading Indicator & Global Industrial Production**  
*Trend = 100*                      *Percent Change from Year Ago*



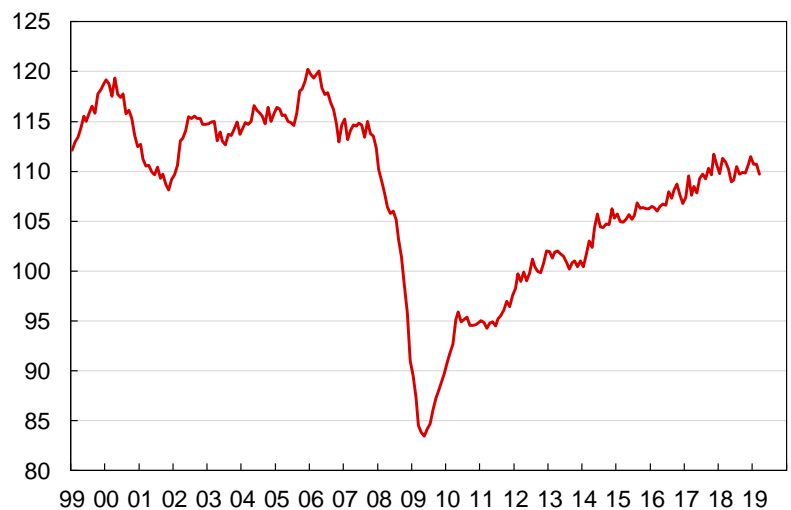
## US Industrial Production

- Industrial production of chemicals (excluding pharmaceuticals) turned up in 2015 as cheap natural gas liquids from shale formations boosted the competitiveness of North American chemical producers. Production was up 1.7% year-over-year in March.
- Growth was interrupted by a manufacturing slowdown in 2016 and a hurricane in 2017.
- U.S. chemical industry capacity (and production) will continue to expand as new facilities built in response to the shale boom come online.
- U.S. industrial production of plastic and rubber products was down 1.1% year-over-year in March and has been essentially flat over the last two years.
- Plastic and rubber production was boosted by the strong recovery in motor vehicle sales and production from 2009 to 2015. With the peak in motor vehicle production likely behind us, future growth in plastic and rubber products will have to depend on other sources of demand. As in the case of chemicals, production is likely to be boosted in the future by the abundance of cheap natural gas liquids.
- Even though natural gas liquids are the primary feedstock for the North American chemical industry, industrial chemical prices are more highly correlated with global oil prices than with natural gas prices because oil-based imports are the marginal source of supply.
- The Producer Price Index for industrial chemicals, which rose after oil prices hit bottom in early 2016, declined in late 2018 when oil prices fell. It has risen with oil prices so far in 2019.

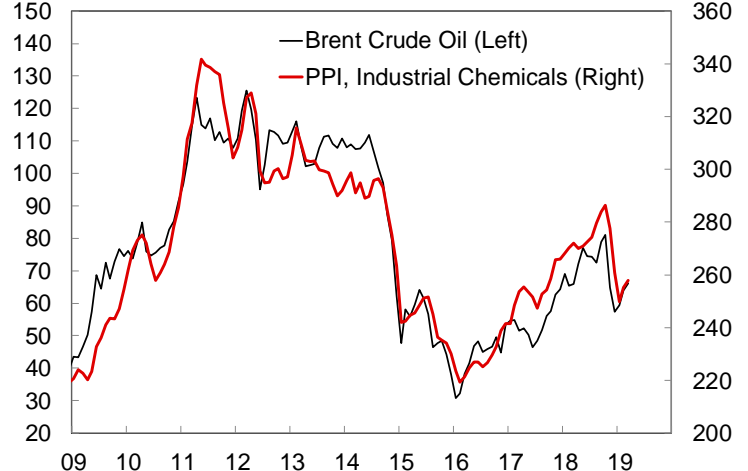
**US Industrial Production: Chemicals ex pharmaceuticals**  
Index, 2012=100



**US Industrial Production: Plastic & Rubber Products**  
Index, 2012=100

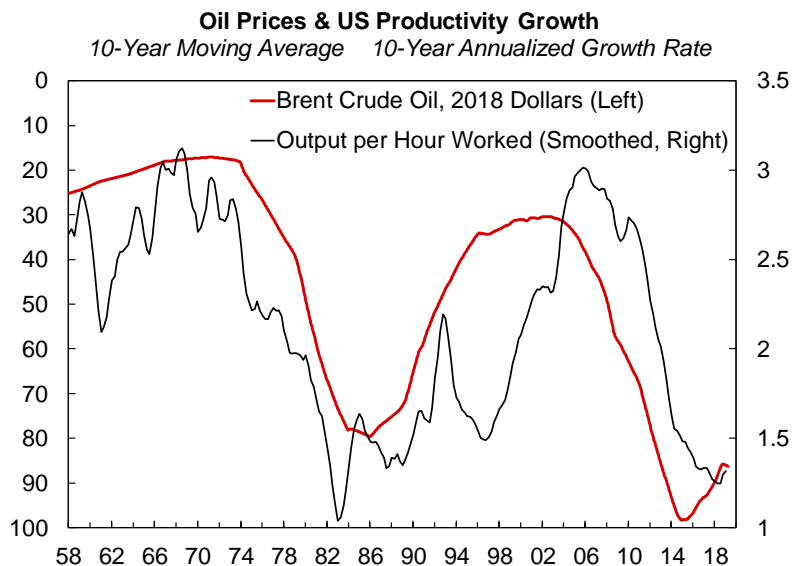
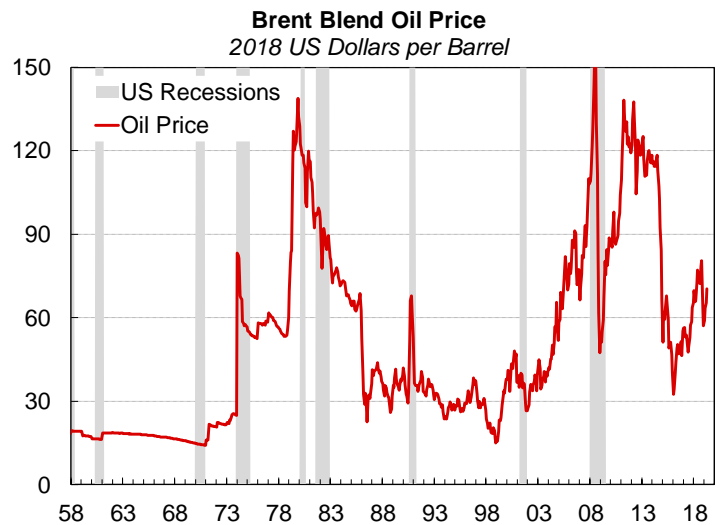
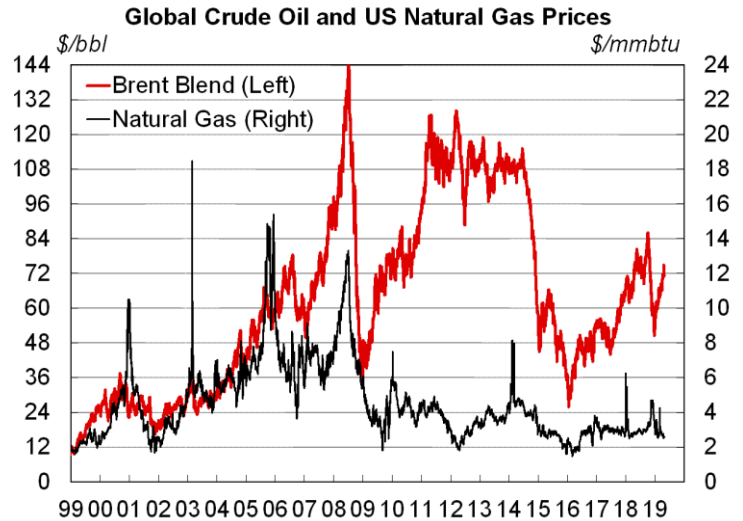


**Brent Oil Price vs Industrial Chemical Prices**  
\$/Barrel (Left) / Index, 1982 = 100 (Right)



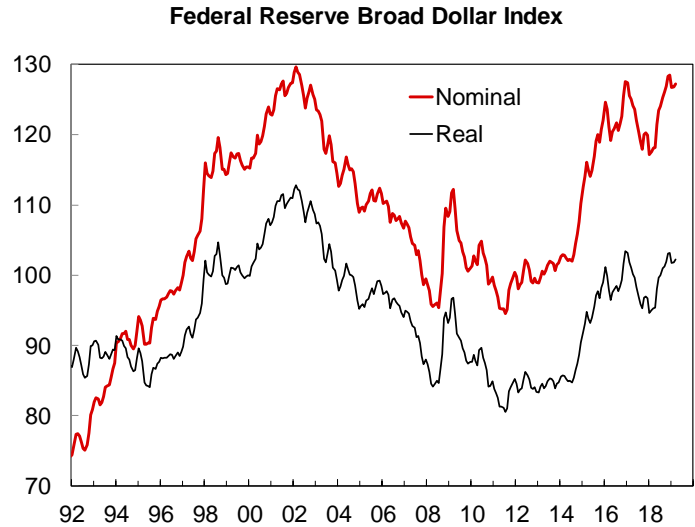
## Oil & Gas Prices

- Oil prices fell more than \$35/barrel from their early-October high to their late-December low. This helped the U.S. and Chinese economies recover from their late-2018/early-2019 weakness.
- Oil prices have rebounded as growth has picked up and as the Trump administration has removed exemptions to sanctions on purchasers of Iranian oil. (Oil prices are especially sensitive to growth in China.)
- Except for brief periods of unusually cold weather, natural gas prices have remained stable at low levels for almost three years.
- Low prices for natural gas and natural gas liquids boost the competitiveness of North American chemical producers, which use natural gas liquids as their primary feedstock while foreign competitors rely on naphtha, a crude oil derivative.
- The real (inflation-adjusted) price of Brent Blend crude oil peaked in November 1979 and did not set another new high until May 2008. Because of surging U.S. production from shale formations, real oil prices could remain below their 2008 highs for decades.
- From the fourth quarter of 2010 to the first quarter of 2017, output per hour worked in the nonfarm business sector, the most commonly used measure of U.S. labor productivity, grew at just a 0.6% annual rate. Only once (1977-82) has productivity grown so slowly for so long.
- Productivity growth was suppressed by residual damage from the financial crisis, non-competitive tax and regulatory policies, and oil prices that exceeded \$100/barrel for most of the 2011-2014 period.
- With these factors largely behind us, productivity growth has picked up. Productivity was up 2.4% year-over-year in the first quarter, the best since 2010.

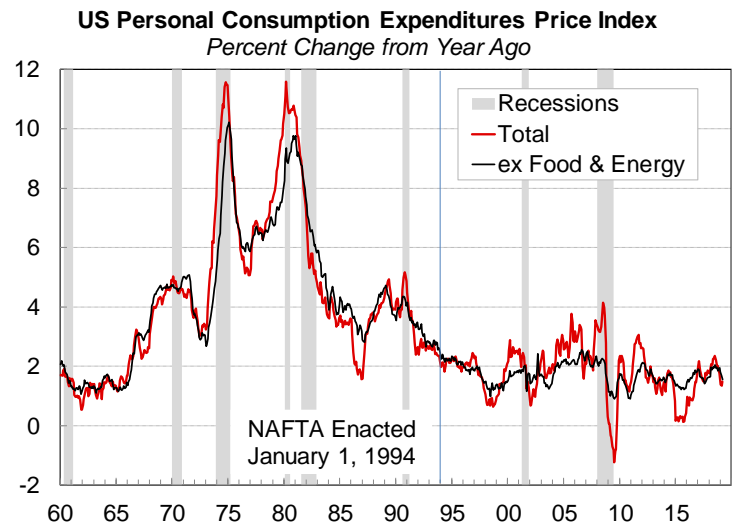


## Exchange Rates, Inflation, and Interest Rates

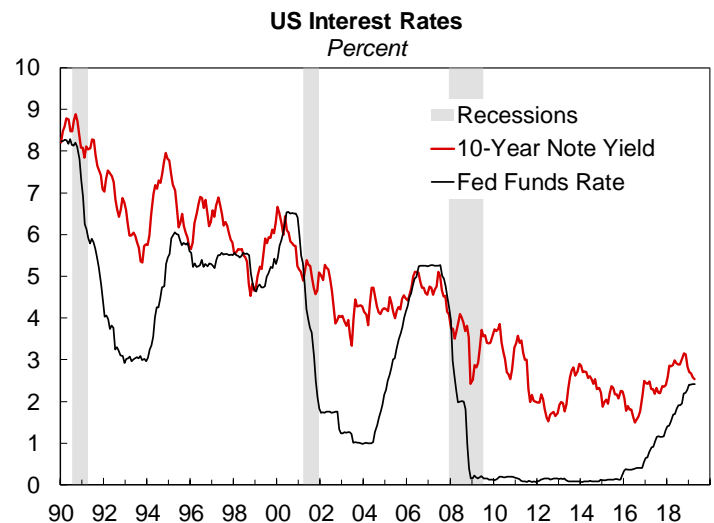
- The trade-weighted foreign exchange value of the U.S. dollar remains close to the post-1973 high reached in 2002.
- A strong dollar helps keep inflation low, but it reduces the competitiveness of U.S.-produced goods and services, especially in agriculture, mining, and manufacturing.
- For all but a few industries (e.g., steel and aluminum), the negative impact of the strong dollar on competitiveness will exceed any benefits from tariffs.



- The U.S. Federal Reserve seeks to keep inflation, as measured by the year-over-year change in the Personal Consumption Expenditure Price Index, near 2%.
- The total PCE Price Index was up just 1.5% year-over-year in March. The “core” (ex food and energy) index was up 1.6%.
- The future path of short-term interest rates will (or at least should) depend on whether the inflation rate rises back above 2%. With inflation below 2% (and declining through March), there is little pressure on the Fed to raise interest rates.



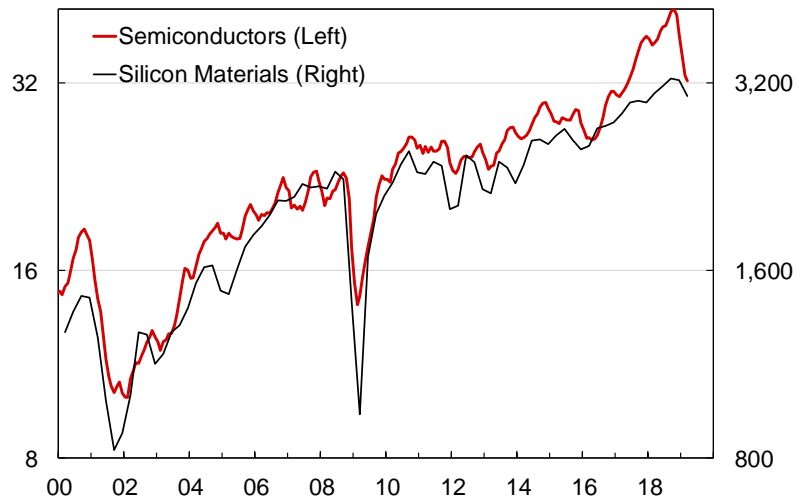
- The Federal Reserve raised its federal funds rate target by a quarter point (to 2.25-2.50%) at its December 2018 meeting. The Fed has since backed away from signals that it plans to raise rates further in 2019.
- The (closing) yield on 10-year Treasury notes rose to 3.24% in October 2018 but fell as low as 2.39% in March after the Fed said it would stop shrinking its holdings of Treasury securities later this year.
- The yield curve inverted for a few days when the 10-year Treasury yield fell below the federal funds rate. A longer and larger inversion is needed to signal a recession.



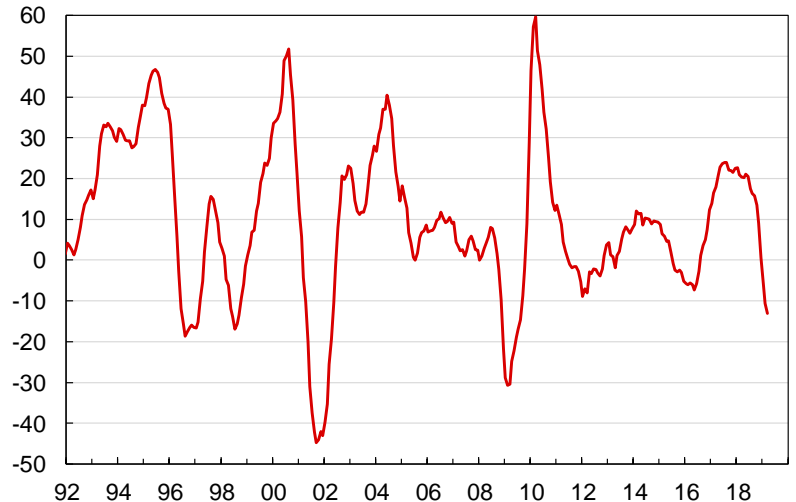
## Electronics & Communication

- Shipments of silicon materials are a good indicator of global demand for products going into the electronics industry. Shipments have fallen for two straight quarters since hitting a record high in the third quarter of 2018. They were down 1.1% year-over-year in the first quarter.
- The data (from SEMI®) are only reported quarterly back to 2000, but silicon wafer area (in square inches) has been strongly correlated with semiconductor shipments (in dollars), which are reported monthly back to 1976.
- Worldwide semiconductor shipments, reported by the Semiconductor Industry Association, have fallen sharply from the record high reached in the three months ending in October.
- Worldwide semiconductor shipments were down 13% year-over-year in the three months ending in March. Year-over-year growth was above 20% as recently as last June.
- Industrial production of wire and cable used in communication and energy applications fell by two-thirds from its 2000 dot.com bubble peak to its 2009 trough. The recovery since then, while significant in percentage terms, has erased little of the 2001-2009 decline.
- Wire and cable production hit a 10-year high last August but then declined for six straight months before increasing in March. Production was down 0.9% year-over-year in March.

**Worldwide Semiconductor & Silicon Material Shipments**  
*Million\$, 3-Month Moving Average      Million Square Inches*



**Worldwide Semiconductor Shipments**  
*Percent Change from Year Ago, 3-Month Moving Average*



**US Industrial Production: Wire & Cable**  
*Index, 2012=100*



# Global GDP Growth

	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>
<b>World</b>	<b>2.8</b>	<b>2.5</b>	<b>3.2</b>	<b>3.0</b>	<b>2.7</b>	<b>3.0</b>	<b>3.0</b>	<b>3.0</b>	<b>3.0</b>
<b>North America</b>	<b>2.7</b>	<b>1.5</b>	<b>2.3</b>	<b>2.8</b>	<b>2.7</b>	<b>2.7</b>	<b>2.5</b>	<b>2.4</b>	<b>2.4</b>
United States	2.9	1.6	2.2	2.9	2.8	2.7	2.5	2.5	2.5
Canada	0.7	1.1	3.0	1.8	1.5	1.9	1.8	1.6	1.6
Mexico	3.3	2.9	2.1	2.0	1.6	1.9	2.4	2.6	2.7
<b>Western Europe</b>	<b>2.2</b>	<b>1.9</b>	<b>2.3</b>	<b>1.8</b>	<b>1.2</b>	<b>1.5</b>	<b>1.5</b>	<b>1.5</b>	<b>1.4</b>
France	1.1	1.2	2.2	1.5	1.3	1.4	1.5	1.5	1.5
Germany	1.5	2.2	2.5	1.5	0.8	1.4	1.5	1.4	1.3
Italy	0.9	1.1	1.6	0.9	0.0	0.5	0.7	0.6	0.6
Spain	3.7	3.2	3.0	2.5	2.1	1.9	1.7	1.7	1.7
U.K.	2.3	1.8	1.8	1.4	1.2	1.4	1.5	1.6	1.6
<b>C &amp; E Europe</b>	<b>1.4</b>	<b>2.0</b>	<b>4.1</b>	<b>3.2</b>	<b>1.5</b>	<b>2.6</b>	<b>2.6</b>	<b>2.5</b>	<b>2.7</b>
<b>Middle East &amp; Africa</b>	<b>2.5</b>	<b>3.2</b>	<b>1.8</b>	<b>1.8</b>	<b>1.9</b>	<b>3.1</b>	<b>2.9</b>	<b>3.0</b>	<b>3.0</b>
<b>Asia/Pacific</b>	<b>4.5</b>	<b>4.5</b>	<b>4.9</b>	<b>4.5</b>	<b>4.4</b>	<b>4.4</b>	<b>4.5</b>	<b>4.4</b>	<b>4.4</b>
Japan	1.2	0.6	1.9	0.8	0.6	0.5	0.5	0.5	0.5
ex Japan	5.6	5.7	5.8	5.6	5.4	5.5	5.5	5.4	5.3
Australia	2.5	2.8	2.4	2.8	2.1	2.8	2.8	2.6	2.7
China	6.9	6.7	6.8	6.6	6.3	6.1	6.0	5.8	5.6
India	8.0	8.2	7.2	7.1	7.3	7.5	7.7	7.7	7.7
Indonesia	4.9	5.0	5.1	5.2	5.2	5.2	5.2	5.3	5.3
Korea (South)	2.8	2.9	3.1	2.7	2.6	2.8	2.9	2.8	2.9
Malaysia	5.1	4.2	5.9	4.7	4.7	4.8	4.8	4.8	4.8
Philippines	6.1	6.9	6.7	6.2	6.5	6.6	6.7	6.7	6.8
Singapore	2.5	2.8	3.9	3.2	2.3	2.4	2.5	2.6	2.6
Taiwan	0.8	1.5	3.1	2.6	2.5	2.5	2.4	2.3	2.2
Thailand	3.1	3.4	4.0	4.1	3.5	3.5	3.5	3.5	3.6
Vietnam	6.7	6.2	6.8	7.1	6.5	6.5	6.5	6.5	6.5
<b>Latin America</b>	<b>-1.1</b>	<b>-2.1</b>	<b>0.8</b>	<b>0.7</b>	<b>1.2</b>	<b>2.5</b>	<b>2.6</b>	<b>2.7</b>	<b>2.7</b>
Argentina	2.7	-2.1	2.7	-2.5	-1.2	2.2	3.2	3.4	3.6
Brazil	-3.5	-3.3	1.1	1.1	2.1	2.5	2.2	2.2	2.2
Colombia	3.0	2.1	1.4	2.7	3.5	3.6	3.7	3.7	3.7
Venezuela	-6.2	-17.0	-15.7	-18.0	-25.0	-10.0	-5.0	-2.0	-1.5

# Global Industrial Production Growth

	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>
<b>World</b>	<b>1.9</b>	<b>3.5</b>	<b>3.1</b>	<b>1.7</b>	<b>3.0</b>	<b>2.6</b>	<b>2.4</b>
<b>Advanced economies</b>	<b>0.2</b>	<b>3.1</b>	<b>2.3</b>	<b>1.2</b>	<b>2.3</b>	<b>1.7</b>	<b>1.4</b>
United States	-2.0	2.3	4.0	2.3	2.9	2.2	1.9
Japan	0.2	2.6	0.9	0.5	1.0	0.5	0.5
Euro Area	1.7	3.1	1.0	0.0	2.0	1.5	1.2
Other advanced	1.4	4.4	2.6	1.5	2.5	2.0	1.5
<b>Emerging economies</b>	<b>3.6</b>	<b>4.0</b>	<b>3.8</b>	<b>2.4</b>	<b>3.9</b>	<b>3.6</b>	<b>3.5</b>
Emerging Asia	5.3	5.8	5.6	4.0	5.0	4.5	4.0
C & E Europe	1.6	3.2	2.8	2.5	2.0	2.0	2.0
Latin America	-3.6	-0.8	-2.1	-2.0	2.0	2.0	2.5
Middle East & Africa	3.6	0.7	1.0	1.5	3.0	3.0	3.5

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