THE FEDERAL RESERVE BANK
OF CHICAGO

ESSAYS ON ISSUES
2018 NUMBER 399
https://doi.org/10.21033/cfl-2018-399

Chicago Fed Letter

Economic growth to accelerate in 2018 and then ease in 2019 as auto sales downshift

by William A. Strauss, senior economist and economic advisor, and Thomas Haasl, research assistant

According to participants in the Chicago Fed's annual Automotive Outlook Symposium (AOS), the nation's economic growth is forecasted to improve this year and then moderate close to its long-term average in 2019. Inflation is expected to increase in 2018 and to pull back in 2019. The unemployment rate is anticipated to decrease to 3.8% by the end of 2018, but then tick back up next year. Light vehicle sales are predicted to decrease from 17.2 million units in 2017 to 17.0 million units in 2018 and then to 16.7 million units in 2019.

The Federal Reserve Bank of Chicago held its 25th annual Automotive Outlook Symposium on June 1, 2018, at its Detroit Branch. More than 40 economists and analysts from business, academia, and government attended the AOS. This *Chicago Fed Letter* reviews the forecasts from last year's AOS for 2017, and then analyzes the forecasts for 2018 and 2019 (see figure 1) and summarizes the presentations from this year's AOS.

The U.S. economy continued to expand from the longest and deepest drop in economic activity since the Great Depression. During the first 30 quarters following the end of the Great Recession in mid-2009 (through the fourth quarter of 2016), the annualized rate of real gross domestic product (GDP) growth was 2.2%—just slightly above what is considered the long-term rate of growth for the U.S. economy. This GDP growth rate is very disappointing, since typically, the pace of economic recovery/expansion is quite sharp following a deep recession. That said, since the start of 2017, growth has accelerated: From the first quarter of 2017 through the first quarter of 2018, the U.S. economy's annualized rate of growth was a somewhat stronger 2.5%. This improvement in growth occurred despite the significant damage and disruptions to economic activity—especially for chemical and energy production—caused by Hurricanes Harvey and Irma in the summer of 2017.

Most materials presented at the latest AOS are available online, https://www.chicagofed.org/events/2018/automotive-outlook-symposium.

Resurgent economic growth has been accompanied by rising energy prices. The average price of oil stood at $106 per barrel in June 2014, but then collapsed later that year, eventually reaching a nadir of $31 per barrel in February 2016. However, over the past two years, oil prices have been increasing, and as of May 2018, they averaged $70 per barrel.

The unemployment rate fell to 3.8% in May 2018, below prominent estimates of the natural rate of unemployment (i.e., the rate that would prevail in an economy making full use of its productive

1. Median forecasts of real gross domestic product and related items

	2017 (Actual)	2018 (Forecast)	2019 (Forecast)
Real gross domestic product[a]	2.6	**2.8**	**2.2**
Real personal consumption expenditures[a]	2.8	**2.2**	**2.2**
Real business fixed investment[a]	6.3	**5.6**	**3.7**
Real residential investment[a]	2.6	**2.8**	**3.3**
Change in private inventories[b]	15.6	**48.0**	**49.2**
Net exports of goods and services[b]	–653.9	**–675.6**	**–724.7**
Real government consumption expenditures and gross investment[a]	0.7	**2.3**	**1.8**
Industrial production[a]	3.0	**3.3**	**2.1**
Car and light truck sales (millions of units)	17.2	**17.0**	**16.7**
Housing starts (millions of units)	1.21	**1.33**	**1.35**
Unemployment rate[c]	4.1	**3.8**	**3.9**
Consumer Price Index[a]	2.1	**2.9**	**2.3**
One-year Treasury rate (constant maturity)[c]	1.55	**2.55**	**2.96**
Ten-year Treasury rate (constant maturity)[c]	2.37	**3.25**	**3.50**
J. P. Morgan trade-weighted dollar index[a]	–4.1	**–0.5**	**0.3**
Oil price (dollars per barrel of West Texas Intermediate)[c]	55.39	**69.00**	**65.75**

[a]Percent change, fourth quarter over fourth quarter.
[b]Billions of chained (2009) dollars in the fourth quarter at a seasonally adjusted annual rate.
[c]Fourth quarter average.
Note: These values reflect forecasts made in May 2018.
Sources: Actual data from authors' calculations and Haver Analytics; median forecasts from Automotive Outlook Symposium participants.

resources). The economy added 16.6 million jobs between March 2010 and May 2017, and strong gains continued—nearly 2.4 million additional jobs were added over the 12 months ending in May 2018. Some other indicators help illustrate how tight the labor markets have become across the country. For instance, unemployment rates for blacks and Hispanics fell to record or near-record lows this year. Yet, not all labor market indicators have actually reached or have come close to reaching historic levels. While continuing to decrease, the pool of unemployed workers who have been out of work for more than six months remains at levels that are exceptionally high—higher than anything seen since the Great Depression. Year-over-year growth in nominal employee compensation (both wages and benefits) has been slowly improving since bottoming out at 1.4% in the fourth quarter of 2009; but it has only reached 2.7% as of the first quarter of 2018.

With rising energy prices and diminishing slack in the economy, inflation has moved higher. Inflation, as measured by the Consumer Price Index (CPI), was extremely low at 0.4% in 2015—the lowest rate since 1955; it moved up to 1.8% in 2016 and then to 2.1% in 2017, and by May 2018, the year-over-year rate of inflation had risen to 2.7%.

The growth rate of industrial output was –0.6% in 2016, perhaps in part due to the challenges posed by a stronger dollar. However, assisted by an improving energy sector, industrial production rose 3.0% in 2017; over the first five months of this year, its annualized growth rate was 3.4%. Real business fixed investment has shown renewed strength over the past year; its annualized growth rate from the start of 2017 through the first quarter of 2018 was 6.9%—which is much faster than its annualized growth rate of 4.2% between mid-2009 and the end of 2016 (the first 30 quarters following the Great Recession). After setting a record of 17.5 million units in 2016, light vehicle sales (car and light truck sales) fell to 17.2 million in 2017. Light vehicle sales softened further in early 2018: The annualized selling rate of light vehicles was 17.1 million units over the first five months of this year.

The housing sector continued its very slow recovery from the Great Recession. Housing starts went up from 1.18 million units in 2016 to 1.21 million units in 2017—a gain of 2.6%. Housing starts rose further in 2018, to an annualized rate of 1.32 million units over the first five months of the year. This pace still falls shy of the nearly 1.4 million annual housing starts that the United States averaged during the 1990s. Residential investment normally plays a major role during an economic recovery/expansion. However, since mid-2009, when the Great Recession concluded, residential investment has contributed just 0.2 percentage points toward the overall economy's annualized growth rate of 2.2%.

Results versus forecasts

For 2017, the actual growth rate of real GDP was 2.6%—half a percentage point stronger than the 2.1% forecasted by participants at last year's AOS. The unemployment rate averaged 4.1% in the final quarter of 2017—lower than the predicted average of 4.4%. Inflation, as measured by the CPI, was in fact 2.1% in 2017—just a bit below the projected 2.3% increase in prices for last year. Light vehicle sales fell from a record of 17.5 million units in 2016 to 17.2 million units in 2017—slightly higher than the forecast of 17.1 million units. Housing starts increased to 1.21 million units in 2017—the actual number of starts was below the 1.26 million units expected for last year.

Outlook for 2018 and 2019

The economy is forecasted to grow at a strong pace in 2018 and at a somewhat slower pace in 2019: The growth rate of real GDP is predicted to be 2.8% in 2018 and 2.2% in 2019. The unemployment rate is predicted to remain below 4% through the end of 2019. Inflation, as measured by the CPI, is projected to increase from 2.1% in 2017 to 2.9% in 2018 (largely as a result of a predicted surge in energy prices) and then decrease to a rate of 2.3% in 2019. Oil prices are expected to average $69 per barrel in the final quarter of 2018—much higher than the $55 per barrel they averaged in the fourth quarter of 2017. Oil prices are predicted to moderate to average $66 per barrel in the fourth quarter of 2019. Real personal consumption expenditures are forecasted to expand at a solid rate of 2.2% this year and in 2019. Light vehicle sales are expected to decline from 17.2 million units in 2017 to 17.0 million units this year and then ease further to 16.7 million units next year. The pace of real business fixed investment is projected to be at a quite strong 5.6% in 2018, but then ease to a still solid 3.7% in 2019. Following a 3.0% gain in 2017, industrial production is forecasted to grow at a rate of 3.3% this year and 2.1% next year.

The housing sector is predicted to continue to improve over the forecast horizon. Real residential investment is anticipated to expand at a solid rate of 2.8% in 2018 and then strengthen to a rate of 3.3% in 2019. Housing starts are expected to increase to 1.33 million units in 2018 and 1.35 million units in 2019—still below what is viewed as their long-term trend.

The long-term interest rate (ten-year Treasury rate) is forecasted to increase 88 basis points in 2018, to 3.25%, and 25 basis points in 2019, to 3.50%. The short-term interest rate (one-year Treasury rate) is expected to increase 100 basis points this year, to 2.55%, and 41 basis points next year, to 2.96%. The trade-weighted U.S. dollar is predicted to fall by 0.5% this year and then rise by 0.3% in 2019. The trade deficit (net exports of goods and services) is projected to increase this year and next.

Auto sector outlook

Mike Jackson, executive director, strategy and research, Original Equipment Suppliers Association (OESA), presented outlooks on both the global and U.S. light vehicle markets and reported results from a survey of top automotive industry executives (the *OESA Automotive Supplier Barometer*).

Jackson began by providing an overview of the global light vehicle market. He said that global light vehicle sales are forecasted to reach 97.6 million units in 2018—which would result in an annual growth rate of 2%, down from 3% in 2017 and 4% in 2016. While auto sales in 2018 are anticipated to decline by 1% in North America, they are predicted to rise by 2% in both Western Europe and China. In regard to production, Jackson said annual light vehicle assembly in China is expected to ramp up by an additional 5.7 million units by 2025. In contrast, annual production is projected to practically stagnate in North America, increasing only by 0.3 million units, over the same time horizon.

> Light vehicle sales are expected to decline to 17.0 million units in 2018 and 16.7 million units in 2019, per the AOS forecast.

Turning to the U.S. light vehicle market, Jackson said that according to projections from some of OESA's key affiliate members, annual sales in the U.S. are expected to decrease from 17.2 million units in 2017 to 16.8 million units in 2018 and remain at the same level in 2019 before slipping further to 16.6 million units in 2020. He cited the following factors influencing this outlook, which differed a little from the symposium's median forecast (see figure 1). From the consumer's perspective, economic conditions actually appear positive. Low rates of unemployment are being recorded—for the labor force as a whole and across all educational attainment groups. Moreover, job creation has been steady, and job opening and quit rates continue to rise. In addition, consumer spending has been strong, perhaps partly because of rising home values, stock market gains, low fuel prices, and low interest rates. However, headwinds still remain. Despite improvements in the labor market, wage growth has been weak, and labor force participation has remained low since the end of the Great Recession in June 2009, Jackson stated. He also noted that the average amount financed for a new light vehicle by U.S. consumers has reached a record high; if interest rates continue to rise, this would exacerbate borrowing costs, likely hurting auto sales. An important unknown factor, Jackson said, is when the current economic expansion—the second longest in history—will come to an end.

From an auto parts supplier's perspective, business conditions appear favorable, Jackson explained. According to the *OESA Automotive Supplier Barometer*, about 40% of respondents were more optimistic about their general business conditions in the first quarter of 2018, compared with about 25% of respondents in the previous quarter. Executives mentioned tax reform, renegotiations for NAFTA (North American Free Trade Agreement), and continued market strength as factors driving their optimism, Jackson stated. When asked about allocating additional funds for research and development, survey respondents replied that suppliers would prioritize investing in advanced materials technologies (for auto body parts), sustainable manufacturing technologies, and electric and hybrid powertrain technologies, Jackson said.

Haig Stoddard, senior industry analyst, WardsAuto, provided his near-term outlook for the U.S. light vehicle market. Although light vehicle sales were fairly steady (relative to a year ago) through April of this year, Stoddard said he has identified underlying softness in the U.S. market and, therefore, anticipates sales to decline by 2.1% in 2018, to 16.8 million units, and by 1% in 2019, to 16.6 million units. Specifically, he noted, demand for new light vehicles is expected to weaken in the near future because of climbing interest rates, rising fuel prices, and slowing growth in incentives from auto dealers and manufacturers (e.g., financing deals, often involving lengthy loan terms to keep monthly payments low; cash-back offers; and generous leasing terms). New vehicles will also have to compete with a growing supply of late-model, high-quality off-lease vehicles entering the used vehicle market. Furthermore, replacement demand—which had boosted new light vehicle sales following the Great Recession and, more recently, Hurricanes Harvey and Irma—will be less of a factor at least during the next couple of years. Besides the overall decline in sales, another concern is the increase in month-to-month volatility of new light vehicle sales (a sign of retail weakness), Stoddard pointed out. Sales are now dependent on a fewer number of models than in the past, and many of these sales are facilitated by favorable pricing and generous promotions, which are not always available. On the plus side, Stoddard noted that strong recent economic growth and the new federal income tax cuts could buoy demand for new cars and light trucks. In addition, improvements in vehicle fuel efficiency could negate some of the negative effects of rising fuel prices.

Stoddard said he will keep monitoring inventory levels to better project light vehicle sales for 2018. The automotive industry recorded large sales figures in each of the previous three years. Auto inventory is currently tracking above 2015 and 2016 levels. If inventory remains elevated through September 2018, then his projection for annual light vehicle sales in 2018 may be revised higher, to about 17 million units, Stoddard indicated. However, he noted that not all sales are equivalent: Some may be based on fundamental sales drivers (such as strong economic growth), while others may be based on different factors (such as large incentives from auto dealers and manufacturers).

Tom Kontos, executive vice president and chief economist, ADESA Analytical Services, discussed used car sales from a wholesale auto auctioneer's perspective. He described the large, growing market for vehicle remarketing, sharing that 44 million used vehicle transactions occurred in North America in 2017. Of the 31 million used vehicle transactions within the retail sector (used vehicles sold by independent and franchise dealers), roughly one-third of the inventory came from auctions. As Kontos explained, used vehicles up for wholesale auction are primarily from dealers (with vehicles that were traded in); auto manufacturers (with recalled vehicles); auto lenders (with repossessed vehicles); and fleet-management organizations (which partner with, for instance, taxi and rental car companies). Wholesale auction volumes rose 1.6% overall in 2017; notably, they increased (by 10.3%) for only sellers *other* than dealers and manufacturers (owing to the rising numbers of vehicle repossessions and vehicles coming off lease). Kontos said auction volumes are likely to continue increasing over the coming years chiefly because new vehicle sales reached substantial levels in 2015–17 and these will shortly generate a greater supply of used vehicles. He said he expects the wholesale used vehicle supply to grow 5% on a year-over-year basis in 2018, inducing a 2% to 3% decline in wholesale prices this year. The increasing supply of crossover utility vehicles, sport utility vehicles, and trucks will soften wholesale prices for such vehicles, moving them closer to those for passenger cars. One factor limiting the supply of used vehicles of all types to wholesale auctioneers is the increase in certified preowned vehicles (late-model vehicles that have gone through detailed inspections and reconditioning by manufacturers or dealers—typically sold with extended warranties and other benefits).

Kenny Vieth, president, Americas Commercial Transportation (ACT) Research Co. LLC, discussed his outlook for the commercial vehicle (heavy- and medium-duty trucking) industry. Vieth reported that there is strong demand for heavy-duty trucks because of the following factors. First, current conditions support sustained economic growth. For instance, there have been improvements in manufacturing activity. Moreover, business confidence and consumer confidence continue to grow, recent oil prices have been stable, and business inventories relative to sales have declined since early 2016. Second, very strong fundamentals in the commercial heavy-duty trucking industry are supporting trucker profitability at levels previously unseen. Freight volumes are at healthy levels—the American Trucking Associations' truck loads index is at its highest level since around mid-2008—and freight rates are continuing to rise. According to Vieth, the supply of truckers is unusually limited, which also props up trucker profitability. The truck transportation sector in the U.S. was expected to add about 50,000 drivers in 2017, but only added roughly 9,000. Besides this labor shortage, another challenge facing the trucking sector is the struggle to ramp up production of heavy-duty vehicles to match the recent increase in orders: In April 2018, net orders for class 8 trucks in North America reached an annualized rate of 421,000 units; however, according to a recent ACT estimate, it will take manufacturers approximately eight months to fill all those orders. Vieth noted medium-duty truck sales are correlated with housing construction and retail sales, which have been solid. He observed that thus far in 2018, more of the same steady growth of the past few years has been seen in the medium-duty truck market. According to Vieth, heavy-duty truck production in North America is forecasted to increase from 256,000 units in 2017 to 328,000 units in 2018 and then to 336,000 units in 2019. In 2020, the heavy-duty truck market is expected to correct: Production is forecasted to decrease to 230,000 units that year. Medium-duty truck production in North America is expected to increase from 249,000 units in 2017 to 253,000 units in 2018, 258,000 units in 2019, and 271,000 units in 2020.

Brian Maxim, vice president, AutoForecast Solutions LLC, discussed developments in electric and hybrid vehicles and his outlook for them. He began by noting that the vast majority (about 95%) of light vehicles currently run on gas or diesel fuel only. Maxim said he expects this trend to continue through 2025; however, completely electric vehicles and hybrid vehicles are projected to slowly gain market share, reaching a combined 9% of total light vehicle production by 2025. Maxim said he expects global electric vehicle production to increase to approximately 3.1 million units by 2025. Moreover, he said he predicts global hybrid light vehicle production to grow steadily to about 5.5 million units by then. Maxim emphasized that there are many factors that will influence the wider adoption of electric and hybrid vehicles. Moreover, there is great uncertainty about how these factors will develop over time and shape auto markets in different regions. Of course, fuel prices strongly affect purchases of electric and hybrid vehicles, which tend to be more expensive than conventional vehicles. Consumers in markets with high fuel prices (such as Europe) will pay off the price premium for buying an electric or hybrid vehicle faster than consumers in markets with low fuel prices (such as North America). Government mandates can also strongly affect the production and sales of electric and hybrid vehicles. For instance, in the U.S. the implementation of corporate average fuel economy (CAFE) standards[1] has helped their growth. A more extreme case is China. The Chinese federal government mandated the production of more electric and hybrid vehicles. In addition, because of problems with pollution and congestion, local governments in several urban areas in China have instituted a preferential licensing system: License plates for nonelectric vehicles are obtained through an auction or a lottery; but license plates for electric vehicles and plug-in hybrid electric vehicles are granted without having to go through either.[2] Another crucial (currently unknown) factor is when electric vehicle battery prices will fall to a point that electric vehicles achieve price parity with nonelectric vehicles, Maxim noted. So, while global production and sales of electric and hybrid vehicles are trending up, it remains challenging to project just how fast their growth will be.

Conclusion

According to the consensus forecast from this year's AOS, the growth rate of the U.S. economy is predicted to be above its long-term average in both 2018 and 2019 (though growth next year is anticipated to moderate). Light vehicle sales are forecasted to ease from 17.2 million units in 2017 to a still solid 17.0 million units in 2018 and 16.7 million units in 2019. Although light vehicle sales are forecasted to decrease, other sectors of the economy are projected to perform well enough so that the overall growth rate improves in 2018 (before slowing next year). Inflation is anticipated to average 2.9% this year and 2.3% next year. And the unemployment rate is expected to remain just below 4% through the end of 2019.

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[1] Details on U.S. CAFE standards are available online, https://www.nhtsa.gov/laws-regulations/corporate-average-fuel-economy.

[2] Further details are available online, https://www.bloomberg.com/news/articles/2018-05-22/these-six-chinese-cities-dominate-global-electric-vehicle-sales.

Chicago Fed Letter is published by the Economic Research Department of the Federal Reserve Bank of Chicago.

ISSN 0895-0164