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Economy to keep rolling along in 2016 and accelerate slightly in 2017

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According to participants in the Chicago Fed's annual Automotive Outlook Symposium, the nation's economic growth is forecasted to be near its long-term average this year and to strengthen somewhat in 2017. Inflation is expected to increase in both 2016 and 2017. The unemployment rate is anticipated to edge lower through the end of 2017, reaching 4.8% by then. Light vehicle sales are predicted to be flat, at 17.3 million units, in 2016 and decrease slightly in 2017.

The Federal Reserve Bank of Chicago held its 23rd annual Automotive Outlook Symposium (AOS) on June 3, 2016, at its Detroit Branch. More than 60 economists and analysts from business, academia, and government attended the AOS. This *Chicago Fed Letter* reviews the forecasts from last year's AOS for 2015, and then analyzes the forecasts for 2016 and 2017 (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 27 quarters following the end of the Great Recession, the annualized rate of real gross domestic product (GDP) growth was 2.1%—near 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 is quite sharp following a deep recession.

Some materials presented at this year's AOS are available at https://www.chicagofed.org/events/2016/automotive-outlook-symposium.

While the economy's expansion has lasted nearly seven years, signs of slack still remain in the economy. The unemployment rate moved down to 4.7% in May 2016, meeting (or even falling 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 resources). However, several other labor market indicators suggest that slack remains in the employment market. First, the labor force participation rate has fallen over the past several years below what demographic changes of an aging population can explain. Second, the percentage of workers who are working at part-time jobs but desire full-time employment is still above what it has historically averaged. And third, 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.

In addition to the persistent slack, there have been two big shocks whose effects have reverberated across the U.S. economy over the past two years. First, the average price of oil, which stood at

1. Median forecast of GDP and related items

	2015	2016	2017
	(Actual)	(Forecast)	(Forecast)
Real gross domestic product[a]	2.0	**1.8**	**2.2**
Real personal consumption expenditures[a]	2.7	**2.5**	**2.4**
Real business fixed investment[a]	1.5	**0.4**	**3.3**
Real residential investment[a]	9.4	**8.5**	**6.0**
Change in private inventories[b]	78.3	**53.8**	**53.0**
Net exports of goods and services[b]	–551.9	**–608.6**	**–631.6**
Real government consumption expenditures and gross investment[a]	1.1	**1.3**	**1.0**
Industrial production[a]	–1.6	**0.2**	**1.7**
Car and light truck sales (millions of units)	17.3	**17.3**	**17.2**
Housing starts (millions of units)	1.11	**1.17**	**1.25**
Unemployment rate[c]	5.0	**4.9**	**4.8**
Consumer Price Index[a]	0.4	**1.2**	**2.1**
One-year Treasury rate (constant maturity)[c]	0.46	**0.97**	**1.68**
Ten-year Treasury rate (constant maturity)[c]	2.19	**2.25**	**2.69**
J. P. Morgan trade-weighted dollar index[a]	11.6	**2.4**	**3.0**
Oil price (dollars per barrel of West Texas Intermediate)[c]	42.02	**45.00**	**48.92**

[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 2016.
SOURCES: Actual data from authors' calculations and Haver Analytics; median forecast from Automotive Outlook Symposium participants.

$106 per barrel in June 2014, collapsed later that year, reaching $59 per barrel in December 2014. The average price of oil eventually bottomed out in February 2016—at $31 per barrel. And then it rose to nearly $47 per barrel in May of this year. The decline in energy prices has had both positive and negative impacts on the U.S. economy. On the positive side, users of energy have enjoyed a substantial reduction in their costs of purchasing energy. The primary beneficiaries have included consumers, manufacturers, and the transportation sector. However, over the past eight years, the United States has become a significantly larger producer of energy, and hence, the loss of income to the domestic energy sector now leads to a greater negative impact than it historically has.

Second, the real value of the U.S. dollar in international exchange markets had strengthened substantially since the summer of 2014, rising nearly 20% through January 2016. The real trade-weighted value of the U.S. dollar fell 3.9% over the following four months, but remained strong. The higher value of the U.S. dollar against foreign currencies has had a dramatic impact on trade and, hence, the U.S. economy's growth. A strengthening dollar makes U.S.-made goods more expensive to foreign customers, thus reducing the demand for such goods from abroad and lowering the growth of exports. It also makes foreign-made goods less expensive to U.S. purchasers, thus increasing the demand for such goods here and raising the growth of imports. So, given the significantly stronger dollar, it's no surprise that the United States saw its trade deficit increase in 2015, amounting to a 0.5 percentage point drag on the growth rate of real GDP.

With the slack in the economy, significantly reduced energy prices, and lower prices on imports, inflation has remained low. Inflation, as measured by the Consumer Price Index (CPI), was extremely low at 0.4% in 2015 (the lowest rate since 1955); by May 2016, the year-over-year rate of inflation had risen to 1.0%.

The growth rate of industrial output was –1.6% in 2015, perhaps in part due to the challenges posed by a stronger dollar. This weakness in industrial production continued into 2016: Over the first five months of this year, its annualized growth rate was –0.7%. That said, light vehicle sales (car and light truck sales) improved from 16.4 million units in 2014 to 17.3 million units in 2015—a 5.5% gain. This increase in light vehicle sales was much larger than the 2.7% increase in real personal consumption expenditures for 2015. Light vehicle sales remained solid in early 2016: The annualized selling rate of light vehicles was 17.2 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 1.00 million units in 2014 to 1.11 million units in 2015—a gain of 10.7%. Housing starts rose further in 2016, to an annualized rate of 1.16 million units over the first five months of the year. This pace is still well below 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. However, since the start of the recovery from the Great Recession in mid-2009, residential investment has contributed just 0.2 percentage points toward the overall economy's annualized growth rate of 2.1%.

Results versus forecasts

For 2015, the actual growth rate of real GDP was 2.0%—nearly identical to the 2.1% forecasted by participants at last year's AOS. The unemployment rate actually averaged 5.0% in the final quarter of 2015—lower than the predicted average of 5.2%. Inflation, as measured by the CPI, was in fact 0.4% in 2015—0.3 percentage points lower than the projected 0.7% increase in prices for last year. Light vehicle sales actually rose to 17.3 million units in 2015 from 16.4 million units in 2014, exceeding the forecast of 16.8 million units. Housing starts increased to 1.11 million units in 2015 from 1.00 million units in 2014; so, the actual number of starts managed to surpass the 1.09 million units expected for last year.

Outlook for 2016 and 2017

The economy is forecasted to grow at a solid pace in 2016 and at a somewhat faster pace in 2017: The growth rate of real GDP is predicted to be 1.8% in 2016 and 2.2% in 2017. In part, 2016's annual economic performance is being held down by the weak performance of the economy in the first quarter. The quarterly forecast (over the period 2016:Q2–2017:Q4) shows the annualized rate of real GDP growth averaging 2.1% for the rest of this year and then ticking up to average 2.2% for 2017. The unemployment rate is predicted to edge lower through the end of 2017: It is expected to fall to 4.9% by the fourth quarter of 2016 and then ease to 4.8% by the final quarter of 2017. Inflation, as measured by the CPI, is projected to increase from a very low 0.4% in 2015 to 1.2% in 2016 and then rise further to 2.1% in 2017. Real personal consumption expenditures are forecasted to expand at solid rates of 2.5% this year and 2.4% in 2017. Light vehicle sales are expected to remain at 17.3 million units this year and then edge down to 17.2 million units next year. The pace of real business fixed investment is predicted to be at a quite slow 0.4% in 2016, but then improve to 3.3% in 2017. Because of the challenges posed by the stronger dollar, industrial production is forecasted to grow at a rate of just 0.2% this year; it is predicted to grow at a rate of 1.7% (still well below its long-term growth rate) next year.

The housing sector is predicted to continue to improve over the forecast horizon. Real residential investment is anticipated to expand at a rate of 8.5% in 2016 and at a rate of 6.0% in 2017. Housing starts are expected to increase to 1.17 million units in 2016 and 1.25 million units in 2017.

The long-term interest rate (ten-year Treasury rate) is forecasted to increase 6 basis points in 2016, to 2.25%, and 44 basis points in 2017, to 2.69%. The short-term interest rate (one-year Treasury rate) is expected to increase 51 basis points this year, to 0.97%, and 71 basis points next year, to

1.68%. The trade-weighted U.S. dollar is predicted to strengthen by 2.4% this year and 3.0% in 2017. The trade deficit (net exports of goods and services) is projected to increase this year and next.

Auto sector outlook

Paul Traub, senior business economist, Federal Reserve Bank of Chicago, Detroit Branch, presented the light vehicle sales outlook for the U.S. He said that the light vehicle market is close to full recovery from the Great Recession and that sales likely peaked in 2015 at around 17.4 million units. While real personal consumption expenditures have been increasing and consumer sentiment has been strong, people are generally saving a higher share of their income than they did in the past (5.7% in the current decade versus 2.5% in the 2000s and 4.8% in the 1990s). So, even today's historically low interest rates are not likely to boost new vehicle purchases beyond their 2015 peak. Traub speculated that the leveling off in vehicle sales might be due in part to millennials having grown up accustomed to saving (and not making big-ticket purchases) during the Great Recession. Because pent-up demand for new vehicles from the recession appears to be almost met, annual auto sales will tend to abate unless dealers find new ways to attract customers, he indicated.

According to Traub, changing demographics and the increasing length of vehicle ownership, among other factors, are altering the long-term trend in new light vehicle sales. For example, more people are increasingly working from home, and the percentage of licensed people of driving age is shrinking as a significant number of millennials have opted to live in areas with mass transportation. Thus, while the ratio of light vehicle sales per nonfarm employee has rebounded somewhat since the recession, it is still well below the peaks of the 1970s and 1980s. Additionally, as Traub noted, the length of new vehicle ownership has steadily trended up from around 50 months in 2005:Q1 to 77.8 months in 2015:Q1; and the average age of passenger cars and light trucks rose to 11.5 years in 2015. These trends, coupled with slowing labor force growth, do not bode well for future increases in light vehicle sales. To close, Traub said he largely agrees with the *Blue Chip Economic Indicators* forecasts for light vehicle sales: slight decreases over the next two years—to 17.3 million units in 2016 and 17.2 million units in 2017—with further declines in the following years.

Light vehicle sales are expected to be at 17.3 million units in 2016 and then edge down to 17.2 million units in 2017.

Kenny Vieth, president, Americas Commercial Transportation (ACT) Research Co. LLC, delivered the outlook on the commercial vehicle industry (medium- and heavy-duty trucks). According to ACT's *For-Hire Trucking Survey*, growth in heavy-duty trucking capacity has been outpacing growth in freight volume, so securing contracts to haul loads may be difficult for many truckers through year-end 2017. Freight volume actually grew 4% in the first quarter of 2015, but it stagnated in the following three quarters. This occurred largely because of the struggling U.S. manufacturing sector. Moreover, overseas demand for several commodities (such as crude oil, steel, and agricultural crops) has fallen dramatically, and the strong dollar has driven down exports more generally. All of these developments have discouraged orders for new heavy-duty trucks, which hit a four-year low in April of this year. Vieth said he expects heavy-duty truck sales in the U.S. to drop from 252,900 units in 2015 to 201,500 units in 2016 and 173,000 units in 2017. In contrast, the medium-duty truck market has continued improving at a slow and steady pace. Vieth noted medium-duty truck sales are correlated with housing construction and retail sales, which have been strong. According to Vieth, medium-duty truck sales in the U.S. are projected to move up from 203,800 units in 2015 to about 215,000 units in both 2016 and 2017.

Patrick Manzi, senior economist, National Automobile Dealers Association (NADA), discussed automotive retailing from the dealers' perspective. Manzi explained that growth in car prices has outpaced growth in wages, with car payments making up a bigger chunk (12%) of monthly personal income during 2014 than in the previous nine years. A chief contributor to price increases has been the addition of automotive innovations, such as those delivering higher fuel efficiency and providing enhanced safety (e.g., blind spot warning systems). In response to higher prices for autos, dealers have had to adjust consumer incentives, e.g., by extending loan terms to lower monthly payments (loan terms grew to an average of 67 months in 2015 from 54–55 months in 1995). Despite the auto price increases, Manzi observed, historically low oil prices have shifted the light vehicle market in favor of generally more expensive, less fuel-efficient light trucks (over passenger cars).

Manzi proceeded to share some of the results from the *NADA Dealership Workforce Study*. It showed that the top 10% performing dealers experienced a net profit of 7% in 2014 (on a pre-tax basis), while the bottom 10% had a net profit of –1.9% that year. Manzi explained that the top performers generally managed their staff and customer relationships well, exhibited strategic inventory control, and extended hours to maximize evening sale opportunities and service center profit. As reported in the NADA study, many dealerships struggle with high employee turnover, which is almost triple the national average, despite raising wages at nearly twice the national rate. Manzi said the turnover rate can be explained to a great extent by preferences of the millennial workforce, which made up nearly a third of total dealership employment in 2014. For instance, millennials prefer a steady salary over commission payment, which is typical at dealerships. Despite these challenges facing dealerships, Manzi said he forecasted new light vehicle sales to grow for the seventh straight year, to 17.7 million units in 2016, and then decline over the next few years to 16.7 million units in 2019 and 2020. Moreover, heavy-duty vehicle sales are expected to end 2016 at 374,000 units, a falloff from 2015, and to move little in the next few years, according to Manzi. He also said he projects 38–39 million used vehicle sales by the end of 2016.

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 42 million used vehicle transactions occurred in North America in 2015. Of the 30 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 or previously leased); auto lenders (with repossessed vehicles); fleet-management organizations (which partner with, for instance, taxi and rental car companies); and auto manufacturers (with recalled vehicles). Wholesale auction volumes rose 7% overall in 2015, but increased disproportionately (by 29%) for manufacturers because of delayed remarketing of vehicles recalled in 2014. Kontos said auction volumes are likely to continue rising over the coming years given the following factors. New vehicle sales reached a record level in 2015, which will later generate a greater supply of used vehicles from all sources. Moreover, leases as a share of new vehicle sales exceeded 30% in early 2016. And auto repossessions have been on the rise as of late. Finally, rental and commercial fleet sales both increased in 2015 (though they have not yet returned to their pre-recession levels). Kontos said he expects the wholesale used vehicle supply to grow 5% to 7% on a year-over-year basis in 2016, inducing a 3% to 5% decline in wholesale prices this year and next. So far in 2016, wholesale prices have softened more for used cars than for used crossover and sport utility vehicles (CUVs and SUVs) because the supply of used cars has surged, while low oil prices have supported strong demand for CUVs and SUVs. In closing, Kontos said he anticipates the wholesale market for used vehicles to shift gradually from a seller's market to a buyer's market if dealer inventory levels remain elevated.

Kristin Dziczek, director of the labor and industry group, Center for Automotive Research (CAR), provided analysis on the 2015 automotive labor contracts between the United Auto Workers Union (UAW) and Fiat Chrysler Automobiles (FCA), General Motors (GM), and Ford Motor Co. All three new contracts guaranteed signing bonuses, pay increases (with specified wage rates varying by tenure and employee type), profit sharing, and retirement incentives, with no change in the worker health care contribution from the previous contracts. By 2019, average hourly labor costs will reach $56 at FCA and $60 at GM and Ford. The union did not win back several previous benefits, including the cost-of-living allowance (COLA),[1] continuing full pay and benefits for workers on layoff, overtime pay after eight hours each workday, and pension increases.

Under the new contracts, automakers can lay off excess employees less expensively than during the last major downturn, said Dziczek. However, hiring qualified workers (with skills in line with the industry's evolving technologies) may present more challenges in the coming years, as the industry's hiring needs will likely outpace overall employment growth. Indeed, according to Dziczek's estimates, one-third of U.S. auto industry employees are or soon will be eligible for retirement. So, for instance, Ford and GM will be focusing on replacing several thousand retirement-eligible employees over the next few years. Additionally, apprentices and temporary workers will be used more by all three automakers, especially Ford, whose temps account for less than 1% of annual hours worked, stated Dziczek.

To close out her talk, Dziczek discussed how automotive production has been shifting across North America. The U.S. share of North American vehicle production is expected to fall to 58% in 2020 from 67% in 2014. FCA is moving away from car production in the U.S. altogether by ending certain models; meanwhile, Ford and GM are shifting a significant portion of their production to Mexico. Such shifts in production are expected to help Mexico become the seventh-largest producer of vehicles in the world this year. The country set a national record for automotive exports in 2014 and likely a new one in 2015. Mexico's automotive boom owes much to its wages being significantly lower than those of its neighbors to the north, as well as its free trade agreements with 44 countries, said Dziczek. In contrast, Canada's automotive future remains unclear: Firms there will negotiate with unions this fall, and several plants will likely be eliminated.

Conclusion

The participants at this year's AOS predicted the growth rate of the U.S. economy to be near its long-term average in 2016 and 2017. While lower oil prices should be generally beneficial for economic growth, the stronger U.S. dollar has added some headwinds. Both factors are predicted to keep inflationary pressures fairly low this year. Inflation is anticipated to average 1.2% in 2016, though it is projected to rise to 2.1% in 2017. The unemployment rate is expected to decline to 4.8% (quite close to its natural rate) over the next year and a half. Light vehicle sales are forecasted to remain above 17 million units in both 2016 and 2017.

[1] A COLA is an increase in wages to compensate for loss of purchasing power due to inflation.

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