

# Chicago Fed Letter

## Economy to cruise at speed limit in 2013 and accelerate slightly in 2014

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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 solid this year and to strengthen somewhat in 2014. Inflation is expected to remain flat in 2013 and 2014, and the unemployment rate is anticipated to move lower but remain high by historical standards through the end of 2014. Light vehicle sales are predicted to improve in 2013 and 2014.

The Federal Reserve Bank of Chicago held its 20th annual Automotive Outlook Symposium (AOS) on May 30–31, 2013, at its Detroit Branch. More than 70 economists and analysts from business, academia, and government attended the

AOS. This *Chicago Fed Letter* reviews the forecasts from last year's AOS for 2012, and then analyzes the forecasts for 2013 and 2014 (see figure 1) and summarizes the presentations from this year's AOS.<sup>1</sup>

The U.S. economy continued to expand from the longest and deepest drop in economic activity since the Great Depression. During the 15 quarters following the end of the "Great Recession," the annualized rate of real gross domestic product (GDP) growth

the Great Recession, which lasted for six quarters beginning with the first quarter of 2008. Generally, the pace of economic recovery is quite sharp following a deep recession.

The sluggish growth following the Great Recession would suggest that large output gaps in the economy remain prevalent. The labor market highlights the persistent slack in the economy. Even with tepid growth, the economy continued to add jobs, but the number of jobs added from March 2010 through May 2013 was just over 6.3 million—around 72% of the more than 8.7 million jobs lost from February 2008 through February 2010. Also, the U.S. employment level is still more than 2.4 million workers below the previous peak. In addition to making up for the lost jobs, the U.S. economy needs to generate jobs to accommodate all the new entrants into the labor force. During the ten years before the Great Recession, the labor force in the U.S. economy increased by an average of 1.7 million individuals each year, according to the U.S. Bureau of Labor Statistics. Even if the labor force had grown at half this rate, over 4 million additional workers would have been added since the start of the recession. All of these factors are reflected in the very high unemployment rate,

was 2.1%—near what is considered the historical trend rate of growth for the U.S. economy. This GDP growth rate is very disappointing given that real GDP fell from its peak by nearly 5% during

### 1. Median forecast of GDP and related items

	2012 (Actual)	2013 (Forecast)	2014 (Forecast)
Real gross domestic product <sup>a</sup>	1.7	2.3	2.9
Real personal consumption expenditures <sup>a</sup>	1.8	2.7	2.7
Real business fixed investment <sup>a</sup>	5.5	3.5	4.6
Real residential investment <sup>a</sup>	14.9	13.9	15.1
Change in private inventories <sup>b</sup>	13.3	50.0	42.0
Net exports of goods and services <sup>b</sup>	-384.7	-408.0	-417.8
Real government consumption expenditures and gross investment <sup>a</sup>	-1.8	-2.0	0.1
Industrial production <sup>a</sup>	2.8	3.2	2.9
Car and light truck sales (millions of units)	14.4	15.3	15.8
Housing starts (millions of units)	0.78	1.02	1.17
Unemployment rate <sup>c</sup>	7.8	7.3	6.9
Consumer Price Index <sup>a</sup>	1.9	1.8	2.0
One-year Treasury rate (constant maturity) <sup>c</sup>	0.17	0.17	0.30
Ten-year Treasury rate (constant maturity) <sup>c</sup>	1.71	2.00	2.47
J. P. Morgan Trade-Weighted Dollar Index <sup>a</sup>	-0.5	0.4	0.5
Oil price (dollars per barrel of West Texas Intermediate) <sup>c</sup>	88.16	92.96	93.50

<sup>a</sup>Percent change, fourth quarter over fourth quarter.

<sup>b</sup>Billions of chained (2005) dollars in the fourth quarter at a seasonally adjusted annual rate.

<sup>c</sup>Fourth quarter average.

NOTE: These values reflect forecasts made in May 2013.

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

which has been above 7% since December 2008. At 7.6% in May 2013, the current unemployment rate illustrates the significant output gaps that persist.

With such slack in production, labor markets, and other parts of the economy, inflation has stayed low. Inflation, as measured by the Consumer Price Index (CPI), was 1.9% in 2012; by May 2013, it had decreased to 1.4%.

Until early last year, the manufacturing sector had been leading the economic recovery from the Great Recession. Manufacturing's pace of production increased rapidly from the end of the downturn through the early part of 2012: From June 2009 through April 2012, manufacturing output grew at an annualized rate of 6.1%. However, from May 2012 through May 2013, manufacturing output expanded at an annualized rate of 2.2%—nearly a percentage point lower than its historical growth rate.

## Light vehicle sales are expected to rise to 15.3 million units in 2013 and then improve to 15.8 million units in 2014.

Light vehicle sales (car and light truck sales) improved from 12.7 million units in 2011 to 14.4 million units in 2012—a 13% gain. This increase in light vehicle sales was much larger than the 1.8% increase in real personal consumption expenditures for 2012. Light vehicle sales continued to improve in 2013, with the annualized selling rate rising to 15.2 million units in the first five months.

Housing used to be the weakest sector of the economy during the current recovery, yet it has been showing improvement of late. Housing starts went up from 0.61 million units in 2011 to 0.78 million units in 2012—a gain of 28%. Housing starts rose further in 2013, to an annualized rate of 0.93 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, residential investment has contributed very little to the growth of the overall economy.

### Forecasts versus results

At last year's AOS, participants forecasted the economy's real GDP growth rate to be 2.3% in 2012—more than half of a percentage point above the actual rate of 1.7%. The unemployment rate was predicted to average 7.9% in the final quarter of 2012—a bit higher than the actual average of 7.8%. Inflation, as measured by the CPI, was predicted to average 2.1% in 2012—0.2 percentage points higher than the actual 1.9% increase in prices that occurred during 2012. Light vehicle sales were expected to rise substantially, from 12.7 million units in 2011 to 14.5 million units in 2012, which was very close to the 14.4 million units actually sold. Housing starts were forecasted to improve from 0.61 million

units in 2011 to 0.71 million units in 2012, but they actually increased a little more last year, reaching 0.78 million units.

### Outlook for 2013 and 2014

The economy is forecasted to grow at a solid pace in 2013 and at a somewhat faster pace in 2014. The growth rate of real GDP is predicted to be 2.3% in 2013 and 2.9% in 2014. The quarterly forecast (over the period 2013:Q2–2014:Q4) shows the annualized rate of real GDP growth to improve from 1.7% in the second quarter of 2013 to 3.0% in the final two quarters of 2014. The unemployment rate is predicted to edge lower through the end of 2014: It is expected to fall to 7.3% by the fourth quarter of 2013 and then ease to a still very high 6.9% by the final quarter of 2014. Inflation, as measured by the CPI, is expected to stay fairly close to its 2012 level this year and next: 1.8% in 2013 and 2.0% in 2014. Real personal consumption expenditures are forecasted to expand at a solid rate of 2.7% this year and in

2014. Light vehicle sales are expected to rise to 15.3 million units this year and then improve to 15.8 million units next year. Real business fixed investment is predicted to record solid growth rates of 3.5% in 2013 and 4.6% in 2014. Industrial production is forecasted to grow this year at a rate of 3.2% and next year at a slower pace of 2.9%—very close to its historical growth rate.

The housing sector is predicted to continue to improve over the forecast horizon. Real residential investment is anticipated to expand at a rate of 13.9% in 2013 and at a rate of 15.1% in 2014. Housing starts are expected to increase to 1.02 million units in 2013 and 1.17 million units in 2014.

The long-term interest rate (ten-year Treasury rate) is forecasted to increase 29 basis points in 2013, to 2.00%, and 47 basis points in 2014, to 2.47%. The short-term interest rate (one-year Treasury rate) is expected to remain unchanged this year, at 0.17%, and increase 13 basis points next year, to 0.30%. The trade-weighted U.S. dollar is predicted to edge up this year, at a rate of 0.4%, and then do so again in 2014, at a rate of 0.5%. The trade deficit (net exports of goods and services) is predicted to increase slightly this year and next.

### Auto sector outlook

C. Jenny Lin, senior economist, Ford Motor Co., presented the sales outlook for new vehicles (i.e., new cars and light trucks, as well as medium- and heavy-duty trucks). She said that global new vehicle sales growth has been very impressive in recent years despite the modest economic recovery in the United States and other parts of the world. Global new vehicle sales are expected to continue this upward trend, reaching a record high of 80–85 million units in 2013, according to Lin. Focusing on the United States, Lin noted that new vehicle sales growth here has been similarly robust and is expected to remain so in the near term. Lin said she forecasts new vehicle sales in the United States to surpass 15 million units this year after having bottomed out at 10.6 million units in 2009. To help explain this impressive growth

and her bullish stance on 2013 sales, Lin highlighted the rebounds in both equity markets and home prices that have given many consumers the wealth and confidence to purchase big-ticket items, such as cars. Indeed, household net worth has recovered from a low of \$51.4 trillion in 2009 to \$66.1 trillion in early 2013, just slightly below the peak of \$67.4 trillion in 2007. Lin also pointed out several other trends to help

that the nation is estimated to be currently short almost a million homes. The energy sector—another key driver of commercial vehicle demand—should also provide many years of strong truck sales, given the recent domestic energy boom. New energy production techniques (e.g., hydraulic fracturing with horizontal drilling) require a significant number of trucks to transport materials (such as water, sand, and chemicals).

in used vehicle sales as a percentage of total sales has contributed to the dealers' growing profitability and optimism, explained Lisulo and Banks. The share of used vehicle sales increased about 5 percentage points from 2008 through 2010 and has stayed at around 32%. Historically, the gross profit margin for used vehicles has been higher than that for new vehicles (e.g., in 2012, the gross profit margin for used vehicles was about three times higher). So, combined, these factors have helped dealers become more profitable since the recession. To close, Lisulo and Banks pointed to the increased pace in dealers' hiring and investing as further proof of their positive outlook. The growth rate of dealership employment has outpaced that of total nonfarm employment since early 2011, with the gap between the two having widened in 2012 and in early 2013. Additionally, dealers are putting more money into fixed investments, such as facility improvements.

David Andrea, senior vice president, Original Equipment Suppliers Association (OESA), presented the outlook on the auto parts supplier industry. He said that supplier sentiment has become more positive in recent months.

## Global new vehicle sales growth has been very impressive in recent years despite the modest economic recovery in the United States and other parts of the world.

explain why new vehicle sales are likely to remain robust in the near future. For instance, she noted that the average age of light vehicles in the United States has continued to reach record highs over the past few years (it now stands at over 11 years); many consumers have held on to their old vehicles and delayed purchases of new ones during the downturn and its aftermath. Therefore, Lin argued there is now—or soon will be—much demand for new vehicles. Additionally, the demographics in the United States are very favorable for the automotive market's long-term growth. In contrast with other developed nations, the United States is still experiencing strong population growth and adding millions of new drivers every year; e.g., in 2011, the United States' driving population increased, on net, by over 2 million.

Kenny Vieth, partner, Americas Commercial Transportation (ACT) Research Co., delivered the outlook on commercial vehicles (medium- and heavy-duty trucks). Vieth said that several economic factors in the United States support his forecast for a healthy commercial vehicle market over the next several years. As Vieth explained, for one, there is strong pent-up demand for new housing—a key driver of commercial vehicle demand. The inventory of existing homes is at a 13-year low. Moreover, after taking into account the current population of the United States and the long-term historical trend of the number of adults per household, Vieth said

In addition, Vieth observed that many truckers have put off buying new vehicles in recent years because of the poor economy; thus, the average age of the commercial fleet has risen. Given the delays in new vehicle purchases and the fact that the new vehicles offer significantly higher gas mileage than current trucks on the road, Vieth contended that demand for new trucks is building up. Vieth noted that while heavy-duty truck sales are forecasted to decrease from 278,700 units in 2012 to 262,300 units in 2013, they are expected to surge to 300,900 units in 2014; medium-duty truck sales are projected to grow from 188,400 units in 2012 to 197,600 units in 2013 and 213,700 units in 2014.

Angela Lisulo, economist, and Jonathan Banks, executive automotive analyst, National Automobile Dealers Association (NADA), presented the light vehicle sales outlook from the dealers' perspective. Lisulo and Banks said that dealerships' vehicle sales have recovered quickly from the Great Recession. This swift recovery in vehicle sales from their 2009 low point has been reflected in dealers being quite upbeat in recent years. According to NADA's optimism index, dealer sentiment in 2011 and 2012 even surpassed the strong levels that had been seen in the early 2000s; and in NADA's surveys for 2010–12, more than 50% of dealers expected profits to increase, while at most a little over 10% of them expected profits to decrease. In addition to rising vehicle sales volumes, the increase

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According to Andrea, because North American light vehicle production is expected to ramp up to 15.9 million units in 2013, 16.3 million units in 2014, and 16.7 million units in 2015,<sup>2</sup> more and more suppliers have begun looking into making long-term investments (e.g., new equipment purchases) and hiring more workers. Over the past few years, suppliers have often lacked the confidence to do so and have instead focused on keeping their operations lean and disciplined while still meeting the rising demand for auto parts. To illustrate this, Andrea noted that North American production of light vehicles has almost doubled from an annualized rate of 8 million units in September 2009 to just over 15 million units in January 2013, while U.S. auto parts manufacturing employment has only increased from around 400,000 to around 500,000 over the same period. However, Andrea said that to support the 16.7 million units projected for 2015, suppliers will have to significantly increase their capital expenditures and work force from current levels.

Ellen Hughes-Cromwick, chief economist, Ford Motor Co., and Joshua Cregger, project manager, Center for Automotive Research (CAR), provided

an analysis of the infrastructure and financing needed to support alternative fuel vehicles (AFVs)—i.e., vehicles that run on compressed natural gas, ethanol, electricity, and hydrogen—in Europe, the United States, and China. Hughes-Cromwick and Cregger said that based on their research, the infrastructure cost per vehicle is estimated to be \$1,560 for natural gas, \$240 for ethanol, \$2,160 for electric, and \$4,840 for hydrogen. They also noted that based on their analysis of current automotive and demographic trends, 71 million AFVs are projected to be in operation by 2030: 21 million in Europe, 35 million in the United States, and 15 million in China. From these two forecasts, they calculated the total infrastructure cost required to support AFVs to be \$95 billion: \$42 billion for Europe, \$19 billion for the United States, and \$34 billion for China. Hughes-Cromwick and Cregger said that most of the funding is expected to come from public sources. They acknowledged the difficult financial positions that European and U.S. governments currently find themselves in; but they argued that the positive effects from investing in AFV infrastructure projects (including employment gains, business growth, and less dependence on energy imports)

should provide enough incentives for these governments to find a way to fund these projects. In the case of China, they explained that its central government will also make the necessary investments to expand AFV infrastructure because the nation is committed to reducing its pollution and its dependence on oil imports.

## Conclusion

The participants at this year's AOS predicted the economy to grow at a solid pace in 2013 and accelerate slightly in 2014. However, because U.S. economic growth is still being restrained following a recession accompanied by a financial crisis and because of weak economic growth overseas, the unemployment rate is expected to remain high by historical standards through 2014. Inflation is anticipated to remain roughly unchanged in 2013 and 2014. Light vehicle sales are forecasted to improve this year and in 2014.

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<sup>1</sup> Some materials presented at this year's AOS are available at [www.chicagofed.org/webpages/events/2013/automotive\\_outlook\\_symposium.cfm](http://www.chicagofed.org/webpages/events/2013/automotive_outlook_symposium.cfm).

<sup>2</sup> Andrea's light vehicle production volumes represent those for cars, as well as trucks in classes 1–5. The AOS median forecast's light vehicle sales volumes represent those for cars, as well as trucks in classes 1–3.