

Thoughts on the U.S. Economy, Monetary Policy and
Energy Sector Dynamics

Remarks by

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The views expressed by the author are her own and do not necessarily reflect those of the Federal Reserve System, its governors, officers or representatives.

Ten years ago this month, financial conditions were fragile and the economy was deep in recession. The unemployment rate stood at 6.5 percent on its way to 10 percent a year later.

The recovery from that recession was slow, but the economy has come a long way. The combination of fiscal stimulus, corporate and bank bailouts, and unconventional monetary policy aided in stabilizing the economy. Yet, these dramatic actions did not generate the sharp bounce back of economic activity that we might have expected based on some past recoveries. Instead, the economy found its footing in a moderate, but resilient, recovery with annual growth in real Gross Domestic Product (GDP) of around 2 percent. More surprisingly, despite the sluggish pace of output growth, employment has grown at a relatively brisk pace, pushing the unemployment rate down to its lowest level since 1969.

Because we are well into a recovery of record length, and with interest rates increasing, many pundits are saying a recession is inevitably on the horizon. Others are convinced that recent tax cuts and increased government spending, combined with robust consumer and business spending, provide momentum that could extend the current expansion. Rather than try to project the future, I'll discuss what I see as the key factors that are in play today and that, on balance, suggest continued growth ahead. In doing so, I'll offer my views on monetary policy and highlight the changing role of the energy sector in contributing to the overall performance of the economy, including the region served by the Kansas City Fed.

U.S. Economic Outlook

By nearly every measure, the U.S. economy is performing well. With accommodative financial conditions, elevated levels of confidence and solid labor markets, it seems reasonable to expect economic growth slightly above trend with low and stable inflation for the next few years.

Consumers are poised to continue to be the main force behind this expansion, and the recent pickup in business investment may continue as well.

Digging a little deeper into the details, several factors support the outlook for consumption. Household balance sheets remain strong. The latest data show that the personal savings rate is 6.6 percent and household net worth as a share of income is at a historically high level. Wage growth has steadily increased, approaching 3 percent in the latest reports, and consumer confidence is at its highest level since prior to 2008. Finally, job gains continue to rise faster than is needed to absorb workers entering the labor force.

The outlook for business spending is also favorable. Business investment expanded robustly last year, and the momentum has continued in 2018. During the first half of this year, business investment grew at an average annualized rate of 10 percent. This is a welcome step up from the stagnant investment levels in 2015-2016.

Looking ahead, capital expenditures seem poised to continue at a robust pace, as economic growth remains solid, borrowing costs remain low, and rising labor costs combined with labor shortages lead firms to invest in technology to automate tasks. The recent cut in the corporate tax rate provides additional incentives for investment. And, as I will discuss later, advances in shale oil production have become an important factor in boosting investment. This impetus from the energy sector seems likely to continue. Over the longer-term, however, investment spending will likely slow to a more sustainable rate in line with the economy's potential growth rate.

Other sectors of the economy, including net exports, residential investment, and inventories, are likely to be a more neutral and uncertain influence on the overall economy. For example, the recent appreciation of the dollar, along with possible retaliatory tariffs and slower

growth in the emerging market economies, could cause net exports be a modest drag on overall economic growth. Nevertheless, I expect domestic demand to remain strong.

This strong demand growth will reinforce the outlook for a tight labor market. The unemployment rate currently stands at 3.7 percent, well below most estimates of its long-run sustainable level. With solid employment gains averaging 190,000 jobs per month in the last three months, some observers argue the economy is getting a second wind. My own interpretation of these gains is that we are seeing the hallmarks of a mature expansion. Looking through monthly fluctuations in the job market reports shows that the pace of payroll growth has actually moderated from a few years ago. At its peak in early 2015, the year-over-year change in total payrolls was roughly 3 million. In contrast, the latest data point to a year-over-year change in total payrolls of 2.5 million. I expect this trend of slowing employment gains to continue as labor market conditions tighten further and it becomes harder for firms to fill vacancies.

Despite tight labor markets and above trend growth, inflation has remained low. In fact, inflation has been remarkably stable even as the unemployment rate has fallen sharply. That said, the accommodative stance of monetary policy that has prevailed, even as the unemployment rate has fallen below estimates of its long-run sustainable level, could push inflation somewhat higher over the next couple of years. Of course, the outlook for inflation has implications for monetary policy.

Implications for Monetary Policy

At last month's meeting, the Federal Open Market Committee (FOMC) took another step to remove some of the extraordinary monetary accommodation that has been in place since the onset of the financial crisis. This gradual normalization of policy seems appropriate to me given

that the FOMC's employment and inflation objectives have largely been achieved while the current setting of its overnight interest rate target remains below estimates of its longer-run value.

As the FOMC seeks to make monetary policy a more neutral influence on the economy and, thereby, sustain the economic expansion, policymakers must consider a variety of risks and uncertainties around the outlook for the economy. On the upside, accommodative financial conditions, elevated consumer confidence and expansionary fiscal policy could lead to further increases in economic growth and inflation. On the downside, trade policy uncertainty, growing risks in emerging market economies and policy divergence between the U.S. and other advanced economies could slow down both foreign and U.S. growth.

While I see these risks as currently balanced, the path of policy cannot be on a pre-set course at this stage of the expansion. The FOMC's approach of gradual increases in the target federal funds rate, combined with gradual reductions in the size of the Federal Reserve's balance sheet, has aimed to thread this needle. This means policymakers will need to carefully assess the effects past policy actions are likely to have as they look for economic fundamentals to remain consistent with the objectives of maximum employment and price stability.

The Shale Oil Revolution

To this point, I've talked about the cyclical nature of the economy and how monetary policy interacts with those cyclical features. At the same time, however, a number of structural changes are occurring in the U.S. economy that bear watching. Among these developments are the aging of the population, ongoing technological change and weak readings for productivity

growth. A key industrial change that is particularly relevant in Oklahoma is related to the shale oil revolution, and I'd like to spend a few minutes talking about some of its implications.

In the 1970s and 1980s, sharp oil price increases pushed the U.S. economy into “stagflation”— an economic downturn with a simultaneous and persistent increase in inflation. At the time, the United States was heavily dependent on oil imports for its energy needs, and higher oil prices acted as a tax on U.S. consumers paid to foreign oil producers. Of particular note, the rise in inflation that resulted from higher oil prices tended to persist. Once inflation rose, people expected it to remain elevated, suggesting a lack of confidence in the FOMC to maintain price stability over the longer run.

Today, the economy's reaction to a sharp change in oil prices is quite different. As you know, oil and gas production has boomed in the United States over the past two decades thanks to horizontal drilling and fracking technologies. In addition, the public's expectations for inflation have become better anchored following the Fed's heightened response to inflationary shocks as well as its adoption in 2012 of an inflation target. As a result, today, oil price increases lead to an increase in oil and gas production and a related increase in investment spending, temporarily raising inflation but offsetting some or all of the adverse effect on aggregate economic activity. Similarly, today, a sharp downturn in oil and gas prices can put temporary downward pressure on inflation with benefits to consumers but adverse consequences for the energy sector – as we witnessed in 2014-15. Importantly, the inflationary effects are viewed as temporary rather than persistent because of the anchoring of inflation expectations around 2 percent.

Although recent developments have muted the effects of oil price changes on the economy as a whole, they have to some extent increased volatility in the oil sector itself and in

business capital expenditures. For example, the oil and gas sector nationwide has experienced a surge in output per rig and per worker. From 2012 to 2017, productivity in the U.S. oil and gas extraction sector more than doubled.¹ Associated with this increase in productivity and along with wide swings in oil prices, the number of rigs and workers required for production has fallen dramatically.

Research by my staff finds that the energy sector has had a significant influence on investment spending in the U.S. economy, both to the upside and to the downside. From 2006 to 2014, for example, total capex spending for U.S. publicly traded firms rose roughly 41 percent. This boost in spending was largely driven by energy investment, which grew 125 percent compared to a more modest 21 percent for non-energy investment. By the same token, after the oil price decline in 2014, energy investment plunged more than 50 percent over the following two years. Despite a modest 2 percent growth in non-energy investment spending over this period, total capex fell 15 percent. Variability in energy investment has had a sizable influence on the broader investment landscape.²

Of course the shale oil boom also has had myriad effects on local economies that are heavily dependent on the oil and gas extraction industry. Yesterday, I had the chance to tour the large oil storage facility in Cushing, just an hour west of here, to learn more about these dynamics. World trade is an important issue today and it affects many local economies, including those involved in oil production. For example, with the lifting of the oil export ban, we've seen U.S. oil exports surge, and places like Cushing are dealing with export delivery challenges until investment in midstream and downstream capacity comes on line.

¹ Chad Wilkerson. 2018. "[Oil and Gas Productivity Doubled in the Past Five Years—What Happens Next?](#)" *Oklahoma Economist*, Federal Reserve Bank of Kansas City, June 18.

² David Rodziewicz, 2018. "[Energy Investment Variability within the Macroeconomy](#)," *Economic Review*, Federal Reserve Bank of Kansas City, Third Quarter.

A key question is whether this now abundant and accessible natural resource has, on net, had a positive effect on local economic conditions. Some theories suggest resource abundance may increase local economic development through higher demand for labor in the energy sector and spillover spending in the local economy. Other theories, though, suggest industries not closely related to the resource extraction industry may be harmed as energy production expands. For example, labor demand by the extraction industry may be high enough to bid up local wages, which in turn could pull employees from other lower-paying jobs and make it difficult for other industries to survive. At the national and international level, this phenomenon has been referred to as the “natural resource curse,” but the topic has received much less attention at the local level.

Staff at the Kansas City Fed took a look at this issue and examined how the boom in the U.S. natural gas industry has affected local economies in the central United States. By looking at labor market conditions at the county level in a nine-state region including Oklahoma, they analyzed how employment and wages have responded to the rapid expansion of natural gas production from 2001 to 2011. The key finding is that the gas boom had a modest but positive impact on local labor market outcomes in counties where natural gas production has increased, and little evidence of a so-called natural resource curse.³

Given the nature and scale of the dramatic developments in the energy sector, we continue to monitor this segment of our economy very closely, both in the Kansas City Fed region and beyond. We stay abreast of real-time trends through roundtable discussions with industry executives, and we conduct a quarterly survey of our oil and gas firms to monitor activity. Our third-quarter survey will be released tomorrow morning. We also host an annual

³ Jason P. Brown. 2014. “[Production of Natural Gas from Shale in Local Economies: A Resource Blessing or Curse?](#)” *Economic Review*, Federal Reserve Bank of Kansas City, First Quarter.

energy conference with the Dallas Fed, bringing together researchers, executives, bankers, and government officials. This year's conference focused on trends in world oil supply and demand, the rising importance of energy trade, and the longer-term future of shale. Overall, the conference attendees were relatively upbeat about the near-to-intermediate outlook for U.S. oil and gas, while recognizing that geopolitical risks could create volatility in the near term.⁴

Conclusion

In closing, the U.S. economy is enjoying a long expansion. One particular bright spot in the outlook is the strength of the oil- and gas-producing sector. As we assess the outlook for the economy as a whole, it has become increasingly important to understand developments in the energy sector to identify industry-specific shocks and their possible spillovers to the broader economy. The Kansas City Fed and its Oklahoma City Branch in particular will continue to keep tabs on these energy sector dynamics.

Looking ahead, there is good reason to expect continued moderate growth, with a gradual slowing to more sustainable growth rates of both output and employment. This outlook will likely require further gradual increases in the FOMC's target interest rate, although the pace and extent of future actions remain a key aspect of the Committee's deliberations.

⁴ See "[Energy and the Economy: Charting the Course Ahead](#)," for presentations from the conference.