OUTLOOK Economic Data and Commentary

February 2014 Volume 11 Number 2

Outlook: Slowing Productivity Growth

In recent months, most of the news about the U.S. economy has been cause for optimism. GDP growth accelerated markedly in the second half of 2013. The housing and auto markets remain firm. Equities have held steady despite tapering by the Federal Reserve. Unemployment, while still high, continues to trend in the right direction.

Despite those recent improvements, economist Lee Ohanian is focused on a more troubling long-term trend: slowing productivity growth.

Productivity, which measures output per hour worked – has been growing at significantly below its historical average in the U.S. for the past four years. Ohanian, a professor of economics at University of California, Los Angeles (UCLA) and a senior fellow of the Hoover Institution at Stanford University, says it's imperative that we find a way to restore productivity growth in the U.S. or there will be significant negative consequences for the economy and standards of living over the long term.

OUTLOOK: Please define productivity in layman's terms.

Lee Ohanian: In economic terms, productivity refers to the amount of value – expressed in dollars and cents – the average worker produces in goods and services per year. You get to that number by dividing GDP by the number of people in the workforce. Using those figures, today's average worker produces well over $100,000 in value per year. Going back to the days of our founding fathers, output was closer to $3,000 per year in today's dollars.

The long-term historical average for productivity growth in the U.S. is 2.5 percent per year. More recently, productivity here has been increasing only by about 1.1 percent per year.

OUTLOOK: What factors typically contribute to increased productivity?

LO: Productivity growth begins with investment. Businesses make investments in new technologies, new plants and equipment. Government makes investments in infrastructure. All of these combine to allow workers to produce more because the process of making a product or providing a service is easier.

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About this article

Lee E. Ohanian is professor of Economics, and director of the Ettinger Family Program in Macroeconomic Research at UCLA, where he has taught since 1999. He is an advisor to the Federal Reserve Bank of Minneapolis, and previously has advised other Federal Reserve Banks, Foreign Central Banks, and the National Science Foundation. He has been an economic advisor to state and national political campaigns.

His research, which recently has been discussed in the *New York Times, Wall Street Journal, Washington Post,* and other media sources, focuses on economic crises, and has been published widely in a number of peer-reviewed journals. He is a frequent columnist for the *Wall Street Journal, Forbes, Newsweek*, and CBS Moneyline. He currently serves on the editorial boards of three journals.

Ohanian holds a bachelor's degree from the University of California-Santa Barbara and a master's and doctorate degree in economics from the University of Rochester.

The banking industry serves as a great example. Before computers, every document had to be typed up, hand-executed and stored as a paper file. There was no ability to communicate electronically with colleagues. Today, of course, virtually everything is electronic – from storage, to access to communication – and it's much more efficient and productive. Back when there was significantly less capital, businesses and manufacturing processes were slower and more cumbersome, and workers weren't nearly as productive.

OUTLOOK: When, specifically, did U.S. productivity begin to slow?

LO: Productivity growth was close to the historic trend of 2.5 percent growth through the 1990s and up to around 2006. It slowed somewhat during the financial crisis and recession, and then temporarily bounced back in 2009. But after 2009, productivity growth has been dismal at 1.1 percent per year.

Typically after a recession, you see a big rebound in productivity that will sustain for a period of time and then settle down to about the historical rate. This time, it persisted only for about two or three quarters and then settled at a rate far below the historic norm, which is why I'm concerned. I don't believe there has been a period since 1947, which is when the Bureau of Labor Statistics began tracking such data, that we have had a four-year period with such anemic productivity growth.

OUTLOOK: What are the implications of slower productivity growth?

LO: In the short term, if productivity is not growing very quickly, it means businesses aren't making the necessary investments in technology and capital goods they typically would make. And, if they're not making those investments, they're probably hiring fewer workers.

Over the longer term, the country's overall standard of living is impacted. The affect is subtle and it will manifest itself over a longer period of time. If the current slowdown in productivity growth were to continue for another four or five years, then its effects will be seen in the U.S. We'll start to look like countries that have been mired in slow productivity growth for over a decade, such as Italy.

> Businesses are worried about the future economic health of the country, and are also uncertain of how major policy shifts such as Dodd-Frank and Obamacare will impact their costs and demand for their products.

Thinking about it mathematically, if our productivity were growing at its historical rate of 2.5 percent, output per hour worked would double in about 28 years to $200,000 per year per worker. But if our current growth rate of 1.1 percent per year were to continue, then output per hour worked would double in 64 years. So, our current productivity slowdown has enormous implications for the future.

OUTLOOK: Why do you think productivity growth is slowing?

LO: Businesses are worried about the future economic health of the country, and are also uncertain of how major policy shifts such as Dodd-Frank and the Affordable Care Act (Obamacare) will impact their costs and demand for their products. As a result, business is not willing to make major investments in advancing productivity. These investments are costly, and businesses are not confident that their after-tax returns from these investments will justify the expenses.

OUTLOOK: How do current U.S. productivity growth rates compare with those in other developed countries?

LO: Much of Europe – including France, Italy, the U.K., and Germany – is also mired in an economic slump with very slow productivity growth. I think there is very limited opportunity for people to make economic progress in Europe, particularly in Western Europe. Japan has had slow productivity growth for nearly a quarter century, since its recession of the 1990s.

OUTLOOK: What about emerging economies?

LO: China and India are catching up to the U.S. and other advanced countries because their productivity growth rates are 5 percent or higher. This is the same story as that of Japan, South Korea, Taiwan, Hong Kong and Singapore of the 1950s through the 1980s when they all experienced productivity growth of about 5 percent per year, and increased their standards of living substantially.

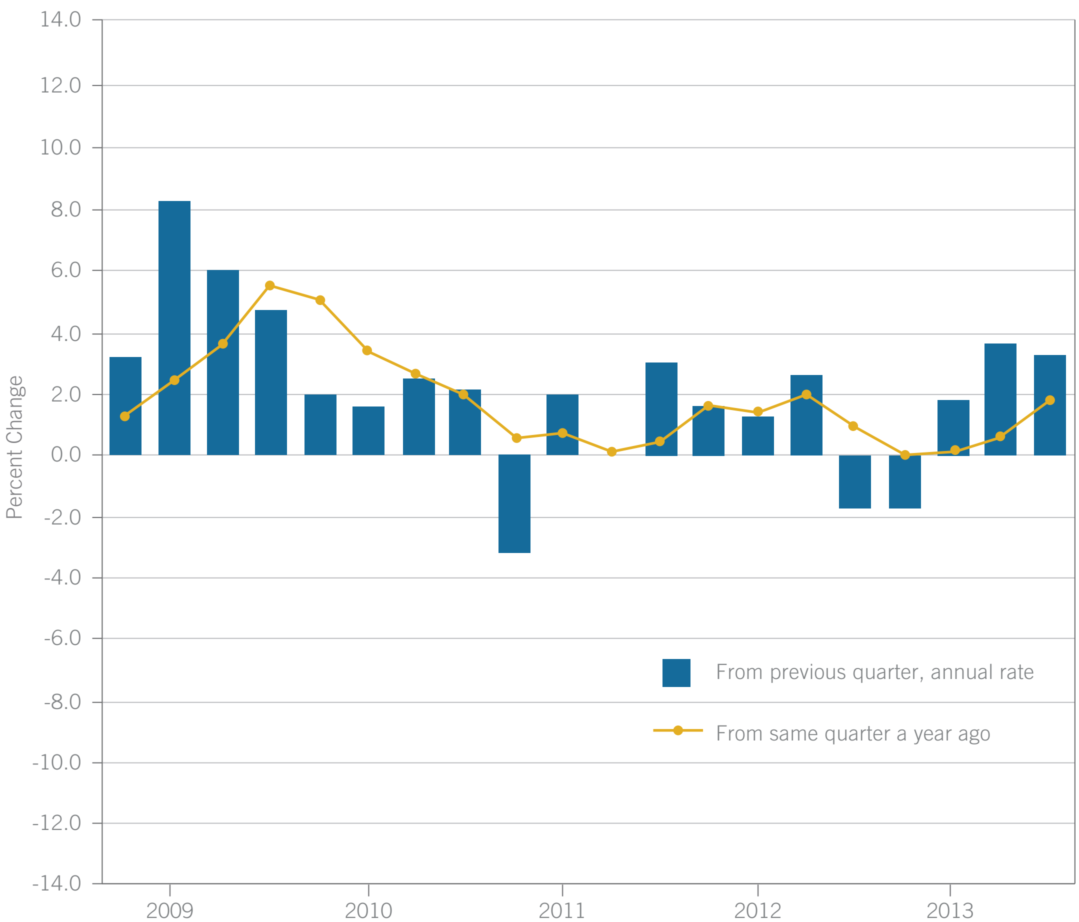
OUTLOOK: How have the various policies coming out of the financial crisis helped or hindered U.S. productivity growth?

LO: The U.S. federal government implemented many programs and policies intended to stabilize and grow the economy. The stimulus package, Cash-For-Clunkers, the payroll tax holiday, the homebuyers tax credit, automaker bailouts and quantitative easing were all advocated as being essential to foster economic growth. However, it is very difficult to see that these policies had any positive impact on the overall economy. The labor force participation rate – often called the employment rate – is now lower than it was during the financial crisis. Productivity growth is 50 percent below its historical average.

There is less commercial bank lending today, per dollar of output, than during the financial crisis. Small business lending is down about 10 percent today relative to the financial crisis. This cannot continue if we are to succeed.

U.S. PRODUCTIVITY BY QUARTER

Nonfarm business, all persons, 2009 Q1 – 2013 Q4



Source: Bureau of Labor Statistics

ANNUAL GROWTH IN U.S. PRODUCTIVITY

Source: Bureau of Labor Statistics

OUTLOOK: What kinds of policies should the U.S. government be pursuing to revive productivity growth?

LO: Almost all economists agree on broad-based tax reform that lowers marginal tax rates and broadens the tax base, and which cuts the tax rate on investment returns.

I would take Dodd-Frank and start over. It doesn't solve the "too big to fail" problem and it substantially raises the costs of banking, particularly for smaller banks. I would take Obamacare and start over. Bringing the uninsured into the world of the medically insured didn't require completely overhauling the U.S. health care system.

We need immigration reform. Immigrants create about half of our most successful high tech startups, yet we make it very hard for the most skilled immigrants to stay and start new businesses. And we need to reform public education. Today, only about one-third of our students are proficient at math and science. We can't compete with other countries at that level of school achievement.

"I would like to see development of technologies that could help out the many low-skilled workers in our economy who have very limited opportunities. Instead, much of the productivity growth that we have seen is taking the place of these workers.

OUTLOOK: You mentioned tax reform. How do taxes play into the recipe for productivity growth?

LO: Generally, businesses will invest in new technologies and make capital investments if the after-tax return on their investments is sufficiently attractive. To the extent that we have high taxes, that reduces the returns and businesses will hesitate to invest.

The U.S. corporate income tax rate, which is statutorily set at 35 percent, is the highest among advanced countries. It brings in relatively little revenue compared to what politicians think it should bring in.

Right now, too many businesses are spending time trying to figure out how to get around the 35 percent tax rate when they could be using their creativity and energy to think about, "What's going to be the next best thing for our business and our customers?"

OUTLOOK: Do you think we will be able to make any progress from a policy perspective in light of the ongoing political gridlock?

LO: Not now. There are not only enormous divisions between Republicans and Democrats that make it very difficult to make progress, but very large divisions within each party. I usually think of politicians as people who do deals. I struggle to think of the last time we saw a major deal done.

OUTLOOK: Which segments of the U.S. economy would you expect to lead the way in renewed productivity growth?

LO: It is hard to predict where the next breakthroughs will occur. We can only say that they will occur where creative and energetic entrepreneurs are willing to invest. Right now, we are seeing major advances in energy and technology, because people have been willing to take risks in those areas. I would like to see development of technologies that could help out the many low-skilled workers in our economy who have very limited opportunities. Instead, much of the productivity growth that we have seen is taking the place of these workers. They need to figure out how to retrain and be competitive in a very different economy than what they were used to.

> "The United States remains the greatest economic power of the world. But we have some work to do to get back on track.

OUTLOOK: Is productivity growth a regional issue? Are certain U.S. regions outperforming others in terms of productivity?

LO: The oil states are doing particularly well. Job growth is high, income growth is high, and unemployment is relatively low. This is partially a consequence of fracking technologies and new approaches to natural gas production.

OUTLOOK: How does the agricultural sector of the U.S. economy contribute to productivity growth?

LO: Over history, agriculture is really one of the shining stars of productivity growth. In the late 1800s, the government created the Department of Agriculture because 60 percent of the population was working on farms. A full 6 out of 10 people were dedicated to feeding our country.

Today, one half of one percent of the workforce is engaged in producing food. That's really an enormous boost to the economy, because we no longer need so many people producing wheat and grain, and raising livestock to feed us. Productivity has enabled our agricultural workforce to be more productive and opened up opportunities for people to do other things. It's a remarkable success story of productivity.

OUTLOOK: Would you agree with some of the pessimists that say that our recent 'golden age of innovation' is over? Or, that some of our great advances in digital innovation eliminated job prospects for many people?

LO: It is so hard to predict how technologies will advance. I suspect that we are only seeing the beginning of what we can achieve. But there is some validity to the thought that technology growth, which used to be the tide that raised all boats, is now only advancing the prospects of highly educated workers.

It is a much more competitive world we live in because of technology and globalization. This is why we fundamentally must improve schooling outcomes, and make retraining programs more available to those who are low-skilled and out of work. The United States remains the greatest economic power of the world. But we have some work to do to get back on track. ■

Interest Rates and Economic Indicators

The interest rate and economic data on this page were updated as of 1/31/14. They are intended to provide rate or cost indications only and are for notional amounts in excess of $5 million except for forward fixed rates.

KEY ECONOMIC INDICATORS

Gross Domestic Product (GDP) measures the change in total output of the U.S. economy. The Consumer Price Index (CPI) is a measure of consumer inflation. The federal funds rate is the rate charged by banks to one another on overnight funds. The target federal funds rate is set by the Federal Reserve as one of the tools of monetary policy. The interest rate on the 10-year U.S. Treasury Note is considered a reflection of the market's view of longer-term macroeconomic performance; the 2-year projection provides a view of more near-term economic performance.

ECONOMIC AND INTEREST RATE PROJECTIONS

Source: Insight Economics, LLC and Blue Chip Economic Indicators

				US Treasury Securities	
2014	**GDP**	**CPI**	**Funds**	**2-year**	**10-year**
Q1	2.50%	1.80%	0.08%	0.42%	3.01%
Q2	2.80%	1.80%	0.09%	0.54%	3.15%
Q3	2.90%	2.00%	0.11%	0.68%	3.29%
Q4	3.00%	1.90%	0.13%	0.85%	3.43%
2015	**GDP**	**CPI**	**Funds**	**2-year**	**10-year**
Q1	3.00%	2.00%	0.17%	0.96%	3.51%

PROJECTIONS OF FUTURE INTEREST RATES

The table below reflects current market expectations about interest rates at given points in the future. Implied forward rates are the most commonly used measure of the outlook for interest rates. The forward rates listed are derived from the current interest rate curve using a mathematical formula to project future interest rate levels.

IMPLIED FORWARD SWAP RATES

Years Forward	3-month LIBOR	1-year Swap	3-year Swap	5-year Swap	7-year Swap	10-year Swap
Today	0.23%	0.28%	0.77%	1.56%	2.16%	2.73%
0.25	0.27%	0.32%	0.92%	1.71%	2.29%	2.83%
0.50	0.29%	0.37%	1.10%	1.88%	2.43%	2.94%
0.75	0.33%	0.46%	1.28%	2.05%	2.57%	3.05%
1.00	0.37%	0.58%	1.48%	2.22%	2.71%	3.16%
1.50	0.64%	0.96%	1.90%	2.57%	2.98%	3.37%
2.00	1.05%	1.46%	2.34%	2.91%	3.22%	3.57%
2.50	1.55%	1.95%	2.71%	3.18%	3.46%	3.73%
3.00	2.06%	2.43%	3.08%	3.46%	3.69%	3.90%
4.00	2.82%	3.17%	3.57%	3.84%	4.00%	4.13%
5.00	3.35%	3.68%	3.94%	4.10%	4.21%	4.28%

HEDGING THE COST OF FUTURE LOANS

A forward fixed rate is a fixed loan rate on a specified balance that can be drawn on or before a predetermined future date. The table below lists the additional cost incurred today to fix a loan at a future date.

FORWARD FIXED RATES

Cost of Forward Funds

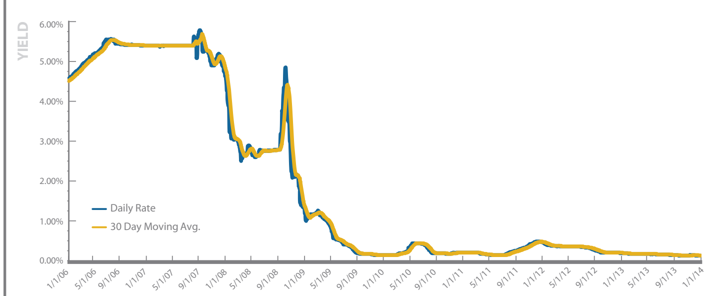
Forward Period (Days)	Average Life of Loan			
	2-yr	3-yr	5-yr	10-yr
30	6	8	8	6
90	15	21	20	15
180	27	39	38	28
365	69	83	78	55

Costs are stated in basis points per year.

SHORT-TERM INTEREST RATES

This graph depicts the recent history of the cost to fund floating rate loans. Three-month LIBOR is the most commonly used index for short-term financing.

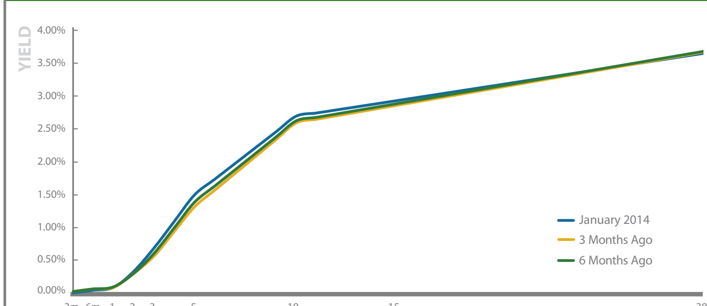
3-MONTH LIBOR



RELATION OF INTEREST RATE TO MATURITY

The yield curve is the relation between the cost of borrowing and the time to maturity of debt for a given borrower in a given currency. Typically, interest rates on long-term securities are higher than rates on short-term securities. Long-term securities generally require a risk premium for inflation uncertainty, for liquidity, and for potential default risk.

TREASURY YIELD CURVE



CoBank Reports 2013 Financial Results

CoBank this month announced fourth-quarter and full-year financial results for 2013. The bank reported net income of $856.5 million for the year, up slightly from $853.9 million in 2012. The increase was driven primarily by improvements in credit quality and the fact that no provision for loan losses was recorded in 2013, compared to $70.0 million in provisions in the prior year. Net interest income decreased 6 percent, to $1.2 billion, primarily due to the impact lower interest rates had on the bank's returns on invested capital, its balance sheet positioning and its portfolio of investment securities. Average loan volume increased 2 percent to $71.9 billion.

For the fourth quarter, net income increased to $227.6 million, from $153.4 million in the same period of the prior year. During the quarter, the bank reversed $20.0 million in loan loss provisions recorded earlier in the year, compared to a $50.0 million provision in the fourth quarter of 2012. Net interest income declined 8 percent during the quarter, to $288.0 million. Average loan volume for the quarter was essentially unchanged from the fourth quarter of 2012, at $72.2 billion.

Robert B. Engel

"We're delighted with CoBank's business and financial performance in 2013," said Robert B. Engel, CoBank's chief executive officer. "The bank recorded its 14th consecutive year of growth in profitability on behalf of customer-owners, while thoughtfully growing our loan portfolio in a highly competitive environment. Credit quality is exceptionally strong, and our capital and liquidity levels remain solid. Most importantly, we continue to fulfill our mission in rural America by meeting the borrowing needs of our customers across all the industries we serve."

During the year, the bank saw increased loan demand from affiliated Farm Credit associations and rural electric cooperatives. Combined, that more than offset a significant decline in seasonal agribusiness lending, which was driven by lower inventories, lower commodity prices and strong cash positions at grain elevators around the country. "We're pleased that overall loan volume grew last year in the face of challenging market conditions," Engel said. "We continue to benefit enormously from the breadth, depth and longevity of our customer relationships, and the bank's reputation for delivering value and a high-quality customer experience."

In March, the bank will distribute $414.5 million in total patronage, including $338.0 million in cash and $76.5 million in common stock. For most customers, that will represent 100 basis points of average qualifying loan volume during the past year, effectively lowering their overall net cost of debt capital from CoBank.

About CoBank

CoBank is a $98 billion cooperative bank serving vital industries across rural America. The bank provides loans, leases, export financing and other financial services to agribusinesses and rural power, water and communications providers in all 50 states. The bank also provides wholesale loans and other financial services to affiliated Farm Credit associations serving farmers, ranchers and other rural borrowers in 23 states around the country.

CoBank is a member of the Farm Credit System, a nationwide network of banks and retail lending associations chartered to support the borrowing needs of U.S. agriculture and the nation's rural economy.

Headquartered outside Denver, Colorado, CoBank serves customers from regional banking centers across the U.S. and also maintains an international representative office in Singapore.

For more information about CoBank, visit the bank's web site at www.cobank.com.

"As a cooperatively organized institution, CoBank prides itself on the fact that it returns substantial value to its customers through annual patronage distributions," Engel said. "We're delighted with the level of patronage our board has approved this year, and we trust that our customers also appreciate this important benefit of doing business with a bank that they own."

At year-end, 0.71 percent of the bank's loans were classified as adverse assets, compared to 1.01 percent at December 31, 2012. Nonaccrual loans totaled $147.8 million at December 31, 2013, or 0.20 percent of total loans, compared to $170.2 million and 0.24 percent of total loans at year-end 2012. The bank's allowance for credit losses totaled $614.7 million at year-end, or 1.85 percent of non-guaranteed loans when loans to Farm Credit associations are excluded.

David P. Burlage

"Generally, the financial health of the customers we finance remains very favorable, reflecting the continued strong performance of American agribusiness, rural infrastructure and other key sectors of the rural economy," said David P. Burlage, CoBank's chief financial officer.

Capital and liquidity levels at the bank remain well in excess of regulatory minimums. As of December 31, 2013, shareholders' equity totaled $6.7 billion, and the bank's permanent capital ratio was 16.7 percent, compared with the 7.0 percent minimum established by the Farm Credit Administration (FCA), the bank's independent regulator. At year end, the bank held approximately $23.0 billion in cash and investments. The bank had 181 days of liquidity at the end of 2013, compared with the 90-day FCA minimum.

Engel noted that despite recent improvement in general economic conditions in the U.S., the earnings environment is likely to remain challenging for CoBank in the year ahead, given tepid overall demand for credit, continued low interest rates, intense competition and other factors. "Our job at CoBank is to effectively manage risks in the market environment in order to maintain our financial strength and meet our customers' financial needs," Engel said. "We look forward to serving our customers in the year ahead and building the financial position of CoBank for the long term."