

OUTLOOK Economic Data and Commentary

October 2012 Volume 9 Number 10

COMMODITY PRICES AND INTEREST RATES.....1-6 **REAL INTEREST RATES AND** THE NEW ENERGY ABUNDANCE 7-12 U.S. RETAIL REGULAR GASOLINE PRICES9 TOP OIL PRODUCERS......10 NATURAL GAS SPOT PRICES......11 DRY SHALE GAS PRODUCTION12 **INTEREST RATES AND** ECONOMIC INDICATORS13 COBANK LOWERS DIVIDEND COSTS AND ENHANCES CAPITAL POSITION THROUGH PREFERRED STOCK TRANSACTIONS14 ABOUT COBANK14

Commodity Prices and Interest Rates

When people think about the direction of commodity prices, they tend to focus on short-term supply shocks – like this summer's drought in the United States – or long-term trends in demand in China, India and other fast-growing parts of the developing world.

An often overlooked factor is the influence of interest rates. History shows a strong correlation between interest rates and prices for commodities, including oil, agricultural products, minerals, metals and other raw materials. Commodity prices generally climb when interest rates fall, and fall when interest rates rise.

In September, the Federal Reserve announced a new round of "quantitative easing" and affirmed its intent to hold short-term rates at super-low levels into 2015. Given the Fed's continued easy money posture, *OUTLOOK* turned to Harvard economist Jeff Frankel for a primer on the connection between rates and commodity price levels. Frankel has studied this dynamic over the course of his academic career, and argues that interest rates should always be kept in mind when assessing the future price for many commodities.

OUTLOOK: At a high level, talk about the relationship between interest rates and commodity prices.

Jeff Frankel: One important concept to define at the outset is the distinction between "nominal" interest rates and "real" interest rates. The nominal rate is the rate of interest before inflation is taken into account. To get the real interest rate, you take that nominal interest rate and subtract a good guess of what inflation will be in the future.

Whenever you see interest rates going up, you have to ask, "Is that increase in the interest rate reflecting expectations of inflation?" If interest rates are rising because the economy is overheating and we're expecting inflation in the future, that's just an increase in the nominal rate rather than the real rate. For instance, in the 1970s, the U.S. had high nominal interest rates, but expected inflation was even higher, which meant that real interest rates were low. Real interest rates even went into negative territory in the late

About this article



Jeffrey A. Frankel is the James W. Harpel Professor of Capital Formation and Growth at Harvard

University. He directs the International Finance and Macroeconomics program at the National Bureau of Economic Research, where he is also on the Business Cycle Dating Committee, which officially declares recessions. He served at the Council of Economic Advisers in 1983-84 and 1996-99. As a CEA member in the Clinton Administration, Frankel's responsibilities included international economics, macroeconomics, and the environment.

Before coming to Harvard in 1999, he was a professor of economics at the University of California at Berkeley. He serves on advisory panels for the Federal Reserve Banks of New York and Boston, the Bureau of Economic Analysis, and the Peterson Institute for International Economics. His research interests include international finance, commodities, currencies, crises, monetary policy, fiscal policy, regional blocs, and international environmental issues.

1970s. Or you can have what happened in the early 1980s, when Paul Volcker became chairman of the Fed and slammed the brakes on the economy to try to fight inflation. Then you had nominal interest rates going higher combined with expectations of inflation going down. The result was that real interest rates went up to an all-time high. In recent years, both nominal and real interest rates have been low.

When we talk about the link between interest rates and commodity prices, it's the real interest rate that we're concerned with.

OUTLOOK: Is there a direct link between the level of real interest rates and prices for commodities?

JF: Yes, I think there is. Certainly there are a lot of other micro factors, especially if you go crop by crop, mineral by mineral. The obvious things include the drought we've seen in the Midwest, or a strike at a major port or production facility, or a good harvest in Brazil. In any given individual market, most of the commodity price fluctuations are caused by things of that nature, which is probably why most people don't think about monetary and other macroeconomic factors.

But the big macroeconomic factors are also important. Think about the fact that virtually all commodities were up in the 1970s. That was when real interest rates were very low. They all came down in the 1980s and then all went up again between 2000 and 2008. The correlation across this quite disparate set of commodities is remarkably high. It's not just oil; it crosses a huge variety of agricultural products and minerals and things like rubber and timber as well.

OUTLOOK: Weren't those fluctuations driven by changes in global demand vs. real interest rates?

JF: The overall level of economic growth is obviously a very important macro-economic factor driving commodity prices. Economists used to focus mostly on growth in the U.S.; now we look at world growth. The impact of real interest rates maybe isn't quite as critical as gross world product, but it is important and often neglected.

REAL INTEREST RATES AND COMMODITY PRICES, 1950-2012



Source: Jeffrey Frankel

OUTLOOK: How, specifically, are changes in real interest rates transmitted into commodity price fluctuations?

JF: There are three key mechanisms, and I'll go through them one by one.

The first relates to what I would call the extraction decision. Many of the commodities we're talking about are storable. And the owner of the commodity always has a decision to make, whether it's pumping oil or mining minerals or logging trees. How quickly do you send it to market? Do you leave the oil in the ground? Do you keep the cattle herd for the next season? Or do you pump the oil and cull the herd today and send it to market?

Essentially the decision is "now versus later." There are a bunch of factors that come into that decision, like price expectations and storage costs and risk. But the one I want to emphasize is the real interest rate. The higher the interest rate is, the more likely it is you'll extract the commodity, which is non-interest earning, and liquidate it in order to earn interest on the proceeds from the sale.

King Abdullah of Saudi Arabia articulated this dynamic very well. In 2008 he was asked if the country planned to tap newly discovered oil reserves. He said: "Let them remain in the ground for our children and grandchildren who need them."

When your currency goes up, the way the dollar did in the early 1980s, the price of your domestic commodities goes down on the international market.

OUTLOOK: What's the second mechanism by which real interest rates impact commodity prices?

JF: The second factor is the carrying cost of inventories, whether it's an individual farmer, or someone who's got a lot of grain silos, or the processing company that is going to use grain to make flour or bread. Anywhere along that line where you've got storage, you've got inventories. And most of these people are quite conscious of the costs of carrying inventory, including the real interest rate. If the interest rate is higher, then everyone is going to want to hold lower inventories, other things being equal. You're going to try to squeeze your inventory down, which effectively lowers demand.

These days the cost of carrying inventory essentially is zero because real interest rates are essentially zero. So people are going to hold all the inventories they feel that they might need for convenience yield or risk of disruption or whatever.

OUTLOOK: What's the third factor?

JF: The third factor relates to financial speculation in commodity markets. Commodities have become an asset that's part of the portfolio for hedge funds and portfolio managers at universities and insurance companies. When real interest rates are very low, these investors go out looking for other things to buy. That includes stocks and bonds, but it also includes taking open positions in the financial market for commodities.

OUTLOOK: What about exchange rates?

JF: Yes indeed; exchange rates are an important fourth mechanism. In any country, if the central bank follows an easy monetary policy and lowers real interest rates, that tends to cause the currency to depreciate. And if you tighten monetary policy then the currency goes up. When your currency goes up, the way the dollar did in the early 1980s, the price of your domestic commodities goes down on the international market.

Investors recognize that, as inflation rises, commodity prices are going to increase more than the general price level.

OUTLOOK: When you look at the combined impact of all these monetary factors, do you see that all commodities are equally impacted by changes in real interest rates? Or are some more correlated than others?

JF: I've done three different studies at different points in time. That research has shown that the sector with the strongest correlation is cattle. I don't know why, but that is just the most consistent relationship. Other sectors with a strong correlation are copper, corn, hogs and soybeans.

OUTLOOK: Is it possible to look at, say, the spot price of a bushel of corn and determine how much of the price is caused by real interest rates and therefore subject to changes in those rates?

JF: If I had to I could give you an answer, but it wouldn't be worth much. The margin of error is big enough that I wouldn't feel good about making a precise estimate. But I am confident there is an effect.

OUTLOOK: The logical follow-up question would be: Are commodity prices at risk of a big drop once we move out of the current, artificially low interest rate environment? Once the Fed and other central banks have to raise rates, are we likely to see a significant decline?

JF: First of all, it's going to be quite a while, at least in the U.S., before short-term nominal interest rates change.

When they do change, the only way they can go is up because they're essentially zero now. But when they do it could be for two very different reasons. One is that inflation is finally starting to show up, which some people are worried about. Most economists believe that at a time when unemployment is about 8 percent you really don't have to worry about inflation, but at some point that could happen. Or it could be because of real growth – that the recovery gets stronger.

Either scenario is good for commodity prices. In the growth scenario you'll see a strengthening of global demand. In the inflation scenario you'll see investors move more heavily into commodities as an inflation hedge. Investors recognize that, as inflation rises, commodity prices are going to increase more than the general price level, especially if real interest rates go down.

If nothing is done to fix the fiscal cliff, we will be in for the most predictable recession of all time. If we take advantage of the fiscal cliff crisis to adopt an intelligent fiscal policy, then we can enjoy an enhanced recovery, at least 3 percent growth.

OUTLOOK: How long do you expect the Fed to maintain the extraordinarily easy posture we've seen over the past few years?

JF: I don't have to guess; they tell it exactly. In September they extended their expectation of maintaining super low interest rates into 2015. It obviously depends on future conditions, but they state publicly how long they're going to keep interest rates low, and if they say their best guess is into 2015, then that's the right answer.

OUTLOOK: In terms of the broader economic situation, are you optimistic or pessimistic about our prospects of returning to a more vigorous growth pattern?

JF: It's really hard to be optimistic with the "fiscal cliff" coming on January 1st.* What happened with the debt ceiling negotiations last year doesn't give me any reassurance that our political system will function sufficiently well to solve it. But if I thought that we could overcome this dysfunctional political gridlock over the fiscal situation, then I'd be optimistic. There is some chance that the fiscal cliff will force people to confront the big issue – a combination of really serious measures to lock in fiscal responsibility over the long run, such as raising the social security retirement age, with some return of fiscal stimulus in the short run, such as extending President Obama's cut in the payroll tax.

*For background on the so-called "fiscal cliff," see Outlook's July interview with economist Kevin Hassett, available at www.cobank.com.

OUTLOOK: Give us your best prediction for growth in the U.S. economy over the next year.

JF: If nothing is done to fix the fiscal cliff, as is quite possible, then we will be in for the most predictable recession of all time. If we take advantage of the fiscal cliff crisis to adopt an intelligent fiscal policy, then we can enjoy an enhanced recovery, at least 3 percent growth.

In the past four years, the U.S. energy sector took a remarkable leap forward. In 2008, consumers were paying up to \$5 a gallon for gasoline and the price per barrel of oil hit \$145. Today, that picture is markedly different. A barrel of oil costs about \$91. Domestic oil production has increased, oil imports are down and natural gas production has blossomed.

The New Energy Abundance

The cost of natural gas also has dropped sharply, which should be a longterm economic boon for the country, helping everyone from consumers to manufacturers. While gas prices have spiked in recent weeks, it's not because of a lack of domestic oil production, energy expert Joel Kurtzman argues.

OUTLOOK recently turned to Kurtzman, executive director of the Milken Institute's Center for Accelerating Energy Solutions, a non-partisan think tank, for an update on the energy market. He contends that market forces, more so than public policy, have transformed the U.S. energy picture in recent years.

OUTLOOK: Characterize the global position of the United States when it comes to energy production from fossil fuels.

Joel Kurtzman: While most people have not realized it, the energy picture in the United States has completely transformed over the past two to three years. Hydraulic fracturing, or "fracking," which creates fractures in shale rock to release oil and gas, has been a game changer. It has allowed companies to tap into previously inaccessible gas so we now have an abundance of natural gas in North America, and that's caused natural gas prices to fall.

The same fracking technology has been used to produce more oil in the United States. Our oil production has climbed 11 percent since 2008, a remarkable feat that has largely gone unrecognized because of a lack of understanding of our energy picture. The United States is a huge oil producer today – the third largest in the world. The Congressional Research Service issued a report in 2011 that shows the U.S. has the largest reserves of fossil fuels of any country in the world, followed by Russia, China and Iran.

This is a tremendous change since 2008. This is all due to new technology which, when used safely, can have tremendous advantages.

Gasoline prices have stayed high not because of underlying oil prices, but because there are so many different kinds of blends that it's almost impossible to sell one state's gas in another state. That probably adds 10 to 15 percent to the prices at the pump.

About this article



Joel Kurtzman is a senior fellow at the Milken Institute, a nonprofit, non-partisan think tank.

His research focuses on globalization and its risks and has been published widely. He is also executive director of the Milken Institute's SAVE Project which focuses on energy security, climate change and alternative energy. He is an advisor to the Wharton School's SEI Center for Advanced Studies in Management and to the Vice Chancellor for Research at the University of California, Davis.

Kurtzman was the Editor in Chief of the Harvard Business Review and a member of the editorial board of Harvard Business School Publishing. He was founding Editor in Chief of Strategy + Business magazine. He also was a business editor and columnist at The New York Times. Kurtzman has authored, co-authored or edited 20 books and hundreds of general and scholarly articles.

The U.S. has the largest reserves of fossil fuels of any country in the world.

OUTLOOK: Global oil prices hit \$145 per barrel in 2008. How did the high price of oil drive change in the market?

JK: It had a big impact on the energy landscape and it was part of the reason why we had the financial and housing collapse. People in places like California, Nevada and Arizona bought houses far from their workplaces and they had home loans on the edge of their capacity of pay. They bought SUVs and counted on paying 2004-2005 gas prices of \$2.50 a gallon. Suddenly that gas price goes above \$4 over a period of four years. Those people had to choose between work and mortgage, and they chose work because they couldn't pay for both their mortgage and their gas bill too.

Yet the upside of those prices was straight out of Economics 101. Some companies began drilling more wells. Other companies pursued substitutes in the form of natural gas. By doing that, they created market conditions straight out of the textbook. Companies sought to participate in the market and capture some of that revenue or create oil substitutes. Today, the United States now has the potential to be energy independent for the first time since 1949.

OUTLOOK: How high do gas prices have to go before they materially impact personal consumption?

JK: The turning point seems to be about \$4.50 a gallon. That's when people drive less, take public transportation and change their behavior. At \$4.50 a gallon, it costs about \$100 to fill up the tank on a big car. That's when people's mindsets start to change.

OUTLOOK: What have been the most important market-driven innovations in fossil fuel exploration?

JK: Fracking has been the big one. The technology has been around since the 1940s in one form or another, but it was really perfected in the 2000s. Today, gas and oil companies can dig 6,000 feet straight down in the ground and then horizontally another 6,000 feet, putting in chemicals and other manipulations to draw out oil and gas. That's remarkable technology.

U.S. RETAIL REGULAR GASOLINE PRICES

Dollars per Gallon



Source: U.S. Department of Energy

OUTLOOK: In 2008, natural gas sold for about \$12 to \$14 per thousand cubic feet. Now it sells for about \$2.50 to \$2.75 per thousand cubic feet. How will these much lower prices for natural gas benefit the economy? What changes could we see?

JK: The drop in natural gas prices is very good for the country over the long-term. It will be especially good for the country if vehicles begin to use natural gas instead of gasoline or diesel fuel. Even 18-wheelers can be retrofitted to run on natural gas. It's not cheap in the short-term, but it is in the long-term. It's also good for the country. When long-distance trucks convert to natural gas, it could be \$150 billion a year that does not leave the country in terms of purchases of foreign oil. The money stays in the country, which is good for the economy.

Cheap natural gas is good for consumers too. Natural gas sells for about \$2.25-\$2.75 a gallon, compared to diesel fuel, which sells for about \$4.10 a gallon. When trucks are converted to natural gas, shipping costs may go down. When bus fleets run on natural gas, it will keep taxes down. And when consumers convert their own vehicles to use natural gas, they will pay less as well. About half of the country has natural gas lines going into their homes, so fueling up your vehicle could soon become more convenient.

Cheaper gas also means jobs. Natural gas can be used to make plastics, pesticides, fertilizers even diesel fuel. Chemical companies like Dow Chemical and Shell are starting to build plants in the United States instead of overseas because of this. That means jobs to build those plants, to operate them and to build pipelines.

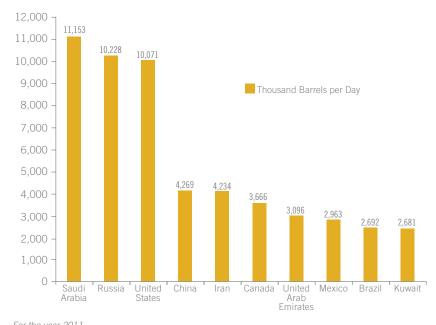
Corporations may also start bringing more factories to the United States because their energy costs will be so much lower. If you're producing Volkswagens in Germany and your energy costs are based on natural gas priced at \$14 to \$16 per thousand cubic feet, then the United States may be more appealing at \$2.50 per thousand cubic feet. The cheaper energy may also mean it's less expensive to ship across the country, instead of using a boat overseas that uses oil.

Energy makes up such a tremendous part of the economic landscape that any time you have downward price pressure it's like a gift to the entire economy.

OUTLOOK: What needs to happen to get more cars and trucks to convert to natural gas? Policy change or market change?

JK: A bill in the U.S. Senate, H.R. 1380, would provide tax relief to truckers who want to convert their fleet to natural gas. It costs about \$60,000 per truck to convert to use natural gas. The bill would essentially give truckers a tax moratorium so they could deduct the expenses over five years. If passed, then we would see a five-year period of ferocious activity with companies converting their fleets for long-distance hauling, which could stimulate the economy. You could see similar activity if taxi fleets, government vehicles and passenger cars followed suit.

TOP OIL PRODUCERS



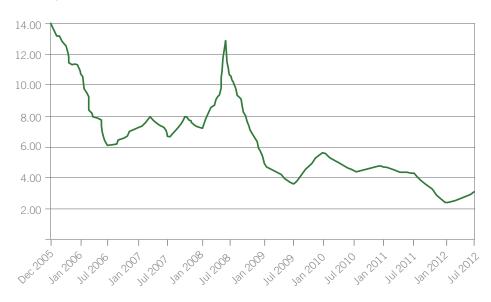
For the year 2011 Source: U.S. Energy Information Administration Energy makes up such a tremendous part of the economic landscape that any time you have downward price pressure it's like a gift to the entire economy.

OUTLOOK: What other public policy changes would be beneficial?

JK: The military was one of the earliest purchasers of semiconductors, and subsequently helped jumpstart the semiconductor industry. Today, 40 years later, American companies claim a 33 percent market share in semiconductors. If the military and other agencies did the same with ethanol or natural gas and decided it would be the official fuel, it would have a tremendous impact on the markets. Carmakers would start making vehicles to conform to the government's mandates. It's already starting to happen with the military testing biofuels in jets. The military really wants to be green and wants more secure sources of energy.

NATURAL GAS SPOT PRICES

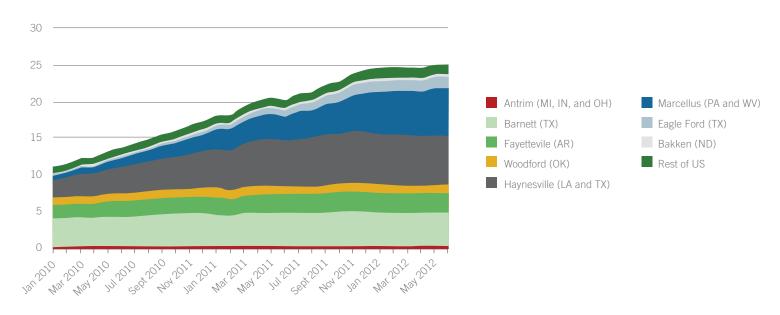
In Dollars per MMBtu



Source: Natural Gas Intelligence

DRY SHALE GAS PRODUCTION

Billion Cubic Feet per Day



Source: Lippman Consulting, Inc. Gross withdrawl estimates are as of August 2012 and converted to dry production estimates with EIA-calculated average.

OUTLOOK: Is there an export market for natural gas?

JK: Yes it can be exported but it usually requires big, expensive ships and involves liquefying the gas. Ports, too, must be built to handle natural gas. Exporting the gas could be lucrative if you take \$2.50 natural gas here and sell it in Japan at \$16. But an easier way for us to take advantage of cheap natural gas here in the U.S. is by exporting the products made using natural gas, such as plastics, chemicals and pesticides.

OUTLOOK: Is more energy exploration the answer to our economic woes, as some politicians contend?

JK: It is partly, only because natural gas and oil are so ubiquitous. When you think about how it affects everything we do, it's very, very big. Anything in that energy sector that brings down prices acts as a stimulator to the economy.

Interest Rates and Economic Indicators

The interest rate and economic data on this page were updated as of 09/30/12. 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 Eco	US Treasury Securities				
2012	GDP	CPI	Funds	2-year	10-year
Q3	1.70%	1.70%	0.14%	0.30%	1.60%
Q4	1.90%	2.20%	0.15%	0.30%	1.70%
2013	GDP	CPI	Funds	2-year	10-year
Q1	1.80%	2.00%	0.15%	0.30%	1.80%
Q2	2.30%	2.00%	0.16%	0.40%	1.80%
Q3	2.70%	2.20%	0.19%	0.50%	1.90%
Q4	2.80%	2.10%	0.21%	0.50%	1.90%

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.

IMPL	IED FOF	RWARD	SWAP	RATES		
Years Forward	3-month LIBOR	1-year Swap	3-year Swap	5-year Swap	7-year Swap	10-year Swap
Today	0.37%	0.34%	0.44%	0.77%	1.19%	1.71%
0.25	0.29%	0.33%	0.48%	0.85%	1.28%	1.78%
0.50	0.33%	0.35%	0.53%	0.93%	1.36%	1.86%
0.75	0.35%	0.37%	0.59%	1.02%	1.45%	1.93%
1.00	0.36%	0.39%	0.66%	1.11%	1.54%	2.01%
1.50	0.39%	0.46%	0.84%	1.32%	1.73%	2.16%
2.00	0.48%	0.59%	1.04%	1.54%	1.86%	2.32%
2.50	0.64%	0.81%	1.30%	1.75%	2.08%	2.46%
3.00	0.79%	1.03%	1.56%	1.95%	2.30%	2.61%
4.00	1.42%	1.55%	2.02%	2.40%	2.65%	2.87%
5.00	1.96%	2.11%	2.48%	2.70%	2.93%	3.08%

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	Average Life of Loan							
Period (Days)	2-yr	3-yr	5-yr	10-yr				
30	5	5	5	5				
90	5	7	11	11				
180	5	10	17	19				
365	7	20	35	38				

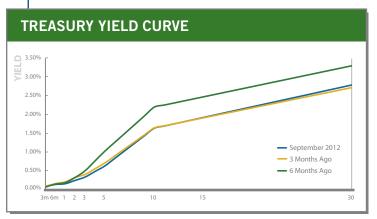
SHORT-TERM INTEREST RATES

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.



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.





About CoBank

CoBank is a \$90 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 more than 70,000 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.

Commentary in Outlook is for general information only and does not necessarily reflect the opinion of CoBank. The information was obtained from sources that CoBank believes to be reliable but is not intended to provide specific advice.

CoBank Lowers Dividend Costs And Enhances Capital Position Through Preferred Stock Transactions

CoBank announced this month that it has completed preferred stock transactions that lower the bank's dividend costs while enhancing its overall capital position.

On October 1, 2012, CoBank redeemed all of its Series A cumulative perpetual preferred stock, issued in June 2001, and its Series B cumulative perpetual preferred stock, issued in November 2003. Together, the two series totaled approximately \$363 million with a blended effective dividend rate of approximately 7.4 percent.

On October 4, 2012, the bank issued \$400 million of new Series F non-cumulative perpetual preferred stock. The Series F preferred stock has a fixed dividend rate of 6.25 percent until October 1, 2022, after which dividends will accrue at a floating rate. Bank of America Merrill Lynch and J.P. Morgan served as Joint Bookrunners on this transaction.

"These transactions will deliver multiple benefits to the bank and its customer-owners," said Robert B. Engel, CoBank's president and chief executive officer. "Third-party capital supplements our member stock and unallocated retained earnings, and it provides the bank with enhanced capacity to serve the borrowing needs of our customers. We're pleased to have been able to take advantage of conditions in the capital markets, which are currently favorable for high-quality corporate issuers."

David P. Burlage, CoBank's chief financial officer, noted that the transactions will lower CoBank's dividend costs by approximately \$1.8 million per year, despite the higher amount outstanding. In addition, the Series F preferred stock will receive better capital treatment under Farm Credit Administration regulations. "The quality and durability of our third-party capital has been significantly enhanced as a result of these transactions," Burlage said.

In addition to the new Series F preferred stock, CoBank has outstanding three other series of non-cumulative perpetual preferred stock totaling \$562 million. CoBank also has \$1 billion in subordinated debt outstanding.

"Our capital strategy is designed to maximize the financial strength and flexibility of the bank and meet the present and future needs of our customers, while minimizing the overall cost," Burlage said. "As always, we continue to monitor the markets closely for additional opportunities to enhance our overall capital position."