CoBANK

OUTLOOK Economic Data and Commentary

October 2010 Volume 7 Number 10

Housing and the Prospects for Recovery

About this article

Vernon Smith was awarded the Nobel Prize in Economics Sciences in 2002 and is a professor of economics and law at Chapman University in California. Steven Gjerstad is a Presidential Fellow at Chapman University.

It's common knowledge that the burst of the housing bubble was a prime cause of the recent recession, and that foreclosures and other problems in the real estate market continue to hang over the U.S. economy.

What's less well understood is that declines in housing expenditures have been at the center of almost every recession of the past century. Vernon Smith, a Nobel Prize-winning economist from Chapman University, and Steven Gjerstad, a Presidential Fellow at Chapman, recently delved into economic data going back to the Great Depression. They discovered that, with very few exceptions, a falloff in the housing market preceded recessions and had a much greater impact than other economic forces, such as business investment.

Outlook talked with Smith and Gjerstad about their research and its sobering implications for a near-term return to strong growth in the U.S.

OUTLOOK: In your research, you set out to see how the Great Recession of 2008 and 2009 was similar to past downturns. What did you find?

Vernon Smith: We went back to the Great Depression, we looked at other postwar recessions and what really amazed us were the tremendous similarities. Although the Great Depression and the Great Recession were far larger than other downturns in terms of magnitude – other postwar recessions were not anything like this – they had a lot of the same features, namely origins in the housing markets, origins in credit financing of the housing industry and also a kind of a supplementary role for other forms of durable consumer goods. We've been astonished that this hasn't been more transparent to others.

Steven Gjerstad: Looking back at the Great Depression and at the other 12 post-war recessions, we find a similar pattern in almost all of them. They involved a pattern of substantial decline in housing expenditures and in the construction of new residential housing units, and the time period for this was typically between two and eight quarters before the recession began. Also, housing expenditures turn down substantially before other segments of the economy. For instance, investments by firms in plants and equipment typically turned down at the beginning of a recession, whereas

Vernon Smith was awarded the Nobel Prize in Economics Sciences in 2002 and is a professor of economics and law at Chapman University in California.

"There's a really fundamental disequilibrium in the economy. I don't see any quick solution to this problem, at least any solution that would be politically acceptable in this environment.

housing turns down several quarters before. The downturn in residential investment precedes the downturn in any other sector of the economy, and it also is much larger in percentage terms than the downturn in any other sector of the economy.

OUTLOOK: Your research is the first time the correlation has been drawn so conclusively. Why haven't other economists seen this pattern?

SG: We think part of the reason this has been missed is that residential construction expenditures are aggregated by the U.S. Department of Commerce into an measurement category called "fixed investments," which includes investment in plants and equipment by firms. Fixed investments tend to be increasing right up until the quarter when a recession begins and only turn down in a recession. So the downturn in residential investment is largely being offset by the increase in non-residential fixed investment. Looking at the series in aggregate, it looks like it's just increasing, then levels off, then just suddenly falls without any apparent reason.

OUTLOOK: Why are housing declines so important in predicting a recession's length and severity?

VS: Because it causes a major balance sheet crunch throughout the broader economy. As demand for homes is increasing, the price of homes is increasing and the debt to finance those homes is rising. Then, when the price of homes flattens and turns down, that debt is denominated as a fixed amount, but the value of the collateral starts to fall. Even if it's not a major recession, that means there's some of that balance sheet crunch that goes not only to households but also to banks, because they're the ones holding the mortgages as assets.

That was particularly pronounced in this recent recession, because the homeowners who were buying homes from 2002 to 2005 were buying at a much increased price, financing them with loans with low down payments, sometimes no down payments, or even these negative equity miracles that the industry had come up with where not only does your principal not decline with your payments, it actually goes up for a while. The homes that were purchased in the latter part of the expansion start to go underwater. Now we have about 25 percent of homeowners nationwide occupying homes whose market value is less than what they owe on it. That's not an environment where you feel comfortable about spending money if you're a homeowner.

Steven Gjerstad is a Presidential Fellow at Chapman University.

> Looking back through 14 economic cycles, we haven't seen a robust recovery without a robust recovery in housing, and every sign we're seeing is pointing to a very long period before housing recovers.

If you're in the banking business, you have the same problem. You have the bank, all of a sudden, with collateral whose value is less than the amount the bank lent on those homes. So both households and banks are in the position of having to pay down their debt. Both need to rebuild their reserve positions. Households, insofar as they face this balance sheet crunch, are prone to spend a lot less, to save and try to pay down debt. Banks are reluctant to make new loans. That affects not only homeowners but everybody. As soon as the banks are in trouble, sectors outside of housing start to be impacted indirectly because of the tightening of credit. That's what puts the system into standstill. What's happening in the financial world then boils over, hits the real sectors of the economy and starts to impact employment.

OUTLOOK: Does the inflationary environment impact the effect of a housing downturn?

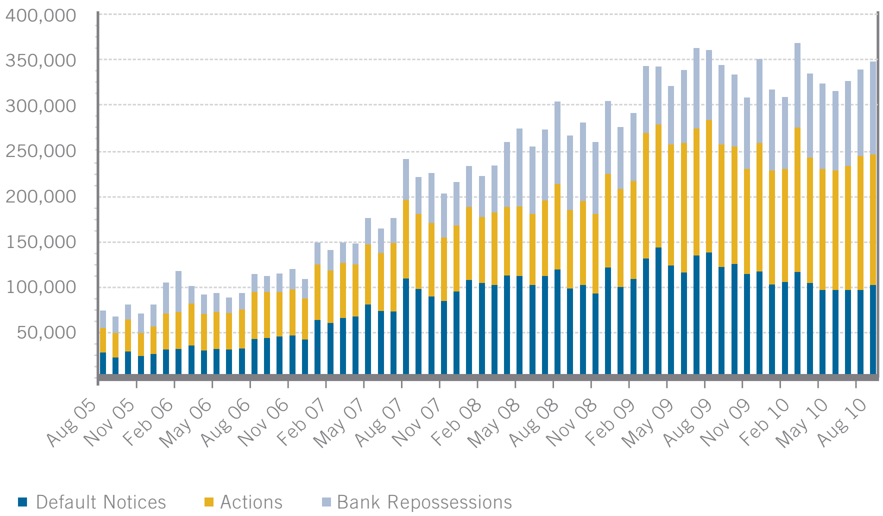
SG: Real price declines aren't so much of a problem in a high-inflation environment like 1979-80, because people bought their houses and the house values continued to increase, though by much less than the rate of inflation. But that's fine, because if they turn around to sell their house, they can sell it at a price above what they bought it for and there's not going to be an impact on their balance sheet and the bank's balance sheet. But in a low-inflation environment, if there's a decline in real prices, there are losses, and they have to be allocated between households and lenders.

OUTLOOK: How do changes in the housing market affect other sectors of the economy?

SG: In recessions, consumers and households are no longer willing or able to take on additional debt due to an uncertain employment environment, and the components of their consumption that are primarily affected ar consumer durables and housing. When that happens, businesses start to see a decline in aggregate demand and are no longer in a situation where they need to expand their capacity. We hear a lot now about low capacity utilization among manufacturers, and that means that their need for investments drops even more than the decline in total GDP. So they're responding to a change in the consumption environment.

That has a big impact. Residential construction has averaged in the postwar period about 3 percent of GDP, but right now it's under 1 percent.

FORECLOSURE ACTIONS



Source: RealtyTrac

That means there's 2 percent of GDP shaved right off the top, and then there are all the other elements that are going to react to that change. For example, if you're Burlington Northern and you're transporting building materials put together by Weyerhaeuser from the northwest to a location where they're going to be used for residential construction, they suddenly see a dramatic decline in the demand for building materials, and that means there's a lot less pressure to do upgrades on their locomotives, on their railroad lines, on their freight cars, and that means there will be less demand for new manufacturing equipment, less demand for raw materials like steel and so forth. So we see one sector of the economy that responds really strongly to credit considerations and to the pattern of movements of asset prices, and that's residential construction expenditures. And then it appears as though a lot of other elements of the economy are reacting to that change.

OUTLOOK: There are some exceptions to the rule in your thesis, including the dot-com crash of 2001.

VS: True, but you could argue they prove the rule. In that case, there had been a long period in which investment by firms had been growing – the dot-com bubble had attracted a whole lot of new capital into startup firms. Even though you might argue that it was excessive and there was a lot of speculation, nevertheless there were new firms being created and that created lots of long-term value and wealth. And that's a different thing than building houses, which doesn't really increase anybody's output or productivity later in the way that these new startup firms do. Well, with the dot-com crash, there was a backing off of new capital investment. And the Fed was very concerned about that and moved to substantially ease monetary policy. It was the easiest monetary policy in 52 years. And they were watching that declining investment and concerned about it.

What's interesting is they didn't have much impact on investment – it continued to fall. What did happen is the rate of expansion of housing spending, new housing construction, started to take off. And we see that as coming in part from that monetary policy. You also had a surge in foreign capital coming into the country, which helped to finance directly or indirectly the stock market boom and also the takeoff in housing markets and prices after 1997.

I anticipate that house prices will look about what they do now for the next six, seven or eight years – maybe even 10 years.

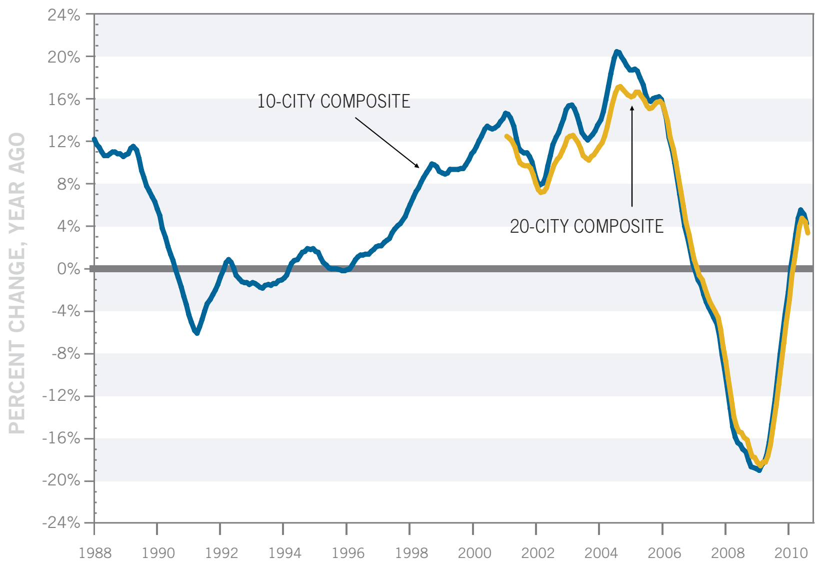
OUTLOOK: Where do you see the housing market right now? There are a number of prognosticators who see another significant decline in housing, and others who think the worst is over.

SG: Looking back at previous cycles in housing, one pattern that we've seen is there's often a drop in housing prices and then there's a very long period where nominal prices don't budge and sales volumes are low. That seems likely now. You've got people who bought a house they can afford the payments on, provided they still have their jobs, and the nominal value has dropped, but that's where they live and where their kids go to school, so they tend to stay there and make their payments. They're in a position where they essentially can't sell. So there's a tendency for those people to stay put, and the market to settle in at a level and stay there for five, six, seven years. If there's a little bit of inflation, house prices are kind of realigning just by that gradual inflation of other prices and salaries. So I anticipate that house prices will look like what they do now for the next six, seven or eight years – maybe even 10 years.

Another perspective is that the typical level of house construction has been about 700,000 to 800,000 units per year. The current level is about 275,000 units per year. That 400,000-unit gap seems large, but there are about one million houses sitting in bank-owned inventory and a projection of about another million to come. So there are two million empty houses, and we're about 400,000 units a year below the normal construction level. So that foreclosure inventory would be absorbed in five years if we were at a normal absorption rate for houses. But we've got high unemployment and debt overhang, so that suggests there's somewhere around eight to 10 years before that glut is going to get absorbed. During that time, there's going to be a very low level of housing construction and no upward pressure on houses.

VS: I think it's stuck. The whole problem has been that houses are way overpriced relative to other goods, and that was the result of the big bubble in house prices, and it was all run up out of proportion to income. People spend, historically, 28 to 30 percent of their income on housing. When housing prices increase faster than income like we had beginning in 1997 and peaking in 2006, that's all driven by credit. Then, what people owe is fixed and the value of what they're living in is declining. So it's the 25 percent of homes that are underwater that are keeping demand so suppressed for all goods. And the construction rate of new homes is basically at its lowest level ever. I'm not too optimistic that this is going to turn around soon. And of course, during the bubble we were borrowing from the future by building homes that were out of line with income. Then what

S&P/CASE-SHILLER HOME PRICE INDICES



Source: Standard & Poor's and FiServ

was the solution to that problem? More of the same, let's subsidize with tax breaks for people to buy new homes. There's a really fundamental disequilibrium in the economy that has been created by this. I don't see any quick solution to this problem, at least any solution that would be politically acceptable in this environment.

OUTLOOK: And what does that mean for the overall economic recovery?

SG: We've never seen a robust recovery without a robust housing recovery. Something could change, but nobody has said what that change would be. It's a pretty pessimistic message, but from my point of view there's a lot of lack of realism in what people have been talking about and what problems we're facing right now. People will say, "Oh, factory orders went up 6 percent last month, so here it comes, here's the recovery." Looking back through these past 14 economic cycles, we haven't seen a robust recovery without a robust recovery in housing, and every sign we're seeing is pointing to a very long period before housing recovers.

OUTLOOK: What is the problem with monetary policy as a solution to the current weak economy?

SG: Monetary policy is ineffective right now. What we've found from the examination of these past postwar recessions is that the housing market and housing construction is the first thing that responds to a relaxation of monetary policy. In some cases, like the 1982 recession, in the four quarters that followed residential construction increased by 75 percent. Averaged across all the postwar recessions, residential construction increased by about 26 percent in the four quarters following the end of the recession. Since the recent recession ended in the second quarter of 2009, residential construction has increased about 6 percent. That's far lower than in any sustained recovery of the postwar period. The only figure that's lower was the 1980 recession, and that was quickly followed by a double dip recession. Since monetary policy primarily acts on the housing sector, and the housing sector is saturated with foreclosed homes that are now bank-owned and with short sales that are going to take a long time to absorb, we don't see that housing is going to be able to provide its usual stimulus to a recovery. It's possible that something else will substitute for that, but there's no precedent for that in the postwar period in the U.S.

> We don't really see the economy as out of the woods yet. I'm still concerned that we could have a double dip.

VS: We don't really see the economy as out of the woods yet. I'm still concerned that we could have a double dip. I believe that the Fed is pretty fearful. I would even say they're sort of running scared. And that's why, whereas six months to a year ago the question was how does the Fed extricate itself from all of this ease, now it is a different question – how can they find a way to ease even more? And it really is pushing on a string, because the funds rate is already down to zero to a quarter percent. So the recovery, as we see it, is very precarious, and we think the Fed sees it as very precarious. It's interesting – securities markets, stock markets – have been reacting optimistically about the Fed's potential action and willingness to go with further easing, but what's not being factored in is that the reason they're doing this is that they're also very concerned. It's always possible that this time it'll be different, but historical evidence doesn't suggest that it is going to be different.

OUTLOOK: What should government and regulators do differently now and going forward?

SG: The way we got where we are is that the government decided that we needed to do something to stimulate housing construction. I remember George W. Bush's 2004 State of the Union address, and he was just very excited that home ownership rates were at their highest level ever and that housing construction was at its highest level ever. We had this persistent downturn in firms' investments after the tech bubble burst, and the government felt it needed to get in there and do something to fix that. What they ended up doing was prolonging the ultimate adjustment. They were kind of encouraging all this residential construction in 2004, 2005, 2006, and then they were participants in the creation of this problem we're now facing. And now they're trying to think about what they can do to solve it. I'm skeptical about their ability to provide any real solution to this.

VS: I would much rather have seen, rather than $1 trillion spent on stimulus, some of that money used to help homeowners get their debts revaluated more in line with their home prices. By the way, that's not a solution I like. I can't believe I'm saying it, because it comes down to forgiving loans. In our economic system contracts and contract performance are important. But we don't have a choice among options in which any of them are good. When you're choosing among circles of hell, you say, "They're all bad – which is the least damaging?"

In terms of policy, we've been talking about housing but there are other things that can be done. The United States has one of the highest corporate business tax rates in the world. Even European countries that tend to be more left-wing don't have as high taxes on business income. I have always preferred the government collect taxes after income has been paid to individuals. You could cut taxes on business income but collect tax on dividend income. The whole idea is to make the business environment more favorable to growth and employment, because that's where you are likely to get the strongest effect on jobs. And it's especially important for small to medium-sized firms, because that's where employment growth comes from. It doesn't come from large, older firms. It's a great time for the federal government and the states to have a good hard look and say, "Are we putting artificial impediments in the way of the starting of new companies? If we are, let's get them out of there."

OUTLOOK: What probability do you place on a double-dip recession? If it's not a double-dip and we do have a recovery going forward, what does it look like and how long does it take?

VS: I haven't ruled out a double-dip. Financial markets and stock markets have come up quite a bit, and that's coming from the fact the Fed has created a lot of money, and where's it going to go? It's not going into plants and equipment and creating new jobs, it's just moving around in the financial markets. I'd give it a fairly high probability that we'll see several years of low growth – five, six, seven years. We have just not historically had a situation in which you had good recovery in the economy and no recovery in housing. It just hasn't happened. Maybe it'll happen this time, but it's not where we've been in the past.

Interest Rates and Economic Indicators

The interest rate and economic data on this page were updated as of 9/30/10. 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 & Blue Chip Economic Indicators

				US Treasury Securities	
2010	**GDP**	**CPI**	**Fed Funds**	**2-year**	**10-year**
Q2	1.60%	-0.70%	0.19%	0.09%	3.50%
Q3	1.80%	1.20%	0.19%	0.05%	2.80%
Q4	2.30%	1.40%	0.20%	0.05%	2.60%
2011	**GDP**	**CPI**	**Funds**	**2-year**	**10-year**
Q1	2.50%	1.60%	0.20%	0.05%	2.60%
Q2	2.80%	1.60%	0.25%	0.06%	2.70%

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 RATES

Years Forward	3-month LIBOR	1-year Swap	3-year Swap	5-year Swap	7-year Swap	10-year Swap
Today	0.30%	0.41%	0.88%	1.54%	2.09%	2.60%
0.25	0.37%	0.48%	1.03%	1.66%	2.19%	2.65%
0.50	0.43%	0.57%	1.15%	1.83%	2.31%	2.76%
0.75	0.52%	0.70%	1.32%	1.98%	2.46%	2.89%
1.00	0.60%	0.83%	1.47%	2.14%	2.57%	2.95%
1.50	0.89%	1.12%	1.85%	2.45%	2.82%	3.16%
2.00	1.20%	1.42%	2.15%	2.69%	3.02%	3.32%
2.50	1.56%	1.80%	2.49%	2.95%	3.22%	3.46%
3.00	1.92%	2.18%	2.82%	3.21%	3.41%	3.60%
4.00	2.59%	2.89%	3.34%	3.57%	3.66%	3.83%
5.00	3.12%	3.41%	3.69%	3.81%	3.91%	3.98%

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

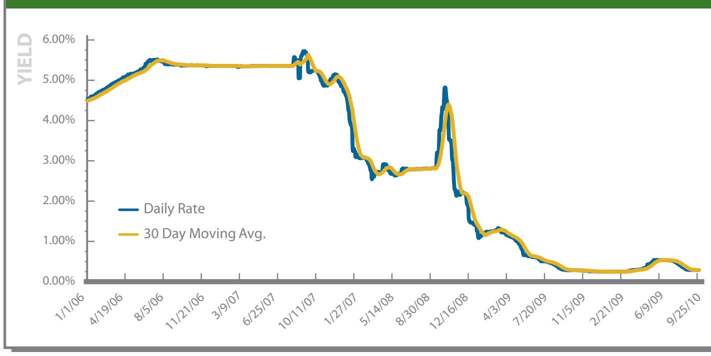
Forward Period (Days)	Average Life of Loan			
	2-yr	3-yr	5-yr	10-yr
30	5	7	7	5
90	10	17	18	13
180	11	30	32	23
365	30	52	61	41

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.

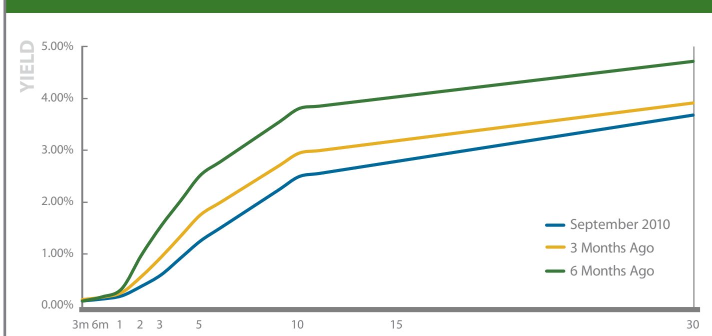
3-MONTH LIBOR



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 Announces Board Election Results

CoBank recently announced results of shareholder elections for the bank's 2011 Board of Directors.

In the bank's Western Region, David L. Reinders was elected to succeed Randy Ethridge, who is retiring from the CoBank board in December. Reinders is the chief executive officer of Sunray Co-op, a diversified farmer-owned grain cooperative in Sunray, Texas. He is also a director of the Texas Agricultural Cooperative Council and formerly served on the board of directors at Land O'Lakes, the dairy and agricultural cooperative based in St. Paul, Minnesota.

Shareholders in the bank's Central Region re-elected Kevin A. Still, who has been a bank director since 2002. Still is chief executive officer and treasurer of Co-Alliance, LLP, a partnership representing five cooperatives supplying energy, agronomy and animal nutrition, producing swine and marketing grain in Avon, Indiana.

In the Eastern Region, Richard W. Sitman was also re-elected. Sitman, who has served on the board since 1999 and also served from 1995 to 1996, is the owner and operator of a retail business and chairman of Dixie Electric Membership Corporation, an electric distribution cooperative outside Baton Rouge, Louisiana. In addition, Sitman serves as a director of the Farm Credit Council, the trade organization for the Farm Credit System.

Reinders, Still and Sitman will all serve four-year terms that begin in January 2011.

"David, Kevin and Dickie are all gifted, experienced, proven leaders, each of whom is deeply committed to rural America and the needs of its vital industries," said Everett Dobrinski, chairman of the CoBank board. "I look forward to working with them, the other members of our board and our management team to fulfill CoBank's mission in the coming year and to continue delivering dependable credit and strong financial performance on behalf of our customer-owners around the country."

Dobrinski also praised Ethridge, who joined the CoBank board in 1997, for his many years of service to the organization. "Randy has been a strong voice for customer-owners throughout his tenure on our board," he said. "We are deeply grateful for Randy's many contributions and wish him continued success in the future."

About CoBank

CoBank is a $58 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.

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. In addition to serving its direct borrowers, the bank also provides wholesale loans and other financial services to affiliated Farm Credit associations and other partners across the country.

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.

CoBank's 16-member board of directors reflects the bank's national scope and the diverse industries it serves. Members include agricultural producers, agribusiness leaders and representatives from the energy and communications sectors. Twelve directors are elected by shareholders from three geographic regions covering all 50 U.S. states. The remaining board members are appointed to their seats. All directors serve four-year terms.

The bank uses an independent nominating committee to develop a slate of qualified director candidates. No current board member may serve as a member of the nominating committee. No member of management sits on the CoBank board.