# RECOGNIZING RISK IN GLOBAL AGRICULTURE

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## Session 3: Weathering Unexpected Downturns

# Weathering Unexpected Downturns in Agriculture

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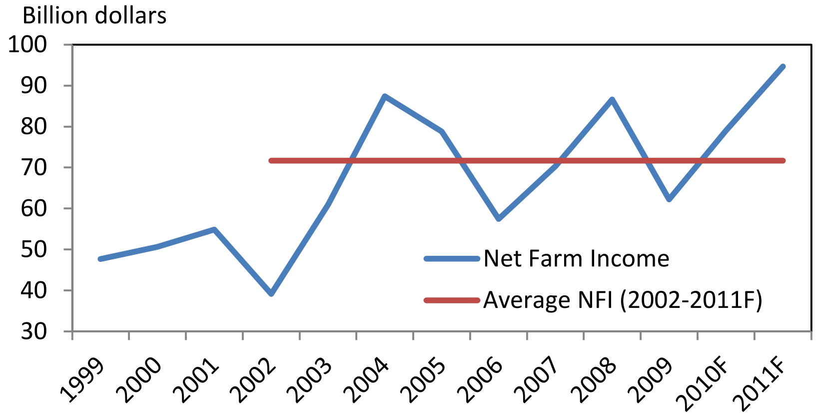
**Introduction**

A consensus among economists is that production agriculture was one of the strongest sectors coming through the financial crisis and economic downturn. The financial crisis affected global economic growth, which subsequently contracted aggregate demand for agricultural commodities. The impact of the crisis on agricultural lending institutions was delayed and not as pronounced as the impact on many of the global institutions. Many of the agricultural-related lending institutions did not participate in higher-risk housing lending procedures, nor were they significantly invested in the structured securities that lost substantial market value. Therefore, the financial crisis did not have a pronounced effect on the credit availability to much of commercial agriculture. Prudent risk management and strong agricultural profitability have resulted in agricultural lending that is well-positioned to meet the continued financial needs of farmers.

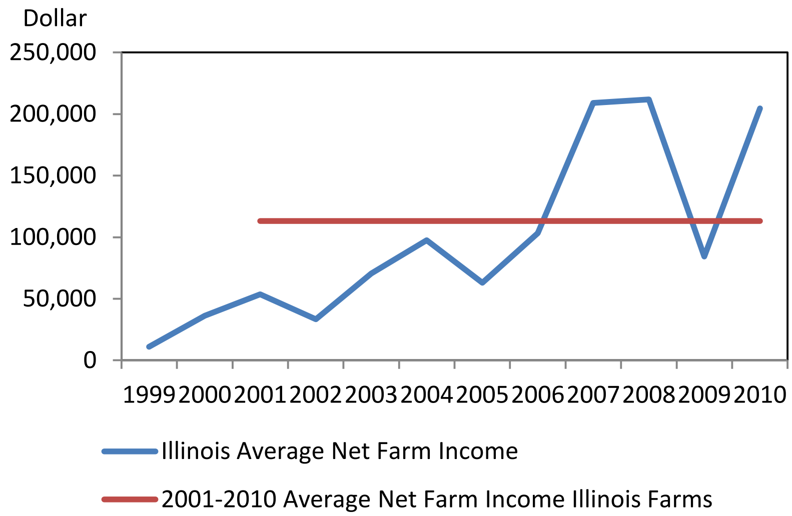
Recent trends in agricultural profitability of U.S. farms are illustrated in Chart 1 (USDA 2011a). The profitability of U.S. farms exceeds the 10-year average in three of the past four years. High profitability is even more pronounced in the Corn Belt. The average farm income level on Illinois farms has exceeded $200,000 in three of the past four years (Chart 2). Given the projected farm profitability prospects, farmland prices have also increased substantially since 2005. Annual farmland prices in the U.S. increased 5.6 percent from 2005 to 2010 (USDA 2011b). Increases in Illinois and Iowa exceeded 8 percent annually. The rate of increase in Illinois farmland in 2011 is estimated at 18 percent (USDA 2011b).

**Chart 1: U.S. Net Farm Income**




Source: Economic Research Service

**Chart 2: Average Net Income of Illinois Farms**




Source: Illinois Farm Business Farm Management

High profitability and rapidly increasing farmland prices raise concerns about a farmland bubble similar to the recent housing crisis or a repeat of the farm financial crisis in the 1980s. Federal Deposit Insurance Corporation (FDIC) Chairperson Sheila Bair indicates that signs of instability exist in farmland markets and require close monitoring. Yale economist and housing expert Robert Shiller recently described farmland as a "dark horse" bubble candidate, partially because the environment is similar to the 1970s in the U.S. when a food price scare sparked the last farmland bubble.

Although recent profitability in agriculture is strong, risks in commercial agriculture are also high and likely increasing. Recent commodity market and input price volatilities are at unprecedented levels. Interest rate and inflation risks are looming. Increased contract production has increased legal and contractual risks, while the recent financial crisis highlighted the significance of counterparty risks. A key element in the continued health of the sector will be risk management strategies employed by industry participants. Another critical factor will be how the risks are distributed among producers, investors, lenders, insurance companies, agribusinesses, government and others. For example, do the various participants most able to bear the risks incur the risks? Are the risk weights changing among the participants? There is a general view that agricultural producers are shouldering an increasing share of the total risk in commercial agriculture. Given evolving risk environments and a fragile global economic climate, a fundamental question to address is, “Are the key players in commercial agriculture healthy enough to withstand an unexpected downturn in agriculture?”

The primary objective of this paper is to provide an overview of the financial health of commercial agricultural producers and lenders. Data from the Economic Research Service (ERS) and the Illinois Farm Business Farm Management Association (FBFM) are used to assess the current financial health of agricultural producers. ERS data provide aggregate measures of financial health while farm-level Illinois data provide additional information on the distribution of financial health measures across producers in a geographic region with volatile commodity prices and increasing land values. Commercial bank and Farm Credit System (FCS) call report data are used to measure how the financial system might be able to respond to a weaker agricultural economy.

**Farm Financial Stress on U.S. Farms**

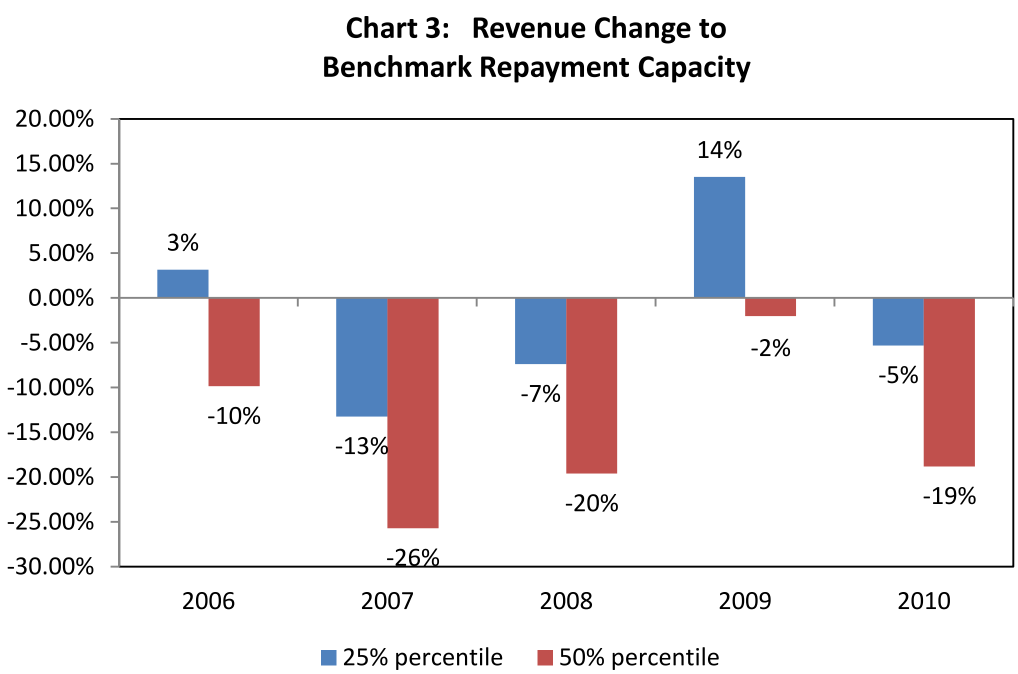
A frequently cited U.S. Department of Agriculture (USDA) measure of financial health for the agricultural sector is the low aggregate debt-to-asset ratio (approximately 10 percent). The cited measure is based on all farm assets employed and all farm debt incurred. Although it does signal a low overall debt usage in the agricultural sector, it is not a measure of average debt usage by farm operations. Moreover, if a farmland bubble does exist, the market-based measure of aggregate leverage may be understated.

A recent study by Briggeman uses 2008 Agricultural Resource Management Survey (ARMS) data to show that a financial shock of an increase in interest rates and a decline in farm income increases financial stress substantially, especially among livestock producers who hold approximately half of the total farm debt. The Debt Repayment Capacity Utilization (DRCU) ratio, defined as outstanding farm debt divided by how much the borrower could afford to repay with farm income at current interest rates, is a measure of financial stress used in the study. Ratios less than 1.0 indicate that income is more than sufficient to meet farm debt. Ratios above 1.0 indicate higher levels of financial stress. Briggeman showed that a one-year, 30 percent drop in income and an interest rate increase to 8.5 percent would have the greatest stress on livestock producers and young operators. The proportion of livestock producers with DRCU ratios greater than 1.0 would increase from 49 percent to 67 percent and the proportion of young operators with DRCU ratios above one would rise from 50 percent to 65 percent.

Although the DRCU ratio is a good measure of farm sector financial stress, it does not measure the ability of a farm business to generate cash flow to repay loans. The DRCU measure may be overstated when an operation has a substantial amount of operating and short-term debt that is paid from cash flows and not net earnings. Detailed cash flow and longitudinal data are not reported in the ARMS data. To further evaluate the balance sheet impacts of a downturn in the agricultural economy, data from Illinois Farm Business Farm Management Association are used. Although not representative of the entire U.S. agricultural sector, Illinois data provide detailed cash flow, income and balance sheet information for a farming region that has high revenue volatility and rapidly increasing land prices.

The three common sources of loan repayment for a farm borrower are (1) farm and nonfarm earnings, (2) liquid assets, and (3) equity. Each of these areas is evaluated to measure the impact of lower profits and falling asset values on the financial health of farm operations in Illinois.

A commonly used earnings and debt repayment measure used by farm lenders is the term debt coverage ratio (FFSC). This measure incorporates farm and nonfarm income, as well as family living expenditures. A standard benchmark for adequate repayment capacity is 1.25. Data from 2006-2010 are used to measure the percentage change in total revenue that would have resulted in repayment capacity equal to 1.25 for each farm in the data.[1]



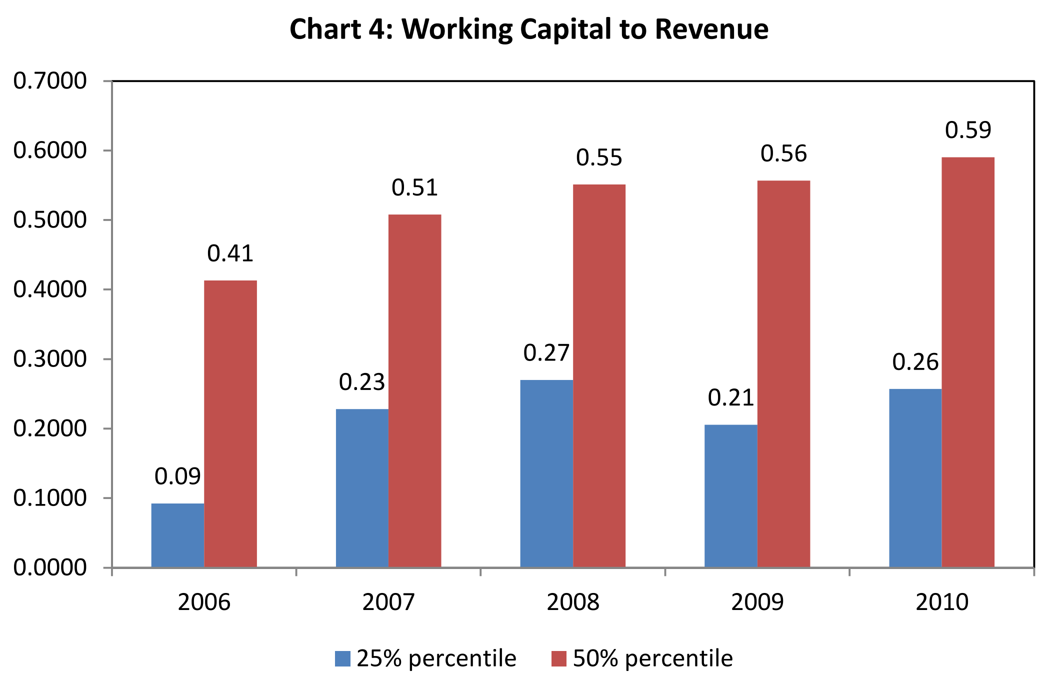

Source: Illinois Farm Business Farm Management

The results are summarized in Chart 3. On average, a gross revenue reduction of 15 percent would result in one-half of Illinois farms just meeting the repayment capacity benchmark, while only a 2 percent decline in gross revenue would result in one-fourth of Illinois farms emerging at or below the benchmark. A 2 percent decline in gross revenue would eliminate the repayment cushion for 50 percent of livestock farms. Distributions for young operators (less than 30 years of age) and large farms (gross revenue > $1 million) are similar to the baseline case. In summary, repayment capacity results illustrate notable sensitivity to modest changes in revenue.

A second level of defense for downturns in profitability and management of risk is maintaining adequate levels of liquidity. Also, as price, yield, revenues, and costs

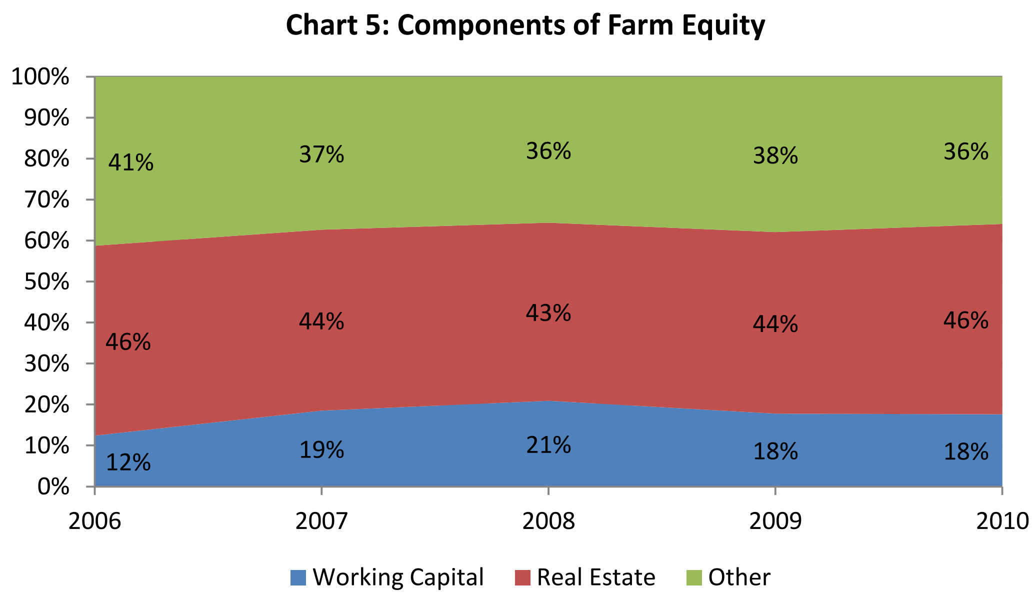
[1] Similar to Briggeman, only farms with debt are included in the analysis.

increase, operations should increase levels of liquidity. A commonly used measure of liquidity that incorporates the size of the operation is working capital to gross revenue. On average, the level of liquidity on operations has increased from 2006 to 2010, signaling that some of the excess profits earned have been used to improve liquidity positions on farms (Chart 4). Moreover, over 75 percent of the farms have levels greater than 20 percent for each of the past four years.




Source: Illinois Farm Business Farm Management

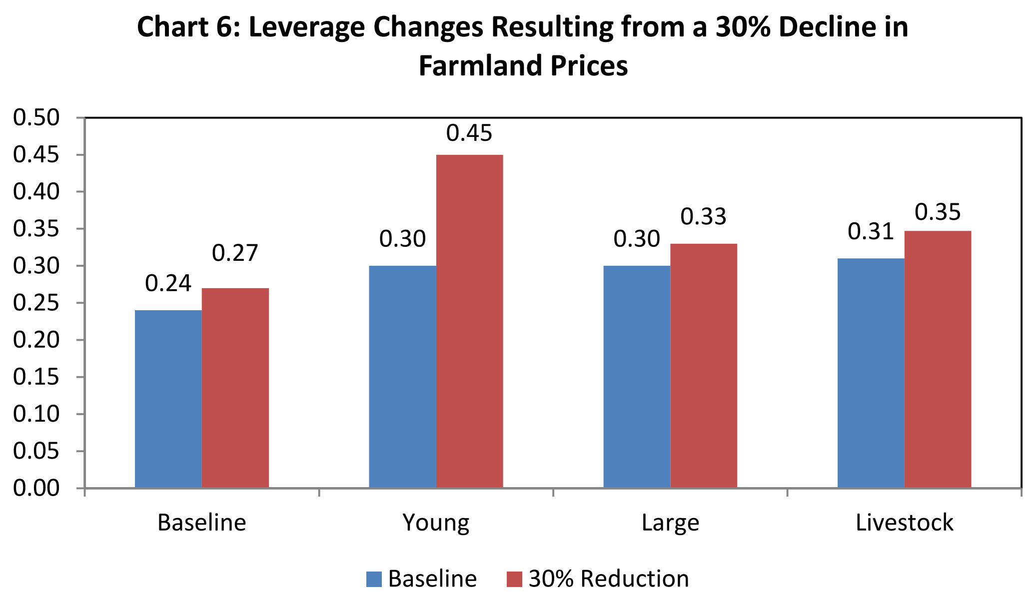
A third level of defense for profitability downturns is equity capital. The average debt-to-asset ratio for Illinois FBFM farms in 2010 was 0.24. Briggeman cautioned that the current aggregate leverage measure could be understated due to the recent upswing in farmland prices. A commonly cited financial health measure for consumers is the percent of housing wealth to total wealth. An analogy for farm enterprises is to calculate net farm real estate wealth. To illustrate, equity is separated into three components: (1) working capital, (2) net real estate equity, and (3) other equity. Despite the increases in market value of farmland, the equity component shares remained relatively constant from 2006 to 2010 (Chart 5). The constant shares imply that growth rates in working capital and other non-real estate wealth (machinery and equipment) have kept pace with increases in real estate.




Source: Illinois Farm Business Farm Management

As indicated by Briggeman, interest rate changes impact borrowers' cash flow. However, the largest effect of interest rate changes could be the huge headwind for farmland prices. Schnitkey and Sherrick propose scenarios that suggest capitalized farmland value declines could exceed 20 percent to 30 percent if interest rates increased 100 basis points. Scenarios presented included changes in earnings as well as a change in farmland capitalization rates.

Farmland prices in Illinois have increased 30 percent from 2006 to 2010. Figure 6 shows the impact of a return to 2006 levels, or a 30 percent decline in farmland prices on the leverage positions of Illinois farms. A price decline of 30 percent would result in modest increases in the leverage ratios for baseline, livestock, and large farms. The debt-to-asset ratio for the baseline farm increases from 0.24 to 0.27. Young farms exhibit the highest sensitivity to changes in land values due to fewer financial assets and other non-real estate assets. The average debt-to-asset ratio for young farmers increases from 0.30 to 0.45.




Source: Illinois Farm Business Farm Management

On average, farms in the Midwest have reserves that should allow them to weather a modest downturn in profits and land prices. However, there is considerable distribution of financial health positions across farms. Highly vulnerable farms would be farms that have high sensitivity to changes in revenue and land values and low levels of liquidity. To gain perspective on the proportion of vulnerable farms, a hurdle rate for each of these measures is established. High vulnerability farms are defined as those that would have debt repayment capacity reduced to benchmark values with a 10 percent reduction in revenue, working capital to revenue ratios less than 15 percent, and debt-to-asset ratios that would exceed 50 percent with a 30 percent land value decline. Although these benchmarks are arbitrary, the analysis provides a measure of the range of distribution measures for vulnerable farms. Approximately 6 percent of farms met the three criteria. Moreover, 37 percent of these vulnerable farms are either large, young, or livestock farms.[2]

## Lenders' Response to the Economic Downturn

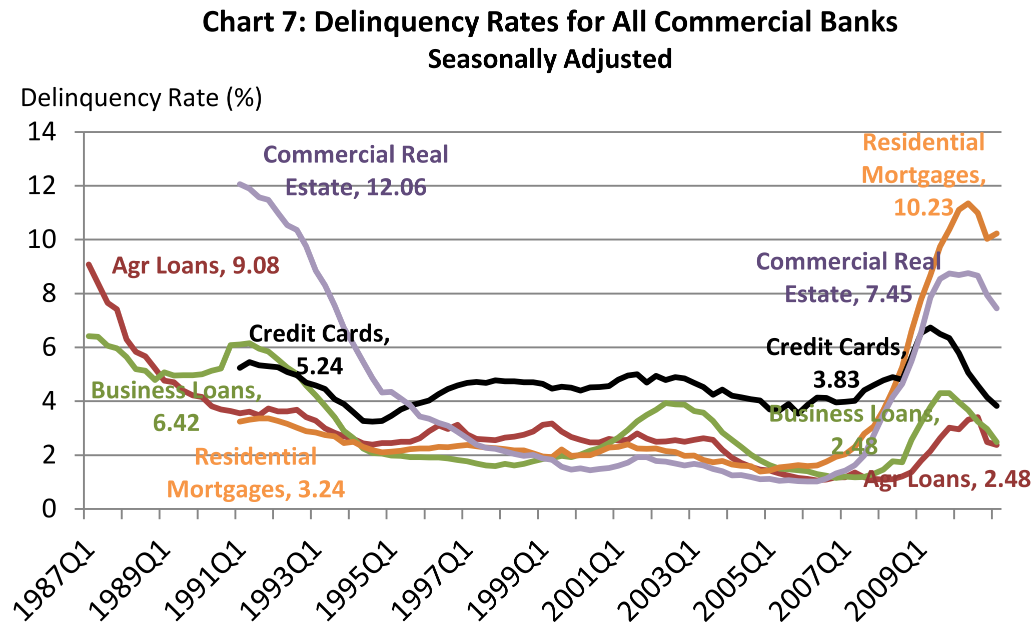
Agricultural lenders are not immune to potential downturns in the overall economy. However, credit risk management procedures for agricultural lending

[2] Farms classified as livestock, young or large farms make up 25% of the entire sample.

institutions have certainly evolved since the agricultural financial crisis of the 1980s. Loan-to-value ratios on farmland are often set at 65 to 70%, providing a cushion for farm real estate declines. These ratios often exceeded 80% in the early 1980s. Loan documentation, farm financial information, and underwriting standards have also improved. Similar to the 1980s, a downturn is likely to affect non-real estate lenders first. Shrinking profit margins and the tendency to use operating lines of credit to pay term debt during a downturn will result in short-term lenders experiencing the first wave of potential delinquencies.

Commercial banks and FCS hold 84 percent of total agricultural debt. Ethanol, hogs, dairy, forestry, and poultry are the portfolio segments experiencing the most stress across the FCS. Cumulatively, these segments represent about one-fifth of FCS's portfolio. Capital levels and profitability of Farm Credit Associations remain strong. Rate of return on assets for 2011:Q1 was 2.19 percent for all FCS associations. The capital to assets ratio for FCS associations exceeded 17 percent with nonperforming loans at 2.39 percent of gross loan volume. At year-end 2010, 16 FCS associations had ratios of nonaccrual loans to total loans exceeding 5 percent. All of these associations were in the South, with 10 of the 16 associations in Florida, Texas, and Georgia.

Given the wide range of commercial banks lending to agriculture, some banking institutions are quite vulnerable to a downturn in the agricultural economy. Losses in consumer, real estate, construction, and development loans have weakened the financial positions of a number of rural and urban banks. However, delinquency rates on agricultural loans at commercial banks are the lowest across other major loan types and substantially lower than the financial crisis of the 1980s (Chart 7).




Source: Board of Governors of the Federal Reserve System

A higher proportion of problem loans for commercial banks occur in the South. Problem agricultural loans to total equity is used to assess a stressed bank lending to agriculture.[3] As of year-end 2010, 68 banks had agricultural problem loan to total agricultural loan ratios exceeding 20 percent, and 232 banks had ratios exceeding 10 percent. These banks hold 1.5 percent and 4.7 percent shares of bank loans to agriculture, respectively. Over 30 percent of the banks with agricultural problem loans to equity ratios greater than 20 percent had head offices in Florida or Georgia.

Although credit conditions have improved across the commercial banking sector, a substantial number of bank failures have occurred. Over the first four months of 2011, 34 banks closed, and over 150 banks failed in 2010. Collectively, these banks held about $1.2 billion of agricultural loans. Only 2 of these banks had more than $100 million of agricultural loans. There have not been substantial credit delivery disruptions to farmers and ranchers because of commercial bank failures.

While the financial health of agricultural banks has improved, these institutions face new and significant challenges. Small banks have a higher floor on cost of funds

[3] Problem agricultural loans are defined as agricultural production loans and loans secured by farm real estate that are accruing and delinquent more than 30 days or designated as nonaccrual.

and do not benefit as much as larger banks and the FCS in these extremely low interest rate environments. New regulations from the Dodd-Frank Wall Street Reform and Consumer Protection Act will add regulatory compliance costs. Typically, as a share of total operating costs, these compliance costs are greater for smaller banks. There will likely be continued pressure to merge institutions and gain potential cost economies and synergies. The profitability of banks with concentrations in agriculture improved in 2010, but still remains at modest levels in comparison to FCS. The average rate of return on assets (ROA) for banks with concentrations in agriculture was 0.88 percent in the fourth quarter for 2010, exceeding the average for all commercial banks (0.64 percent).

In general, the capital levels at banks lending to agriculture remain strong. Table 1 shows the distribution of banks lending to agriculture by level of equity capital to assets. Less than 10 percent of the share of agricultural bank loans are held by banks with equity capital to assets less than 8 percent. However, these include over 800 commercial banks.

Table 1. Distribution of Agricultural Loans at Commercial Banks By Equity/Asset Ratio [1]

| December 2010 | Large Banks [2] | | Other Banks | |
|---|---|---|---|---|
| Equity to Assets | Share [3] | Number | Share | Number |
| less than 4% | 0 | 0 | 0.6% | 86 |
| 4-8% | 1.2% | 8 | 7.0% | 714 |
| 8-12% | 16.5% | 33 | 56.0% | 3605 |
| > 12% | 6.0% | 22 | 12.7% | 1235 |

Source: FDIC Call and Income Reports

[1] Agricultural loans are loans used for agricultural production plus loans secured by farm real estate

[2] Banks with assets exceeding $10 billion.

[3] Share of all agricultural loans held at commercial banks.

Table 2 shows the distribution of banks by equity capital to assets after applying a net loss of 10 percent of agricultural loans at each bank. Although a 10 percent loss exceeds historical agricultural loan losses, the shock level provides a metric that measures the ability of commercial banks to weather an economic downturn. The number of banks with less than 4 percent equity capital to total assets would increase by 96 banks, while the number of banks with ratios less than 8 percent would increase by over 1,000.

Table 2. Distribution of Agricultural Loans at Commercial Banks By Equity/Asset Ratio After an Equity Shock of 10% of Agricultural Loans [1]

| December 2010 | Large Banks [2] | | Other Banks | |
|---|---|---|---|---|
| Equity to Assets | Share [3] | Number | Share | Number |
| less than 4% | 0 | 0 | 4.2% | 182 |
| 4-8% | 1.2% | 8 | 32.6% | 1644 |
| 8-12% | 16.6% | 34 | 32.7% | 2902 |
| > 12% | 5.9% | 21 | 6.9% | 912 |

Source: FDIC Call and Income Reports

[1] Agricultural loans are loans used for agricultural production plus loans secured by farm real estate

[2] Banks with assets exceeding $10 billion.

[3] Share of all agricultural loans held at commercial banks.

**Summary**

Recent financial market volatility has migrated to risks in commercial agriculture. Supply disruptions and low levels of inventories resulting from drought and other weather conditions could accelerate these risks. Considerable uncertainties regarding commodity prices, input costs and interest rates combined with inherent production risks in agriculture will result in winners and losers among agricultural producers, as well as their lenders. Strong producer balance sheets and liquidity levels will provide a cushion for many producers and their lenders. Crop insurance has also been an effective short-term risk management tool for many grain producers. However, this analysis shows that financial stress could increase quickly if commodity prices decline – especially for livestock producers and young farmers. Interest rate changes could have the largest impact on land values and equity positions of farms.

On average, lenders have strong capital positions and have mitigated agricultural loan losses. An extended downturn in agriculture could certainly erode capital positions, especially for many agricultural lenders that have incurred losses in the livestock sector and lenders in the South that have already incurred losses to their agricultural and non-agricultural portfolios. Monitoring risk positions of existing borrowers and increased evaluation of underwriting standards will be essential for agricultural lenders.

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# Weathering Unexpected Downturns (Transcript)

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*University of Illinois*

It is really an honor to be asked to speak on this topic. I am going to step back a little bit and put on my research hat. Having talked about the publications that are out there, we as researchers – especially in agricultural finance – rely a lot on what they do at the Kansas City Fed. It goes back to Alan Barkema and Mark Drabenstott. For a long period of time, they have paid close attention to agricultural finance. It is highly appreciated by academics, but it is highly appreciated by the industry, as well. They truly are the leader in terms of doing research in the area of agricultural finance. I appreciate that.

What I hope to do is be able to frame some of the issues. We characterize agriculture in a very aggregate way at times. What we have to do, and we can't do it all today, is to drill down a bit more and look at how much diversity we have in agriculture. We can talk about what is going to happen, on average. Somebody might talk about whether we weathered the 1980s. Well, a lot of you are here. Did we weather the 1980s? It's your definition of weathering. Did we weather the housing crisis? Some would say we have winners and losers in all this. What I will try to do is evaluate some of the vulnerabilities in production agriculture.

The other aspect of the initial question is measuring the size of the storm. Can we weather a downturn? What we tend to do when we look at regulations like those that we recently passed, is to try to fix the last crisis and the events that were around the last crisis. As we look to the next crisis, what is this going to be combined with? Is it just going to be market volatility? Is it going to be interest rates? Is going to be international trade? What other combination of factors do we have?

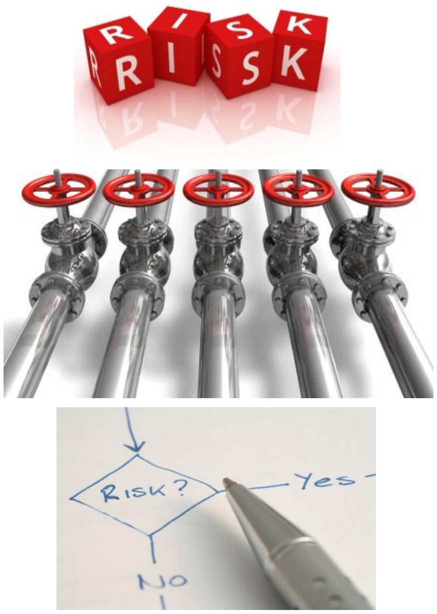
In the 1980s, the issues with oil in Texas and savings and loans were combined with inflation. These issues and events are intertwined, and, as you try to look at whether we can weather this or not, it certainly presents challenges. So that is my hedge as an economist in terms of saying we have a definitive answer. I'd like to move on. It certainly ties into the next session about risk management tools.

What I'd like to do is talk about risks in general, and talk a bit about agricultural producers, using some of the data we have at the University of Illinois. We are limited in some sense of really drilling down and doing a lot of distributional research on whether firms can manage downturns. I was also asked to talk about the lending community and whether they can weather a downtown. Then, I'll leave it to some of my colleagues on the panel to drill down to some of the "on the ground" things.

To start, I have a couple of quotes. The noted Robert Shiller gets a lot of attention with the Case-Shiller Home Price index, but when he talks about farmland being a dark-horse-bubble candidate, people listen. FDIC Chairman Sheila Bair did this as well. It characterizes the same question the Fed asked this panel to discuss, is there a farmland price bubble? That is one of the issues we will try to address, as we move forward in this session.

This slide is a complicated, and probably not well-done, graphic here [Figure 1]. To set this up, Jason [Henderson] talked about there being more risk in agriculture. When I attend a meeting like this, I ask if there is more risk than there was in the past. Most people would shake their head and say yes. So, the risk pie is bigger. But look at this as a big funnel. Risk is going down this funnel, and it is going to be shared by a lot of participants -- farmers share this, lenders have part of it, government, input suppliers, and so on.

**Figure 1: Agricultural Weight Risks: Different from the 1980s?**




Portfolio / Magnitude
Higher or Lower?

Weights Different?

- ❖ Farmers
- ❖ Lenders
- ❖ Suppliers
- ❖ Government
- ❖ Investors
- ❖ Insurance Cos.
- ❖ Consumers
- ❖ Others

Can the "new" risk bearers
manage the risks?

As we go down this risk path, each of the risk bearers has different tools. Farmers have crop insurance, government programs, enterprise diversity, portfolio management, futures and options, before we even get to the balance sheet. Then, farmers have liquidity, profitability, and equity. Lenders have underwriting standards, covenants in place, and equity. So they are managing that risk as it flows through the pipeline.

The key question to ask is, are the weights different than they were in the 1980s? Is more of that risk falling back to farmers than it did in the past? Are the risk weights any different in terms of where this risk is falling? Is it falling in different patterns and in different levels? What comes through the risk pipe? What is not being covered by crop insurance?

As we think about risk coming through a pipe, what sort of residual risks are still hanging on here? If we are pushing risk back to the producers, are we pushing it back to different risk holders and can they bear the risk? Hopefully, Mike [Swanson] can talk a bit about some of these things in the next session

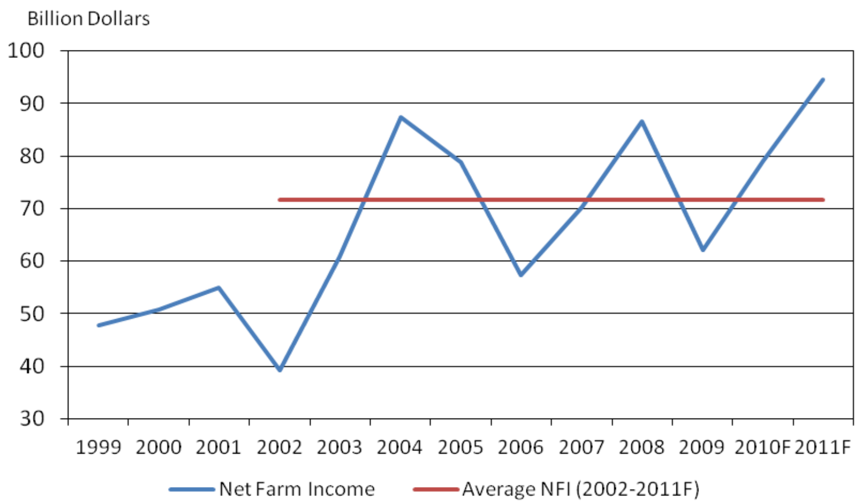
A nice way to frame this is, to compare to the 1980s. Do we have the same kind of risks? The whole risk pie is bigger, but is it shared similarly as we did in the past? I don't have the answer to that, but this is something to consider as we move forward.

The general consensus when I talk to most folks is they believe more risk is being pushed back to the farmer. When we look at risks – interest rate risk, contract risk, supplier risk, and cash rents – some of that is being pushed back. Another good example, of course I'm a bit biased toward my home base of Illinois, I had a farmer come in the other day and ask, "How do I manage? I just had to pay $500 per year for cash rent for the next three years – all up front."

So is more risk being pushed back to the producer and, if it is, then are we managing it well? We will talk more about financial statements and balance sheets here today, but there are other pieces to the puzzle.

This chart is similar to what Jason [Henderson] said before. The red line is the average farm income level in the United States. [Chart 1] The blue line is the volatility we've seen in national aggregate farm income.

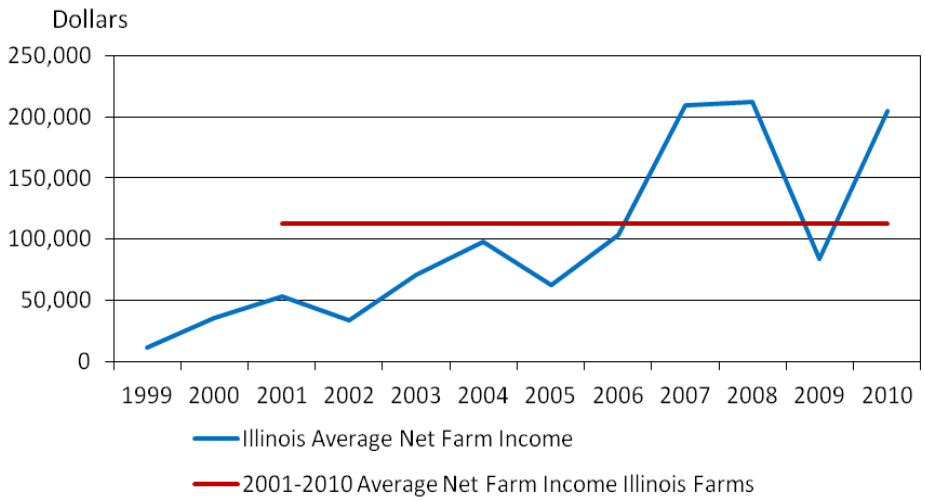
**Chart 1: U.S. Net Farm Income 1999 – 2011F**




Source: Economic Research Service.

We have access to farm level data for Illinois producers, primarily grain and hog farms. Three of the last four years, on average, Illinois producers have had income levels over $200,000. [Chart 2] These farmers would be primarily full-time operators. From a weathering or cash-flow standpoint, economic conditions are pretty good. But, in 2009, our average livestock producers' net farm income was a negative $50,000. So, we obviously have some distributions around that line and, when we see these aggregate numbers, sometimes we don't get the whole picture. I put these aggregate measures up here, not because I think they are great signals of strength, but because they are ones we have typically used when we talk about the health of the agricultural sector.

**Chart 2: Average Income on Illinois Farms 1999 - 2010**



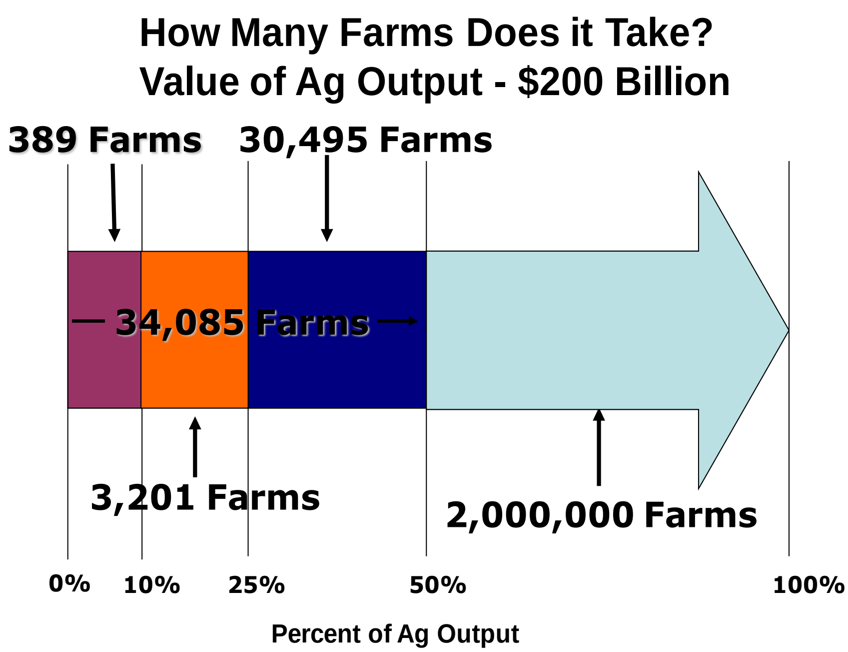

Source: Illinois Farm Business Farm Management

We often talk about leverage or debt-to-asset ratio being low in agriculture. When we went through the recent crisis, this is the measure referenced as much any. "Agriculture is fine, because we have 10 percent leverage in agriculture." To some degree, that is informative. This number is calculated is by including all farm assets, including all farmland. This includes farmland investors, as well as actual producers.

Is this a good characterization of leverage? We probably get more out of the trend or the first derivative of this in terms of change and in terms of signals. I am not sure we get a lot of value from these aggregate numbers to say the agricultural economy in general is healthy. Again, to look at the debt-to-asset ratio number and the USDA values, about 84 to 90 percent of the asset value is farmland. Depending on what happens to farmland prices is what will happen to that ratio, as well. We need to drill down a bit more to evaluate the true health of producers.

The aggregate debt to asset level does provide signals about how agriculture compares to the different times in the past. Some might argue, if you look at the poor times in the 1980s, 22 percent isn't an alarming debt to asset ratio from a leverage standpoint.

**Figure 2: Distribution of Ag Output by Farm Numbers**




I bring up this next chart to illustrate the structural changes happening in agriculture. [Figure 2] When we discuss whether we can weather a storm, who are we talking about? Are we talking about the 389 farms that produce 10 percent of what we have? Are we talking about the 34,000 farms that produce half, or the other 2 million farms that produce the other half? As we look at the risk management ability and risk management tools, the strategies are different in each one of these pools. There will be a lot more ripple effects from stressed events that happen with the largest 389 farms. My point of emphasis here and throughout is we can't look through this large lens. We have to be more careful about evaluating the different risks among the different farms. Getting back to evaluating some of the farm financial conditions and trying to get some distributional aspects of this, Brian Briggeman – former economist here at the Kansas City Fed – used USDA data to illustrate how much debt farms were carrying, compared with what they could carry. What he did, and it was very well-done – was to determine how much debt could a farm support, given the level of income and how much is that compared with what they actually are borrowing. Results indicate that farms, in general, had adequate repayment capacity. Livestock farms, young farms, and large farms were the most vulnerable to changes.

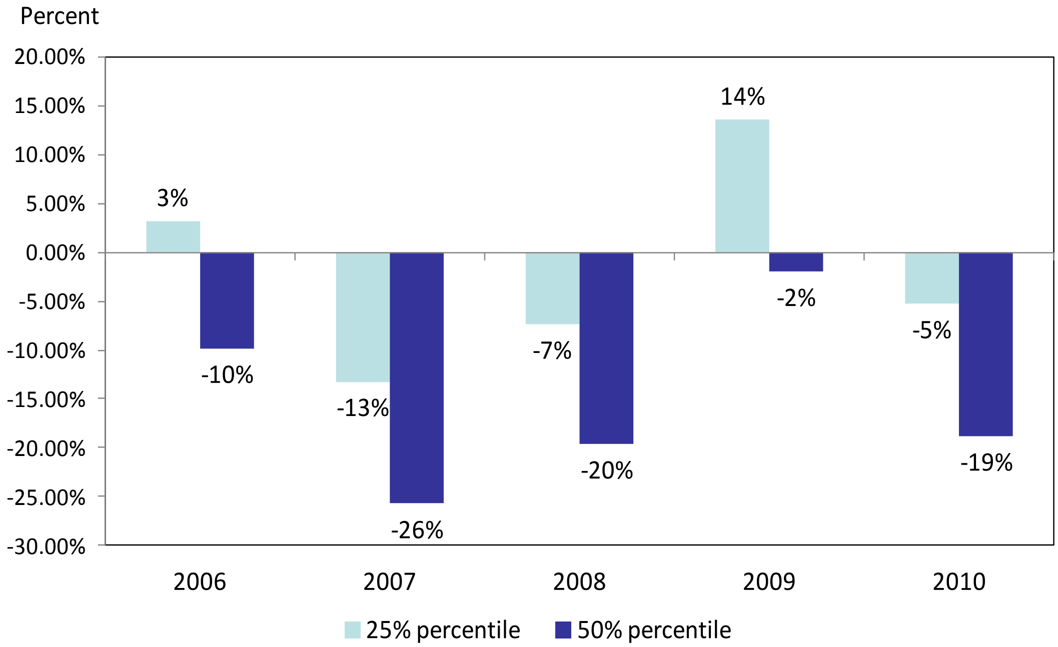
The downside of the research is the data he did not have. Lenders in this room would agree that cash flow pays loans. Liquidity is a backstop. The Briggeman study did not differentiate between term loans and operating debt in the calculation of the level of debt a farm could support. Cash flow measures are needed to evaluate repayment capacity.

I've done an extension of this analysis. The data will be for Illinois producers. Illinois data provide additional distributional aspects of producers and use cash flow measures that lenders use to determine whether a borrower can weather a storm.

What is the first thing you look at? It is likely earnings and cash flow. The second thing you look at is liquidity. Finally, you look at whether there is some equity capital. As we weather the storm, that is probably the same sequence we have to look at things. We have cash flow, with liquidity as our first backstop, and equity as our last backstop. Again, these are Illinois data, but they allow us to get some distributional aspects of farm producers.

This graph goes back over multiple years. I took the data and asked, what if we were to reduce gross revenue to a level where lenders typically lend(a repayment capacity benchmark of 1.25)? How much would we reduce gross revenue to derive that level? Basically, how much cushion do we have across the farms, including all cash flow, all nonfarm income, all family living, and everything else – items most lenders will look at?

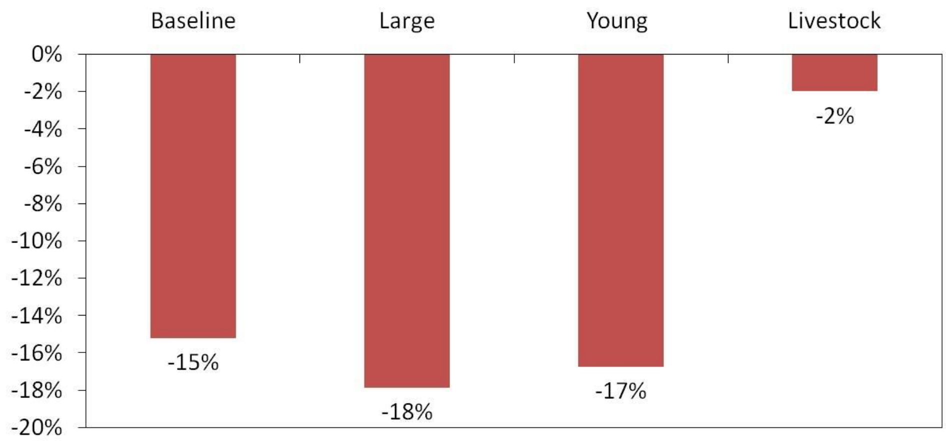
**Chart 3: Percent Farm Revenue Drop Needed to Reduce Repayment Capacity to 1.25 Benchmark for Illinois Farms.**




There are two values represented in the graph -- 25th percentile and the 50th percentile of the farms. Using the 2008 number, a 7 percent drop in gross revenue would result in 25 percent of the farms not meeting the benchmark debt-repayment capacity of 1.25. If we had a revenue decline of 20 percent, one-half the farms in Illinois would not meet the benchmark debt-repayment capacity. Mike [Swanson] will talk about the likelihood of that or how we can protect these kinds of things [downturns] in the next session. This chart shows the magnitude of the vulnerability to revenue changes.

We can separate the measures among the same types of farms that Brian did. The baseline was about 15 percent over the last four years: For large farms – 18 percent, young farms – 17 percent, but livestock -- only 2 percent [Chart 4]. Small margins are not news to anybody in here. And, sensitivity to changes in revenue is much more variable among livestock farms than it is among other operations.

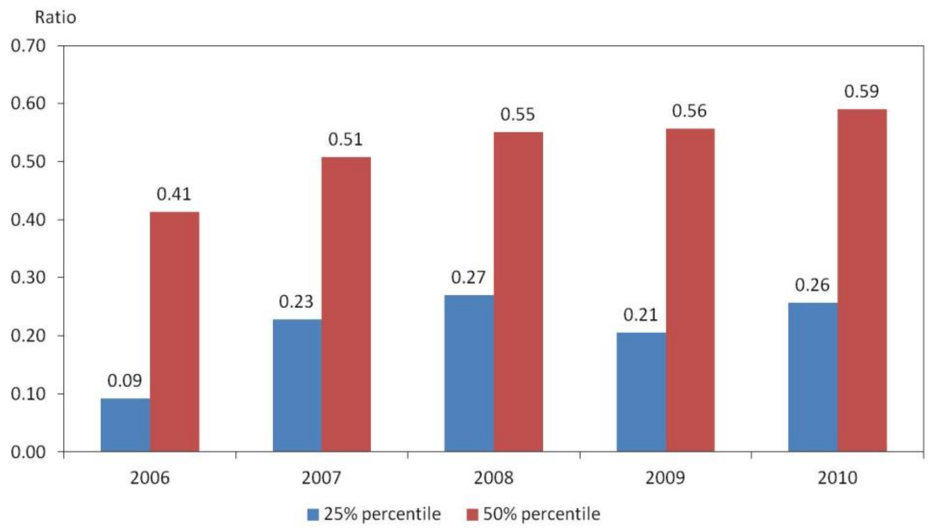
**Chart 4: Revenue Decline if 50% of Farms are Below Repayment Capacity Benchmark (average of 2006-2010)**




The next question that gets asked is, has liquidity kept up with increases in costs and revenues? Since we had high earnings on farms, were those earnings invested back in farmland, fixed assets, or did farms actually improve their liquidity positions in this process?

Instead of a standard liquidity measure like the current ratio, a better measure is working capital relative to revenue [Chart 5]. You can see from 2006 to 2010, the average measure has increased, showing some improvements in liquidity at the same time we had increases in revenues and costs. The lower number is 25 percent of the farms. Values ranging from 25 to 30 percent is the benchmark where we like to see most farm operations. The bottom line here is it looks like there have been some investments in working capital and cash, in addition to investments in capital items.

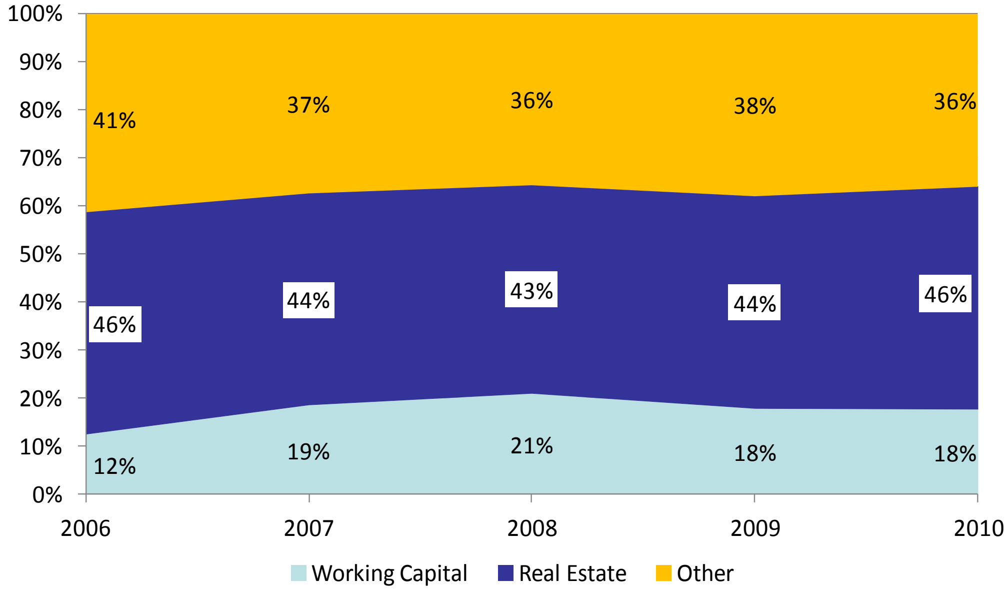
**Chart 5: Liquidity – Working Capital to Sales**




This table probably surprised me more than anything else. A very common housing measure that you see coming out of the housing literature reports the proportion of house equity to total personal wealth. The level has fallen off to almost 10% now, whereas before it was up in the 20 to 25 percent range earlier in the decade.

We can do the same thing in agriculture and calculate how much of the wealth position on a farm is farmland equity? Has it grown rapidly with increasing land prices? If we have a decline in land prices, that obviously will affect equity more. I was surprised that shares of equity have been relatively flat [Chart 6]. The bottom line indicates working capital as a percent of equity. The next line shows farm real estate as a percent of equity. The final line is machinery equity and everything else. In general, what we have seen is there have been almost uniform changes resulting in relatively constant shares over time.

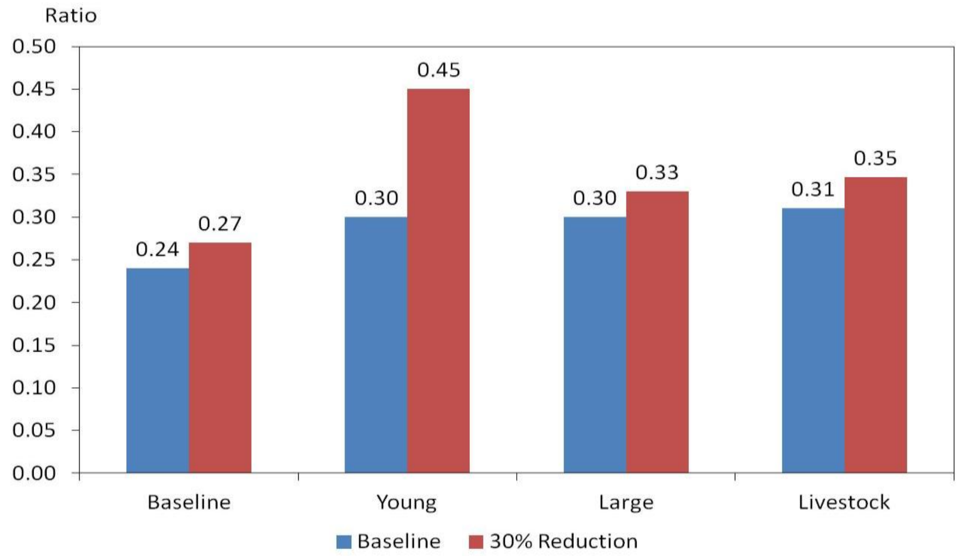
**Chart 6: Components of Farm Equity**




One caveat is the method land is valued in the FBFM data; it is probably similar to most of the lenders in this room. It is not the $13,000 an acre we just observed last week in Champaign County, Illinois. It's a bit more conservative measure. Brian [Briggeman] did a similar analysis with the Kansas City Fed. I said, "What happens if we reduce land prices? What would it do to leverage ratios?"

For our 3,000 farms or so we have in here [data set], the leverage ratio would increase from 24 to 27 percent with a 30 percent decline in land values. Young farmers take a bit bigger jump, because their balance sheets aren't as large and changes in land values increase their leverage [Chart 7]. And livestock farms, not so much. If you look at these from an aggregate measure, it doesn't appear there would be substantial changes. The 30 percent decline is equivalent to the increase in Illinois land values from 2006 to 2010.

**Chart 7: Effect of a Decline in Farmland Values on Leverage Ratios**

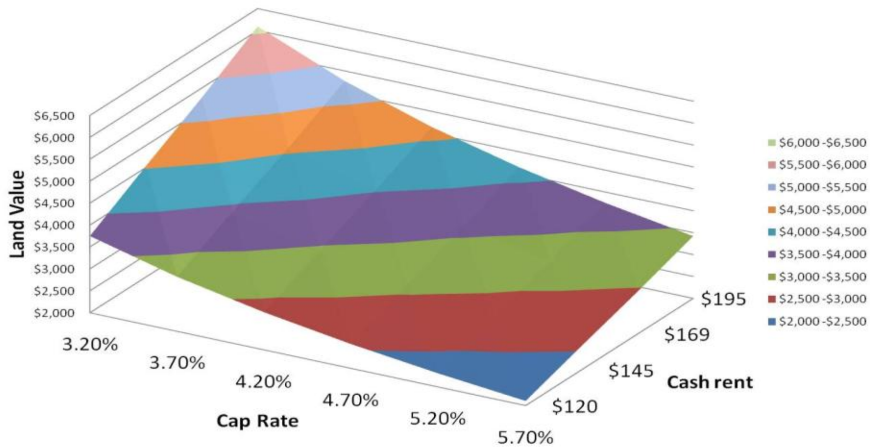



I was asked to talk a little about interest rate risk. The big interest rate risk for Illinois farmers relates to land values rather than cash flows.

A couple of colleagues of mine at Illinois did an analysis of farmland, both of actual prices and capitalized values. It tracked pretty well, except for the first part of 1980s. Then, it was partially due to interest rates being substantially higher than what was expected. What they also looked at was, if we get a bump in interest rates or a bump in inflation, what would happen to land values?

This chart is relatively hard to interpret, but look at the cap rates across the bottom from 3 percent up to 5 percent and cash rent or returns to land on the other side [Chart 8]. Actual land values are on the vertical axis. As you can see, increases in cap rates could result in 40 percent declines in land values. The real risk and vulnerability in the Midwest, at least, are not interest rates from a cash flow standpoint, but interest rates from a land-value standpoint.

**Chart 8: Land Price, Cap Rates and Cash Rents**

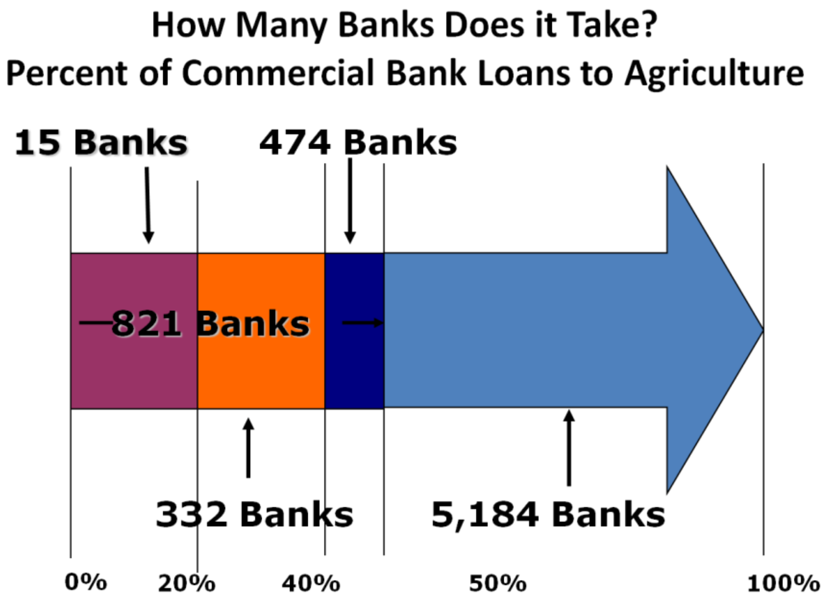



Source: Schnitkey and Sherrick

Jason [Henderson] also asked me to talk about what is happening on the lender side. In terms of who holds the shares, the share data on this chart aren't new to anyone here. We have some panelists, who are on the ground that will talk about the farm lending situation in more detail after me.

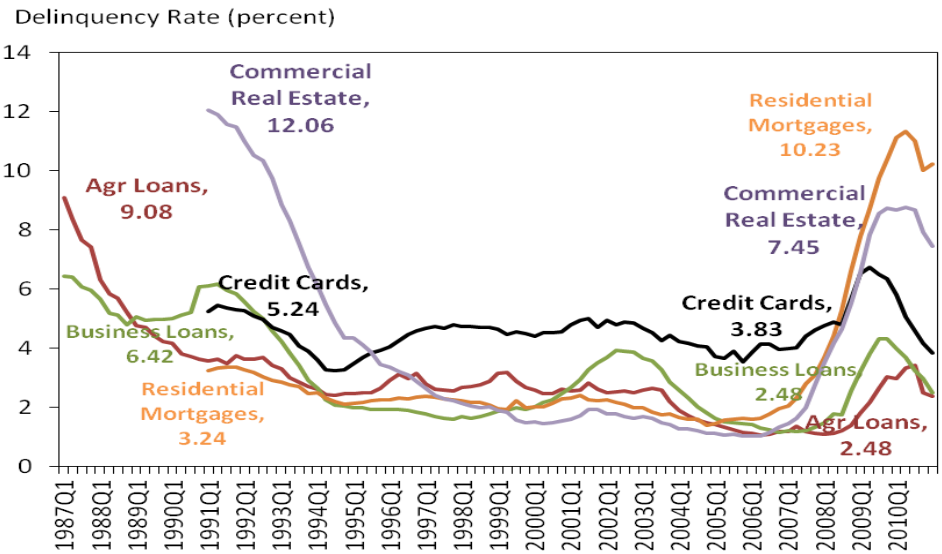
For this next slide, I included every bank that is lending to agriculture and calculated distributions of the agricultural debt by bank size. The largest 15 banks hold about 20 percent of that portfolio [Figure 3]. Another 800 larger and regional banks control 30 percent. That leaves the other 5,000 banks for everybody else. Who are we talking about when we say whether we can weather the storm? Where are some of the vulnerabilities right now within this sector?

**Figure 3: Distribution of Commercial Bank Loans to Agriculture**




I did some analysis about what we are seeing in delinquency rates at banks. Agricultural loans are the green number. [Chart 9] Back in 1980s, we were a little north of 9 percent; Currently, agricultural loan delinquency rates are down to 2.5 percent. Compared with the other sectors, agriculture is still much stronger.

**Chart 9: Commercial Bank Delinquency Rates**




There is one caveat I would add. As we look at these numbers and try to use this as a measure of health, we have to be cautious of delinquency rates on operating loans. When are they delinquent? One time a year. Even then, we may roll it over to the next year.

Now for a brief summary of what is happening on the banking side. Profitability, as measured by ROA, even if it is an uptick for people who are lending to agriculture, are not quite 1 percent. When looking at all failed banks from 2010 through June of this year, the amount of agricultural loans that have been affected by the failed banks is about $1.2 billion, which is 1 percent of all bank-held agricultural loans. So, there hasn't been tremendous disruption on the agricultural banking side, in terms of the bank failures we have observed.

Problem loan data are reported through call reports. From this data it is hard to identify the sectors within agriculture that are incurring stress. Since we have extensive branching, it is hard to say where the hot points are from available data.

I calculated problem loans to equity for all banks lending to agriculture. Typically measures of stress use problem loans to total loans. If you are looking at vulnerability of banks, problem loans to equity is a stronger measure. Vulnerabilities occur when banks have low equity and high problem loans.

There are 68 banks out of 6,000 banks that lend to agriculture with ratios greater than 20 percent. Most of those banks are headquartered in Georgia, Florida, Oklahoma, and Nebraska. There is only a handful beyond those areas. The number of banks increase to 230 banks, if you look at that ratio being greater than 10 percent. This encompasses only about 5 percent of the agricultural loans at commercial banks. In general, we have relatively strong equity positions at banks and strong performance of loans at banks.

Let me interpret these final two tables quickly, as well. I evaluate the distribution of agricultural loans by equity to asset ratio and not necessarily by agricultural banks or non-agricultural banks [Table 1]. I simply report large banks, those with assets greater than $10 billion and all other banks. And, then I evaluated how much equity they have relative to assets. It illustrates the vulnerability of banks that hold high shares of agricultural loans.

**Table 1: Distribution of Agricultural Loans at Commercial Banks by Equity/Asset Ratio**

| December 2010 | Large Banks [1] | | Other Banks | |
|---|---|---|---|---|
| Equity to Assets | Share | Number | Share | Number |
| less than 4% | 0 | 0 | 0.6% | 86 |
| 4-8% | 1.2% | 8 | 7.0% | 714 |
| 8-12% | 16.5% | 33 | 56.0% | 3605 |
| > 12% | 6.0% | 22 | 12.7% | 1235 |

[1] Banks with assets exceeding $10 billion.

The left-hand side of the table is a standard equity-to-asset ratio, less than 4, 4-8, and 8-12. Next, the data are separated between “large banks” and “other banks.” The 1.2 value can be interpreted that there were eight banks with assets greater than 10 billion with equity-asset ratios between 4 and 8% and they hold 1.2 percent of the agricultural loans.

On the right-hand side, we have smaller banks at less than 4 percent that have some exposure to low equity positions and problematic loans, as well. You can see the distribution of the shares of agricultural loans by bank size and solvency level.

A very simply analysis is represented in Table 2. Let's shock 10 percent of agricultural loans and call them losses. The 10 percent value is larger than previous crises. I simply took 10 percent of agricultural loans and reduced equity by that same amount. What would that distribution look like? On the large banks, the distribution does not change much because their percentage of agricultural loans compared with equity is very, very small. But, if you look over on the other bank side, we see the numbers sliding to lower capital to asset levels -- over 100 banks below 4 percent, 1,600 banks in 4-8 percent, and so forth.

**Table 2: Distribution of Agricultural Loans at Commercial Banks by Equity/Asset Ratio with a 10% Drop in Farm Production Loans**

| December 2010 | Large Banks [1] | | Other Banks | |
|---|---|---|---|---|
| Equity to Assets | Share | Number | Share | Number |
| less than 4% | 0 | 0 | 4.2% | 182 |
| 4-8% | 1.2% | 8 | 32.6% | 1644 |
| 8-12% | 16.6% | 34 | 32.7% | 2902 |
| > 12% | 5.9% | 21 | 6.9% | 912 |

[1] Banks with assets exceeding $10 billion.

The Farm Credit System's return on assets has been a bit higher than community banks and banks in general. Stepping back a little bit, it is more difficult for the community-size banks to take advantage of these current low interest rates. The yield curve doesn't benefit community banks as much as it does the larger banks or Farm Credit System. Community banks have a floor on their cost of funds, which is probably why their spreads are a little bit lower.

Return on assets has been strong for Farm Credit. Capital-to-asset ratios are also strong at 17 percent, with nonperforming loans at 2 percent. I sorted all the associations from highest nonaccrual loans to total loans to lowest and identified geographic locations of the associations.

At the end of the fourth quarter of 2010, 16 associations had nonaccrual loans to total loans greater than 5 percent. Those were primarily located in Florida, Texas, Georgia, Tennessee, and South Carolina. They are very regionalized in terms of where the problem loans are located.

As noted by Lee Strom at the Farm Credit Association, problem loans in the Farm Credit System are primarily in ethanol, hogs, forestry, dairy, and poultry – the portfolio segments experiencing the largest degree of stress – which is about 20 percent of our total portfolio. We'll stop here then come back to talk about the implications and listen to the other panelists first.

# Industry Panelist

## Transcript

*Ejnar Knudsen*
*Passport Capital*

A little background, with a name like Ejnar you would think I am a foreigner – I am. I am from the Republic of California, [laughter] but I am not from San Francisco. I still reside at the feed mill in the central valley of California. When I go to San Francisco and they tell me about how we should have an organic food production system, I tell them we would have to go to an alternate eating-day process. If your Social Security number is odd, you get to eat today and tomorrow if it's even. I am not received very well in San Francisco. [laughter]

The firm I do work for is there. They manage about $5 billion. What I do is manage a portfolio for them made up of investors that might be 500,000 investors or banks and universities. It adds up to about $120 million I manage in this one fund. It is a job I've wanted for a long time, because previously I'd been with Rabobank in New York for 10 years and I was lending to the agricultural sector around the world. I enjoy being in the equity position of choosing which sectors. What we do is we break down all the agricultural sectors into 43 subsectors. There are about 500 public companies in the world. I have the pleasure to travel around the world to figure out which countries and which sectors are at what stage in the cycle and where I want to place the capital in advance. It's a dream job to do that.

With that, what I thought I would spend some time that might be valuable for you is to give you some perspectives of risk and how we view it in some of the sectors. Maybe it will lead to some Q&A. When I was asked to think about things that would be valuable in risk management, there are a couple things. How many of you have read the book *The Big Short*? It's a great book, and Passport Capital, the firm I am with, was one of the people who bet on the subprime mortgage meltdown and they made $1.5 billion in that process. It was before my arrival, so I never saw that bonus check.

What I learned from that was, what they look for is slow-moving trends that are not really appreciated; that are not priced. When I think about what is the biggest slow-moving trend we've seen in our lifetime, what is it? Slow-moving trend, how do you boil a frog? You boil him slowly. If you took your grandfather, removed him from his age, and dropped him right here, the biggest observation he'd probably have as a shock effect is that there was a billion people on earth when he was living and now there are 7 billion people. That's a monstrous change that we don't see. It is imperceptible on a daily basis.

Just like the subprime mortgage thing was imperceptible on a daily basis. But, then, one day people woke up to it and it all happened very quickly. I think about in investing other imperceptible changes on a daily basis and how do we invest? One thing, for example, is people's consumption of high-fructose corn syrup versus sugar. Investing in sugar refiners has been a very rewarding business recently, and we found that to be the case, but it is imperceptible on a daily basis.

Or another slow-moving trend is investing in fish meal and fish oil. The consumption of fish meal and fish oil has been very significant, and the margins in that business have been fantastic. So those companies are doing very well.

There are two things. One is slow-moving trends and one is things people can't imagine. When I think about that, one of the things we take for granted here is the population going from 7 billion to 9 billion people. We start every conference by taking that for granted, then we build our businesses and our sectors based on that assumption.

There is a book that is worth reading. How many of you have read the book *The Black Swan*? Actually quite a few. It is well worth reading, because if you took Professor Babcock's research yesterday, and the corn price could be $5.30, and you built your whole business or your lending portfolio based on $5.30 corn and a what-if scenario. What *The Black Swan* is about is the highly improbable events, but ones that could be fatal or extremely rewarding, like the $1.5 billion that Passport made. It is figuring out how fat are the tails on his models, because if we have $4 corn and $12 corn all within a 12-month period, can your portfolios and businesses handle that kind of volatility?

We've heard the previous speaker say there is likely more volatility, and I would agree with that, because if you know of a person who is addicted to something and the addiction is debt and consumption and 100 percent of their salary is now debt, are they going to be more predictable going forward or more unpredictable? More unpredictable. There is probably a lot more volatility ahead of us than behind us. So the volatility that is in Professor Babcock's model – and is outlined in this book – is important to appreciate as far as risk.

One of the other things I've learned at Passport is saying "what if." What if – and I am going to play a game here and the question is – first I'll do a quiz. I am a dairy guy, so I am used to cycles: Milk prices always come back to the same old price and corn comes back to the same old price. I mention that, and I'll come to why I looked into this.

Write this down or think about it. Out of the last 20 centuries, or 2,000 years, how many centuries has China been the number one economy? I was thinking China is mean-reverting. In my entire life, China has been nowhere and they will probably go back to nowhere. But then, when I spent a lot of time in China, somebody said, "Well we are just trying to get back to where we were."

I said, "What do you mean?"

So I had to go into the history books. And I didn't spend a lot of time studying history. I was milking cows. What I figured out was, 18 out of the last 20 centuries, China was the number one GDP of the world! That gave me a different perspective. A lot of people say, "What if China breaks?"

There is this whole housing market. It's a speculative bubble. Then, if you go to China and figure out what the housing market is driven by, you realize it is not much different than in southern California. Why do people have fancy cars? When you are young, you have fancy cars because that is how you get a date. In China, you need several apartments to be able to get married, because the mother-in-law won't let their daughter – who is a hot commodity because there are more men there than women – actually be the chosen one. Do you have three apartments or four apartments? And a lot of those apartments are bought with cash or 75 percent cash. When you figure out that market and you figure out they have over a $1 trillion of reserves, you realize that country is maybe a little more stable than we think.

The growth in the dairy industry is growing so fast in China they need the equivalent of one new California's milk production every year. In five years, they will need the entire U.S. milk production for consumption. The only reason Nestle is not growing faster than 26 percent a year is they can't get enough milk. That is the kind of force we see, and it's a slow-moving trend, and it's a black swan.

Back to this image on risk management. We have a just-in-time food supply, but we now have seven billion people. What happens if there is a shock to the system? When there is a billion people, we have more ability to handle that shock. At seven billion people, we probably have less. Another "what if" I heard yesterday – and I think about the black swans – what if there is no mandate for ethanol in five years? How are businesses structured and values, what could that do? What if the European banking systems failed and everybody went to the dollar very quickly and the dollar appreciated 30 percent? What happens to corn prices if that happens? What is the financial flexibility of the businesses we are in?

It causes me, when I think about all these risks, to want [to discuss quantitative easing and agriculture]. Thirty-eight years ago we did quantitative easing in a massive way. And 38 years before that, we did quantitative easing, also in a massive way. The first time was when we went off the gold standard in 1933. We went off the gold standard, printed a lot of money, and changed the whole dynamics of asset pricing in our debt, so we deflated the value of our debt.

In 1971, 38 years later, we went off the gold standard, we had a cheaper dollar, and agriculture had a boom. We may be around 1975 in that boom. We don't have a lot of debt yet. We probably have a whole other wave of buyers, but of course something may happen like a meltdown here or there along the way. But the volatility in the 1970s was tremendous and eventually we had debt in the system, which today we don't have.

I look at that cycle, and I also look at the weather cycle when I consider things we expect to be normal. We don't realize the fat tails. Another one is the weather cycle, where we expect normalcy based on our lifetimes. If we look back 200 years ago and 200 years prior to that, we had very low sunspot activity. Sunspot activity actually does result in weather impacts on earth.

I am not an expert in it, but I have studied it enough to appreciate that we've had the same low sunspot activities as we had 200 years ago that led to massive crop issues around the world. That is when Malthus wrote the population principle that the population is going to surpass the carrying capacity of the earth. It is interesting he wrote that whole principle when we were having crop failures because of weather issues – droughts, record droughts, and a lot of things that seem to rhyme with today. I mention that because we have a just-in-time food supply system, we have seven billion people, our country and other countries have a lot of debt, and instant information, where people can hit a button and liquidate their whole portfolios to initiate massive liquidity shocks. It's a really interesting time to be in. I mentioned that because my encouragement is to read this book, think about it, and don't make plans based on the averages – make plans based on the extremes.

In closing, I thought about the impact of having the speech here at the Federal Reserve and the dollar has on it "In God We Trust." It is one of those things we just assume -- that everybody trusts that dollar. Boy, when that was first created, the Founding Fathers sure had to hope and pray for people's trust in that dollar. I sure hope the politicians can be careful when they are haggling, because people trust the dollar right now, but maybe we are taking that for granted, because people will until one day, what happens if they don't? And then what? My question is, what will you have wanted to be in yesterday or before that trust breaks in the dollar? So where are you going to preserve your purchasing power? What I say is, "Thank God we are in agriculture, because the farmland and the private and public companies are where I believe we can place our trust." Thank you. [applause]

# Industry Panelist

## Transcript

*Douglas Hofbauer*
*Frontier Farm Credit*

I appreciate this symposium. I have always been entertained here, so I'll try to not disappoint. Here are a couple of revelations: First of all, there are a lot of smart people who serve on these panels and I'm a farmboy from Iowa, so keep that in perspective. Ejnar, thank you for eliminating all vestiges of sleep I once had. With that, though, I would like to share a bit of experience in the Farm Credit System and a perspective of what we look at in our association, for sure.

Considering all the growth and volatility we see in our industry, it is certainly a topic the Farm Credit System is seriously considering, considering our mandate and mission to serve agriculture and rural America. The financial health of our institutions, of course, is directly tied to the financial health of our borrower-owners.

Let me share a little about the financial health of both of the Farm Credit System and the farmers and ranchers and customers we serve. I have been in the System for 31 years. I have experienced both good times and bad times – sometimes in the same year, sometimes in the same week. I am very pleased to report the Farm Credit System is financially strong. At year-end 2010, the System held a loan portfolio of about $175 billion, which is an increase of 6.4 percent over 2009. Combined net income was $3.5 billion, a 23 percent increase over 2009; and the System held a combined capital of $33.3 billion, or nearly 15 percent of total assets. By any financial institution measure, that is a strong balance sheet and income statement.

It is because of that financial strength, as a System we weathered the disruption and turmoil of the financial meltdowns in 2008 and 2009 and met the daily and seasonal financing needs of every one of our creditworthy customers. We also provided forbearance and support to those experiencing industry downturns, especially in the pork and dairy sector.

The association I lead, Frontier Farm Credit, serves the eastern 41 counties of Kansas. We provide approximately 11,000 loans, totaling nearly $1.3 billion to 6,000 member customers. We serve customers of all sizes and complexity, and hold approximately 34½ percent of the agriculture credit market in our territory. By number, 72 percent of our loans are less than $100,000 in size and compose 22 percent of our volume. Conversely, then, 28 percent of our loans by number compose 78 percent of association volume.

In today's agriculture, it certainly doesn't take very long for a farmer-ranch operation or agribusiness to need more than a million dollar loan. Our financial results would mirror those of the rest of the system as a whole. In 2010, we grew about 6.1 percent in loan volume. Our net income was $19.6 million. Our permanent cap ratio is nearly 16 percent. We also have an active loan participation group, and we mitigate risk from larger loans by participating amounts above our internal hold limits.

Typically, in our situation, that means we hold credits below 5 percent of permanent capital and commonly as low as 1 percent to 3 percent of permanent capital and risk funds. As a cooperative, we pay cash patronage. We distributed $4.75 million last year and have distributed $25.65 million in cash patronage, money we think returns to our local communities. Nationally, the Farm Credit System distributed $730 million in patronage to its customers last year.

How are our customers doing? In our real estate portfolio, the average loan-to-value on land is 44.9 percent. Their current ratio is 1.53 to 1, net worth is $1.7 million, owner equity is 68.7 percent, and the debt-coverage ratio – the most important ratio – is 164 percent. In 2010, the average real estate loan value went up to about 54 percent on all the new real estate loans we made last year. All the other ratios improved, as well.

To mitigate risk, 68 percent of the volume in our real estate portfolio is in longer-term fixed rates. Our average operating-loan customer has a similar ratio of about 1.68 to 1 in terms of current ratio, net worth of about $1.6 million, owner equity is 70 percent, and, again, the capital repayment capacity of 149 percent. Of the volume in our operating-loan customer portfolio, 35 percent is in short and intermediate-term fixed rates.

Many of our customers are employed off-farm. Off-farm income is very diverse in our territory, with no one sector of employment more than 15 percent of the total. Delinquency rates are at reasonably low levels. We are at a less than 0.5 percent delinquency rate and we have been there for the last five to six years.

Of course, nationally of great interest in local coffee shops, increasingly from the media, and from financial regulators are the recent price increases in agricultural real estate. The most notable increases certainly have been in the upper Midwest – the major grain-producing areas of the country. Because we in the Farm Credit System hold virtually all of our loans on own balance sheet, we have a strong interest in seeing that customers are successful by remaining focused on using sound underwriting principles.

Given the volatility and risk in agricultural real estate values, we have adjusted underwriting standards by setting lower loan-to-value limits, stress testing the borrower's repayment capacity, shortening loan terms, or cross-collateralizing loans with property that has limited debt encumbrance. The most important thing we do, though, is make our credit decision based on the repayment capacity of the borrower, not just collateral.

Regardless of the System's financial strength and the general strength of our customer base, we know it is not the time to become complacent. There are many long-term, tenured management teams in the Farm Credit System, and we know industry downturns occur in the tails of the curve, not at the average. The operations most affected tend to be those that are growing rapidly in specialized and concentrated industries and young, beginning operators. Those that are late to the game and use leverage are certainly at most risk.

The successful businesses, including farms and agribusinesses, that grow also grow their intellectual capacity to manage a larger, more complex operation. Many use advisers and consultants for their production, marketing, and risk-management programs. That correctly positions us as a lender to accurately assess their plans and strategies, determine if they fully understand the implications to their business, and then structure the financing appropriately. We found our most successful customers embrace the concept of growing intellectual capacity, and add the appropriate accounting and risk management discipline to their business.

We've had significant downturns in the last several years that I've been at Frontier. I always am amazed and underestimate the ability of our customers to make adjustments on their own. It is our credit philosophy that when a customer begins to significantly increase loan size, leverage, and risk, we increase our expectations for quality information and frequency of reporting. We set loan covenants with expectations for minimum financial ratios before and after any new business venture and capital expansion project. We support and fund growth and expansion certainly, but we also feel it is our responsibility to provide counsel on managing growth and leverage appropriately.

As an industry, agriculture has been very profitable the past several years. Considering the amount of cash in the market right now, a marketing and financial adviser friend of mine who gives good counsel to his customers said, "We're in a profitable time, folks. And, if you aren't financially healthy, get healthy. If you are already healthy, get strong. Nobody ever said building equity was a sin."

Volatility certainly takes more liquidity and equity on producer balance sheets to manage risk. We know that. Grain producers, for instance, might fund portions of three years of production – last year's until it's marketed; this year's until it's grown and harvested; and before this year's is harvested, they are doing prepaids and marketing this year's production in the next year.

Livestock and grain producers alike are increasingly sophisticated marketers in using options and hedging strategies. And it takes more expertise and knowledge by lenders to serve their risk management needs. Today, I think customers have better financial and risk management tools available to them than they did 25 and 30 years ago. More importantly, they seem to be taking advantage of them.

I have been at this business of lending for more than a few years and I ask myself the question, why? Why do customers seem to have stronger financial skills and financial ratios today and seem to display more savvy financial management skill? Have we as lenders played any part at all in that change with demands for more information and evidence of management? Likely, it is a combination of factors, because frankly customers and lenders alike have no choice. You have to get better at what you do, if you expect to stay in the industry.

At our association, therefore, we've structured staff into specialized roles to make certain we have the right staff with the right tools with the right products and services for our customers. We know the future of agriculture is in the young, beginning operators. And, for that reason, every Farm Credit Association, including ours, has programs in place. At our association, we offer AgStart, a program for young, beginning operators, where we combine specialized loan programs with assistance on business and financial planning. Our loan officers work hard to understand the agriculture operations these new farmers engage in. Last year, the Farm Credit System made $7.3 billion in loans to young farmers and $10.3 billion in loans to beginning farmers.

So, in answer to the question of the day, are we ready, both as lenders and as customers, for unexpected downturns in agriculture? My answer is a cautiously optimistic "yes," especially for those customers and lenders with strong balance sheets and liquidity. Not all will be ready. Not all will survive. But then that is always the case.

Will we see the 1980s repeated? I don't think so, and certainly not for the same reasons. In the 1980s, economic and fiscal policy changed to bring inflation under control and severely penalized capital-intensive businesses like agriculture. We planted fence row to fence row and didn't build the demand to sell the product. We didn't have seven billion people in the world.

Today, inflation is in check ….so far. Worldwide demand exceeds supply. Even so, with those positive elements, we can't control the uncontrollable and liquidity, equity, and , risk management is an absolute. Volatility increases risk; it also increases opportunity for those who are well-positioned. There are more opportunities in agriculture today than ever before.

The Farm Credit System and our association are financially strong in serving our mission for agricultural America. Our association motto is "Side by Side, Season by Season." Those words were chosen carefully years ago, because they reflect an expectation by us and by our customers to be dependable and consistent. Today, that means being prudent in underwriting, knowledgeable about customer operations, conservative in good times, and courageous in bad times. I look forward to your questions.

# Industry Panelist

## Transcript

*Jeffrey Gerhart*

*Bank of Newman Grove*

Well, good morning. Yes, I am from Nebraska and, yes, we are looking forward to the Big 10. I can do that in a mixed group like this. What I will miss is looking across the way to the University of Kansas and knowing that once a year they come to Nebraska to play basketball. So I have to be confined to watch that on television, because those tickets are way, way too high.

What I am going to do is give you a little bit of a banker's perspective on the farm customers we have. The Bank of Newman Grove was founded or established in 1891, so we have been financing farmers for an awfully long time. Since that time, farmers have gone from the plow behind the horse to the farm machinery of today.

I was sitting out on my back patio having a cup of coffee the other day and the machinery that goes by looks more and more like it came out of a *Transformers* movie or a *Star Wars* movie. They were heading out the other day to do some spraying and all the end guns that protrude out, cars or trucks could be driven underneath those things, since they sit up so high.

We are a $36 million agricultural bank in northeast Nebraska. We are about 120 miles north and west of Omaha or Lincoln, Nebraska. Our customers raise corn and beans – most of it under center-pivot irrigation. We have several cattle feeders and a couple of cow-calf operators. Hogs went by the wayside in our area many years ago, although several of our customers raise hogs on a contract basis.

There is a saying, "The more things change, the more things stay the same." My invitation to this event from Mr. Hoenig stated, "As you know surging commodity prices have ushered in a new era of prosperity for agriculture. Yet, agriculture profits are often fleeting and there are certainly many questions about what the future may hold." Again, "the more things change, the more they stay the same."

We've been down this road before. They are many differences and there are many similarities. Agricultural bankers, like their customers, are pretty resilient and will weather, as best we can, those unexpected downturns.

The 1980s agricultural crisis was our toughest time since the Great Depression. It was also the toughest time for our borrowers. Together we worked through those challenges. Our bank was fortunate not to lose any farmers through bankruptcy or foreclosure during those years. Many banks were not so fortunate.

I still remember the day that one of the first agricultural banks in Nebraska failed and was closed. Because I knew the family, I looked in the mirror and reminded myself that, if we weren't careful, this could happen to us. Between the bankers and farmers, there were many sleepless nights – and also for the local agribusinessmen. In the end, working together, we worked through the challenges that surrounded us.

So will we today, as we prepare to weather the downturns in agriculture – expected or unexpected. I believe that and I agree with Doug. Overall, we are much better prepared. I asked and received input from a variety of agricultural bankers from across the country. I asked them to take a look at their farm customers and give me some insight to their agricultural customers' financial health.

There were nine questions that Jason gave me and I added one. We'll get to that, so I can poke him a little bit. One of the questions was, would you comment on how strong the farm financial sector is financially? Most of the agricultural bankers said the farm sector is financially as sound as they've seen it in the past 30 years. We have record commodity prices, land prices, and low interest rates.

So how much debt do farmers actually have? A majority of the farmers are less leveraged than in recent past. Most bank deposits are up from a year ago and most bank loans are lower from a year ago. Is the debt rising or holding steady? The response from bankers is mixed on that. Most debt is declining. Within the past couple of years, farmers are now paying down that debt with profits. Farmers will borrow more to plant and harvest this year's crop, but overall farmers have been working to reduce their debt.

What types of farm debt are farmers accumulating -- real estate or non-real estate? Again, there was a mixture of answers, depending on whether you were in Montana, Minnesota, Texas, Nebraska, or Kansas. Of real estate, machinery, grain bins, and irrigation pivots, there is probably more machinery and equipment debt. Several bankers mentioned the farmers have been updating their equipment over the past couple years and we've experienced that, too. When the sun shines, you have to make hay, so there are good opportunities for the farmers to update machinery.

I remember in 1980s guys would come in to look at a new combine and their cash flow just didn't handle that. So we would turn them down. But, they were paying a lot for machinery repairs every year, so when the farmer had a good year and could buy that new piece of machinery, that took him down the road quite a ways.

Would farmers be able to handle a correction in commodity prices and farmland values? Boy, I wish I knew the real answer. What I found out from a lot of bankers was they felt farm customers could handle a modest correction in both commodity prices and farmland values. Most bankers felt land values on their financial statements are conservative. We'll find out as we go down the road and see if that worm does turn in a couple years.

At what price would corn have to fall before farmers started showing signs of stress? The consensus from the various agricultural bankers was that it would stress the farmers' cash flow if the price of corn was between $3.50 and $5 a bushel. Beans down into the $8 range would cause problems in most portfolios. That is a good range on the corn price, but then if you have bankers from Iowa, Montana, Texas, Nebraska, and Minnesota, you will receive different answers, depending on their particular situation.

How far would farmland values have to fall before the farmers would face serious challenges? Again, this response is all over the board too. Some said 30 percent and some said 50 percent. This also depends on what land value the farmer has on his balance sheet or how much land he's bought recently. Many of our borrowers have met very conservative land values.

We just had some irrigated ground in northeast Nebraska go for around $6,300 an acre. But some of my customers, who have just as good or better irrigated ground, they have land at $2,000 an acre on their financial statements and they don't want you to raise that amount. Again, it depends on the situation. Each year we also stress test our customers' land values. I'll give you some insight to that in a little bit.

Another question was, how would bankers respond to smaller profits in agriculture? Well, I run an agricultural bank, so I have to get up each day and loan to that farmer to get him through the good times and get him through the bad times. The consensus was we would continue to work with farmers just like we have in the past. We'd rewrite loans and repayment loans, if needed, as we've done in the past. By the way, that really works. Agriculture, as we all know, is cyclical in nature and we understand that in the good times and not-so-good times, that will come and go.

Now, the one question that Jason *didn't* ask me to address that every banker had some fun with this one. Remember the question was, how would banks respond to smaller profits in agriculture? Jason didn't ask the follow-up question which was, how would regulators respond to smaller profits in agriculture? That is the tail that really wags the dog. The banker's ability to work with his customer is influenced – and heavily at times – by the examiner's position on this.

In the 1980s agricultural crisis, we were able to restructure debt for farmers, if they needed help. The banking examiners at that time were willing to work along with the banker who was working along with the farmer. And the worm will turn at some point in time, but the regulators – and I know the Kansas City Fed's District and we are a state member bank – so the Fed comes in, as does the Nebraska Department of Banking and Finance -- they understand this. We hope that will be across the sector, because when the downturn comes, we'll need that consideration, and not just because a guy had his debt restructured. Will that loan be classified? Because that will do the most damage the quickest. It will be key for the regulatory environment to acknowledge this and allow agricultural bankers to work with their borrowers to see them through the tough times.

Would funding dry up? The consensus was no, but probably new purchases of land and machinery would certainly slow. Farmers are pretty good at making hay when the sun shines. They are updating machinery. They are adding irrigation. In fact, in our area, there has been a lot of conversion from dry land to irrigated land and also from propane and diesel wells to electrical wells. There is good upgrading going on that down the road will benefit the farmer.

How should agribusinesses prepare themselves if the farm boom ends? Any business needs to be prepared to work through the good times and the bad. As one agricultural banker said, "Be as prepared as you can."

Doug and I were talking at lunch yesterday and one of the issues in the 1980s agricultural crisis, for the folks out here that have implement dealerships and finance purchases, a farmer would come into me wanting to buy a new combine. We would sit down and do a cash flow and it just wasn't going to work. So we would turn him down. But then he would go down the road to the machinery dealer – whether it was Case IH or John Deere – I don't care what color – and whoever was financing, he would get that financing and come in 6, 8, or 10 months later, had a short crop, was not able to pay that down, so we had to figure out how to help him make that payment so that combine wouldn't be picked up.

We learned from that. Doug and I were talking and felt we were smarter than that. But there is a marked change today in how bank regulators look at my loan customers. They look at the global payments. It took me about six months to understand what the word "global" was, because I would just use the word "all." When an examiner comes in, if the customer is not making their payment to Case IH, I stand a really good chance of having that loan classified, or that customer classified. So we all need to be aware of that – that what the implement dealer makes or the pivot guy, whether it's Farm Credit or community bank, this all fits together. At the end of the day, we want to see that farmer out there year after year, because that is our bread and butter. That's something we want to keep in mind.

Most of the agricultural bankers I know and most of the banks have been in banking long enough to have lived through and remember the 1980s agricultural crisis. Many of us cut our teeth at that time. That is when we learned to make loans and collect loans. We learned also that we made some mistakes and we are trying hard, hopefully, to not do that again.

Our farmers also learn from their mistakes. We hope at the end of the day we work to be better prepared. We do a stress test on our real estate land values. We just did this the other day and our current loan-to-value ratio for farm real estate is at 20 percent. If land values drop by 25 percent, our loan-to-value ratio would rise to 26 percent. If land values drop by 50 percent, the loan-to-value ratio would rise to 40 percent. If land values drop by 75 percent, our loan-to-value ratio would rise to 79 percent. Now that's collectively. That's everything.

If you break that down into individual customers, which is where all these numbers come from (we have a software program that lets us put a lot of information in it and extract this information), you will see individual customers differently. But we've run a stress test on our portfolio for quite a long time. I was surprised that most agricultural bankers I asked do not stress their farm real estate loans. Sometime soon, as per request from the regulator, they will do that.

In closing, let me thank Jason Henderson and the Federal Reserve Bank of Kansas City for allowing me to give a community banker's perspective as it relates to the financial strength of our farm customers. As a fourth-generation banker, we work hard every day to make prudent lending decisions for our customers. Many of these customers are second, third, and fourth generation farmers. We would like to keep that ball rolling.

As sure as it will rain, someone is going to get hail and sure as the sun shines, some farmer will dry out. Over the years, agricultural bankers have done a good job of managing risk, along with their customers in good times and in bad. As an agricultural banker in Colorado told me when I put these questions out (he was in the middle of a wheat harvest in the western part of Kansas and I don't know exactly where, but maybe south of I-70, because that is where the dry weather is, I believe), he said his wheat crop was very poor and he was going to keep his day job as a banker. He does banking on the side. He's a Kansas farm boy.

My parting word is that agricultural bankers are prepared for the next downturn, whenever that might come. And we are also working to prepare our customers for that downturn. Thank you very much.

# General Discussion

## Transcript

*Moderator: Jason Henderson*

*Vice President and Omaha Branch Executive*

*Federal Reserve Bank of Kansas City*

**Mr. Jason Henderson:** Now it's time for some discussion and questions and answers, again, similar to yesterday. I want to start off with some questions. When I go out, people say they're afraid of the 1980s returning. But I heard today that we are at 1975. Does that mean we are on the verge of an investment and leverage boom in agriculture in terms of that timing? What types of investments are going to be made? Is it going to be in U.S. agriculture or overseas?

**Mr. Ejnar Knudsen:** I've learned to *not* say, "I think it's exactly 1975." It's "maybe", "probably", and words like those, because it won't be exactly the same. But it sure seems to rhyme with that.

To me it seems, when I travel to the Middle East as an example, they have a major issue. We've transferred a lot of our wealth to the Middle East, but they have fossil water, they have aquifers that are not replenished, they are phasing out their wheat production, they have food security issues, and countries are destabilizing with these high food prices in the Middle East. China, over 2,000 years, they've lost the ability to govern their people 13 times. Seven of those times have been about food issues. So these countries have our money, and they're worried about their ability to continue to govern. They need to deal with food issues and have tried to invest in places like Egypt, just to find that the whole country destabilizes.

I expect a significant amount of money to come here to buy our resources. They've tried to buy in Australia, New Zealand, and South American, but they are being blocked in a lot of countries like Madagascar. I expect a lot of money to come to buy our resources in some form or fashion. I don't invest in farmland, but it's probably likely we will see many more buyers coming, and some of those buyers might use leverage. Because, with the instability in the dollar, would you rather own farmland? When asked about gold, Warren Buffett, at the Berkshire-Hathaway Conference in May, said, "Buying gold today is betting on people's insecurity being greater in the future than it is today. I am not about to bet that people are going to be more insecure in the future. But I would take all the gold, that's $8 trillion, and take that $8 trillion – which would be all the gold in the world – and buy all the U.S. farmland for $2 trillion and I'd buy 10 energy companies for $6 trillion, because you are going to get something from them every year, since they produce something." He continued, "The government doesn't get upset at him. Every government produces fiat currency."

The answer is "yes," I would expect a lot more money coming from places that have our money. I would expect to see it well-supported. There might be cracks and crises along the way, as there were in the 1970s. But we are in the first third or the first half of the game.

**Mr. Paul Quinn, Harvest Moon Capital:** I'm Paul Quinn. I'm with Harvest Moon Capital. My question is for Ejnar. You mentioned fat-tail risk. How do we hedge or, more importantly, make money from fat-tail risk.

I also had a second question for the bankers. Given the health of your borrowers, why do you think there hasn't been more of a competitive response from the money center banks in the agriculture arena?

**Mr. Knudsen:** Hedging fat-tail risk is pretty hard because you don't know the time it's going to come. You don't know if it's this year or not, so the easiest thing is the financial flexibility. But you don't want to have too much cash because the cash might become worth a lot less, as the government is printing so much of it. It's the balance of having that financial flexibility and not a lot of leverage. Also what I value is liquidity. I invest in public securities, so I have the option to sell one company's stock to redeploy it. But, of course, it could be depressed to buy something that is even more depressed -- liquidity less leverage.

With this volatility, options probably are underpriced at some times. I noticed it in the milk market, where banks are forcing their customers to be more sophisticated and have risk-management strategies. So, then, the dairymen are actively selling call options to be able to buy put options.

They are unfortunately not realizing we have a much wider distribution tail. We could have $24 milk, and we see that happening right now, whereas eight months ago that was unimaginable for the dairy industry where we were at $22 milk. Buying options and being careful when you sell options, because we have so many extreme scenarios with the devaluation of the dollar and the potential for liquidity shocks. Hopefully that answers your question.

**Mr. Jeffrey Gerhart:** The question on the competitive side is, Why aren't the very large banks in our markets? …They are, they just don't pay taxes. We have the Farm Credit System we compete against every day, along with other community banks. A lot of it is the farmers that Doug is financing, I am financing, and some of the bankers around the table are financing, they are just too small.

In the 1980s agricultural crisis, one of the big providers for real estate debt – we weren't doing it [lending on real estate] in the 1970s and 1980s, because you had the Federal Land Bank and the insurance companies – when times got tough, they got out of it. I don't know if that mentality is out there, but our borrowers aren't that big, and I'd be interested in Doug's perspective on that. We do have the Bank of the West around. We have Wells Fargo and U.S. Bank, and they are active in the area. I also think – a little bit tongue-in-cheek – come Thursday, the 111 largest banks and credit unions in the country are going to be invaded by the Consumer Financial Protection Bureau. They will have their hands full. There is a smallness to it that community banks can certainly fill. Maybe we are not large enough, but I'd be interested in Doug's perspective.

**Mr. Doug Hofbauer:** I would agree with everything Jeff has said here, other than we do pay taxes, by the way. [laughter] We have a pretty diverse portfolio and the 72 percent of our portfolio I said that was smaller than $100,000, that is not a target market for a money center or international bank. But, when you get up into our larger customer base, we certainly compete. They are in those markets. If you look at the percentage of volume in our system that is in the large-customer base, we certainly compete with that market every day. We also compete with the local community banks on the local level. We see them in the market all the time, they are good competitors, and we do business with one another.

**Mr. Kenneth McCauley, National Corn Growers:** Ken McCauley, a northeast Kansas farmer. There is a hazard of sitting too close to the microphone. I swore I wouldn't get up today.

But there is something we've missed, in talking about the price of grain going down. The yield and volume a farmer has to sell are really, really important. When you look at this 2010 crop, I would put some money on the fact the average selling price of corn was $4 or a little higher. And 2010 is going to go down in the books as a very profitable year for agriculture. It tells me $4 is a pretty good breakeven point for farmers to sell corn and soybeans at the same percentage. It is really important we not just talk about the prices falling, but we look at the whole growth side of a farmer's portfolio.

The question I have is, if a farmer who buys land today and finances it at 50 percent of the value, which would be financing about $4,000 an acre, is subjected to some of the things that happened in the housing market, will we need to reappraise that land if the values drop 50 percent? And, if that is the case, that is a totally different situation for my son who doesn't have a lot more to go back on or myself, if I buy 160 acres today for $1 million and have to refinance three I've already paid for, just to stay current, when you are current with your payments. I'd be interested in that. Thanks.

**Mr. Hofbauer:** I might answer that. As long as your payments are current, we don't care what the value of that property is. Agriculture is one of the few industries that celebrates the increase in the cost of the factory. Did you ever think about that? Everybody else wants to cheap factories and we celebrate the increase in cost of our factory.

As long as they are current, we are certainly not going to reappraise and expect additional security to support that loan. When there is trouble that occurs in the account, then we are going to look for additional security or something to try to restructure the debt.

**Mr. Gerhart:** The situation today is also with the low interest rates. This gives a great opportunity for the farmer, existing operator, or new young farmer to lock in for very long times and very low interest rates. I know I'll get the question, "Well, if I pay this off early, is there a penalty?"

But I say, "No, but at these low rates, I don't think you are going to pay this off early."

If they do, I still have some cheap money to utilize for something else. Yes, that it is a tough question. In our bank, we typically loan 50 cents on the dollar and take some additional ag land, if we feel it's prudent. Plus, in most financial statements, the long-time farmer has some pretty good values built up.

I am not actively out soliciting $6,300 an acre land. In fact, that particular piece of property was too large for us, which was a nice way not to have to work with our customer. He didn't get it, but I wondered where in the world, and how in the world, is he going to pay that off. We are in some pretty high times. We are going to get through this thing, but properly structuring that loan is important, so they don't have to come back and redo it.

**Mr. Ken Keegan, Farm Credit Services of America:** Paul, I'm interested in your slide that is showing the current distribution of farms. What can we expect in farm structure changes for our agricultural producers as we look forward, particularly in light of some of the world food security issues.

**Mr. Paul Ellinger:** That's a very good question. When we go to meetings like this, what we tend to see is bigger tails, with more of a barbell where the larger farm size is more consolidated, as well as more hobby-size farmers. So we might see them move toward the tails of those distributions.

What we see in Illinois is clearly consolidation on that side. We've gone at a faster pace than maybe other parts of the country. But we have a lot more farmers that are doing 7,000 to 10,000 acres when we get to meetings. It used to be we'd only have a handful of those, but now we can get a room almost this size of the farmers that are at that edge. One of the biggest changes I've seen since I came back to the University of Illinois in 1996, and we asked what the bigger changes are when we go out to the farmers, they said, "We compete with each other now."

You get the sense that farmers help everybody else in their farming operations. Now land rent and land access have become so valuable that they're competing for land rent. Good friends are taking land away from somebody else, so there is a tremendous amount of competition for renting land. We're seeing a higher percentage of land being rented that is being farmed in our state. From that standpoint, we are going to see larger farms, but we are still going to maintain more of the hobby size as well.

If you look at the slide I had at the beginning about farm profitability, the one area that didn't have high correlation with that is agriculture. What generates a lot of interest in farmland, both domestically and internationally in some of the research we've done, is it does look good in a portfolio.

An interesting anecdote is we receive a lot of calls from institutional investors about – for those of you who don't know much about farming – asking where they can get the price? Where is it listed? Well, it's not.

The very interesting one – and one he wouldn't mind me sharing – is I received a call from Peter Lynch, just wanting an hour primer on agriculture. There are people who are interested in that industry, both domestically and internationally, who haven't been interested before.

**Mr. Henderson:** We have an investment fund that shorted the housing market. Now you are investing in agriculture. What draws you in and, the other people who come in, what is the risk they leave at a future date?

**Mr. Knudsen:** The reason why a firm like Passport Capital would be interested in launching a fund is it's a long-term commitment for them to have a fund that is dedicated versus just having a part of the main fund. The reason is they view persistent resource scarcity – this seven billion people and better economics and all the new consumers in the world. But Passport's view is that we are going to have liquidity and crises shocks of high magnitude happen very quickly, so we should be prepared for more of what happened a few years ago. They value having liquidity in those crises, because other things can become even more distorted. That's why 1) they are interested in agriculture and 2) interested in some liquidity in that strategy. But it's a long-term view and, not something that's three years; it's a decade plus.

Marc Faber of "Gloom, Boom, and Doom Report" did an excellent presentation recently in Indianapolis that I attended. He took the Mexican crisis and -- if you were in the peso or in Mexican bonds at the beginning of the Mexican crisis, you lost more than 90 percent of the purchasing power of your peso, because of the devaluation that happened --but, if you were in equities or if you were in commodities, you maintained your purchasing power through that decade.

Even though the public equity market might be down 20 percent intra-period, through that decade you maintained your purchasing power. That is an example of why we and our clients, who are giving us money, look at it as they will have money in farmland and in hard assets and they will have money in equities. If you look at the U.S. equity market, farmland, and rents, they are very cheap relative to most parts of the world, so a lot of money is probably going to come to the United States to buy even more public equities and farmland.

**Mr. Gerhart:** Jason, I have a question for the panel. With regard to slow-moving trends, there might be a slow-moving trend from the standpoint that in our area – I'd be curious to see if Paul saw this in his research and Doug with his customer base – we are seeing more farm families continue to work more together on buying machinery, land, and other types of equipment than we saw maybe 20 years ago. It's brothers and spouses having off-farm income, but that might be something under the radar screen. I don't know what kind of research is out there, but I've been seeing that more in our area. I am curious what you folks are seeing. Maybe there is an underlying current that it will add some stability, if these guys are not *each* buying a $300,000 or $500,000 combine, but they are sharing the load a bit.

**Mr. Ellinger:** It goes back to the last question that was asked, where are we getting larger firms? It depends upon how you count the farms. In many cases, these farm families have two sons and a nephew and a farmer who are all sharing. Is that counted as one farm in this versus individual farmers? I guess we are seeing a lot more of that by necessity and the capacity to be able to do that. We are trying to conduct seminars to assist in how to do machinery sharing, even outside of a family operation. Lawyers get involved, then bankers – who has the security? – but we are seeing more opportunities with people trying to investigate that.

**Mr. Hofbauer:** We've seen more growth in some of the larger operations where a neighbor decides to discontinue farming and sells her machinery or rolls her machinery assets into another neighbor. It used to be adding 80 acres or a quarter section. Now we are adding 500, 1,000, or 2,000 acres at a time. Part of that is to create more efficiency in the resource allocation, so you can put that same piece of equipment over more acres. I don't know if we have any research which shows the trend you seeing, though.

**Mr. Henderson:** How does that structural change affect the structural change of the financing industry? If your farming is consolidating, what's the agricultural lending landscape going to look like five years from now?

**Mr. Ellinger:** If you go back to his question, why aren't the large people getting involved, if you look at my graph, the large people are involved since 20 percent of lending is involved in that capacity. Some of the community banks are going to be challenged, as we become larger. I am on the board of directors of a $100 million bank and our maximum loan is $2 million. This consolidation is going to force you to partner with Farm Credit or Farm _____ or with somebody else. The shift in the data would support some of that is going to larger operations.

**Mr. Hofbauer:** I would agree. We are in the process of restructuring our company, so we have specialists assigned to larger customers. They have to have fewer accounts. They can't be everything to everybody. At the same time, we have more farms in Kansas this year than we had in past years. That is a specialized market to serve, too. So we try to assign and allocate staff appropriately.

We work with money center banks. We've worked with community banks recently on some participation activity. That trend is going to continue.

**Mr. Ellinger:** Getting back to openness, I see more partnering now. We have this little dialogue between banks and Farm Credit. The conversation is occurring more, where people are seriously thinking about partnering. Our two local associations in Illinois said they need and want that partnership with the bankers. That conversation, at least, is occurring, whether or not a lot of transactions are resulting.

**Paul Quinn, Harvest Moon:** If we were to see a stress scenario develop – $4 corn and land values down 30 percent – how would you expect cash rents to behave?

**Mr. Hofbauer:** With a severe lag. [laughter] Landlords don't like to reduce rent. They are very sticky. That is where some of the risk is and hopefully our next speaker will talk to this. Within a year, at least our own corn producers are fine, we have crop producers and other types of things. From year to year is where you see the drop with our guaranty insurance rates and land values stay at that level for another year, if they are sticky for that year. That is where some of the real risk occurs and also with fixed rents at $500 for three years out. That happens. Those are hard to protect against but maybe Michael [Swanson] will tell us how to protect from that, as well. That is where the real challenge is and, in my opinion, those will be sticky. We tend to not see those rents come down at least in the Midwest. We are seeing a lot higher proportion of cash rents versus shares or some combo of that.

___________: It seems there is always somebody willing to pay it too. We are talking about that competitiveness between neighbors, because we are seeing more cash rental auctions occurring.

**Mr. Gerhart:** The last time cash rents went up, before more recent times, I had an older customer and former farmer who was cash renting his farm out. All of a sudden grain prices jumped up – he was a good depositor too – and he came into the bank one day and he was upset because his renter was making so much money. He thought he really should have an opportunity to raise the cash rent during the year. It was an interesting conversation, because I was trying to calm him down a little bit. I said, "Listen, you are getting a guaranteed amount out there. Next year you could do that or you could go to a crop share, if you wanted to take on that risk."

It has always surprised me there is more cash rent going on versus crop share, because most of the farms are going from one generation to the next. But sometimes even Dad wants a cash-rent check versus the crop share. The crop share would help that son do a little better job and give him less risk. It is another slow trend. Maybe it's ________, but it is an interesting change that has gone on.

**Mr. Ellinger:** But, the more institutional investment you have, the more cash rents and more stickiness you will see in that as well, because they want a return on the $10,000 an acre they have and a certain percent would be my opinion.

**Mr. Knudsen:** A lot of farmland in the world is based on bags of whatever the crop is, not on this fixed priced. So it is surprising to me that the U.S. is still in this "We're going to set it and it is going to be the right price for however long," and then there is the relationship damage that occurs when you want to change that.

**Mr. James Andrew, Andrew Farms, Inc.:** Jim Andrew from Iowa. My question is directed to Jeff. In my community, there are three community banks. My old system of telling how well they were doing was how full the parking lot was. I realize that no longer holds with electronic banking. Are you seeing it more difficult to maintain customer relations when I can sit at my computer at midnight, transfer my funds around, make my payments, and don't have to come in to physically see you – other than maybe socially on the street – your ability to press me as to an opportunity or whatever being limited? Are you noting that?

**Mr. Gerhart:** In our shop, no. We'll sit down before harvest is done with our customers and work their cash flows and set up the next year's crop over the winter months. So we have a pretty good flow of traffic. We will set up a line of credit, as many do. They can call in or they can come in, but there are times when it is not as busy. Certainly online banking allows people to move money and to check their balances. We are taking fewer phone calls from the customers inquiring whether checks have come through, their daily balance, or whatever.

Technology has been a boon to us. We use the services of Web Equity out of Iowa and are able to put in all the tax information and the year's financial statement, which gives us some nice trends. When we first started asking for tax information, believe it or not we did not always ask for that, there was a certain of reluctance from customers, but when they see the results and trends and we can go over those with them and show them the different ratios where they are either improving or not improving, then the discussion becomes, "What do I do to improve?"

They are appreciative of that. There is no way on God's green earth we could do all those ratios for all of our customers with this being a small bank having a limited staff. Technology is helping us a lot. Yes, there are fears they would go someplace else, but for the most part, it is a people-related business and it's person to person. If we are competitive in the market with interest rates and providing them with the funding they need, they return generation after generation.

**Mr. Ellinger:** I want to pick up on that. A more interesting question from a banking perspective is, back in the beginning of the decade, we thought we'd see with Internet banking a lot fewer branches. There is not a lot of evidence of that, at least in the Midwest. Branch expansion has not slowed down. We are still investing in bricks and mortar. We anticipated having only an Internet banking service, but there is no evidence of that. We have a research report that asks why we are still expanding and why do we need bricks and mortar and people on the corners, but it is happening. It is still happening at a rate that is a bit puzzling of that investment.