

**Current Trends in Commercial Agriculture**  
**Statement of**  
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**at the**  
**Farm Credit Administration Symposium on**  
**Consolidation in the Farm Credit System**  
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Chair Long Thompson, thank you for the invitation to speak to your board and invited guests on this important issue evaluating potential impacts of consolidation in the Farm Credit System. I am currently the Head of the Department of Agricultural and Consumer Economics (ACE) at the University of Illinois. For full disclosure, I am also on the board of directors at Gifford State Bank, a \$150 million rural, community bank in central Illinois. Moreover, Farm Credit Illinois, 1<sup>st</sup> Farm Credit Services and CoBank provide financial support for educational and outreach programs in ACE and the College of Agricultural, Consumer and Environmental Sciences at the University of Illinois. I have also been a paid consultant for Farm Credit System director training.

My remarks are focused on the trends in commercial agriculture, primarily in the Midwest. My objective is to provide factual, research-based information to aid in your subsequent discussion of potential implications for FCS consolidation. The term “commercial agriculture” often has alternative interpretations. For my discussion, most full-time farm operations in the Midwest are considered commercial agriculture. These operations are all sizes and mostly family-owned and operated.

Significant trends in Midwestern commercial agriculture that relate to services provided by the Farm Credit System are:

1. Concentration, consolidation and a decline of the middle producers,
2. Rapid change in site-specific technology, information technology, bio-technology use by farm operations,
3. Strong profitability and higher variation among farms,
4. Increase in working capital needs for farm operations, and
5. Risk management tools and analysis are becoming more complex.

The trends are obviously not mutually exclusive and have many interrelated elements. I will speak briefly to each of these five trends.

## **Concentration, consolidation and a decline of the middle producers**

Commodity production is more concentrated by geographic region. Table 1 shows the change in the cumulative proportion of cash receipts of the top three commodities in eleven Midwestern states. Kansas was the only state that exhibited a decrease from 2004 to 2012. The cumulative proportions of the top three commodities in Illinois and Nebraska approach 90%. Enterprise diversification for lenders will be difficult to achieve in many of these states. Increasing individual farm specialization and fewer enterprises also increases specific producer business risks. It is well documented that U.S. crop and livestock production have been shifting to large operations. A majority of the shift has been at the expense of mid-size operations. MacDonald, Korb and Hoppe provide a detailed analysis of the complex nature of changes in farm structure shifts, notably the growing farm numbers at the extremes (large and small). Their analysis also highlights increasing farm specialization.

The proportion of farm receipts by farm size for Midwestern states is shown in Table 2. Farms with total farm sales \$1,000,000 or more hold an increasing share of total cash receipts in all states except for Kansas. Although some of this shift is due to inflation and commodity price increases, farm consolidation is also a driving force. Not only are some of these operations becoming larger, but their business operations are becoming more complex. Many of the farms are now complex agribusinesses as they have integrated with grain elevators and input supplier operations.

At the small farm extreme, it is well documented regarding the increase in local foods and farmer markets. For example, the increase in local outdoor farmer markets in an intense grain cropping state like Illinois increased from 97 in 1999 to 270 by 2008 and now 339 today (Illinois Local and Organic Food and Farm Task Force). Although not the focus of this analysis on commercial agriculture, the increase in local food producers presents challenges to lenders with limited experience in these enterprises. It is likely that lenders may have to initiate departments that have specialized expertise in the unique production, marketing and financial risks of these types of operations. University of Illinois is also faced with the challenge of increasing our education, research, and outreach in this area of food production.

## **Rapid change in site-specific technology, information technology, bio-technology use by farm operations**

A driving force of farm consolidation is the change in technologies. The new technologies change the mix of inputs, including labor, on farm operations and are likely to lead to increasing scale economies. Most of the technologies have been labor and management saving. Thus, farm operators can operate more acreage or seek off-farm employment.

Increasing farm size is one consequence of changes in technology. Another consequence is the tradeoff of labor for capital and the resulting increase in capital investments required to operate competitively. For example, total power costs per acre on Illinois operations have increased from \$85 to \$132 or 55% since 2007 (Schnitkey). Capital and depreciation costs per acre have

tripled over the same time. The result is increasing financial costs as well as increasing challenges for young and beginning farmers to acquire adequate capital to operate competitively.

Rapid changes in information and communication technology are also changing the landscape in commercial agriculture. The recent purchase of Climate Corporation by Monsanto for close to \$1 billion is an example of the perceived value of information and the linkages to increased efficiencies and management of risks. Other firms like Deere and Company are also investing in “big data” research. It is too early to understand the business risks and financial implications of this increased information, but it will likely result in increased capital as well as sophisticated integration of financial, price, production and weather data. Lenders will likely need to evolve to more detailed and frequent data information systems for their clients.

Rapid changes in communication technology will require lenders to respond to clients through multiple channels. To illustrate the magnitude and size of these information and social media companies, Amazon (\$165 B) and Facebook (\$164 B) each have market capitalization higher than Deere and Co. (\$32 B), Ford Motor Company (\$59 B) and Monsanto (\$58) combined. Combined with Google (\$395B) and other technology firms, the significant CAPEX of these companies will likely continue to shape the communication and data demands of farms and producers.

### **Strong profitability and higher variation among farms**

As Mary and Alton report in their analysis, USDA Economic Research Service forecasts farm income for 2013 at a record high of \$131 billion. Farm profitability in the Midwest has been particularly strong. The average farm income for full time Illinois farm operators have exceeded \$200,000 in 5 of the past 6 years. In contrast, the average farm income for Illinois operations from 1999-2002 was \$33,000. The average size of these Illinois operations is approximately 1,100 acres. Commodity and input price volatility, yield variability and risk management practices also resulted in higher variability among farms during the past six years. Lenders will need to have a good understanding of the risk profiles of their clients during times of price, cost and production volatility.

### **Increase in working capital needs for farm operations**

In absolute terms, as farm size increases, so do the needs for working capital. However, farm input prices and land costs have increased resulting in a per-acre increase in working capital needs. For example, in Northern Illinois, nonland operating costs to grow corn increased from \$354 per acre in 2007 to \$600 per acre in 2013 or almost 70%. Land costs increased from \$149 per acre in 2007 to \$259 in 2013 or a 74% increase (Schnitkey).

One implication for lenders is simply the increased need for working capital and potential loans. The second is that as the working capital needs increase, smaller-community banks may exceed lending limits and need to partner with others to continue to service these farmers

(Ellinger 2012). A third implication is the increased challenge for young and beginning farmers to acquire financial capital to compete.

### **Risk management tools and analysis are becoming more complex**

As the structure of agriculture changes, the nature of risks has changed, leading to the need for risk management solutions. An increasing menu of risk management tools are available to farm producers. Federal commodity programs, alternative crop insurance products, introductions of and changes in use of grain marketing contracts, and changes and innovations in farmland rental arrangements have complicated the risk profiles of customers. Lenders will need to have considerable expertise to evaluate the portfolio of tools used by customers and identify credit risks that result.

The increase in risk management tools also presents opportunities for agricultural lenders. Some of these tools can be products marketed to clients. Financial and human capital resources may be needed to research, develop and market new and innovative risk-management products.

### **Implications and Conclusions**

Consolidations in the financial service sector have been the interest of regulators and the research community for decades. Factors motivating mergers have been increases in efficiencies, economies of scale and scope, improved diversification and market power. Opponents of consolidation suggest that larger institutions might impose more restrictions on their lending officers, making it more difficult for smaller, less profitable farmers to receive credit. Supporters of consolidation suggest larger organizations may improve service to rural areas and farmers. Larger organizations may have the capital and stability to offer a broader range of services, and the reach to assume more and riskier loans in the market due to increased diversification opportunities. Regulators often have concerns regarding anti-trust, changes in community and mission-related activities, and capital adequacy.

I have been involved in two specific studies that evaluated changes in agricultural lending, capital and deposit flows of commercial banks after merger (Ellinger, 1992, Wozek). Both studies concluded that the agricultural loan ratio was not adversely affected by acquisitions. Some negative impacts on the equity to asset ratio and positive impacts on loan to deposit ratio were detected.

I have presented some historical information on the primary trends that have occurred in commercial agriculture. Looking to the past is not always the best forecast of future events. Is this why our windshield is larger than our rearview mirror? I realize the difficult challenge is to look forward and evaluate potential implications of consolidation in the System.

Following are 10 key issues I think will be important to consider as FCA evaluates mergers.

1. A growing segment of producers is becoming larger and more complex. Can your institutions meet the needs of these producers? Is their enough expertise to understand and measure the business and financial risks of these clients? Can you compete effectively with competitors for this business segment?
2. If your institutions get larger, will there be interest by institutions and regulatory oversight to continue mission-related activities?
3. Would larger institutions have economies of scale and interest to develop departments and expertise for a growing segment of small, local food farmers?
4. Should specialized services/departments be at the bank or association level? What serves the client most effectively?
5. How will “big data” impact your clients and your business? Do you have the platforms and infrastructure to manage the data and information needs of your customers?
6. Do you have the critical communication channels and infrastructure to meet the demands of your customers? Should this be at the bank or association level? What serves the clients most effectively?
7. As concentration risk increases, how do associations efficiently diversify portfolios?
8. Do institutions have the R&D resources to develop new and innovative products for your clients?
9. How do you develop, train and retain talent in your organization? Are there identifiable career paths?
10. How do you assure outstanding customer service as organizational structure changes?

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**Table 1. Proportion of Cash Receipts: Top 3 Commodities, Selected Midwest States.**

	2004	2012
	%	%
Illinois	83.4	88.9
Indiana	58.8	76.1
Iowa	74.4	80.0
Kansas	79.9	78.7
Michigan	48.4	56.0
Minnesota	53.1	65.8
Missouri	53.2	60.7
Nebraska	85.1	89.6
North Dakota	57.5	61.9
Ohio	55.0	67.2
South Dakota	69.9	74.0

Source: Economics Research Service, USDA Farm Income and Wealth Statistics.

<http://www.ers.usda.gov/data-products/farm-income-and-wealth-statistics/cash-receipts-by-commodity.aspx>

**Table 2. Proportion of Farm Income by Economic Class, 2004 and 2012.**

	Farm Economic Class (Total Farm Sales \$000)				
	> 1,000	500-1,000	250-500	100-250	< 100
	% of Gross Cash Income				
US All Farms 2004	42%	14%	15%	14%	15%
US All Farms 2012	57%	14%	11%	8%	10%
Illinois 2004	35%	17%	19%	17%	11%
Illinois 2012	47%	23%	15%	9%	6%
Iowa 2004	43%	13%	19%	13%	13%
Iowa 2012	49%	17%	15%	10%	9%
Kansas 2004	56%	7%	13%	11%	12%
Kansas 2012	48%	15%	11%	10%	15%
Minnesota 2004	26%	19%	20%	21%	14%
Minnesota 2012	53%	16%	14%	9%	7%
Missouri 2004	16%	6%	14%	32%	32%
Missouri 2012	45%	18%	10%	10%	16%
Nebraska 2004	41%	15%	15%	16%	13%
Nebraska 2012	59%	18%	12%	7%	4%
Wisconsin 2004	28%	13%	19%	24%	15%
Wisconsin 2012	47%	12%	18%	14%	9%

Source: Economic Research Service (USDA), ARMS Financial and Crop Production Practices: Farm Structure and Finance, Tailored reports (data compiled by author)

[http://www.ers.usda.gov/Data/ARMS/app/default.aspx?survey\\_abb=FINANCE](http://www.ers.usda.gov/Data/ARMS/app/default.aspx?survey_abb=FINANCE)