

Farm Structure and Finance Considerations

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Chairperson Jill Long-Thompson, Kenneth Spearman and Leland Strom, it is an honor to be able to share my views on farm structure and finance considerations as the Farm Credit Administration considers the implications of bank consolidation for U.S. agriculture and rural communities. I would first like to thank Steve Gabriel for this invitation to participate. I have known Steve professionally for decades and have the greatest respect for his financial expertise. Similarly, it is an honor to share this panel with two distinguished experts I have long admired.

I retired last month from the Economic Research Service after nearly 36 years of service. One early lesson I learned as an economist contributing to official financial reports is to never to go beyond what the data can support. Hence, and in consultation with my fellow panel members, I will focus my comments today on the financial performance of the farm sector and what we know about farm finance issues as they relate to structural differences across the U.S. farming sector. I am sure you would agree that such an understanding is a prerequisite to assessing the complex question of how bank consolidation might affect farmers.

Current Financial Situation of the Farm Sector

The ERS, USDA has a long history of producing farm sector-level income and balance sheet estimates that are used by many private and public sector decision makers and analysts to provide an overall picture of the financial health of the sector (USDA, ERS, 2014). The 2013 forecast of net farm income of the sector is \$130.5 billion. In real terms, this is the highest level since 1973. On February 11th, USDA released its first forecast of net farm income for 2014, at \$95.8 billion. While a 27% decline over 2013, the expected 2014 level is still the 7th highest net farm income in real terms since 1973. Net cash farm income, the companion to the net farm income indicator, excludes the noncash gross income items (like change in inventories) and expenses (like capital consumption). Net farm income and net cash income often have minor different year-to-year changes but move in the same general direction. The projected 2014 net cash income of \$101.9 billion is 22% below the 2014 level. This lower rate of decline than for net farm income is largely due to about \$6 billion in sales of carryover stocks from 2013. Looking towards the future, the new farm legislation's increased reliance on taxpayer-subsidized crop insurance may bring a greater counter-cyclical influence from farm programs, in spite of softening in some commodity prices. A challenge to producers will continue to be carefully managing complex risks and production costs.

As I am sure everyone here is aware, the farm sector balance sheet is also quite strong. Farm land values were last reported by NASS in August (USDA, NASS, 2013). On average, the per-acre value of land and buildings in the 48-States was \$2,900, up 9% from 2012. Of course, land values varied significantly across the country with the Corn Belt averaging \$6,400 per acre and the Northern Plains experiencing the highest rise per acre of 23%. There are indications that the rise in land values may be at a turning point. The Federal Reserve Bank of Kansas City, Omaha Branch's survey of bankers for the 10th District found that bankers reported that in spite of less

land being on the market, cropland value gains slowed in the 4th quarter of 2013 (Kauffman and Aikers, 2013).

Land values dominate total assets, accounting for 81% in 2014. Though debt-to-asset ratios continue to decline, sector debt is still increasing. From 2013 to 2014 the increase in debt was 2.3%, compared to the 2.4% increase in total sector assets. Recent years prior to 2013, saw the value of assets rising much faster than the rise in debt. Though many observers expect land prices to moderate and even decline in some regions, no one expects the sector will experience the types of financial stress of the 1980s because of relative low debt levels for the majority of producers. Looking to the future, the increasing reliance of the sector on crop insurance will bring lower gross revenue risk, of importance to lenders as well as producers. It remains to be seen how producers will respond to this lower revenue risk. In a recent article, Ifft, Kuethe, and Morehart (2013) argued that crop insurance may lead to greater use of debt as producers focus on managing an optimal level of risk (i.e., according to risk balancing theory (Gabriel and Baker, 1980)), balancing financial risk with production risk. Indeed, the authors found that farmers participating in crop insurance in 2011 had a higher level of default risk than those that did not.

Of special interest to this group, is the trend in debt by lender (Figure 1). Farm Credit System debt represented \$122 billion of the \$300 billion of sector debt reported in the ERS sector accounts in 2012. (ERS does not forecast debt by lender.) The FCS share is 41% of sector total debt, comparable to the 40% of farm debt held by commercial banks. The farm debt shares of FCS and commercial banks have been roughly on par since 2008. Before that time, the last year the FCS share of farm debt exceeded the share held by commercial banks was 1986. From 1993 to 2000, the difference between commercial banks' share of debt and the FCS' share ranged from 15 to 17%. Over the last three decades, the USDA, Farm Service Agency's (FSA's) share of debt has slowly declined to as little as 2% in 2012. Debt held by all other lenders, such as individuals and life insurance companies, has exhibited more variability over the period, as this miscellaneous group of lenders change their role in the market.¹

Structural and Distributional Issues

Early in my career as I was focused on the economically disadvantaged in rural areas, I puzzled over the disconnect between the relatively rosy situation portrayed by sector level farm income estimates and the perception, supported by a long-standing ERS time series, that the average income of farmers was low relative to U.S. households. A logical answer relates to distributional issues, but a lack of farm-level data prevented further exploration. A positive outcome of the farm financial crises of the 1980s was the destruction of the institutional roadblock that prevented economists in ERS from having access to farm-level survey data collected by USDA's statistical agency, now called NASS (Gardner, Goodwin, and Ahearn). Under the leadership (on the ERS side) of John Lee and Jim Johnson, the Farm Costs and Returns Survey was established to collect data for calendar year 1984 and a handful of ERS economists were permitted access to individual farm-level records under the strictest of security conditions--and even under the threat of jail time for confidentiality disclosures. In 1996, I was part of the 4-person ERS-NASS team that merged 2 farm-level surveys to unite the costs and returns data with the environmental data

¹ In part, this variability is due to the challenges in measuring this diverse source of debt. Currently, this category is based on the ARMS. Revisions from 2002 forward reflect the use of a multiple imputation process for missing data.

and rename the farm-level data set, the Agricultural and Resource Management Survey, or ARMS. ARMS is now widely used by select researchers outside of USDA to allow the fullest returns from this investment of public resources. (However, the security restrictions have not only been maintained, but increased over time.) My analysis today will draw on the ARMS data utilized in ERS products as well as the so-called “sector” debt accounts which are largely, though not exclusively, developed from administrative data. ERS and NASS have survey and financial experts dedicated to the team effort required to produce the ARMS data base and the financial statistics. I would be remiss if I didn’t recognize their efforts and the importance of the continued investment in this information source.

I share this institutional history with you now to not only establish my data source but to compare and contrast our ability to understand the current financial situation with lessons learned from the farm crisis of the 1980s, often the reference period for farm financial analysts. The overarching lesson of this experience is the importance of having a farm-level understanding of financial conditions. In 1980, farm sector assets in nominal terms were \$1 trillion and debt was \$162 billion. As assets started to decline and debt rose in 1981, USDA was heavily criticized for not anticipating and being able to contribute significant insights to the problems. Though most farms likely saw an erosion in their net worth, the USDA was not in a position to identify the share of farms that were experiencing significant financial difficulty. Not until 1985, after losing 40% of the sector’s 1980 real value of assets, was ERS able to report the share of farms in a vulnerable position, i.e., negative cash flows and debt-to-asset ratios exceeding 0.40 (USDA, ERS, 1985). It was also this time that ERS was able to highlight the importance of off-farm income as an important source of financial security for many farm households (Ahearn, Johnson, and Strickland, 1985). The “average” farm household today earns 80-90% of its household income, depending on the year, from off-farm sources and more than two-thirds have a household member earning income from off the farm. ERS also releases financial indicators for a subset of farms, termed farm businesses, who have gross sales of \$350,000 or more or whose principal operator has farming as a major occupation (USDA, ERS, 2014). In addition, ERS regularly releases a Congressionally-mandated report on farm structure as well as insightful special topic reports on farm structure. For example, see Hoppe and MacDonald (2013) and MacDonald, Korb, and Hoppe (2013).

Use of Debt. In a 2009 report, Harris et al. reported that in 1986, 60% of farms used debt, compared to 31% in 2007. Debt repayment capacity utilization had also dropped during the period, as producers and lenders became more conservative in their financial leverage decisions. In 2012, 27% of producers used debt. Harris, et al. (2009) also reported that, while the majority of farms used a variety of credit sources, 72,028 farms used only FCS loans as a credit source, compared to more than 300,000 farms using only commercial banks as a source of credit. Commercial banks were much more likely to be the only source of credit for small farms, 43% were under \$10,000 in sales, compared to 29% for FCS only loans. In 2012, whether a farm had more than one lender or not, 28% of FCS borrowers had more than \$500,000 in gross sales, compared to 14% of commercial bank borrowers.

The structure of agriculture varies considerable by region, and, of course, this implies different credit needs among the farm population. It also implies differing concentrations of debt by farm size. The FCB of TX and the AgFirst, FCB serve a population with a higher share of small farmers, in contrast to AgriBank, FCB and CoBank, ACB. For example, in 2012, the region of

the FCB of TX had 71% of farms with sales under \$10,000 and 26% of its loans are held by these farms. In contrast, 49% of the debt held by farms in CoBank, ACB's region was held by the 3% of farms with \$1,000,000 or more in gross sales. AgriBank's region has the lowest share of beginning farmers among the regions.

Young and Beginning Farmers. At least since the 1992 Farm Bill, policy makers have expressed concern about the aging of the farm operator population. As a group, U.S. principal farm operators are older than the typical U.S. household head. In 2011, more than 30 percent of principal farm operators were age 65 or older. One reason for the advanced age structure of farmers is the farm's status as the family home; nearly 20 percent of farm operators report they are retired. The policy concern about an aging farmer workforce has translated into programs and policies directed at beginning farmers, or those with 10 years or less of experience. Unlike the FCS's Congressional mandate to serve young, beginning, and small (YBS) farmers the USDA's mandate is not focused specifically on young farmers. What is less well-understood than the advancing age of farmers is that the majority of beginning farmers are not young farmers. Middle-aged, and even older, farmers enter farming for a variety of reasons, such as the need to work off the farm to accumulate capital for entry into farming, waiting for the older generation (who is living longer) to transition out of farming, and as a lifestyle destination while working off the farm or retiring.

The Agricultural Act of 2014 has several important credit provisions targeting beginning farmers (and socially disadvantaged farmers), including priority lending in FSA's Direct and Guaranteed Farm Ownership and Operating Loan programs, a permanent program for FSA's Microloan Program, and lower interest rates for Joint Financing Loans (which brings together farmers, USDA, and private lenders). The 2014 Act also gave USDA more flexibility in determining what constitutes farm management experience in qualifying a prospective borrower for farm ownership loans. Since the 2008 Act, beginning farmer groups were most vocal about the need to allow relevant experiences to substitute for farm management experience, as well as the need for microloans. USDA's pilot microloan program was very popular, especially with small farmers, allowing loans up to \$35,000 (Escalante, Ferrer, and Wang, 2013).

The challenge for a lending institution, as well as policy makers, is to understand how credit needs of young beginning farmers might differ from credit needs of middle-aged or senior beginning farmers. To pursue this question a bit further, next I would like to share with you the findings from an ongoing collaboration with Dr. Ani Katchova of the University of Kentucky. In essence, we are evaluating the interplay of two dynamics: the dynamics of entry into farming and the life-cycle of wealth accumulation. First, we identified the individual farms that were beginning farmers in 1997 and linked their records to their 2002 and 2007 census reports, i.e., these are the 1997 beginners who survived in farming. Secondly, we examined how they changed their farm size over their life-cycle. We found that after older beginning farmers start their farm businesses, they generally did not expand their operation, in contrast to young beginning farmers. These results imply that older beginning farmers may need capital to start their businesses at an "optimal size" but no further capital is needed for subsequent expansion of the farm business. In contrast, young beginning farmers rapidly expand their farm operations after entering agriculture. These findings may inform more effective approaches for targeting loan programs to young and beginning farmers. This finding is also consistent with recent work on the motivations of nonfarm small business owners which found that, contrary to conventional

economic models and the view of policy makers, most have no desire to grow their firm (Hurst and Pugsley, 2011).

Rural Capital Markets

Although it varies significantly by geographic region, as the farm sector has been enjoying favorable financial conditions, rural nonfarm conditions have been less positive during and since the period of the 2008 recession. For example, the number of Community Reinvestment Act loans declined sharply between 2007 and 2010 (Rupasingha, 2013). Most of this decline came from nonfarm business loans due to uncertainty and limited credit being offered. It is understood that as capital flows out of rural communities, labor follows (Kilkenny and Jolly, 2005). And loans to rural nonfarm businesses are becoming increasingly important as the share of self-employed residents relative to those who hold wage and salary jobs has been increasing in rural areas and is higher than in urban areas. Because the majority of farm households report receiving the majority of their household income and their health insurance from off-farm jobs and businesses, before concluding, I would like to make a few observations about rural trends. First, rural depopulation continues to be a policy concern in many areas. Nearly half of the nonmetropolitan counties lost population through net outmigration between 1988 and 2008; for over 700 counties, this loss exceeded 10 percent (McGranahan, Cromartie, and Wojan, 2010). Rural poverty is not the main driver behind out-migration. One factor is the loss of young people, seeking higher education and career opportunities. Much of the depopulation in rural areas is in areas traditionally classified as being farming-dependent. These areas have a much smaller share of small farms simply because there are no off-farm jobs or the rural population to support thriving nonfarm businesses. Hence, the major point to be made in the context of our issue here today is that the lack of opportunities in many rural areas affects the local farm structure, which in turn is likely to have implications on the effects of bank consolidation. In some areas where poverty is a factor, such as with high proportions of limited resource farmers, the Secretary of Agriculture has started a small initiative (i.e., the Strike Force) to address the community development needs by better coordinating across the USDA programs to target these areas.

Concluding Comments

I would like to conclude by mentioning a few pending questions that may become significant drivers in the future of agriculture and, therefore, have implications for how the FCS meets the needs of its potential customers.

- Regarding the continuation of the long trend towards increased concentration of production, do the lending practices of the FCS' contribute to that trend? While small and mid-sized farms account for a relatively small share of production, they control a disproportionate share of land and affect the quality of our rural communities. How will consolidation affect how the FCS balances multiple objectives?
- How will large-scale agriculture manage the risks of concentration, such as development of antibiotic resistance, and the growing consumer demands for information on how food is produced, such as labeling of GMOs.
- How will large firms respond to the tradition in agriculture of reporting characteristics about their operation in an era of concerns about "big data?" Large-scale agriculture is quickly moving to real time monitoring and adjustment to agronomic conditions,

facilitated by advanced technologies. There is an ongoing and growing debate about who owns these data.

- Not unrelated to the growing concentration in production, is the growth in consumer demand for local foods, especially from small farms. Currently, most local food farms do not make a profit, but there will likely be innovative producers who learn to expand to a more economically efficient scale while still being able to market as “local.” The interest of major retailers, like Walmart who has a goal of 9% local produce by 2015 in its retail stores, is a sign that local food production is well-positioned to grow in the near future. With its regional focus, the FCS may be able to play a role in financing development of local foods supply chain infrastructure. How will potential consolidation affect those financing choices?

Again thank you for this opportunity to participate in this panel presentation.

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Figure 1. Trends in farm sector debt, nominal billions

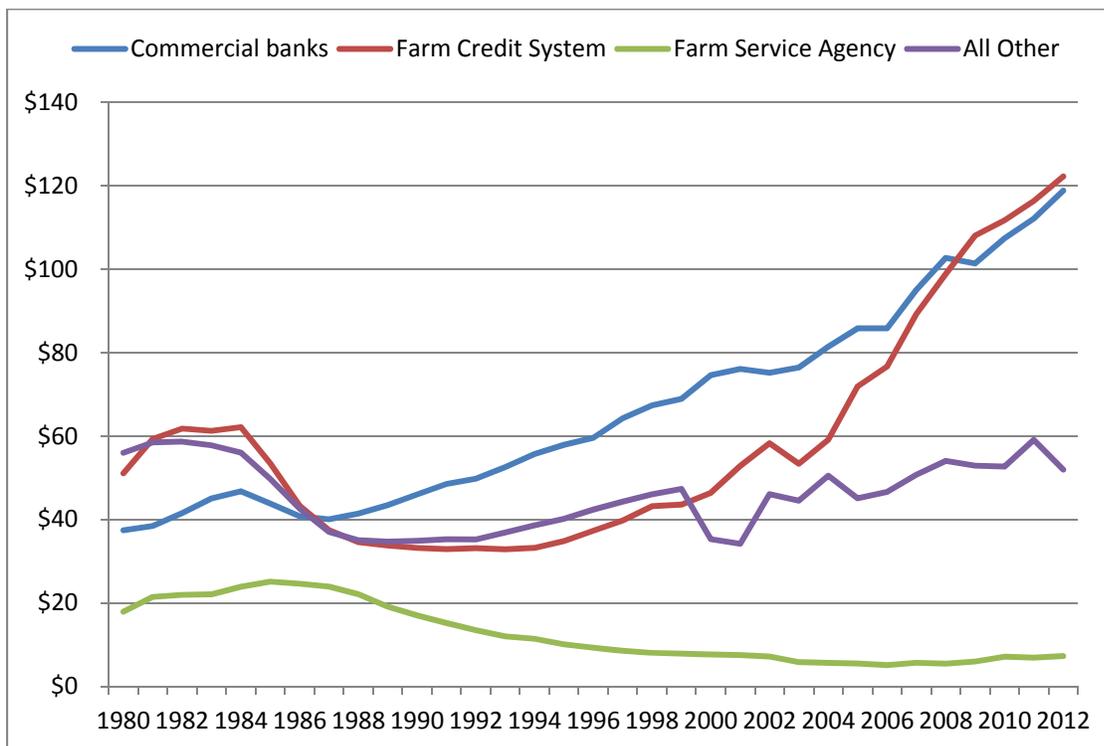


Table --Distribution of Debt by Farm Size and Region, 2012

Item	Gross sales of farm						All
	No production	\$1 to \$10,000	\$10,000 to \$99,999	\$100,000 to \$499,999	\$500,000 to \$999,999	\$1,000,000 or more	
CoBank, ACB							
Number of farms	112,933	200,774	131,912	59,726	13,110	17,772	536,227
Percent of all farms	21	37	25	11	2	3	100
Percent of total value of production	NA	1	5	14	8	71	100
Percent of all debt	5	9	10	18	8	49	100
Share of farms beginning	27	20	14	9	NA	NA	18
AgriBank, FCB							
Number of farms	81,847	347,351	221,336	139,758	41,687	38,230	870,209
Percent of all farms	9	40	25	16	5	4	100
Percent of total value of production	NA	1	6	21	17	54	100
Percent of all debt	2	8	11	25	15	38	100
Share of farms beginning	21	19	12	10	NA	NA	15
AgFirst, FCB							
Number of farms	90,104	203,669	84,202	31,003	10,628	15,095	434,702
Percent of all farms	21	47	19	7	2	3	100
Percent of total value of production	NA	2	5	13	14	66	100
Percent of all debt	6	17	9	18	11	38	100
Share of farms beginning	22	19	14	NA	NA	NA	18
Farm Credit Bank of Texas							
Number of farms	96,986	230,211	98,225	21,265	6,464	9,147	462,300
Percent of all farms	21	50	21	5	1	2	100
Percent of total value of production	NA	2	6	11	11	69	100
Percent of all debt	6	20	19	17	6	32	100
Share of farms beginning	26	20	NA	NA	NA	NA	19

Source: 2012 USDA, ARMS. NA= Not available. NM, AL, MS, and LA are included in both regions in which they are served. Excludes AL and HI.