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**FARM CREDIT SYSTEM STRUCTURE AND PERFORMANCE: WHAT IS THE EVIDENCE  
ON ASSOCIATION DIVERSITY OR UNIFORMITY?**

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# **Farm Credit System Structure and Performance: What Is The Evidence On Association Diversity Or Uniformity?<sup>1</sup>**

By

Marvin Duncan and Charles Dodson<sup>2</sup>

## **Introduction**

The Farm Credit System (FCS) is a cooperatively organized set of lending institutions chartered under Congressional legislation that grants the FCS status as a government sponsored entity (GSE), empowered to raise lendable funds by selling debt instruments to the investing public in the government agency market. The FCS was created to ensure the adequate provision of appropriate credit to all U. S. farmers, cooperatively organized agri-business, and rural housing. As a consequence, the FCS supplies credit everywhere across the United States and Puerto Rico. The FCS has, for more than a decade, offered consolidated Farm Credit System securities, rather than individual bank group securities, for sale in the agency market. These are collateralized securities backed by the assets of the entire FCS. As with other GSE issuers, such as Fannie Mae or Freddie Mac, the FCS securities sold to investors are not obligations of the Federal government.

During the mid 1980s, a number of FCS district banks and their related associations experienced severe financial stress as a result of a number of factors, including the financial stress experienced by its farmer borrowers. As a result, the U. S. Congress passed legislation aimed at shoring up the financially troubled FCS, to assure that it could continue to provide appropriate credit to farmers at reasonable costs, across the Nation.

During the Congressional debates on legislative proposals, the benefits of an cooperative structure with primary leadership emanating from individual lending associations were compared with one where district banks exercised primary leadership. Ultimately, Congress decided to strengthen the authority of individual lending associations. This decision resulted from the Congress's expressed interest in greater local decision making authority for associations and their farmer borrowers -- who also owned the associations.

Despite the greater emphasis on local control, many assume the FCS functions like an integrated system, with changes in authorities quickly reflected in changed loan activity by all the direct lending associations. FCS's trade association, Farm Credit Council (FCC), probably

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reinforces that impression as it speaks on behalf of the entire FCS. The sale of consolidated FCS securities in the agency market further reinforces this impression.

Consequently, ten years after the last major rescue legislation by the U. S. Congress, and in light of calls by the FCS for broader charter authority, it is useful to ask what the structure and performance of the FCS lending associations indicate about uniformity of association business practices and performance. Does the FCS function at the direct lending association level as a unified system, or do associations function more like independent local lending institutions under the policy direction of their own boards of directors? Do direct lending associations follow uniform practices and strategies, or are they tied to the rest of the FCS primarily through the Farm Credit Banks (FCB) and Banks for Cooperatives (BC) sale of consolidated FCS debt instruments to raise lendable funds. How direct is the impact of public policy making on the lending activities of these associations? And, what is the factual evidence on the structure, capitalization, and financial performance data of direct lending associations? To what extent do direct lending associations work with small and limited resource producers? To what extent have the associations used new lending authority, and how have associations dealt with risk that comes from borrower concentration in their loan portfolios? This study is intended to provide insights into these issues, utilizing the annual reports of FCS direct lending associations, Farm Credit Administration (FCA) Call Report data, and the USDA Farm Cost and Returns Survey data.

### **Methodology and Results**

This paper assembles and analyzes information from a broad range of structural and operational data presented by FCS direct lending associations from across the United States in their annual reports to stockholders. Annual reports to stockholders for the years 1995 and 1996 were collected from the 157 FCS lending associations which had direct lending authority in 1996<sup>3</sup>. This paper reports preliminary findings of the investigation of association structure and performance. It also suggests a number of policy implications. Further analysis using all six years of data, although beyond the scope of this paper, can be expected to yield more definitive results.

Farm-level financial data were provided by USDA's Farm Cost and Returns Survey (FCRS). This data was used to compare the characteristics of FCS borrowers with that of bank borrowers and to evaluate differences in clientele served across FCS districts. The FCRS is a multiple frame stratified random sampling survey that provides farm expense, income, and balance sheet estimates along with operator characteristics for a calendar year. Estimates discussed represent year end data for 1995. Data were collected on each loan owed by a farm business. Included was year-end balance, interest rate, year loan was acquired, lender, term, and loan type (real estate, non real estate, or operating loans).

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<sup>3</sup>In addition, there were 60 Federal Land Bank Associations (FLBA) that acted as agents for direct mortgage lending for a district FCB. The associations are not considered direct lending associations since they do not hold portfolios of loans.

## Structure and Size Issues

Legislation passed by the U. S. Congress in the mid 1980s provided FCS with incentives to restructure itself in a way that increased the local decision authority. Two new association structures were created, the Agricultural Credit Association (ACA) with authority to lend across the entire maturity spectrum and to hold such loans in its own portfolio, and the Federal Land

**Table 1. Size and Structure of Farm Credit Direct Lending Associations (DLAs), by FCS district, December. 31, 1996.**

	FCB District							All DLAs
	CoBank	AgFirst	Agribank	Wichita	Texas	Western	AgAmerica	
-----Number of associations-----								
Lending association type:								
PCA	0	1	19	17	16	11	1	65
ACA	5	39	11	0	0	4	1	60
FLCA	0	0	19	0	0	12	1	32
Total	5	40	49	17	16	27	3	157
Jointly managed PCA-FLCA \1	0	0	36	0	0	18	2	56
Associations by size (total assets):								
Under 50 million	0	0	2	12	6	1	0	21
\$ 50 million -100 million	0	3	10	4	10	8	0	35
\$100 - 250 million	2	25	24	1	0	11	0	63
\$250 million - 1 billion	3	12	12	0	0	7	0	34
Over 1 billion	0	0	1	0	0	0	3	4
-----(\$000 of loans/association)-----								
Association size (loans):								
Average	352,061	203,940	249,469	41,051	54,578	176,393	1,862,133	216,955
Smallest	108,976	59,686	7,400	16,969	14,964	11,435	852,047	7,400
Largest	760,802	430,811	3,795,904	100,118	91,324	598,598	2,951,598	3,795,904
-----Percent-----								
Distribution of district loan vol.								
Association size in assets:								
Under 50 million	0	0	0.5	41	22	0.2	0	2
\$ 50 million -100 million	0	3	6	44	78	9	0	7
\$100 - 250 million	18	53	29	15	0	36	0	29
\$250 million - 1 billion	82	44	33	0	0	55	0	34
Over 1 billion	0	0	31	0	0	0	100	28
-----Number per association-----								
Voting stockholders \2	5,295	2,019	2,936	329	554	635	17,751	2,140
-----Dollars (\$)-----								
Loans/ stockholder \2	66,489	101,010	84,969	124,775	98,516	277,784	104,903	101,381

1\ Reflects total number of associations\ boards of directors.

2\ Obtained from June 1996 Call Reports

Source: Annual stockholder reports of associations, 1996.

**Table 2. Capitalization of Farm Credit Direct Lending Associations (DLAs), by FCS District, December 31, 1996.**

	FCB District							All DLAs
	CoBank	AgFirst	Agribank	Wichita	Texas	Western	AgAmerica	
Permanent capital ratio \1	17.8	18.7	14.8	24.8	22.7	14.9	13.9	16.2
-----Percent-----								
District loan volume								
Permanent capital ratio:								
Under 10%	0	0	0	0	0	0	0	0
11-14.9%	0	38	71	0	0	56	84	56
15-19.9%	100	50	26	26	36	38	16	36
20% or more	0	11	4	74	64	6	0	8
Distribution of capital								
Type of capital:								
Capital stock	21	15	18	25	33	23	15	17
Allocated surplus	2	31	0	1	4	1	0	9
Unallocated surplus	77	53	82	74	63	76	85	74
-----Number of associations-----								
Permanent capital ratio:								
Under 10%	0	0	0	0	0	0	0	0
11-14.9%	0	13	22	0	0	8	2	45
15-19.9%	5	20	20	4	6	14	1	70
20% or more	0	7	7	13	10	5	0	42
Associations allocating capital	2	32	1	1	6	3	0	45

1\ Weighted by risk weighted assets

Source: Annual stockholder reports of associations, 1996.

Credit Association (FLCA) with authority to make and hold mortgage loans in its portfolio. Greater local control was viewed by policy makers as consistent with increased local accountability. Since that time, many mergers have occurred among the Production Credit Associations (PCA) and Federal Land Bank Associations (FLBA). Of the 157 FCS direct lending associations in 1996, 60 were structured as ACAs, with authority to lend across the maturity spectrum (Table 1). All of FCSs short and intermediate term farm loans are held by the ACAs and PCAs. Farm mortgage loans made within an ACA or FLCA territory, but held by the FCB, are in the process of being transferred to that association. Moreover, 28 PCAs and 28 FLCAs are paired in jointly managed relationships. Only the Texas and Wichita FCB districts have maintained the more 'traditional' structure which existed prior to 1985. These districts are characterized by smaller PCAs and FLBAs with primary leadership and policy making authority at the FCB.

There remains a great deal of variability in association size and the number of association borrowers across the System. The largest direct lending association, Mid-America ACA, held a

portfolio of \$3,795,904,000 and serves four states, while the smallest, Delta PCA, had a portfolio of only \$7,400,000 and serves five Arkansas counties (Table 1). In the AgAmerica FCB district, direct lending associations had an average of 17,751 voting stockholders compared to only 329 members per association in the Wichita FCB district. The smallest direct lending association, Delta, had only 115 stockholders. When categorized by size, AgAmerica has three, or all its associations in the over \$1 billion size category. Associations in the Texas and Wichita FCB districts are, with one exception, all \$100 million in size or smaller. Smaller associations make only minor contributions to total FCS farm loan volume. Only 9 percent of the assets of direct lending associations are held by associations of \$100 million in size or smaller. And, 28 percent of the assets of direct lending associations were held by associations with loan portfolios of over \$1 billion.

Differences in size among associations are partially the result of actions taken during the 1980s period of financial stress, in order to shore up association capital positions and to gain operating efficiency. The Mid-America ACA, South-Atlantic PCA, Northwest ACA, and Associations of the Midlands were created, in large part, in an effort to consolidate capital within a district into one association. Only the South Atlantic PCA, which was located in the AgFirst district, was later dissolved when financial conditions improved. As a consequence of this realignment, associations within the AgFirst district display homogeneity of structure and size. In the Agribank and Western FCB districts, associations appear to be slowly evolving toward sizes that permit them to achieve cost effective credit service delivery and also toward a more uniform structure as ACAs or jointly managed PCA-FLBCs.

### **Association Capital**

Direct lending associations were well capitalized, with an average permanent capital ratio of 16.2 percent (Table 2). The lowest association permanent capital ratio was 11.4 percent. Direct lending associations in the Texas and Wichita FCB districts reported the highest average capital ratios, with average ratios of 22.7 and 24.8 percent, respectively. Direct lending associations in the Agribank, Western, and AgAmerica FCB districts reported the lowest average capitalization, but still strong at 14.8, 14.9, and 13.9 percent, respectively.

Most direct lending associations currently primarily rely on retained earnings (profits) for capitalization. However, in the Texas FCB district direct lending associations relied more heavily on sales of stock sold to borrowers, which made up 33 percent of total capital. The proportion of stock sold to borrowers ranged down to 15 percent in the AgAmerica FCB district. Nearly all of the retained earnings were classified as unallocated surplus in the direct lending associations.<sup>4</sup> Only in the AgFirst FCB district did associations allocate a notable share of retained earnings.

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<sup>4</sup> Unallocated surplus represents retained earnings of a cooperative which have not been allocated to the accounts of individual borrowers. Allocated surplus represents cooperative earnings which have been allocated to the accounts of individual borrowers but not yet paid to them.

**Table 3. Capitalization of Farm Credit Direct Lending Associations, by total assets, December 31, 1996.**

	Association Size (assets)				
	Under \$50 Million	\$50-99 Million	\$100-249 Million	\$250-999 Million	\$1 Billion or more
Permanent capital ratio <sup>1\</sup>	22.8	20.3	17.4	15.4	14.2
-----Percent-----					
Distribution of loan volume					
Permanent capital ratio:					
Under 10%	0	0	0	0	0
11-14.9%	0	7	33	60	92
15-19.9%	24	45	59	37	8
20% or more	76	48	8	3	0
Distribution of capital					
Type of capital:					
Capital stock	33	25	16	18	2
Allocated surplus	2	3	16	9	0
Unallocated surplus	65	72	68	73	98
-----Number of associations-----					
Associations by					
Permanent capital ratio					
Under 10%	0	0	0	0	0
11-14.9%	0	2	20	19	4
15-19.9%	5	16	36	12	1
20% or more	16	17	7	2	0
Associations allocating capital	2	9	25	10	0
Loans/ stockholder <sup>2\</sup>	88,826	82,301	102,558	108,879	98,657

<sup>1\</sup> Weighted by risk weighted assets

<sup>2\</sup> June 1996 Call Report

Source: Annual stockholder reports of associations, 1996.

AgFirst associations allocated an average of 31 percent in of total surplus to the accounts of individual borrowers compared to 4 percent or less for other districts.

Smaller associations (under \$50 million) were more highly capitalized but accounted for only 2 percent of all direct lending association loan volume (Table 1; Table 3). The higher capital levels probably reflect efforts to lower costs for lendable funds by using retained earnings to support lending activity. Retained earnings have no acquisition cost to the association, and can be used to support part of an associations lending activity. Also, smaller associations tended to rely more heavily on borrower stock for capitalization (Table 2). Associations with less than \$50 million in assets received one-third of their capital from sales of stock to borrowers, as compared to associations with over \$1 billion in assets where just two percent of their capital came from sales of stock to borrowers.

FCS direct lending associations have performed remarkably well in rebuilding capital



depleted during the financial stress of the 1980s. Direct lending associations, both across the different organizational structures and districts, have dramatically increased their risk adjusted permanent capital ratios. Capital requirements for FCS institutions are established based upon the risk particular assets hold for the lender. Permanent capital is the capital that meets a regulatory definition of capital that will be available in the institution to bear risk that it might face in the conduct of its business. Patronage dividends from district FCBs and CoBank to their direct lending associations also have materially hastened the pace at which the associations have accumulated permanent capital. The greater reliance on retained earnings (or surplus) for building capital has been motivated by an FCS decision to phase out of meaningful levels of stock purchases by borrower/members. However, permanent capital ratios have risen so high, over 22 percent among lending associations in the Texas and nearly 25 percent in the Wichita FCB Districts, that they can be questioned because of the resultant higher interest cost to borrowers and weak rates of return to stockholder equity. Since associations can use retained earnings to fund lending activity, highly capitalized associations could reduce borrower rates without jeopardizing their capital ratios.

### **Association Operating Performance**

Profitability across direct lending associations varied substantially as measured by returns on assets (Table 4). Rates of return on equity also varied substantially across FCB districts, from 3.8 percent for Texas associations to 14.4 percent for AgAmerica associations, and averaging 10.8 percent across all FCS direct lending associations. The lower rates of return earned by direct lending associations in the Wichita and Texas FCB districts were inversely related to the very high association capitalization found in those districts.

Net interest margins, (net interest income / average earning assets), ranged from under 2.9 percent to 4.6 percent, averaging 3.6 percent, across the direct lending associations. In a number of cases, wide margins occurred in associations with high capitalization rates. Most associations had margins of 3.9 percent or less while 53 associations had margins of 4 percent or more. There were 66 associations with average annual interest rates to borrowers higher than 9 percent. In many cases the higher rates charged by these associations can be explained by a reliance on non real estate loans which generally carry higher rates than real estate loans.

Some of the variation among associations in interest rate margins and profitability can be attributed to unique financial arrangements between FCBs, or CoBank, and their related associations. Some FCBs consistently provided patronage refunds to associations while others did not. AgAmerica's high return on assets (ROA) was largely due to a patronage refund from the FCB to the direct lending associations, amounting to 2.1 percent of earning assets. Inter-district variations in the price of lendable funds to direct lending associations also contributed to differences in margins and ROA. The average cost of funds to associations ranged from 5.8 percent in the Wichita FCB to 7.0 percent in the AgAmerica FCB. One explanation is that FCBs used the interest cost to associations to transfer capital between the FCB and their related associations. This may have been undertaken to assist institutions in meeting capital

requirements.

**Table 4. Profitability of Farm Credit Direct Lending Associations (DLAs), by FCB district, December 31, 1996.**

	FCB District							All DLAs
	CoBank	AgFirst	Agribank	Wichita	Texas	Western	AgAmerica	
	-----Percent-----							
Return on assets	1.5	2.1	1.5	1.2	0.9	1.6	2.4	1.8
Return on equity	7.8	11.7	9.4	4.7	3.8	10.3	14.6	10.4
Net interest margin \1	3.6	3.5	3.4	4.6	4.0	4.4	2.9	3.6
Avg. annual rate on earning assets \2	8.7	9.2	8.6	8.7	8.6	9	9.1	8.9
Salary/earning assets	1.1	1.1	1.1	1.7	1.6	0.9	1.2	1.1
Other op. exp/ earning assets	1.2	0.7	1.0	1.0	1.2	1.0	1.0	0.9
Avg annual cost of all funds \3	5.1	5.7	5.2	4.1	4.6	4.6	6.2	5.3
Avg annual cost of borrowed funds \4	6.0	6.8	6.4	5.8	6.5	5.9	7.0	6.2
Non interest income / earning assets \5	0.44	0.17	0.44	0.2	0.3	0.12	0.19	0.28
FCB patronage refunds/ earning assets	0.55	0.66	0.36	0.08	0.64	0	2.1	0.68
	-----Number of associations-----							
Net interest margins								
Under 3%	0	12	13	0	1	3	2	31
3-3.9%	5	18	32	3	6	8	1	73
4-4.9%	0	9	3	10	8	8	0	38
5% and over	0	1	1	4	1	8	0	15
Associations with avg. annual interest rates : \6								
8 and under	0	1	8	5	4	1	0	19
8.1-9	4	13	32	8	3	10	2	72
9.1-10	1	21	9	3	6	14	1	55
10 and over	0	5	0	1	3	2	0	11

- 1\ Net interest income/average earning assets
- 2\ Includes income on investment securities
- 3\ Average rate on earning assets- net interest margin
- 4\ Interest expense/average outstanding liabilities
- 5\ Excluding patronage refunds from FCB.
- 6\ Includes loans and investments

The average rate of return on earning assets was fairly uniform across districts, at 8.6 to 8.7 percent. The exceptions were AgAmerica, AgFirst, and Western FCB districts where the average rates on earning assets were higher. Adjusting the rate of return in AgFirst to reflect patronage refunds brought its association rates back in line with other districts. The higher rate of return in the AgAmerica district can probably be explained by a greater reliance on mortgage loans, while higher rates in the Western district may reflect a need for higher profits in order to build capital. Some of the Western district associations experienced financial stress during the early 1990s. When adjusted to reflect non interest income, there was even greater uniformity. Thus, it appears that much of the inter district variance in net interest margins was attributable to

factors other than farm loan rates.

**Table 5. Profitability of Farm Credit Direct Lending Associations, by Association Size, December 31, 1996.**

	Association Size (assets)				
	Under \$50 Million	\$50-99 Million	\$100-249 Million	\$250-999 Million	\$1 Billion or more
	-----Percent-----				
Return on assets	0.9	1.5	2.0	1.7	1.6
Return on equity	3.2	6.4	11.0	9.0	8.4
Net interest margin \1	4.8	4.4	3.9	3.7	4.4
Avg annual rate on earning assets \2	9.1	8.7	9.0	8.8	8.8
Salary/earning assets	1.9	1.5	1.1	1.1	1.0
Other op. exp/ earning assets	1.3	1.1	0.9	0.8	0.9
Avg annual cost of funds \3	4.3	4.3	5.0	5.1	4.4
Avg annual cost of borrowed funds \4	6.0	6.1	6.6	6.4	6.8
Non-interest income / earning assets \5	0.13	0.25	0.21	0.31	0.18
FCB patronage refunds/ earning assets	0.25	0.43	0.45	0.39	1.32
	-----Number of associations-----				
Net interest margins	21	35	63	33	5
Under 3%	0	3	14	8	2
3-3.9%	4	17	33	19	3
4-4.9%	10	9	15	5	0
5% and over	7	6	1	1	0
Avg. annual interest rates on earning assets \6					
8 and under	5	5	6	3	0
8.1-9	6	16	29	18	3
9.1-10	6	12	24	11	2
10 and over	4	2	4	1	0
-----					
1\ Net interest income/average earning assets					
2\ Includes income on investment securities					
3\ Average rate on earning assets- net interest margin					
4\ Interest expense/average outstanding liabilities					
5\ Excluded patronage refunds from FCB					
6\ Includes loans and investments					

There also was inter district variation in total costs, with non interest costs ranging from 180 to 280 basis points across associations. Much of this variation was due to differences in association size (Table 5). For associations under \$50 million in size, non interest expenses were 320 basis points. Also costs were higher for associations specializing in making production loans, compared to those making a higher proportion of mortgage loans. That, of course, would be expected because of the greater costs associated with making and administering a production loan portfolio, as compared to a mortgage loan portfolio.

Total expenses in associations in the Texas and Wichita FCB districts were higher, primarily because of the preponderance of smaller PCAs in these districts. But, size differences and types of loans do not explain all the variation. Several of the associations in the AgFirst district, most of which held between \$100 and \$250 million in real estate and non real estate

loans, reported non interest costs of under 150 basis points. Smaller associations reported higher net interest margins, but because of greater non interest cost they did not post markedly higher rates of return on earning assets (Table 5). Wider net interest margins at smaller associations may also be explained by proportionately lower borrowing from their FCB to support their loan portfolio, due to their higher capitalization rates.

Salary costs per dollar of loan volume generally presented a similar picture, declining as association size increases. The implication is that most small associations are less efficient than larger associations, at least to the \$250 million size range and that reductions in interest rates to farmer/ borrowers could be possible if smaller associations were consolidated into larger associations. Put another way, farmer/stockholders' willingness to retain smaller size associations has to be premised on perceived value that offsets the higher interest rates charged by the smaller associations. Over time, one might expect an evolutionary trend toward larger associations, as borrower/stockholder business considerations increasingly outweigh other perceptions of value provided by smaller direct lending associations.

Not all smaller associations were less efficient than larger associations, however. One third of the associations with less than \$50 million in assets had costs, per unit of loan volume, below the average for all direct lending associations. It appeared that these associations were keeping their costs low by focusing on larger loan sizes as indicated by a larger loan volume per stockholder compared to other small associations.

### **Association Loan Portfolios**

A substantial number of direct lending associations posted declines in real estate and non real estate loan volume over the 1994 to 1996 period (Table 6). Forty-one associations posted declines in real estate loan volume, over half of them in the AgFirst FCB district. Twenty-nine associations posted declines in non real estate loan volume, 13 of them in the AgFirst FCB district. Yet, a notable number of associations were experiencing loan growth, especially those specializing in non real estate lending. Eighteen associations posted growth of more than 10 percent in real estate loan volume and 75 associations posted growth of more than 10 percent in non real estate loan volume.

Among the direct lending associations, real estate lending predominated with 53.7 percent of total loans compared to 38.5 percent for non real estate lending. In the CoBank, Agribank, Western, and AgAmerica FCB districts, real estate loan volume exceeded non real estate loan volume while non real estate lending predominated among direct lending associations in the Wichita and Texas FCB districts. Rural housing loans made up only 4 percent of all association loan volume, with only associations in the CoBank, AgFirst, and Texas averaging more than five percent of their loan portfolios in rural housing loans. Processing and marketing loan authority and farm related business authority accounted for only very small proportions of association loan volume, 2 percent and 0.6 percent respectively.

**Table 6. Non real Estate and Real Estate Direct Lending Association Loan Growth and Purpose, by District, 1994-1996.**

	FCB District							All DLAs
	CoBank	AgFirst	Agribank	Wichita	Texas	Western	AgAmerica	
-----Number of direct lending associations-----								
Real estate loan volume:								
No real estate loans	0	1	19	17	14	11	1	63
Declining	3	23	9	0	0	6	0	41
0-10% growth	2	10	14	0	1	6	2	35
10-25% growth	0	3	6	0	0	2	0	11
25% or more growth	0	3	1	0	1	2	0	7
Non real estate loan volume:								
No non real estate loans	0	0	19	0	0	12	1	32
Declining	0	13	5	4	4	3	0	29
0-10% growth	4	3	4	1	6	3	0	21
10-25% growth	0	6	6	4	2	7	1	26
25% or more growth	1	18	15	8	4	2	1	49
Loan purpose:	-----Percent of direct lending association debt /1-----							
Farm real estate	58.9	41.1	56.5	45.9	31.6	56.6	70.5	53.7
Farm non real estate	32.4	43.9	37.9	50.8	61.5	36.5	24.9	38.5
Processing & marketing	0.0	7.0	0.7	0.1	0.1	3.1	0.0	2.0
Farm-related business	0.6	1.2	0.2	0.1	1.4	0.5	0.9	0.6
Rural residence	7.7	6.2	2.9	1.3	5.2	2.7	1.4	4.0
Participations bought	0.6	0.6	1.8	1.8	0.2	0.6	2.3	1.2
Subtotal	100	100	100	100	100	100	100	100
Participations sold	2.1	10.3	3.7	3.9	5.0	1.5	9.2	5.1
Loan status:								
Nonaccrual	1.4	1.2	0.7	0.8	1.0	1.1	1.6	1.1
Restructured	0.4	0.2	0.1	0.0	0.1	0.2	0.6	0.2

\1 Based on 1996 loan volume

Direct lending associations made only very limited use of their ability to buy and sell loan participation to other FCS institutions and to other lenders. Only 1.2 percent of loan volume for all direct lending associations was from participations purchased. Participations sold amounted to 5.1 percent of all direct lending association loan volume. But were higher than average in the AgFirst and AgAmerica FCB districts which reported 10.3 percent and 9.2 percent of loan volume originating from participations. The gap between participations bought and sold, 1.2 versus 5.1 percent of loan volume, suggests that associations are selling participations to non FCS lenders and FCBs rather than to other associations.

Growth in loan volume did not appear to be related to association size (Table 7). In fact, many associations of less than \$100 million in size grew in loan volume by more than 25 percent. Smaller associations appeared more active in rural home lending. Processing and marketing loan activity was dominated by associations in the \$250 - 999 million size range. Associations made

**Table 7. Non real Estate and Real Estate Direct Lending Association Loan Growth and Purpose, by Association size, 1994-1996.**

	Association Size (assets)				
	Under \$50 Million	\$50-99 Million	\$100-249 Million	\$250-999 Million	\$1 Billion or more
	---Number of direct lending associations ---				
	21	35	63	33	5
<b>Real estate loan volume:</b>					
No real estate loans	20	24	16	2	2
Declining	0	5	23	12	0
0-10% growth	0	2	18	11	3
10-25% growth	1	1	2	7	0
25% or more growth	0	3	4	1	0
<b>Non real estate loan volume:</b>					
No non real estate loans	2	6	19	7	1
Declining	5	7	11	4	1
0-10% growth	3	6	6	6	0
10-25% growth	5	7	9	3	2
25% or more growth	6	9	18	13	1
	---Percent of direct lending association debt \1--				
<b>Loan purpose:</b>					
Farm real estate	40.9	48.9	53.7	50.1	69.9
Farm non real estate	51.1	46.8	38.1	39.9	24.4
Processing & marketing	0.1	0.6	1.5	4.8	0.2
Farm-related business	0.4	0.7	0.3	1.0	0.9
Rural residence	5.9	2.4	5.6	3.1	1.2
Participations bought	1.5	0.7	0.8	1.0	3.4
Subtotal	100	100	100	100	100
Participations sold	5.3	2.8	4.3	6.0	8.3
<b>Loan status:</b>					
Nonaccrual	0.9	0.8	1.2	0.8	1.5
Restructured	0.0	0.1	0.3	0.1	0.6

\1 Based on 1996 loan volume

very limited use of authority to restructure troubled loans. While 1.1 percent of all direct lending association loan volume was classified as non accrual, only 0.2 percent of loan volume was comprised of restructured loans. Associations in the Wichita FCB district were least likely to report restructured loans. This may be a consequence of their smaller size, since associations with under \$50 million in assets also tended not to report any restructured loans (Table 7). Overall, the proportion of non accrual loans in the FCS direct lending associations was quite low, ranging from 0.55 percent in Wichita District associations to 1.74 percent in Texas district associations. This represented a dramatic improvement in loan quality from a decade earlier. It reflected both strengthened loan underwriting standards and credit administration procedures by these associations, as well. It may also reflect efforts to target large and better capitalized farmers as prospective borrowers.

The FCS associations also made relatively little use of Farm Service Agency (FSA) loan guarantees. Only slightly over one-fourth of all direct lending associations had more than 5

percent of their farm loans guaranteed by the FSA. (Koenig and Dodson). Again, the low percentages may have resulted from a strategic targeting of larger and better capitalized farmers as prospective borrowers. Some associations have neither a community based service delivery system nor credit products designed for small and low resource borrowers. Thus, it may difficult to profitably serve these market segments.

### Concentration In Loan Portfolio

A continuing source of concern for single sector lenders, such as the FCS, is their capacity to manage the concentration of risk in their loan portfolios. Associations' annual reports indicate that the single commodity concentration was high by commercial banking standards, but declined as association size increased. Fifty-two associations have single commodity group concentrations of over 50 percent (Table 8). If FCS loan volume growth to borrowers with higher than average risk, such as financing large scale confinement livestock facilities, grows, the importance of managing the risk associated with loan concentration will increase.

**Table 8. Many Direct Lending Associations are Highly Specialized.**

	Commodity group					
	Dairy	Cattle/ Lvstk	Cash grains\1	Poultry	Rice	Other \2
	-----Number of associations-----					
Farm loans to one commodity group (%)						
50%-60%	2	7	8	7	2	0
61%-75%	7	2	3	1	0	1
Over 75%	1	4	4	0	0	2

\1 Corn, soybeans, sorghum, wheat.

\2 Included in the "other" commodity group were associations with concentrations in cotton, citrus, and potatoes.

Source: Association Annual Reports to Stockholders, 1996.

These concentrations of risk may be unnecessary, given the capacity of FCS institutions to participate in loans on a national basis. However, the concentrations of risk are evidence that associations probably act more like independent lending institutions than integral components of a nationwide lending system. High single commodity concentrations may be one reason for the extraordinarily high capitalization of many FCS lending associations. However, that is a high cost strategy for FCS borrowers, as opposed to broader loan participation among associations or sales

of qualifying loans to other lenders or into a secondary market, such as Farmer Mac.

### **Borrower Focus by FCS District**

Earlier studies have shown that FCS borrowers were, on average, older and operated larger farms than those who borrowed from commercial banks (Dodson and Koenig). Even when small farms were excluded from the data (farms with annual sales less than \$50,000) farmers borrowing from the FCS had farm assets and net worth even greater than those of commercial banks' farm borrowers. This trend was particularly notable for the borrowers within the CoBank, Agribank, and Wichita FCB districts (Table 9). Smaller FCS associations do not seem to be focusing on smaller borrowers to a greater degree than do larger associations. In fact, associations with over \$1 billion in outstanding loan volume had less loan volume per stockholder than associations holding between \$100 and \$999 million of loans (Table 3).<sup>5</sup>

### **Implications**

Opportunities for increased efficiencies across FCS direct lending associations do appear possible with the trend toward somewhat larger associations and increased adoption of the ACA structure. However, differences in association size and structure, may reflect the culture of local associations. Hence, movement toward greater homogeneity in FCS association size and structure is likely to be driven primarily by the desires of individual association boards of directors, rather than by coordinated direction from the FCBs and CoBank. Moreover, if the past is prologue, change is more likely to be evolutionary over an extended period of time rather than quick and decisive.

FCS direct lending associations currently are well capitalized providing opportunities to reduce interest rates to borrowers or to take on additional lending risks without jeopardizing the association's financial stability. From a capitalization perspective, direct lending associations are well positioned to take on new lending authority, should the Congress decide to provide broader charter authority for FCS institutions.

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<sup>5</sup>These data are reflective of a number of factors. First, if the FCS is to play a strong role in financing U. S. food and fiber production, it must be active in lending to these larger farmers. Commercial scale agriculture continues to increase its share of the production of food and fiber production the United States. Second, it is more cost effective for the FCS to serve the credit needs of large scale commercial agriculture. Third, the FCS delivery system and product line currently may not be well adapted to cost effectively serve the credit needs of small, low resource, and part time farmers. Yet, the Farm Credit Act, under which the FCS is chartered, envisions it offering constructive credit to all of agriculture. Now that the FCS financial condition is strong, it would not be surprising if some interest groups in agriculture asked the FCS to direct more of its focus to groups that perceive themselves to be under served by lenders. Small and low resource farmers could be one such group



**Table 9.** Characteristics of commercial-sized farms with debt owed FCS and commercial banks, December 1, 1995.

	FCB District							All Districts
	CoBank	AgFirst	Agribank	Wichita	Texas	Western	AgAmerica	
-----\$ per farm-----								
<b>Commercial farms with FCS debt:</b>								
Farm assets	901,562	791,167	845,104	948,840	824,141	1,640,126	883,393	899,523
Farm debt	243,739	159,189	214,759	260,669	336,248	504,492	212,800	233,443
FCS debt	181,803	112,888	138,552	138,482	227,191	379,523	119,508	150,185
Net worth	657,823	631,978	630,345	688,171	487,893	1,135,634	670,593	666,080
Gross cash farm income	376,769	245,308	217,558	207,387	249,579	669,294	228,235	255,896
Average net farm income	77,242	47,656	29,365	844	(11,643)	56,029	22,219	29,611
Average household income	67,223	72,800	51,972	d	d	d	41,459	57,243
-----years-----								
Operator age	51	49	49	54	47	50	53	50
-----\$ per farm-----								
<b>Commercial farms with banks debt</b>								
Farm assets	718,856	823,232	683,749	780,367	794,979	1,620,093	751,041	785,214
Farm debt	195,385	159,280	163,389	194,962	179,374	416,050	175,852	185,165
Bank debt	44,570	59,010	69,272	94,119	83,402	152,066	83,954	78,988
Net worth	523,471	663,952	520,360	585,405	615,605	1,204,043	575,189	600,049
Gross cash farm income	268,694	255,974	179,252	209,200	280,466	708,411	212,884	232,028
Average net farm income	48,075	33,965	32,018	21,735	21,641	60,125	30,015	32,538
Average household income	50,663	63,036	48,223	44,112	d	d	39,865	55,770
-----years-----								
Operator age	49	47	47	52	52	49	47	48

Commercial-sized farms were defined as reporting over \$50,000 in annual farm production.

d/ insufficient data for disclosure.

Source: USDAs Farm Costs and Returns Survey, 1995.

However, there may be risks to associations if they experience sustained loan volume growth. Reliance on retained earnings rather than capital stock makes associations vulnerable to significant reductions in permanent capital ratios if their volume of loans outstanding grows rapidly over a multi-year period. Over the period 1994 to 1996, 49 direct lending associations grew their non real estate loan volume by 25 percent or more. In those associations, capitalization ratios were reduced by one-tenth. Thus, sustained rapid growth in loan volume, as could occur with broader charter authorities, may not be supportable using only retained earnings to capitalize the associations. Growth in loan volume might need to be intentionally slowed. Alternatively, the FCS direct lending associations might find it necessary to once more sell at-risk stock to new borrowers or to other investors.

Two additional alternatives could be used to conserve association capital, while continuing to serve the credit needs of borrowers. Greater use of Farm Services Agency (FSA) credit

guarantees on farm loans could be quite useful. Presently, many FCS associations do not make much use of these guarantees. Another alternative involves packaging and selling loans to other lenders or into non GSE secondary market, through private placement, which may require charter and regulatory changes, or to a Farmer Mac with broader securitizing authorities that include production and/or intermediate term loans.

As a consequence of building capital stock through retained earnings, direct lending associations have kept net interest margins wide, relative to historical standards. If association management decides that capital levels are sufficient, margins may fall. How long current borrowers will continue to pay the higher interest rates required to capitalize the loans of future borrowers through accumulation of retained earnings (surplus) remains a difficult question for FCS board members and senior management. At some point, current stockholders may insist that association retained surplus be allocated to them -- or that patronage dividends be paid to stockholders on a regular basis. Only in the AgFirst District do direct lending associations have more than 30 percent of their total capital in allocated surplus. Allocated surplus averaged 4 percent or less of total direct lending association capital in each of the other FCB and CoBank districts.

Further, a capitalization policy based on retained earnings places the direct lending associations on the horns of a dilemma. If loan volume is expected to grow, earnings must be kept high in order to capitalize this growth. But, that means higher interest rates, which make loan growth more difficult and restrains FCSs ability to serve as a price yardstick in the credit marketplace.

The relatively low, and variable, rates of return to assets and equity currently posted by direct lending associations could be an impediment in selling stock to either prospective borrowers or non borrower investors, should the associations decide to use sales of stock to investors as part of their capitalization strategy. ROA and ROE performance, presumably, would have to meet broader lending industry expectations in order to attract willing stock investors.

The results also bring into question FCS's ability to utilize new loan authority that has been granted. Only in the associations served by AgFirst did the proportion of total loan volume in for processing, marketing or farm-related business reach as much as 7 percent. In four FCB districts, the proportion of association loans to these categories was less than one percent. Rural housing authority has been available for more than 25 years. Yet, only the associations in AgFirst have as much as 8 percent of their loan portfolio in rural housing, far below the 15 percent cap on such lending. When the FCS seeks broader charter authority, it seems likely the Congress will inquire how successfully the FCS has utilized past additions to its lending authority. Additionally, given the strength of FCS capitalization, the Congress could ask the FCS to allocate more of its lending activity to under served regions and groups, as the Congress has done with Fannie Mae, Freddie Mac, and commercial banks with the Community Reinvestment Act.

## Conclusion

Our preliminary analysis of FCS direct lending association annual reports leads us to tentatively conclude that these associations operate with a large measure of independence. The structure and performance data we present support the view that associations do not march together in lock step. Substantial differences in size, capitalization, and performance measures exist across the FCS.

Never the less, similarities within districts, especially regarding the structure of the direct lending associations suggest that different models of organization have evolved across different FCB districts. These differences are likely to be quite persistent. Still, there does seem to be an evolutionary trend toward the Agricultural Credit Association structure across all the FCB districts, except for the Texas and Wichita districts where the Production Credit Association and Federal Land Bank association structures continue to predominate.

Six significant challenges for direct lending associations emerge from this preliminary analysis. First, how can they evolve to a size that offers most of the economies of scale, and, hence, achieve greater cost effectiveness in service delivery. Second, how can these associations build their capital base to support growth in loan volume, while at the same time competing in the credit marketplace on the basis of price, and providing a price yardstick of value for their borrower/stockholders. Third, how can associations improve their financial performance and deliver the benefits of that performance to borrower/stockholders in narrower net interest margins and regular patronage dividends. Fourth, what will be required in structural change and management focus to fully exploit their current lending authorities and take advantage of broadened charter authority. Fifth, what changes must be made in products and in delivery systems to enable associations to meet their public purpose responsibilities to provide credit services to under served small and low resource farmers and to the rural housing market. And, sixth, there are improved strategies the associations can use to manage the growing risk associated with being a national lender to a single sector of the U. S. Economy.

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