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The Center for Farm and
Rural Business Finance

University of Illinois
305 Mumford Hall
1301 W. Gregory Drive
Urbana, IL 61801

University of Arkansas
221 Agriculture Building
Fayetteville, AR 72701

A joint effort of the Department of Agricultural Economics at the University of Illinois and the Department of Agricultural Economics and Rural Sociology at the University of Arkansas.

Farmer Mac's New Environment:

Key Issues and Performance Factors

Peter J. Barry, Bruce J. Sherrick, and Paul N. Ellinger

Peter J. Barry is a Professor and Director, Bruce J. Sherrick is an Associate Professor, and Paul N. Ellinger is an Assistant Professor, Center for Farm and Rural Business Finance, University of Illinois at Urbana-Champaign.

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Farmer Mac's New Environment:

Key Issues and Performance Factors

Executive Summary

Major revisions in Farmer Mac's statute have given the organization new energy to establish an effective secondary market for farm real estate loans and rural housing loans. Included among the changes in the Farm Credit System Reform Act of 1996 are: 1) The power to purchase eligible loans directly from originating lenders and to issue guaranteed securities backed by such loans; 2) The ability to conduct business without the 10% minimum cash reserve or subordinated participation interest previously required with each loan; 3) The elimination of commodity and geographic diversification requirements for loan pools; and 4) The phase-in of revised capital requirements including an equity capital target of at least $25 million by February 1998 (equity capital on June 30, 1996 was $14.87 million) and full implementation of higher minimum regulatory capital requirements by February, 1999.

These changes and several others in the Act have made Farmer Mac's operating structure essentially the same as that of other government-sponsored enterprises (Fannie Mae and Freddie Mac) providing secondary markets for residential mortgage loans. The general goal is to provide a viable secondary market through which commercial banks, life insurance companies, the Farm Credit System, and other eligible lenders can sell loans to fund the farm real estate and rural housing components of their loan portfolios. As evidenced by data provided in this report, rural financial markets generally are considered more concentrated and less competitive than their urban counterparts, with fewer institutions and more limited offerings of financial products and services. Farmer Mac was developed, in part, to help overcome competitive impediments in rural

markets and to complement the activities of other local institutions. The goal of this report is to identify and evaluate key attributes of Farmer Mac's performance and operations, as the organization continues to gain a steady foothold in the financial market place.

In the management of credit risk, Farmer Mac has utilized a relatively conservative set of underwriting standards. Past studies have shown, for example, that only about 40%-55% of loan volume and loan numbers originated during the 1970s and 1980s by the Texas Farm Credit Bank and the former St. Paul Farm Credit Bank would have been eligible for Farmer Mac. Various financial ratios (e.g. debt-to-asset ratio, current ratio, loan-to-value ratio) of recently originated loans guaranteed by Farmer Mac are also consistent with similar measures obtained from farm record systems and the USDAs Farm Costs and Returns Survey.

Farmer Mac's June 1996 pool of 265 loans totaling $120.7 million indicated farm mortgage loans originated by 42 banks covering 18 states and 38 commodities. While more than 50% of the loans come from the Pacific region, the broad coverage of regions and commodities yields a relatively diverse loan portfolio. As additional pools are formed under the 1996 statute, the degree of diversity in Farmer Mac's overall loan portfolio will continue to increase.

The potential farm mortgage loan volume for Farmer Mac depends on such factors as total market size, the market portion available to Farmer Mac, anticipated loan growth, principal repayment rates, Farmer Mac eligibility rates, and Farmer Mac's ability to penetrate the available volume. Using a range of plausible values for these variables, potential realized volumes range from $241.5 million to $1,897.5 billion per year, suggesting the potential for substantially larger loan volumes over time under the revised statute. Whether high penetration rates can be realized

depends on competitive conditions in the farm mortgage market, especially the interest of commercial banks in securitizing farm mortgage loans.

The capitalization portion of the 1996 Act requires Farmer Mac to increase its equity capital from $14.87 million on June 30, 1996 to at least $25 million by February 1998. Part of the increase will come from additional retained earnings, although new stock sales must provide most of the added capital. Given a healthy outlook for Farmer Mac, the required stock sales seem feasible to obtain.

For bank customers of Farmer Mac, the competitively priced and potentially profitable securitization of farm mortgage loans can occur through sales of newly originated loans or through swaps of seasoned loan portfolios, financed in both cases by the issuance of agricultural mortgage-backed securities with lower capital requirements than holding loans in portfolio. The lower capital requirement of agricultural mortgage-backed securities provides for greater financial leveraging, and the potential for greater rates of return to equity relative to holding the loans in portfolio. In turn, competition in the credit market will eventually lead to lower interest rates for agricultural and rural home borrowers and to competitive profitability rates for lenders as well. The securitization process allows the efficient reallocation of credit risks, with Farmer Mac guarantees, and interest rate risk to financial market investors through the risk-reducing benefits of well diversified loan pools. The specialized, information-intensive functions of loan origination, monitoring, and servicing can remain with the local lenders.

Analysis of bank call report data for year-end 1995 indicate that Farmer Mac approved banks on average have higher profitability, greater utilization of lending capacity, lower capital positions, and lower lending risks than average banks in several other bank categories. In general,

Farmer Mac appears to have attracted higher performing banks as members of its customer base. These banks apparently see strategic merit in the potential utilization of Farmer Mac's secondary markets services, and may be indicative of the types of banks who will become Farmer Mac customers in the future.

A favorable near-term outlook for agriculture, growth in agricultural loans experienced by commercial banks, and potentially profitable origination and securitization of farm mortgage loans by both small banks and large banks provide a more optimistic environment in which Farmer Mac can respond to the fresh start provided by the 1996 Act. Farmer Mac provides another important linkage to the connection between rural financial markets and national and international markets. This linkage will broaden the financial options for rural institutions and borrowers, further stabilize the availability of rural credit, enhance local market competition, allow added product and service offerings by local lenders, and make interest rates more uniform and lower across regions. Farmer Mac is now well engaged in the process of providing a successful secondary market for the agricultural and rural housing sectors.

Farmer Mac's New Environment:

Key Issues and Performance Factors

Introduction

Major revisions in Farmer Mac's statutory provisions have given the organization renewed energy to establish an effective secondary market for farm real estate loans and rural housing loans. Included among the changes in the Farm Credit System Reform Act of 1996 are: 1) the power to purchase eligible loans directly from originating lenders and to issue guaranteed securities backed by such loans; 2) the ability to conduct business without the 10% minimum cash reserve or subordinated participation interest previously required with each loan pool; 3) the elimination of commodity and geographic diversification requirements for loan pools; and 4) the phase-in of revised capital requirements, including an equity capital target of at least $25 million by February 1998 (equity capital on June 30, 1996 was $14.87 million) and full implementation of higher minimum regulatory capital requirements by February of 1999.

These changes and several others in the Act have made Farmer Mac's operating structure essentially the same as that of other government-sponsored enterprises (Fannie Mae and Freddie Mac) providing secondary markets for residential mortgage loans. The general goal is to provide a viable secondary market through which commercial banks, life insurance companies, the Farm Credit System, and other eligible lenders can sell loans to fund the farm real estate and rural housing components of their loan portfolios. The potential effects include a widening of financial options for rural financial institutions and borrowers, stabilization of rural credit availability, enhanced local competition, lowering of barriers to entry for non traditional lenders, added product and service offerings by commercial banks, and more uniform and perhaps lower interest

rates across regions. A viable secondary market provides additional flexibility for rural borrowers as financial markets continue to evolve toward larger, more consolidated bank and non bank systems.

The goal of this report is to identify and evaluate key attributes of Farmer Mac's performance and operations, as the organization continues to gain a steady foothold in the financial market place. Included among these attributes are prudent management of credit risks, conservative underwriting criteria, sound capitalization, adequate loan volume, a high performing customer base, and a positive effect on competition in rural credit markets. Following the background and competition sections, these issues are addressed in greater detail.

Background on Farmer Mac

The Federal Agricultural Mortgage Corporation (Farmer Mac) was created by the Agricultural Credit Act of 1987 (an amendment to the 1971 Farm Credit Act) to oversee the development of a secondary market for farm real estate and rural housing loans. Farmer Mac operates as an independent entity within the Farm Credit System. It exists as a government-sponsored enterprise (GSE), with a federal charter, private ownership, a targeted mission, and, similar to other GSEs, access to financial markets through sales of mortgage-backed debt securities having agency status. Farmer Mac is supervised and regulated by the Office of Secondary Market Oversight of the Farm Credit Administration.

As stated in the Agricultural Credit Act of 1987, the purposes of the secondary market are to:

- Increase the availability of long term credit to farmers and ranchers at stable interest rates.

- Provide greater liquidity and lending capacity in extending credit to farmers and ranchers.
- Facilitate capital market investments in providing long term agricultural lending, including funds at fixed rates of interest.
- Improve the availability of credit for rural housing.

As originally set forth in the 1987 Act, Farmer Mac was to oversee the purchase by agricultural mortgage marketing facilities (poolers organized by commercial banks, Farm Credit System institutions, insurance companies, and others) of farm mortgages that were originated and perhaps serviced by primary lenders. These marketing facilities were to pool the individual loans into aggregate portfolios, following various diversification requirements, and then sell pooled participation securities to investors based on a pass-through of principal and interest payments by borrowers, or based on bonds sold to investors that were backed by the pools of loans. In turn, Farmer Mac was to provide guarantees on these securities to ensure their safety for financial market investors.

While Farmer Mac was a major innovation in agricultural finance, several factors combined to stymie its ability to develop a successful secondary market in a timely fashion. Included was weak loan demand, especially for long term fixed rate loans, resulting in part from the financial stresses in agriculture of the 1980s. The reduction of loan demand together with moderate growth in deposits created high liquidity for many rural banks and, thus, provided a diminished incentive to sell loans into a secondary market. In addition, interest rates were declining in the 1980s from record high levels to eventually become low and more stable in the early 1990s, with a relatively steep yield curve. As a result, agricultural borrowers have had

relatively low interest in fixed rate loans, despite the considerable uncertainties associated with adjustable rate loans, often having large balloon payments. Thus, from the loan demand perspective, Farmer Mac started at an inopportune time.

The incentive for loans sales was also reduced when the Office of the Comptroller of the Currency required banks to meet equity reserve requirements on the full amount of the loan sold, rather than on the 10% portion held as a reserve by the originating lender. The regulator believed that, despite selling most of the loan, the originator was still carrying all of the loan's credit risk. This factor reduced a bank's ability to use Farmer Mac to adjust regulatory capital ratios, and diminished the potential profitability of loan sales to Farmer Mac.

Potential poolers were also reluctant to participate in the Farmer Mac program because of concerns that loan volume might not be sufficient to justify their capital commitments to the program. Part of that concern involved the potential lack of competitiveness of interest rates and other lending terms for borrowers. The accumulation of safety reserves needed for Farmer Mac was to come mostly from interest rates paid by borrowers. Thus, safety for securities investors was coming at the cost of less than competitive rates for borrowers. While Farmer Mac did receive authority in the early 1990s to operate a secondary market for loans guaranteed by the Farmers Home Administration (Farmer Mac II) and some additional refinements to its farm mortgage program, volume growth remained limited. Volume under the Farmer Mac I program totaled $793 million, while volume under Farmer Mac II was $184.8 million at year-end 1995.

The 1996 legislative changes outlined above have removed the statutory impediments to Farmer Mac and now allow the organization to function similar to Fannie Mae and Freddie Mac subject to differences in the degrees of standardization, repayment arrangements, and other

characteristics for residential housing loans versus farm mortgage loans. Other past impediments, including weak loan demand by farmers, high liquidity of rural banks and competitive relationships with other lenders in rural markets, are treated in the following sections.

Competitiveness of Rural Credit Markets

Rural financial markets generally are considered less competitive than their urban counterparts, with fewer institutions and more limited offerings of financial products and services. Historically, rural markets were insulated from conditions in regional and national markets by ceilings on interest rates depository institutions could pay to investors and by usury limits on loans that differed among states. Geographic boundaries on bank structures and restrictions against the underwriting of securities further limited competition in banking markets.

Financial deregulation in the 1980s and 1990s removed many of these restrictions. Interest rate ceilings were removed in the early 1980s. Geographic liberalization is moving toward interstate branching in 1997, and the range of products and services commercial banks may offer has broadened substantially. In addition, the Federal Reserve System in 1979 shifted its monetary policy targets from interest rates to the rate of growth of the money supply. These changes have more closely integrated rural markets with regional and national markets, and have allowed changes in interest rates to reconcile differences in the supply of and demand for loanable funds. The quality of information in rural markets also has improved as a result of electronic communications, media advertisements of interest rates, and improved methods of measuring credit worthiness.

Despite these advances, rural markets still tend to lag behind urban markets in quality of information, ranges of products and services, and numbers and sizes of financial institutions. A

1996 USDA report indicates that the Department of Justice still classifies 93% of rural banking markets as non competitive.[1] Several indicators of degrees of market competition among banks are shown in Table 1 using a county as a proxy for local market size and county type as the classification scheme.[2] As counties become increasingly rural, the average numbers of head offices and branches of commercial banks decline, and the head offices become smaller in size. Fewer branches and head offices are consistent with smaller populations. Interestingly, the population measures reported in Table 1 indicate that the number of branch offices per capita is greater in rural counties versus non rural counties. Still, fewer offices in rural counties are farther away from each other and the smaller office size is consistent with more limited offerings of products and services.

A frequently used measure of market concentration is the Herfindahl-Hirschman Index (HHI).[3] As shown in Table 1, all of the average HHIs for market shares of deposits exceed 1,800, indicating concentrated markets, although the HHI values for rural counties are much higher than those for urban counties. The average HHI values for completely rural counties are

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[1]Collender, Robert, "Can Federal Action Improve Efficiency in the Market for Farm Loans?" Economic Research Service, U.S. Department of Agriculture, Agriculture Information Bulletin 724-01, Washington, March 1996.

[2]Barry, P.J. and P.N. Ellinger, "Liquidity and Competition in Rural Credit Markets" Center for Farm and Rural Business Finance, Department of Agricultural and Consumer Economics, University of Illinois, November 1996.

[3]The HHI is used by the Department of Justice, for example, to establish guidelines for evaluating the acceptability or unacceptability of acquisitions based on the potential increase in concentration in the market where an acquisition occurs. In banking, the HHI index is computed by squaring and summing the percentage market shares of branch levels deposits for each bank in the market. The Department of Justice defines a concentrated market as having a post-merger HHI greater than 1,800, a modestly concentrated market as having an HHI of 1,000-1,800 and an unconcentrated markets as having an HHI of less than 1,000.

Table 1. County Types: Banks Competition as of June 1995

Economic County Type	Number of Counties	Ave. Number of Head Offices	Ave. Number of Branches	Ave. Herfindahl-Hirschman Index	Ave. Head Office Bank Size Assets (Millions $)	Ave. County Population 1995	Number of Branches per 10,000 Population
Completely rural counties							
Farming	291	1.6	3.5	6065	37.1	4,618	7.58
Mining	33	0.9	3.6	6692	62.2	9.741	3.70
Manufacturing	49	1.4	4.7	5264	58.8	11,016	4.27
Other	158	1.5	4.4	5673	58.7	10,249	4.29
Other rural counties							
Farming	265	2.7	6.5	4034	51.7	12,901	5.04
Mining	114	2.0	7.5	4542	95.9	22,870	3.28
Manufacturing	467	2.5	12.6	3482	122.8	33,961	3.71
Other	927	2.8	11.2	3523	93.9	29,917	3.74
Small metro counties	205	4.4	31.2	2712	120.4	103,557	3.01
Other metro counties	632	6.0	76.8	2480	594.1	297,925	2.58

especially high exceeding 5,000 in all four cases. Higher concentration is associated with lower competition, reduced efficiency, and less favorable offerings of products and services for customers.

Over the years, several policy responses have had intended pro-competitive effects on rural financial markets. Federal programs targeted to rural markets include the Farm Credit System and the Consolidated Farm Services Agency for agriculture, and the Small Business Administration and several rural development programs for the non farm rural sectors. Various state credit programs operate on a smaller scale.

Farmer Mac was also developed, in part, to help overcome competitive impediments in rural markets and to complement the activities of other local institutions. As illustrated later in this report, the competitively-priced and potentially profitable securitization of farm mortgage loans can occur through sales of newly originated loans or through swaps of seasoned loan portfolios, financed in both cases by the issuance of agricultural mortgage-backed securities with lower capital requirements. This process allows the efficient reallocation of credit risks (with Farmer Mac guarantees) and interest rate risk to financial market investors with the risk-reducing benefits of securitization. Only prepayment risks would remain for pricing with prepayment premiums. In addition, Farmer Mac's alternatives in security design (e.g. yield maintenance specifications, maturity and repayment tranches, prepay insurance) allow considerable flexibility in tailoring the characteristics of pools to different classes of investors. The specialized, information-intensive functions of loan origination, monitoring, and servicing can remain with the local lenders. The goals are to widen the financing options for community banks and rural

borrowers, stabilize rural credit, enhance local competitiveness, allow added product offerings by commercial banks, and make interest rates more uniform and perhaps lower across regions.

This process resembles the securitization and secondary market services of Fannie Mae and Freddie Mac in residential housing. The smaller size of the farm mortgage market, lesser standardization of farm mortgage loans, and lower reliance on monthly payments distinguish the two markets, although funding costs, credit risks, guarantee fees, prepayment risks, and operating costs should be comparable. The competitiveness issue is an important one, relative to Farmer Mac's potential contributions. Much can be gained from efforts to make rural financial markets more competitive.

Farmer Mac's Underwriting Standards

Farmer Mac initially developed a set of underwriting standards to use in determining loans that would be eligible for Farmer Mac guarantees and pooling. Most of the standards are based on financial ratios or other quantitative measures. Several others are stated in qualitative terms.

Farmer Mac underwriting standards are as follows:

1. **Standard One: Credit Worthiness of the Borrowers.**

   In addition to confirming the character, capital, capacity, condition and collateral involved in each loan, loan originators must obtain complete and current credit reports for each borrower. The credit report must include a current uniform commercial code lien search, historical experience, identification of all debts, and all other pertinent information.

2. **Standard Two: Income Statements and Balance Sheets.**

   The loan applicant must provide income statements and fair market value balance

sheets for the last three years. The current statements should be adjusted to reflect the value of production by recognizing non cash expenses and changes in inventory, accounts payable, accounts receivable, and prepaid expenditures.

3. **Standard Three: Debt-to-Asset Ratio.**

   The entity being financed should have a pro forma debt-to-asset ratio of 50% or less, after closing any new loans.

4. **Standard Four: Earnings and Liquidity**

   The entity being financed should be able to generate sufficient earnings and liquidity to meet all obligations as they come due and provide a reasonable margin for capital replacement and contingencies. This standard is achieved by having: a) a total debt service coverage ratio of not less than 1.25, including income from farm and non farm sources; and b) a current ratio of not less than 1.0.

5. **Standard 5: Loan to Appraised Value (LTV) and Cash Flow Debt Service Coverage Ratio.**

   The LTV in financing any individual property should not exceed 75%. A minimum debt service cash flow ratio of 1.0 from the subject property is also required, except for loans in which the borrower's principal residence is on the property securing the loan.

6. **Standard 6: Minimum Acreage and Annual Receipts Requirement.**

   Agricultural real estate must consist of at least 5 acres of land, or be used to produce annual receipts of at least $5,000 in order to be eligible to secure a qualified loan.

7. **Standard 7: Loan Conditions.**

The loan must be level payment or level principal payment and either: a) fully amortized principal over a term not to exceed 30 years; or b) amortized principal according to a schedule not to exceed 30 years, and mature no earlier than the time at which the remaining principal balance of the loan equals 50% of the original appraised value of the property securing the loan.

In addition to the above underwriting requirements, the size of loan must not currently exceed $3.5 million, adjusted annually for inflation.

These underwriting standards are applied on a screening basis. Eligible loans must meet each of the standards. The screening approach differs from a credit scoring approach in which higher values for some standards may offset lower values for other standards. Farmer Mac may, however, evaluate and accept screened loans utilizing a "Standard 9" condition in which mitigating factors outweigh a loan's inability to meet all of the above underwriting standards.

Applying the Underwriting Standards

The degree of conservativeness of Farmer Mac's underwriting standards is indicated by measures of the Farmer Mac eligible portions of farm mortgage loans originated during alternative historic periods by two Farm Credit Banks. These measures are shown in Table 2, and are drawn from the article "Farmer Mac Credit Risk and Capital Adequacy" *Agricultural Finance Review* 1994, authored by L.H. Miller, P.J. Barry, C. DeVuyst, D.A. Lins, and B.J. Sherrick, and from two research reports at the University of Illinois. The originated loans for the two Farm Credit Banks were evaluated for Farmer Mac eligibility using four of the underwriting standards for

which loan-level data were available: the debt-to-asset ratio, the debt coverage ratio, the current ratio, and the loan-to-value ratio. Information about the qualitative standards was not available.

As shown in Table 2, 55.8% of loan numbers and 44.8% of loan volume originated by the Texas Farm Credit Bank during the 1973-1992 period would have been eligible for Farmer Mac, based on the four underwriting standards indicated above. Similarly, 50.5% of loan numbers and 41.3% of loan volume originated by the former St. Paul Farm Credit Bank during the 1974-1986 period would have been eligible for Farmer Mac. For each Farm Credit Bank, the maximum rates of loan loss for Farmer Mac ineligible loans exceeded the maximum annual loss rates for Farmer Mac eligible loans, based on both loan numbers and loan volume.

This historical perspective suggests that the conservativeness of Farmer Mac's underwriting standards compares favorably to those of two Farm Credit Banks, which themselves were regarded as prudent, conservative lending institutions. A complete comparison would require information about Farmer Mac's use of its Standard 9 exception and about the risk positions of loan applicants rejected by the two institutions. Currently, Farmer Mac is considering revisions to its underwriting standards that would utilize the "offsetting strengths" feature of credit scoring in contrast to the loan screening approach followed in the past.

Farmer Mac's Credit Risk

The highly conservative nature of Farmer Mac's original statutory authorities and regulations yielded positions of nearly zero risk and nearly zero opportunity for growth and viability. Ironically, the stringent risk controls, especially the 10% subordinated requirement, contributed significantly to a lack of institutional competitiveness, depletion of equity capital (from $21 million in the late 1980s to $14.87 million on June 30, 1996), and an interim reduction

Table 2. Farmer Mac Eligible and Ineligible Loan Data for the Texas (1973-1992) and St. Paul (1974-1986) Farm Credit Banks

	Texas			St. Paul		
Item	Total	FMac Ineligible	FMac Eligible	Total	FMac Ineligible	FMac Eligible
Loan Numbers						
Percent	100.0	44.2	55.8	100.0	49.5	50.5
Max loss, %	3.78	4.76	2.54	13.35	18.25	6.40
Average loss, %	1.03	1.57	0.54	6.17	8.63	3.31
Loan Volume						
Percent	100.0	55.2	44.8	100.0	58.7	41.3
Max loss, %	2.52	2.74	2.10	0.07	0.09	0.05
Average loss, %	0.55	0.71	0.36	0.03	0.04	0.02

of equity for Farmer Mac's initial investors (recent increases in the market value of Farmer Mac stock have offset these initial losses). The revised statute reflects a more realistic view of the risk-return trade-off in business enterprises--that is, high performance requires some degree of risk taking, but prudent oversight will ensure that risks are effectively managed.

Financial Measures

Farmer Mac's current credit risk position can be evaluated in terms of average values for selected financial ratios of loans in its portfolios and pools, relative to comparable values of ratios from other data sources. As shown in Table 3, the aggregate characteristics of loans in the Farmer Mac I Program indicate 2,560 loans totaling $793,847,853 and an average loan size of $310,096. The weighted average loan-to-value ratio is .461. Key borrower characteristics indicate weighted averages of .360 for the debt-to-asset ratio, 4.12 for an adjusted current ratio, and 2.07 for the debt coverage ratio.

More recent data show the aggregate characteristics of the 265 loans in the June 1996 set of 10 pools of agricultural mortgage backed securities (AMBS) created by Farmer Mac. The total principal amount of $120,711,946 yielded an average loan size of $455,517, with a range from $15,000 to $3.5 million. The weighted average loan-to-value of the AMBS pool is .574, with averages of .383 for the debt-to-asset ratio, 2.38 for the adjusted current ratio, and 2.05 for the total debt coverage ratio.

These financial ratios can be compared to values for various types of farms as evidenced by data from the Economic Research Service of USDA and the several state-level farm record systems. USDA's Farm Costs and Returns Survey (FCRS) and the farm record data include responses from farmers who use no debt and they do not necessarily reflect typically higher debt

Table 3. Selected Financial Ratios for Farmer Mac Loans and Other Data Sources

	Debt to Asset Ratio	Current Ratio	Debt Coverage Ratio	Loan to Value Ratio
Farmer Mac I Loans	.360	4.12*	2.07	.461
Farmer Mac Total AMBS Pool, 1996	.383	2.38*	2.05	.574
USDA-ERS, 1994				
All Farms	.191	2.58	2.77	
$500,000 or more annual sales and 0-20% managed assets owned	.456	1.69		
$50,000 or less annual sales and 80-100% managed assets owned	.119	4.19		
Illinois FBFM, 1994				
Hogs	.359	1.60		
Grain	.303	1.83		
Dairy	.332	1.55		
Beef	.443	1.37		
All	.314	1.78		
Tenure: 0-10% acres owned	.365	1.90		
Tenure: 75-100% acres owned	.174	2.00		
Minnesota, S.W. Farm Bus. Mgmt. Assoc., 1994	.479	1.85		
Nebraska Farm Business Assoc.	.390			
New York Dairy Farms	.390			

*Weighted average current ratios reported by Farmer Mac are distorted by outliers. Values in this table reflect mid-points of .25 current ratio intervals ordered from low to high when 50% of total loan principal is accounted for.

**Blank entries in the table indicate that data were not available to calculate these measures.

levels that occur at the time of loan origination. These factors lead to downward biases in the debt-to-asset ratios from farmer surveys and farm record systems relative to those lenders would face on new loans and, thus, hamper strict comparisons to loan data from Farmer Mac. It has also been established that benchmark financial ratios may differ systematically by a farm's tenure position, size, and perhaps other structural characteristics.[4]

Farmer responses to the 1994 Farm Costs and Returns Survey (FCRS) of USDA indicate an average debt-to-asset ratio for all farms of .191, a current ratio of 2.58, and a debt coverage ratio of 2.77.[5] The debt-to-asset ratio tends to increase as farm size and reliance on leased land increase--to an average of .456 for farms with more than $500,000 of annual sales and less than 20% of managed assets owned by the farm operator. At the other extreme, farms with less than $50,000 of sales and more than 80% of managed assets owned by the farm operator have an average debt-to-asset ratio of .119.

Median values of two similar measures for 1,522 farms participating in the Illinois Farm Business Farm Management System in 1994 are .314 for the debt-to-asset ratio and 1.78 for the current ratio (Financial Characteristics of Illinois Farms 1993-94). When classified by farm type, the average debt-to-asset ratios range from .303 for grain farms to .443 for beef farms. Other debt-to-asset ratios in 1994 average .479 for 188 Southwest Minnesota farms, .390 for 86 Nebraska farms, and .390 for 321 New York dairy farms.

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[4]P.N. Ellinger and P.J. Barry "The Effects of Tenure Position on Farm Profitability and Solvency" Agricultural Finance Review, 47(1987):106-108.

[5]J.T. Ryan "Commercial Farm Operations Financial Performance and Ability to Service Debt: Impacts of Non Farm Capital and Income" USDA-ERS, September 1996.

Loan to value ratios on the Farmer Mac loans also compare favorably to equity requirements on loans from other farm mortgage lenders. Most FCS institutions now require at least a 35% equity margin in land transactions, and survey results at the University of Illinois indicate required equity margins for farm real estate loans in the 25%-30% range for agricultural banks.

Pool Diversity

The aggregate of the ten pools formed in June 1996 indicates farm mortgage loans originated by 42 banks covering 18 states and 38 commodities. While more than 50% of the loans come from the pacific region, the broad coverage of regions and commodities yields a relatively diverse loan portfolio. The geographic territories and commodity coverage of most FCS lending associations and banks, along with those of commercial banks engaged in agricultural lending are more limited. As additional pools are formed under the 1996 statute, the degree of diversity in Farmer Mac's overall loan portfolio will continue to increase.

Farmer Mac also employs a risk-based simulation model to determine actuarially sound guarantee fees on pools structured according to alternative loan and pool characteristics. The result is a risk-based concept of pricing that directly reflects the combined effects of credit risk and pool diversity. These elements of diversification together with effective risk pricing of loans and monitoring of loan origination by participating banks are important elements of effective credit risk management by Farmer Mac.

Potential Loan Volume

Volume of secondary market sales must be sufficient to have a sustained presence in the financial market and to reduce the costs of operating the secondary market to the point where the

costs per dollar of loan are less than the benefits of pooling. Standardization of products lowers the volume threshold and is one of the primary reasons that secondary markets for residential housing loans have performed well. Accumulation of loan volume has been a major impediment to Farmer Mac's performance in the past. The 1996 legislation, however, allows Farmer Mac to compete more equitably for loan volume in the future. The key parameters of potential loan volume are considered in this section.

Available Loan Volume

The potential farm mortgage loan volume for Farmer Mac depends on several factors, including total market size (i.e. farm real estate debt), the market portion available to Farmer Mac (i.e. excluding loans by individuals and the Farm Services Agency), anticipated loan growth, principal repayment rates, and Farmer Mac eligibility rates. These variables can be expressed in the following model.

$$V=(B)(1-a)(g+p)(e)$$

where V is potential annual loan volume available to Farmer Mac, B is base loan volume, a is the Farmer Mac non availability rate, g is the loan growth rate, p is the principal repayment rate, and e is the loan eligibility rate based on Farmer Mac underwriting standards.

Table 4 indicates potential annual loan volume available to Farmer Mac for a range of plausible values for the loan growth rate, the principal repayment rate and the eligibility rate. The values in Table 4 are based on the 1996 farm real estate debt outstanding value of $84.6 billion (variable B), including operator household debt, and a non availability rate of 32% (a = .32). The non availability rate reflects the exclusion of loans held by individuals and others ($19.2 billion),

Table 4. Potential Annual Loan Volume Available to Farmer Mac*

Loan Growth	Principal Repayment Rate	Eligibility Rate			
		50%	60%	70%	80%
		($ billion)			
2%	12%	4.03	4.83	5.64	6.44
	14%	4.60	5.52	6.44	7.36
	16%	5.18	6.21	7.25	8.28
4%	12%	4.60	5.52	6.44	7.36
	14%	5.18	6.21	7.25	8.28
	16%	5.75	6.90	8.05	9.20
6%	12%	5.18	6.21	7.25	8.28
	14%	5.75	6.90	8.05	9.20
	16%	6.33	7.59	8.86	10.12

*Based on January 1, 1996 farm real estate debt outstanding (including operator household debt) of $84.6 billion, less loans of $27.1 billion held by individuals and other ($19.2 billion), the Farm Services Agency ($5.4 billion) and guaranteed Farm Services Agency loans ($2.5 billion), leaving $57.5 billion.

the Farm Services Agency ($5.4 billion) and guaranteed Farm Services Agency loans ($2.5 billion).[6] Subtracting the sum ($27.1 billion) of these loan volumes from the $84.6 billion base leaves an available volume of $57.5 billion, or 57.5 = 84.6 (1-.32).

As indicated in Table 4, potential annual loan volume available to Farmer Mac ranges from $4.03 billion to $10.12 billion, for the range of parameter values indicated in the table. To illustrate the $4.03 billion figure is based on a loan growth rate of 2%, a principal repayment rate of 12%, a Farmer Mac eligibility rate of 50%, and a Farmer Mac availability rate of 68% applied to the $84.6 billion outstanding real estate debt. Other values were calculated in a comparable fashion.

The major variable under Farmer Mac's control is the eligibility rate. As discussed above, the historic eligibility rates relative to loans acceptable to the Texas and St. Paul Farm Credit Banks were in the 40% to 55% range, indicating considerable expansion leeway if Farmer Mac so chooses.

Realized Loan Volume

Realized loan volume then depends on Farmer Mac's ability to penetrate this available volume. Table 5 reports potential annual loan volume of Farmer Mac under alternative market penetration rates, loan growth rates, and principal repayment rates, for the 32% non availability rate and the 60% eligibility rate. Potential realized volumes range from $241.5 million for a 5% market penetration rate, a 2% loan growth rate, and a 12% principal repayment rate to $1,897.5

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[6]Koenig, S.R. and J.T. Ryan "Farm Loan Volume Prospects for the New Farmer Mac" ERS-USDA, 1996.

Table 5. Potential Annual Loan Volume of Farmer Mac Under Alternative Market Penetration, Loan Growth and Principal Repayment Rates for a 60% Eligibility Rate

Loan Growth	Principal Repayment Rate	Market Penetration Rate				
		5%	10%	15%	20%	25%
		($ million)				
2%	12%	241.5	483.0	724.5	966.0	1,207.5
	14%	276.0	552.0	828.0	1,104.0	1,380.0
	16%	310.5	621.0	931.5	1,242.0	1,552.5
4%	12%	276.0	552.0	828.0	1,104.0	1,380.0
	14%	310.5	621.0	931.5	1,242.0	1,552.5
	16%	345.0	690.0	1,035.0	1,380.0	1,725.0
6%	12%	310.5	621.0	931.5	1,242.0	1,552.5
	14%	345.0	690.0	1,035.0	1,380.0	1,725.0
	16%	379.5	759.0	1,138.5	1,518.0	1,897.5

billion for a 25% market penetration rate, a 6% loan growth rate, and a 16% principal repayment rate.

Currently, Farmer Mac's penetration rate is at a low level; however, as Table 5 indicates, developing the ability to achieve higher penetration, greater loan growth, and faster loan repayments (and higher eligibility rates) can yield substantially larger loan volumes over time. Whether higher penetration rates can be realized depends on competitive conditions in the farm mortgage market, especially the interests of commercial banks in securitizing farm mortgage loans (see the financial analysis section to follow). It is doubtful that the Farm Credit System will participate in securitization, given its current reliance on the wholesale and retail delivery of loan funds to agricultural borrowers.

Acquisition of seasoned loan portfolios would further increase Farmer Mac's volume in the short run, although longer term reliance on seasoned loans would be reflected in the market penetration rate. Thus, seasoned loans could provide a significant boost to loan volume in the next few years, but seasoned loans are not a dependable strategy for the long term. It is also possible that widespread use of Farmer Mac could lead to innovations in financial products and services, and greater loan volumes in the future.

Capital Requirements

The capitalization portion of the 1996 Act requires Farmer Mac to increase its equity capital from $14.87 million on June 30, 1996 to at least $25 million by February 1998. A portion of this increase will come from retained earnings generated by guarantee fees on securitized pass-through pools created by Farmer Mac and by net interest income on loans Farmer Mac holds in its portfolio, net of operating expenses and payment of income tax obligations once net operating

losses from the past are depleted. Most of the added capital in the near term, however, must come from new stock sales.

During the first half of 1996, Farmer Mac's net income totaled $592,000. If Farmer Mac could sustain this level of earnings over the next three six-month periods (i.e. to January 1, 1998), its equity capital would increase by $1.78 million to $16.65 million, leaving a short fall of $8.35 million. This short fall could be met by average stock sales of $1.67 million to 5 investors, $835,000 to 10 investors, $417,500 to 20 investors, or $167,000 to 50 investors. Interestingly, the $417,500 average stock sale to 20 investors is less than the average loan size of $455,517 in the June 1996 loan pool.

Given a healthy outlook for Farmer Mac, these minimum levels of stock sales seem feasible to attain. Stock sales above the minimum would provide an expanded capital base to support future growth in guarantee volume, while maintaining relationships between capital and earnings consistent with those of other secondary market organizations. These price-earnings ratios tend to fall in the 10%-12% range for Fannie Mae and Freddie Mac. Farmer Mac's price-earnings ratio could be different in the near term, because it has a shorter history than the residential housing GSEs.

Performance Effects of Using Farmer Mac

The potential effects of Farmer Mac's secondary market services on a lender's profitability, risk and liquidity positions for its agricultural mortgage activities can be illustrated for the case of holding agricultural mortgage loans in portfolio versus holding agricultural mortgage-backed securities (AMBS) on a pool of Farmer Mac guaranteed loans. Such a choice might take the form of a swap of whole agricultural loans for the Farmer Mac guaranteed

AMBSs. A key variable is the difference in capital requirements on the two types of asset holdings. The implications of this investment choice are illustrated in the context of commercial banks.

In 1988 federal banking regulators agreed to an international set of risk-based capital standards in response to credit risk. Under the new standards the total capital of a financial institution must be at least 8% of its risk weighted assets.[7] Each asset held by the institution is assigned a particular weight that reflects its perceived riskiness. U.S. Treasury securities, for example, have a zero weight--because they are believed to bear no credit risk, no capital requirements are imposed. In contrast, commercial, agricultural, and many other types of loans have a 100% risk weight and thus carry a full 8% capital requirement. Agricultural mortgage-backed securities guaranteed by Farmer Mac (similar to those of Fannie Mae and Freddie Mac) have a 20% weight, yielding a 1.6% capital requirement. The lower risk weight for AMBSs reflects the greater national diversity of loan pools versus more concentrated institutional loan portfolios, lower operating costs per unit of securitized assets, and the greater liquidity of mortgage-backed securities. The lower capital requirement of AMBSs, in turn, provides for greater financial leveraging, and the potential for greater rates of return to equity relative to holding the loans in portfolio.

As a simple example, engaging in a swap of whole farm mortgage loans for Farmer Mac guaranteed mortgage-backed securities would result in a 6.4% (8.00%-1.6%) capital requirement reduction. Assuming the cost of equity is 20% and the cost of debt is 6%, the cost of funds

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[7]Total capital generally consists of common stock, preferred stock, retained earnings, qualified subordinated debt, and loan loss reserves limited to no more than 1.25% of risk-weighted assets.

savings by converting higher cost equity to lower cost debt would be 14%. Applying this cost of funds saving to the 6.4% reduction in capital requirements, results in a savings of 0.896% (6.4 x .14), or 89.6 basis points, on the principal balance of the swap. The net savings would be 0.346%, or 34.6 basis points after accounting for a 50 basis point guarantee fee and a 5 basis point trustee fee. The adjustment from a higher to a lower capital requirement is assumed to occur by borrowing in the debt market and using the proceeds to retire part of the equity capital.

An alternative and more detailed example of a swap transaction is shown in Table 6. In this case the focus is on measuring the Return on Equity (ROE) for the two investments. Table 6 presents the funding requirements in section I and the profitability analysis in section II. The loan principal and interest rates on the loans are $100 and 9.00%, respectively, in both cases, reflecting the earnings for loans held in portfolio and the pass-through of interest earnings on the loans backing the AMBS. Equity requirements are 8.00% for loans and 1.60% for AMBS. Operating costs for loan origination, monitoring, and servicing are 1.00% for both cases, assuming that the originating bank retains these functions and receives the same (zero here) fee compensation. Debt costs are 6.0% in both cases. We will abstract from the type of bank debt, thus ignoring the possible effects of deposit insurance and reserve requirements if deposit funds are sought.

As shown in section II of Table 6, the after-tax Return on Assets (ROA) for loans (1.74%) exceeds that of the AMBSs (1.09% ROA). However, the lower capital position (higher leverage) of the AMBS investment leverages the ROA into a substantially higher Return on Equity (ROE) for AMBSs (67.81%) versus loans (21.75%). The different ROE effect is substantial in this simulated, yet realistic situation.

Table 6. ROE Effects of Holding Loans versus Agricultural Mortgage-Backed Securities (AMBS)

	Loans	AMBS
I. Funding Requirements		
Loan principal	100	100
Equity capital required	8.00	1.60
Debt required	92.00	98.40
Debt cost, %	6.00	6.00
II. Profitability Analysis		
Loan interest rate	9.00	9.00
Weighted debt cost (92 x .06)(98.4 x .06)	5.52	5.90
Operating cost	1.00	1.00
Guarantee and trustee fees	NA	.55
Total cost	6.52	7.45
Net return	2.48	1.55
Income taxes (t = .30)	.74	.47
After-tax Net Return	1.74	1.09
Return on Assets, %	1.74	1.09
Return on Regulatory Equity, %	21.75	67.81

The ROE effect also suggests considerable flexibility in establishing terms and standards on the AMBS investments. Continuing with the data in this example, the capital requirements for the AMBS investments could be as high as 4.99% and still yield the same after-tax ROE as the loan investment.[8] Or, the average interest rate on the loans comprising the AMBS pool could be reduced by 105 basis points to 7.95%, while still yielding the same ROE as holding the loans in portfolio.[9] The latter example shows the potentially beneficial effects on loan rates for agricultural borrowers from using the securitization approach--again, based heavily on the risk-based differences in capital requirements between holding loans in portfolio versus sales into loan pools funded by mortgage-backed securities. Implementing these securitization opportunities in competitive lending markets will eventually lead to the lower borrowing rates and to lower profitability rates for lenders as well.

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[8]The revised, break-even, capital requirement is found by solving for E in the following ROE model:

$$ROE = \frac{(9.00-7.45)(1-.30)}{E} = .2175$$

$$E = 4.99$$

where 9.00 is interest earnings on the loan, 7.45 is total lending cost, .3 is the income tax rate, .2175 is the ROE for holding loans in portfolio, and E is the break-even capital requirement.

[9]The revised interest rate is found by solving for *i* in the following ROE model:

$$ROE = \frac{[(100)(i)-7.45](1-.30)}{1.60} = .2175$$

$$i = .0795 \ or \ 7.95\%$$

where 100 is the loan principal, *i* is the interest rate on pooled loans, 7.45 is the total lending cost, .30 is the income tax rate, 1.60 is required capital, and .2175 is the ROE on loans held in portfolio.

Besides the potentially favorable profitability and risk effects of AMBSs, lenders can also achieve greater liquidity in their asset holdings. Unlike whole loans, guaranteed agricultural mortgage-backed securities are readily saleable in secondary markets, recognized as collateral at Federal Reserve Banks, eligible as collateral for municipal deposits, and useful in repurchase transactions. In general, the financial advantages of utilizing agricultural mortgage-backed securities guaranteed by Farmer Mac are similar to the advantages experienced by Fannie Mae and Freddie Mac in residential housing. These advantages, in turn, are responsible for the strong movement toward the use of securitized, mortgage-backed securities in the financing of residential housing.

Characteristics of Farmer Mac Approved Banks

The characteristics of the commercial banks currently originating and selling loans to Farmer Mac are important to consider because these characteristics provide signals about the nature of Farmer Mac's customer base. Inferences then can be made about the overall effectiveness of loan sales and about the potential to expand the customer base in the future. Positioning a bank to utilize loan sales is a key element of an asset-liability management strategy intended to enhance overall bank performance.

On average, Farmer Mac's customer base likely includes higher performing banks that more rigorously exercise asset-liability management. Higher performance would be indicated by above average profitability, substantial commitment to lending activities, and greater ratios of loans-to-deposits and loans-to-total assets. Higher profitability generally implies greater financial leveraging and perhaps a greater risk position consistent with the risk-return trade-off in business enterprises. Effective asset-liability management ensures, however, that the appropriate mix of

profitability, risk, and liquidity in bank operations is strategically established, carefully monitored, and adapted when necessary. Higher performing banks may also be larger in size, reflecting the greater capacity for larger banks to exercise effective financial management.

Bank call report data for year-end 1995 are used to calculate selected measures of bank profitability, liquidity, and risk, as reported in Table 7. The measures are categorized by bank size (total assets) and allow comparisons between the measures for the 63 Farmer Mac approved banks and the same measures for all U.S. banks (10,536), agricultural banks (3,446), and other rural banks (2,634). Agricultural banks are those having a ratio of agricultural loans to total loans exceeding the national average (16% at year-end 1995). Other rural banks are those not in a MSA, minus the number of agricultural banks.

The data reported in Table 7 clearly indicate that Farmer Mac approved banks on average have higher profitability, greater utilization of lending capacity, lower capital positions, and larger size than the average banks in the other bank categories. The Return on Assets (ROA) of 1.21% for Farmer Mac approved banks consistently exceeds the ROAs for all banks (1.14), agricultural banks (1.14), and other rural banks (1.19). The Return on Equity (ROE) of 14.13% for Farmer Mac banks exceeds the average ROEs for the other banks classes by even wider margins (11.79% for all U.S. banks, 11.18% for agricultural banks, and 12.64% for other rural banks). This ROE effect reflects the leveraging from the lower average capital ratio for the Farmer Mac approved banks (8.88) relative to those of the other bank classes (capital ratios of 10.58 for all banks, 10.79 for agricultural banks, and 10.26 for other rural banks).

The Farmer Mac approved banks also have significantly a greater average of loan-to-deposit ratios (73.85) versus 67.71 for all banks, 63.46 for agricultural banks, and 68.59 for other

Table 7. Selected Financial Ratios for Farmer Mac Approved Sellers and Other Types of Banks

Bank Size (millions of dollars)	No. of Banks	Average Assets ('000s)	Return on Assets	Return on Equity	Equity to Assets (%)	Loans to Deposits (%)	Ag Loans to Total Loans (%)	Total Loans To Total Assets (%)	Allowance for Loan Losses to Total Loans (%)
***Selected Financial Ratios for All U.S. Banks*:**									
< 25	1,801	$16,387	0.94	8.90	13.18	62.56	32.15	51.91	1.84
25 to <50	2,437	$35,184	1.12	11.12	10.63	65.03	22.06	55.27	1.62
50 to <100	2,646	$68,513	1.19	12.21	10.17	67.51	13.47	57.30	1.54
100 to <300	2,403	$158,066	1.22	12.89	9.87	70.03	6.56	59.04	1.54
300 to <500	474	$366,398	1.21	13.61	9.30	74.06	2.97	60.70	1.91
> 500	775	$4,578,240	1.23	14.63	8.78	80.52	1.53	62.54	1.93
Average		$417,443	1.14	11.79	10.58	67.71	15.72	56.84	1.66
Selected Financial Ratios for Farmer Mac Approved Sellers:									
< 25	4	$18,527	1.13	15.17	7.74	64.93	35.18	59.13	2.59
25 to <50	5	$39,780	1.09	11.99	8.79	73.35	42.47	63.01	1.52
50 to <100	15	$70,735	1.21	13.03	10.16	62.75	31.49	57.10	1.42
100 to <300	28	$174,124	1.28	14.35	8.93	76.88	22.73	64.15	1.54
300 to <500	1	$366,199	1.19	15.26	8.03	81.73	10.10	71.91	1.26
> 500	10	$4,801,027	1.17	15.96	7.53	84.97	5.37	65.09	1.45
Average		$865,681	1.21	14.13	8.88	73.85	24.26	62.18	1.52

Source: 1995 End of Year Bank Call Report data.
Note: Means for Farmer Mac Approved Sellers are significantly different (95% level) from the means of Other Types of Banks, except for Return on Assets.

Table 7. (Continued)

Bank Size (millions of dollars)	No. of Banks	Average Assets ('000s)	Return on Assets	Return on Equity	Equity to Assets (%)	Loans to Deposits (%)	Ag Loans to Total Loans (%)	Total Loans to Total Assets (%)	Allowance for Loan Loss to Total Loans (%)
Selected Financial Ratios for U.S. Agricultural Banks:									
< 25	1,126	$15,803	1.02	9.62	11.26	62.20	48.02	52.48	1.88
25 to <50	1,153	$34,799	1.16	10.78	10.78	62.93	41.93	53.55	1.59
50 to <100	806	$66,705	1.25	10.59	10.59	64.22	36.27	54.03	1.35
100 to <300	328	$138,488	1.27	9.93	9.93	68.19	31.36	56.95	1.24
300 to <500	24	$355,108	1.06	12.98	8.60	69.75	26.04	58.76	1.07
> 500	9	$901,717	1.39	15.96	9.10	72.74	21.41	57.46	1.80
Average		$50,419	1.14	11.18	10.79	63.46	41.42	53.68	1.53
Selected Financial Ratios for Other Rural Banks:									
< 25	353	$16,541	0.82	9.47	11.37	63.71	6.79	53.23	1.95
25 to <50	611	$35,723	1.18	12.20	10.26	66.80	6.05	56.44	1.67
50 to <100	804	$69,410	1.25	13.02	10.21	68.19	5.69	57.70	1.69
100 to <300	734	$155,339	1.30	13.75	9.98	70.61	4.74	60.12	1.52
300 to <500	92	$368,187	1.26	14.03	9.34	79.92	3.60	65.52	1.45
> 500	40	$996,133	1.44	16.46	9.04	84.33	2.57	67.83	1.62
Average		$102,964	1.19	12.64	10.26	68.59	5.54	57.91	1.69

Source: 1995 End of Year Bank Call Report data.
Note: Means for Farmer Mac Approved Sellers are significantly different (95% level) from the means of Other Types of Banks, except for Return on Assets.

rural banks, and a significantly greater ratio of total loans to total assets. Farmer Mac approved banks also have a lower average ratio of allowance for loan losses to total loans (1.52) than for all banks (1.66) and other rural banks (1.69), although the margin of difference is slight relative to agricultural banks (1.53).

These relationships hold with a high degree of consistency across the bank size categories for ROE, the capital ratio, and the loan to deposit and total asset ratios. Only for the ROAs and the loss ratios do the averages for several of the size classes for non Farmer Mac approved banks outperform those of the Farmer Mac banks. Even for the ROA cases, however, the lower capital ratios of the Farmer Mac approved banks leverage these results into consistently higher ROEs across nearly all of the bank size classes.

In general, Farmer Mac appears to have attracted higher performing banks as members of its customer base. These banks apparently see strategic merit in the potential utilization of Farmer Mac's secondary market services, and they may be indicative of the types of banks who will become Farmer Mac customers in the near future.

Agricultural and Rural Finance Conditions

The future competitive environment for Farmer Mac also depends upon the financial outlook for the agricultural sector, structural changes in commercial banking, and new developments affecting other government-sponsored enterprises. Each of these areas is briefly considered in this section.

The near term (3 to 5 years) outlook for agriculture is generally a favorable one. Income conditions overall are good, export prospects are favorable, land values are steadily increasing, and farm real estate debt, while a mature market, reflects modest growth potential. Continuation of these near term conditions, however, depends heavily on world-wide swings in production

levels of major farm commodities. Variations in weather, cropping patterns, and trade conditions can strongly influence the expected level and variability of aggregate production. Longer term prospects are more uncertain, reflecting the withdrawal of government involvement in crop production and marketing, and anticipated termination of the seven year transition payments for crop producers.

In rural financial markets, the loan-to-deposit ratios of agricultural banks and other lenders have risen substantially in recent years (from an average of .551 in 1991 to .641 in 1995 for agricultural banks), although still falling below desired levels for many banks, as reported in several Federal Reserve Bank surveys. Greater interest rate stability and today's flatter yield curve may also lead to a stronger demand for fixed-rate loans by agricultural borrowers. In general, the near term provides a relatively favorable set of conditions in which Farmer Mac can contribute to greater liquidity in rural financial markets, stabilize the availability of credit for farm real estate investments by farmers, and enable rural banks to offer a wider range of financial products and services to their customers.

The on-going transition of commercial banking in the U.S. toward larger, more consolidated and diverse branching and holding company systems is also important to consider. This transition could diminish and destablize the availability of credit to agricultural and rural borrowers, especially family farmers and other small scale borrowers. This transition is especially challenging to community banks, although it is well recognized that agricultural and rural lending will remain important niche markets for well capitalized, highly competitive, and strongly managed banks that have strong customer relationships and can effectively use various services from larger financial institutions. One of the important services is a reliable, competitive secondary market for agricultural loans offered by Farmer Mac. Both small banks and large banks

may view loan origination and securitization through loan sales as a profitable element of their asset-liability management strategies.

The long term status of several other government-sponsored enterprises (GSEs) is subject to considerable uncertainty. Pressures for privatization continue. Sallie Mae requested and recently received congressional authority to eventually privatize. Fannie Mae is being scrutinized closely for possible prioritization through recent reports by the General Accounting Office and the Congressional Budget Office that identify large subsidies, only part of which goes to homeowners. The currently proposed Enterprise Resource Bank Act of 1996 intends to restructure the Federal Home Loan Bank System into a wholesale GSE lending system for depository institutions. The Farm Credit System is also addressing competitive changes in its marketplace, and has sought possible expansions in its lending authority.

Within this dynamic, uncertain GSE policy environment, Farmer Mac has a clearly defined and targeted mission, that was reinforced by the 1996 Act. Moreover, the 1996 Act confirms Farmer Mac's GSE role in agricultural finance, and gives the agency a fresh start in seeking to establish a successful secondary market for farm real estate and rural housing loans.

Concluding Comments

Farmer Mac's revised statute has given the organization a new base from which to establish an effective secondary market for farm real estate and rural housing loans. The goal is to add another viable linkage to the connection between rural financial markets and funding sources in the national and international capital markets. Such a linkage will broaden the financial options for rural institutions and borrowers, further stabilize the availability of rural credit, enhance local market competition, allow added product and service offerings by local lenders, and make interest rates more uniform and lower across regions.

Important elements of this process include prudent management of credit risks, conservative underwriting criteria, sound capitalization, adequate loan volume, profitable opportunities for participating lenders, a high performing customer base, and a favorable agricultural and financial market environment. Farmer Mac is now engaged in meeting these requirements in order to provide a successful secondary market for the agricultural and rural housing sectors.