COMMERCIAL FARM OPERATIONS' FINANCIAL PERFORMANCE AND ABILITY TO SERVICE DEBT: IMPACTS OF NONFARM CAPITAL AND INCOME

James Ryan

Proceedings of a Seminar sponsored by
North Central Regional Project NC-207
"Regulatory, Efficiency and Management Issues Affecting Rural Financial Markets"
New York, NY
September 8-9, 1996

Department of Agricultural and Consumer Economics
College of Agricultural, Consumer and Environmental Sciences
332 Mumford Hall
Urbana, IL 61801

June 1997

Commercial Farm Operations' Financial Performance and Ability to Service Debt: Impacts of Nonfarm Capital and Income

James T. Ryan[1]

Commercial farm operations gain access to the use of assets through debt financing of capital purchases, through temporary management of needed resources by renting land and leasing equipment, and through internal funding from earnings derived from farm and nonfarm income sources. Farm operations also acquire the use of additional resources through contractual arrangements, and may have access to capital provided by the nonfarm income and assets of multiple households that participate in the operation of the farm business. Fully accounting for the assets provided and returns earned by all participants in the industry complicates the evaluation of the financial performance of farm operations with standard financial measures.

This paper reports a descriptive analysis of two structural phenomena affecting measures of financial condition, performance, and creditworthiness of commercial farm operators: 1) capital invested by those not actively engaged in the farming operation (landlords and machinery leasing agents), and 2) operator income derived from nonfarm sources that could be available for servicing farm business debt obligations and further investment in the farm operation. The results illustrate the difficulty in meaningful interpretation of financial performance measures for operators who rent or lease the bulk of their assets, or for those who rely on nonfarm income to meet existing obligations.

First, average income statements, balance sheets, and financial performance measures are presented for commercial farm operations (those with sales over $50,000) responding to USDA's 1994 Farm Costs and Returns Survey (FCRS). The total value of all assets managed by farm operations is determined by combining assets controlled through renting and leasing with owned assets. For purposes of this analysis, managed assets include land leased through share rent and cash rent arrangements, but exclude land or other assets provided by contractors.

Returns and rates of return are then computed for each identified supplier of capital. A comparison of financial measures is made for operations classified by size of operation and extent of ownership of managed assets. Estimates of commercial farm operator debt capacity and its level of utilization during 1994 are then presented for FCRS respondents. Impacts of operators' nonfarm income on farm operators' ability to meet debt service and family living expenses are then presented.

---

[1] James T. Ryan is an agricultural economist with the Rural Economy Division, ERS/USDA.

Financial Condition and Performance Measures

The Farm Financial Standards Council (FFSC) has recognized the need for improved financial reporting by agricultural producers. The FFSC has issued recommendations for a standardized approach to construction of uniform financial reports and for a methodology for calculation and presentation of universal financial criteria and measures of financial performance.

FFSC recommendations were followed to the extent possible in computing the measures presented here. The FCRS collects farm asset current market value estimates, rather than cost or other basis data, so no contingent tax liabilities are included in balance sheets. Also, all breeding livestock are effectively considered raised, with sales of breeding livestock included in income, and no capital gains or losses reported on the sale of such assets. Due to this treatment of capital assets, net farm income is considered an appropriate measure of net farm income from operations.

Net farm income measures the returns to operator and unpaid family labor, management and equity capital. This income may be distributed among multiple households, and thus may not all be available for the farm operator's household. More than one-half of all 1994 FCRS respondents reported that income from the farm operation was shared by multiple households.

Returns to assets and equity include an imputed charge for operator and unpaid family labor and management, based on reported labor hours and a standard management fee; the total charge was limited to withdrawals for reported family living expenses, which are reported only for the operator's household.

Farm Costs and Returns Survey Data

Abbreviated income statements and balance sheets and selected financial measures have been prepared for respondents to USDA's annual Farm Costs and Returns Survey (table 1). The FCRS provides production and financial information on all farms in the continental U.S., obtaining data on owned and rented acreage, gross income, expenses, assets, debt, estimates of the value of rented land, and characteristics of the senior operator, such as the operator's age, education, major occupation, and household income and family living expenses. Only the nonfarm income and family living expenses of the senior operator's household are reported for partnerships and for multiple family farm operations. Farms reported to be operated as corporations or cooperatives, or with hired farm managers, were omitted from this analysis, since the respondent did not report certain operator household financial data.

The largest farms, in addition to generating the highest income and profit margin ratios, reported the highest rates of return on assets and equity. The average commercial farm produced over $200,000 of gross income, using over $700,000 worth of owned assets. Those in the largest sales class reported gross cash farm income over $950,000, with 44 percent of this from crop sales, and 43 percent from livestock sales.

Importance of Managing Rented and Leased Assets

Those in the largest sales class owned assets valued at almost $2 million. FCRS respondents estimate the current market value of the land they rent, and report machinery and equipment leasing expenses. An estimated 75 percent of reported lease expenses are considered capital lease payments. Leased machinery values are estimated by capitalizing lease payments at 10 percent. When capital provided by landlords and other outside sources is considered, the average value of all assets managed by operations in the largest sales increased to over $3.4 million (table 2).

Listing of all managed assets used in the farm operation effectively extends the operation's balance sheet, and allows observation of the relative amounts of capital provided by each of the participants. Rented land and leased machinery are individually identified, and owned assets are allocated to creditors and farm operators based on their balance sheet values. Farm operators owned about 59 percent of the assets used in their 1994 operations, with almost 48 percent being supplied by the operators' equity, and creditors providing about 11 percent. Landlords, meanwhile, provided about 40 percent of all farm operators' managed capital in the form of rental land, and machinery lessors provided about 1 percent.

Returns to Managed Assets

Returns to capital provided by each of the participants are also computed. Returns to assets owned and equity are reduced by an operator and unpaid family labor and management charge. Interest expenditures were identified as the returns to creditors, while reported cash rent and estimated share rent are returns to landlords. The 75 percent of reported lease payments considered capital leases expenses are included as the returns to lessors.

An average farm operation generated about $58,000 in total returns to all providers of capital, with only 32 percent of this (about $19,000) being a return on owner's equity. Farms in the largest sales class generated returns of over $157,000 to their own equity, and returns of $133,000 to other capital providers.

Rates of return are computed for each capital provider. For each source of capital, rates are computed as the ratio of returns to the year-end amount of capital provided. If debt levels are assumed constant over the year, the rate of return to creditors effectively measures an average interest rate. An operation generating returns on owned assets above the interest rate levels will produce even higher rates of return to equity. The rate of return on rented land was a relatively stable 5-6 percent across all sales classes in 1994. This rate of return is not unfavorable for an asset with appreciation potential, especially considering that most rental land has been held over a long term, and the rate of return on the actual cost of the rental land would be much higher than that on its estimated current market value. The aggregate rate of return to all managed assets indicates that farm operations generated average returns of almost 5 percent to all providers of

capital during 1994. Creditors and lessors, through their contractual interest rate charges, received the most consistent rates of return on the capital they provided to farmers.

Classification of Farms by Share of Managed Assets Owned

The financial statements and performance measures presented for farms in various sales classes have been recomputed for farms classified by the percentage of managed assets that are owned by the operation (table 3). Only 21 percent of commercial farms own all of the assets they manage, while 23 percent gain access to over 60 percent of the assets they manage through rental and lease arrangements.

Income statements for 1994 are similar across all tenure arrangements, while balance sheets fully reflect the effects of limited asset ownership. Operations owning less than 20 percent of the assets they manage generated gross income of almost $200,000, including net farm income of $40,000, on owned assets of only $226,000, and had an average net worth of about $148,000. Operations owning 80 to 100 percent of managed assets produced gross income of $228,000, with net farm income of about $28,000, on owned assets of over $1 million, and had an average net worth of over $885,000. This suggests that ownership of an additional $829,000 in assets, ($737,000 provided by the owner's equity) produces additional gross income of $28,000 (but $12,000 less net income). Rented land assets are apparently more extensively used in generating crop sales than livestock receipts, as the share of gross income from crop sales ranged from 69 percent for those owning less than 20 percent of managed assets to 36 percent for those owning 80 to 100 percent of managed assets.

Standard financial measures suggest additional differences: low ownership operations have lower current ratios and working capital, higher debt-to-asset ratios, operate on a roughly equal profit margin, but otherwise have more favorable profitability measures. With higher rates of return to owned assets and equity, these low ownership operations generate favorable debt repayment and financial efficiency measures.

Returns to Managed Assets for Low Ownership Operations

Rented land accounted for almost 89 percent of the value of all assets used in 1994 by low ownership operations (those owning less than 20 percent of managed assets) (table 4). While these operations own only $226,000 in assets, they manage over $2 million, the largest managed asset base of any ownership level class. The addition of rented and leased assets means that these operations must generate additional income to distribute to providers of this capital. Low ownership operations generated returns to all providers of managed assets of over $100,000, only $22,000 of which was the residual return to their own equity. While these operations distributed over 78 percent of returns to managed assets to other providers, full owners share only 31 percent of these returns, paid out as interest to creditors and as short-term rent to landowners.

While low ownership operations generated favorable rates of return to owned assets and equity, their rate of return to all managed assets was about 4.4 percent in 1994, lower than that achieved by operations owning 20 to 80 percent of managed assets. Low ownership operations paid an average interest rate of over 10 percent, the highest of any class, reflecting lenders apparent concern of higher risk due to their fixed commitments to other providers of capital. Despite relatively low returns to all assets, these operations were able to generate high rates of return to owned assets and equity, mainly because the rate of return they paid landlords was less than 3.3 percent. Traditional performance measures, reflecting returns to owned assets, suggest that these farms are highly productive operations. When all resources used are accounted for, the operations do not generate high returns to all capital providers.

Returns to Managed Assets Varies by Size of Farm

While the largest commercial farms (those with sales over $500,000) had the highest average debt/asset ratio (almost 27 percent) of any size class in 1994, low ownership operations had the highest (over 45 percent) among these large farms (table 5). While average operating profit margins varied only slightly among the largest farms, the high rates of return to owned assets (33 percent) and equity (almost 55 percent) of low ownership operations reflect their apparent effectiveness in leveraging their equity and owned capital in generating income. While these rates of return to owned assets and equity seem extremely high, they are consistent with the more reasonable rate of return to all managed assets (less than 8 percent) generated by these operations. Relative to the total capital used in these operation, total returns to all capital providers are not unusually high.

Similar relationships generally held in 1994 for farms in the $250,000 to $500,000 sales class, with low ownership operations reporting favorable rates of return to owned assets and equity, and less favorable rates of return to managed assets. However, the situation was reversed for operations in the $100,000 to $250,000 sales class. While low ownership farms apparently received favorable rental terms from landlords, they generated low rates of return to owned assets and negative returns to equity. Among farms with sales less than $100,000, low ownership operations report the most favorable overall performance, despite paying the highest average interest rate of any group.

Debt Repayment Capacity Utilization

The previous sections have presented comparisons of financial performance of commercial farm operations based on the relative capital contributions of active and investing participants in farming. This section discusses the relative contributions of income from farm and operator's nonfarm sources to the acquisition of owned assets used in the operation. Debt repayment capacity utilization measures actual debt financing used relative to the maximum supportable by net income available for debt service payments. Extension of the FFSC's recommended Term Debt and Capital Lease Coverage Ratio, which measures income available

for debt coverage relative to required debt service payments, allows estimation of a debt level supportable by farm operator incomes, from both farm and nonfarm sources.

Income available for debt coverage (table 6), measures the farm and nonfarm income that is available, after meeting all cash expenses, to make principal and interest payments on debt, and to provide a reasonable margin for capital replacement and contingencies. Given this income level, the maximum loan payment is determined by applying the Term Debt and Capital Lease Coverage Ratio. While the FFSC considers a ratio above 1.1:1 as favorable, the more conservative ratio of 1.25:1 recommended in the Farmer Mac (FAMC) standards for farm mortgage loans eligible for sale on the secondary market is used in this analysis. The maximum loan payment supportable by a level of income for debt coverage can be determined by dividing the income for debt coverage by the predetermined minimum debt coverage ratio. Here, requiring a debt coverage ratio of 1.25 is equivalent to stating that no more than 80 percent (1 / 1.25) of income for debt coverage can be allocated to payment of principal and interest.

Debt repayment capacity, measuring the amount of debt that the maximum loan payment could support, is a function of that loan payment, the interest rate, and the term of the loan. Once a maximum loan payment has been established, the maximum amount of debt that could be supported by income for debt coverage can be determined for any given amortization schedule (interest rate and loan term). Thus, applying a minimum debt coverage ratio requirement to any farm operator, the maximum debt that can be repaid from any level of income for debt coverage can be computed.

Debt repayment capacity varies directly with the loan term and inversely with the loan interest rate. Therefore, debt repayment capacity for 1994 was calculated for loan amortization schedules based on three alternative interest rates (current bank rates and constant 7.5- and 10-percent rates) for 1994 over three alternative hypothetical repayment terms (5, 7, and 10 years). For simplicity, only the results for loan payments amortized over 10 years at a constant 7.5-percent rate are presented here. Operations with debt are, in effect, using a portion of their credit capacity. The ratio of actual debt to maximum debt repayment capacity measures the extent of their use of their potential credit repayment ability.

For farms classified by relative ownership of managed assets, debt repayment capacity utilization is presented for three scenarios: 1) all nonfarm income of the operator's household is available to meet the debt service requirements of the farm business; 2) nonfarm income of the operator's household is available to meet the household's living expenses, but not the debt service requirements of the farm business; 3) no nonfarm income is included in income for debt coverage, so that the ability of the farm business to internally generate sufficient income to service debt and provide for family living expenses can be measured.

Excluding nonfarm income from consideration means that operations have less income for debt coverage and can thus support a lower level of debt. Here, this exclusion increased estimated debt repayment capacity utilization from 43 percent to almost 76 percent. Low

ownership operations showed the least reliance on nonfarm income to meet the debt service requirements of the business. These operations owed only 25 percent of the debt that could be serviced by their 1994 farm and nonfarm income. Elimination of nonfarm income raised their use of borrowing capacity to 50 percent.

Comparison of debt repayment capacity utilization by size of farm suggests that smaller operations are more reliant on nonfarm income (table 7). Among larger farms (with sales over $250,000), lower ownership operations were generally less reliant on nonfarm income, but farms in all ownership classes were generating sufficient farm income to fully provide for all debt service and family living expenses. For farms with sales less than $250,000, operations in all ownership classes appear to generate sufficient income to service business debt requirements, but rely on nonfarm income to meet family living expenses.

Conclusions

Fully accounting for the capital provided farm operations by creditors, landlords, lessors, and farm operators themselves, and returns earned by all participants in the industry clouds the evaluation of the financial performance of farm operations with standard financial measures. The results illustrate the difficulty in meaningful interpretation of financial performance measures for operators who rent or lease the bulk of their assets, or for those who rely on nonfarm income to meet existing obligations.

References

Farm Financial Standards Council (FFSC). Financial Guidelines for Agricultural Producers: Recommendations of the Farm Financial Standards Task Force. (Revised) July 19951.

Federal Agricultural Mortgage Corporation (FAMC). Farmer Mac Securities Guide. Washington, D.C. (December 1989) pp. 401-424.

Koenig, Steven R. and Charles B. Dodson. "Sources of Capital for Commercial Farm Operators." Paper presented at NC-207 meeting, Kansas City, MO, October 16, 1995.

Koenig, Steven R. and James T. Ryan. "Farm Mortgage Volume: What is Available for Farmer Mac." Paper presented at NC-161 meeting, St. Louis, MO, September 24, 1991.

Ryan, James T. "Estimated Lender Loan Losses Relative to Changes in Farm Debt Levels in the 1980's." Paper presented at NC-161 meeting, Kansas City, MO, September 24, 1990.

Ryan, James T. and Steven R. Koenig. "Farmer Mac: Can It Help Indebted Farm Operators?" Agricultural Income and Finance: Situation and Outlook Report. AFO-43. Washington, D.C.: Economic Research Service (December 1991).

Ryan, James T. and Mitchell Morehart. "Debt Repayment Capacity of Commercial Farm Operators: How Much Debt Can Farmers Afford?" Agricultural Income and Finance: Situation and Outlook Report. AFO-45. Washington, D.C.: Economic Research Service (May 1992).

U.S. Department of Agriculture (USDAa). Agricultural Income and Finance: Situation and Outlook Report. Washington, D.C.: Economic Research Service (Various issues).

U.S. Department of Agriculture (USDAb). Economic Indicators of the Farm Sector, National Financial Summary, 1993. ECIFS 13-1. Washington, DC: Economic Research Service (February 1995).

U.S. Department of Commerce (USDCa). 1969 Census of Agriculture, Farm Finance (1970), Volume V, Part 11. Washington, D.C.: Bureau of the Census (August 1974).

U.S. Department of Commerce (USDCb). 1978 Census of Agriculture, Farm Finance Survey (1979), Volume 5, Part 6, AC78-SR-6. Washington, D.C.: Bureau of the Census (July 1982).

U.S. Department of Commerce (USDCc). 1987 Census of Agriculture, Agricultural Economics and Land Ownership Survey (1988), Volume 3, Part 2 , AC87-RS-2. Washington, D.C.: Bureau of the Census (July 1990).

Table 1. Farm business financial statements and measures, by size of farm, 1994.

Item	Value of sales				
	$500,000 or more	$250,000 to $499,999	$100,000 to $249,999	$50,000 to $99,999	All farms
Number of farms	43,179	70,141	17,335	208,746	539,401
Percent of farms	8.01	13.00	40.29	38.70	100.00
Income Statement ($ per farm)					
Gross cash income	956,350	317,494	148,194	73,130	205,853
Livestock sales	411,442	114,169	61,861	29,886	84,273
Crop sales	425,135	165,710	64,873	30,102	93,368
Direct government payments	20,451	13,817	,509	5,388	8,947
Net cash farm income	215,115	83,487	32,465	17,094	47,772
Net farm income	182,953	65,711	19,014	12,302	35,612
Balance Sheet ($ per farm)					
Total assets	1,958,340	974,168	661,222	436,000	718,590
Total liabilities	527,177	200,838	118,529	54,855	137,303
Net worth	1,431,163	773,330	542,692	381,144	581,287
Financial Measures					
Liquidity					
Current ratio (ratio)	2.09	2.41	2.64	3.96	2.58
Working capital ($)	234,057	114,020	65,635	50,915	79,713
Solvency					
Debt/asset ratio (%)	26.92	20.62	17.93	12.58	19.11
Profitability					
Rate of return on assets (%)	10.25	6.15	1.78	0.94	4.20
Rate of return on equity (%)	10.99	5.67	0.31	-0.16	3.22
Operating profit margin ratio (%)	21.00	18.86	7.92	5.62	14.66
Net farm income ($)	182,953	65,711	19,014	12,302	35,612
Repayment Capacity					
Debt coverage ratio (ratio)	3.01	3.01	2.03	3.74	2.77
Debt repayment margin ($)	163,087	58,590	19,157	22,352	37,043
Financial Efficiency					
Asset turnover ratio (ratio)	48.83	32.59	22.41	16.77	28.65

SOURCE: USDA Farm Costs and Returns Survey, 1994

Table 4. Value of assets managed by farm operators, and returns to owners of assets, by percentage of assets owned, 1994.

Item	Percentage of managed assets owned						
	Less than 20 percent	20 to 40 percent	40 to 60 percent	60 to 80 percent	80 to 100 percent	100 percent	All farms
Number of farms	44,307	82,163	83,780	87,730	125,755	115,666	539,401
Percent of farms	8.21	15.23	15.53	16.26	23.31	21.44	100.00
Managed assets ($ per farm)							
Assets owned	226,373	422,441	614,876	796,115	1,054,983	768,097	718,590
Creditor provided	78,009	112,256	155,887	164,013	169,519	109,063	137,303
Owner provided	148,364	310,185	458,989	632,102	885,464	659,033	581,287
Rented land	2,090,463	966,536	598,264	333,085	88,413	0	486,648
Leased machinery	37,703	15,767	15,479	13,258	7,658	0	11,845
Total managed assets	2,354,539	1,404,744	1,228,618	1,142,458	1,151,055	768,097	1,217,083
Managed assets (million $)							
Assets owned	10,030	34,709	51,514	69,843	132,670	88,843	387,609
Rented land	92,623	79,413	50,123	29,221	11,118	0	262,499
Leased machinery	1,671	1,295	1,297	1,163	963	0	6,389
Total managed assets	104,323	115,418	102,934	100,227	144,751	88,843	656,496
Percent of asset class							
Assets owned	2.59	8.95	13.29	18.02	34.23	22.92	100.00
Rented land	35.28	30.25	19.09	11.13	4.24	0.00	100.00
Leased machinery	26.15	20.28	20.30	18.20	15.07	0.00	100.00
Total managed assets	15.89	17.58	15.68	15.27	22.05	13.53	100.00
Percent of managed assets							
Assets owned	9.61	30.07	50.05	69.68	91.65	100.00	59.04
Creditor provided	3.31	7.99	12.69	14.36	14.27	14.20	11.28
Owner provided	6.30	22.08	37.36	55.32	77.38	85.80	47.76
Rented land	88.78	68.81	48.69	29.16	7.68	0.00	39.98
Leased machinery	1.60	1.12	1.26	1.16	0.67	0.00	0.97
Returns to managed assets							
Returns to assets owned	29,095	28,976	35,116	34,803	25,518	29,448	30,182
Interest returns to creditors	6,622	9,867	12,312	12,960	14,638	9,124	11,436
Returns to equity	22,474	19,108	22,804	1,843	10,879	20,325	18,746
Rental returns to landlords	68,634	55,215	43,933	23,866	7,690	108	26,570
Cash rent	25,895	19,674	18,570	12,878	5,235	108	11,346
Share rent	42,739	35,541	25,363	10,988	2,456	0	15,224
Lease returns to lessors	3,770	1,577	1,548	1,326	766	0	1,184
Returns to managed assets	102,756	86,293	81,113	60,438	34,229	29,556	58,331
Rates of return							
Assets owned	12.85	6.86	5.71	4.37	2.42	3.83	4.20
To creditors	10.27	9.88	8.70	8.60	9.28	9.01	9.11
To equity	15.15	6.16	4.97	3.46	1.23	3.08	3.22
Rented land	3.28	5.71	7.34	7.17	8.70	n.a	5.46
Leased machinery	10.00	10.00	10.00	10.00	10.00	n.a.	10.00
Managed assets	4.36	6.14	6.60	5.29	2.97	3.85	4.79
Asset turnover ratio	88.00	46.90	36.19	27.59	21.57	21.84	28.65
Managed asset turnover ratio	8.46	14.10	18.11	19.22	19.77	21.84	16.91

SOURCE: USDA Farm Costs and Returns Survey, 1994

Table 5. Farm business financial statements and measures, by percentage of assets owned, 1994.

Value of sales Item	Percentage of managed assets owned: Less than 20 percent	20 to 40 percent	40 to 60 percent	60 to 80 percent	80 to 100 percent	100 percent	All farms
$500,000 or more							
Number of farms	3,311	6,364	7,899	6,040	11,478	8,087	43,179
Percent of farms	7.67	14.74	18.29	13.99	26.58	18.73	100.00
Financial measures							
Current ratio (ratio)	1.69	1.72	1.75	2.02	2.69	2.31	2.09
Debt/asset ratio (%)	45.58	33.91	28.48	27.22	24.21	23.83	26.92
Operating profit margin ratio (%)	23.21	22.58	22.35	23.27	16.65	22.32	21.00
Net farm income ($)	251,907	202,692	187,218	217,615	134,775	177,517	182,953
Rates of return							
Assets owned	33.05	15.01	11.68	11.11	6.38	9.52	10.25
To creditors	9.36	9.26	9.49	7.83	9.29	9.10	9.07
To equity	54.70	18.49	12.94	12.59	5.65	9.85	10.99
Rented land	4.28	5.14	7.80	7.68	9.61	.	5.82
Managed assets	7.71	8.20	9.84	10.20	6.72	9.53	8.49
$250,000 to $499,999							
Number of farms	6,220	12,336	11,494	13,227	17,032	9,832	70,141
Percent of farms	8.87	17.59	16.39	18.86	24.28	14.02	100.00
Financial measures							
Current ratio (ratio)	1.58	2.34	2.13	2.14	2.73	4.28	2.41
Debt/asset ratio (%)	38.61	5.58	27.77	24.81	15.35	12.11	20.62
Operating profit margin ratio (%)	15.84	21.78	17.74	16.86	17.79	23.88	18.86
Net farm income ($)	61,347	73,021	63,186	59,874	62,833	75,086	65,711
Rates of return							
Assets owned	12.53	10.40	6.79	5.33	4.11	6.82	6.15
To creditors	9.58	10.29	8.29	7.88	8.51	10.40	8.77
To equity	15.23	10.87	6.50	4.69	3.43	6.46	5.67
Rented land	3.96	6.44	7.59	8.41	9.17	.	6.10
Managed assets	5.05	7.66	7.31	6.33	4.56	6.83	6.21
$100,000 to $249,999							
Number of farms	21,175	29,984	41,726	37,408	49,753	37,290	217,335
Percent of farms	9.74	13.80	19.20	17.21	22.89	17.16	100.00
Financial measures							
Current ratio (ratio)	1.61	1.86	2.08	2.65	3.34	3.85	2.64
Debt/asset ratio (%)	28.08	26.78	23.88	19.11	13.85	15.15	17.93
Operating profit margin ratio (%)	2.40	5.31	9.22	10.69	5.81	11.34	7.92
Net farm income ($)	15,907	16,872	22,803	24,085	13,860	20,052	19,014

Table 7. Debt repayment capacity utilization comparisons for alternative nonfarm income credit scenarios, by percentage of assets owned, 1994.

Value of sales / Item	Percentage of managed assets owned: Less than 20 percent	20 to 40 percent	40 to 60 percent	60 to 80 percent	80 to 100 percent	100 percent	All farms
$500,000 or more							
Number of farms	3,311	6,364	7,899	6,040	11,478	8,087	43,179
Percent of farms	7.67	14.74	18.29	13.99	26.58	18.73	100.00
Scenario 1	18.31	35.99	37.91	39.28	53.32	37.32	39.29
Scenario 2	23.84	38.99	42.64	40.95	57.28	40.30	43.24
Scenario 3	25.16	41.48	45.50	43.21	60.92	44.45	46.24
$250,000 to $499,999							
Number of farms	6,220	12,336	11,494	13,227	17,032	9,832	70,141
Percent of farms	8.87	17.59	16.39	18.86	24.28	14.02	100.00
Scenario 1	37.97	34.87	43.94	61.08	43.82	23.02	41.68
Scenario 2	44.91	37.12	52.18	64.62	48.88	28.04	47.00
Scenario 3	53.84	43.09	62.35	74.00	55.77	32.51	54.57
$100,000 to $249,999							
Number of farms	21,175	29,984	41,726	37,408	49,753	37,290	217,335
Percent of farms	9.74	13.80	19.20	17.21	22.89	17.16	00.00
Scenario 1	34.68	63.86	64.18	63.01	62.95	43.93	57.19
Scenario 2	57.44	86.34	76.74	75.02	94.62	73.80	79.97
Scenario 3	484.42	171.39	127.17	102.89	158.86	157.42	141.07
$50,000 to $99,999							
Number of farms	13,602	33,479	22,661	31,055	47,493	60,457	208,746
Percent of farms	6.52	16.04	10.86	14.88	22.75	28.96	100.00
Scenario 1	17.83	27.50	36.92	42.54	49.67	23.37	32.75
Scenario 2	39.12	52.77	73.64	65.96	93.00	49.08	63.10
Scenario 3	77.91	-115.43	224.54	150.77	443.77	133.96	250.24
All farms							
Number of farms	44,307	82,163	83,780	87,730	125,755	115,666	539,401
Percent of farms	8.21	15.23	15.53	16.26	23.31	21.44	100.00
Scenario 1	25.05	39.70	46.35	51.46	53.44	32.60	43.12
Scenario 2	36.20	48.65	57.32	59.70	68.15	47.95	55.69
Scenario 3	50.32	72.22	74.95	75.00	89.49	70.83	75.67

Note: Debt repayment capacity utilization expresses actual farm debt as a percentage of the maximum debt that could be serviced by income for debt coverage reported in the current period. In all scenarios, maximum debt is that which could be repaid over a 10-year term at an interest rate of 7.5 percent.

Scenario 1 - All nonfarm income is available to service farm business debt.

Scenario 2 - Nonfarm income is available to extent of family living expenses.

Scenario 3 - No nonfarm income is available to service farm business debt; all debt service and family living expenses are provided by farm income.

SOURCE: USDA Farm Costs and Returns Survey, 1994