

Financial Benchmarks of North Dakota Farm Operators: 1992 Update

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This paper presents financial benchmarks of North Dakota farm operators in 1992 and compares them to similar measures in 1991.¹ The financial benchmarks reported in this paper are those the Farm Financial Standards Task Force (1991) recommends.

These measures are

- **liquidity**--the ability of the farm business to meet short-term (those within one year) financial obligations when they are due (Table 1),
- **solvency**--the amount of liabilities relative to the amount of assets and owner equity invested in the business (Tables 2 and 3),
- **profitability**--the returns the farm business generated from the invested resources of land, labor, and capital (Table 4),
- **repayment capacity**--the ability of the farm business to repay debt (Table 5), and
- **financial efficiency**--the degree to which the business uses invested resources to generate revenue (Tables 6 and 7).

Data used to develop financial benchmarks of North Dakota farm operators were based on the financial records of participants in the North Dakota Farm Business Management Education Program (NDFBMEP). Nineteen North Dakota counties had Farm Business Management Education Programs during 1991 and 1992. Over 500 farm operators participated in the program during these years. Their financial records are used in this study.

Benchmarks are presented for each of the financial measures among various farm classifications for 1992. A median or midpoint value is provided for each financial measure. Upper and lower quartiles² are also reported to permit a more comprehensive financial analysis and a broader application of financial benchmarks. Median 1991 values are included for each measure to illustrate changes in financial position and performance from 1991 to 1992.

All Farms

Average profitability of all North Dakota farm operators increased from 1991 to 1992. The median **net farm income** was \$41,000 in

1992, a 29 percent increase from 1991 (Table 4). Record small grain crop yields, higher grain prices, and lower interest rates improved profitability from 1991 to 1992. The median **return on farm assets** for all farms was nearly 7 percent in 1992, 1 percentage point higher than in 1991. The median **return on farm equity** for all farms was 6 percent in 1992, three times higher than in 1991. The median **operating profit margin** was 16 percent, up 2 percentage points from 1991.

The liquidity position of North Dakota farm operators also improved. The median **working capital** for all farms was \$29,527 in 1992, \$7,000 (33 percent) higher than in 1991 (Table 1). The median **current ratio** was unchanged from 1991 to 1992. The median current ratios do not vary much except for its relationship to farm income and debt-to-asset ratio. Operators want a 1.5 to 2.0 current ratio. Even the lower quartile of farm operators maintain a current ratio of 1.

The increased profitability also improved the solvency position of North Dakota farm operators. The median **debt-to-asset ratio** was 48 percent in 1992, (Table 3). The median **equity-to-asset ratio** was 52 percent, up 2 percentage points from 1991. The median **debt-to-equity ratio** was 0.9:1, down from 1991. The improved solvency position can be attributed to a reduction in overall farm debt from 1991 to 1992, again reflecting increased profits (Table 2). Apparently, profits primarily were used to pay down debt (rather than make new investments or bid up the price of existing assets).

The repayment capacity of farm operators increased from 1991 to 1992. The median **term debt and capital lease coverage ratio** for all farms was 1.4 in 1992, higher than in 1991 (Table 5). The median **term debt and capital repayment margin** was \$8,767 in 1992, up 125 percent from 1991. Increased profits and reduced debt are responsible for the changes in repayment capacity.

The financial efficiency of farm operators improved. The median **operating expense ratio** for all farms was 58 percent in 1992, down from 1991 (Table 6). The median **depreciation expense ratio** was 4.5 percent in 1992, down 0.7 percentage points from 1991. The median **interest expense ratio** was 7.8 percent in 1992, down 15 percentage points from 1991 (Table 7). The median **farm income ratio**

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¹The methods and procedures used to determine the financial position and performance of North Dakota farm operators are those outlined in Baltezore et al. (1993).

²The upper quartile value represents the middle response between the highest value and the median value. The lower quartile value represents the middle response between the median value and the lowest value.

TABLE 1. LIQUIDITY MEASURES, QUARTILE VALUES FOR 1992, MEDIAN VALUE FOR 1991, FARM BUSINESS MANAGEMENT EDUCATION PROGRAM PARTICIPANTS

Farm Group	1992				1992			
	Upper Quartile	Lower Quartile	Median	1991 Median	Upper Quartile	Lower Quartile	Median	1991 Median
	Current Assets(\$)				Current Liabilities(\$)			
All Farms	141,988	43,765	85,270	72,065	3,087	52,109	20,678	16,341
Region								
East	206,172	56,700	105,244	108,270	16,542	89,453	48,000	40,411
North Central	107,283	40,950	67,129	59,064	867	34,678	13,147	12,068
South Central	144,841	48,208	85,050	76,577	4,202	56,456	27,542	23,821
West	120,401	43,799	89,232	64,642	0	29,163	6,525	5,992
Farm Enterprise								
Crop	154,336	53,313	93,400	81,049	5,413	61,115	25,000	22,527
Livestock	117,079	36,542	75,055	64,880	817	43,817	11,325	10,760
Mixed	139,261	40,950	76,300	67,237	4,500	46,149	20,923	14,183
Farm Sales								
\$99,999 or less	69,192	24,010	42,146	40,763	0	25,000	7,240	6,833
\$100,000-\$249,999	133,108	60,716	90,152	83,392	4,500	51,500	23,801	21,680
\$250,000 or over	314,096	145,600	201,391	221,257	20,767	122,000	81,526	71,773
Farm Size								
1,200 acres or less	87,631	27,080	56,097	54,983	904	42,204	13,720	11,800
1,201 acres or over	165,724	65,548	104,683	86,755	4,500	62,501	27,093	20,376
Cropland Tenure								
Full tenant	135,582	32,192	80,945	49,500	1,438	55,056	25,865	15,965
1-20 percent owned	142,295	42,146	85,698	76,030	6,285	51,071	20,938	20,581
21-40 percent owned	169,436	65,548	106,120	87,482	7,000	76,853	36,547	27,974
41 percent or over owned	135,813	43,799	81,436	70,405	817	37,076	14,713	9,873
Farm Income								
Negative	62,380	18,754	33,525	37,179	15,771	86,501	45,008	25,716
\$0-\$19,999	66,115	18,053	29,188	37,235	2,243	36,694	13,819	11,639
\$20,000-\$39,999	98,007	41,291	64,800	62,042	1,346	38,206	17,375	15,325
\$40,000 or more	187,702	85,866	126,838	116,580	3,418	63,053	26,121	21,670
Debt-to-Asset Ratio								
0-40 percent	164,453	62,900	101,964	88,463	0	33,000	8,412	6,000
41-70 percent	138,115	43,107	86,931	77,033	6,463	69,598	28,938	24,428
71 percent or more	90,267	27,080	49,207	42,175	12,800	69,691	34,866	23,184
Farmer Age								
34 years or younger	120,860	28,826	63,298	62,631	1,377	45,653	16,762	11,778
35-44 years	147,762	52,598	90,267	73,054	4,519	61,508	26,601	16,930
45 years or older	162,280	55,572	91,374	91,088	2,000	46,149	20,700	21,680
	Current Ratio				Working Capital(\$)			
All Farms	3.3	1.0	1.6	1.6	73,248	-2,344	29,527	22,154
Region								
East	2.5	0.9	1.5	1.5	110,575	-7,572	33,148	26,583
North Central	4.8	1.1	1.7	1.8	62,251	2,875	28,510	19,847
South Central	3.1	0.9	1.5	1.7	69,901	-5,754	29,654	30,825
West	3.6	0.9	2.0	1.5	74,097	-3,237	30,111	17,401
Farm Enterprise								
Crop	4.0	1.0	1.8	1.8	86,918	1,834	38,294	27,792
Livestock	2.5	0.8	1.4	1.4	49,561	-9,298	16,521	12,757
Mixed	2.9	1.0	1.6	1.7	65,867	-1,238	27,759	25,365
Farm Sales								
\$99,999 or less	5.1	1.0	1.7	1.8	39,167	-1,238	17,114	12,745
\$100,000-\$249,999	2.9	1.0	1.6	1.6	72,509	-4,102	33,520	26,670
\$250,000 or over	2.5	1.0	1.6	1.8	166,793	3,795	73,346	72,488
Farm Size								
1,200 acres or less	3.3	0.8	1.5	1.7	46,576	-7,572	15,423	16,271
1,201 acres or over	3.3	1.0	1.7	1.6	94,795	2,760	37,518	30,259
Cropland Tenure								
Full tenant	3.1	0.9	1.7	1.5	67,185	-6,361	22,784	15,372
1-20 percent owned	3.3	1.3	2.1	1.5	80,121	7,288	39,383	19,441
21-40 percent owned	3.2	1.0	1.5	1.8	81,115	-1,238	35,369	37,299
41 percent or over owned	3.6	1.0	1.7	1.8	74,097	-3,639	29,654	26,594
Farm Income								
Negative	0.9	0.3	0.6	1.0	-2,420	-60,967	-31,440	194
\$0-\$19,999	1.7	0.5	1.1	1.3	16,046	-20,809	1,808	9,780
\$20,000-\$39,999	3.6	1.0	1.7	1.7	46,994	767	23,645	23,267
\$40,000 or more	4.4	1.3	2.2	2.3	110,455	23,131	58,446	65,636
Debt-to-Asset Ratio								
0-40 percent	8.3	1.7	3.2	3.5	118,008	28,914	64,261	55,556
41-70 percent	2.3	0.9	1.4	1.5	56,293	-4,102	22,784	23,426
71 percent or more	1.4	0.6	1.0	1.0	19,886	-31,179	-1,642	194
Farmer Age								
34 years or younger	2.8	1.0	1.5	1.6	49,794	-747	18,230	15,516
35-44 years	3.3	0.9	1.6	1.8	81,513	-7,375	34,980	29,125
45 years or older	3.8	1.0	1.9	1.5	91,241	4,690	34,117	26,339

TABLE 2. TOTAL ASSETS AND TOTAL LIABILITIES, QUARTILE VALUES FOR 1992, MEDIAN VALUE FOR 1991, FARM BUSINESS MANAGEMENT EDUCATION PROGRAM PARTICIPANTS

Farm Group	1992				1991 Median	1992			
	Upper Quartile	Lower Quartile	Median	1991 Median		Upper Quartile	Lower Quartile	1992 Median	1991 Median
	Total Assets(\$)					Total Liabilities(\$)			
All Farms	585,443	232,501	374,013	343,201	91,469	257,338	163,132	166,223	
Region									
East	710,066	218,928	397,065	394,101	112,301	262,321	186,699	188,320	
North Central	481,084	222,875	337,970	302,090	64,019	212,000	146,272	151,039	
South Central	579,918	239,247	367,264	347,291	86,800	265,924	159,449	169,106	
West	609,820	276,503	392,395	364,749	120,969	300,802	178,975	174,939	
Farm Enterprise									
Crop	600,344	217,962	363,122	353,496	88,458	240,941	153,015	157,644	
Livestock	570,486	242,230	372,384	343,730	104,051	301,232	185,693	194,815	
Mixed	586,170	259,239	387,418	327,914	104,276	249,107	163,816	158,766	
Farm Sales									
\$99,999 or less	306,081	122,537	218,153	225,119	48,306	168,942	93,165	107,880	
\$100,000-\$249,999	555,703	287,795	396,114	402,166	120,969	262,321	174,201	184,292	
\$250,000 or over	1,012,131	496,675	784,430	754,274	171,078	477,428	306,589	286,994	
Farm Size									
1,200 acres or less	400,121	136,733	260,560	265,724	53,861	196,326	128,526	123,547	
1,201 acres or over	671,772	300,441	445,238	426,677	122,370	303,953	190,578	192,694	
Cropland Tenure									
Full tenant	386,161	113,915	200,357	172,496	42,513	158,629	92,666	93,228	
1-20 percent owned	406,915	203,751	323,484	320,929	100,922	214,519	162,355	180,002	
21-40 percent owned	631,984	325,414	466,329	404,766	145,315	302,461	204,489	200,451	
41 percent or over owned	672,851	306,517	444,180	435,185	129,734	301,232	204,979	197,867	
Farm Income									
Negative	388,031	122,537	255,947	269,985	72,792	266,785	174,674	174,742	
\$0-\$19,999	346,413	133,770	256,685	250,064	78,357	199,405	127,091	146,426	
\$20,000-\$39,999	447,528	210,297	323,557	324,445	87,527	228,071	161,819	157,570	
\$40,000 or more	720,394	337,970	480,418	464,377	110,115	297,133	175,064	174,963	
Debt-to-Asset Ratio									
0-40 percent	696,285	272,259	409,499	398,750	34,938	145,315	92,573	87,437	
41-70 percent	588,593	267,645	392,430	378,203	148,498	302,461	211,298	203,365	
71 percent or more	363,122	184,777	245,471	249,068	157,430	336,771	206,335	215,420	
Farmer Age									
34 years or younger	399,377	138,010	257,057	248,434	53,426	191,860	132,766	126,099	
35-44 years	599,163	264,744	386,038	348,864	113,460	286,261	173,150	174,277	
45 years or older	713,123	321,591	498,775	477,061	107,795	300,802	182,598	190,500	

TABLE 3. SOLVENCY MEASURES, QUARTILE VALUES FOR 1992, MEDIAN VALUE FOR 1991, FARM BUSINESS MANAGEMENT EDUCATION PROGRAM PARTICIPANTS

Farm Group	1992				1991 Median	1992				1991 Median		
	Upper Quartile	Lower Quartile	Median	1991 Median		Upper Quartile	Lower Quartile	Median	1991 Median			
	Debt-to-Asset(%)					Equity-to-Asset(%)					Debt-to-Equity	
All Farms	29.7	64.7	48.4	50.0	70.3	35.3	51.6	50.0	0.4	1.8	0.9	1.0
Region												
East	29.7	66.4	48.3	48.4	70.3	33.6	51.7	51.6	0.4	2.0	0.9	0.9
North Central	26.8	64.0	47.4	51.4	73.2	36.0	52.6	48.6	0.4	1.8	0.9	1.1
South Central	29.1	65.1	48.1	47.7	70.8	34.9	51.9	52.3	0.4	1.9	0.9	0.9
West	34.7	64.8	48.9	52.1	65.3	35.2	51.1	47.9	0.5	1.8	1.0	1.1
Farm Enterprise												
Crop	28.3	63.4	47.0	46.5	71.7	36.6	53.0	53.5	0.4	1.7	0.9	0.9
Livestock	34.9	74.2	54.8	56.1	65.1	25.8	45.2	43.9	0.5	2.9	1.2	1.3
Mixed	29.4	57.7	46.3	52.2	70.6	42.3	53.7	47.8	0.4	1.4	0.9	1.1
Farm Sales												
\$99,999 or less	24.9	72.2	50.9	51.3	75.1	27.8	49.1	48.6	0.3	2.6	1.0	1.1
\$100,000-\$249,999	30.9	65.0	47.6	50.5	69.1	35.0	52.4	49.5	0.5	1.9	0.9	1.0
\$250,000 or over	28.3	60.5	46.8	44.2	71.7	39.5	53.2	55.8	0.4	1.5	0.9	0.8
Farm Size												
1,200 acres or less	28.1	66.3	50.5	49.6	71.9	33.7	49.5	50.4	0.4	2.0	1.0	1.0
1,201 acres or over	30.9	64.0	47.5	50.2	69.1	36.0	52.5	49.8	0.5	1.8	0.9	1.0
Cropland Tenure												
Full tenant	19.2	71.6	48.7	47.9	80.8	28.4	51.3	52.1	0.2	2.5	1.0	0.9
1-20 percent owned	32.6	65.0	51.7	53.0	67.4	35.0	48.3	47.0	0.5	1.9	1.1	1.1
21-40 percent owned	35.5	63.7	49.5	51.4	64.5	36.3	50.5	48.6	0.6	1.7	1.0	1.1
41 percent or over owned	29.9	65.4	48.0	50.8	70.1	34.6	52.0	49.2	0.4	1.9	0.9	1.0
Farm Income												
Negative	50.5	89.1	70.4	64.8	49.5	10.9	29.6	35.2	1.0	8.2	2.4	1.8
\$0-\$19,999	38.9	81.4	58.0	56.5	61.1	18.6	42.0	43.5	0.6	4.4	1.4	1.3
\$20,000-\$39,999	34.2	65.3	50.5	49.3	65.8	34.7	49.5	50.7	0.5	1.9	1.0	1.0
\$40,000 or more	23.8	57.0	41.3	40.6	76.2	43.0	58.7	59.4	0.3	1.3	0.7	0.7
Debt-to-Asset Ratio												
0-40 percent	--	--	--	--	90.2	67.7	77.7	78.2	0.1	0.5	0.3	0.3
41-70 percent	--	--	--	--	59.3	47.1	52.6	46.4	0.9	1.5	1.1	1.2
71 percent	--	--	--	--	24.3	-0.7	17.5	15.5	3.1	∞	4.7	5.4
Farmer Age												
34 years or younger	36.0	67.0	50.8	52.7	64.0	33.0	49.2	47.3	0.6	2.0	1.0	1.1
35-44 years	32.0	65.3	49.0	49.3	68.0	34.7	51.0	50.7	0.5	1.9	1.0	1.0
45 years or older	24.2	58.1	43.1	46.4	75.6	41.9	57.0	53.6	0.3	1.4	0.8	0.7

TABLE 4. PROFITABILITY MEASURES, QUARTILE VALUES FOR 1992, MEDIAN VALUE FOR 1991, FARM BUSINESS MANAGEMENT EDUCATION PROGRAM 1992 PARTICIPANTS

Farm Group	1992				1991 Median	1992			
	Upper Quartile	Lower Quartile	Median	1991 Median		Upper Quartile	Lower Quartile	Median	1991 Median
	Return on Farm Assets(%)					Return on Equity(%)			
All Farms	13.1	1.9	6.8	5.5	18.3	-5.5	6.0	2.1	
Region									
East	14.0	1.0	6.9	10.3	20.0	-8.0	5.2	10.8	
North Central	12.5	2.3	6.5	4.5	17.8	-4.1	5.1	-0.3	
South Central	12.9	1.8	6.8	6.5	18.0	-5.7	6.4	3.8	
West	12.7	3.4	7.4	3.8	17.6	-7.2	7.3	-1.6	
Farm Enterprise									
Crop	16.1	2.4	8.1	7.8	21.0	-4.1	6.8	6.5	
Livestock	11.7	1.4	6.2	2.9	16.8	-10.4	4.6	-3.5	
Mixed	10.9	1.6	6.1	3.5	12.6	-5.5	4.1	-0.6	
Farm Sales									
\$99,999 or less	9.1	-4.3	3.4	1.8	12.4	-22.3	-0.8	-5.2	
\$100,000-\$249,999	13.3	2.9	7.1	6.7	17.9	-4.1	6.4	4.3	
\$250,000 or over	18.0	5.6	9.9	9.0	24.6	5.1	12.2	10.9	
Farm Size									
1,200 acres or less	12.9	2.3	5.7	5.3	17.9	-14.4	2.9	1.2	
1,201 acres or over	13.1	3.3	7.4	5.7	18.7	-2.4	6.8	2.2	
Cropland Tenure									
Full tenant	16.3	-4.5	6.7	6.9	19.9	-36.6	5.0	5.7	
1-20 percent owned	17.4	3.7	9.3	8.7	24.5	-4.3	7.3	7.7	
21-40 percent owned	12.9	2.5	7.4	6.9	19.8	-0.8	6.7	4.7	
41 percent or over owned	10.9	2.3	6.1	3.6	14.1	-3.8	5.3	0.1	
Farm Income									
Negative	-4.0	-22.8	-7.4	-9.1	-22.3	-292.9	-46.2	-42.0	
\$0-\$19,999	2.6	-4.7	0.3	0.6	-4.2	-39.6	-12.2	-11.1	
\$20,000-\$39,999	8.2	2.4	5.3	5.3	8.0	-3.3	2.1	1.2	
\$40,000 or more	17.5	7.4	11.5	11.5	25.5	6.8	13.7	14.5	
Debt-to-Asset Ratio									
0-40 percent	13.4	2.4	7.0	5.8	15.6	1.1	6.6	4.5	
41-70 percent	13.9	2.9	7.5	6.3	21.4	-3.0	8.0	4.3	
71 percent or more	9.6	-2.6	3.8	2.6	12.6	-137.0	-16.8	-39.3	
Farmer Age									
34 years or younger	17.3	2.9	9.8	8.3	26.4	-7.4	11.2	5.9	
35-44 years	12.0	1.4	6.2	5.0	15.5	-6.1	4.8	1.5	
45 years or older	10.4	2.1	6.4	3.5	11.4	-5.0	3.9	-1.2	
	Operating Profit Margin(%)					Net Farm Income(\$)			
All Farms	27.9	4.8	16.4	14.3	68,682	20,639	40,998	31,711	
Region									
East	23.8	1.5	13.4	20.8	93,708	19,807	40,964	52,510	
North Central	26.7	7.4	16.5	10.6	60,032	23,141	39,776	26,640	
South Central	27.6	4.5	15.9	14.9	68,776	18,095	43,083	35,675	
West	32.8	8.7	21.7	12.7	67,927	22,082	41,711	24,599	
Farm Enterprise									
Crop	28.7	5.4	16.9	18.8	82,985	24,776	45,119	42,959	
Livestock	27.2	3.2	16.8	8.0	59,266	13,915	30,860	18,457	
Mixed	25.6	5.2	15.6	12.4	55,901	15,735	36,819	24,520	
Farm Sales									
\$99,999 or less	25.6	-9.2	10.2	5.9	34,977	10,896	22,713	16,835	
\$100,000-\$249,999	28.3	6.9	16.9	17.9	65,971	24,785	44,038	37,199	
\$250,000 or over	29.9	10.5	18.1	19.4	141,374	60,391	95,223	84,190	
Farm Size									
1,200 acres or less	24.3	-5.2	11.9	10.6	47,004	12,696	28,419	27,871	
1,201 acres or over	30.3	8.4	18.2	14.9	86,033	25,748	49,589	33,957	
Cropland Tenure									
Full tenant	22.8	-4.5	10.3	9.4	56,258	12,778	33,333	31,711	
1-20 percent owned	28.3	5.6	17.4	18.4	85,923	22,871	45,216	37,012	
21-40 percent owned	28.5	8.0	17.6	18.2	78,764	29,730	44,565	38,259	
41 percent or over owned	30.8	7.4	18.7	13.5	65,562	21,964	39,847	26,817	
Farm Income									
Negative	-7.2	-52.6	-20.8	-32.0	--	--	--	--	
\$0-\$19,999	7.8	-14.1	0.4	2.4	--	--	--	--	
\$20,000-\$39,999	22.2	5.5	14.1	14.0	--	--	--	--	
\$40,000 or more	33.0	16.5	25.1	25.7	--	--	--	--	
Debt-to-Asset Ratio									
0-40 percent	29.1	8.1	18.7	15.7	86,033	28,379	53,392	41,314	
41-70 percent	28.5	7.5	17.3	17.7	71,602	23,609	41,268	33,641	
71 percent or more	21.1	-4.4	6.8	3.8	39,847	4,745	21,722	13,638	
Farmer Age									
34 years or younger	28.2	4.7	16.4	14.8	65,281	21,762	38,676	32,623	
35-44 years	27.7	4.2	15.6	14.0	70,095	19,753	42,161	31,818	
45 years or older	27.9	5.9	18.2	13.6	72,713	21,308	43,611	28,665	

TABLE 5. REPAYMENT CAPACITY MEASURES, QUARTILE VALUES FOR 1992, MEDIAN VALUE FOR 1991, FARM BUSINESS MANAGEMENT EDUCATION PROGRAM PARTICIPANTS

Farm Group	1992				1992			
	Upper Quartile	Lower Quartile	Median	1991 Median	Upper Quartile	Lower Quartile	Median	1991 Median
	Term Debt and Capital Lease Coverage Ratio				Term Debt and Capital Repayment Margin(\$)			
All Farms	2.5	0.7	1.4	1.2	32,087	-8,935	8,767	3,891
Region								
East	2.8	0.6	1.5	1.4	55,457	-6,588	10,943	13,301
North Central	2.4	0.8	1.4	1.1	23,451	-6,782	6,686	1,363
South Central	2.5	0.7	1.3	1.4	34,261	-9,429	9,523	9,070
West	2.3	0.6	1.5	0.9	27,095	-23,646	9,804	-7,645
Farm Enterprise								
Crop	3.2	0.9	1.6	1.4	45,577	-5,688	13,480	11,635
Livestock	2.0	0.4	1.2	0.8	23,424	-25,364	4,422	-9,059
Mixed	2.1	0.7	1.3	1.2	23,371	-5,627	3,554	4,453
Farm Sales								
\$99,999 or less	2.3	0.7	1.3	1.2	18,791	-6,591	3,603	2,422
\$100,000-\$249,999	2.4	0.6	1.4	1.2	32,087	-13,939	8,492	3,776
\$250,000 or over	2.9	1.0	1.5	1.3	81,775	-5,364	39,704	19,011
Farm Size								
1,200 acres or less	2.6	0.6	1.3	1.2	21,501	-11,771	4,507	3,628
1,201 acres or over	2.4	0.8	1.5	1.2	46,821	-6,990	12,606	4,454
Cropland Tenure								
Full tenant	3.9	0.6	1.5	1.3	33,206	-10,272	7,233	3,837
1-20 percent owned	3.4	1.1	1.8	1.3	50,978	1,327	11,949	5,600
21-40 percent owned	2.4	0.8	1.3	1.5	33,915	-13,720	9,858	10,260
41 percent or over owned	2.2	0.7	1.4	1.1	28,553	-8,492	8,833	1,313
Farm Income								
Negative	0.6	-1.4	-0.2	0.1	-8,935	-68,742	-25,744	-22,468
\$0-\$19,999	1.3	0.3	0.7	0.9	3,863	-23,646	-6,588	-3,121
\$20,000-\$39,999	1.8	0.8	1.2	1.1	14,590	-11,607	2,890	693
\$40,000 or more	3.5	1.3	2.0	1.9	58,811	8,202	30,510	27,291
Debt-to-Asset Ratio								
0-40 percent	4.0	1.0	2.0	1.7	53,535	-781	21,279	13,400
41-70 percent	2.0	0.7	1.4	1.2	29,336	-10,672	7,530	5,244
71 percent or more	1.5	0.2	0.8	0.6	9,794	-28,731	-5,488	-10,015
Farmer Age								
34 years or younger	2.8	0.7	1.4	1.4	30,924	-8,053	6,279	6,081
35-44 years	2.5	0.6	1.4	1.2	32,649	-13,829	7,314	3,533
45 years or older	2.3	0.8	1.5	1.1	34,595	-4,038	11,265	1,686

was 28 percent in 1992, up 13 percentage points from 1991. Lower interest rates, lower overall farm debt, and higher gross farm revenues resulted in a lower median interest expense ratio. Lower interest expenses and higher gross farm revenue were partially responsible for a decrease in the operating expense ratio.

Region

The financial position and performance of farm operators in the west improved from 1991 to 1992. Their liquidity position increased, based on a 33 percent increase in their median current ratio and a \$12,710 or 73 percent increase in their median working capital from 1991 to 1992 (Table 1). Their solvency improved, based on lower debt-to-asset and debt-to-equity ratios and a higher equity-to-asset ratio (Table 3).

The profitability of farms in the west region increased from 1991 to 1992 (Table 4). The median return on farm assets doubled, the

median return on farm equity increased from -2 percent to 7 percent, the median operating profit margin increased 9 percentage points, and the median net farm income increased \$17,112 or 70 percent from 1991 to 1992. Increased profitability can be attributed to improved small grain yields, small grain prices, and lower interest rates.

Repayment capacity increased with a higher term debt and capital lease coverage ratio and term debt and capital repayment margin (Table 5). Efficiency of these farm operators increased, based on lower depreciation and expense ratios and a higher net from income ratio from 1991 to 1992 (Tables 6 and 7).

Changes in the financial position and performance of farm operators in the north central region were similar to those of operators in the west region. The financial condition of operators in the north central region improved from 1991 to 1992.

TABLE 6. ASSET TURNOVER, OPERATING EXPENSE, AND DEPRECIATION EXPENSE EFFICIENCY MEASURES (AS A PERCENTAGE OF GROSS FARM INCOME), QUARTILE VALUES FOR 1992, MEDIAN VALUE FOR 1991, FARM BUSINESS MANAGEMENT EDUCATION PROGRAM PARTICIPANTS

Farm Group	1992				1992				1992			
	Upper Quartile	Lower Quartile	Median	1991 Median	Upper Quartile	Lower Quartile	Median	1991 Median	Upper Quartile	Lower Quartile	Median	1991 Median
	Asset Turnover				Operating Expense (%)				Depreciation Expense			
All Farms	0.7	0.3	0.4	0.4	49.1	68.4	58.4	60.0	1.1	8.1	4.5	5.2
Region												
East	0.8	0.4	0.5	0.6	55.1	79.0	65.2	65.5	1.0	5.7	3.1	-3.9
North Central	0.6	0.3	0.4	0.4	48.3	61.6	55.1	57.2	1.9	7.7	4.5	5.9
South Central	0.7	0.3	0.4	0.4	48.4	69.1	59.6	59.9	2.1	9.9	6.4	6.7
West	0.5	0.3	0.4	0.3	48.0	65.1	55.9	59.4	-1.0	7.1	3.1	4.4
Farm Enterprise												
Crop	0.8	0.4	0.5	0.5	48.2	68.5	57.2	59.5	1.9	7.3	4.5	3.9
Livestock	0.6	0.3	0.4	0.3	52.6	69.4	60.0	64.6	-1.4	9.8	4.8	6.4
Mixed	0.5	0.3	0.4	0.3	47.9	66.5	58.0	58.9	0.3	10.5	4.2	5.9
Farm Sales												
\$99,999 or less	0.7	0.3	0.4	0.3	46.4	65.2	55.1	58.2	0.5	8.1	4.8	5.9
\$100,000-\$249,999	0.6	0.3	0.4	0.4	50.0	67.3	58.7	60.1	1.4	8.4	4.7	4.9
\$250,000 or over	0.8	0.4	0.6	0.5	51.1	73.1	63.6	64.2	1.8	7.1	4.0	2.8
Farm Size												
1,200 acres or less	0.7	0.3	0.5	0.4	50.4	70.6	58.8	60.2	0.8	7.9	4.0	4.5
1,201 acres or over	0.6	0.3	0.4	0.4	48.3	67.2	57.3	59.7	1.6	8.4	4.7	5.7
Cropland Tenure												
Full tenant	1.0	0.5	0.8	0.7	52.2	76.4	63.8	65.3	1.3	7.8	4.2	3.2
1-20 percent owned	0.8	0.4	0.6	0.5	48.6	70.4	60.3	61.6	1.9	6.5	4.1	4.0
21-40 percent owned	0.6	0.3	0.4	0.4	51.8	66.9	58.5	59.4	1.5	7.6	4.6	5.6
41 percent or over owned	0.4	0.2	0.3	0.3	45.3	64.2	54.7	56.5	1.0	9.7	5.0	6.1
Farm Income												
Negative	0.8	0.3	0.4	0.3	76.5	106.4	91.7	81.7	0.4	14.0	6.3	11.7
\$0-\$19,999	0.6	0.3	0.4	0.3	57.1	75.8	66.3	66.0	4.0	10.8	6.6	6.5
\$20,000-\$39,999	0.6	0.3	0.4	0.4	52.2	68.3	60.1	57.6	0.8	7.3	3.8	4.6
\$40,000 or more	0.7	0.3	0.5	0.5	45.3	61.3	53.2	55.1	1.0	6.9	3.9	2.5
Debt-to-Asset Ratio												
0-40 percent	0.6	0.3	0.4	0.4	45.4	63.8	57.1	58.2	1.9	8.6	5.1	5.2
41-70 percent	0.6	0.3	0.5	0.4	50.2	68.1	57.9	59.1	0.8	7.1	3.6	4.9
71 percent or more	0.8	0.4	0.6	0.5	57.1	76.5	65.3	67.0	1.1	8.1	4.5	5.3
Farmer Age												
34 years or younger	1.0	0.4	0.6	0.6	49.5	71.5	58.4	60.4	0.5	7.0	3.1	2.8
35-44 years	0.6	0.3	0.4	0.4	49.3	68.0	58.1	59.1	1.6	8.9	5.1	6.0
45 years or older	0.5	0.2	0.3	0.3	48.1	66.3	58.5	62.5	1.6	8.0	4.8	6.1

The liquidity and solvency position of farm operators in the south central region declined from 1991 to 1992, based on a decrease in the median current ratio, working capital, and equity-to-asset ratio and an increase in the median debt-to-asset ratio. However, profitability and efficiency of farm operators increased. Repayment capacity was unchanged from the previous year.

The liquidity and solvency of farm operators in the east region increased from 1991 to 1992. However, profitability decreased, based on a 33 percent decline in the median return on farm assets, a 52 percent decline in the median return on farm equity, a 36 percent decline in the median operating profit margin, and a 23 percent decline in the median net farm income (Table 4). The decline in profitability can be attributed to lower corn and soybean yields and prices in 1992 than in 1991. The efficiency of farm operators in the east region increased in 1992.

Farm Enterprise

The financial position and performance of crop, livestock, and mixed farm operators improved from 1991 to 1992. The liquidity, profitability, repayment capacity, and

efficiency of farm operators among farm enterprises increased. The profitability of livestock and mixed farm enterprises increased considerably more than crop farm enterprises. This reflects higher small grain yields and prices and cattle prices farm operators received moving east to west across the state and the lower corn and soybean yields in the eastern portion of the state. Lower interest rates also increased profitability. Return on farm assets, return on farm equity, operating profit margin, and net farm income of livestock and mixed farm enterprises increased from 1991 to 1992 and rivaled those of crop enterprises (Table 4).

Farm Sales

The solvency position of farm operators with sales of \$249,999 or less improved, while the solvency position of farm operators with sales of more than \$249,999 deteriorated from 1991 to 1992. The debt-to-asset ratio increased and the median equity-to-asset ratio decreased for farm operators with sales exceeding \$249,999 (Table 3). The reduction in solvency can be attributed to additional capital purchases, which increased total liabilities (Table 2) and the depreciation expense ratio (Table 6). The percentage increase in total liabilities exceeded the

TABLE 7. INTEREST EXPENSE AND FARM INCOME EFFICIENCY MEASURES (AS A PERCENTAGE OF GROSS FARM INCOME), QUARTILE VALUES FOR 1992, MEDIAN VALUE FOR 1991, FARM BUSINESS MANAGEMENT EDUCATION PROGRAM PARTICIPANTS

Farm Group	1992				1992			
	Upper Quartile	Lower Quartile	Median	1991 Median	Upper Quartile	Lower Quartile	Median	1991 Median
	Interest Expense (%)				Farm Income (%)			
All Farms	4.4	11.7	7.8	9.2	38.7	16.3	28.0	24.8
Region								
East	4.0	10.1	6.7	7.0	35.1	10.4	22.9	29.1
North Central	4.6	13.2	8.3	9.4	39.0	21.8	31.7	24.9
South Central	4.1	11.1	7.4	9.1	37.0	14.4	25.8	24.9
West	5.3	13.3	8.3	12.0	42.2	20.5	33.6	21.3
Farm Enterprise								
Crop	4.0	10.0	7.0	7.6	40.5	19.1	28.8	29.6
Livestock	5.1	14.4	8.3	11.1	35.4	14.0	26.3	15.7
Mixed	4.9	13.3	8.5	10.4	37.5	14.3	28.1	23.5
Farm Sales								
\$99,999 or less	3.7	12.8	8.1	10.2	42.2	15.9	31.2	24.7
\$100,000-\$249,999	5.0	12.3	8.3	9.3	37.1	16.2	27.3	24.8
\$250,000 or over	3.3	9.0	5.6	7.0	35.6	17.8	26.0	24.6
Farm Size								
1,200 acres or less	4.2	11.5	7.4	9.1	36.9	15.5	27.2	27.2
1,201 acres or over	4.7	12.0	8.0	9.4	39.1	16.6	28.8	23.1
Cropland Tenure								
Full tenant	2.2	7.2	4.9	4.8	37.5	12.6	26.0	24.4
1-20 percent owned	4.0	9.5	6.7	8.3	39.1	17.5	30.9	24.5
21-40 percent owned	5.5	11.7	8.3	10.1	38.0	17.5	28.1	25.5
41 percent or over owned	6.3	15.1	9.9	11.5	41.3	18.3	29.0	23.5
Farm Income								
Negative	6.4	17.9	10.0	16.0	-3.3	-16.5	-8.8	-13.8
\$0-\$19,999	7.4	15.8	11.2	11.4	19.2	5.4	10.4	12.0
\$20,000-\$39,999	4.9	13.3	8.9	9.8	33.8	18.0	25.3	25.4
\$40,000 or more	9.0	3.3	6.3	6.7	44.1	27.5	35.3	36.6
Debt-to-Asset Ratio								
0-40 percent	1.8	7.3	4.6	4.8	45.3	25.0	34.4	32.1
41-70 percent	6.7	13.2	9.2	11.0	35.4	16.6	26.5	24.4
71 percent or more	6.5	15.2	9.8	14.2	28.8	4.1	14.8	12.0
Farmer Age								
34 years or younger	3.2	8.9	5.8	7.1	39.6	19.9	29.7	28.6
35-44 years	5.0	12.4	8.2	9.5	37.9	13.9	27.3	24.4
45 years or older	5.3	13.1	8.4	10.6	38.0	15.8	27.5	21.7

percentage increase in total assets for farms with sales over \$250,000 from 1991 to 1992. These operators increased their size using debt to expand. Operators with lesser sales reduced both debt and assets.

The profitability and repayment capacity of farm operators increased among all farm sales classifications. Return on farm assets, return on farm equity, operating profit margin, and net farm income of farm operators with sales of more than \$249,999 were higher than those with sales \$249,999 or less (Table 4). For example, the median return on farm assets for farm operations with sales of more than \$249,999 was 2.9 times (6.5 percentage points) higher than operations with sales of \$99,999 or less.

Farm Size

The liquidity and solvency of farms 1,200 acres or less in size decreased from 1991 to 1992. The median current ratio declined 11 percent and the median working capital declined 5 percent (Table 1). The median debt-to-asset ratio increased 1 percentage point and the median equity to asset ratio decreased 1 percentage point (Table 3).

However, profitability, repayment capacity, and efficiency increased.

The financial position and performance of farms more than 1,200 acres in size increased from 1991 to 1992. The increase in liquidity, solvency, profitability, repayment capacity, and efficiency of these farms from 1991 to 1992 can be attributed to higher small grain yields and prices, higher cattle prices, and lower interest rates. Farms more than 1,200 acres in size had 2.2 times the working capital (Table 1), 1.3 times the return on farm assets, 2.3 times the return on equity, 1.5 times the operating profit, and 1.7 times the net income of farms 1,200 acres or less in size (Table 4).

Cropland Tenure

The liquidity position of farm operators who are full tenants increased from 1991 to 1992. The median current ratio of these farm operators increased from 1.5 to 1.7, and the median working capital increased \$7,400 (33 percent) (Table 1). However, their solvency position worsened, based on a higher debt-to-asset ratio and a lower equity-to-asset ratio. Farm operators' depreciation and interest expense ratios increased, suggesting

part of the reduction in solvency is attributable to higher capital expenditures. Return on farm assets and equity declined for full tenants, suggesting assets and owner equity increased more than net farm income.

The financial position and performance of farm operators who own 41 percent or more of the cropland they farm increased from 1991 to 1992. The median working capital increased \$3,060 or 12 percent (Table 1), the median debt-to-asset ratio decreased 3 percentage points, and the median equity-to-asset ratio increased 3 percentage points (Table 3). The median return on farm assets doubled, the median return on farm equity increased over 5 percentage points, and the median net farm income increased 50 percent (Table 4).

Landowners had more debt (higher interest expense, Table 7) but they kept a slightly greater portion of their gross income as net income than did tenants. This distinction between landowners and tenants was not as great in 1991. These movements demonstrate the impact of falling interest rates and steadily or increasing rental rates.

Farm Income

The liquidity, solvency, and repayment capacity of farm operators with negative farm income declined from 1991 to 1992. Their median current ratio declined from 1.0 to 0.4, and their median working capital declined more than \$31,000 (Table 1). The decline in liquidity can be attributed to additional current liabilities. The median debt-to-asset ratio of farm operators with negative farm income increased 6 percentage points (Table 3), due to a decrease in total assets (Table 2). The median term debt and capital repayment margin declined more than \$3,000 (Table 5).

The liquidity of farm operators with \$40,000 or more farm income declined from 1991 to 1992. Both the current ratio and working capital declined (Table 1). Profitability was lower, based on lower median return on equity and median operating profit margin (Table 4). The repayment capacity improved, based on a higher term debt and capital lease coverage ratio and a higher term debt and capital repayment margin (Table 5).

Debt-to-asset Ratio

The profitability of farm operators with debt-to-asset ratios of 40 percent or less increased from 1991 to 1992. The median return on farm assets increased 1.2 percentage points, the median net operating profit margin increased 3.0 percentage points, and the median net farm income increased more than \$12,000 (Table 4). The repayment capacity of these farm operators improved, based on a 60 percent increase in the median term debt and capital repayment margin (Table 5). These farm operators also became more efficient, with lower operating

(Table 6), depreciation (Table 6), and interest expense ratios (Table 7).

The liquidity of farm operators with a debt-to-asset ratio of 71 percent or more declined from 1991 to 1992. The current farm financial environment still does not accommodate farm operators with a highly leveraged position. The median working capital decreased more than \$1,800 (Table 1). However, solvency, profitability, repayment capacity, and efficiency improved.

Farmer Age

The financial condition of farm operators 34 years of age or less generally improved from 1991 to 1992. Their median working capital increased 18 percent (Table 1), their median debt-to-asset ratio decreased 2 percentage points (Table 3), and their median return on farm assets increased 1.5 percentage points (Table 4).

The financial position and performance of farm operators 45 years of age or older improved from 1991 to 1992. Their liquidity, solvency, profitability, repayment capacity, and efficiency improved. Farm operators 45 years of age or older had more favorable liquidity and solvency positions than farm operators 34 years of age or less. Older farm operators had a higher current ratio and twice the working capital of younger farm operators. The median debt-to-asset ratio for older farm operators was 8 percentage points lower than for younger farm operators. However, younger farm operators were more profitable than older farm operators, based on the median return on farm assets and return on equity. The median return on farm assets for younger farm operators was 3 percentage points higher and the median return on farm equity was more than 7 percentage points higher than for older farm operators.

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