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MINNESOTA COOPERATIVE ELEVATOR ASSOCIATIONS

by

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and

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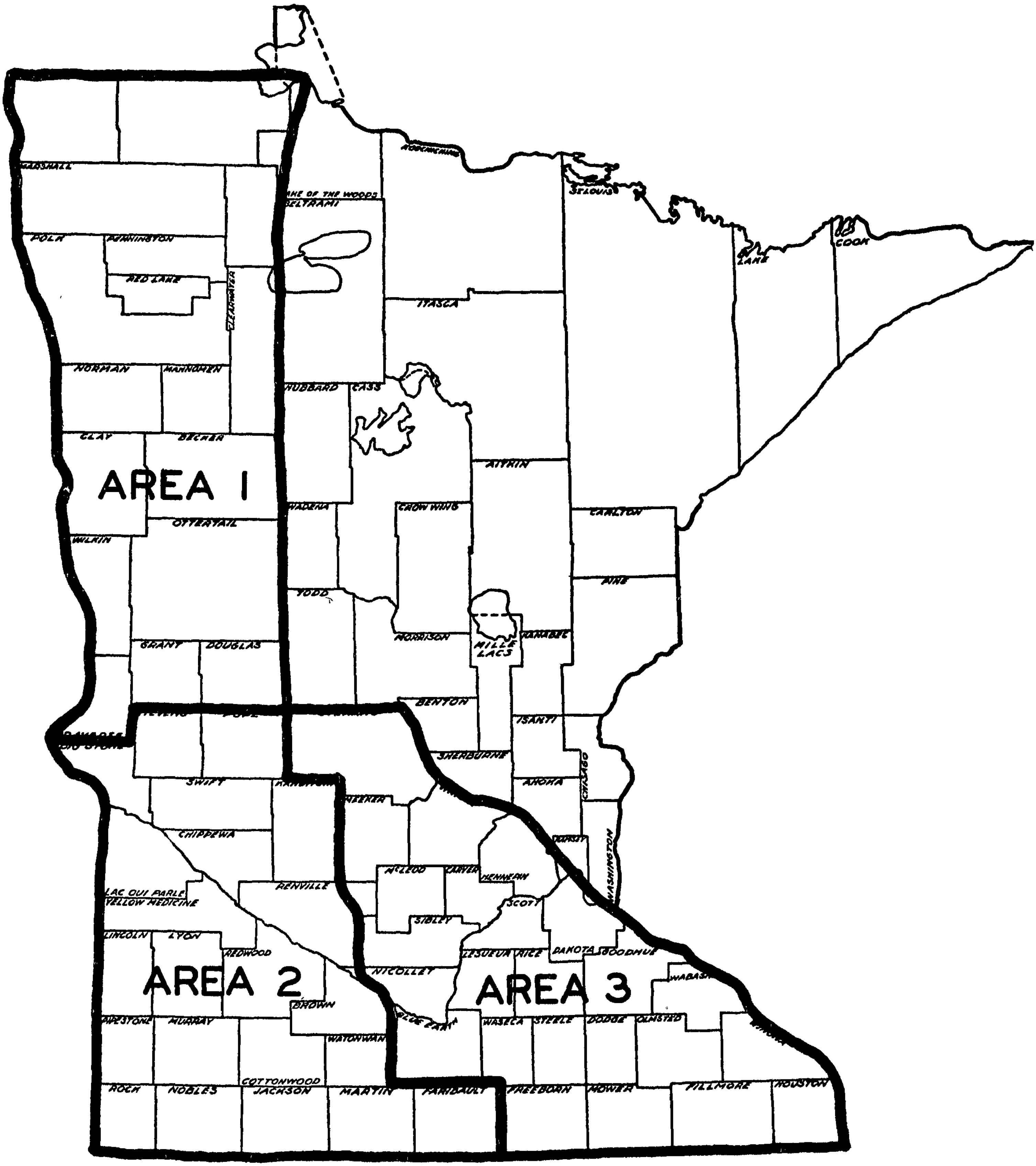

Figure I. Location of Areas

Summary

The influence of cooperative grain elevators on local grain handling and costs is felt at nearly every local shipping point in Minnesota. While the number of associations has not changed greatly over the past 30 years, the volume of grain and merchandise handled has increased significantly.

Most of the 80 associations which were surveyed in 1949 adhere fairly closely to the legal cooperative specifications in their organization and operations. However, some are organized and operating under articles of incorporation and bylaws of long standing which should be amended or revised in order to bring them into closer conformity with the more recent amendments to the basic Minnesota cooperative law. For example, a few associations still provide for the payment of 8 percent on capital stock, although only one association actually pays this amount.

Some associations distributed patronage dividends to the producers of grain only. In practically every instance, this was in direct violation of the bylaws. To be truly cooperative, both the sellers of grain and buyers of merchandise should share in the distribution of savings. This is a specific requirement if the association is exempt from payment of income taxes.

Very few of the associations experience difficulty in maintaining control in the hands of producer member patrons. However, some associations have found that when the proportion of non-producer or non-patron members becomes higher than desirable, the situation becomes very difficult to correct. In consequence, the stock of such members should be retired as soon as possible after the member ceases patronizing the association.

About 60 percent of the 80 associations are exempt from income taxes. A number of other associations meet all the requirements but for various reasons have not applied for exemption.

The grain supply area of three-fourths of the associations studied has less than a 10 mile radius. The patronage and volume of business of all associations is limited in varying degrees by the presence of other competing grain buyers. Many of the competitors of the 80 associations are other cooperatives, but the more usual competition is either a line or independent elevator or both. Thirty-eight associations had no local competition but some have as many as three local competitors. Within a five mile radius, about two-fifths of the associations studied had two or more competitors. It is evident that competition in some areas for the available grain supply is particularly keen and as the supply areas of the larger and more efficient associations expand, some of the smaller organizations are experiencing more and more difficulty in obtaining adequate volume.

The net capital invested in cooperative elevator associations averaged $118,642 in 1948 ranging from less than $50,000 to more than $300,000. Operating capital represented by current assets constituted 70 percent of the total or $82,461 per association. Accounts receivable from patrons, one of the important items of operating capital, averaged $8,992 but one-tenth of the associations had outstanding accounts of $16,000 or more.

The over extension of credit to purchasers of merchandise with the accompanying difficulty of maintaining collections is one of the more serious problems of financial management particularly during a period of declining farm income. This is well evidenced by the fact that for over one-fifth of the associations, the days sales outstanding in receivables were 50 days or more.

Of the total capital required, 26 percent was used for fixed assets. The original investment was $45,511 per association but one-third of this had been depreciated leaving a net value of $30,295.

Creditors supplied 42 percent of the capital. Included in this proportion is that representing patronage dividends payable which amounted to 5.2 percent of the assets. Inasmuch as most of the patrons are members, the amount of this item can be considered as capital provided by members, bringing the total capital supplied by members and patrons to an average of 63 percent of the assets.

Capital stock including both common and preferred accounted for 20 percent, and patrons deferred dividends, 24 percent of the total net worth. The surplus which constituted 11 percent of the net worth is in the main not credited to individual patrons accounts. Some associations continue to make substantial additions to this account whenever savings permit. However, any association which hopes to maintain an income tax exempt status should avoid placing any of the savings in an unallocated account.

On the basis of averages, the financial status of Minnesota cooperative elevator associations at the end of the 1947-48 fiscal year was very satisfactory. The ratio of current assets to current liabilities was slightly over the standard of 2 to 1; the ratio of net worth to debt was well above the minimum accepted standard of 1.5 to 1. However, these ratios for many associations were below the standards. For example, 8 percent of the associations did not have enough liquid assets to meet current creditor claims in full on demand. In the case of 29 percent of the associations, the ratio of net worth to debt was less than 1.0 indicating that the owners actually control less than one-half of the assets.

Sales of grain averaged $711,460 or 86 percent of the combined sales of grain and merchandise. The total gross margin averaged $41,140 or 4.5 percent of total sales and was about equally divided between operating expenses and operating savings. The gross margin expressed as cents per bushel of grain handled, varied widely, ranging from 3.9 cents for oats to 25.3 cents for flaxseed.

Labor and management expense represented 52 percent of operating expenses. Labor and management expense per $1000 of sales ranged from $26.22 for those associations with sales per employee of less than $100,000 to $7.70 for those associations with sales per employee of $400,000 and more. Probably, the most important attack on high operating costs among those associations of adequate volume is to obtain a more efficient management and utilization of labor.

The net savings of $19,716 was 2.4 percent of total sales plus service income. For the 80 associations included in the study the net savings totaled $2,070,423. Of this amount, 80 percent was paid out in cash, made currently payable, or placed in a patrons equity reserve. In addition, almost 7 percent was distributed to the patrons in the form of capital stock or stock credits. About 10 percent of the earnings was added to surplus, and 6 percent represented undistributed savings.

MINNESOTA COOPERATIVE ELEVATOR ASSOCIATIONS 1/

Rex W. Cox

INTRODUCTION

The farmers' elevator movement in Minnesota started about 1890. The number of elevator associations in which farmers owned at least 50 percent of the stock had grown to 270 by 1914. In that year the aggregate membership totaled 34,500 an average of 128 members per association. For the fiscal year, 1912-13, $22,000,000 of grain were marketed and $2,000,000 of supplies purchased for members. The grain marketed through these associations constituted 30 percent of the grain marketed by Minnesota farmers.

Although these elevator associations were mainly farmer owned, all of them did not conform in their organization and operations to what were then considered the essentials of cooperation, namely, the one-man one vote principle, limitation of the amount of stock owned by any member, and the patronage dividend. About 95 percent of the 270 associations provided for one man one vote; 84 percent set a limit on the number of shares owned by any person, ranging from 1 to 50 shares; and one-third of the companies limited dividends on capital stock and distributed the balance of the earnings on the basis of patronage. 2/

Today, there are 1188 public local grain warehouses or elevators in Minnesota. Of this number, 300 are classified as farmers' elevators, but only 256 of these can be called cooperative if the payment of patronage dividends and limitation of dividends on capital stock are considered as the main criteria. The grain marketed from these farmers' cooperative elevators constituted about 45 percent of all grain shipped from local elevators in the fiscal year 1947-48.

The prospects of practical accomplishment led producers of grain to organize and invest their funds in cooperative elevators. The skillful utilization and preservation of this investment is a matter of major concern to the members of these associations. During the period of constantly rising prices, few associations experienced any financial difficulty, but with the advent of a decline in grain prices and rising costs, many problems of a financial nature loom ahead. In addition, there are constant problems of competition, organizational structure, and distribution of savings. This report presents an analysis of the organization and operation of a representative group of Minnesota cooperative elevator associations. The first part of the report is concerned mainly with the organizational structure and cooperative character of elevators. This is followed by a discussion of grain supply area. The final sections are devoted to an analysis of the financial status and financial operation of elevator associations.

Scope of the Study

The data on which this report is based were obtained during interviews with the managers of 80 cooperative elevator associations in the summer of 1949, and from the

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1/ Preliminary report of a study conducted with funds provided by the Research and Marketing Act. Appreciation is expressed to managers of elevators for their cooperation in supplying the basic data for the study.

Credit is due to Dr. E. Fred Koller, Division of Agricultural Economics who assisted in the organization of the study and analysis of the data and to Mr. Max K. Hinds, Extension Division, who participated in the field work and other aspects of the study.

2/ Wold, L.D.H., Farmers Elevators in Minnesota, University of Minnesota Agr. Exp. Station Bul. 152. August 1915.

annual audits for the fiscal years 1947-48 and 1948-49. The operation of elevators is influenced by the type of farming and kinds of grain grown in the locality, the volume of business, and the relative importance of the grain business compared with the merchandising business. In the selection of the elevators included in the study, the state was first divided into three areas and all of the cooperative elevator associations in each area were then grouped into the following five divisions according to the dollar volume of total sales in 1947-48: less than \$400,000, \$400,000-\$799,000, \$800,000-\$1199,000, \$1200,000-\$1599,000, \$1,600,000 and above. The sample of 80 associations included the random selection of 25 percent of the associations in each of the first four groups in each area and all of the associations with a volume of sales of \$1,600,000 or more. The location of the areas is shown in Figure I. The number of elevators selected for study in each area is as follows:

Area	Number of Elevators
1. Northwest	25
2. West and Southwest	45
3. Southeast	10
	80

In the discussion which follows, reference to any area is made by number, as Area 1, rather than by the name of the area, as Northwest Area.

ORGANIZATIONAL STRUCTURE AND COOPERATIVE CHARACTER

Legal Basis of Organization

Provision was made in the laws of Minnesota for the incorporation of cooperatives as early as 1870. Fifty-four of the elevator associations surveyed were incorporated under statutes enacted previous to 1920. Laws governing the organization and operation of cooperatives have been changed several times and the associations incorporated subsequent to 1922 were organized under the Cooperative Law of 1923 or amendments thereto. In addition to those which have been originally incorporated since 1922, many of the older associations have reorganized or changed their bylaws to conform to specifications included in more recent amendments to the 1923 Cooperative Law. About one-half of the 80 elevators have reorganized completely or amended their bylaws since 1939, and one-third have made those changes subsequent to 1944.

The 1949 session of the Minnesota legislature passed a number of amendments to the basic cooperative statutes. The characteristics essential to a Minnesota cooperative association, according to the amended statutes, include the following:

Individual stockholders shall be restricted to only one vote in the affairs of the association.
Proxy voting is prohibited.
Shares of stock are transferrable only with the approval of the association.
Dividends on stock shall not exceed 6 percent.
The net income of the association except certain amounts required for a reserve fund or permanent surplus or set aside by the vote of the association shall be distributed on the basis of patronage.

Conformity to Legal Cooperative Specifications

State Laws

All associations surveyed limited each member to one vote. Eight limited dividends on capital stock to 8 percent, although only one paid this amount. Sixty-three associations limited dividends to 6 percent. Of these, 29 paid less than 6 percent in 1948. Nine of the associations specified a dividend rate of less than 6 percent.

All associations provided for the payment of patronage dividends and dividends were actually declared in 1948 except by those elevators which had either no net savings or only nominal savings. In the case of 12 other associations, patronage dividends were distributed to the producers of grain only, both member and non-member producers, and 3 associations confined the distribution to members only. With the exception of one association, both of these procedures were in direct violation of the bylaws. Distribution of savings to producers of grain only is sometimes justified on the basis that the merchandise business is being conducted at cost and in consequence, does not provide for any savings.

Although a limit on the number of shares held by any one member is not a requirement according to the latest amendment, about three-fifths of the elevators provide for a limitation in their bylaws.

Federal Laws

In order to obtain exemption from federal income taxes or to qualify for loans from the St. Paul Bank for Cooperatives, the association must meet additional requirements: the association shall consist of agricultural producers, the business transacted with non-members shall not be greater in value than that handled by it for members, and not more than 15 percent of the merchandising business shall be with non-member non-producers. It has been generally assumed that if 90 percent of the members are producers, the association meets the first requirement. However, the Bureau of Internal Revenue specifies that substantially all of the stock must be held by producers of agricultural products and determines individually the status of any association which is applying for exemption or whose exemption is questioned.

The membership of the 80 associations varied from less than 100 to more than 1500 and averaged 426. About 60 percent of the associations had less than 400 members. Very few of the associations have experienced difficulty in meeting the specification that membership primarily must be producers. In all but 10, producers made up 90 percent of the total membership. All of the members in 15 associations were producers. However, some associations have difficulty in keeping the membership in the hands of producer patrons. Although the bylaws usually specify that membership shall terminate if the member shall cease patronizing the association, not all associations make a serious effort to terminate the membership. The management of all associations should always keep in mind that the cooperative character of an association requires that not only shall a high proportion of the members be producers and producers be patrons, but also that control of the associations shall be in the hands of member patrons.

With one exception, the amount of business with members exceeded that with non-members. In 29 associations member business accounted for 80 percent of the total. In general, the proportion of member business is higher in the grain marketing business than in merchandise sales. The proportion of the merchandising business transacted with non-member non-producers exceed 15 percent in only 3 associations.

Federal Income Tax Exemption Status

Fifty of the 80 associations paid no income tax because they had been granted exemption, and one association paid no tax because of no income. The tax paid by the remaining 29 associations averaged about $1600. Eleven paid less than $500 and three paid more than $5500. A number of the non exempt associations meet the federal specifications for tax exemption, but have not applied for it. However, the amount of tax paid may be relatively small because they adhere strictly to the policy of paying patronage dividends to both members and non-members, and in case the dividends are retained and put in a reserve fund, the amount so added is credited to the indivi dual patron accounts. It should be emphasized to those associations which are exempt that the maintenance of this status requires a complete allocation of retains disregarding the category in which they are included on the financial statements.

GRAIN SUPPLY AREA

Other factors remaining equal, the efficiency of grain elevator operation is largely dependent on the volume of grain handled. The more significant factors influencing the amount of grain received by an elevator are the amount of grain produced in the territory served which in turn is highly dependent on prevailing climatic and soil conditions, and the patronage the elevator obtains from grain producers in the supply area. The patronage which a grain elevator enjoys depends on the interest of producers in the cooperative, the number of competing elevators serving the area and the competitive practices which they have adopted, merchandising and other services provided by the elevator, and prices paid for grain including dividends declared at the end of the year.

Extent of Supply Area

The supply area of three-fourths of the associations studied has less than a ten mile radius although a few draw grain from a distance of 15 miles or more. (table 1) However, the amount of grain obtained from the farther distances is only a minor part of the total receipts of grain. Some associations perform certain services which encourage a longer haul by patrons who otherwise would patronize elevators closer by.

Table 1. Extent of Grain Supply Territory

Radius of Supply Territory	Area 1	Area 2	Area 3	All Areas
	Number of Elevators			
Less than 5 miles	1	4	1	6
5 - 9	18	32	4	54
10 - 14	4	6	3	13
15 - 19	1	2	2	5
20 and over	1	0	0	2
Total	25	45	10	80

The number of patrons delivering grain varied from 40 to about 2500. However, if Area 3 is excepted, the minimum number is about 90. The three associations handling the smallest volume of grain and located in the important grain producing sections averaged 105 patrons and marketed about 101,000 bushels. A volume as small as this is inadequate for efficient operation particularly if sales of merchandise constitute only a minor proportion of the total sales. In contrast, four associations located in the important grain producing areas averaged 1180 patrons who delivered an average of approximately 1,330,000 bushels of grain.

Competition

The patronage and volume of business of all elevator associations are limited in varying degrees by the presence of other competing grain buyers in their territory. In recent years, the competition has become more intense and the area of competition expanded because of the great and rapid improvement in transportation. Inasmuch as it is the associations with the larger volume which tend to increase their supply area, the difficulty of the smaller associations in maintaining an adequate volume is greatly increased.

Many of the competitors of the 80 elevators included in the study are other cooperatives. Occassionally, two cooperatives are located in the same town (table 2) but the more usual local competition is either a line or independent elevator or both. As is shown by the last column of the table, 38 elevators had no local competition and one elevator had as many as four local competitors.

Within a five mile radius, 20 of the associations compete with one or more other cooperatives for the available grain supply. Twenty of the associations compete with one or more independent elevators and 33 with one or more line companies. The last column of the table indicates that 11 of the 80 associations meet with competition from at least 3 elevators within the radius of 5 miles.

When the radius of competition is extended to 15 miles, only one of the associations has no competition. Twenty-eight have 5-6 competitors of various types and 7 have as many as 9 or 10 competitors.

Examination of this table calls attention again to the rather intense competition that prevails for the available grain supply. The situation is very acute in some localities and in consequence, the time of survival of some associations, whether cooperative or other types, is limited. From time to time, boards of directors must decide as to the advisability of erecting a new structure. If the present volume is small because of competitive conditions, it might be a wise policy to combine with a neighboring cooperative or to liquidate rather than to sink a large amount of money in a new structure.

Table 2. Number and Type of Competing Grain Buyers Within Specified Distances

Number of competing buyers and their location	Type of Competing Buyer: Other cooperative elevators	Independent elevators	Line elevators	All types combined
	Number of elevators reporting specified types of competition			
In same town				
None	78	62	52	38
1	2	16	26	33
2	0	1	2	8
3	0	1	0	0
4	0	0	0	1
Total	80	80	80	80

Table 2. (Con't.)

Number of competing buyers and their location	Other cooperative elevators	Inde-pendent elevators	Line elevators	All types combined
	Number of elevators reporting specified types of competition			
Within a 5 mile radius				
None	58	52	38	24
1	20	20	33	25
2	2	5	9	14
3	0	3	0	11
4	0	0	0	3
5 - 6	0	0	0	3
Total	80	80	80	80
Within a 10 mile radius				
None	17	22	17	1
1	32	30	18	5
2	20	16	30	6
3	8	7	11	14
4	3	2	2	20
5 - 6	0	3	2	26
7 - 8	0	0	0	6
9 - 10	0	0	0	1
11 - 14	0	0	0	1
Total	80	80	80	80
Within a 15 mile radius				
None	5	15	10	1
1	27	25	16	0
2	24	18	25	1
3	14	11	20	4
4	8	6	5	16
5 - 6	2	2	4	28
7 - 8	0	3	0	21
9 - 10	0	0	0	7
11 - 14	0	0	0	2
Total	80	80	80	80
Within a 20 mile radius				
None	3	8	9	0
1	7	18	14	0
2	27	24	16	0
3	24	10	24	1
4	13	8	7	7
5 - 6	5	7	10	20
7 - 8	1	5	0	29
9 - 10	0	0	0	12
11 - 12	0	0	0	2
13 - 14	0	0	0	8
15 - 16	0	0	0	1
Total	80	80	80	80

Table 3. Asset Values of Minnesota Cooperative Elevator Associations, 1948

	Area 1		Area 2		Area 3		All Areas	
	Average Value	Percent of total assets	Average Value	Percent of total assets	Average Value	Percent of total assets	Average Value	Percent of total assets
Current Assets								
Cash	$ 5,458.59	5.0	$ 9,716.35	7.5	$ 6,305.31	6.8	$ 7,926.06	6.7
Government Bonds	545.50	.5	1,105.95	.9	930.81	1.0	909.87	.7
Accounts Receivable-Patonrs	6,581.84	5.9	9,921.24	7.6	12,448.89	13.4	9,269.09	7.8
Less Reserve for Bad Debts	199.46	.2	317.40	.2	286.05	.3	276.91	.2
Net Accounts Receivable	6,382.38	5.7	9,603.84	7.4	12,162.84	13.1	8,992.18	7.6
Advances	261.57	.2	115.15	.1	---	---	143.11	.1
Accounts Receivable Commission Companies	21,028.29	19.1	10,840.76	8.3	12,213.58	13.2	14,143.19	11.9
Notes Receivable	1,995.32	1.8	1,078.54	.8	4.32	1/	1,202.61	1.0
Inventory-Grain	32,048.54	29.1	43,262.65	33.3	17,957.50	19.4	36,188.47	30.5
Inventory-Merchandise	7,322.15	6.6	15,642.35	12.0	12,442.97	10.7	12,644.88	10.7
Other Current Assets	283.53	.3	403.75	.3	13.61	1/	310.73	.3
Total Current Assets	75,325.87	68.3	91,769.34	70.6	62,030.94	66.9	82,461.10	69.5
Investments								
Other cooperatives	7,079.41	6.4	4,972.08	3.8	78.38	.1	4,906.86	4.1
Other Investments	96.45	.1	140.69	.1	217.29	.2	138.28	.1
Total Investments	7,175.86	6.5	5,112.77	3.9	295.67	.3	5,045.14	4.2
Fixed Assets								
Buildings and Equipment	39,773.89	36.1	49,217.01	37.8	43,488.18	47.0	45,511.81	38.4
Less Reserve for Depreciation	12,716.39	11.5	17,028.46	13.1	13,580.28	14.7	15,216.25	12.8
Net Buildings and Equipment	27,057.51	24.6	32,188.55	24.7	29,907.90	32.3	30,295.56	25.6
Land	229.26	.2	476.04	.4	263.24	.3	370.09	.3
Total Fixed Assets	27,286.77	24.8	32,654.59	25.1	30,171.14	32.6	30,665.65	25.9
Other Assets								
Prepaid Expenses	394.54	.3	399.28	.3	148.04	.2	361.52	.3
Other	57.97	.1	165.05	.1	---	---	108.58	.1
Total Other Assets	452.51	.4	564.33	.2	148.04	.2	470.10	.4
Total All Assets	110,241.01	100.0	130,111.03	100.0	92,645.79	100.0	118,641.99	100.0

1/ Less than .05 Percent

FINANCIAL STRUCTURE

Cooperative associations are constantly faced with the problems of adequate financing and the maintenance of desirable relationships between the various items on the balance sheet. These problems become particularly acute during the transition from a relatively high to a lower price level.

Assets

The net capital invested in cooperative elevators in Minnesota based on data obtained from 80 associations averaged $118,642 at the end of the 1947-48 fiscal year. (table 3) The total capital of individual associations ranged from less than $50,000 to more than $300,000 with the most usual amounts between $50,000 and $100,000. (table 4)

Table 4. Total Assets of Minnesota Cooperative Elevator Associations, 1948

Assets	Area 1	Area 2	Area 3	All Areas
		Percent of all associations		
Less than $50,000	15.3	8.6	21.6	12.5
50,000 - 99,999	35.9	39.7	54.1	40.7
100,000 - 149,999	25.6	24.8	10.8	23.0
150,000 - 199,999	10.3	10.6	2.7	9.4
200,000 - 249,999	9.0	3.6	0	4.7
250,000 - 299,999	1.3	9.9	10.8	7.4
300,000 and over	2.6	2.8	0	2.3
Total	100.0	100.0	100.0	100.0

Invested capital requirements are greatly influenced by the annual volume of business. As the dollar volume of sales increased from less than $400,000 to more than $1,600,000, the total invested cpaital increased from about $54,000 to more than $244,000. (table 5)

Table 5. Relation Between Value of Sales and Total Amount of Capital Required

Volume of sales	Total assets
Less than $400,000	$ 53,836
400,000-799,999	92,452
800,000-1,199,999	121,781
1,200,000-1,599,999	206,715
1,600,000 and above	244,457

Operating Capital

The operating capital of Minnesota cooperative elevator associations, including cash, receivables, inventories and other current items represented 70 percent of the total capital requirements or $82,461 per association. It averaged highest in Area 2, although the proportion that current assets were of total assets varied only slightly among areas.

Cash

Of the current assets, cash averaged almost $8,000, constituting 6.7 percent of the total assets and about 10 percent of the current assets. However, this item varies widely among associations. In some cases it represents only the cash on hand inasmuch as practically all funds are on deposit with the terminal agency. In others bank overdrafts and outstanding checks exceed the cash on deposit in banks. The amount of cash on deposit in banks for those associations which had a net cash position varied from a low of $648 to a high of $91,055.

Accounts Receivable-Patrons

Accounts receivable from patrons which mainly represent credit sales of merchandise averaged $8,992 or 11 percent of current assets. However, 10 percent of the associations had outstanding accounts of $16,000 or more.(table 6) In the southeast area where merchandise sales constitute a higher proportion of total sales than in other areas, almost one-fourth of the associations had accounts receivable of $16,000 or more. In this connection, it should be noted that only 14 associations set up a reserve for bad debts. This means that no provision is made for recognizing in advance the existence of a serious bad debt situation which frequently prevails during a period of declining producer incomes.

Table 6. Patrons Accounts Receivable

Patrons accounts receivable	Area 1	Area 2	Area 3	All Areas
		Percent of all elevators		
Less than $2,000	21.8	14.2	0	14.5
2,000 - 5,999	33.3	35.5	32.4	34.4
6,000 - 9,999	37.2	29.8	10.8	29.3
10,000 - 15,999	2.6	11.3	32.4	11.7
16,000 - 27,999	3.8	5.0	13.6	5.8
28,000 - 39,999	0	1.4	10.8	2.3
40,000 and over	1.3	2.8	0	2.0
Total	100.0	100.0	100.0	100.0

Wide variations also exist among the associations regarding the proportion accounts receivable are of the total current assets. For all areas accounts receivable of about one-fifth of the associations represented 20 percent or more of the current assets. The outstanding accounts of more than one-half of the associations in area 3 were 20 percent or more of the current assets. (table 7)

Table 7. Proportion Patrons Accounts Receivable are of Total Current Assets

Proportion of current assets	Area 1	Area 2	Area 3	All Areas
		Percent of all elevators		
Less than 2.5	21.7	12.0	---	13.2
2.5 - 4.9	14.1	12.8	---	11.4
5.0 - 9.9	16.7	29.8	10.8	23.1
10.0 - 19.9	30.8	29.8	35.2	30.9
20.0 - 29.9	11.6	12.8	32.4	15.2
30.0 and over	5.1	2.8	21.6	6.2
Total	100.0	100.0	100.0	100.0

The extension of credit by cooperative associations to the purchasers of merchandise, particularly the over extension of credit with accompanying difficulty of maintaining collections, constitutes one of the more serious problems of financial management of many associations. While the problem exists at all times, it always becomes a more difficult one during declining farm prices because requests for credit mount rapidly during such a period. The status of cooperative elevator associations in this respect is fairly well revealed by table 8 which shows the days sales outstanding in receivables. Practically all associations aim to limit credit to a maximum of 30 days. However, in the case of almost half of the associations, the days sales outstanding in receivables exceeded 30 days, and in 10 percent of the associations the figure was 90 days and over.

Table 8. Days Sales Outstanding in Patrons Accounts Receivable

Days sales outstanding in receivables	Percent of all elevators
Less than 10.0	13.1
10 - 29	44.4
30 - 49	21.0
50 - 69	2.8
70 - 89	7.9
90 and over	10.8
Total	100.0

Too much emphasis cannot be given to the recommendation that the board of directors establish a strict credit policy and maintain this policy if serious difficulty is to be avoided. Whatever the policy, it should be defined by the board and the manager given the responsibility of administering the same. A helpful procedure in providing information on the present status of accounts receivable is the aging of these accounts at periodic intervals. This is being done annually by about one-half of the 80 associations included in the study. Many of the associations which have quarterly or semi-annual audits age the accounts as frequently.

Accounts Receivable-Commission Companies

The status of associations regarding their financial relations with commission companies not only varies widely among individual associations but also during the season for the same association. At the end of the fiscal year, some associations are debtors of commission companies and some are creditors, while a few are neither. Of the associations surveyed 49 had accounts receivable from commission companies. For those associations, the accounts averaged almost $20,000, ranging from a low of about $200 to a high of $180,000. If all elevators are included in the calculation the average is reduced to $12,213 which represents 17 percent of the total current assets.

Inventories

Inventories of grain of $36,188 constituted 44 percent of current assets. Almost 38 percent of the grain inventory is grain owned by holders of storage tickets. Inventories of merchandise averaged $12,645 or about one-fourth of the combined inventories of grain and merchandise.

Investments

Investments of cooperative elevator associations are confined primarily to those in other cooperative associations, the major portion of which represents preferred stock in the Farmers Union Grain Terminal Association.

Fixed Assets

Of the total capital required by elevator associations an average of 26 percent was used for fixed assets in the form of land, buildings and equipment. The original capital investment in these items was $45,511 per association but about one-third of this has been depreciated, leaving a net value of $30,295.

All associations set up a reserve for depreciation. The reserve amounted to less than 20 percent of the original value of fixed assets in the case of one-sixth of the associations but exceeded 50 percent in about one-sixth of the associations. The average for all was 33 percent. (table 9)

Table 9. Proportion Reserve for Depreciation is of Original Cost of Fixed Assets

Percent reserve is of original cost	Percent of all elevators
Less than 10	3.2
10.0 - 19.9	13.2
20.0 - 20.9	24.0
30.0 - 30.9	17.3
40.0 - 49.9	24.9
50.0 - 59.9	11.3
60.0 and over	6.1
Total	100.0

The reserve for depreciation is a valuation account used to maintain the value of capital invested in fixed assets. If it is to serve the function of protecting the assets against dissipation, the offsetting funds should be used only to finance current or fixed assets, to reduce existing liabilities, to retire capital, or to set up a special depreciation fund. The latter may be invested in government bonds or other interest bearing securities and may be used to finance replacements as they are needed. It should be emphasized that the fund should not be used for merchandising purposes inasmuch as such represents a liquidation of the investment. In such a case, when replacements are needed the association will be forced to borrow funds or sell more stock.

Sources of Capital

Creditors supplied 42 percent of the capital of the associations. Included in this proportion is that representing patronage dividends payable which amounts to 5.2 percent of the assets. (table 10) Inasmuch as most of the patrons are members, the amount of this item can be considered as capital provided by members, bringing the total amount of capital provided by members and patrons to an average of 63.1 percent of the total assets. The proportion varies from an average of 59.4 percent in Area 1 to 77.8 percent in Area 3.

Table 10. Liabilities and Net Worth Values of Minnesota Cooperative Elevator Associations, 1948

	Area 1		Area 2		Area 3		All Areas	
	Average Value	Percent of total value	Average Value	Percent of total value	Average Value	Percent of total value	Average Value	Percent of total value
Current Liabilities								
Bank Overdrafts	$18,568.65	16.9	$11,255.05	8.6	$6,354.34	6.9	$12,775.12	10.8
Accounts Payable-Patrons	12.97	1/	382.53	.3	8.56	1/	215.88	.2
Accounts Payable Commission Companies	4,541.28	4.1	13,827.36	10.6	6,368.12	6.9	9,919.91	8.3
Accounts Payable-General	265.06	.3	604.96	.5	722.57	.8	518.40	.4
Interest	272.82	.2	592.37	.5	1.036.91	1.2	566.48	.5
Notes Payable	461.54	.4	83.36	.1	3,470.27	3.7	688.10	.6
Storage Liabilities	17,872.47	16.2	15,015.25	11.5	1,348.55	1.4	13,910.54	11.7
Patronage Dividends Payable	5,121.24	4.7	8,024.13	6.2	981.84	1.1	6,121.82	5.2
Other Current Liabilities	1,120.61	1.0	1,357.21	1.0	1,237.78	1.3	1,267.86	1.1
Total Current Liabilities	48,236.64	43.8	51,142.22	39.3	21,578.94	23.3	45,984.11	38.8
Long Term Liabilities								
Notes and Mortgages Payable	1,687.18	1.5	4,244.15	3.3	---	---	2,851.66	2.4
Other Long Term Liabilities	---	---	1,909.07	1.4	---	---	1,051.48	.9
Total Long Term Liabilities	1,687.18	1.5	6,153.22	4.7	---	---	3,903.14	3.3
Total Liabilities	49,923.82	45.3	57,295.44	44.0	21,578.94	23.3	49,887.25	42.1
Net Worth								
Preferred stock	4,174.67	3.8	1,727.31	1.3	---	---	2,223.34	1.9
Common stock	11,821.49	10.7	16,799.40	12.9	26,522.81	28.6	16,688.03	14.1
Stock Credits	4,304.80	3.9	3,108.07	2.4	11,295.00	12.2	4,655.97	3.9
Patrons Equity Reserve	19,888.21	18.1	33,575.80	25.8	23,458.64	25.3	27,943.12	23.5
Statutory Reserve	1,414.94	1.3	---	---	---	---	431.11	.4
Other Net Worth Reserves	1,487.30	.4	2,084.48	1.5	143.65	.2	1,317.32	1.1
Certificates of Equity	---	---	199.14	.2	143.24	.2	130.39	.1
Surplus	13,056.93	11.8	13,763.97	10.6	8,322.77	8.9	12,762.12	10.7
Undistributed Savings	5,168.85	4.7	1,557.42	1.2	1,180.74	1.3	2,603.34	2.2
Total Net Worth	60,317.19	54.7	72,815.59	56.0	71,066.85	76.7	68,754.74	57.9
Total Liabilities and Net Worth	110,241.01	100.0	130,111.03	100.0	92,645.79	100.0	118,641.99	100.0

1/ Less than .05 percent

Capital Supplied by Creditors

Only a small proportion of the liabilities on the average represented formal borrowing. However, the balance sheets of 6 of the associations surveyed included short term notes payable ranging from around $100 to $30,000. Eighteen of the associations obtained funds through long term paper, the amounts remaining to be paid at the end of 1947-48, ranging up to $75,000. Only five of the associations were being financed in part by the St. Paul Bank for Cooperatives. While bank overdrafts do not represent formal borrowing, they do indicate a temporary indebtedness to banks. This item amounted to 11 percent of the total assets.

Only a small portion of the total capital, .6 percent, was obtained from patrons and on open accounts with the suppliers of merchandise. However, funds supplied by commission companies constituted 8 percent of the total assets. Of the 80 associations, 37 owed commission companies an average of $21,500 with individual associations owing from $350 to about $90,000. Many associations depend almost entirely on commission firms for financing their current operations.

Capital Provided by Members

Members and patrons have furnished the largest proportion of the capital of these associations through the purchase of capital stock and the creation of net worth reserves and surplus. These items which comprise net worth average almost $69,000 and vary for individual associations from about $5,000 to almost $213,000. The net worth of 70 percent of the associations was less than $75,000.(table 11)

Table 11. Net Worth of Cooperative Elevator Associations

Amount of net worth	Percent of all associations
Less than $25,000	7.8
25,000 - 49,999	34.4
50,000 - 74,999	28.1
75,000 - 99,999	7.8
100,000 - 124,000	12.1
125,000 - 149,000	.8
150,000 and over	9.0
Total	100.0

Capital stock, including both common and preferred, and capital stock credits provided 20 percent of the capital or approximately $23,567. The proportion averaged 41 percent in Area 3, compared to 17 percent in Area 2. In about one-fourth of the associations, capital stock outstanding amounted to less than $10,000, but 10 percent had outstanding stock of $40,000 or more. Two associations revolve common stock.

Eight associations had issued preferred stock which does not share in voting privileges but which has preferred claims to dividends and assets. Often preferred stock is used in lieu of a patrons equity reserve with provisions for revolving the same. Only 8 associations had issued certificates of equity in the form of certificates of interest to non-member non-producers. However, the bylaws of other associations provide for issuing such certificates to these patrons and to members whose stock is being retired. Patrons' deferred dividends which are shown as patrons equity reserve on the balance sheet amount to about 23 percent of the total assets or approximately one-half of the total net worth. Sixty-two out of the 80 associations maintain a revolving plan of financing whereby savings are placed in a reserve to be distributed at a later date. The length of the revolving plan is definite for only a few associations and in no case is it specified in the bylaws.

A few associations build up a statutory reserve until the amount therein is equal to 10 percent of paid in capital. Inasmuch as the amounts added are allocated to the individual patrons' accounts, this reserve has practically the same status as the patrons' equity reserve.

The unallocated surplus of $12,762 was 11 percent of the total assets. In many associations this item has changed but slightly during recent years because all savings are distributed as interest on capital stock, stock credits, cash dividends, or allocated to the patrons in some reserve account. However, some associations make substantial additions to general surplus whenever savings permit. For example, 3 of the 80 associations placed all of the 1947-48 savings in general surplus, and 21 associations after the declaration of patronage dividends and interest on capital stock placed the ramainder in surplus. Any association which hopes to maintain an income tax exemption status should avoid distributing any of the savings to an unallocated surplus account.

Financial Relationships

A strong financial condition of elevator associations requires that certain standard relationships be maintained between various balance sheet items. These relations are usually expressed as financial ratios of which the most commonly used is the current ratio or the ratio of current assets to current liabilities. This ratio indicates the current solvency of the business. To be solvent from this point of view, an association should have current assets at least equal to current liabilities. Since current assets are required for purposes other than the payment of current debts, a current ratio of 2 to 1 is usually recommended. It will be observed from table 12 that 8 percent of the associations did not have sufficient liquid assets to meet current creditor claims in full on demand. (table 12) In contrast, 26 percent of the associations had ratios of 5 to 1 or more. The weighted average was 2.1 to 1 or about the same as the standard.

Table 12. Ratio of Current Assets to Current Liabilities*

Size of ratio	Percent of elevators
Less than 1.0	7.8
1.00 - 1.99	41.0
2.00 - 2.99	18.3
3.00 - 3.99	7.0
4.00 - 5.99	10.3
6.00 and over	15.6
Total	100.0

* In the calculation of the current and other ratios, patronage dividends payable have been subtracted from current liabilities and added to net worth.

The ratio of net worth to total liabilities indicates to what extent the association is financed by owner capital and to what extent by borrowed capital. A high ratio reveals a favorable financial condition in that the association is financed mainly by the owners and the debt burden is low in consequence. For all elevators, the ratio averaged 1.9 to 1 compared to a desirable minimum standard of 1.5 to 1. (table 13) However, 29 percent of the associations had a ratio of less than 1.00. In these associations the members and patrons actually own less than 50 percent of the capital. In such cases the association membership should give serious consideration to increasing the amount of owner capital either by sale of additional stock or a retention of a larger proportion of the annual savings.

Table 13. Ratio of Net Worth to Total Debt and to Fixed Assets

Size of ratio	Ratio of Net Worth to: Total Debt	Fixed Assets
	Percent of all elevators	
Less than 1.00	28.9	7.8
1.00 - 1.99	20.3	18.8
2.00 - 2.99	16.0	30.9
3.00 - 4.99	10.2	23.7
5.00 and over	24.6	18.8
Total	100.0	100.0

A common rule of sound finance is that fixed assets should be financed by owner capital which means that the ratio of net worth to fixed assets should be at least 1 to 1. For all associations this ratio averaged 2.4. (table 13) Only 8 percent of the elevators failed to meet the standard of 1 to 1. About two-fifths of the associations showed a ratio of 3.0 to 1 or larger.

Another ratio of importance is that of sales to fixed assets. This ratio is indicative of the use made of fixed assets. An association with a low ratio is presumably obliged to spread the fixed expenses resulting from the use of the fixed investment, such as depreciation, interest, insurance, and taxes over a relatively smaller volume of business, and consequently may be at a disadvantage from a competitive standpoint. This ratio averaged 18.1. The ratio was less than 10 for 11 percent of the associations and 25 or more for 22 percent of the associations. (table 14)

Table 14. Ratio of Total Sales to Fixed Assets

Size of ratio	Percent of all associations
Less than 10.0	10.9
10.0 - 14.9	19.9
15.0 - 19.9	20.7
20.0 - 24.9	26.6
25.0 - 29.9	12.9
30.0 and over	9.0
Total	100.0

Table 15. Sales, Cost of Sales, and Gross Margins of Minnesota Cooperative Elevator Associations

	Area 1		Area 2		Area 3		All Areas	
	Average Value	Percent of total sales	Average Value	Percent of total sales	Average Value	Percent of total sales	Average Value	Percent of total sales
Sales								
Grain	$698,748.07	92.4	$788,351.56	85.4	$445,242.98	72.0	$711,460.58	85.9
Merchandise	57,842.71	7.6	134,220.26	14.6	172,925.50	28.0	116,543.08	14.1
Total Sales	756,590.78	100.0	922,571.82	100.0	618,168.48	100.0	828,003.66	100.0
Cost of Sales								
Grain	670,919.32		762,798.07		428,075.59		686,425.89	
Merchandise	51,769.52		119,695.80		154,847.10		104,079.97	
Total Cost of Sales	722,688.84	95.5	882,493.87	95.7	582,922.69	94.3	790,505.86	95.5
Gross Margin from Sales								
Grain	27,828.75		25,553.49		17,167.39		25,034.69	
Merchandise	6,073.19		14,524.46		18,078.40		12,463.11	
Total Gross Margin from Sales	33,901.94	4.5	40,077.95	4.3	35,245.79	5.7	37,497.80	4.5
Other Operating Income	2,507.91		3,892.14		5,081.04		3,642.21	
Total Gross Margin	36,409.83		43,970.09		40,326.83		41,140.01	

FINANCIAL OPERATIONS

Sources of Gross Operating Income

The principle sources of income in elevator operation are the sales of grain and merchandise or supplies and various services such as storage, seed cleaning, and feed grinding. Sales of grain averaged $711,460 for the fiscal year 1947-48 or 86 percent of the combined sales of grain and merchandise. (table 15)

The importance of grain sales relative to merchandise sales varies widely from Area to Area. They averaged 92 percent of the total sales in Area 1 compared with 72 percent in Area 3. Grain sales in practically all of the associations in the Area 1 exceeded 80 percent of the total sales, whereas in Area 3 less than one-half of the associations had grain sales exceeding 70 percent of the total. (table 16)

Table 16. Proportion that Grain Sales are of Total Sales

Percent grain sales are of total sales	Area 1	Area 2	Area 3	All Areas
		Percent of all associations		
90 and more	87.2	44.0	10.8	52.3
80 " "	94.9	75.9	45.9	77.3
70 " "	94.9	90.0	45.9	85.1
60 " "	94.9	100.0	56.7	94.0
50 " "	98.8		100.0	99.6
40 " "	100.0			100.0

Operating Margins

Usually at the time of delivery of grain, the patrons, both members and non-members are paid the price currently available, grade and quality considered less an amount per bushel as an operating margin. This buying margin can be considered as the initial charge for services and risks because the adequacy for this purpose is not fully known until the end of the marketing season when all realized margins and costs are definitely determined.

The size of the margin as determined by the manager depends mainly on the estimated costs of handling the particular grain in question, the intensity of competition within the locality, and the variability of grain prices. In practically every locality, there is a prevailing margin which may vary from year to year and during the season. Usually, the association which currently is obtaining the larger proportion of the available grain supply is in a position to more or less lead in the determination of the prevailing margin. However, the variations from this tendency are frequent and are due mainly to the differences in the competency of the managers and to the type of competing elevators in the community. Associations with high costs and located in a community where competition is intense are constantly faced with the problem of adjusting costs to the prevailing margin.

The actual realization of the attempted buying margin depends in part on the judgement of the manager because it is partly influenced by factors within his control such as accuracy in weighing and grading, shrinkage, knowledge of quality premiums and discounts, mixing practices, and market information. It also depends on conditions which are more or less speculative in nature and which cannot be forecasted with any degree of accuracy, such as day to day fluctuations in prices, variation in protein premiums and cash prices relative to future prices.

Table 17. Gross Margins Per Bushel of Grain Sales

Gross margin: Cents per bu.	Wheat	Barley	Soybeans	Gross margin: Cents per bu.	Corn	Oats	Gross margin: Cents per bu.	Flaxseed
	Percent of all associations				Percent of all associations			Percent of all associations
Loss	9.9	8.1	7.0	Loss	15.0	6.7	Loss	0
Less than 5.0	5.8	11.3	20.7	Less than 2.0	10.8	23.0	Less than 10.0	9.5
5.0 - 9.9	23.3	35.1	27.2	2.0 - 3.9	13.1	19.9	10.0 - 19.9	23.8
10.0 - 14.9	26.0	32.3	14.7	4.0 - 5.9	26.3	19.2	20.0 - 29.9	28.2
15.0 - 19.9	13.9	9.6	16.3	6.0 - 7.9	15.6	19.1	30.0 - 39.9	25.8
20.0 and over	21.1	3.6	14.1	8.0 and over	19.2	12.1	40.0 - 49.9	12.7
Total	100.0	100.0	100.0	Total	100.0	100.0	Total	100.0

Table 17a. Gross Margin Per Dollar of Sales

Grain		Merchandise	
Gross margin: cents per dollar of sales	Percent of all associations	Gross margin: cents per dollar of sales	Percent of all associations
Less than 2.0	14.1	Less than 6.0	4.8
2.0 - 2.9	22.6	6.0 - 7.9	17.1
3.0 - 3.9	25.8	8.0 - 9.9	25.4
4.0 - 4.9	26.6	10.0 - 11.9	34.4
5.0 - 5.9	3.9	12.0 - 13.9	15.1
6.0 and over	7.0	14.0 and over	3.2
Total	100.0	Total	100.0

These conditions do not present as serious a problem to managers who sell mainly to arrive or on track as they do to those who consign grain for sale at the terminal market. It is the daily variation in protein premiums and cash premiums which often renders hedging inadequate in the realization of the attempted buying margin.

The problems connected with the determination of the margin and the realization of the same in the merchandising of supplies probably are less difficult than in the merchandising of grain. Competition again plays an important part in the determination of the selling margin. However, the realization of the margin is not attended with so many risks, assuming adequate judgment has been exercised in purchasing saleable supplies and in keeping inventories at proper levels in order to avoid decline in inventory valuations because of marked price changes.

Realized Margins

The margins actually realized in merchandising of grain varies widely among elevators. (table 17) For example, 10 percent of the associations reported an actual loss in handling wheat while 14 percent of the elevators realized a margin of 20 cents or more per bushel. Of the elevators handling corn, 15 percent reported a loss and 19 percent obtained a margin of 8 cents or more per bushel. Similar variations exist for the other grains, the largest variation occuring in the case of flaxseed. Some of the elevators handling flaxseed were able to realize unusually large margins because they were in a position to take advantage of the rapid increase in flaxseed prices when ceilings on prices were removed.

When the gross margin is expressed as cents per dollar of sales of all grains, 14 percent of the elevators realized less than 2 cents and 11 percent, 5 cents or more. (table17a) The variation in the gross margin realized on the dollar sales of merchandise is also wide. About 5 percent of the elevators obtained less than 6 cents and 18 percent obtained 12 cents or more per dollar of sales.

Source of Realized Margins

The combined gross margin realized on grain and merchandise sales and service enterprise averaged $41,140.(table 15) The proportions contributed by the three departments to this total were: grain--59 percent, merchandise--33 percent, and services--8 percent. (table 18). The proportions are different for the various areas. In each area the income from services contributes a significant proportion to the total gross margin and in the case of some associations it means the difference between profit and loss.

Table 18. Proportions that Gross Margins from Various Elevator Departments are of Total Gross Margins

Department	Area 1	Area 2	Area 3	All Areas
		Percent of all associations		
Grain	76	58	43	59
Merchandise	17	33	45	33
Services	7	9	12	8
Total	100	100	100	100

The variation in the contribution that income from feed grinding, storage, and other services makes to the total gross margin is shown in table 19. For example, this income constituted less than 7.5 percent of the total gross margin for about one-half of the associations in Areas 1 and 2, and for only about one-seventh of the associations in Area 3.

Table 19. Proportion that Income from Services is of the Total Gross Margin

Income from services: Percent of Total Gross Margin	Area 1	Area 2	Area 3	All Areas
	Percent of all associations			
Less than 2.5	16.7	18.4	10.8	16.8
2.5 - 7.4	21.8	30.5	2.7	23.8
7.5 - 12.4	33.3	26.2	43.2	30.9
12.5 - 17.4	12.8	9.9	10.8	10.9
17.5 - 24.9	10.3	8.5	32.5	12.5
25.0 and over	5.1	6.5	--	5.1
Total	100.0	100.0	100.0	100.0

Operating Expenses

Labor and Management

Differences in the operating efficiency of elevator associations depend to a large extent upon the variations in the volume of business and in the administration of labor. The importance of successful labor adjustments in elevator operation is evidenced by the fact that labor and management costs make up 52 percent of all operating expenses. The proportion averages highest in Area 3 where merchandise sales relative to grain sales are high. (table 20)

Table 20. Operating Expenses of Minnesota Cooperative Elevator Associations, 1947-48

	Area 1		Area 2		Area 3		All Areas	
	Average	Percent of total	Average	Percent of total	Average	Percent of total	Average	Percent of total
Merchandising Expense								
Labor and Management	$ 8,177.66	50.5	$11,735.85	51.7	$12,860.84	56.9	$10,814.31	52.2
Elevator Supplies	381.12	2.4	466.78	2.1	417.61	1.9	433.57	2.1
Repairs	797.94	4.9	875.68	3.8	517.44	2.3	800.21	3.9
Truck Expense	148.83	0.9	586.61	2.6	468.31	2.1	436.13	2.1
Freight and Drayage	83.12	0.5	127.83	0.6	79.52	0.3	107.22	0.5
Heat, Light, and Power	728.76	4.5	1,133.08	5.0	1,291.04	5.7	1,032.72	5.0
Rent	46.32	0.3	93.34	0.4	97.40	0.4	79.61	0.4
Advertising	320.48	2.0	548.37	2.4	375.71	1.7	453.98	2.2
Miscellaneous	93.42	0.6	49.54	0.2	3.24	0.01	56.21	0.3
Total Merchandise Expense	10,777.65	66.6	15,617.08	68.8	16,111.11	71.3	14,213.96	68.7
Administrative and General Expense								
Office Salaries	147.09	0.9	60.25	0.3	593.50	2.6	163.78	0.8
Directors Fees and Expense	204.30	1.3	231.52	1.0	315.19	1.4	235.32	1.1
Office Supplies	328.74	2.0	416.60	1.8	372.70	1.6	383.48	1.9
License, Inspection and Bonds	133.16	0.8	216.75	1.0	81.34	0.4	171.71	0.8
Audit	338.31	2.1	306.36	1.4	220.71	1.0	303.71	1.5
Telephone and Telegraph	176.08	1.1	270.96	1.2	225.99	1.0	235.55	1.1
Local Taxes	812.82	5.0	1,126.44	5.0	874.17	3.9	994.42	4.8
Payroll Taxes	106.69	0.7	226.60	1.0	221.89	1.0	189.39	0.9
Insurance	1,251.66	7.7	1,551,07	6.8	1,172.62	5.2	1,405.15	6.8
Depreciation	1,422.24	8.8	1,972.36	8.7	1,804.53	8.0	1,780.49	8.6
Bad Debts	79.56	0.5	114.38	0.5	123.97	0.6	105.15	0.5
Education Allowance	---	---	8.10	*/	27.72	0.1	8.47	*/
Miscellaneous	408.23	2.5	577.30	2.5	437.19	1.9	505.54	2.5
Total Administrative Expense	5,408.88	33.4	7,078.69	31.2	6,471.52	28.7	6,482.16	31.3
Total Merchandising, Administrative and General Expense	16,186.53	100.0	22,695.77	100.0	22,582.63	100.0	20,696.13	100.0

* Less than .05 percent

Efficiency of the utilization of labor depends in large part on the adjustment of the amount of labor hired to the amount needed and its administration. The efficiency in the use of labor is fairly well indicated by the dollar sales per employee. The variation in the latter is marked. About 10 percent of the associations show less than $100,000 of sales per employee and 17 percent show $300,000 or more. (table 21)

Table 21. Sales per Employee

Sales per employee	Percent of all associations
Less than $100,000	9.8
100,000 - 149,999	14.5
150,000 - 199,999	24.2
200,000 - 249,999	20.3
250,000 - 299,999	14.4
300,000 - 399,999	12.5
400,000 and over	4.3
Total	100.0

A close relationship exists between dollar sales per employee and labor and management costs per $1,000 of sales. In those cases where the dollar sales per employee averaged less than $100,000 labor and management costs constituted $26 per $1,000 of sales. When the sales per employee exceeded $250,000 these costs averaged less than $10. (table 22)

Table 22. Relationship Between Total Sales per Employee and Labor and Management Costs per $1000 of Sales

Sales per Employee	Labor and Management Costs per $1000 of Sales
Less than $100,000	$26.22
100,000 - 149,999	18.75
150,000 - 199,999	12.41
200,000 - 249,999	9.46
250,000 - 299,999	9.18
300,000 - 499,999	7.90
400,000 and over	7.72

Other Expenses

Other items of expense which constitute 4 percent or more of the total operating expenses are heat, light and power, elevator repairs, local taxes, insurance, and depreciation. These items when combined together constitute 29 percent of the total operating expenses, depreciation alone accounting for almost 9 percent of the total.

Total Operating Expenses

The total operating expense averaged $20,696 or 2.5 percent of total sales. When the total operating expense is expressed as a percent of the total value of sales plus service income, the proportions vary from 1.1 to 6.2 percent. A range from 1.5 to 2.5 percent includes one-half of the associations. (table 23)

Table 23. Proportion that Total Operating Cost is of Total Sales and Service Income

Operating costs: Percent of total sales and service income	Percent of all associations
1.00 - 1.49	9.8
1.50 - 1.99	32.0
2.00 - 2.49	18.4
2.50 - 2.99	10.1
3.00 - 3.49	7.0
3.50 - 3.99	6.6
4.00 - 4.49	5.1
4.50 and over	6.3
Total	100.0

Some of the variations in the proportion that operating expenses are of total sales and service income are due to the variations in merchandise sales relative to grain sales. In the case of associations whose merchandise sales were less than 5 percent of total sales, operating expenses averaged 1.9 percent of total sales. When the merchandise sales were 25 percent or more the operating expenses were 4.4 percent or more. (table 24)

Table 24. Relation Between the Proportion Merchandise Sales are of Total Sales and Proportion Operating Costs are of Total Sales

Merchandise Sales: Percent of Total Sales	Operating Costs: Percent of Total Sales
Less than 5.0	1.9
5.0 - 14.9	2.2
15.0 - 24.9	3.0
25.0 - 34.9	4.4
35.0 and over	4.8

Operating Savings

The operating savings or the difference between total gross margin and operating costs averaged $20,443 or practically the same as operating costs. This means the total gross margin was about equally divided among costs and savings. (table 25)

Table 25. Sales, Gross Margin, Expenses, and Savings of Minnesota Cooperative Elevator Associations, 1947-48

	Area 1 Average	Area 2 Average	Area 3 Average	All Areas Average
Total sales	$756,590.78	$922,571.82	$618,168.48	$828,003.66
Service income	2,507.91	3,892.14	5,081.04	3,642.21
Total sales and service income	759,098.69	926,463.96	623,249.52	831,645.87
Gross margin	36,409.83	43,970.09	40,326.83	41,140.01
Operating expenses	16,186.53	22,695.77	22,582.63	20,696.13
Operating savings	20,223.30	21,274.32	17,744.20	20,443 88
Other expenses	1,500.26	1,654.83	2,238.32	1,692.06
	18,723.04	19,619.49	15,505.88	18,751.82
Other income	935.85	1,177.06	679.10	1,031.59
Net savings	19,658.89	20,796.55	16,184.98	19,783.41

When operating savings are expressed as a percent of total sales plus service income, it is observed that the operating savings of almost one-fifth of the elevators were less than one percent of the total sales plus service income. However, over one-fourth of the elevators had savings of 3 percent or more of the total sales plus service income. (table 26)

Table 26. Proportion Operating Savings are of Total Sales and Service Income

Operating Savings Percent of total sales and service income	Percent of all associations
Loss	3.1
Less than .50	7.8
.50 - .99	8.3
1.00 - 1.49	11.7
1.50 - 1.99	14.8
2.00 - 2.49	13.3
2.5 - 2.99	12.9
3.0 - 3.49	5.5
3.5 - 3.99	10.9
4.0 and over	11.7
Total	100.0

Relation Between Gross Margins, Operating Expense and Operating Savings

Operating savings depend on the realized gross margin and operating costs. As the gross margin averaged 5 percent of the total sales plus service income and was equally divided between operating expense and savings, each of these items averaged 2.5 percent of total sales and service income. Those associations whose savings were less than the average of 2.5 percent had either or both a gross margin below the average or operating expenses above the average. Similarly, those associations whose savings were 2.5 percent or more had either or both a gross margin above the average or operating expenses less than the average.

These relationships are shown in table 27. For example, there were 47 associations whose gross margin was less than 9 percent of the total sales plus service income. The operating expenses of 9 associations of this group were 2.5 percent or more resulting in net savings which were only .8 percent of total sales plus service income. Twelve of the 33 associations whose gross margin was 5.0 percent or more and operating expenses less than 2.5 percent averaged net savings of 3.9 percent. These are the associations which are enabled to distribute a substantial dividend to the patrons at the end of the year.

Individual associations whose volume of business is relatively small may be competing with stronger associations whose volume is much above average. If both groups were realizing the same absolute margin the percentage margin would also be the same. However, the operating expenses of the associations with the smaller volume probably would be a relatively higher proportion of total sales and service income, assuming competency of management to be the same. In consequence, the net operating savings of the lower volume associations will be a relatively smaller proportion of the total sales and service income.

Table 27. Gross Margin, Operating Expenses, and Operating Savings

Gross Margin and Operating Expenses: Percent of total sales and service income	Number of associations	Operating savings: Percent of sales and service income
Gross margin: Less than 5.0	47	1.6
Operating expenses:		
Less than 2.5	38	1.8
2.5 and more	9	.8
Gross margin: 2.5 and more	33	3.5
Operating expenses		
Less than 2.5	12	3.9
2.5 and more	21	3.1

Net Savings

The net savings after adjustment for other income and expenses averaged $19,783 and ranged from a loss to over $100,000. One-fifth of the associations had net savings of less than $5,000 and almost one-tenth of them had $40,000 or more. (table 28)

Table 28. Net Savings of Minnesota Cooperative Elevators

Net savings	Area 1	Area 2	Area 3	All Areas
		Percent of all elevators		
Loss	10.2	5.7	--	6.2
Less than $5,000	15.4	14.9	10.8	14.5
5,000 - 9,999	25.6	11.3	32.4	18.7
10,000 - 19,999	5.1	21.3	53.3	19.5
20,000 - 29,999	10.3	17.8	2.7	13.3
30,000 - 39,999	24.4	18.5	--	17.6
40,000 - 49,999	3.8	3.5	--	3.1
50,000 - 59,999	--	3.5	--	2.0
60,000 and over	5.2	3.5	10.8	3.5
Total	100.0	100.0	100.0	100.0

Associations with the larger volume of business had the larger net savings. The latter averaged about $4,500 for the group with total sales of less than $400,000 and exceeded $50,000 for the group with sales of $1,600,000 or more. (table 29)

Table 29. Relation Between Volume of Sales and Average Net Savings

Total Sales	Average Net Savings
Less than $400,000	$ 4,561
400,000 - 799,999	11,433
800,000 - 1,199,999	27,684
1,200,000 - 1,599,999	37,090
1,600,000 and more	50,735

Distribution of Savings

The net savings of the 80 elevators included in the study exceeded $2,000,000 for the fiscal year 1947-48. It will be observed from table 29 that almost 75 percent of the total was paid in cash, made currently payable or added to the patrons equity reserve. Almost 10 percent was added to surplus, which in practically all cases is not allocated to the individual patrons accounts. (table 30)

Table 30. Distribution of Net Savings

Application of Net Savings	Amount	Percent of total
Patonage dividends		
Paid	$ 312,336.09	15.1
Currently payable	290,701.09	14.0
Patons equity reserve*	922,407.99	44.6
Total	1,525,445.17	73.7
Educational fund	5,321.50	.2
Capital stock and stock credits	135,126.90	6.5
Surplus**	200,320.76	9.7
Interest on stock	51,925.67	2.5
Other***	18,292.24	.9
Undistributed	133,991.29	6.5
Total	2,070,423.72	100.0

* Includes statutory reserve
** Before deduction for income taxes
*** Includes a building fund of $15,500

Patronage Dividends

There is no one prevailing method followed in allocating patronage dividends to patrons. Of the 69 associations for which complete data are available, 6 associations paid no dividends on either grain purchases or merchandise sales, primarily because of the lack of savings. There were 14 other associations which paid no dividends on merchandise sales. In a number of cases, it was assumed that the merchandise department was operated at cost, and in consequence, no savings from this department were available for distribution. Only four associations paid a uniform number of cents per bushel on grain purchases. Of the 35 associations which paid a specified percentage of the value of grain purchases, 27 paid a specified percentage of merchandise sales, and with the exception of three associations, the percentages were the same for both grain and merchandise. (table 31)

Table 31. Method of Allocating Patronage Dividends

Dividends on grain	Dividends on Merchandise: None	Percent of sales: Uniform	Percent of sales: Different	Dollars per unit of sales	Total
None	7	0	0	0	7
Cents per bushel					
Uniform	2	2	0	0	4
Different	4	14	2	3	23
Percent of purchases	6	27	2	0	35
Total	19	43	4	3	69

Changes in Financial Organization and Operation

The main changes in the financial organization of cooperative elevator associations from 1948 to 1949 as shown by the composite balance sheets were the decline in current assets and current liabilities and the increase in fixed assets and net worth. (table 32) Inasmuch as total assets remained about the same, these changes resulted in current assets and current liabilities representing smaller proportions and fixed assets and net worth larger proportions of the total assets in 1949. However, changes in most of the financial ratios were only slight indicating that the financial status of the associations on the average was about the same in 1949 as in 1948. 1/ In fact, the situation in both years was fairly satisfactory.

Ratio	1948	1949
Current assets to current liabilities	2.1	2.0
Net worth to debt	1.8	1.9
Net worth to fixed assets	2.4	2.1

1/ In the calculation of the ratios, patrons' dividends payable has been transferred from current liabilities to net worth.

Table 32. Comparative Balance Sheets, Minnesota Cooperative Elevator Associations, 1948 and 1949

	1948		1949	
	Average Value	Percent of total assets	Average Value	Percent of total assets
Assets				
Current assets				
Cash	$ 7,926.06	6.7	$ 9,900.39	8.4
Government bonds	909.87	.7	1,062.81	.9
Accounts Receivable-Patrons (Net)	8,992.18	7.6	9,092.43	7.7
Advances	143.11	.1	417.05	.4
Accounts Receivable-Commission firms	14,143.19	11.9	10,362.26	8.8
Notes Receivable	1,202.61	1.0	341.27	.3
Inventory-Grain	36,188.47	30.5	29,741.82	25.1
Inventory-Merchandise	12,644.88	10.7	11,295.02	9.4
Other current assets	310.73	.3	977.80	.8
Total Current Assets	82,461.10	69.5	73,190.86	61.8
Investments	5,045.14	4.2	6,591.42	5.6
Fixed Assets				
Buildings and Equipment	45,511.81	38.4	53,802.86	45.4
Less: Reserve for depreciation	15,216.25	12.8	16,987.16	14.4
Net Buildings and Equipment	30,295.56	25.6	36,815.70	31.0
Land	370.09	.3	438.27	.4
Total Fixed Assets	30,665.65	25.9	37,253.97	31.4
Other Assets	470.10	.4	1,389.55	1.2
Total Assets	118,641.99	100.0	118,425.80	100.0
Liabilities and Net Worth				
Current Liabilities				
Bank overdrafts	$ 12,775.12	10.8	$ 6,939.18	5.8
Accounts Payable-Patrons	215.88	.2	701.51	.6
Accounts Payable-Commission firms	9,919.91	8.3	7,907.91	6.7
Accounts Payable-General	518.40	.4	323.14	.3
Interest Dividends Payable	566.48	.5	697.39	.6
Notes Payable	688.10	.6	624.14	.5
Storage Liability	13,910.54	11.7	19,667.32	16.6
Patrons Dividends Payable	6,121.82	5.2	3,541.12	3.0
Other Current Liabilities	1,267.86	1.1	849.88	.7
Total Current Liabilities	45,984.11	38.8	41,251.59	34.8
Long Term Liabilities				
Notes and Mortgages Payable	2,851.66	2.4	2,249.41	1.9
Other Long Term Liabilities	1,051.48	.9	1,362.24	1.2
Total Long Term Liabilities	3,903.14	3.3	3,611.65	3.1
Total Liabilities	49,887.25	42.1	44,863.24	37.9

Table 32. (Con't.)

	1948 Average Value	1948 Percent of total assets	1949 Average Value	1949 Percent of total assets
Net Worth				
Preferred stock	$ 2,223.34	1.9	$ 3,385.14	2.9
Common stock	16,688.03	14.1	16,616.82	14.0
Stock Credits	4,655.97	3.9	4,994.85	4.2
Patrons Equity Reserve	27,943.12	23.5	31,293.36	26.4
Statutory Reserve	431.11	.4	1,111.17	.9
Certificates of Equity	130.39	.1	112.03	.1
Other Net Worth Reserves	1,317.32	1.1	1,113.95	.9
Surplus	12,762.12	10.7	12,539.89	10.7
Undistributed Savings	2,603.34	2.2	2,395.35	2.0
Total Net Worth	68,754.74	57.9	73,562.56	62.1
Total Liabilities and Net Worth	118,641.99	100.0	118,425.80	100.0

Days sales outstanding in receivables from patrons were 24 in 1949 compared with 23 in 1948. However, this figure was quite high for some associations in both years indicating the need for a stricter credit policy.

The total sales in 1948-49 averaged about 4 percent less than in the previous year. The decline in sales and the increase in fixed assets resulted in the ratio of sales to fixed assets changing from 18 to 15. The gross margin on sales averaged 4.1 percent in 1948-49 compared with 4.5 percent one year earlier. (table 33)

The decline in total gross margin and the increase in operating expenses reduced operating savings by 30 percent. The net savings in 1948-49 constituted 1.7 percent of the total sales plus service income compared with 2.4 percent in 1947-48.

Table 33. Comparative Operating Statements, Minnesota Cooperative Elevator Associations, 1947-48 and 1948-49

	1947-48		1948-49	
	Average value	Percent of sales	Average value	Percent of sales
Sales				
Grain	$711,460.58	85.9	$682,124.93	85.9
Merchandise	116,543.08	14.1	111,935.31	14.1
Total sales	828,003.66	100.0	794,060.24	100.0
Cost of sales				
Grain	686,425.89		661,625.29	
Merchandise	104,079.97		99,489.11	
Total Cost of Sales	790,505.86	95.5	761,114.40	95.9
Gross Margin on Sales				
Grain	25,034.69		20,449.64	
Merchandise	12,463.11		12,446.20	
Total Gross Margin on Sales	37,497.80	4.5	32,945.84	4.1
Other Operating Income	3,642.21		5,119.44	
Total Gross Margin	41,140.01		38,065.28	
Operating Expenses	20,696.13		23,498.30	
Operating Savings	20,443.88		14,566.98	
Other Expenses	1,692.06		1,505.60	
	18,751.82		13,061.38	
Other Income	1,031.59		734.06	
Net Savings	19,783.41		13,795.44	

Table 34. Factors to use in Analyzing the Business of Cooperative Elevator Associations, 1948

	Area 1	Area 2	Area 3	All Areas	Your Association
Financial and operating ratios					
Current assets to current liabilities	1.7	2.1	3.0	2.1	
Net worth to debt	1.5	1.6	3.5	1.8	
Net worth to fixed assets	2.3	2.5	2.4	2.4	
Sales to fixed assets	18.9	18.7	14.1	18.0	
Merchandise sales outstanding in receivables	33 days	21 days	21 days	23 days	
Volume of business					
Bushels of grain sold	282,100	318,300	191,900	289,400	
Value of sales					
Grain	$698,748	$788,352	$445,243	$711,461	
Merchandise	57,843	134,220	172,926	116,543	
Total	756,591	922,572	618,169	828,004	
Returns from operations					
Gross margin					
Grain	$ 27,829	$ 25,554	$ 17,168	$ 25,035	
Merchandise	6,073	14,524	18,078	12,463	
Services	2,508	3,892	5,081	3,642	
Total	36,410	43,970	40,327	41,140	
Operating expense	16,187	22,696	22,583	20,696	
Operating savings	20,223	21,274	17,744	20,444	
Net savings	19,585	20,715	16,185	19,716	
Operating efficiency					
Gross margin: Cents per bushel					
Wheat	13.4	14.1	5.5	12.9	
Oats	3.1	4.2	5.6	3.9	
Barley	9.8	9.7	9.1	9.7	
Corn	5.1	4.6	6.8	4.8	
Flaxseed	20.2	27.4	24.2	25.3	
Soybeans	---	6.7	13.7	7.6	
Gross margin: Percent of sales					
Grain	4.0	3.2	3.8	3.5	
Merchandise	10.5	10.8	10.4	10.7	
Total	4.5	4.3	5.7	4.5	
Operating expenses: Percent of sales and service income	2.1	2.5	3.6	2.5	
Operating savings: Percent of sales and service income	2.7	2.3	2.8	2.5	
Net savings: Percent of sales service income	2.6	2.2	2.6	2.4	