

FARMERS GRAIN ELEVATORS

Circular 476

UNIVERSITY OF ILLINOIS . . . COLLEGE OF AGRICULTURE
AGRICULTURAL EXPERIMENT STATION AND EXTENSION
SERVICE IN AGRICULTURE AND HOME ECONOMICS

CONTENTS

	PAGE
RATES EARNED VARY WIDELY.....	3
HOW VOLUME OF BUSINESS AFFECTS EARNINGS.....	4
EXPENSE PER DOLLAR OF SALES VARIES WITH VOLUME OF GRAIN AND PROPORTION OF MERCHANDISE.....	5
GROSS MARGINS EARNED ON GRAIN.....	6
Margins Influenced by Trends in Market Price.....	7
Wide Variations in Margins Point to Need for Sound Merchandising Policies.....	9
EARNINGS FROM MERCHANDISE.....	10
Lower Gross Margins Taken on Merchandise by Larger Companies.....	10
Rapid Turnover Permits Lower Margins.....	11
Cost of Handling Merchandise.....	12
Bad-Debt Losses and Capital Needs Increased by Handling Merchandise.....	12
"NET WORTH" MEASURES THE FINANCIAL CONDITION.....	13
SUMMARY.....	14
SUGGESTED METHOD FOR ANALYSIS OF A LOCAL COMPANY...	15

Acknowledgment is hereby made to the Illinois Agricultural Auditing Association, Mr. F. E. Ringham, Manager, for permission to use auditors' reports in the preparation of this circular.

Farmers Grain Elevators

Factors Influencing Their Successful Operation

By L. J. NORTON, Chief in Agricultural Marketing

FARMERS' GRAIN marketing associations do a substantial business in Illinois, according to figures compiled by the Cooperative Division, Farm Credit Administration. In 1935-36 there were in Illinois approximately 400 such farmers' associations marketing grain, with a membership of 75,000 and a volume of business of 52 million dollars annually.

The typical unit in this field is the independent farmers' elevator, owned by local people, mostly farmers, and operating as a rule at only one place. Some such companies, however, operate at one or more outlying points. Independent local operation and management are the rule. The grain is sold chiefly thru grain firms on the primary markets to which Illinois grain moves—Chicago, St. Louis, Peoria, and Indianapolis—or thru country grain brokers representing dealers on the central markets or mills or consumers at outside points.

RATES EARNED VARY WIDELY

As would be expected among a large group of independent concerns, some of the farmers' elevators are making good earnings on their capital, whereas others are losing money. The earnings, expressed as a percentage of total assets (book value of all property used in the business) of a group of 88 farmers' elevator companies in Illinois during the business year ending between July 1, 1935, and June 30, 1936, were distributed as follows:

- 9 companies *gained* 12 percent or more
- 10 companies *gained* 8 to 11 percent
- 4 companies *gained* 4 to 7.9 percent
- 23 companies *gained* 0 to 3.9 percent
- 11 companies *lost* 0 to 3.9 percent
- 12 companies *lost* 4 to 7.9 percent
- 4 companies *lost* 8 to 11.9 percent
- 1 company *lost* 12 percent or more

The average rate earned was 3 percent, but 9 of the 88 companies earned more than 12 percent, and 5 lost more than 8 percent.

Earnings are important even in a cooperative company, for continuous losses will soon use up the capital and force the organization to go out of business. Moreover, interest must be paid on borrowed capital if operations are to continue; and the invested capital, repre-

sented by capital stock, is entitled to a fair rate of return. Earnings in excess of a fair rate of return on the investment may be used to develop the business or may be returned as patronage dividends to the members. Hence even in a cooperative company, successful operation demands that the company earn a fair rate of return on the capital.

HOW VOLUME OF BUSINESS AFFECTS EARNINGS

Such differences in earnings as those just described are in part due to location: some companies are in areas where there is a large volume of grain; others are not. In part, also, the differences are caused by differences in business policy and management.

A grain elevator typically handles not only all of the different kinds of grain raised in its trade area but also several kinds of merchandise. The relative importance of grain and merchandise varies greatly among companies, depending again on location and the way in which the business has been developed. In northern, western, and south-western Illinois so-called "side lines" are relatively important; in eastern and central Illinois, the grain-shipping area, they are of less significance. Lines of merchandise commonly handled are coal, feed, seed, twine, fencing, and occasionally farm machinery, and in the northern part of the state, lumber and building materials.

Because more capital is required and more expense is involved in handling a dollar's worth of merchandise than in handling a dollar's worth of grain, in any analysis of differences in earnings among associations in this business, allowance must be made for the relative importance of grain and of merchandise handled. Moreover, the volume of business handled directly influences costs. Therefore the 88 companies for which the variation in earnings was shown above were grouped according to (1) the number of bushels of grain of all kinds handled, and (2) the ratio (percentage) of grain sales to total sales. The rates of earnings in the different groupings are shown in Table 1.

From the differences in rates of earnings made by the companies in the different groupings two important conclusions may be drawn:

1. Where conditions are such that less than 300,000 bushels of grain are handled annually, a sufficient amount of merchandise business must be added in order to have a profitable business. (Note that earnings were lower as less merchandise was handled, when less than 300,000 bushels of grain were sold.)

2. Where 300,000 bushels of grain are available annually, the handling of side lines in volume is not necessary in order to earn a good return on the investment. In fact, the handling of merchandise by companies handling a large volume of grain will reduce the rate of

TABLE 1.—RATE EARNED ON TOTAL ASSETS OF 88 ILLINOIS FARMERS' ELEVATOR COMPANIES, 1935-36

Bushels of grain sold	When grain sales in relation to total sales were:			Number of companies	Rate earned
	70% or less	70-89.9%	90% or more		
	<i>perct.</i>	<i>perct.</i>	<i>perct.</i>		<i>perct.</i>
Less than 100,000.....	3.7	2.2(loss)	1.7(loss)	31	.2
100,000 to 199,000.....	6.0 ^a	2.7	1.9	29	2.6
200,000 to 299,000.....	7.1 ^a	9.7 ^a	2.2	21	4.2
300,000 or more.....	...	10.5 ^a	13.8 ^a	7	13.3 ^a
All companies.....	4.2	2.3	3.1	88	3.0

^aProfitable operation.

return on the capital, for the reason that the earnings on merchandise per dollar invested are less than on grain. This tendency does not mean that it is necessarily poor policy for a cooperative elevator company handling a large volume of grain to handle side lines, even tho the side lines barely pay their way, for the handling of merchandise increases the service of the cooperative to the community.

Were the rates of earnings made by the 88 companies in 1935-36 typical of earnings that may be made in other years?

A partial answer to this question is furnished by comparison with figures from the same companies for the preceding year, when the average rate of earnings was 6.6 percent on the property value of the companies. Earnings were larger in the earlier year chiefly because higher margins were earned per bushel of grain handled, as shown in Table 3. However, the two principles stated above held good, with the qualification that a volume of grain smaller than 300,000 bushels annually earned a satisfactory rate of return on invested capital, even when only a relatively small volume of merchandise was handled.

EXPENSE PER DOLLAR OF SALES VARIES WITH VOLUME OF GRAIN AND PROPORTION OF MERCHANDISE

The larger the amount of grain handled the lower is the cost per unit. Also the expense per unit goes down as the relative amount of merchandise handled declines, because it is more expensive to handle a dollar's worth of merchandise than to handle a dollar's worth of grain. The expenses per dollar of sales, excluding interest, incurred by 87 companies in 1935-36 ranged from 10.9 cents per dollar of sales for companies which were essentially merchandise stores, to 2.6 cents for the large grain companies which handled only a little merchandise (Table 2). The average was 5.6 cents per dollar of sales.

TABLE 2.—OPERATING EXPENSES, EXCLUDING INTEREST, PER DOLLAR OF SALES, FOR 87 ILLINOIS FARMERS' ELEVATOR COMPANIES, 1935-36

Bushels of grain sold	When grain sales in relation to total sales were:			Number of companies	Rate earned
	70% or less	70-89.9%	90% or more		
	<i>cents</i>	<i>cents</i>	<i>cents</i>		<i>cents</i>
Less than 100,000.....	10.9	7.4	5.8	31	8.3
100,000 to 199,000.....	6.1	5.4	4.4	28	5.0
200,000 to 299,000.....	6.8	4.2	3.1	21	3.6
300,000 or more.....	3.1	2.6	7	2.7
All companies.....	10.0	5.9	3.9	87	5.6

GROSS MARGINS EARNED ON GRAIN

As noted above, the lower gross margins earned on grain largely explain the decline in earnings from 1934-35 to 1935-36. (The gross margin is the difference between what the grain costs per bushel and the net returns per bushel after various incidental marketing charges, such as inspection fees are paid.) For the two years the margins on grain per dollar of grain sold averaged as follows for companies handling different volumes of grain:

	1934-35	1935-36
100,000 bushels or less.....	5.3 cents	4.0 cents
100,000 to 199,000 bushels.....	5.1 cents	3.4 cents
200,000 to 299,000 bushels.....	4.8 cents	3.4 cents
300,000 bushels and more.....	4.7 cents	3.6 cents
Average.....	5.0 cents	3.6 cents

There was no marked tendency for the margin per bushel to vary greatly with variations in the volume of grain handled, altho the gross margins taken by companies handling a small volume of merchandise

TABLE 3.—GROSS MARGINS EARNED PER BUSHEL ON GRAIN BY ILLINOIS FARMERS' ELEVATOR COMPANIES FOR WHICH GRAIN MADE UP 90 PERCENT OR MORE OF TOTAL SALES, 1934-35 AND 1935-36

Bushels of grain sold	Corn		Oats		Wheat		Soybeans	
	1934-35	1935-36	1934-35	1935-36	1934-35	1935-36	1934-35	1935-36
	<i>cents</i>	<i>cents</i>	<i>cents</i>	<i>cents</i>	<i>cents</i>	<i>cents</i>	<i>cents</i>	<i>cents</i>
100,000 or less.....	3.7	2.3	.7	5.7	2.5	3.7	2.5	3.5
100,000 to 199,000.....	2.5	2.0	6.1	2.8	8.6	4.5	4.5	3.7
200,000 to 299,000.....	3.0	1.7	7.3	.4	4.2	4.3	4.0	4.4
300,000 and over.....	2.2	1.7	4.8	2.2	5.3	2.8	4.1	3.6
Total.....	2.8	1.9	5.3	2.2	5.5	4.0	4.0	3.9

were somewhat lower in both years than those taken by the companies in which the handling of merchandise was of greater relative importance.

The gross margins per bushel earned on different kinds of grain by companies whose grain sales made up 90 percent or more of their total sales are shown in Table 3. The larger companies handled corn on lower average margins per bushel than the smaller ones. This did not seem to be true for oats, wheat, or soybeans. The averages for 1935-36 were: corn, 1.9 cents; oats, 2.2 cents; wheat, 4.0 cents; and soybeans, 3.9 cents.

Margins Influenced by Trends in Market Price

Margins for corn and oats were lower in 1935 than in 1934; for soybeans they were about the same. The differences between margins for the two years were caused by differences between trends in market

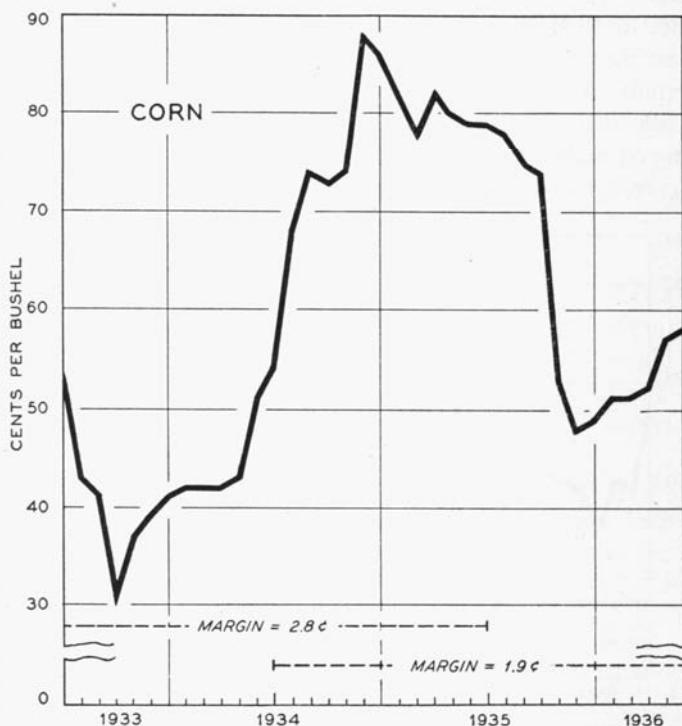


FIG. 1.—TREND OF ILLINOIS FARM PRICE OF CORN, AND MARGINS EARNED HANDLING CORN IN INDICATED PERIODS

Margins earned on corn were larger in 1934, when prices were rising, than in 1935, when the trend was downward.

prices during the two years. There are of course always some companies in a group of this size that operate on a speculative basis, and the margins of such companies naturally increase more when prices are going up and decline more when prices are going down than do the margins of nonspeculative companies.

Trends in farm prices of corn and oats in these two years, shown in Figs. 1 and 2, may be summarized as follows:

Corn. Corn prices went up from April, 1933, to December, 1934, a rise that made it easy to increase earnings from handling corn during this period. But in 1935 corn prices went down, and this would reduce margins even tho grain was sold promptly, because there is always a small lag between purchase and sale. The differences in margins for the two years averaged 2.8 cents in 1934 and 1.9 cents in 1935.

Oats. The trend in oats prices likewise was upward in 1934 and downward in 1935, and the margins earned on oats averaged 5.3 cents per bushel in 1934, and 2.2 cents in 1935. The reason for the wider margin on oats than on corn per bushel is that oats are stored to a larger extent. The margin consequently represents not only handling charges but also storage earnings. The fact that oats are more commonly stored makes the earnings on oats more variable than on corn, for the earnings are affected by the trend in market prices during the

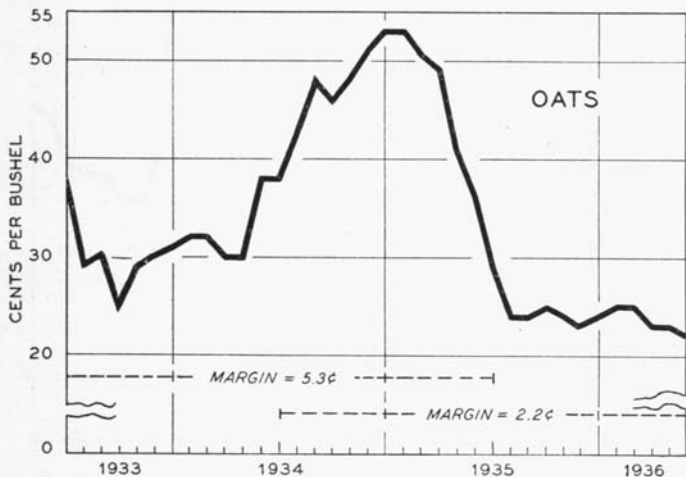


FIG. 2.—TREND OF ILLINOIS FARM PRICE OF OATS, AND MARGINS EARNED HANDLING OATS IN INDICATED PERIODS

Margins earned on oats were comparatively high in 1934, when the trend in prices was upward, but were lower in 1935, when the trend in prices was downward until harvest and then was sidewise.

period of storage. Few of these companies hedged by sale of futures when they stored, and consequently on a rising market, as was experienced in 1934, they earned a larger profit than in 1935, when the market was falling.

Wide Variations in Margins Point to Need for Sound Merchandising Policies

Margins per bushel earned by different companies on corn, the most important commodity handled, in 1935-36 varied widely (Fig. 3). About two-thirds of the companies took margins ranging from 1 to 3 cents a bushel. One-tenth of the companies earned less than 1 cent, and about two-fifths earned more than 3 cents.

A small difference in the margin has a marked influence on earnings and frequently is the reason why companies handling similar volumes earn such widely different rates of return on the invested capital. The variation in rates of return on total assets for the 28 companies that handled more than 200,000 bushels of grain were distributed as follows:

6 companies	<i>gained</i> 12 percent or more
4 companies	<i>gained</i> 8 to 11.9 percent
7 companies	<i>gained</i> 4 to 7.9 percent
6 companies	<i>gained</i> 0 to 3.9 percent
2 companies	<i>lost</i> 0 to 3.9 percent
2 companies	<i>lost</i> 4 to 7.9 percent
1 company	<i>lost</i> 8 to 11.9 percent
	Average rate earned = 6 percent

A difference of 1 cent a bushel in the margin on 200,000 bushels of corn would result in a difference of \$2,000 in earnings. For a company with property valued at \$50,000, this \$2,000 would represent 4 percent on the investment. Small differences in earnings per unit thus very appreciably affect the earnings on capital in companies, such as grain elevators, handling large volumes of business.

The wide variations in the margins per bushel on grain shown in Table 3 and Fig. 3 indicate the importance of sound merchandising policies. Factors which may cause too narrow a margin for profitable operation are:

1. Buying prices that are too close to current selling prices
2. Overgrading—that is, paying for a higher class or grade than the grain turns out to be when finally inspected for sale at a terminal (When grain is high in price, the range within a grade may equal the usual buying margin)
3. A decline in market price during the storage period, when the grain is not hedged
4. Failure to store grain and earn carrying charges when price relationships permit such storage to be done without hazard.

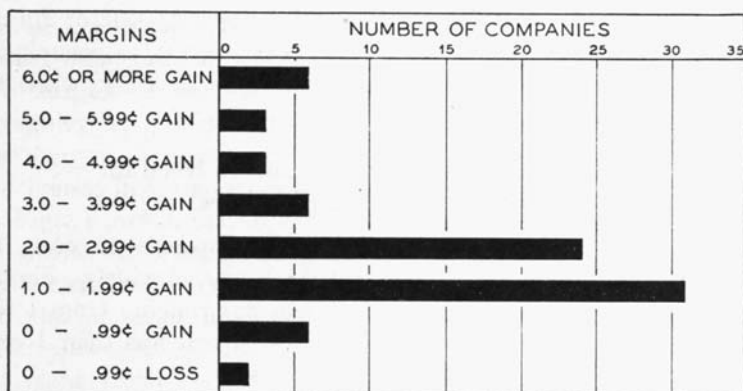


FIG. 3.—NUMBER OF COMPANIES EARNING DIFFERENT MARGINS ON CORN, 81 ILLINOIS FARMERS' ELEVATORS, 1935-36

The most common margins on corn ranged from 1 to 3 cents a bushel. For 10 percent of the companies the margins were negative. Small variations in margins cause large differences in earnings in a business where the number of units handled is as large as in the grain business.

EARNINGS FROM MERCHANDISE

The relative importance of grain and merchandise is best measured by average sales, which were as follows for the companies studied:

	<i>For fiscal years ending between:</i>	
	<i>July 1-June 30,</i>	<i>July 1- June 30,</i>
	<i>1934-35</i>	<i>1935-36</i>
	<i>77 companies</i>	<i>88 companies</i>
Bushels of grain.....	176,871	161,387
Sales of grain.....	\$114,750	\$108,600
Sales of merchandise.....	15,530	21,800
Total sales.....	130,280	130,400
Proportion of merchandise.....	12%	17%

Merchandise thus represented, on an average, 12 percent of total sales the first year and 17 percent the second year.

The important factors governing the effect which the handling of merchandise had upon the business were: (1) the gross margins, (2) the rate of turnover, (3) the cost of handling, (4) the capital requirements, and (5) the losses resulting from bad debts.

Lower Gross Margins Taken on Merchandise by Larger Companies

The gross margin on merchandise, as on grain, represents the difference between the returns from sales and the cost of goods sold. Expressed as a percentage of sales value, the gross margin on merchandise averaged 12.6 cents per dollar of sales in 1935-36 and 14.4

cents in 1934-35, for the companies studied. That the margin was lower the second year was probably caused by somewhat higher prices and the tendency to take a uniform margin per unit. As the price goes up, a uniform margin represents a smaller percentage of the selling price.

Margins taken on merchandise by the larger grain companies handling comparatively small proportions of merchandise were lower in both years than the margins taken by companies for whom the handling of merchandise was relatively more important. When the companies were grouped according to the volume of grain sold, the average gross margins on merchandise per dollar of sales were:

100,000 bushels or less.....	14.0 cents
100,000 to 199,000 bushels.....	12.2 cents
200,000 to 299,000 bushels.....	11.2 cents
300,000 bushels and more.....	12.2 cents
Average margin.....	12.6 cents

When the companies were grouped according to the ratio (percentage) of grain sales to total sales, the average gross margins on merchandise per dollar of sales were:

70% or less.....	14.8 cents
70 to 89.9%.....	12.4 cents
90.0% or more.....	11.8 cents
Average margin.....	12.6 cents

According to these averages, the larger grain companies handling small amounts of side lines handle the merchandise as "service" or convenience items to a greater degree than do the companies which depend on merchandise to earn a substantial part of their operating expenses. The kinds of merchandise handled (chiefly coal, feed, seed, twine, fencing, with implements and lumber less common) are highly competitive, as the above margins indicate. The competitive situation for these items of merchandise is evidently quite different than for petroleum products, which are handled extensively in Illinois by a different type of cooperative company. For petroleum products the competitive situation permits much wider margins, and hence very high rates of return can be earned and large patronage dividends can be paid by cooperative companies handling such products in large volume.

Rapid Turnover Permits Lower Margins

The quickness with which commodities can be sold influences the margin at which they can be handled. The higher the turnover the lower the margin necessary. The rate of turnover in the companies studied, as measured by dividing the merchandise sales by the closing inventory, was 10.1 in 1934-35 and 13.5 in 1935-36. The turnover was

higher in the companies handling relatively small amounts of merchandise. In such companies the service items, such as seed and twine, the stocks of which have to be carried only for short periods, are more important.

Cost of Handling Merchandise

No attempt has been made to determine the separate costs for each of the two different types of business handled by these companies—grain and merchandise. In Table 2 the cost, inclusive of interest, of handling grain and merchandise was shown to be 10 cents per dollar of sales for companies whose merchandise sales make up 30 percent or more of their total sales.

Bad-Debt Losses and Capital Needs Increased by Handling Merchandise

A substantial portion of the merchandise handled by the farmers' grain companies in Illinois is sold on credit, as would be expected inasmuch as income is seasonal in grain farming. Extending this credit requires considerable capital and of course creates the possibilities of bad-debt losses. The situation with reference to receivables (amounts due from customers) and bad-debt losses is shown in Table 4.

Receivables made up a little over one-third of the current assets of these companies in 1935-36, a condition which indicates that a large amount of capital is required to handle merchandise. If receivables are equal to one-third of sales, then \$5,000 of capital will be tied up if annual sales of merchandise amount to \$15,000. Better collection procedures would no doubt reduce this proportion somewhat.

In the companies whose merchandise sales were relatively small,

TABLE 4.—RECEIVABLES AND BAD-DEBT LOSSES OF 88 ILLINOIS FARMERS' ELEVATOR COMPANIES, 1935-36

When grain sales as percentage of total sales were—	Receivables, as a percentage of:		Accounts receivable less than one year old, as a percentage of merchandise sales	Bad-debt loss per dollar of merchandise sales
	Current assets	Merchandise sales		
	<i>perct.</i>	<i>perct.</i>	<i>perct.</i>	<i>cents</i>
70 percent or less.....	42	26	13	1.5
70 to 89.9 percent.....	41	40	23	.8
90 percent or more.....	32	78	48	3.1
Average.....	37	54	33	2.0

receivables tended to pile up. For example, the companies whose merchandise sales constituted more than 30 percent of the total sales had accounts receivable at the end of the year equal to only 13 percent of the merchandise sales thruout the year. This amount is equivalent to the merchandise sales made in about 1.5 months if sales are uniformly distributed thruout the year. The companies whose merchandise sales were less than 10 percent of their total sales, on the other hand, had accounts receivable equal to 48 percent of their merchandise sales, or the equivalent of six months' sales. The managers of these grain companies apparently hesitate to bear down on debtors and collect the amounts due, possibly for fear of offending good grain customers. The high ratio of receivables to sales in these companies may be caused in part, however, by larger sales of grain to local farmers. Such sales are included in grain rather than in merchandise sales, and consequently the sales figures to which receivables are compared are probably somewhat too low and the ratio correspondingly too high.

Interest on accounts which stand for a period longer than 30 to 60 days, or some other stated time, affords a considerable source of income to some of the companies which emphasize merchandise. In fact, the practice of charging interest on receivables helps to explain why some of these companies earn a fair rate of return on their investment even tho they take only a moderate gross margin on merchandise. The practice is fair, for it puts a part of the cost of extending credit where it belongs—on those who use it—and permits the company to handle merchandise on a lower gross margin than would be possible otherwise.

The average bad-debt loss (accounts and notes charged off) taken by these companies in 1935-36 was 2 cents a dollar of merchandise sales. Such losses are a bad leak for many companies.

"NET WORTH" MEASURES THE FINANCIAL CONDITION

Whether a business is being operated along financially sound lines can be measured by the financial condition of the company at the end of a period of years. Earnings or losses in any one year do not constitute a good measure, for a business operated speculatively might show very profitable earnings one year and heavy losses the next.

The net worth per dollar of stock outstanding is one method of measuring the financial condition of a company with capital stock. Net worth equals the par value of the stock which has been issued and is outstanding, plus the surplus or minus the deficit which has resulted from operations. For example, if a company has capital stock outstanding equal to \$25,000 and has accumulated net earnings of \$15,000,

the net worth would be the sum of the two, \$40,000, which would be equal to \$1.60 per dollar of stock outstanding. This measure showed that the elevator companies that handled a substantial volume of merchandise or a large volume of grain were in the best financial condition. Those handling only small volumes of grain, and who had not built up substantial side-line businesses, were in the poorest condition. These findings are in agreement with those to be expected from the study of factors affecting earnings (page 4).

It is commonly said that net worth should equal twice the fixed assets (the real estate, elevator, and other property of a fixed character) in a cooperative company. This ratio would require that sufficient capital be invested, or left in as earnings, to finance all the fixed assets and leave an equal amount for working capital. In the 88 cooperative companies studied, the depreciated value of the elevator and other fixed assets was, on an average, equal to 71 percent of the net worth; or to put it the other way around, the net worth was nearly 1.6 times the value of the fixed assets. The companies which came nearest to the desired ratio were again those handling a substantial volume of merchandise or a large volume of grain—in other words, those having a satisfactory basis for earnings.

SUMMARY

1. Wide variations in earnings occur among farmers' elevator companies, caused in part by location and in part by differences in business methods.

2. With profit margins and expenses as they were in 1935 a company would have to handle around 300,000 bushels of grain or supplement the grain business with an equivalent volume of merchandise business in order to earn ordinary rates of return on the capital required in the business. The companies earning over 5 percent on their investments and handling less than 300,000 bushels of grain, handled an average of \$56,000 of merchandise, compared with an average of \$19,000 of merchandise sold by the companies handling 300,000 bushels or more of grain.

3. Expenses of operation decline as the volume of grain handled increases, illustrating the law of decreasing costs.

4. Merchandise is more expensive to handle than grain, and the margins taken on merchandise average about three times as large as those taken on grain, when measured by percentage of sale value. This higher margin approximately measures differences in costs of handling merchandise and grain.

5. Margins taken on merchandise decrease as the volume of grain handled increases and as the relative importance of merchandise in the business decreases.

6. The gross margin earned on grain is not closely correlated with the volume of grain handled, except for corn, where the margin declines with volume.

7. The variation from year to year in margin per bushel of grain is closely related to the trend in the price of grain during the year. Margins on soybeans seem to be better stabilized than on corn, oats, or wheat.

8. The wide variation in margins taken on grain by the different companies indicates great variance in buying, selling, and storage practices. Differences in margins earned on grain, more than any other factor, explain the differences in the earnings of the companies handling adequate volumes of business.

9. The rate at which merchandise is turned over influences the capital requirements of a merchandise business. Companies handling relatively little merchandise have more rapid turnovers than those for which merchandise sales are more important.

10. Receivables materially increase capital requirements. As an average for the companies studied, receivables represented nearly 40 percent of the current assets. The companies that handle relatively little merchandise are poorer collectors and have higher bad-debt losses than those which specialize in merchandise.

11. The financial condition of cooperative elevator companies, as measured by the net worth per dollar of stock outstanding and by the relationship between fixed assets and net worth, vary with the factors necessary for earnings. For the financial condition to be favorable, there must be either adequate volume of grain, or the volume of grain must be supplemented by an equivalent volume of merchandise sales.

SUGGESTED METHOD FOR ANALYSIS OF A LOCAL COMPANY

Because the business policies of farmers' elevators are determined locally, the decisions as to policies are made independently by each individual company. In the analysis of a company, the manager or directors may find the material presented in this circular useful as a guide.

The following questions are designed as an aid in applying to a particular company the principles developed in this circular. The

figures needed to answer the questions may be taken or calculated from the auditor's report of the company.

1. What rate of return did we earn on the invested capital? percent. (Take the net earnings before payments of interest, income taxes, dividends, or patronage refunds; *divide* by total assets; and then *multiply* by 100.)

2. Is this rate adequate to pay a reasonable return to stockholders and to accumulate the capital needed in the business?.....

3. How many bushels of grain did we handle? bushels.

4. With reasonable margins per bushel, is this volume adequate to permit successful operation?

5. Is there any practicable method of increasing the volume of grain and still maintain an adequate margin of profit?
What method?

6. What volume of "side lines" did we sell? \$.....

7. If the grain business is inadequate to make reasonable earnings possible, what side lines can be developed to yield the income needed for successful operation?.....
.....
.....

8. Is the capital needed for handling these side lines available? (With an inventory turnover of 10, and receivables equal to one-third of annual sales, the capital required per \$1,000 of merchandise sales would be \$433.33. For \$25,000 sales the capital requirements would be about \$10,800. With good merchandising, management, and collection policies this figure could be reduced.)

9. What margins did we earn per bushel on the kinds of grain handled?

Corn cents;
Oats cents;
Wheat cents;
Soybeans cents.

10. What were the margins the preceding year?

Corn cents;
Oats cents;
Wheat cents;
Soybeans cents.

11. Why the differences?.....

12. Are our margins adequate to earn a reasonable return?
13. Will they be maintained in a year of falling prices?
14. What was our average margin on merchandise? percent
 of sales.
 Was it adequate or excessive? (If merchandise is
 important this should be answered for the different kinds handled.)
15. What were our expenses per dollar of sales? cents.
 How does this compare with other companies doing a similar kind and
 amount of business? (*See Table 2 for averages*).....

16. What items of expense, if any, can be eliminated or reduced
 without lowering the efficiency of the business?
17. What percentage of our current assets are tied up in receivables?
 percent.
18. What percentage of our merchandise sales for the past year are
 still uncollected? percent.
19. What percentage of our sales did our bad-debt loss for last year
 represent? percent.
20. Can this be reduced? How?
21. How rapidly does our merchandise turn over?
- (Divide sales by average inventory.)
22. Can this rate be increased?
- What lines move slowly?
-

- Are we justified in carrying these slow items?.....
23. What is the net worth per dollar of stock outstanding? \$.....
24. Is our capital adequate to operate successfully?
25. If not, can it be increased to better advantage by sale of stock
 or by borrowing?

26. What three changes in our own business would help most?

1.

.....

2.

.....

3.

.....

The foregoing analysis may be summarized in the following fashion:

	<i>Good standard</i>	<i>Your company</i>
Bushels of grain handled.....	300,000 bu. bu.
Sales of grain.....	\$200,000	\$.....
Sales of merchandise.....	\$ 50,000	\$.....
Total sales.....	\$250,000	\$.....
Grain, as percent of total.....	80%%
Expenses per dollar of sales.....	3.0¢¢
Rate of turnover of merchandise...	15
Receivables, as percent of merchandise sales.....	20% or less%
Bad-debt losses, as percent of sales..	½% or less%
Net worth per dollar of stock.....	\$ 2.00	\$.....
Fixed assets, as percent of net worth..	50%%

Printed in furtherance of the Agricultural Extension Act approved by Congress May 8, 1914. H. W. MUMFORD, *Director*, Extension Service in Agriculture and Home Economics, University of Illinois.

THE SUCCESS OF FARMERS ELEVATOR
COMPANIES IS LARGELY
INFLUENCED BY—

1. The handling of around 300,000 bushels, at least, of grain yearly.
2. The merchandising of an amount of side lines sufficient to make up for the lower volume of grain, if less than 300,000 bushels.
3. Grain buying and selling practices that result in adequate margins.
4. Avoidance of speculative losses on falling markets.
5. Adequate margins, rapid turnover, and strict credit and collection policies, where merchandise is handled.
6. Good accounts, proper audits, and periodic reports to directors.
7. Economical operation without sacrifice of efficiency.

Small differences in margins mean large differences in earnings where units handled are as many as in the grain business