

# Farmers' Elevators of Ohio

## Fifteen Years, 1928 to 1943

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## FOREWORD

Each year for the 15 years beginning in 1929, the Department of Rural Economics has issued a bulletin summarizing audit data from a large proportion of Ohio's farmer-owned elevator companies.

The data now in hand cover the operations of some 150 such companies, which is within a half dozen of the whole number now operating in the State. The available data are taken from more than 2000 audits, covering a volume of business in excess of 390 million dollars. The period is one of marked progress in these organizations—progress not alone in financial soundness, but in widening range of service offered and of commodities handled and also in increasing membership and in growth of cooperative practice. This material thus offers not merely a picture of conditions at a time, but a history of a period of development.

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## CHAPTER I

### AN INTRODUCTORY VIEW

The farmers of Ohio were and are favorably situated with regard to markets. In addition to nearly seven million population within their own borders, just over the border are Detroit, Buffalo, and Pittsburgh. Furthermore, of the food surplus-producing states, Ohio is nearest to the populous Atlantic seaboard.

Farmers in the mid-west without these advantages were combining in cooperatives through which to sell and buy long before Ohio farmers were establishing their own livestock and elevator companies. Grange, Gleaner, and Farmers' Alliance groups in Ohio were discussing these problems, and as early as 1887 two sections were added to the general corporation laws, Sections 8638 and 8639, authorizing a company to operate on a one-man, one-vote basis and to pay patronage dividends.

The first farmers' elevator organized in Ohio was the Ottawa County Cooperative (1904), followed by Grelton in 1906 and Lindsey in 1907. A study<sup>1</sup> by L. G. Foster in 1925 secured data from a total of 35 companies organized by the end of 1914, 165 companies organized in the period 1915-1920<sup>2</sup>, and 17 organized from 1921 to 1924. Of the 217 companies, 126, or 58 per cent, were organized during the 3 years 1918, 1919, and 1920—just in time to get caught in the cataclysm of 1920-1921.

Probably fully one-fourth of these companies that were formed in the period 1915-1920 passed out of existence in the next 5 years. Among the reasons are:

1. Plants had often been bought at inflation prices.
2. The nearly invariable undercapitalization of these companies.
3. The impossibility of finding in the short period 200 managers, who were capable business operators and also were acquainted with cooperative principles.
4. The lack of sufficient freight cars—many companies bought grain to elevator capacity, and then could not get cars until the price had dropped disastrously; and the purchases were made on borrowed money.
5. Too liberal payment of dividends out of the earnings of 1917, 1918, and 1919.

The period of the 20's, especially from 1923 on, was devoted by the remaining companies to paying off of indebtedness, reducing or wiping out deficits, and improving the plant. Eighty-eight companies on which we have

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<sup>1</sup>Bulletin 416, Ohio Agricultural Experiment Station.

<sup>2</sup>At least 50, and possibly 75, other elevator companies were formed in 1915-1920, of which records could not be secured.

those data increased their total assets in the years 1924-1928 by \$470,000; likewise, 59 companies, most of them included in the 88 companies just mentioned, reduced notes payable in the same 4 years by \$310,000.

The period 1930-1933, the depression period, has a history all its own. The volume of business in 1933 had declined to little more than half that of 1929. In spite of cutting expenses to the bone and of widening margins somewhat (8.7 cents per dollar of sales in 1929 and 11.2 cents in 1932-33), it was still impossible to make reasonable savings. Net savings per company in 1928-29 averaged \$3649, and in 1932-33, even with profit margins increased more than a fourth, the net saving per company averaged \$635; 36 per cent of the companies showed losses instead of gains.

The rise and fall of the average volume of business per company and the average net savings per company is pictured in figure 1. The volume in thousands of dollars per company indicated at the left, and the net gain per company in thousands of dollars is indicated at the right.

The data for figure 1 and for the remaining chapters of this bulletin have the following history.

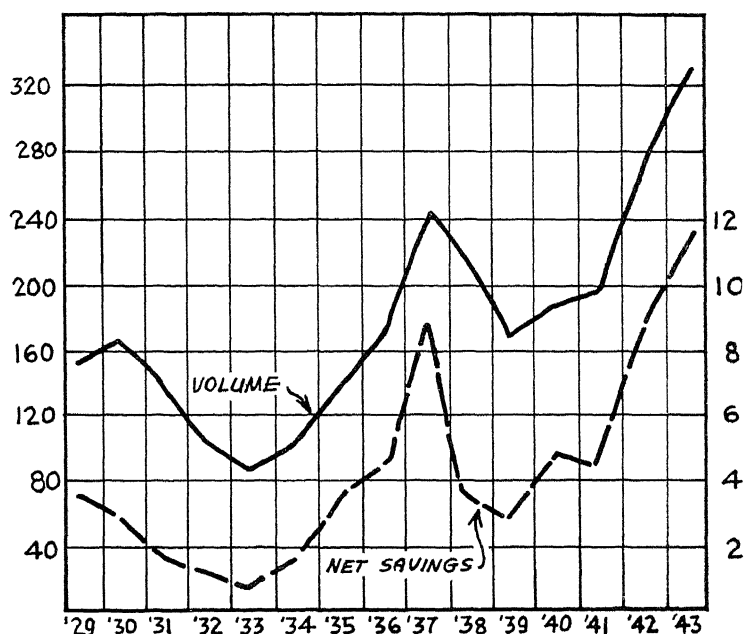


Fig. 1.—Volume of business of farmers' elevators of Ohio, 1928-1943\*  
At left, sales, and, at right, net savings, in thousands of dollars per company.

\*Perhaps 60 per cent of these companies use the 15th or the 31st of December as the end of their fiscal year, but others use the end of January, February, April, May, or June. Thus, our figures do not cover the same period for all companies; for example, 1932 data referred to above covers fiscal years ending from November 30, 1931 to June 30, 1932.

In 1929 the Department of Rural Economics assembled data from 119 farmer-owned elevator companies of Ohio and issued a short bulletin summarizing and commenting on the material assembled. Every year since, a bulletin has been issued covering operations of 143 to 151 companies, which is nearly the whole number of such companies in the State. As the work was continued, the scope of the data analyzed was widened, so that later bulletins have been somewhat more complete. This present study is based on the underlying material assembled during the 15 years and thus rests on the following data:

1. Audit summaries of 143 to 151 companies for the 15 years 1928-1943 (in 1928-1929 only 119 companies).

2. A distribution of expense among its various items, based on data from 35 to 50 companies for each of the earlier years and from 70 to 85 companies more recently.

3. Average trading margins on the different grains and farm supplies handled, based at first on data from 40 to 50 companies and more lately on 75 to 119 companies.

4. Month by month trend of accounts receivable for 19 companies well distributed over the elevator territory and covering the period 1928-1943.

Throughout these studies the importance of volume of business in relation to buying power and expense of operation was recognized; hence, the companies were grouped on the basis of volume. Throughout this bulletin, the first four groups include companies operating one plant each.

Group I. Those companies below \$75,000<sup>3</sup> in annual volume.

Group II. Those companies with \$75,000-\$150,000 volume.

Group III. Those companies with \$150,000-\$225,000 volume.

Group IV. Those companies with a volume above \$225,000.

Group V. Those companies operating more than one plant each.

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<sup>3</sup>In the depth of the depression the dividing points were \$60,000, \$125,000, and \$200,000.

## CHAPTER II

## THE INCOME OF FARMER ELEVATORS AND ITS SOURCES

The farmer elevator buys the farmer's grain, seed, hay, or livestock at an agreed upon price; it pays him in cash at the time or on his demand later; it sells these products at whatever price the market permits and takes its profit or its loss as may be. Likewise, it buys farm supplies from manufacturers or jobbers and sells them to its farmer and village customers. The trading or profit margins on the grain, livestock, and supplies handled constitute over the years some 80 to 85 per cent of the total gross income of the company.

Most of these companies, especially those in central and east-central parts of the State, were set up to handle farm supplies as well as farm products. Feed was one of the earliest supplies handled and is still the one most generally and most largely handled of these supplies. Ohio farmers, however, do not buy all their feed. They produce corn, oats, and barley, a large percentage of which is fed on the farm where they are produced; more recently wheat and soybeans are also largely in the feed picture. So company after company put in grinders, then larger grinders and feed mixers, until today many companies operate two or four grinders each. Thus, throughout the period of our study grinding has been a second and, broadly speaking, an increasing source of income.

What may be an income source of third rank is trucking or delivery service. Each of these companies have from one to seven trucks hauling in grain and delivering coal, feed, fertilizer, fence, and other supplies. This involves a cost in labor, depreciation, and upkeep and operation of trucks which accounts in many companies for 15 to 20 per cent of their total costs of operation. For this service, the company collects a service charge of 2 or 3 cents a bushel for hauling grain and likewise a charge for delivering coal and other supplies. In total, this makes so large a source of income that it should be reported separately, but some companies lump it all into the selling price of commodities or deduct it from the buying price of grain or livestock; other companies carry in a separate account what is collected on some items and not on others. In a few cases does the report cover all of trucking income that it seemed best to carry what is reported as part of "other income".

Thus, the major items in "other income" are receipts from trucking, plus recoveries of receivable written off, plus dividends received from central cooperatives. Other items are rents received, interest on notes receivable, savings accounts or bonds, or occasional capital gains on a stock transfer (though some auditors put these last directly into surplus).

In table 1 is presented the 15-year picture of these items for the group in our records for the respective years.

The data presented in the table speak for themselves. One might note however: The decline in volume in 1930-31; the consistent rise since 1933, interrupted only in the 1936-38 period when Ohio's big corn crop (in a year when the Nation's crop of corn was a billion bushels short) gave Ohio's elevators a huge increase in both volume and net savings, a part of which carried over into the following year.

Volume of business is always a major factor in determining gross trading profit on goods handled. However, when dollar volume drops too rapidly, as in the 3 years 1930-1933 when the volume dropped 50 per cent, expenses of

**TABLE 1.—Income of Ohio farmer elevators for the years 1928-1943  
for the number of companies indicated for the respective years**

	1928-29	1929-30	1930-31	1931-32	1932-33
Number of companies.....	119	144	151	147	146
Volume of business.....	\$18,538,504	\$24,512,561	\$22,076,000	\$15,927,079	\$12,282,452
Gross margins.....	1,613,228	1,883,120	1,796,811	1,525,830	1,372,048
Grinding income.....	227,060*	315,032	342,390	283,580	234,207
Other income.....	90,000*	96,214	105,517	98,592	103,244
Total income.....	\$ 1,930,288	\$ 2,294,366	\$ 2,244,718	\$ 1,908,022	\$ 1,711,499
	1933-34	1934-35	1935-36	1936-37	1937-38
Number of companies.....	149	149	150	150	149
Volume of business.....	\$15,240,373	\$20,615,576	\$26,363,825	\$37,115,864	\$30,990,376
Gross margins.....	1,622,358	2,053,439	2,284,595	3,192,900	2,454,088
Grinding income.....	190,227	171,355	230,058	302,637	323,515
Other income.....	81,094	94,535	102,203	124,866	132,912
Total income.....	\$ 1,893,679	\$ 2,319,329	\$ 2,616,856	\$ 3,620,403	\$ 2,910,515
	1938-39	1939-40	1940-41	1941-42	1942-43
Number of companies.....	145	145	145	145	145
Volume of business.....	\$23,710,885	\$26,291,965	\$28,277,217	\$39,082,940	\$47,883,550
Gross margins.....	2,304,321	2,669,917	2,730,490	3,490,482	4,072,137
Grinding income.....	355,090	412,311	410,104	462,223	581,820
Other income.....	138,616	152,364	161,221	175,562	224,870
Total income.....	\$ 2,798,027	\$ 3,234,592	\$ 3,301,815	\$ 4,128,267	\$ 4,878,827

\*In the 1928-1929 Bulletin, income was divided only into trading margins and "other income"; "other income" was \$317,060, which we have here broken into two items to correspond with the table for later years.

operation simply cannot be cut so rapidly; hence, wider trading margins are forced upon dealers. We note that even though trading margins in per cents were rising, trading margins in dollars were declining from 1930 to 1933; that trading margins in dollars were rising from 1934 to 1937, and that again in 1938-39 an advance began which has continued to 1943.

Grinding income was advancing in the early years of our study. With the depression years two disturbing factors entered: first, the traveling grinder took some business away from the company and often also forced a reduction in grinding charges; second, the low prices for livestock and livestock products did not encourage heavy feeding. Hence, the advance in grinding income stopped in 1930-31, with a decline in gross dollars received lasting until 1934-35; then there started a steady advance which, with a momentary halt in 1940-41, has continued to date. The grinding income for 1942-43 is nearly double that of any year of the early 30's.

Other income for the first half of the study remained about \$90,000 to \$100,000 yearly for the whole group in the study; with the year 1935-36 an advance began which has continued without a break (due to increasing patronage dividends from central cooperatives, increase of trucking income, and interest and dividends on the larger investments).

To get away from the year by year changes and get a broader picture of what has happened to volume of business and to income from various sources, the reader can examine table 2, in which the data are presented in averages for the three 5-year periods.



**TABLE 2.—Volume and income for Ohio farmer-owned elevators in three 5-year periods of the years 1928-1943**

	Totals for 5 years			Yearly average		
	1929-33	1934-38	1939-43	1929-33	1934-38	1939-43
Volume of business.....	\$93,336,596	\$130,326,014	\$165,246,557	\$18,667,319	\$26,065,203	\$33,409,311
Gross margins.....	8,191,036	11,607,380	15,267,347	1,638,207	2,321,476	3,053,469
Grinding income.....	1,402,271	1,217,792	2,221,548	280,454	243,558	444,310
Other income.....	495,567	535,609	852,633	99,113	107,122	170,526
Total income.....	\$10,088,874	\$ 13,360,781	\$ 18,341,528	\$ 2,017,774	\$ 2,672,156	\$ 3,668,305

One finds a steady advance in each 5-year period in volume of business and also in every major item of income, except for the small slump in grinding income in the mid-30's (already discussed above). Total income for the group, however, averaged \$650,000 per year higher in the second 5 years than in the first; then in the third 5 years the yearly average was another \$1,000,000 higher.

Both trading margins and total income were not only larger in dollars in the last 5-year period than in either of the earlier like periods, but the per cent of margin and of total income in comparison with dollar volume were higher. These per cents were declining, however, in the last 2 years.

One of the purposes of the studies of the last 5 years has been to discover whether any particular volume groups of these companies were progressing more rapidly than other groups. Hence, each company has been kept in the group in which it was placed in 1938-39, regardless of its progress. Table 3 presents the total volume for each of the groups for each of the 5 years.

**TABLE 3.—Volume of business by groups for the years 1938-1943**

Group	Number companies	1938-39	1939-40	1940-41	1941-42	1942-43
I.....	12	\$ 613,570	\$ 671,669	\$ 711,725	\$ 1,077,489	\$ 1,190,473
II.....	42	4,027,863	4,334,494	4,752,908	6,518,290	7,656,624
III.....	33	4,349,725	4,850,639	5,448,355	7,368,191	9,279,313
IV.....	30	6,836,790	7,462,726	7,959,189	11,044,953	13,896,891
V.....	28	7,882,937	8,972,417	9,405,040	13,074,017	15,860,249
Total.....	145	\$23,710,885	\$26,291,945	\$28,277,217	\$39,082,940	\$47,883,550
Average per company.....	.....	\$ 163,524	\$ 181,324	\$ 195,015	\$ 269,538	\$ 330,231
Average per plant....	186	\$ 127,478	\$ 141,355	\$ 152,028	\$ 210,123	\$ 257,438

One notes that every group has shown an increasing volume in every one of the years. A comparison of volumes of the first and last of these years shows that groups I and II had less than 100 per cent increase in volume and that the remaining three groups had more than 100 per cent increase. Group V, made up of companies large and small, each with varying numbers of plants, shows the same ratio of increase as the whole group, 101 per cent.

Owing to the fact that not all our data cover in any year the same fiscal period for all companies, an accurate index of price levels cannot be determined, but the best estimate we can make from Department of Agriculture indices is that approximately half of the increased dollar volume since 1940-41 is due to advancing prices and half to increased tonnage of grains and farm supplies handled.

It has already been pointed out that trading income is not far from five-sixths of an elevator's total income. It might be worthwhile right here to note that the various volume groups differ somewhat at this point. Table 4 shows the average total income for the respective groups for the past 5 years and the percentage of income which was derived from trading margins. "Other income", of which income from grinding, mixing, cleaning, hauling, and weighing constitutes the major part, makes up nearly 21 per cent of total income for the smaller companies; whereas for the larger companies, it makes up less than 16 per cent. In other words, the value of a company to its community is not alone in its merchandising but in its "services" also; this is relatively more true of the smaller than of the larger company.

TABLE 4.—Per cent of the average total income, derived from grinding plus other income, by groups for the years 1938-1939

Group	Total income	Total grinding and other income	Per cent of total income from	
			Trading margin	Other income
I.....	\$10,132	\$2,113	79.1	20.9
II.....	16,687	3,123	81.3	18.7
III.....	23,457	4,327	81.6	18.4
IV.....	30,028	4,722	84.3	15.7
V.....	42,102	6,244	85.2	14.8
Averages.....	\$25,353	\$4,247	83.2	16.8

Another and far more significant point to note is the difference in trading margin experienced by the various groups. This is illustrated in table 5, which shows the total volumes handled in the year 1941-42 by the respective groups, with gross trading margins appearing in dollars and per cents of sales. For comparison, the margins derived similarly for certain of the earlier years are given.

TABLE 5.—Trading margins of 1941-42 compared with those of earlier years

Group	Sales	1941-42 trading margin	Per cent of margin	Per cent of margin, former years				
				1940-41	1939-40	1937-38	1932-33	1928-29
I.....	\$ 1,077,489	\$ 127,891	11.9	11.7	10.8	9.2	12.4	9.5
II.....	6,518,290	642,390	9.9	10.8	11.9	8.3	11.6	9.7
III.....	7,368,192	708,101	9.6	9.8	10.5	7.7	11.0	9.1
IV.....	11,044,953	865,705	7.8	8.2	8.9	7.3	10.5	7.2
V.....	13,074,017	1,145,553	8.8	9.6	9.8	8.2	10.2	8.2
Total averages.....	\$39,082,941	\$3,489,640	8.9	9.5	10.1	7.9	11.2	8.7

One notes the wide divergence in ratios; e. g., in 1941-42 group I had 11.9 per cent and group IV 7.8 per cent. Exact figures differ from year to year, but the same principle always holds that the smaller companies receive a wider margin. The cause goes back to the higher expenses of operation per unit handled for the smaller company; this is discussed more fully in Chapter III.

Important questions about incomes in trading are still unanswered; namely, What are the principal commodities handled? To what extent does each contribute to gross earnings? How do gross profits from grain compare with gross profits from farm supplies?

To give some light on these questions we have for years offered a table based on commodity analyses from some 35 to 45 companies. This size of sample was not always found to be typical; hence, in recent years these analyses have been secured from a larger number of reports—in the last 3 years from 119, 89, and 73 companies, respectively. For the past 2 years, the government's efforts to secure more soybeans and the impossibility, on the other hand, for a company to secure certain farm supplies (such as fence, roofing, fertilizer, and certain feeds) in sufficient quantity have thrown the normal relationships out of balance. For this reason and the added reason that for 1940-41 the data available include the figures of a larger number of companies than in any other year, the table of that year is presented in table 6.

TABLE 6.—Commodity sales and trading margin in farmers' elevators as shown by data from 119 companies

	1940-41				Margins in preceding years		
	No.*	Sales	Margin	Per cent of margin	1939-40	1937-38	1933-34
Wheat .....	115	\$ 4,395,719	\$ 219,903	5.0	6.5	0.3	5.7
Corn .....	101	5,369,226	299,371	5.6	7.0	5.8	8.9
Oats .....	95	955,946	90,830	9.5	13.1	6.5	11.6
Other grains .....	23	143,577	12,608	8.7	6.1	11.6	26.3
All grains .....	...	\$10,864,468	\$ 622,712	5.7	7.2	3.0	7.4
Soybeans .....	90	\$ 1,878,997	\$ 89,190	4.7	6.1	6.5	.....
Hay and straw .....	14	39,861	4,559	11.4	15.9	14.3	12.1
Livestock .....	13	887,132	20,210	2.3	1.4	1.0	1.0
Wool .....	18	49,904	6,487	13.0	13.2	.....	.....
Total sales of farm products..	....	\$13,720,362	\$ 743,158	5.4	6.9	2.8	.....
Flour and feed .....	64	\$ 2,601,228	\$ 394,934	15.1	14.9	11.8	12.5
Seed .....	81	624,315	70,688	11.3	10.6	13.2	13.0
Fertilizer .....	78	709,363	85,405	12.0	13.1	14.1	12.5
Coal .....	95	1,893,535	335,319	17.7	17.3	20.2	18.8
Building material .....	21	143,580	25,343	17.7	15.8	22.3	25.5
Farm machinery .....	16	302,926	43,488	14.4	12.2	15.9	22.9
Hardware .....	26	390,740	55,516	14.2	8.8	13.4	.....
Twine .....	31	52,041	4,935	9.5	11.3	8.5	11.6
Fence .....	54	188,711	28,190	14.9	12.6	17.4	12.1
Gas and oil .....	26	477,721	66,942	14.0	14.6	14.5	16.5
Lumber .....	7	496,448	80,054	16.1	15.8	15.8	.....
General merchandise .....	96	2,387,388	342,472	14.3	14.7	15.0	15.0
Total sales of farm supplies..	.....	\$10,267,996	\$ 1,533,286	15.0	14.8	14.6	15.0
Grand total .....	119	\$23,988,358	\$ 2,276,444	9.5	10.9	8.3	.....

\*No. indicates in each case how many of the 119 sets of data in our hands indicated the sales and profits for the respective commodities.

A few exceptions and comments are in order.

1. Many company audits do not report on all these items separately, so that in various cases the \$2,387,000 of General Merchandise include fence, hardware, twine, and even at times feeds, fertilizer, or coal. Note how closely the General Merchandise trading margin approximates that of all farm supplies.

2. An extreme example of margin fluctuations in grain is seen in 1937-38 when discounts for poor quality suffered by many local dealers resulted in such losses for them on wheat as nearly to counterbalance the gains of others, with

a net gain for the group of about a third of 1 per cent on more than a million dollars worth of wheat handled to be followed a year or two later by 6.5 per cent made on wheat.

3. Oats, corn, barley, and rye normally carry a wider margin than wheat, because they enter more largely into local farm supply trade; the margin on these grains fluctuates less and is less speculative for the same reason.

4. Grain of \$10,800,000 volume brought gross profits of \$622,712, while merchandise of slightly lesser volume brought \$1,533,000, or nearly two and one-half times as much.

5. Note also the fluctuating margin on grains, 7.4, 3.0, 7.2, and 5.7 compared with the almost constant margins on farm supplies—15, 14.6, 14.8, and 15.

The gross profit margins experienced in the last 5 years, together with the number of companies in each case whose data we had on that particular commodity appear in table 7.

TABLE 7.—Commodity sales and trading margin in farmers' elevators 1938-1943

Commodity	1938-39		1939-40		1940-41		1941-42		1942-43	
	No.*	Per cent	No.*	Per cent	No.*	Per cent	No.*	Per cent	No.*	Per cent
Wheat.....	46	4.2	44	6.5	115	5.0	87	4.1	82	4.1
Corn.....	39	6.8	35	7.0	101	5.6	77	6.1	74	6.9
Oats.....	37	12.5	35	13.1	95	9.5	72	8.3	71	7.1
Other grains.....	11	5.2	13	6.1	29	8.7	18	6.6	18	5.4
All grains.....	.....	5.8	.....	7.2	.....	5.7	.....	5.4	.....	5.8
Soybeans.....	15	6.9	21	6.1	90	4.7	60	4.6	67	2.6
Hay and straw.....	7	19.3	6	15.9	14	11.4	10	9.8	12	11.2
Livestock.....	7	1.3	3	1.4	13	2.3	9	2.2	16	3.1
Total sales of farm products.....	.....	5.5	.....	6.9	.....	5.4	.....	5.2	.....	4.6
Feed and flour.....	32	13.8	28	14.9	64	15.1	57	15.0	57	13.0
Seed.....	38	10.6	34	10.6	81	11.3	72	13.5	64	15.0
Fertilizer.....	32	13.2	27	13.1	78	12.0	56	12.3	54	12.6
Coal.....	37	17.6	36	17.1	95	17.7	73	16.6	72	17.8
Building materials.....	18	17.1	19	15.8	21	17.7	35	15.4	25	20.0
Farm machinery.....	7	15.9	5	12.2	16	14.4	10	14.6	9	19.0
Hardware.....	9	19.3	9	8.8	26	14.2	25	13.1	22	18.3
Twine.....	14	10.2	15	11.3	31	9.5	24	11.4	28	12.3
Fence and posts.....	20	12.1	18	12.6	54	14.9	36	14.1	33	19.8
Gas and oil.....	15	11.2	15	14.6	26	14.0	23	16.5	25	13.1
Lumber.....	3	19.4	6	15.8	7	16.1	6	15.2	4	18.2
General merchandise.....	43	14.3	22	14.7	96	14.3	69	15.3	71	15.1
Total sales of farm supplies.....	.....	14.2	.....	14.8	.....	15.0	.....	15.0	.....	15.2
Grand total.....	50	9.7	48	10.9	119	9.5	89	8.9	85	8.46

\*The number of companies reporting separately the data on the respective commodities.

Most of the comments made on table 6 are equally applicable here. In addition it might be noted that the low gross profit on soybeans in 1942-43 was purely artificial—due to the  $4\frac{1}{4}$  cents handling charge allowed by Commodity Credit. ( $4\frac{1}{4}\text{¢}$  on beans at \$1.60 constitutes 2.4 per cent gain). Probably the actual profit margin on beans was below 2.0 per cent, as many beans were bought at the farm with the hauling cost deducted from buying price. The slightly higher gross profit on farm supplies was due to the gradually rising price trend. When a new lot of goods came in at a higher cost, there was a necessary mark-up and any goods on hand might benefit, partially at least, by it.

It has already appeared in table 5 that the lower volume groups secure higher gross profit margins than do the larger volume groups. (Why they must do so will appear in the discussion of expense.) In table 8 are presented these margins over the 15-year period, presenting figures for every other year of the first 10 years and every year of the last 5.

TABLE 8.—Per cent of gross profit margin received by the various margin groups of farmer elevators of Ohio, 1928-1943

Group	1928- 29	1930- 31	1932- 33	1934- 35	1936- 37	1938- 39	1939- 40	1940- 41	1941- 42	1942- 43
I .....	9.5	10.6	12.4	12.4	11.4	9.6	10.8	11.7	11.9	11.1
II .....	9.7	9.0	11.6	10.8	10.3	11.0	11.9	10.8	9.9	9.4
III .....	9.1	8.1	11.0	9.8	9.3	10.2	10.5	9.8	9.6	9.4
IV .....	7.2	6.2	10.5	8.8	7.5	8.4	8.9	8.2	7.8	7.5
V .....	8.2	7.5	10.2	9.3	8.6	9.8	9.8	9.6	8.8	8.2
Averages.....	8.7	8.2	11.2	10.0	8.6	9.7	10.1	9.5	8.9	8.5

Note that these figures can be read as cents of margin per dollar of sales.

## CHAPTER III

## EXPENSES OF FARMER-OWNED ELEVATORS OF OHIO

One usually finds the income and expense account of an elevator set up something like this:

Trading margin on grain and merchandise	\$15,000	
Grinding income	3,000	
Other income (generally further itemized)	1,500	
		\$19,500
Expenses		
Operating expense itemized (all cash outlays, except interest paid)		12,500
		7,000
Operating profit		
Interest paid	\$ 300	
Depreciation allowance	1,800	
Bad debt allowance	400	
		2,500
Net savings for the year		\$ 4,500

In table 9 is presented the totals of expenses for the whole group in the data of each year. It furnishes the material for comparison with income as shown in table 1.

TABLE 9.—General picture of expense for the whole group of companies

	1928-29	1929-30	1930-31	1931-32	1932-33
Number companies.....	119	144	151	147	146
Interest.....	\$ 56,287	\$ 80,802	\$ 90,092	\$ 67,914	\$ 64,909
Depreciation.....	149,821	203,150	210,199	186,984	186,637
Bad debts.....	37,366	61,200	61,108	61,740	76,411
Operating expense.....	1,049,223	1,518,400	1,627,898	1,423,401	1,291,395
Total expense.....	\$1,292,697	\$1,863,552	\$1,989,297	\$1,740,039	\$1,619,352
	1933-34	1934-35	1935-36	1936-37	1937-38
Number companies.....	149	149	150	150	149
Interest.....	\$ 57,661	\$ 51,703	\$ 45,450	\$ 39,000	\$ 41,720
Depreciation.....	194,968	197,425	205,050	232,350	244,360
Bad debts.....	128,760	128,587	89,400	99,900	67,050
Operating expense.....	1,259,266	1,364,244	1,585,800	1,897,200	2,049,793
Total expense.....	\$1,640,655	\$1,741,959	\$1,925,700	\$2,268,450	\$2,402,923
	1938-39	1939-40	1940-41	1941-42	1942-43
Number companies.....	145	145	145	145	145
Interest.....	\$ 42,716	\$ 39,765	\$ 36,573	\$ 32,385	\$ 23,540
Depreciation.....	234,400	236,362	232,692	243,912	254,592
Bad debts.....	79,714	82,666	76,206	72,974	58,898
Operating expense.....	1,995,219	2,089,933	2,187,252	2,438,082	2,822,818
Total expense.....	\$2,352,049	\$2,448,726	\$2,532,723	\$2,787,353	\$3,159,843

One notes the steady rise in total expense; this rise was interrupted only in 1931-35, when the managements, confronted with rapidly declining volume and greatly lowered gross profits, were cutting expense at every possible point. The interruption in 1938-39 is only apparent; it is due to having data from four fewer companies than in the preceding year (one of these companies is a large-volume company and would alone account for most of the \$50,000 reduction in expense).

Regarding the major items under which we have grouped expense, the reader may note:

1. The gradual reduction in interest paid, as the "Notes Payable" of the early 20's were still being whittled down. Doubtless, too, with better credit, some companies were getting lower interest rates.

2. The general advance in reserves set up yearly for depreciation (This will be discussed later).

3. The allowance for incollectible accounts (sometimes the actual write-off and sometimes a reserve set up) seems fairly constant at first; then in the depression period there were heavy write-offs and heavy reserves; then a period in which, excepting during the last year of our study, the bad debt expense is fairly constant in dollars although actually declining in comparison with sales.

4. Operating expense steadily increased except during the depression period 1931-34 and for the year 1938-39 when the total fell off 2 per cent because of the inclusion of fewer companies. Operating expense per company in 1942-43 is more than double that of 1929-30—\$19,467 per company, as compared with \$8,817.

Table 9 gives the changes year by year in these items. Table 10 gives us the main outlines of what went on by presenting the yearly charge to each item, averaged in 5-year periods.

TABLE 10.—Volume and expense for Ohio farmer-owned elevators in three 5-year periods of the years 1928-1942

	Total for 5 years			Yearly average		
	1929-33	1934-38	1939-43	1929-33	1934-38	1939-43
Volume of business . . . . .	\$ 93,336,596	\$130,326,014	\$165,757,146	\$ 18,667,319	\$ 26,065,203	\$ 33,152,382
Interest paid . . . . .	351,671	231,666	174,979	70,334	46,333	34,996
Depreciation reserve . . . . .	912,715	1,061,136	1,201,958	182,543	212,227	240,392
Bad debt reserve . . . . .	287,975	505,033	370,458	57,595	101,007	74,092
Operating expense . . . . .	6,743,402	8,071,726	11,533,304	1,348,680	1,614,345	2,306,660
Total expense . . . . .	\$ 8,295,763	\$ 9,869,561	\$ 13,280,699	\$ 1,659,152	\$ 1,973,912	\$ 2,656,140
Percentage of sales . . . . .	8.88	7.57	8.0	8.88	7.57	8.0

In this broader picture the steady decline of interest paid is clear (the third period averaging less than half the first), as is the rise of the depreciation reserve set up each year. Bad debt allowances had to be boosted in the early and mid 30's, but since then they have declined, especially when considered in relation to volume of business (0.38 per cent in 1934-38 and 0.22 per cent in 1939-43). The big advance in operating expense, which was higher in the third 5-year period than in the first by 77 per cent, is due largely to increased labor expense.

A question of immense import in regard to expense is the way in which it impinges on the various volume groups. During every recent year of our studies there has been presented a table to answer this question. Table 11 is one of these tables taken from the 1940-41 study—the last study preceding the unusual conditions incident to war.

**TABLE 11.—Major expense items—Farmer elevator companies, 1940-1941**  
Averages for 145 companies

Group	Sales	Interest	Depreci- ation	Bad debts	Operat- ing expense	Total expense	Expense ratio	
							Operat- ing	Total
I .....	\$ 59,310	\$264	\$ 672	\$ 355	\$ 6,675	\$ 7,966	11.2	13.4
II .....	113,164	291	1,098	376	9,855	11,620	8.7	10.3
III .....	172,495	198	1,604	350	14,429	16,581	8.4	9.6
IV .....	265,306	197	1,701	532	17,144	19,574	6.5	7.4
V .....	335,894	343	2,686	1,012	25,372	29,413	7.6	8.8
Average per company	\$196,532	\$258	\$1,609	\$ 522	\$15,133	\$17,522	7.7	8.9
Average per plant. . .	\$155,944	\$205	\$1,277	\$ 414	\$12,007	\$13,903	7.7	8.9
Average per plant in group V . . . . .	\$142,500	\$146	\$1,140	\$ 429	\$10,764	\$12,479	7.6	8.8

In this table we note that group I, those elevator companies which at the inception of the 5-year study had each a volume of business below \$75,000, had a total expense equal to 13.4 cents per dollar of sales, while the average for the whole group of 145 companies in the study was 8.9 cents per dollar of sales, a difference of 4.5 cents. In comparison with the large-volume companies in group IV, the difference in total expense amounts to 6 cents per dollar of sales. In other words, the big neighbor of one of these small-volume companies could pay \$1.03 for the same grain that the smaller neighbor buys at \$1.00 or it could sell the same supplies at 97 cents which the smaller neighbor sells at \$1.00 and still the big company would make 3 cents more net on the dollar of sales than could the smaller neighbor.

That this difference in expense among the groups was not an accidental occurrence of 1940-41 is shown in figure 2, which pictures the expense ratios of several of the different groups over the whole 15 years of our study.

One notes here that these lines fail to cross at any point; that is, that group I always has a higher ratio of expense to sales than group II, which in turn is always above the average for the whole number of companies; and group IV (with the highest volume per company of the single plant companies) always has a lower expense ratio, with all the implications inherent in the closing sentences of the paragraph discussing table 9.

Still a third question might be asked; namely, What are the principal items making up operating expense and what does each contribute to total expense?

These data have never been available from all our companies and for years a sample was used composed of data from 35 to 50 companies. It was found that a sample of this size was not always typical; hence, in recent years a larger sample has been secured. In setting up the analysis sheet for this table, there are listed 14 separate expense items, with a "miscellaneous" to catch the remaining expense. Then a comparison of the total for any one item with the grand total gives a figure which may be read either as per cent of total expense or as cents in each dollar of expense.



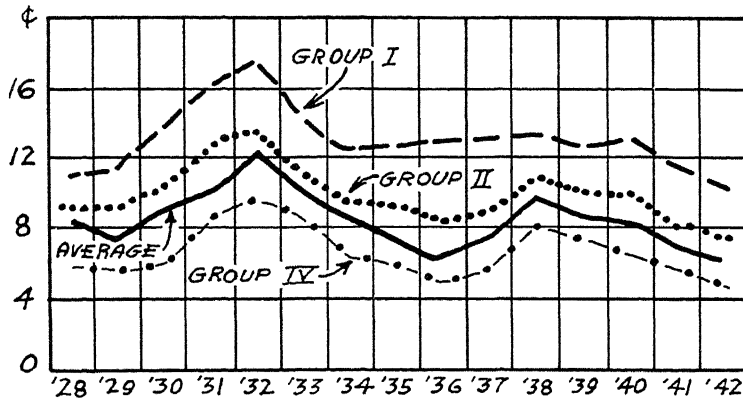


Fig. 2.—Ratios of expense per dollar of sales for the various volume groups—Ohio farmers' elevators

Group I—Companies under \$75,000 volume each — — — — —  
 Group II—Companies with volume of \$75,000 to \$150,000  
 Group IV—Companies with volume above \$225,000 each —.—.—.  
 General Average—Of all companies in our study —————

Before one examines this table he should know what is included at least in each of the major items.

Labor includes salary of manager, employes, special help, and per diem of directors (this last usually amounts to \$100 to \$150 per company per year).

Power includes electric power, or rarely fuel and other supplies for steam power.

Insurance includes insurance against losses by fire or tornado and also workmen's compensation insurance.

Taxes include local property taxes, state and federal franchise taxes, old age and unemployment taxes. We never knowingly include Federal income tax, for, although in one sense it is a tax expense, nevertheless it is not determinable until the net income is established.

Supplies and repairs include plant and equipment supplies and repairs, except those for the trucks.

Advertising is a self-explanatory term, but the advertising charge often includes the cost of the annual meeting of stockholders (especially the dinner or refreshment items) and of subscriptions to community funds or enterprises.

Truck or delivery expense includes merely the gasoline, rubber, oil, and other supplies and the repairs directly chargeable to the trucks and, in a few cases, to trucks hired. Were the labor of drivers and the depreciation on trucks included, the share of total expenses arising from trucking and delivery would not be 6 per cent of the total expense but 12 per cent to 15 per cent, and in some companies it would be close to 20 per cent of the total expense.

Postage is an elusive item, and sometimes the company bookkeeper includes it with "Telephone and Telegraph" and sometimes in "Office Expense".

"Audit and Legal" is generally the auditor's charges, not however for the audit alone but for the audit and for further services rendered. Sometimes these services include making condensed statements in quantity for stockholders' meetings, the making out of income tax, personal property tax, and other reports to government, and often the attendance of the auditor to explain the audit at stockholders' meeting.

Table 12 gives the major changes in the relative importance of the items as contributors to the total expense over the years; figures are presented for every other year of the first 10 years and for every year of the last 5.

**TABLE 12.—Number of cents contributed to each dollar of total expense by each major expense item, farmer elevators of Ohio, 1928-1943**

Item	Year ending									
	'29	'31	'33	'35	'37	'39	'40	'41	'42	'43
Labor .....	50.0	49.4	46.9	45.4	50.7	50.2	51.2	51.9	52.5	56.2
Power .....	8.6	9.4	9.2	7.7	8.6	7.8	8.2	8.0	7.7	8.3
Insurance .....	4.0	5.0	4.7	4.8	4.7	4.4	4.5	4.2	4.6	4.3
Taxes .....	4.9	4.7	4.8	4.1	3.2	5.4	5.0	5.3	4.9	4.3
Supplies and repairs .....	2.8	4.1	5.0	3.6	5.6	3.9	4.1	3.8	4.0	5.1
Advertising .....	.8	1.2	.7	1.3	1.4	1.5	1.7	1.6	1.6	1.4
Postage and telephone .....	.9	1.3	1.0	1.1	1.0	.9	1.1	1.1	.9	.9
Audit and legal .....	.8	.4	.7	1.3	1.0	.8	1.0	.8	.6	.7
Truck .....	2.6	2.7	3.2	4.4	5.9	5.3	5.8	5.9	5.7	4.9
Office supplies .....	2.0	.....	.....	1.7	1.9	1.6	1.5	1.4	1.6	1.2
Rent .....	.....	.....	.....	.....	0.6	0.5	0.4	0.4	0.4	0.4
Interest .....	4.3	5.5	4.0	2.8	1.5	2.0	1.5	1.1	1.2	.7
Depreciation .....	11.6	10.1	12.3	11.8	9.5	9.2	9.1	9.1	8.9	8.0
Bad debts .....	2.9	2.2	4.3	7.7	3.1	3.5	2.8	3.1	2.7	1.6
Miscellaneous .....	3.8	4.0	3.2	2.3	1.3	3.0	2.1	2.3	2.7	2.0

Table 12 shows that Labor throughout the 15 years has accounted for roughly half of the total expense. During the early 30's, managements could cut wages or let one man go better than they could reduce expense at almost any other point; hence, labor is seen as a contributor to total expense at its lowest point in the period of 1932-1935; then advancing living costs, together with the prosperity of the companies (which managements were willing to share to some extent with labor), plus, in the last 2 years, heavy advances in labor costs due to competition of war industries have all contributed to the rapid advance in this item.

Power costs have not varied greatly. When one remembers that the increased grinding, mixing, and cleaning all add to power costs rather rapidly, he might expect power costs to rise; they have, but the fact is somewhat obscured by the rapid rise of labor costs which have assumed a greater relative share.

This same fact (namely, that these ratios are relative rather than in absolute amounts) is brought out by a comparison with table 10. We note here in table 12 that from 1929 to 1935 "Depreciation" represented 10 to 12 per cent of total expense and in recent years about 9 per cent of total expense. But in table 10 we find the depreciation reserves averaged \$182,543 per year in the period 1929 to 1933 and \$240,392 in the past 5 years. The increasing absolute amounts of depreciation are covered up on the percentage basis by the more rapid increase in other items—labor, in particular.

The table 10 also shows bad debt allowances of \$74,000 in recent years as compared to \$57,595 in the earlier years, even though table 12 shows a lower percentage of total expense belonging to "Bad Debt" reserve.

## CHAPTER IV

## NET GAIN OF OHIO FARMER-OWNED ELEVATORS—1928-1943

The chapter discussing "Net Gain" will be short because the influences which affect it have already been covered in the discussion of "Gross Income and Expense".

The picture of Income and Expense, with the resulting net gain in averages per company, is presented in tables 13 and 14. Table 13 shows the detailed changes year by year, and table 14 the generalized picture made up of averages for the three 5-year periods.

TABLE 13.—Income and expense of Ohio farmer elevators, 1928-1943  
Averages per company

	Number companies	Volume	Trading margin	Gross income	Operating expense	Total expense	Net gain
1928-29.....	119	\$155,785	\$13,557	\$16,221	\$ 8,817	\$12,572	\$ 3,649
1929-30.....	144	170,226	13,079	15,932	10,557	12,941	2,991
1930-31.....	151	146,199	11,900	14,866	10,832	13,174	1,692
1931-32.....	147	108,347	10,380	12,980	9,683	11,837	1,143
1932-33.....	146	84,126	9,334	11,633	8,785	11,016	627
1933-34.....	149	102,284	10,088	12,709	8,451	11,011	1,698
1934-35.....	149	138,360	13,782	15,566	9,156	11,691	3,875
1935-36.....	150	175,759	15,321	17,446	10,572	12,838	4,608
1936-37.....	150	247,439	21,136	24,136	12,648	15,123	9,013
1937-38.....	149	207,989	16,470	19,534	13,757	16,127	3,407
1938-39.....	145	163,524	15,891	19,296	13,760	16,221	3,075
1939-40.....	145	181,324	18,413	22,307	14,414	16,888	5,419
1940-41.....	145	195,015	18,890	22,771	15,084	17,467	5,304
1941-42.....	145	269,538	24,072	28,471	16,815	19,223	9,248
1942-43.....	145	330,231	28,084	33,647	19,468	21,792	11,855

TABLE 14.—Income and expense of Ohio farmer-owned elevators  
Averages per company for three 5-year periods

	Number companies	Volume	Trading margin	Gross income	Operating expense	Total expense	Net gain
1928-33.....	140	\$134,136	\$11,650	\$14,328	\$ 9,736	\$12,308	\$2,020
1933-38.....	149	174,366	15,389	17,878	10,917	13,358	4,520
1938-43.....	145	228,628	21,106	25,353	15,908	18,318	7,035

In table 13, all columns, except the "Net Gain" column, have already been discussed elsewhere.

"Net Gain" we note was in a period of decline during all the first 5 years of the downhill period of the depression. In the year 1932-33, 36 per cent of the whole number of companies showed net losses instead of net gains. After 1933-34 there was no year in which the net gain was below an average of \$3000 per company. The year 1936 was the year of Ohio's excellent corn crop at the time when the Nation's corn crop was more than a billion bushels below normal, and 1936-37 stood as the peak year in net gain per company for a 5-year period, being surpassed only by each of the past 2 years.

One notes that from the 1933-34 low in total expense, there has been an increase each succeeding year over the preceding year. In table 14 the yearly detail is canceled out and we get the general picture with every item—trading margin, total income, operating expense, total expense, and, finally, net gain—showing a steady advance over the preceding 5-year period. One notes that a 70 per cent increase in volume of business was accompanied by only 50 per cent increase in total expense; this accounts in large part for the greatly increased net gains.

Another picture of change in the gain and loss situation is seen in table 15.

**TABLE 15.—Gain and loss position of farmer-owned elevators of Ohio 1928-1943**

Year	Number showing		Year	Number showing		Year	Number showing	
	Gain	Loss		Gain	Loss		Gain	Loss
1928-29.....	105	14	1933-34.....	119	30	1938-39.....	118	27
1929-30.....	115	29	1934-35.....	139	10	1939-40.....	142	3
1930-31.....	109	42	1935-36.....	139	11	1940-41.....	140	5
1931-32.....	94	53	1936-37.....	145	5	1941-42.....	144	1
1932-33.....	108	38	1937-38.....	118	31	1942-43.....	144	1
5-year average..	106	35	5-year average..	132	17	5-year average..	138	7+
Per cent.....	75	25	Per cent.....	88.6	11.4	Per cent.....	95	5

Tables 14 and 15 indicate a progress in number and percentage of companies showing a net gain. This is unquestionably due in part to the gradual elimination of a few of the weaker companies. On the other hand, the fact that nearly all of the 145 companies in our data at present were among the 149 to 151 companies of those earlier years shows that the progress is also due to the coming of "better times" and to the building up of resources and of good business practices.

How do the different volume groups compare in their contribution to the number of companies showing losses?

An examination of the records reveals that during the 15 years we have had summaries of 2179 audits, of which 1879 showed gains for the year and 300 showed losses, or, on the percentage basis, about 86 per cent showed gains and 14 per cent losses. Of these 300 audits showing losses, the various groups contributed as follows:

Group I	Per cent	37	Group IV	Per cent	4
Group II		33	Group V		16
Group III		10			

Of the total number of audits showing losses, groups I and II furnished 70 per cent.

Perhaps a better comparison follows in which is shown the percentage of the audits from each group showing losses.

Group I	Per cent	37	Group IV	Per cent	4
Group II		16	Group V		15
Group III		7			

How do the different volume groups compare in relation of net gains to volumes of business?

In comparing total net gains (i. e., gains of those in each group which made gains less losses of those which suffered losses) one finds the various groups showing respective net gains over the 15-year period in comparison with sales as follows:

Group I	1.0 per cent of sales	Group IV	2.7 per cent of sales
Group II	2.5 per cent of sales	Group V	2.5 per cent of sales
Group III	2.6 per cent of sales		

Finally, how did the net gains of the whole group of companies in each year's study compare with sales for that year?

**TABLE 16.—Relation of net gain to sales of farmer-owned elevators of Ohio, year by year, 1928-1943**

	Volume	Net gain	Percentage
1928-29.....	\$18,538,504	\$ 434,220	2.3
1929-30.....	24,512,561	430,810	1.75
1930-31.....	22,076,000	255,421	1.15
1931-32.....	15,927,079	167,971	1.05
1932-33.....	12,282,453	92,146	0.75
1933-34.....	15,240,373	253,024	1.66
1934-35.....	20,615,576	577,337	2.80
1935-36.....	26,363,825	691,145	2.62
1936-37.....	37,115,864	1,352,010	2.64
1937-38.....	30,990,376	507,648	2.42
1938-39.....	23,803,932	481,612	2.02
1939-40.....	26,501,268	805,521	3.04
1940-41.....	28,485,456	767,706	2.69
1941-42.....	39,082,941	1,340,072	3.43
1942-43.....	47,883,550	1,718,978	3.60

## CHAPTER V

TRENDS IN FINANCIAL CONDITION OF OHIO FARMER-OWNED  
ELEVATOR COMPANIES, 1928-1943

The only study antecedent to 1929 presenting any considerable data on the financial condition of these companies was the study by Mr. Foster<sup>4</sup> in 1925. In this study which covered 80 companies, more than 50 per cent of whose business was in grain handling, and 85 companies, whose business was more than 50 per cent in farm supplies, Mr. Foster found that in both the grain and farm supply companies the two groups having less than \$75,000 and \$150,000 in volume of business, respectively, had in 1925 a total of deficits in excess of surpluses. The grain companies above \$150,000 in volume had average surpluses of between \$3000 and \$4000 per company in excess of deficits; the farm supply companies between \$150,000 and \$225,000 in volume averaged \$2029 in surplus, and those above \$225,000 in volume of business had surpluses averaging \$9078 per company.

Our study of these companies began in 1929, based on figures from 119 companies for the year 1928 or some fiscal year ending between January 1, 1929 and June 30, 1929. This study and those made in the years immediately following show that immense progress had been made and has continued to be made in changing deficits over to surpluses. This 1929 study found that of the 119 companies 102, or 86 per cent, were already on a surplus basis. Subtracting the deficits of the 17 companies still laboring under deficits from the total of surpluses of the 102 companies results in an average surplus of \$10,014 for the 119 companies. (One must recognize that part of the advance in average surplus is due to the fact that some of the companies with big deficits in 1924 no longer existed in 1928-29.)

We present in table 17 the data on this point from the whole number of companies in the studies of the respective years. The reader should remember that in determining average surplus the total of deficits in that year's reports is deducted from the total of surpluses, and then the remainder is divided by the whole number of companies in that year's data. In determining book value of the stock, the total capital stock of all the companies studied is compared with the total net worth of the same companies.

This table is based on data from all the companies in our studies for the respective years; in the remaining tables of this chapter, the figures represent identical companies for the 5 years 1938-1943.

The only comment that seems to be needed in addition to table 17 itself is that the value per \$100 of stock in recent years (e. g., \$166 to \$187) is much more conservatively stated than was the case in 1928-1933—more conservative in that plants and machinery have been written down to values less in most cases than the companies would consider selling them for, receivables and inventory are much more conservatively valued and cash position is far more sound. (E. g., in 1943, 2 dollars of every nine of total resources were in cash).

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<sup>4</sup>Economic Aspects of Ohio Farmers Elevators, Bulletin 416, Ohio Agricultural Experiment Station.

TABLE 17.—The surplus and deficit situation of farmer-owned elevators at the end of each fiscal year, 1929-1943

Year	Number* of companies	Number having surpluses	Per cent with surplus	Average surplus per company	Book value of stock per \$100 share
1928-29.....	119	102	86	\$10,014	\$138.60
1929-30.....	144	115	80	10,027	138.21
1930-31.....	151	122	81	9,933	136.71
1931-32.....	147	113	77	10,071	138.11
1932-33.....	146	108	74	8,629	132.07
1923-34.....	149	110	74	8,574	132.42
1934-35.....	147	123	83	11,160	142.66
1935-36.....	150	127	85	12,635	146.53
1936-37.....	150	138	92	17,026	164.34
1937-38.....	149	134	89	15,882	157.14
1938-39.....	147	134	91	16,251	157.43
1939-40.....	146	136	93	18,098	165.06
1940-41.....	146	136	93	18,595	166.11
1941-42.....	144	139	96	23,186	180.30
1942-43.....	144	141	98	26,401	187.73

\*The number of companies whose figures we had for the respective years.

In our balance sheets, the terms we have used have the following meanings:

Cash and Bank includes cash in till and checking and savings accounts in bank.

Receivables includes customers' accounts receivable, notes receivable (customer or stock), and receivables from grain firms, less reserves for uncollectible accounts.

Inventory is grain and farm supplies on hand inventoried at which-ever is lower of cost or market.

Net Plant includes real estate, machinery, equipment, office furniture, and trucks, less depreciation reserves.

Investments includes U. S. bonds, stock held in central cooperatives, stock in Bank for Cooperatives, and minor investments.

Other assets are prepaid expense, principally insurance, sales tax stamps on hand, and operating supplies on hand.

On the liability side, the terms used are:

Notes Payable includes all notes payable outstanding whether secured by mortgage or not.

Dividends Payable includes both current dividends, declared but yet unpaid at time of audit, and patronage dividends of earlier years, held by the company to accumulate to patrons' credit until sufficient to buy stock in the company.

Income Tax Reserve is an amount estimated to cover the Federal income tax and set aside from surplus for that purpose.

Capital stock should be merely capital stock outstanding, but at this point the records are not quite clean cut. The condensed statements which we often have in place of the audit itself sometimes place patronage dividends accumulating toward stock purchase in "dividends" or "refunds" as indicated above and sometimes place partial payments on stock along with capital stock. We have no recourse but to follow the statement as received.

Surplus is to many persons a confusing term. It does not mean surplus cash. A company may have a surplus even though its bank account is over-drawn and no money is in the till; it may have much cash on hand and still have a deficit. Surplus is the amount by which Net Worth of the company exceeds its capital stock outstanding; if capital stock outstanding exceeds net worth, the company has a deficit.

Another way in which to determine surplus at the end of a given period is to subtract from the surplus at the beginning of the period the dividends, taxes, and other charges paid from it, and to the result thus obtained add the gain or subtract the loss for the given period. The result thus secured must be the amount which, combined with capital stock outstanding, equals the net worth of the company as indicated above.

With this explanation of terms, the balance sheet data can now be examined. The combined assets and liabilities of the whole group of companies in each year's data are presented in table 18 to give a picture of the movement as a whole; managers and boards of directors will find of more interest the average per company for the whole group; the averages for the different volume groups in earlier and later years tell the reader something about the relative progress of larger and small volume companies. Each of these approaches to the data thus has its story to tell.

First, the movement as a whole, as shown by the totals in the analysis for 1935-36 and for every year since is pictured in table 18.

**TABLE 18.—Resources of Ohio farmer-owned elevators  
at close of each indicated year**

Year	Cash and bank	Receivables	Inventory	Net plant	Investments	Other assets	Total assets
1935-36 .....	\$ 940,011	\$1,544,895	\$1,606,576	\$2,836,948	\$ 107,227	\$ 112,130	\$ 7,147,787
1936-37 .....	1,097,987	1,566,482	2,095,187	3,045,550	144,746	61,872	8,011,824
1937-38 .....	802,763	1,943,671	1,844,988	3,246,196	109,962	60,632	8,008,212
1938-39 .....	888,706	1,850,111	1,672,062	3,043,483	173,640	50,501	7,678,503
1939-40 .....	931,556	1,847,484	2,044,122	3,069,594	162,374	51,855	8,106,985
1940-41 .....	941,444	2,005,060	2,182,464	3,096,614	202,341	50,474	8,478,397
1941-42 .....	1,351,833	1,881,614	2,775,228	3,093,412	217,179	49,966	9,369,232
1942-43 .....	2,208,130	1,614,385	2,696,536	3,122,498	349,443	55,969	10,046,961

**Liabilities and net worth of Ohio farmer-owned elevators  
at close of each indicated year**

Outside obligations					
Year	Notes payable	Dividends payable	Income tax reserve	Other payables	Net worth
1935-36 .....	\$ 644,359	\$ 188,278	*	\$ 401,428	\$5,913,722
1936-37 .....	662,452	279,722	*	545,649	6,524,001
1937-38 .....	815,234	155,045	*	528,860	6,509,073
1938-39 .....	728,979	187,508	\$ 22,213	352,551	6,387,252
1939-40 .....	658,755	280,542	24,916	468,564	6,674,208
1940-41 .....	595,334	383,188	29,396	640,874	6,829,605
1941-42 .....	507,122	437,350	59,094	869,162	7,496,504
1942-43 .....	314,236	789,346	113,466	694,771	8,135,142

\*1935-38 we had not begun to separate "Income Tax Reserve" from "Other Payables."



The reader should note in table 18 that for the first 4 years indicated in the table the number of companies varies by one or two each year. Beginning with 1938-39, we aimed to carry through the 5 years an identical number of companies, keeping each company throughout the 5 years in the volume group in which it started. Four companies from our starting number of 147 failed us later, but a substitute was found comparable to two of the four.

One figure, that of "Net Plant" if followed through the years by itself, is deceiving. The 5 years from the close of the year 1937-38 to the end of the end of the 1942-43 year show a decline in Net Plant value of \$124,000. In the 5 years, however, depreciation reserves of \$1,200,000 have been deducted, which would indicate that more than \$1,000,000 of new buildings, machinery, and trucks have been added, in addition to thousands of dollars of minor improvements charged directly to expense.

Another striking change is the increase of total resources utilized in performing the services offered, an increase in 7 years of from \$7,147,787 to \$10,046,961, or more than 40 per cent.

Table 19, giving averages per company, is more nearly the statement a manager or director would like for comparison with his own.

TABLE 19.—Resources and liabilities per company

	1934-35*	1936-37	1938-39	1940-41	1942-43
Resources					
Cash.....	\$ 5,000	\$ 7,320	\$ 6,129	\$ 6,494	\$15,228
Receivables.....	11,100	10,443	12,759	13,828	11,134
Inventory.....	11,000	13,967	11,531	15,051	18,597
Net plant.....	18,300	20,304	20,990	21,356	21,534
Investments.....	.....	964	1,198	1,395	2,410
Other assets.....	300	414	348	348	386
Total.....	\$45,700	\$53,412	\$52,955	\$58,472	\$69,289
Liabilities and net worth					
Notes payable.....	4,710	4,416	5,027	4,106	2,167
Dividends payable.....	*	1,865	1,293	2,643	5,444
Income tax reserve.....	3,668	450	153	203	782
Other payables.....	.....	3,188	2,431	4,420	4,791
Capital stock.....	26,162	26,467	27,855	28,164	29,886
Surplus.....	11,160	17,026	16,196	18,936	26,219
Total.....	\$45,700	\$53,412	\$52,955	\$58,472	\$69,289

\*The reader will note that in 1934-35, our first attempt of its kind, we used rounded out figures and for the "Other Payables" we inserted the figure which we did not have but which was needed to create a balance for all the other items (which we did have). In every year since, the figures for each item are the actual averages to the nearest dollar.

The first thing that strikes one in examining this table is the marked increase in cash over the average cash on hand that was shown earlier. Receivables show no particular trend in absolute amounts until the last 2 years, when the increased incomes of farmers have resulted in a 20 per cent reduction (besides bringing about the payment of considerable amounts of accounts previously written off). However, receivables constitute in 1938-39 about 24 per cent of total assets, while in 1942-43 receivables were 16 per cent of the total assets. Compared with average volume of business the progress is still more marked. (A further examination of receivables appears later in this chapter.)

Inventory has shown a marked increase, much of which is merely higher price for a given tonnage.

Three other comments can be made—

Inventory would be still higher if sellers of farm supplies could get roofing, fence, posts, and feeds in desired quantities.

Inventory has not increased as rapidly as volume of business—now 5.6 per cent of volume as compared with 7 per cent 4 years earlier, which would indicate that turnover is roughly 25 per cent more rapid.

Will managements be caught as in 1920 with high priced inventories which must sell at reduced prices?

“Net Plant” is nearly constant through recent years, but, when one notes that depreciation reserves have been set up to an average of about \$7000 per company in the past 5 years, it is obvious that additions and improvements have been made to about that amount.

Investments have grown largely through two major factors—the purchase of war bonds and the increase of stock holdings in central organizations.

On the liability side, one notes the marked increase in dividends payable, made up in part of dividends declared to be paid at once but not yet paid at time of the audit, and of dividends accumulating to the credit of patrons to purchase stock in the company. At that, “Dividends Payable” does not include dividends declared for the year and already paid in cash, stock, credit on account, or trade.

The increase in tax reserve arises from the larger profits the companies have made in these years, and in spite of the fact that a few more companies each year become exempt from Federal income tax.

Other payables are higher. Increased volume of operations would probably increase running accounts to some degree; farmers have more money than 4 years ago and probably are not coming in so quickly to collect for grain sold to the elevator.

“Net Worth” shows a steady growth, due to increase both in stock outstanding and increase of total surplus and also of average surplus per company. That surplus has increased more rapidly than stock outstanding is shown in the advance of the value per \$100 of stock from \$157.43 in 1938-39 to \$187.73 in 1942-43. (Stock outstanding increased by 7 per cent and surplus by 62 per cent.)

We have purposely reserved “Notes Payable” for fuller treatment. Going back to the original data used by Mr. Foster in 1925, we found the Notes Payable figures for 59 companies which appeared also in our 1928-29 data and in some years since. Taking these 59 companies as a sample (they are about a 40 per cent sample), one finds them with \$776,711 of Notes Payable outstanding in 1924-25 and \$450,787 in 1928-29, a reduction of more than 40 per cent in 4 years. The same group had reduced this class of payables by another \$108,000 in the next 3 years, and by the end of the 1934-35 fiscal year owed on promissory notes only \$250,000. Stated in another way—in 10 years, four of them markedly depression years, a reduction from \$776,711 to \$250,000 was made.

Beginning with 1934-35, we have the average notes payable per company outstanding at the end of each successive fiscal year for the whole group in our studies and here (See Table) we note a steady decline in Notes Payable continuing down to date, with one interruption in 1937-38. The preceding year, 1936-37, is the year referred to several times in this bulletin when a net

gain of \$9,013 was by far the largest net gain shown up to that time. The following year there was much less grain to handle and much of it, especially wheat, was of poor quality. Wheat handled by 35 companies showed net gains over losses of a third of one per cent. The big earnings of 1936-37 had led to expansion of expense. The net result was that in 1937-38, 31 companies showed losses to a total of \$82,000.

The next year, 1939-40, a slight reduction in total notes payable was made, after which the downward trend was resumed in greater force, and 1942-43 found "Notes Payable" at only 40 per cent of what they had been only 4 years before.

"Receivables" had some 9 years ago constituted, on the average, almost a fourth of the total assets of a company and this past year, while retaining a slightly larger total than 9 years ago, were less than one-sixth of the total assets. When we noted that receivables were about the same as some years ago while the volume of business is now much greater, they seemed still less menacing. Receivables can be viewed from other angles also. One question is, what do they cost? This cannot be answered with exactness, but the following will give any manager a method of approaching the question for his own company.

Time given by office help to entering charges, sending out statements, and entering collections . . . . .	\$ 360 <sup>5</sup>
Cost of sending out 500 statements every 2 months (stationery and postage) . . . . .	90
Interest on \$12,000, average at 5 per cent . . . . .	600
Average write-off yearly . . . . .	350 <sup>6</sup>
	\$1400

\$1400 is 11.7 per cent of the \$12,000 outstanding. Some years ago we figured this out with several managers and bookkeepers, and the results varied from 11 per cent to 14 per cent of average amount outstanding—this, in addition to the share of the manager's time which goes into a discussion of granting the account and later into examination and collection of accounts.

For the 15 years of our study we have had the monthly charges to account, monthly collections, and month-end balances from a number of companies well distributed as to area and types of business handled (at first 10 companies and for most of the period 19 of an intended 20). Table 20 presents the ups and downs of these month-end balances.

The reader will note generally a low point in December or January, an advance with spring buying, a decline in June to August, and a peak in September (which is often the highest point of the year), followed by a decline to December or even January.

But the mere amount of receivables is not the sole measure of the problem; how long does a dollar once on the books stay there? Among the 19 companies, Willard in 1942 had an average of \$3324 on the books, and its collections on account during the year were more than \$51,000—a turnover of 15.6 times a year; that is, a dollar stayed on the books an average of 23 days. Another company with an average balance outstanding of \$8862 made collections during the year of \$16,517, a turnover of 1.87 times, which means that a dollar on the books stayed there more than 6 months on the average.

<sup>5</sup>Several bookkeepers estimated that about a third of their time was thus taken, which, at \$90 as an average monthly wage, gives \$360 as the cost of this item.

<sup>6</sup>The average write-off or reserve set up was \$512, but some accounts written off were later collected. So we estimate that item at \$350.

TABLE 20.—Average month-end balances of accounts receivable  
19 Ohio farmer elevator companies

	1929	1933	1935	1938	1939	1940	1941	1942
January.....	\$12,309	\$11,676	\$10,771	\$12,439	\$12,422	\$12,919	\$13,256	\$10,903
February.....	12,092	11,947	10,488	12,981	12,679	13,078	13,387	11,766
March.....	13,971	12,276	11,902	14,686	13,950	14,071	14,374	13,576
April.....	14,908	12,223	12,246	15,850	15,081	14,873	15,599	15,228
May.....	15,704	12,435	12,145	15,829	16,559	16,286	16,300	15,373
June.....	15,476	12,610	12,387	15,361	15,748	14,245	15,931	14,345
July.....	15,493	12,018	12,176	13,713	14,761	15,487	15,078	12,963
August.....	14,825	12,374	11,334	14,221	14,891	14,819	15,268	12,691
September.....	16,742	12,732	12,133	16,903	16,481	16,509	16,509	14,253
October.....	15,919	12,897	12,718	15,624	15,720	16,004	15,239	13,250
November.....	15,429	12,612	11,691	14,500	14,383	14,698	13,649	11,892
December.....	13,965	11,783	10,636	12,378	12,428	12,363	11,054	9,781

A third question regarding changing balance sheets is, "Have the various volume groups shared equally in this progress?"

For this question for years only a rather general answer could be given, for each year's grouping was determined by the volume for that particular year. For the past 5 years, however, each company has been kept in the group in which it started the 5-year period.

In table 21 is presented the distribution of assets and liabilities for each group for the first and last years of the 5 years, thus showing the changes occurring in 5 years.

In examining table 21, one finds that all groups have strengthened their cash position, group V (in 4 years) multiplied its cash by 3.3 and group I by 2.9, while the other groups multiplied their original cash by 2.0 to 2.5.

In receivables, every group reduced receivables except for the slight increase in group I, and even they reduced receivables as a percentage of assets and especially in relation to sales.

Inventories are higher in every group, partly as a result of price; here group I shows the smallest relative increase, while group IV nearly doubled the dollar value of its stock of goods on hand.

In total assets, group I shows an increase of only 14 per cent, groups II and III of between 25 per cent and 30 per cent, and groups IV and V of approximately 35 per cent.

On the other side of the balance sheet, we find during the 4 years an average reduction of Notes Payable of 57 per cent, with group IV considerably better than the average and group I considerably below the average.

Dividends Payable multiplied by more than four times, all groups sharing; groups I and II show a very high percentage of increase, largely because they were so low in 1938-39.

Net Worth showed an increase of 27 per cent, with groups IV and V at that average and group I considerably below that figure.

One interesting question remaining is how have the companies through the years handled the distribution of these net gains? What per cent has been distributed in income taxes and dividends and what per cent has been added to surplus?

TABLE 21.—Comparison of average assets and liabilities of the respective volume groups of Ohio farmer-owned elevators

Year	Cash	Net receivable	Inventory	Plant	Investments	Other	Total
I 1938-39 .....	\$ 1,804	\$ 5,947	\$ 4,913	\$ 9,689	\$ 684	\$100	\$ 23,137
1942-43 .....	5,277	6,040	6,192	8,251	608	48	26,416
II 1938-39 .....	3,861	9,566	8,302	14,695	567	177	37,168
1942-43 .....	9,198	7,658	13,560	14,524	1,741	194	46,875
III 1938-39 .....	5,852	11,430	11,587	31,598	1,142	345	51,954
1942-43 .....	14,627	9,498	18,076	22,935	1,559	295	66,990
IV 1938-39 .....	10,231	12,882	11,061	22,885	1,629	547	59,235
1942-43 .....	19,977	11,493	20,125	23,855	3,827	863	80,140
V 1938-39 .....	7,316	21,905	19,651	32,527	1,966	503	83,867
1942-43 .....	24,160	20,073	30,506	33,545	3,670	416	112,370
Average 1938-39 .....	6,129	12,759	11,531	20,990	1,198	348	52,955
1942-43 .....	15,228	11,134	18,597	21,534	2,410	386	69,289

Year	Notes payable	Dividends	Income tax reserve	Other payables	Net worth	Total
I 1938-39 .....	\$4,513	\$ 169	\$ 21	\$1,659	\$16,775	\$ 23,137
1942-43 .....	3,028	1,296	167	2,070	19,855	26,416
II 1938-39 .....	4,997	361	81	1,846	29,883	37,168
1942-43 .....	1,810	2,445	650	3,428	38,542	46,875
III 1938-39 .....	2,877	902	153	2,252	45,770	51,954
1942-43 .....	1,617	3,617	521	4,422	56,813	66,990
IV 1938-39 .....	3,934	1,694	293	2,605	50,709	59,235
1942-43 .....	846	8,178	987	5,668	64,461	80,140
V 1938-39 .....	8,999	3,206	168	3,666	67,828	83,867
1942-43 .....	4,398	10,942	1,335	7,499	88,196	112,370
Average 1938-39 .....	5,028	1,293	153	2,431	44,050	52,955
1942-43 .....	2,167	5,444	782	4,792	56,104	69,289

Because of the varying number of companies in the studies of different years, no exact answer can be obtained, but a close approximation is found in taking the average net gain year by year for the whole group in the studies of the respective years, together with the changes in surplus.

Taking the data on Net Gain from table 15 in the preceding chapter, together with the data on average surplus, one gets the figures shown in table 22.

TABLE 22.—Average distribution of net gains of Ohio farmer-owned elevators between surplus and outlay for income tax and dividends

Year	Surplus beginning of period	Net gains 5 years	Total surplus*	Surplus at end of period	Distribution in dividends and income tax
1928-33 .....	\$ 6,365	\$10,102	\$16,467	\$ 8,629	\$ 7,838
1933-38 .....	8,629	22,601	31,230	15,882	15,348
1938-43 .....	15,882	35,176	51,058	26,401	24,657
15 years .....	\$ 6,365	\$67,879	\$74,244	\$26,401	\$47,843

\*Surplus at the end of 5 years if no distribution had been made.

That is, of \$67,879 average net gains per company during the 15 years, \$47,841, or 70.4 per cent, was paid out in stock and patronage dividends or in Federal income tax, while \$20,036 (\$26,401-\$6,365), or 29.6 per cent, was added to surplus. During the first of these 5-year periods, 22.4 per cent of the net gains went into surplus; during the second, 32.1 per cent; and during the third, slightly less than 30 per cent. It should be noted that during the first period, several companies were losing money in certain years which means that some surpluses were being lowered—this happened to very few companies in the 10 years 1934-1943, except in the one year 1937-38.

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