

RETAIL CREDIT IN SOUTHWESTERN KANSAS
COOPERATIVE ELEVATORS

by

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INTRODUCTION

Cooperative purchasing of farm supplies is not a new development in Kansas. Nor is the handling of the supplies needed on the farm a new venture with the cooperative elevators of southwestern Kansas. But with the growth of the use of power machinery, especially after the World War, side lines have become a much larger proportion of the total volume of business of cooperative elevators. Some associations definitely have shifted from a strictly marketing organization to one in which a major portion of the net income is derived from the retail departments of the business.

Side lines not only help to stabilize the amount of business and furnish a larger volume over which to spread the fixed expenses, but the handling of side lines gives additional service to the members; thus making it possible to purchase cooperatively as well as to market cooperatively. The credit problem came with the increase in volume of retail business. Consequently, questions arise such as: Who should receive credit? How much credit should be extended? Should any charge be made for this additional service? How much can receivables accumulate before the

financial status of the business will be endangered? What are the costs for this service? Answering these questions has caused many cooperatives to restrict credit somewhat, some to a greater degree than others. The consideration of this whole problem of retail credit has become much more universal since the drastic price declines of 1929 and the early thirties, when retail credit evolved into one of the biggest problems with which most Kansas cooperatives had to deal.

PURPOSE OF STUDY

Since credit is one of the big problems with which most cooperatives have to deal and since it is provoking much consideration, there is need for definite information on which associations can rely when deciding upon a credit policy. The purposes of this study were: (a) To determine the magnitude of the retail credit problem in southwestern Kansas cooperative elevators and its effect on the financial stability and results of operation of these organizations; and (b) to ascertain the methods used and problems involved in restricting retail credit in associations of this area.

The magnitude of the credit problem was treated so as to find the effect of retail credit upon the financial status of the organization and to determine the way in which costs for credit affect profits and losses. Some cooperatives feel obliged to extend credit when they come into competition with private businesses and there probably are limits within which credit can safely be extended so it is a further purpose to determine these limits. An attempt was made to point out how retail credit in a cooperative differs from that in a private business concern. It is the duty of the board of directors to determine the credit policy of a cooperative. The writer has endeavored throughout this study to keep in mind the board of directors and their need for information with which to direct more intelligently the affairs of the organization as they pertain to credit. Having decided that retail credit needs either to be restricted entirely or rigidly controlled, the best method of adopting the new basis and of successfully operating upon it immediately confronts the directors. Thus, to point out ways that are being used to satisfactorily control credit becomes a final purpose.

REVIEW OF LITERATURE

Considerable has been written with regard to the history, financial status and operation of farmer's cooperative elevators in various states, but little has been published that directly concerns the retail credit problem and its effect upon the financial stability and results of operation of these associations. The following review consists largely of excerpts from writings on other subjects than retail credit but wherein mention is made of the credit problem.

Bell (1), writing of the problems of Montana farmers elevators stated that "Side lines seem to be handled by farmers elevators when the members feel the need for such service. First, if the volume of grain business is so small that the elevator cannot pay expenses from that alone, side lines are added as an additional source of revenue. Second, side lines are added when the elevator has been unusually successful." Little mention was made of the credit problem but this quotation probably states the reason why most farmers' elevators in Kansas handle side lines thus opening the way for the appearance of the credit problem.

Durand and Jensen (4) brought out the fact that in Minnesota when side lines were handled in moderate amounts

they do not require any extra labor or equipment, especially when handled during the less busy season at the convenience of both the elevator and the patrons.

Maughan (8) in a survey of approximately 200 stores granting credit to farmers of New York state showed that the average amount of credit sales per store decreased from \$18,000 in 1921-22 to \$16,000 in 1931-32. The number of days a credit sale was outstanding in receivables, however, increased from 160 to 180 days during the 10 year period.

That side lines become a liability to the grain business where credit is granted freely, was brought out by Metzger and Price (11) writing of Minnesota farmers elevators. They further stated that directors agree almost universally that a more capable manager is needed to handle side lines and grain than to handle grain alone.

Price and Arthur (14) stated that Minnesota farmers elevators are confronted with the difficulty of obtaining borrowed funds, especially from commission firms when side lines are large and even more difficulty is encountered when credit is extended.

Green (5) working with records of Kansas elevators, found that receivables equal to 40 per cent or more of current assets were associated with a higher percentage of

losses than were receivables constituting a smaller proportion of total current assets. In southwestern Kansas for the 4 year period 1931 to 1934, for elevators handling less than 100,000 bushels of grain, 26.9 per cent of the records showed a net income where receivables were more than 40 per cent of current assets, and 50 per cent showed net income where receivables were less than 40 per cent of current assets. The elevators that were handling more than 100,000 bushels of grain with receivables more than 40 per cent of current assets, showed 70 per cent with net income and of those with less than 40 per cent of current assets in receivables, 91.5 per cent showed net incomes.

Green further stated that where the receivables were much more than 40 per cent of the current assets, the increase was at the expense of cash reserves and this naturally bears some relation to the frequency with which net income is earned.

"Large losses are taken annually through unwise extension of credit" states Post (13) of farmers elevators in South Dakota. "Losses incurred due to too liberal credit should not be confused with sound business opportunities to build up volume with side lines." He further writes that "Close scrutiny of accounts by members of boards of

directors, limiting of credit to patrons, the charging of interest on open accounts, and a strictly cash basis in some elevators is doing much to strengthen the side-line situation."

Benton and Peightal (2) stated that in North Dakota "slightly less than one-half of the elevators handling side lines charged their customers interest on open accounts," indicating that the credit costs were being shifted in some degree in these elevators to the customers granted credit.

Knapp and Lister (7) stated the following concerning credit extension: "Many cooperative purchasing associations operate on a strictly cash basis. This represents an ideal situation for any cooperative business. Doing business on credit ties up working capital, restricts the ability of an association to render other valuable services, causes management worries and dissatisfaction among members, increases expense for collection, necessitates more extensive bookkeeping, and entails losses from bad debts. Cash trading puts all members on a similar basis in dealing with the association and reduces selling prices or increases refunds by cutting down financial and operating expense. Cooperative purchasing associations offer an opportunity

for farmers to appreciate the advantages of doing business on a cash basis. The establishment of cooperative production credit associations by the Farm Credit Administration under authority of the Farm Credit Act of 1933 promises to play an important role in enabling farmers to operate on a cash basis."

Maughan (9) divided the costs of extending credit into interest, bookkeeping, collections, and bad debts. The average costs for extension of credit in 311 stores in New York were found to be; \$735 for interest, \$259 for accounting, \$252 for collections, and \$285 for bad debts. These total \$1,531. The volume of credit business was \$25,662. Consequently the credit costs were nearly 6 per cent of the credit sales. From these records two important conclusions were drawn: First, that the cost of granting credit tend to be lower in stores which (a) collected from their customers relatively promptly, (b) sold relatively large volumes of goods on credit, and (c) sold relatively large amounts per customer on credit. The second conclusion was that stores which were better than average in any one of these respects were likely to be better than average in all three.

Maughan (10) in a study of 84 feed stores in New York found that the average cost per store to grant \$39,848 of credit was \$1,848 or 4.6 cents out of every dollar of credit extended. He further showed that 46 per cent of the cost for extension of credit was due to interest, 18 per cent to bookkeeping, 17 per cent to collections, and 19 per cent represented the loss from bad debts.

Robotka (15) reported that the average cost for credit extension in 93 farmers elevators in Iowa was \$1,943.10. This total cost was divided into \$695.10 for interest (6.2 per cent of receivables), bad debts \$686 (6.1 per cent of receivables) and bookkeeping, collecting, etc. \$562 (5 per cent of receivables). These costs absorbed 79 per cent of the gross profits on credit sales.

The average amount of receivables carried on the books per association was \$11,240. These receivables represented about one-fourth of the annual side-line sales. Furthermore the side-line sales were 24 per cent of the total sales, yet receivables were equal to 21 per cent of the total capital, 73 per cent of the share capital and 90 per cent of the net working capital.

In summarizing the reports on control of the credit problem, managers reported that strict limitation of credit

eliminates discrimination, attracts business of cash patrons, reduces costs of operation, helps to meet competition, and avoids loss of grain patronage of credit supply patrons. About 85 per cent of the companies favored restricting credit extension and most of the other 15 per cent were on a cash or nearly cash basis.

SCOPE AND METHOD OF PROCEDURE

In line with an attempt to present this subject in a concise but understandable manner, cooperative elevators in only one section of Kansas were chosen for this study. Figure 1 shows the location of the 51 organizations in southwestern Kansas which were included in the study. They are evenly distributed over the main wheat producing section of this area and are in 23 counties. They are the associations which have cooperated in a survey conducted by the Division of Extension and Department of Agricultural Economics of the Kansas Agricultural Experiment Station. The data used were from these survey records and from an analysis of the costs for retail credit in 10 typical credit elevators of southwestern Kansas. Each of the records was taken from a bonded auditor's report.

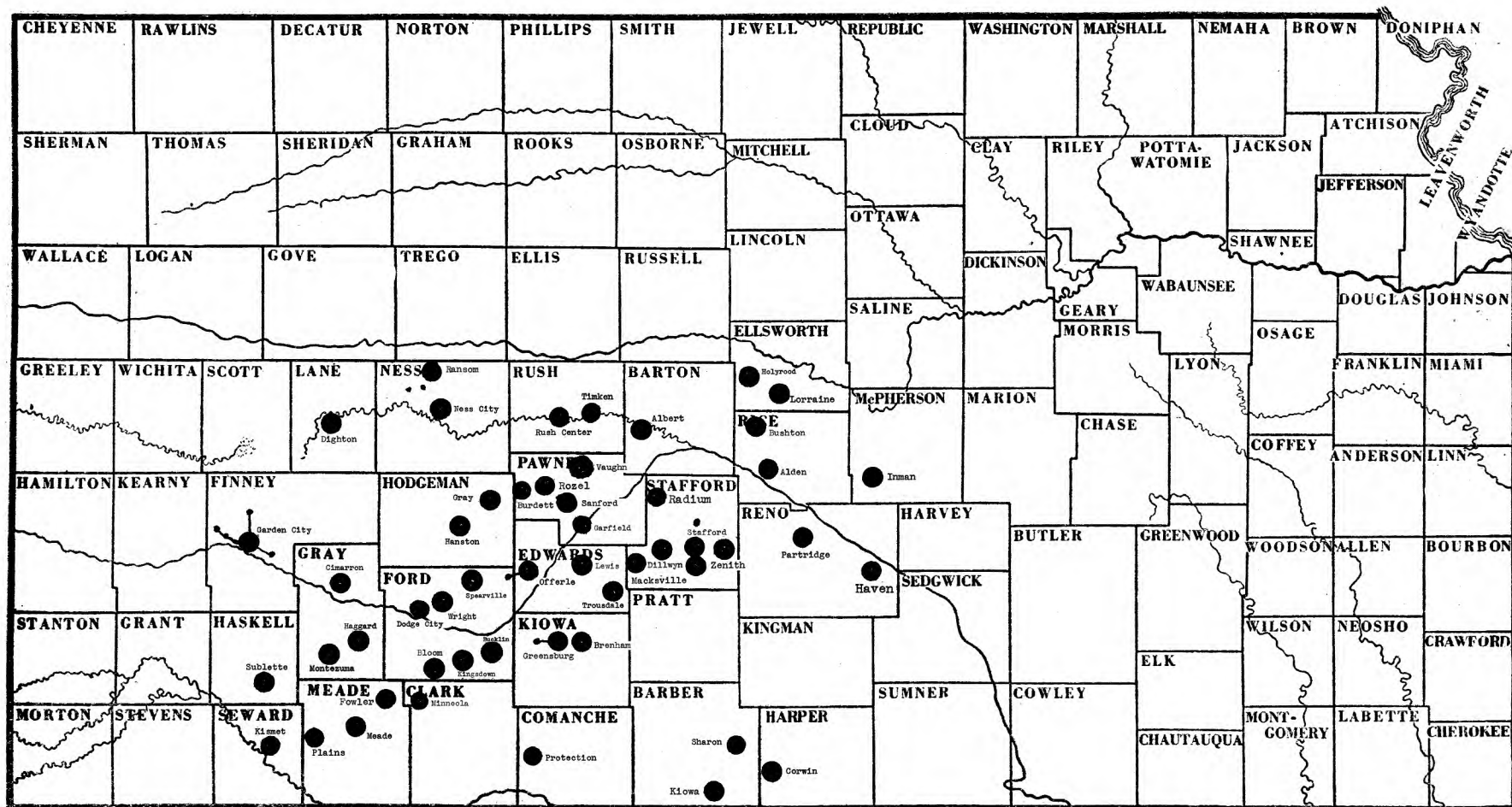


Figure 1. Location of the 51 cooperative elevators used in this study.

These 51 elevators constitute 55 per cent of the total number of 93 cooperative elevators in this district, thus the sample is representative, and generally speaking any findings can be applied to all elevators in the area.

Frequency distributions, graphic correlations, index numbers, averages and medians are the statistical devices used to summarize and present the data.

The frequency distributions were used almost entirely to summarize the different items showing the credit situation and costs for retail credit of this group of elevators.

Scatter diagrams (dot charts) were used to show that these credit costs are actually reflected in the profit and loss statements of these elevators and to point out the relationship between certain factors affecting credit and the efficiency of operation.

An attempt was made to measure the efficiency of these elevators by combining their relative positions on an array of the relation between (a) net operating profit and net worth, (b) net operating profit and member business, (c) net operating profit and total sales, and (d) actual total expenses of operation and desirable expenses of operation. That these four efficiency factors can be combined the

first three mentioned were arrayed and index numbers calculated using as a base the median. The latter relationship was expressed by using as a base the actual operating expenses for the organization. Those elevators operating with less expenses than is allowed by the desirable standard would have an index higher than 100. The four resulting index numbers were combined and averaged. Certain credit factors were then shown in relation to this "combination efficiency index." Although credit pertains only to the retail departments of the businesses their expense records are not separated so that expenses can be allocated to the various departments nor can expenses be allocated between the grain and side lines. No attempt was made to estimate these expenses by departments, because of the extreme difficulty in doing so with any great assurance of accuracy.

DEFINITION OF TERMS

Credit refers to selling on trust of future payment, in other words time granted customers in the payment for purchases.

Retail Department is that part of the business which sells supplies to patrons. Retail sales usually include the sale of all commodities other than grain and also the grain sold for feed and seed.

Side Lines are all commodities other than grain which are sold to patrons.

Net Operating Profit is the gross profit on operations less operating expenses including depreciation and bad debts. Total net profit excluding other income.

Other Income is the income not obtained directly from buying and selling such as prorates from regional cooperatives, income from grinding, storage, rent, collection of bad debts, etc.

Expenses are total expenses of operating the association including amount written off as bad debts, depreciation and interest expense. Dividends on stock are not included.

Bad Debts are those accounts and notes receivable finally regarded as uncollectible.

Audit refers to the bonded auditors' report.

Crop Year refers to the period from July 1 of one year to June 30 of the following year. Audit dates for 1936-37 cover the 1936 crop year and include those at the

end of the calendar year 1936 and the mid-year audits for fiscal years ending in April and May principally. Elevator refers to a cooperative association, organization, cooperative elevator, or association. These are synonymous terms for purposes of this study and they refer to the business organization of farmers.

Receivables are uncollected retail sales including both notes and accounts receivable.

Current Assets are composed of cash, receivables, inventory and also investments or are those items which the association can reasonably expect to turn in the next fiscal year.

"Combination Efficiency Index" is the index number measuring the efficiency of one association relative to others.

RELATION BETWEEN CREDIT AND FINANCIAL STABILITY

Amount of Receivables

The elevators of southwestern Kansas provide a more uniform group of records than if elevators of the whole state were used. These associations are somewhat larger than elevators in other parts of the state; in capacity of

the elevators, in volume of business, in per cent of wheat sales to other commodities, they have greater uniformity of commodities handled as side lines, and are larger in membership and the usual size of farm operated by each member is large. Green and Rucker (6) found that in the Dodge City territory 10.8 per cent of the farmers control 34.7 per cent of the wheat produced. This brings out another characteristic differentiating the elevators of this district from those of other sections of the state. Credit, however, is one factor which nearly all associations in Kansas that are handling side lines have in common, some to a greater degree than others as brought out for southwestern Kansas by Table 1.

Although the amount of receivables ranged from slightly more than \$150 to nearly \$40,000 there are so many more associations in the lower amount group, that the distribution has positive skewness. This is brought out by the wide difference between the median of \$5,124.71 and the simple average of \$8,847.73 for total receivables. There is a bunching of elevators around two amounts since 17.6 per cent of the 51 elevators have receivables within the range of \$1,000 to \$2,000 and 13.7 per cent of the elevators are within the frequency of \$5,000 to \$6,000 in

Table 1. Distribution of 51 southwestern Kansas elevators according to the amount of accounts and notes receivable carried on the books, 1936-37.

Amount of accounts and notes receivable	Number of elevators	Per cent of total number of elevators
Less than \$1,000	4	7.9
\$1,000 to 1,999	9	17.6
2,000 to 2,999	4	7.9
3,000 to 3,999	4	7.9
4,000 to 4,999	3	5.9
5,000 to 5,999	7	13.7
6,000 to 6,999	1	1.9
7,000 to 7,999	3	5.9
8,000 to 8,999	3	5.9
9,000 to 9,999	2	3.9
10,000 or more	11	21.5
Total	51	100.0

Other measures:

Average	\$8,847.73
Median	5,124.71
Range: Largest amount	39,737.08
Smallest amount	152.14

receivables. This tendency may be due to the fact that the total receivables are taken from the balance sheets set up by the auditor at the close of the fiscal year and there is some effort on the part of the management to collect all that is possible just before the close of the year so as to show a better statement to the stockholders. For the associations having larger receivables, it seems logical that they might adopt a collection goal that would bring the receivables to about the \$5,000 mark and for the associations with smaller receivables \$1,000 might be the aim. The distribution indicated that there may be some success at least in attaining the desired goal. The associations having receivables less than \$6,000 were somewhat more evenly distributed than those with receivables of more than this amount.

Those elevators with more than \$10,000 in receivables were quite evenly distributed with two and three to each \$5,000 frequency up to \$40,000. These data show slightly smaller receivables than would a yearly average of receivables on the first of each month. This is because of the attempt to collect as much as possible at the end of the year as mentioned above and also because most of the audit dates are around December 31 or May 31 which are two

periods of slack business and low outstanding balances.

The receivables in elevators of southwestern Kansas have shown a decrease from an average of \$11,680.22 in 1930 to a low of \$8,163.77 in 1934 then an increase to the 1936-37 average of \$8,847.73. This fluctuation could be interpreted as being due to change in price level rather than physical volume of charged goods. On the other hand there was a definite tendency in 1932 to 1934 to operate nearer a cash basis. Whether this tendency will remain with the return of good crops and higher prices is a question.

Retail Sales and Receivables

The volume of retail sales is one factor affecting the amount of receivables. Table 2 shows that receivables increase less proportionally than sales. Receivables were nearly two-fifths of retail sales for the small volume elevators and below one-tenth of retail sales for the group of associations doing from \$70,000 to \$80,000 of retail business. As the volume of retail sales exceeds this amount, however, the receivables increase at a faster rate.

Table 2. Relation between volume of retail sales and total receivables in 51 southwestern Kansas elevators, 1936-37.

Retail sales	Average re- ceivables in per cent of average retail sales	Turnover of receivables in days	Average current receivables in per cent of aver- age retail sales	Turnover of current re- ceivables in days	Average current receivables in per cent of aver- age charged retail sales	Number of days charged retail sales represented by current re- ceivables
Less than 10,000	38.5	140	7.6	28	17.8	65
\$10,000 to 19,999	23.9	87	4.1	15	10.5	38
20,000 to 29,999	43.7	159	10.4	38	23.9	87
30,000 to 39,999	15.4	56	5.4	20	10.0	36
40,000 to 49,999	7.6	28	2.6	9	8.1	30
50,000 to 59,999	11.0	40	4.4	16	10.4	38
60,000 to 69,999	14.7	54	6.5	24	15.6	57
70,000 to 79,999	9.3	34	2.3	8	7.2	26
80,000 to 89,999	28.8	105	4.7	17	9.5	35
90,000 to 99,999	26.9	98	8.2	30	11.9	43
100,000 or more	13.7	50	4.4	16	10.5	38
Average \$51,604.27	17.2	63	5.0	18	11.4	42

The above comparisons have used total receivables and except for the differences in size of the percentage there is little difference when current receivables are compared to retail sales. Current receivables are those accounts and notes placed on the books during the fiscal year which remain uncollected at the end of the year. As with total receivables, those associations doing between \$20,000 and \$30,000 retail business show the largest proportion of current receivables to retail sales, being slightly more than 10 per cent. Medium to large volume elevators apparently restrict credit extension more than small volume elevators and more than extremely large ones.

The use of the first two columns showing turnover of receivables in days, is limited except for purposes of comparison within the column and to assist in visualizing the percentage that receivables are of retail sales. In the first column showing turnover, total receivables included both those placed on the books during the current year as well as those carried over from previous years, and the retail sales included both those for cash and those for credit. The second column shows the turnover of receivables eliminating the old receivables, that is those accounts outstanding more than one year, but still retains

the cash and charge sales as retail sales. The third section of this table reveals the actual per cent of the charge sales for the past year that were uncollected at the end of the year and also shows the time required to make collection on those retail sales charged during the 1936-37 crop year. Each of the sections of this table has advantages depending upon the use to which it is put. It is often well to know how fast the total receivables are being turned since a high turnover indicates more of a likelihood that the old receivables are being paid as well as a high proportion of cash or short time credit sales. The average ratio of retail sales to receivables was 5.8 to 1, or in other words a turnover of total receivables a little better than once each two months. The range of this comparison, however, showed some elevators to be turning total receivables less than once per year and others nearly on a cash basis. A 30 day basis, of course, is a turnover of 12 times per year.

Table 3 showed that more than one-fourth of the elevators obtained an average turnover of those receivables placed on the books during the fiscal year, of better than once each 10 days. A collection of receivables each 10 days is often considered as a desirable approach to a cash

Table 3. Distribution of 51 southwestern Kansas elevators on the basis of current receivables in per cent of retail sales, 1936-37.

Current receivables in per cent of retail sales	Number of elevators	Per cent of total number of elevators
Less than 1	4	7.8
1 to 1.99	4	7.8
2 to 2.99	6	11.8
3 to 3.99	10	19.6
4 to 4.99	8	15.7
5 to 5.99	3	5.9
6 to 6.99	2	3.9
7 to 7.99	2	3.9
8 to 8.99	5	9.9
9 to 9.99	3	5.9
10 or more	4	7.8
Total	51	100.0

Other measures:

Average	5.0%
Median	4.3
Range: Largest	38.0
Smallest	.13

basis. The bulk of the remaining 75 per cent of elevators was within a 20 day turnover and in only 3 associations did average turnover of current receivables exceed one month. In figuring this turnover it must be kept in mind that these retail sales include both cash and credit sales, and with nearly 50 per cent of retail sales cash, on the average, as will be brought out later, this average turnover of current receivables as discussed above would roughly be lengthened to twice the figures.

The fact that the current receivables in per cent of retail sales on the average was nearly 5 per cent and the median only slightly less, showed that the elevators were rather evenly distributed between zero and 10 per cent of retail sales.

Receivables and Capital

Current assets are composed mainly of three items: (a) cash, (b) receivables, and (c) inventory. The question of how available each of these is and the relative proportion of one to another is important. Each dollar in the business must be turning and each time it turns it helps to care for a portion of the overhead expense, thus economy

must be exercised in the use of the capital. Table 4 discloses the fact that more than 35 per cent of these associations had receivables in excess of 40 per cent of the current assets. It is sometimes considered desirable not to build receivables in excess of 40 per cent of the current assets or the total working capital. Almost 30 per cent of the elevators on the other hand kept receivables to less than 20 per cent of the current assets. Uncollected retail sales averaged 37 per cent of the current assets with a range from 2 per cent to the extreme of 82 per cent of total working capital in receivables. Capital invested in receivables is usually regarded as yielding no direct returns unless business can be increased, thus lowering the overhead expense per unit. This will be treated in detail later.

To measure further the receivables and the financial status of these organizations, receivables were compared with outstanding capital stock. Table 5 indicates that in more than one-third of the associations less than one-third of the capital stock was used to carry accounts. This appears quite favorable but at the lower end of the distribution more than 15 per cent of the elevators had receivables which were in excess of the capital stock and one association had receivables which were more than four and

Table 4. Distribution of 51 southwestern Kansas elevators on the basis of receivables in per cent of current assets, 1936-37.

Receivables in per cent of current assets	Number of elevators	Per cent of total number of elevators
Less than 9	6	11.8
10 to 19	9	17.6
20 to 29	10	19.7
30 to 39	8	15.6
40 to 49	8	15.6
50 to 59	6	11.8
60 to 69	1	2.0
70 to 79	2	3.9
80 to 89	1	2.0
Total	51	100.0

Other measures:

Average	37%
Median	30
Range: Largest	82
Smallest	2

Table 5. Distribution of 51 southwestern Kansas elevators on the basis of receivables in per cent of capital stock outstanding, 1936-37.

Receivables in per cent of capital stock outstanding	Number of elevators	Per cent of total number of elevators
Less than 10	6	11.8
10 to 19.9	7	13.7
20 to 29.9	7	13.7
30 to 39.9	5	9.8
40 to 49.9	3	5.9
50 to 59.9	5	9.8
60 to 69.9	1	2.0
70 to 79.9	3	5.9
80 to 89.9	2	3.9
90 to 99.9	4	7.8
100 to 109.9	2	3.9
110 to 119.9	1	2.0
120 or more	5	9.8
Total	51	100.0

Other measures:

Average	49.8%
Median	43.5
Range: Largest	462.6
Smallest	2.5

one-half times the capital stock. This, of course, means that the remaining capital in fixed assets, cash, and inventories was either borrowed money or surplus. The average receivables were 25.3 per cent of the net worth as compared to 49.8 per cent of the capital stock. Although credit retail business was only 12.2 per cent of the total sales it used 20.2 per cent of the total assets, 36.9 per cent of the total working capital and 49.8 per cent of the capital stock.

It seems unreasonable for a cooperative to borrow money for the purpose of extending credit and few elevators would term it a good policy. Yet the average total liabilities of these associations were \$8,928.88 as compared to total receivables of \$8,847.73. On the average these elevators could have paid off almost the entire amount of liabilities if the receivables could have been collected. Actual borrowings in the form of interest bearing obligations amounted to \$5,172.12 or 58 per cent of the total receivables.

Table 6 and figure 2 show that total liabilities increased somewhat faster than receivables. Not all organizations have liabilities, however, and in many cases the notes payable were a small percentage of the receivables.

Table 6. Distribution of 51 southwestern Kansas elevators according to the relation of receivables to notes payable and to total liabilities, 1936-37.

Amount of receivables	Number of elevators	Notes payable (average)	Total liabilities (average)
Less than \$1,000.00	4	\$1,425.00	\$ 1,433.75
\$1,000 to 1,999.99	9	5,310.25	6,880.50
2,000 to 2,999.99	4	4,680.85	11,076.02
3,000 to 3,999.99	4	4,265.49	5,482.83
4,000 to 4,999.99	3	543.39	3,066.57
5,000 to 5,999.99	7	4,881.83	11,882.20
6,000 to 6,999.99	1	4,500.00	9,954.03
7,000 to 7,999.99	3	2,493.25	5,081.98
8,000 to 8,999.99	3	10,507.52	11,697.64
9,000 or more	13	7,322.47	12,984.67
Average 8,847.73	51	5,172.12	8,928.88

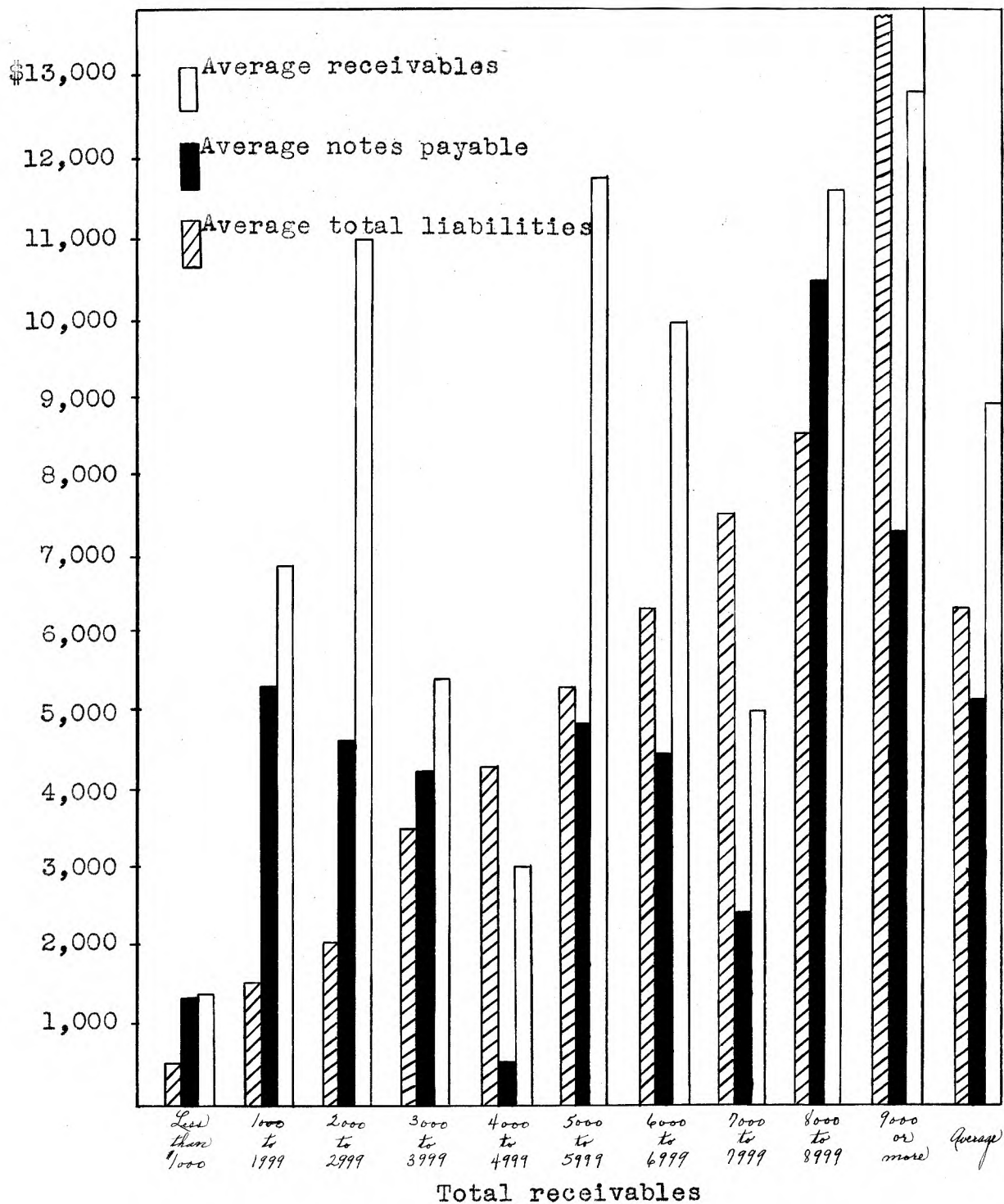


Figure 2. Distribution of 51 southwestern Kansas elevators according to the relation of receivables to notes payable and to total liabilities, 1936-37.

Money is not always borrowed for the purpose of extending credit but more often it is obtained to replenish the operating capital after the receivables are incurred. Nevertheless it seems logical that the interest on payables might be called an expense for doing credit. In nearly one-third of the cases the notes payable were in excess of the total receivables.

THE COST OF RETAIL CREDIT

It is from the standpoint of costs for extending credit that the credit problem receives the most discussion and consideration. There are certain of these costs which are tangible and which show up on the profit and loss statement. Others are indirect and exist in a greater or lesser degree in all associations extending credit. Certain of these costs are unavoidable such as bad debts, extra bookkeeping, paper, postage, interest, expense of collections, etc., and others such as legal expense, and loss of trade resulting from disputed and large accounts and undiplomatic collection policies are factors which may be controlled to a considerable extent by the management. The manager of a cooperative association is hired mainly because of his

ability as a business man and salesman who can get along with his customers and build good will and membership. To get a combination of the above qualifications and those which make a good credit man is quite difficult. As a salesman, he attempts to sell all he can; and as a credit man, he attempts to restrict to a minimum those sales for which there is any doubt in his mind as to the ability and willingness of the customer to pay. On the other hand it has been stated that, "the sale is not made until the money is paid."

But the fact still remains that when credit is extended costs are incurred. Additional bookkeeping is necessary. Time and money must be spent in collecting these accounts if they are not paid within a reasonable time. Even though collections are pushed vigorously some losses from bad debts will occur. And funds must either be borrowed or the elevator must forego the use of its own funds to extend credit.

Bad Debts

One of the actual costs which can be charged entirely to the credit extended is losses from bad debts. These occur

in spite of the work that is done to avoid them. The most frequent reasons for bad debt losses over the period 1930 to 1937 as estimated by managers were "crop failures" strongly leading the list, next in line as most frequently given was the "extension of too much credit to one man" followed by "moving away", and then miscellaneous reasons mentioned two or three times each were "change in management", "deaths", "dishonesty", and "poor risks".

It is less satisfactory to use bad debts for any one year since there was a definite tendency on the part of most associations to write off accounts and notes receivable in years when a profit was made and to write off none in years of a loss. This tends to shift the losses from bad debts to the years when profits are shown, thus reducing income tax since losses of previous years are not deductible on years when profits are made. In Table 7, however, this tendency is not revealed since the bad debts and the profits were for an average of the past six years. This table points out the extreme range in average annual net profit for the past six years of from a loss of \$5,915.81 to a gain of \$16,401.79, averaging \$1,425.90 for all elevators. In addition it shows the amount of losses from bad debts. The larger profit associations wrote off more than twice as much

Table 7. Distribution of 51 southwestern Kansas elevators according to the relation between the average of total net operating profit 1930-31 to 1936-37 and the amount of bad debts written off 1930-31 to 1936-37.

Amount of profit or loss	Number of elevators writing off bad debts	Average profit for elevators writing off bad debts	Average bad debts per elevator writing off bad debts
Loss			
\$3,000 or more	1	\$5,915.81	\$373.69
2,999.99 to \$2,000	3	2,410.89	730.63
1,999.99 to 1,000	8	1,470.23	317.39
999.99 to 0	8	598.62	389.94
Profit			
0 to 999.99	10	742.46	373.20
1,000 to 1,999.99	5	1,383.50	384.26
2,000 to 2,999.99	5	2,562.92	445.13
3,000 to 3,999.99	6	3,522.77	713.33
4,000 or more	5	10,825.38	851.85

Other measures:

Average	\$ 1,425.90	Bad debts	\$469.31
Median	880.82		316.45
Range: Largest profit	16,401.79	Largest	2,273.38
Largest loss	5,915.81	Smallest	none

in actual amount of bad debts, however only a part of the reasons for this tendency can be attributed to failure to write off accounts by those associations sustaining net losses on operation, the remainder being due to differences in volume of business and in credit. The average bad debts per association, however, is not far from a statement of the actual uncollectable retail sales per year for the period. Table 8 shows the annual average losses from bad debts per elevator for the past six years to be \$469.31. Two elevators wrote off no bad debts for the six year period while one association wrote off annually an average of \$2,273.38. A portion of these large bad debts may have been an accumulation from previous years, but over a six year span undoubtedly a major part was current uncollectable sales.

Nearly 20 per cent of the elevators kept the annual average of bad debts for the six years to less than \$100 and 60 per cent of them showed less than \$400 written off. Nearly 12 per cent of the organizations wrote off more than \$1,000 a year.

Since the remainder of the cost items are figured on the current year 1936-37, bad debts likewise should be compared and analyzed for that year. Table 9 shows bad debts

Table 8. Distribution of 51 southwestern Kansas elevators according to the average of bad debts written off 1930-31 to 1936-37.

Amount of bad debts	Number of elevators	Per cent of total number of elevators
None	2	3.9
Less than \$ 100	8	15.7
\$ 100 to 199.99	8	15.7
200 to 299.99	6	11.8
300 to 399.99	7	13.7
400 to 499.99	3	5.9
500 to 599.99	5	9.8
600 to 699.99	1	2.0)
700 to 799.99	2	3.9)
800 to 899.99	0	0)
900 to 999.99	3	5.9) 23.5
1,000 to 1,099.99	1	2.0)
1,100 to 1,199.99	1	2.0)
1,200 to 1,299.99	1	2.0)
1,300 or more	3	5.9)
Total	51	100.0

Other measures:

Average	\$ 469.31
Median	316.45
Range: Largest	2,273.38
Smallest	none

Table 9. Distribution of 51 southwestern Kansas elevators according to the relation between volume of retail sales and bad debts, 1936-37.

Retail sales	Number of elevators	Average bad debts	Bad debts in per cent of retail sales	Bad debts in per cent of charged sales	Bad debts in per cent of receivables
Less than \$10,000	7	\$ 255.25	4.38	10.2	11.4
\$10,000 to 19,999	8	486.72	3.39	8.7	14.2
20,000 to 29,999	6	291.22	1.17	2.7	2.7
30,000 to 39,999	8	213.62	.63	1.2	4.2
40,000 to 49,999	3	253.44	.58	1.8	7.7
50,000 to 59,999	4	252.60	.48	1.2	4.4
60,000 to 69,999	4	297.08	.47	1.1	3.0
70,000 to 79,999	3	320.04	.42	1.2	4.6
80,000 or more	8	1,187.88	.76	1.7	4.5
Average \$51,604.27	(51)	442.38	.86	2.0	5.0

for 1936-37 in comparison to retail sales, receivables and charge sales. The bad debts varied considerably with the volume of retail sales. The seven small volume elevators lost 4.4 per cent of the retail sales as bad debts while eight large volume elevators lost only .76 per cent of the retail sales. Probably a clearer measure of the actual losses in bad debts per unit of sale would be that of losses incurred on the charge sales alone. Bad debts were 8 to 10 per cent of the charge sales for small volume concerns while with the large volume elevators the bad debt loss amounted to 1.5 to 2 per cent of the credit sales. The losses were 10 to 14 per cent of receivables for the small volume associations and 3 to 4.5 per cent of receivables for the large volume elevators. This tendency for smaller bad debt losses per dollar of charge sales in the large volume elevators may be due to a combination of factors. The large volume associations probably declare larger prorates which are applied on accounts and notes owed to the association before any cash is paid out. Larger prorates may build more good will which fosters a psychological attitude such that the customer will do all possible to pay, or at least not pay all the rest of his bills first, then if he has any funds left pay the cooperative which is his own

organization. Again the large volume elevators are probably in a better financial position to bring pressure and to proceed vigorously to collect from slow patrons. An average of \$442.38 in bad debts was written off in 1936-37 or .86 per cent of average retail sales of \$51,604.27. Bad debts averaged 2 per cent of the charge sales, that is each time an account was carried through the accounts receivable ledger, 2 per cent could be attributed to the bad debts that would be incurred on the whole volume of charge sales. Boards of directors often wish to use the easily calculated bad debts in per cent of total receivables which with this group averaged 5 per cent.

Interest on Receivables

Although interest cost perhaps is not so tangible a cost as bad debts nevertheless interest on payables actually shows up in the expenses. Any interest which is charged to receivables above that which is actually paid on notes payable is justified on the basis that capital is costly and each dollar in a business must earn money and when tied up in receivables, some other part of the business foregoes the use of that capital and few are the associations which

could not use more operating capital to an advantage at times. Money can be invested at approximately 3 per cent at present in a much safer investment than many receivables, so 3 per cent interest cost was applied to receivables which were in excess of the interest bearing liabilities, and the rate of interest on the notes payable was applied against the remainder of the receivables. This interest rate ranges from 3 per cent per year with the Bank of Cooperatives to 8 per cent at local banks. An attempt was made with all of the costs for credit, to use as conservative a figure as could be arrived at so that when the total costs for credit for the average association were calculated the cost would be a minimum.

The costs for interest on receivables in comparison to the receivables, the retail sales and the charge sales are shown in Table 10. The interest cost for the average association was \$334.24 or 3.8 per cent of the receivables. Maughan (9) charged an arbitrary 6 per cent when figuring interest costs for New York feed stores. Robotka (15) used 7 per cent since that was the bank rate of interest in Iowa in 1931 when he wrote of costs for credit in Iowa elevators. The interest cost was .65 per cent of the total retail sales and 1.5 per cent of the charge sales for the 51 associations used in this study.

Table 10. Costs for retail credit in 51 southwestern Kansas elevators, 1936-37 compared with receivables and with retail sales.

Items of cost for credit	Average cost for retail credit	Costs in per cent of receivables	Cost in per cent of retail sales	Cost in per cent of charged sales
Interest	\$334.24	3.8	.65	1.5
Bookkeeping and collections	424.69	4.8	.82	1.9
Bad debts	442.38	5.0	.86	2.0
Total	1,201.31	13.6	2.3	5.4

Bookkeeping and Collections

Since no definite data were available as to the costs of bookkeeping and collections, it was advisable to obtain this information. A sample of 10 elevators was used. The sample was chosen not on the basis of a random sample, but on the basis of those elevators doing between 18 and 31 per cent of total business as retail and between 30 and 50 per cent of this retail business as credit. These were the middle associations in the arrays of retail business in per cent of total and credit business in per cent of retail. This not only provided typical or characteristic elevators, but included those in which credit was a real problem, yet they were not elevators in which credit had developed until it was out of control. These ten elevators are located at Sanford, Hanston, Dighton, Albert, Offerle, Bucklin, Haggard, Greensburg, Trousdale, and Stafford, and are in nine counties.

As shown in Table 11 more than 300 hours a year were spent by the manager and an average of more than 45 hours by other employees and nearly 100 hours for extra and regular bookkeeper or a total of 460 hours annually for extra bookkeeping due to credit. This compares to more than 500

Table 11. Average costs for extending credit in 10 southwestern Kansas elevators whose total business ranged between 18 and 31 per cent side lines and those side lines ranged between 30 and 50 per cent credit, 1936-37.

Costs	Your Association
Interest cost:	
Average amount of open book accounts	\$4,357.15
Notes held by association	5,997.17
Notes discounted at the bank	0
Notes given to finance companies.....	0
Less total interest bearing notes	3,042.36
Total receivables - non-interest bearing....	\$7,311.96
Amount borrowed money \$6,494.11 Interest rate 5.3 per cent	
Interest cost at 4.5 per cent	\$ 329.70
Bookkeeping costs:	
Manager's time	315.6 hrs. \$ 180.77
Time of other employees.....	46.9 hrs. 11.57
Hired bookkeeper	99.3 hrs. 30.78
Materials (ledgers and other supplies).....	23.20
Total accounting cost	\$ 246.32
Collection costs:	
Manager's time	276.8 hrs. \$ 169.70
Time of other employees	57.7 hrs. 20.49
Travel expense	377.5 mi. 15.10
Clerical expense	13.6 hrs. 3.88
Postage and stationery	26.20
Fees of professional collectors	16.07
Legal fees	0
Fees for filing chattel mortgages60
Total collection costs	\$ 252.04
Bad debts	397.50
Total costs of granting credit	\$1,225.56

hours for extra bookkeeping due to credit in stores in New York (9). The total bookkeeping cost was \$246.32 or 2.4 per cent of the receivables in the 10 elevators of southwestern Kansas.

More than 275 hours were spent annually by the manager and nearly 60 hours by other employees for collecting. More than 375 miles were driven a year for that purpose. This mileage was divided equally between two or more purposes if the trip was for more than collecting. Other collection expenses such as clerical, postage, stationery, fees for professional collectors, legal fees, fees for filing chattel mortgages, etc. in addition to those above, total \$252.04. The annual collection cost was 2.4 per cent of the total receivables. The cost of bookkeeping and collection averaged 4.8 per cent of total receivables for this group of associations. The cost for these two items when applied against the receivables of all of the 51 elevators, gave an average total of \$429.69 for bookkeeping and collection as shown in Table 9. This cost is .82 per cent of the retail sales and 1.9 per cent of the charge sales. Robotka (15) used an estimated 5 per cent of receivables as the costs for bookkeeping and collections in Iowa. The interest cost and the bad debts for the 10 associations were 15.3 per

cent and 24 per cent respectively, less than the actual interest and bad debts for the 51 elevators. These facts lend an element of conservatism to the 4.8 per cent of receivables as the costs for bookkeeping and collections.

The average costs then, for retail credit in 51 elevators of southwestern Kansas was \$1,201.31 or nearly 14 per cent of receivables annually. This cost was 2.3 per cent of the retail sales and 5.4 per cent of the charged sales. A cost for credit of nearly 5.5 per cent of the charged sales was especially significant since the average elevator tended to set its margins so that approximately a 3 per cent net profit per dollar of sales was shown and if this were on a cash basis, credit would not permit a 3 per cent profit on the charge sales.

These were not the only credit cost factors affecting the decision of a board of directors as to the credit policy; however, they were the more important ones and those which will be considered for this study. When the question was asked the manager of the 10 elevators from which the bookkeeping and collection costs were taken, how much business they estimated was lost or gained by extending credit, the answer indicated a net loss in business for extending credit. About the only logical reasons most businesses gave

for extending credit were to increase business and for accommodation. In a cooperative association, however, the matter of gaining business through credit worked somewhat differently. Here the members owned and ran the business. Any profit that was made was returned to those on whose business it was made. Some were cash customers and some demanded credit. When the cash customers saw that the profits from their business paid the bad debts and other credit expenses for the one who received credit, he might become dissatisfied and go where he could get a discount for cash. Then the member who asked for credit and was turned down became dissatisfied because he felt he should be granted credit if his neighbor received this service. Especially should he be able to get credit up to the amount of his share of stock, so he thought. In addition there were those who disputed the size of their accounts and others who felt that credit was just a poor way to run a cooperative successfully because one of the Rochdale principles is to operate on a cash basis. On the other hand, many farmers appreciated this courtesy and this service, but they probably would patronize the association without the credit as well and when more prorate was forthcoming they would be more loyal supporters in the end. There were injustices

involved when credit was extended to some and not to others, for certainly the cost was excessive and when the cash and credit customers paid equally for the credit extended there was an element of unfair treatment.

For the above reasons business was often actually lost through extending credit. Why associations continue to extend credit in the face of these costs and problems is a question. The reasons given were that competition must be met and therefore the elevator extended credit. Experience has shown that in many cases competition will operate on a cash basis if the cooperative will take the lead. Another difficulty in getting the cooperative to adopt a cash basis was that most farmers would use credit if they could get it and this was true as well with the individuals who were on the board of directors. When they instructed the manager to operate on a cash basis they were restricting their own credit. Probably the main reason why more cooperatives were not nearer a cash basis was that the stockholders did not realize the costs involved. The main reason for organizing a cooperative in most instances has been to provide the members with the best possible buying and selling service at the lowest cost. From the foregoing analysis it is apparent that liberal credit is inconsistent with economy

in buying and selling. There is a loss of profit due to loss of volume of business because credit is extended in many instances. This estimated loss of profit for the 10 elevators mentioned above was 1.3 per cent of receivables, or an average of \$115.02 annually per elevator. This is figured by multiplying the per cent net profit per dollar of sales by the amount of business lost or gained, as estimated by managers. This does not take into consideration the element of fixed and variable costs which would have made this loss slightly larger since more volume would have meant less cost per unit and greater net profit per dollar of sales. In addition there are other miscellaneous costs which have not been included such as auditors fees which are higher because of the extra tickets, notes receivable, adjustment of accounts, aging of accounts, etc.

Credit and Total Expenses

Expenses vary so much from association to association and from one year to another that it is difficult to make any direct comparisons involving expenses. For example, a few elevators put truck expense for hauling gasoline and oil from the bulk plant to the farmer, in cost of sales and

sometimes even the commissions to the truck drivers as well, while in most associations these items are in the expenses. Some elevators fail to charge depreciation one year and then tend to double it in other years. In spite of these difficulties figure 3 shows some relationship of receivables in per cent of retail sales and total expenses in per cent of total sales. Those associations represented along the lower right hand edge of the chart rather than showing the expected increase in receivables in per cent of retail sales as expenses per dollar of sales increase, are large capacity associations averaging 96,785 bushels. The high fixed expenses of these associations caused them to fail to show the expected relationship in short crop years.

In spite of the difficulties in making comparisons with total operating expenses, because of the variation in accounting procedure from association to association and from year to year, figure 4 indicates to what extent the costs for retail credit actually did show up in expenses. Here again the elevators are bunched into two groups. Both, however, show that higher expenses were associated with increased costs for credit. This separation was due to a combination of factors, the greatest of which were differences in volumes of business and capacity of the house.

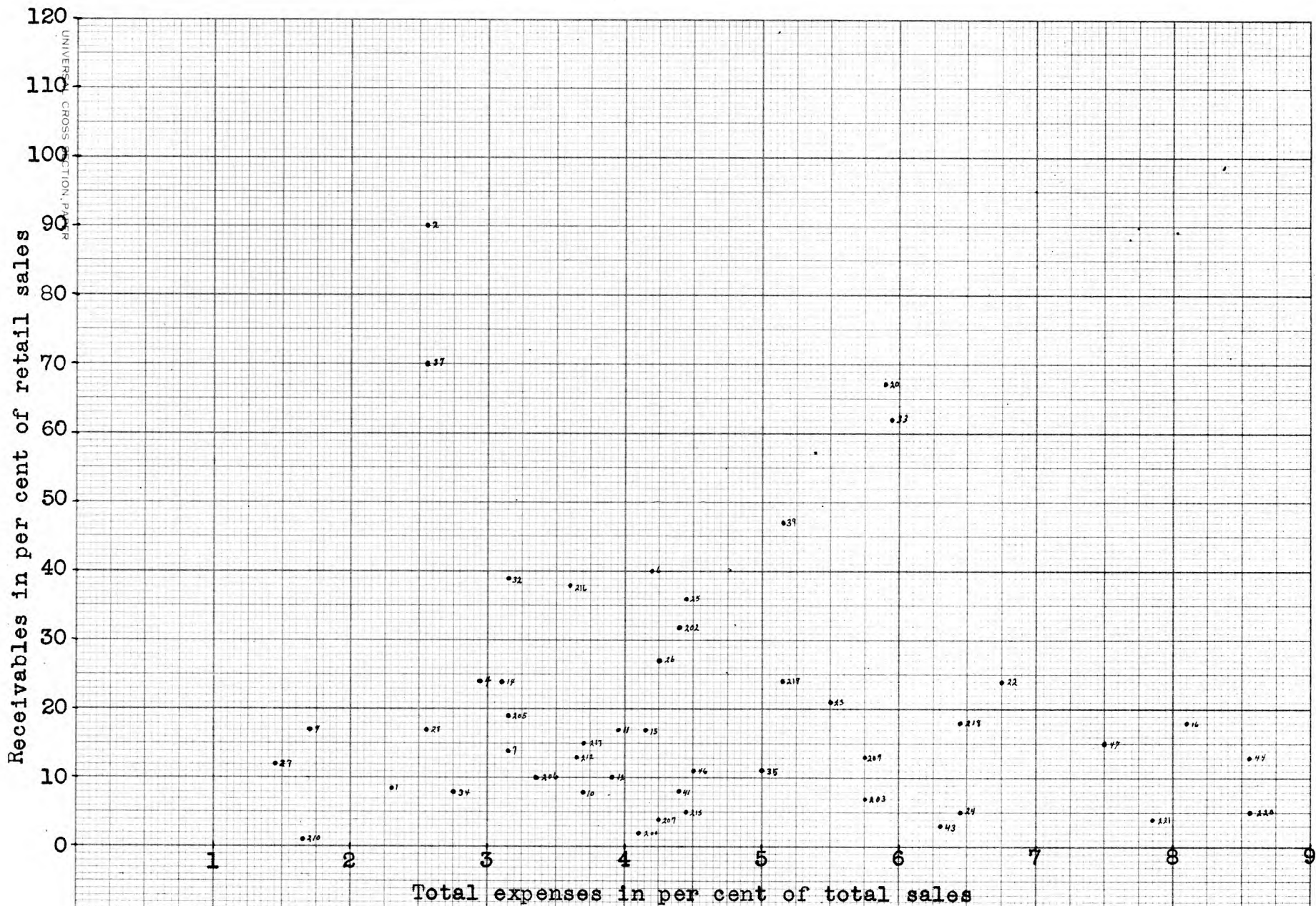


Figure 3. Relation of receivables in per cent of retail sales and total expenses in per cent of total sales, 1936-37.

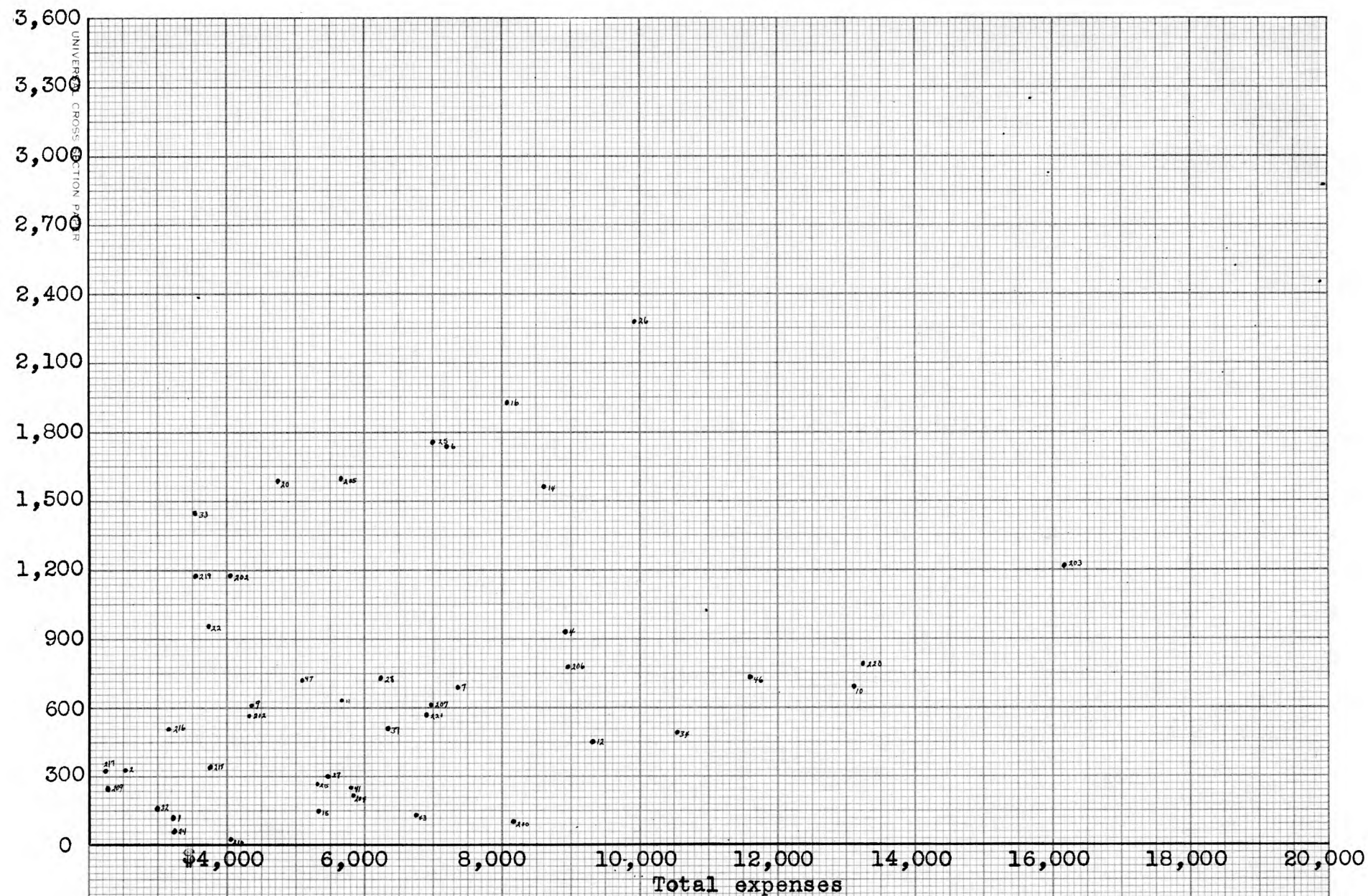


Figure 4. A comparison of costs for extending credit and total expenses in 51 southwestern Kansas elevators, 1936-37.

The upper row of relationships show 11 associations which had an average volume of business of \$133,962.89 and a house capacity of 34,454 bushels while the lower group in the figure with 13 associations had an average volume of business in 1936-37 of \$233,733.34 and an average elevator capacity of 76,500 bushels. The volume of business of the lower group was approximately \$100,000 more than the upper group and the capacity of the elevators was more than double the upper group. Retail sales averaged \$35,924.19 in the upper group and \$59,090 in the lower. Quite logically in these associations with the high fixed expenses due to larger houses, the total expenses would be higher in proportion to the costs for credit.

Credit Policy and Costs for Credit

Even though the costs for credit extension are high for the average association, there are some differences in costs depending upon the credit policy. Table 12 shows the increase in each of the items of credit costs and in total credit costs in the liberal credit policy organizations as compared to the strict credit policy elevators. Although these total credit costs for the liberal credit policy

Table 12. A comparison of the costs for retail credit in liberal and in strict credit policy elevators in southwestern Kansas, 1936-37.

Items of average credit cost per credit policy group	Per cent of retail business for credit		
	Strict credit policy (upper one-third)	Middle one-third	Liberal credit policy (lower one-third)
Interest	\$238.80	\$336.84	\$427.07
Bad debts	318.37	570.26	438.49
Bookkeeping and collection	261.60	400.43	612.01
Total credit costs	818.77	1,307.53	1,477.57
Credit costs in per cent of receivables	15.0	15.7	11.6
Credit costs in per cent of retail sales	1.7	2.7	2.5
Credit costs in per cent of charged sales	7.5	6.8	4.8

elevators were almost double the costs in the strict credit policy group these are not to be taken as increasing costs in terms of increasing volume of credit business. In fact about the opposite is true. Whereas, the credit costs in per cent of the receivables increased slightly in the middle group as compared to the strict credit group, the costs decreased in per cent of receivables for the liberal credit group. Again when these costs were compared to the total retail sales, a similar situation was found. And when costs for credit were compared to the charged retail sales there was a decrease from 7.5 per cent of the charged retail sales in the strict credit policy group to 4.8 per cent in the liberal credit group. Thus, on each dollar of charged sales the costs are somewhat less in the liberal credit policy associations. The credit costs, however, in the lowest cost group were still nearly 5 per cent of the charged sales.

Credit Costs and Gross Margins

The proportion that the cost for credit was to the total gross profit on side lines is important as a measure of the relative profitableness of retail departments under different credit policies. Table 13 and figure 5 brings

Table 13. A comparison of costs for retail credit and gross profit on side lines in 51 southwestern Kansas elevators, 1936-37.

Total costs for credit	Number of elevators	Average gross profit on side lines	Average costs for credit	Costs for credit in per cent of gross profit on side lines
Less than \$ 300	12	\$ 2,378.62	\$ 174.84	7.4
\$ 300 to 599.99	9	4,306.41	462.18	10.7
600 to 899.99	10	6,176.64	708.20	11.5
900 to 1,199.99	4	2,334.52	1,065.77	45.6
1,200 to 1,499.99	2	4,342.13	1,347.74	31.0
1,500 to 1,799.99	5	3,566.95	1,651.88	46.3
1,800 or more	9	14,520.92	3,634.33	25.0
Average		\$5,796.33	\$1,201.31	20.7

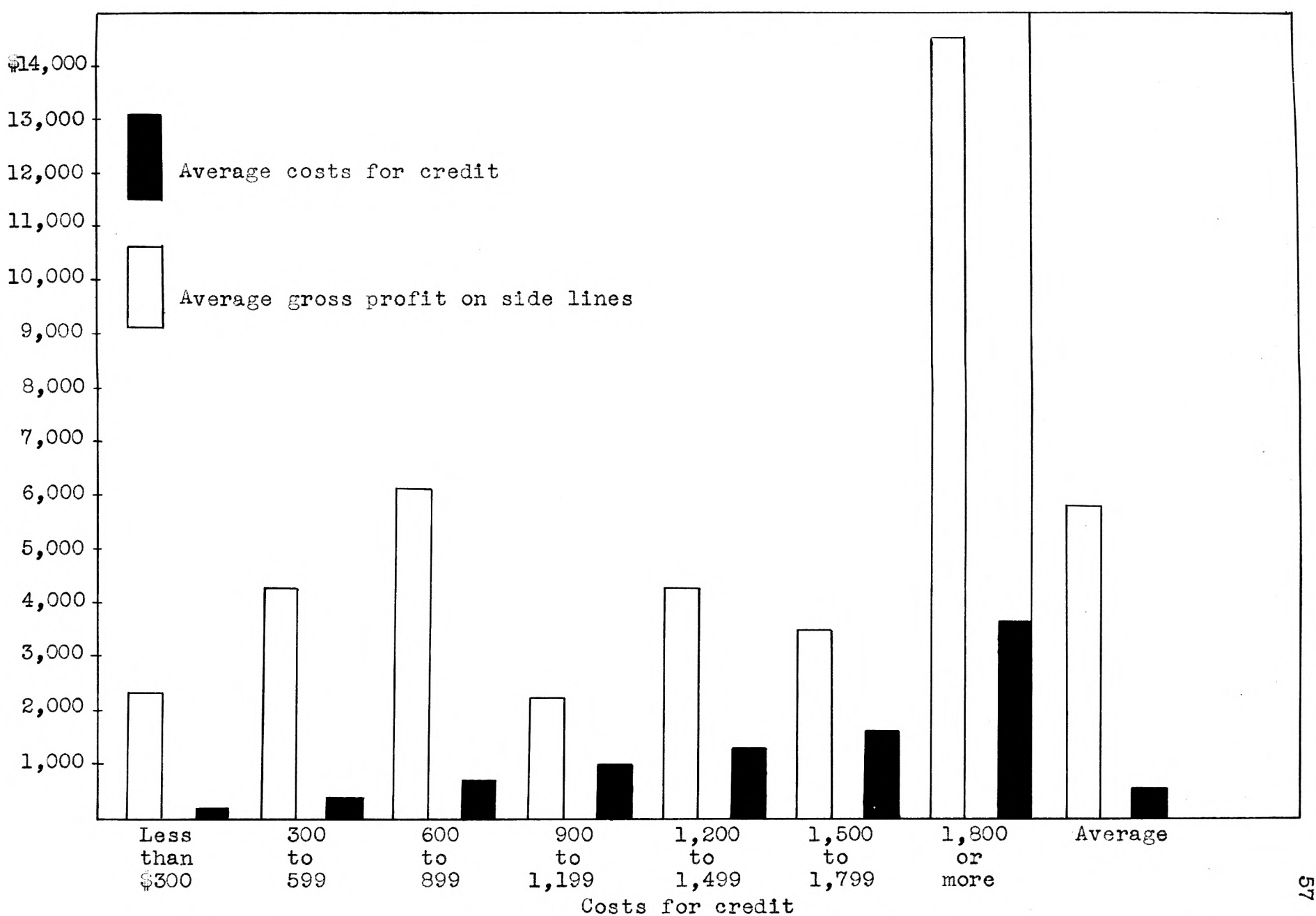


Figure 5. A comparison of the costs for retail credit and gross profit on side lines in 51 southwestern Kansas elevators, 1936-37.

out the high percentage of gross profits on side lines that was taken to pay for the costs of credit in the higher credit cost associations as compared to the low cost elevators.

The smallest credit cost group, less than \$300, used only 7.4 per cent of its gross margin on side lines to take care of the costs for credit, while in those associations sustaining average credit costs of \$1,651.88, 46.3 per cent of the gross margin was used to meet credit costs. Certainly those associations wherein one-third to one-half of the total gross margin was used for credit costs had difficulty in making the side lines bear their share of the operating load. As a desirable standard 12 per cent of side-line sales is acceptable to meet expenses and 3 per cent for the net profit. This 3 per cent is one-fifth of the total desirable margin of 15 per cent. If these desirable standards are set up for an association doing little credit business then only 20 per cent of the total gross margins can be used for credit costs until the side lines begin to show net losses. Compared with these desirable standards, 29 of the 51 associations showed credit costs in excess of 20 per cent of side line gross profits. The average credit costs were 20.7 per cent of average gross

profit on side lines; thus, the average association just about broke even as far as net profit on side lines was concerned assuming that the above desirable standards, as outlined and widely used, are for an association doing little credit business.

It follows then that the gross margin on side lines should be higher in the liberal credit elevators as compared to the strict credit policy concern. Figure 6 shows that these margins do not increase in proportion to the increased per cent of margins which were required to meet the costs for credit extension. However, they do show an irregular tendency to increase slightly.

Referring again to Table 13, these credit costs are compared to the gross margins on total side-line sales when in reality they should be borne by the credit sales alone. The average credit sales were 43.5 per cent of total retail sales. The average gross profit on credit sales was \$2,521.39 compared to the average cost for credit of \$1,201.31. Credit costs were almost 50 per cent of the gross margins on credit sales. This would leave about 7.5 per cent of credit sales for other expenses and 7.5 per cent of credit sales for credit costs and nothing for profit, using the desirable total gross margin on side

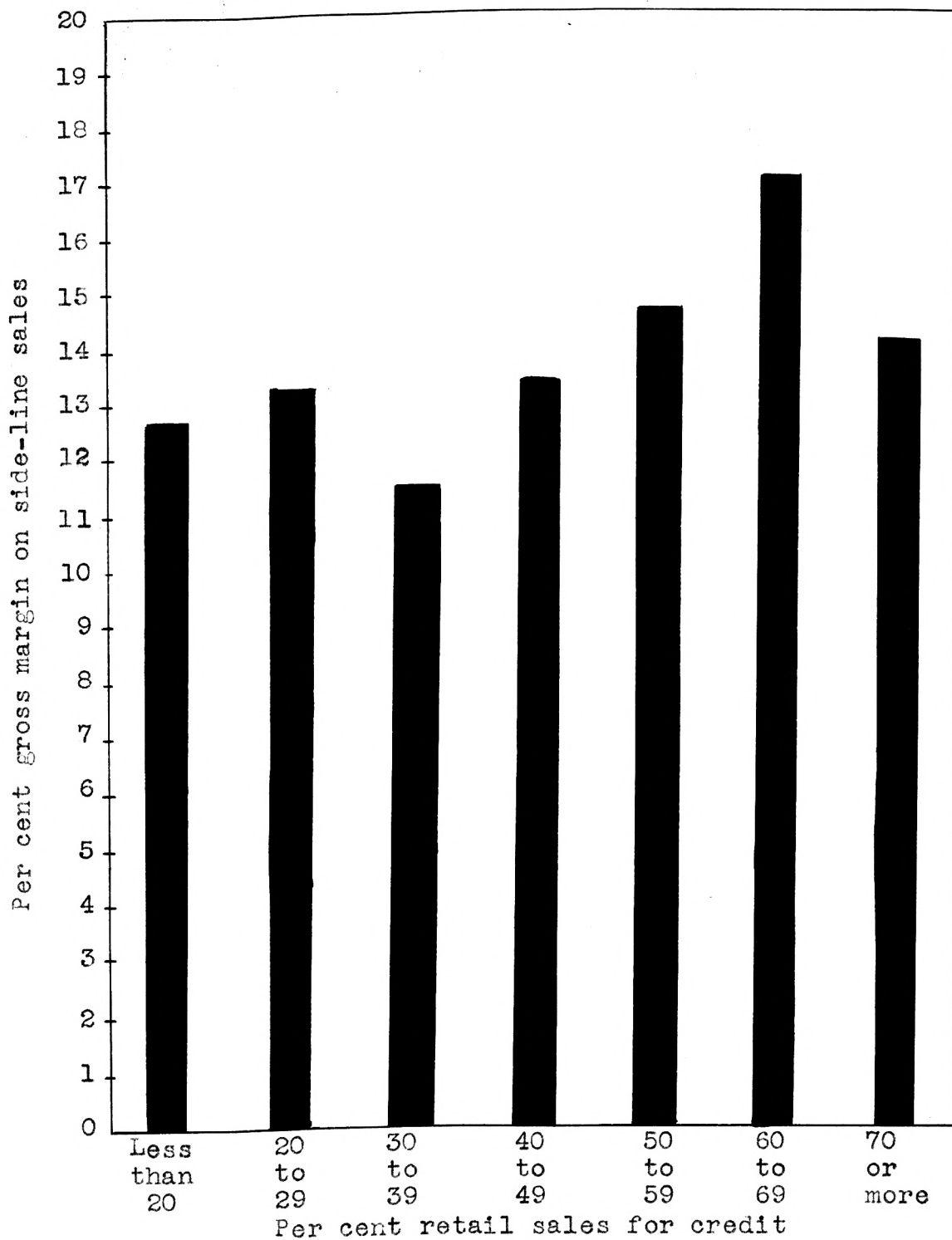


Figure 6. Relation between credit policy and gross margin on side lines in 51 southwestern Kansas elevators, 1936-37.

lines of 15 per cent as previously mentioned. It is quite doubtful whether any of the side lines can be handled for 7.5 per cent of the side-line sales as a gross margin unless extremely large volume is obtained and the side lines are of particular commodities such as feeds.

Credit Costs and Borrowed Capital

That retail credit is a costly service has been brought out by the foregoing analysis. Table 14, however, reveals that those associations restricting credit somewhat, have higher notes payable in per cent of the total sales and in per cent of the current assets. In other words, those associations operating on a strict credit policy were not in as good a financial condition as those extending more credit. However, this may be another way of saying that those associations in poorer financial standing were forced to a cash basis by the creditors, or by the forced reduction in costs or by their own judgment in trying to solve their financial difficulties. Here again the use of the average may distort the figures of a frequency when one of the cases has an extremely large debt. This is the case with the frequency of 40 to 49 per cent credit business wherein

Table 14. Relation between credit policy and notes payable in per cent of total sales and of total current assets, 1936-37.

Credit policy (per cent credit business)	Notes payable in per cent of total sales	Notes payable in per cent of current assets
Less than 20	4.6	67.5
20 to 29	4.9	32.9
30 to 39	3.7	23.3
40 to 49	4.8	35.6
50 to 59	1.2	9.3
60 to 69	.2	1.5
70 or more	1.9	19.7

Other measures:

Average	43.3 per cent	2.8	21.7
Median	42		
Range:	Highest 80		
	Lowest 6		

one association showed \$54,027.49 notes payable and the other eleven below \$11,000. There is, however, a tendency for the liberal credit policy elevators to be in a stronger financial condition. It may be that they extend credit in spite of the costs for doing so because of their larger volume of business.

Credit Policy and Volume of Business

Figure 7 shows the relationship between percentage of credit business and volume of business commented on in the previous paragraph. There is a tendency for the liberal credit policy concern to show a larger volume of business than the strict credit policy association. This probably is not as a result of the additional credit extended, if the results of the survey of the 10 elevator sample previously discussed are adequate to serve as the basis for judgment of all southwestern Kansas cooperative elevators. Other reasons why this additional volume of business probably was not due to the credit extended are discussed on pages 46 and 47 in connection with Table 10.

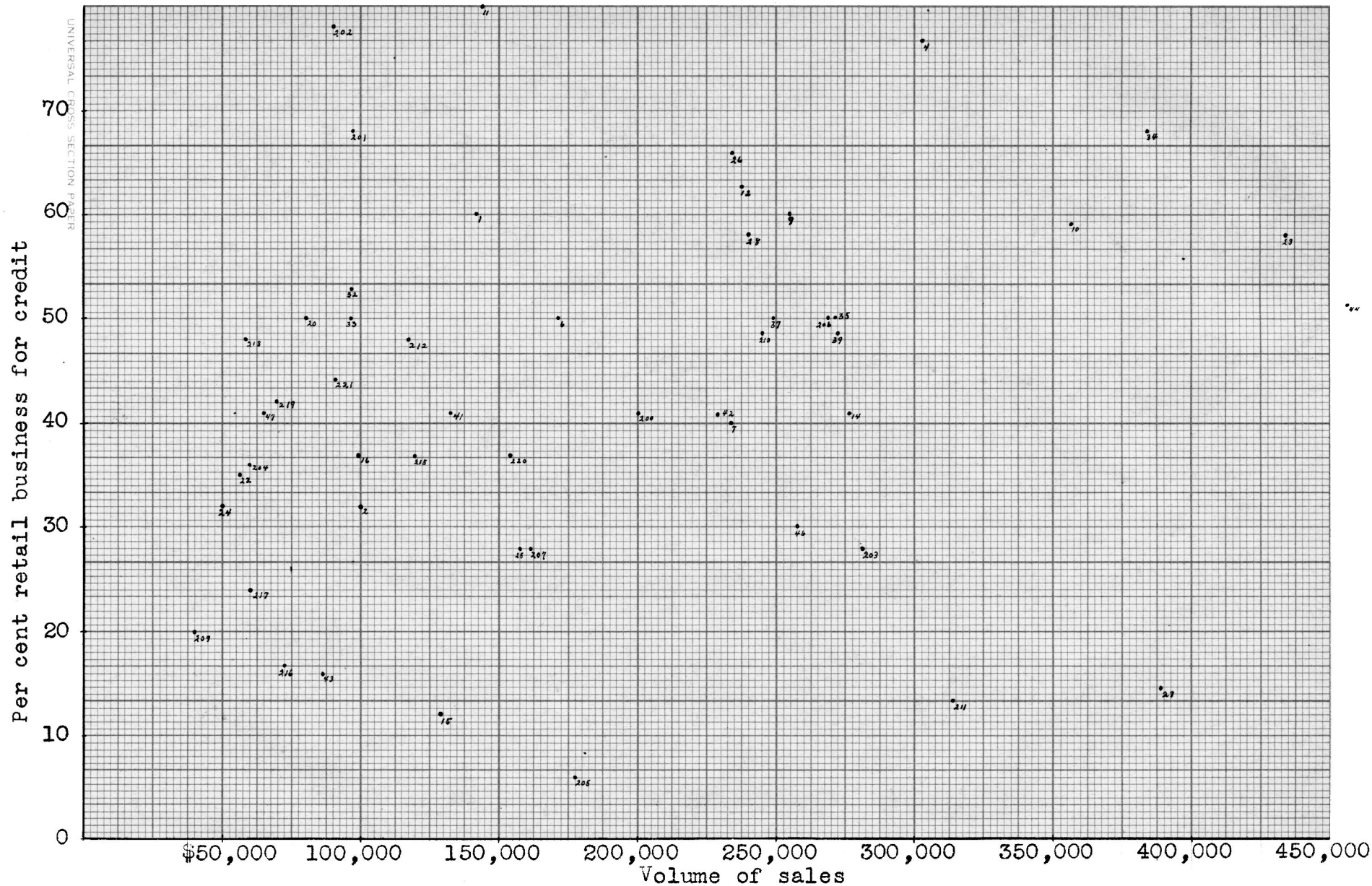


Figure 7. A comparison of the per cent of retail business sold for credit and the total volume of sales in 51 southwestern Kansas elevators, 1936-37.

RELATION BETWEEN CREDIT FACTORS AND EFFICIENCY

As a means of making the conclusions of this study more objective, some means was sought which would point out the position with respect to credit of what might be termed the "better elevators" of southwestern Kansas. The measurement of the elevators to determine the relative position of one as compared to another is a difficult problem. Most cooperative elevators of this state and others were primarily built to save the members money and to deliver as good or better service than existed before the cooperative was organized. Probably there are less differences between associations on the latter purpose than the former and in addition the service a cooperative offers compared to the competitor is much a matter of opinion and difficult to measure. Again the idea of saving money either through the narrowing of margins, paying back profits due to excess margins as prorates, or the operating of the cooperative for less expenses per unit of volume seem to be the objectives of most cooperative elevators.

Combination Efficiency Index

Net profit and operating expenses are two measures of the success of a cooperative association. But net profit per member if taken alone is not adequate nor is net profit per dollar of sales or per dollar of net worth, nor is operating expenses when considered alone an adequate measure. By the use of the index number as an abstract percentage relationship in each instance, these elevators were arrayed on each of the net profit factors and on the expenses of operation and then combines, as will be explained later. The net profit per active member was determined and the elevators arrayed from largest to smallest net profit. Then with the median as a base, the index of each of the elevators from the highest to the lowest was calculated and all elevators with a profit above the median obviously showed more than 100 and those below the median had an index of less than 100.

The number of members actually patronizing the association was used rather than the total number of members, thus, leveling out the differences in loyalty of members. In the eyes of a member this probably measures success as adequately as any of the factors.

Similarly the net profit in per cent of sales was determined and the elevators arrayed on this basis. An index number was calculated, using the median as a base. The amount of net profit an association is able to show per dollar of sales probably has considerable to do with the success of a business in the eyes of any layman. A manager is considered successful if he makes money although volume directly affects this comparison just as it does other net profit factors. Volume probably should enter into an efficiency index for without volume equal to normal capacity an association lacks efficiency.

The index of the net profit in per cent of the net worth was likewise calculated with the median as the base of the index. Every dollar invested in a business by its stockholders should be made to earn money, thus, the more times a dollar of merchandise can be turned the more efficient is that business.

The figuring of relative efficiency of the elevators with respect to costs of doing business was slightly different from the calculation of the other factors. Here an index number was calculated using certain desirable standards for expenses of operation. These standards are those being used in the survey and analysis work which

is now being conducted with elevators of this state by the Division of Extension and the Department of Agricultural Economics of the Kansas Agricultural Experiment Station. The standards for gross margins are 5 per cent for wheat, 7 per cent for other grains, 15 per cent for side lines, and a standard of 3 per cent of total sales for total net profit. Each commodity should be made to stand its own expense and contribute equally in percentage to the net profit. Thus, 3 per cent for profit was deducted from the gross margins on each of the above classes of commodities leaving the per cent margin considered as a desirable for expenses or for wheat, 5 per cent less the 3 per cent leaves 2 per cent for expenses, other grains then 4 per cent and side lines 12 per cent for expenses. These percentages were multiplied by the respective volume of sales and the totals comprised the desirable amount for expenses for that concern. Using the actual expenses of operation as a base, the index was calculated which obviously was above 100 when the association's expenses were less than the desirable.

These four index numbers were combined and averaged and the results arrayed. The association with the highest index number was used as the "best" elevator. The index number thus obtained was termed the "combination efficiency

index".

It must be realized that the time of the audit, size of the crop, strength of competition, price levels, and many other things, which change from year to year, may place one elevator further up or down the array more than conditions over a period of say 10 years of the operation of that elevator would justify. However, the credit factors that were used were for the most recent crop year; thus, the combination efficiency index should be figured on the current year. Furthermore, the business during the 1936 crop-year was fairly typical over most of this territory. The determination of a more complete "combination efficiency index" is beyond the scope of this problem. No doubt other factors than profit and expenses should be taken into account. However, these appear to be the more important measures of efficiency.

Combination Efficiency Index and Certain Credit Factors

As a means of determining how the elevators arrayed on the basis of "combination efficiency index" stood with respect to certain credit factors, a scatter diagram with total receivables is shown in figure 8. Although no

outstanding relationship appears, there is some showing of larger receivables being carried by the less efficient concerns. This relationship shows up in spite of the larger retail sales by the more efficient group. Figure 9 comparing the current receivables in per cent of the charged retail sales to the combination efficiency index, shows somewhat more of a relationship of higher current receivables per volume of charged sales among those elevators having the lower index.

Figure 10 shows that the elevators with the higher index have less notes payable compared to receivables and figure 11 illustrates a similar relationship to total liabilities; that is, the higher receivables in per cent of total obligations tend to be associated with the elevators having lower indexes. Quite logically the elevators with higher indexes would be in a stronger financial condition and any comparison with notes payable would show thus. However, these elevators with higher index numbers could extend credit at less costs as compared to elevators with lower indexes from the interest expense standpoint.

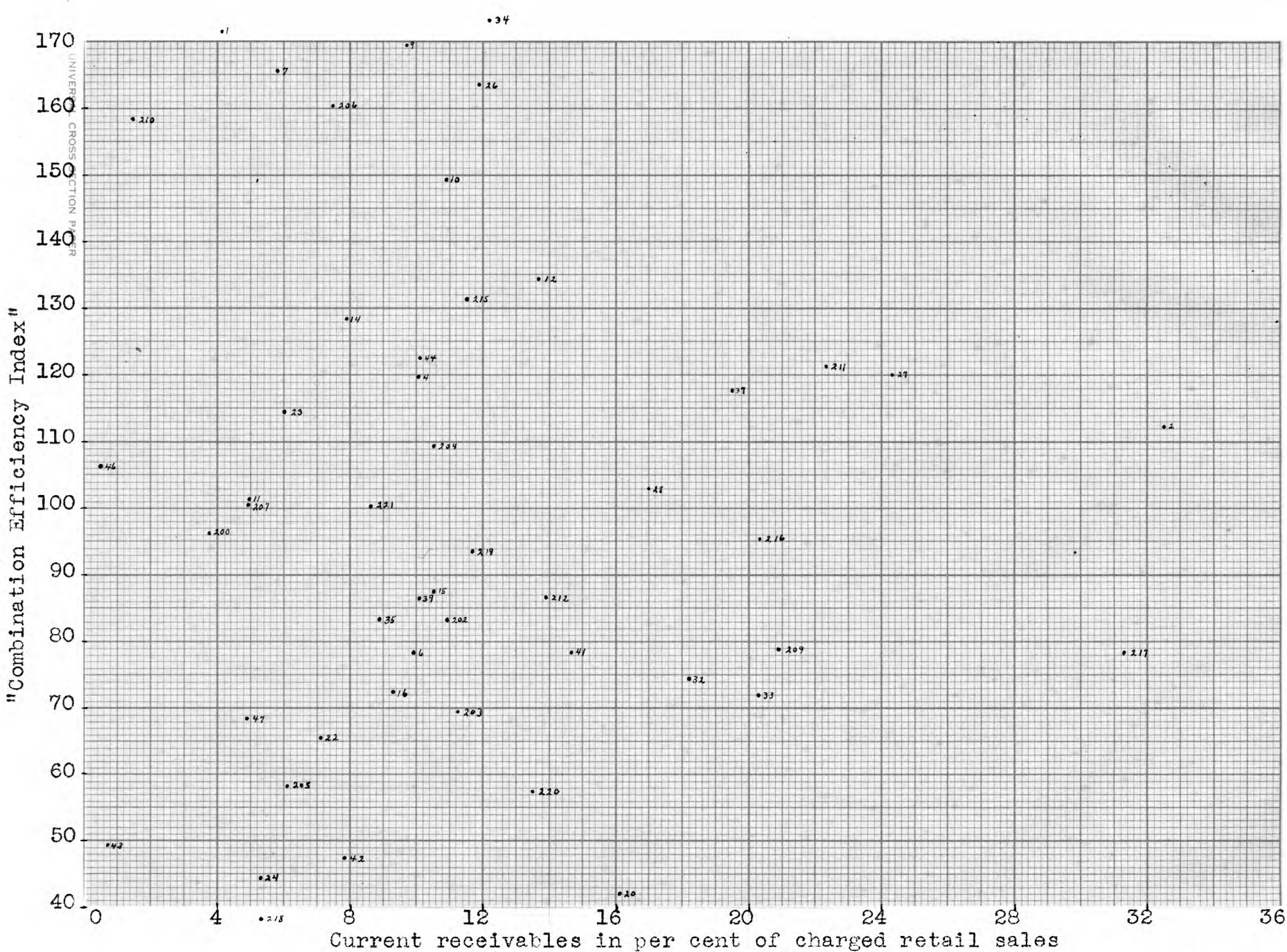
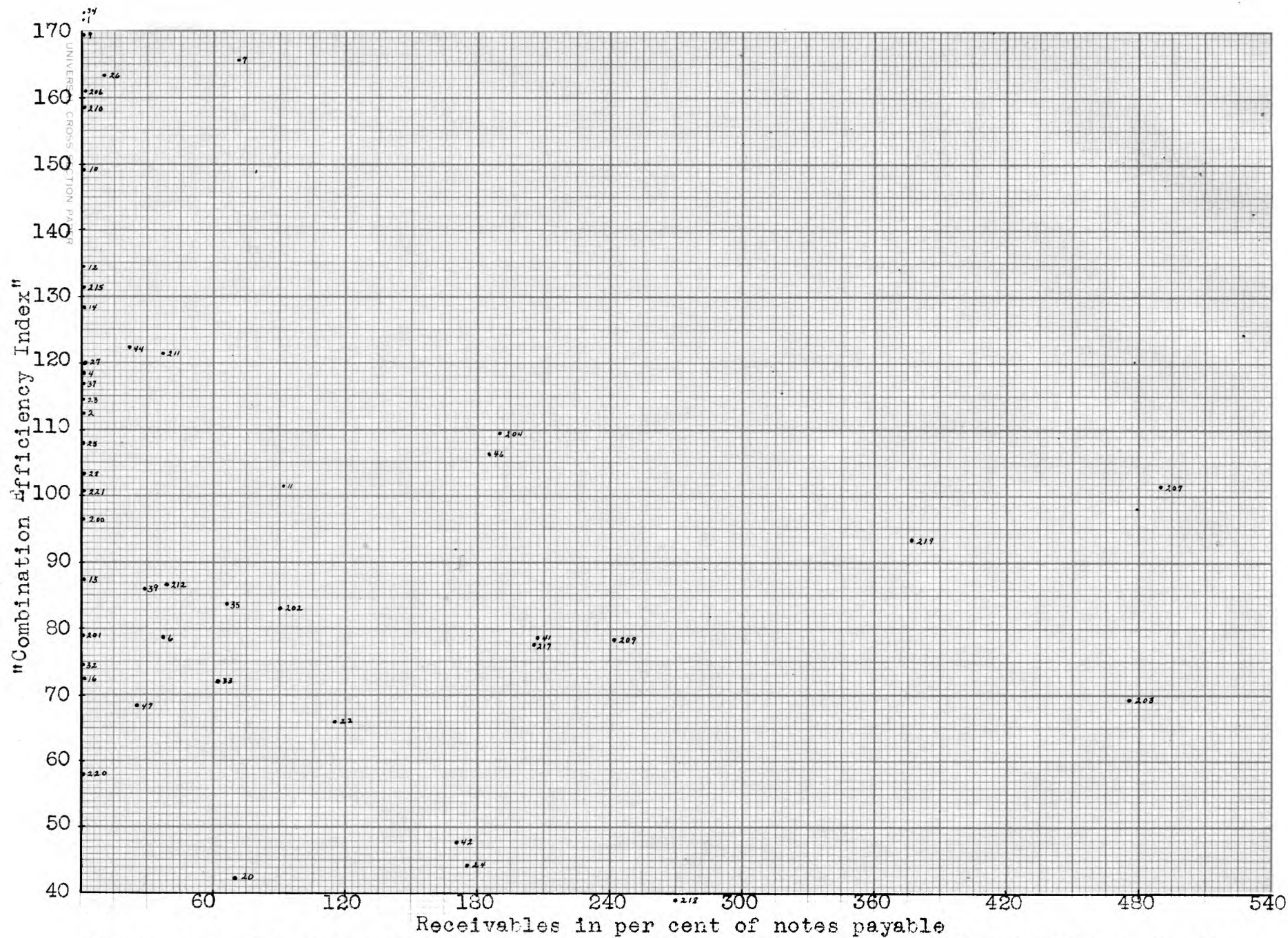


Figure 9. Relation between the "combination efficiency index" and current receivables in per cent of charged retail sales in 51 southwestern Kansas elevators, 1936-37.



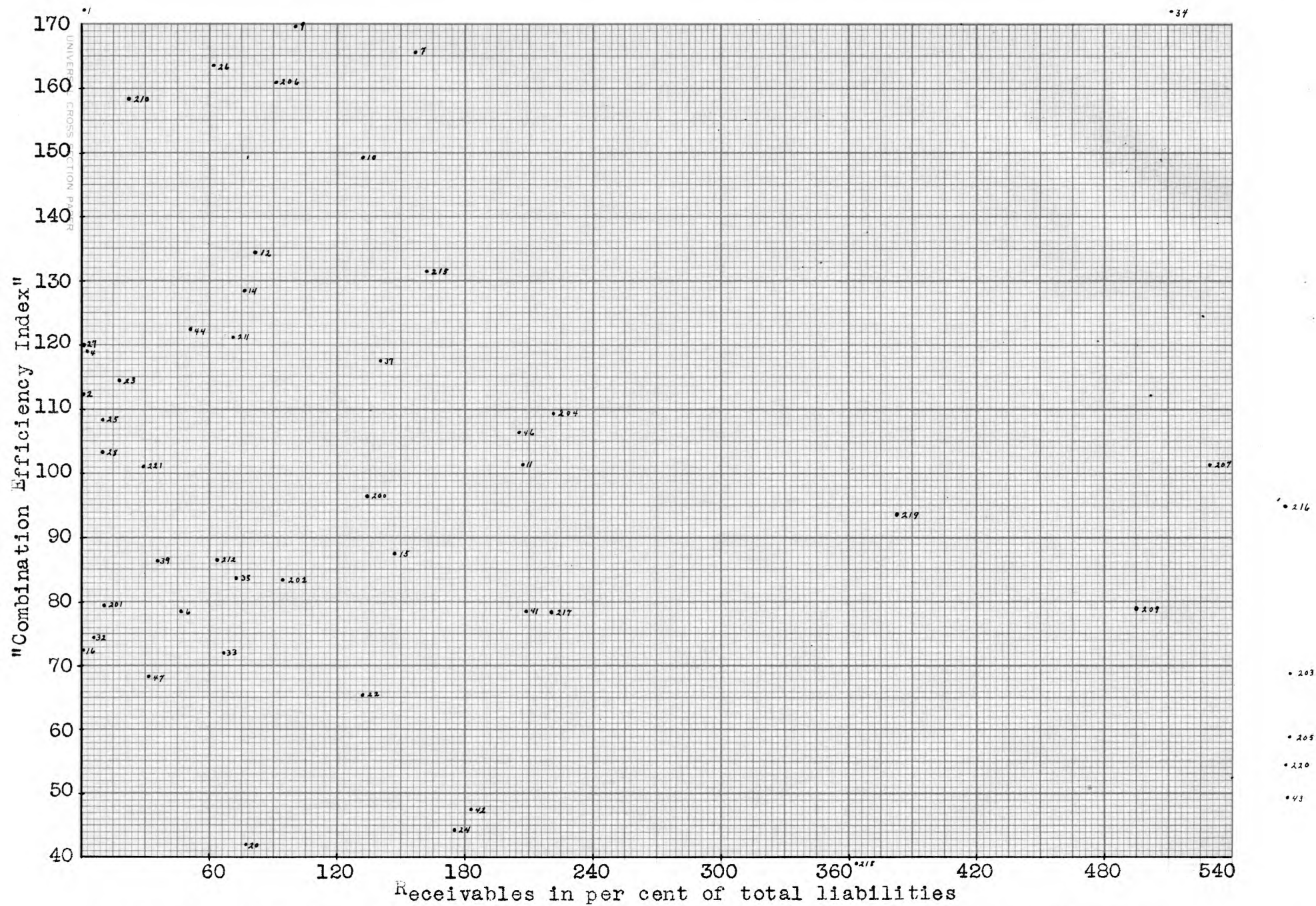


Figure 11. Relation between the "combination efficiency index" and receivables in per cent of total liabilities in 51 southwestern Kansas elevators, 1936-37.

Combination Efficiency Index and Credit Policy

In figure 12, showing per cent retail sales for cash compared to the combination efficiency index, there seems to be some tendency at least for the whole group to show a greater percentage cash business associated with the elevators with a lower index. However, it should be noted how definitely certain characteristics will cause elevators to group themselves together and when these elevators are shown separately there seems to be the opposite relation, that is, the higher percentage of cash associated with the elevators with a higher index. The average capacities of the elevators per group on the scatter diagram tend to become greater from the top group including elevators numbers 1, 9, 34, and 26, proceeding to the right and down until the lower two groups are reached which have average capacities of 80,500 bushels and 82,250 bushels compared to the first two groups with average capacities of 31,625 bushels and 17,785 bushels respectively. The total sales tend to decrease from the top to the lower group, being \$253,718.49 and \$256,052.48 for the top two groups respectively and gradually lowering until the lower two groups averaged

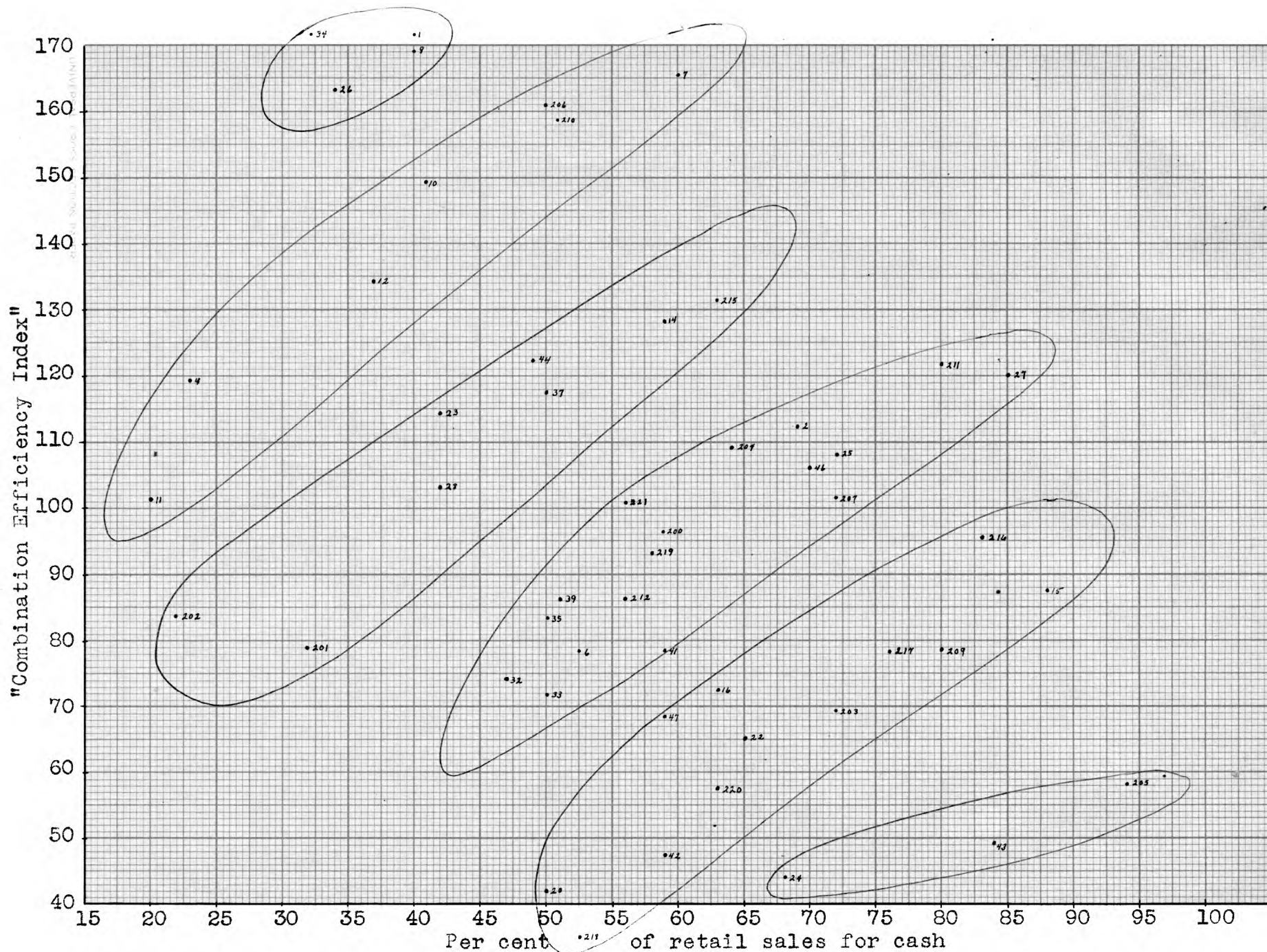


Figure 12. Relation between the "combination efficiency index" and per cent of retail sales for cash in 51 southwestern Kansas elevators, 1936-37.

\$116,796.30 and \$98,564.36. A similar relationship exists with total retail sales.

Figures 13 and 14 separate the elevators into "small capacity, small volume, and small per cent retail business of the total" and "small capacity, large volume, and small per cent retail business of the total" respectively. By separating the elevators on this basis there is some apparent relationship between low receivables in per cent of current assets and high index.

These comparisons of credit factors and the combination efficiency index assist in formulating conclusions since it has been shown under costs for credit and credit and financial stability, that to extend any great amount of credit a cooperative undertakes quite an operating load. Although for the most part these relationships point out that less credit was being extended and receivables carried per dollar of liabilities, of retail sales, and of current assets, they also bring out the fact that many successful elevators and those with a high index extend much credit and likewise many elevators in the lower index group are operating nearly or on a cash basis. In the former instance, however, it would appear that the great volume of business which this group has because of large memberships,

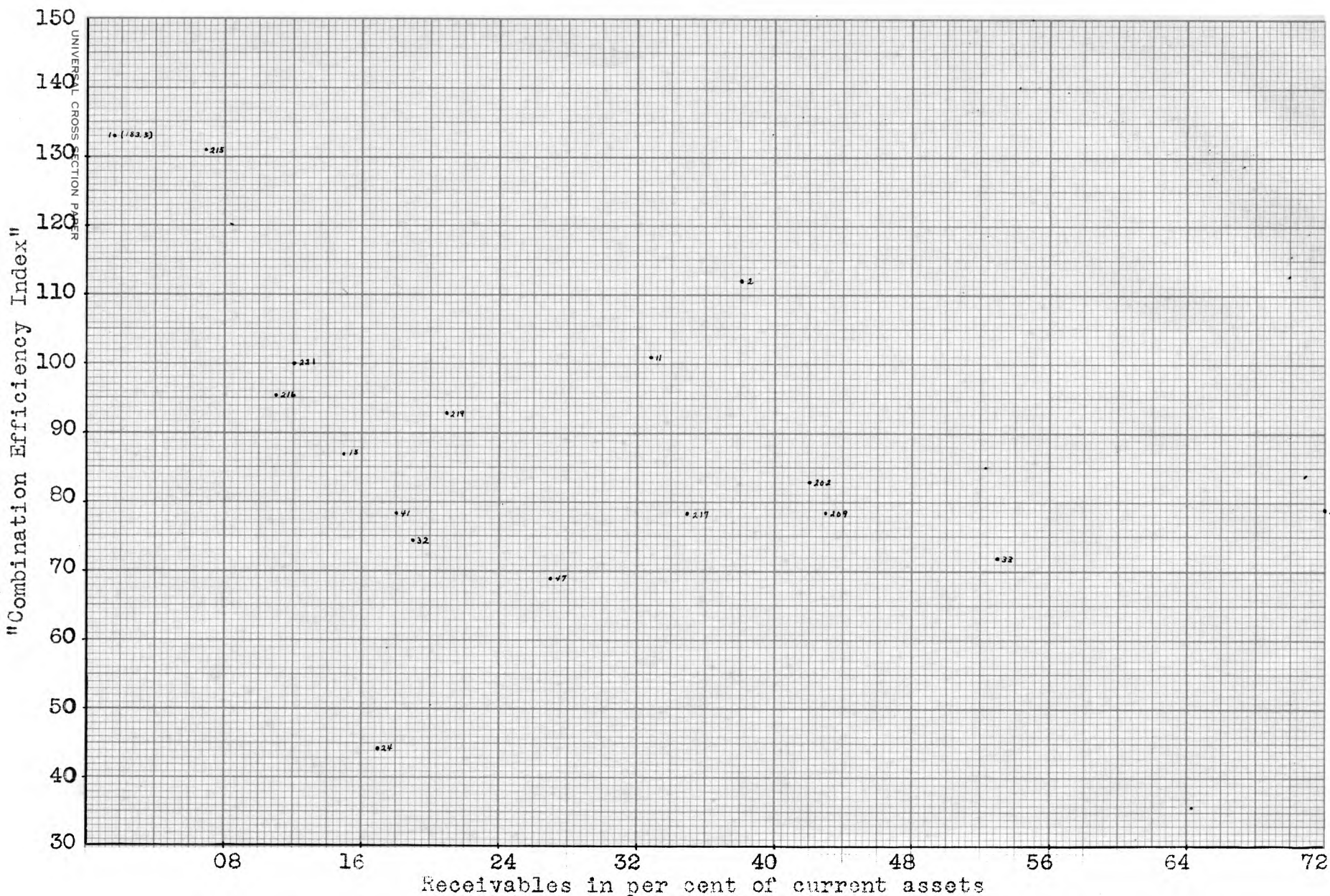


Figure 13. Relation between the "combination efficiency index" and receivables in per cent of current assets in elevators of small capacity, small volume and small per cent of retail sales, 1936-37.

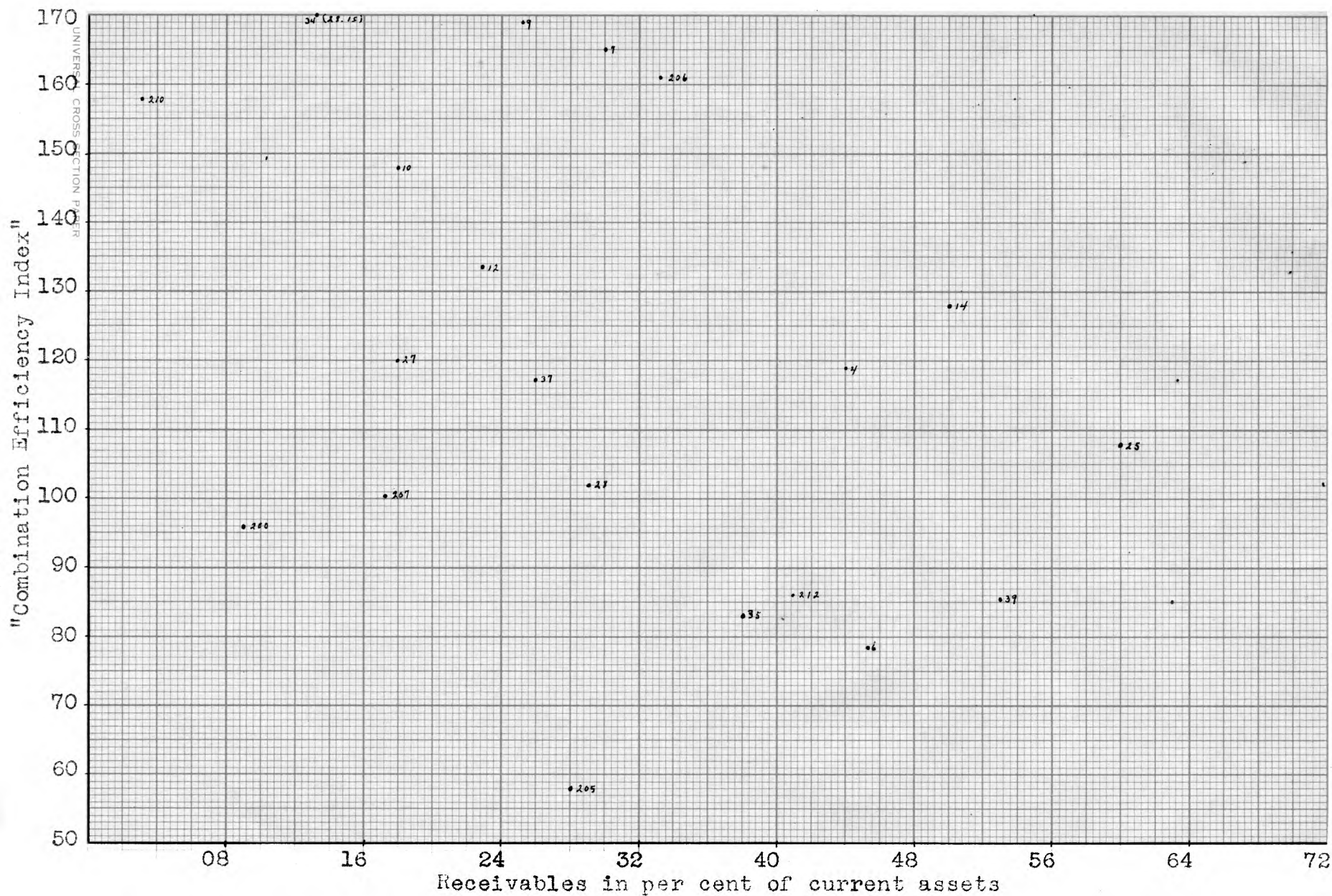


Figure 14. Relation between the "combination efficiency index" and receivables in per cent of current assets in elevators of small capacity, large volume and small per cent of retail sales, 1936-37.

good crops, perhaps less competition and other reasons tends to cover up the expenses for credit and the prorates at the end of the year because larger profits keep receivables under control. In the group of elevators with a low index which were nearly on a cash basis, the reasons for this low index were probably either other than credit or else credit placed them in a weak condition and therefore they were forced to restrict credit.

CREDIT CONTROL

One of the practices recognized by the first successful cooperatives was "cash trading." As can be seen from the foregoing study the cooperatives of the United States (if Kansas cooperatives are typical) have for a great part failed to follow that sound rule. In general, Americans have become accustomed to credit and demand it and farmers especially with high investments in inventory and operating capital at times and with the wide fluctuations in income certainly do need credit. The question is, who should furnish those credit needs, credit institutions or sales institutions? There is little question but that cooperative credit is beneficial and successful but it is doubtful if credit and farm supplies should be furnished by the

same cooperative association. Many associations claim credit must be extended to meet competition while others say the competitor changes to a cash basis with the cooperative or that they have little trouble holding trade when they can declare larger prorates because of savings in expenses and of being able to take cash discounts and can lower prices or offer more attractive goods by being on a cash basis. The claim is often made that credit should be one of the services offered by the cooperative and that the members are willing to pay for that service, while others find difficulty in turning down poor pay patrons or even in determining ability to pay and find further difficulty in keeping the membership satisfied when they find they are paying their neighbors bills and a high price for the service. It is estimated by managers that 55 per cent of the patrons practically always pay cash. Some shareholders feel they are entitled to credit up to the value of their shares while the cooperative feels that the stock was not paid for by the member in advance for a single order of goods but to keep a continuous supply of goods always on hand. The claim is made that modern business must extend credit and that every great business in the country does extend credit and that it serves as a real accommodation

and facilitates business. On the other hand this statement has mainly to do with wholesale rather than retail credit, and furthermore, the price of this accommodation is high at times. Others feel that the place for credit requirements to be served are cooperative credit institutions, and that few elevator managers can be good salesmen and money lenders at the same time. Again, the inequity of taking the money of all who belong to the cooperative and loaning it to a few leads to discontent. Many members, however, feel the need for the accommodation credit affords to the extent that they haul produce to the elevator before a busy season to take care of the supplies to be purchased. Most members do not resent having to pay cash if they are assured that all others are doing the same.

Past Credit Policy Tendencies

Considerable amounts of receivables were accumulated in some associations through the practice of placing a truck driver on a commission and not restricting credit. The driver sold to customers far and wide with no thought of collecting. Machinery has been a commodity which contributed to high receivables. Machinery sales are large

and have to be financed in many instances. But those who received the credit often stood only the costs for interest and when poor crop years appeared, the bad debts, collection expense and losses on reclaims more than balanced the profits at time of sale. At present most cooperatives that sell machinery require the machinery company to send an outside collector in to get payment from slow paying patrons. Accounts were often incurred in good times without close supervision and then difficult collections appeared in short crop or depression years.

Present Credit Policy Tendencies

Most cooperative associations of southwestern Kansas have made an attempt to adopt some kind of a credit control policy within recent years. Of 37 associations reporting in 1935, 11 reported operating on a cash basis, 1 on cash in 10 days, 17 cash in 30 days, and 8 had no particular policy. In many association's offices, such signs as "cash is cash", "we are on a cash basis" are conspicuous. This indicates a tendency even though not adhered to strictly. The fact that credit was one of the topics of discussion in 14 of the 51 elevator's annual meetings in 1936 again

shows that it is causing comment and is a problem requiring the attention of all the members. Of the 51 elevators 33 reported that competition did not influence them in deciding whether or not to extend credit. Gas and oil were the only commodities in which competition had any effect on credit policy in 5 associations and in 5 others competition more or less forced them to extend some credit. One association stated that competition would take away credit business until the cooperative could declare a prorate again.

Many boards of directors and stockholders are attempting to work out the best credit policy for their association. Often they hesitate to adopt a cash basis immediately because it involves too radical a change, or that it will take time to change the community's credit habits, or they want to see what competitors will do on a modified cash basis, or they are afraid of offending good pay and substantial patrons, or the board members themselves hesitate to cut off their own credit, as well as for other reasons. A few organizations in Kansas report having tried a cash basis for awhile but failed to stick to it for no particular reason given and still a few others have reported adopting a cash basis and lost a little business temporarily until the people understood the new policy and its

advantages, then business actually increased. So it follows that if a cooperative on a cash basis will spend the time on educational work among the members that is spent on credit when on a credit basis, business will actually increase. Iowa (15) reported an increase of 15 per cent in the volume of business of 28 companies adopting a strict credit policy. Records from southwestern Kansas showed no appreciable loss or gain in business in those associations adopting a strict credit policy as compared to those making no change. Although no attempt has been made to show conclusively that business would increase any great amount if a strict credit policy were adhered to, certainly these impressions, estimates, and figures from Kansas as well as Iowa tend to show that there is little danger of actually losing business if a strict credit policy is properly administered.

Difficulties in Restricting Credit

In answer to the question of what commodities were the most difficult to keep on a cash basis, a majority of the elevators placed gasoline and oil in first place, followed by coal in second place. Feeds were in a strong third place

and 10 elevators stated that there was little difference in difficulty of commodities to keep on a cash basis. The main reason for difficult collections in gasoline and oil at the time of purchase is that delivery often is made to the field or to the farmstead when the customer is away. It is hard to turn a customer down who needs coal immediately and will try to pay for it later. Furthermore, in answer to the question, "Why will not a cash basis work in your association?", 19 managers stated the reason that the community is accustomed to credit and has the habit, 12 stated that gasoline and oil are commodities for which it is difficult to collect at time of delivery, while 11 others stated that there was no reason why it wouldn't work. Other reasons given by one or two elevators each include that the farmers have no cash between harvests, that the board members want credit, and that competition forces the elevator to a credit basis.

In answer to the question of how credit extension affects operations, 31 answered no effects, 12 that interest on payables was burdensome, and others that inventories were low, that operating capital forced passing of discounts on purchases (only 7 elevators reported passing of discounts) and overdrafts were costly and embarrassing.

Some of the reasons given for restricting credit were to improve financial stability, to reduce expenses of operation, to gain volume, to pay off borrowed money, to carry larger inventories, to promote better harmony among members, to keep from passing up discounts on purchases, to strengthen operating capital, to be better able to stand price declines, to refinance indebtedness, to meet competition, and to eliminate disputes over accounts.

Collection Methods

The collection of old receivables is perhaps as much of a problem among elevators as current credit policies, since 40 per cent or \$2,010.26 of the accounts and 45 per cent, or \$1,890.35, of the notes receivable were more than one year old and nearly 25 per cent or \$1,026.45 of the notes receivable were more than two years old. Many managers believed it was not their task to try to collect these old accounts and notes since some of them were incurred by previous managers. Some managers were quite dubious about pushing collections for fear of causing the slow paying patron to become dissatisfied. Because of those reasons and others, 8 elevators reported that the directors

were assisting in collection work and 6 others used outside collectors. The most frequent rate of compensation for outside collectors was 25 per cent of the amount collected.

Various methods were used in collection work in these 51 southwestern Kansas elevators. The method most frequently given was to send out statements periodically followed by personal calls where needed. One of the fundamentals of successful granting of credit and one of the foundations for good collections is to have a definite understanding at the time of sale. Some elevators reported deduction of the account from proceeds from wheat, others set a limit of 30 days and if the account was not then paid, additional credit was restricted entirely until the bill was paid, other elevators felt that educational work helped considerably and others hired outside collectors. Almost all elevators followed the practice in one way or another of applying the prorata to accounts and notes receivable before any payment was made in cash.

Only 4 associations were using discounts for cash as an inducement to cash trading. In reporting opinions on the practice of using cash discounts, 28 managers were not favorable for one reason or another, 3 stated they felt it was not practical, 2 that it was unsatisfactory, 1 too much

trouble, 2 that margins were not sufficient, 1 that customers wanted the discount after three or four days. This made a total of 37 managers who were not favorable to cash discounts while 8 were favorable, 3 considered it not necessary, and 1 would rather use carrying charge than cash discount. However, interest was seldom collected on accounts. Probably another reason for skepticism concerning cash discounts is the fact that when time is given on these definite bases the customer feels less obligated to pay for quite a lengthy period of time similar to the disadvantages of turning accounts into notes, that is, the customer worries less about paying the bill and in addition collection can't be made except voluntarily until the due date of the note.

The problem of using cash discounts and the attempt to cut down bookkeeping sometimes results in the carrying of charge sale tickets in inventory until they are paid. This procedure is advisable in but few instances and usually results in more losses through bad debts or carelessness than the extra bookkeeping costs. Few elevators in this group, however, handled tickets in this manner.

As another means of credit control, some elevators have made the manager personally responsible for any

accounts unpaid. This procedure does not work as much to the disadvantage of the manager as might be assumed at first thought. Many managers welcome such a ruling, because it makes them more cautious as well as gives a tangible excuse for not extending credit. Furthermore, when the farmer realizes that the manager must personally pay all bad debts there is greater effort on his part to pay the accounts in a short time. The manager assuming a debt personally also may work with the customer who "leaves his pocket book at home."

Some managers have found difficulty in dealing, for example, with the customer who sends his son after a load of feed. To get a definite understanding at time of sale the manager often writes across the ticket "will be in to pay Saturday" and asks the son to hand that to his father.

One frequent reason given for difficult collection was the extending of too much credit to one man. Of 43 elevators having notes receivable the average size of the largest note owed by any one individual was \$583.76. In addition to this note or notes owed by this individual, he probably owed an account. The average elevator having notes receivable had loaned to one man in form of notes receivable 11.7 per cent of its total notes receivable,

2.5 per cent of its current assets and 3.3 per cent of its capital stock. The largest note held by one individual in the 51 associations was \$2,900. In too many cases the largest account or note was owed by one of the members of the board of directors. This certainly is not much encouragement for other members to pay their bills promptly.

Few associations brought suit against slow paying patrons during 1936-37, but 11 associations reported they were favorable to the use of this procedure not only from the standpoint of the collection of large bills but from the psychological effect that it has on the remainder of the slow paying customers.

In Table 2 of the appendix can be found the estimates of collectibility of accounts and notes receivable. The question of collectibility is divided into the per cent estimated collectible immediately and after harvest. The accounts were estimated 45 per cent and 82 per cent respectively and 21 per cent of the notes receivable were estimated as collectible immediately and 50 per cent after harvest. Although these estimates are only the summarization of a number of opinions, they undoubtedly do reflect the status of the receivables to a certain extent. With only 50 per cent of the notes receivable even collectible

after harvest, probably a large number of them will never be collected. Again, if the associations were badly in need of funds to meet some emergency there is little possibility of collecting more than 45 per cent of the accounts and only about 20 per cent of the notes, on short notice.

Changing the Credit Policy

Making any major change in policy such as from a credit to a cash basis or restricting credit to some credit control plan, involves some definite steps in procedure. First of all the board of directors should formally declare the policy change in the form of a motion, then let the stockholders know of the change and why. Too much emphasis cannot be placed on informing the members of the reasons for the change. It is obvious then, that the management should be thoroughly sold on the plan and the change. The terms of the credit control plan or the cash basis should be clearly set forth and rigidly adhered to. Lax enforcement of any detail invites the wedge of dissention. Loss of volume for a temporary period should not be viewed with alarm but should be the urge to more work among the patrons showing them the reasonableness of the change. With a

change in management or with a refinancing program or with the approach of the harvest season as the time for the new policy to be adopted less disturbances may result. The management needs, however, to consider local conditions as they relate to the above factors and arrive at the conclusions independently.

SUMMARY

Retail sales in the 51 southwestern Kansas elevators used in this study averaged \$51,604.27 per elevator of which 43.3 per cent was sold on credit. The per cent of credit business ranged from 6 to 80 per cent of total sales. The average total receivables was \$8,847.72 while the median was \$5,124.71; thus, the greater number of elevators were below the average. Accounts receivable were 55 per cent less than one year in age and notes receivable were 28 per cent current. Whereas, retail sales were 28 per cent of total sales and charge sales were 43 per cent of retail sales as well as 12 per cent of total sales, the receivables were 50 per cent of capital stock and 37 per cent of current assets.

Total receivables were turned on the average once each 60 days and current receivables maintained a turnover of once each 18 days; thus, the old receivables affect the credit situation to a great extent. Money may not be borrowed expressly for the purpose of extending credit but when it is borrowed to replenish inventories and these in turn are sold on credit, the loan finally comes to be represented by the receivables. Average total liabilities were slightly larger than average total receivables.

The average credit costs per association were \$1,201.31. These costs were 13.6 per cent of the total receivables, 2.3 per cent of the retail sales, and 5.4 per cent of the charged sales. Of this total \$334.24 was for interest, \$424.69 for bookkeeping and collection expenses, and \$442.38 for bad debts. In addition, these credit costs averaged 20.7 per cent of the gross profits on side lines and ranged from 2.5 per cent to 406 per cent of the gross profit on side lines. In 8 cases the credit costs alone were in excess of the gross profit on side lines. These credit costs were 14 per cent of total expenses and 6.8 per cent of outstanding stock.

Credit costs were nearly two-thirds larger per dollar of charged sales in the strict credit policy associations

than in the liberal policy associations.

The more efficient elevators as measured by the "combination efficiency index," were doing somewhat less credit business per dollar of sales when associations were grouped according to similar characteristics such as size of elevator, total volume, and percentage of side lines. The more efficient associations show a faster turnover of current receivables revealing a better job of collecting, due to such factors as higher prorates, managers being better credit men, and greater volume of marketing business. The elevators possessing greater efficiency also had less notes payable and total liabilities compared to the receivables. That credit is associated with less efficient operation is quite logical in view of the excessive costs, loss of business, and dissatisfactions that result when credit is extended.

A 10-elevator sample chosen as representative credit granting associations reported an average net loss of business due to extension of credit. Of 35 southwestern Kansas elevators reporting in 1935, 11 reported operating on a cash basis. Although this basis was not always strictly adhered to, it does indicate a tendency.

Petroleum products were reported by managers as the most difficult commodities to keep on a cash basis. Credit affects materially the operations of many elevators through low inventory, large payables, and through passing of discounts. On the other hand 31 of the 51 elevators stated that credit did not affect operations to any great extent.

The problem of collections was nearly as big as that of credit control when 40 per cent of the accounts and 45 per cent of the notes receivable were more than one year old. A few associations were using discounts for cash or a carrying charge for credit as a means of credit control and of encouraging prompt payment.

Eleven and seven-tenths per cent of total receivables was in the form of notes receivable to one individual.

The problem of credit control and of collections is one involving many factors which deserve much deliberation and study by the management.

CONCLUSIONS

From the foregoing study the following conclusions are drawn:

1. The amount of receivables affects the financial stability of an organization. The extent to which the financial status is weakened is in direct proportion to the amount of credit granted.

2. Credit uses greater than its proportionate share of the total capital of the organization.

3. If the average association could turn its receivables into cash, nearly all of the liabilities could be liquidated or all the interest bearing liabilities could be paid off with more than \$3,500 left.

4. The costs for credit are excessive when 5.4 per cent of the average charged sale is used for carrying the receivable. Certainly the average association would find considerable difficulty in showing any profit at all on charged sales, and in many organizations the charged sales actually would lose money.

5. Even more injustices are involved when small amounts of credit are extended to a few patrons and not to

others since the costs for credit are borne by both the cash and credit customer.

6. Larger amounts of receivables, more credit business, and slower turnover of receivables are associated with less efficient operation when associations are grouped according to similar characteristics.

7. Experiences of those associations restricting credit show that a farmers elevator can be run successfully without credit.

8. There has been quite a definite tendency on the part of southwestern Kansas cooperative elevators in recent years to adopt some sort of a credit control policy.

9. Sending out statements periodically, personal calls and a definite understanding at the time of sale are methods used most frequently in collection work.

10. Probably the credit policy can be changed with less disturbance when the management is changed or at the time of some similar occurrence in the history of the association.

11. The above conclusions lead to one general recommendation which is that it is best to operate on a cash basis.

ACKNOWLEDGMENT

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LITERATURE CITED

- (1). Bell, E. J., Jr.
Current problems of Montana farmers elevators.
U. of Mont. Agric. Expt. Sta. and U. S. Dept.
of Agric., B. A. E. Bul. 226. 48 p. 1930.
- (2). Benton, Alva H. and Peightal, M. F.
Farmers elevators in North Dakota. N. Dak.
Agric. Expt. Sta. Bul. 206. 52 p. 1927.
- (3). Donaldson, D. N. and Hemphill, Perry V.
Operating practices of farmers cooperative
elevators in Colorado. Colo. Agric. Expt.
Sta. and U. S. Dept. of Agric., B. A. E.
Bul. 397. 59 p. 1932.
- (4). Durand, E. Dana and Jensen, J. P.
Farmers elevators in Minnesota 1914 - 1915.
U. of Minn. Agric. Expt. Sta. Bul. 164:24-28.
1916.
- (5). Green, R. M.
Membership, financial and operating status of
cooperative country elevators in Kansas 1931 -
1934. F. C. A. Coop. Div. and Kans. State Col.
Misc. Report 7. 32 p. 1936.
- (6). Green, R. M. and Rucker, Vance M.
Marketing problems of farmers' elevators in
Kansas. Ext. Circ. 106. 20 p. 1934.
- (7). Knapp, J. G. and Lister, J. H.
Cooperative purchasing of farm supplies.
F. C. A. Coop. Div. Bul. 1. 92 p. 1935.
- (8). Maughan, Orlo H.
Amount of store credit granted to farmers.
In Farm Economics. N. Y. State Col. of Agric.
Cornell U. 87:2108-2111. Jan. 1935.

- (9). _____
The cost of store credit. Cornell Ext. Bul.
349. 26 p. 1936.
- (10). _____
Cost of granting credit in 84 feed stores.
In Farm Economics. N. Y. State Col. of Agric.
Cornell U. 82:1976-1978. Aug. 1933.
- (11). Metzger, Hutzler and Price, H. Bruce
Economic aspects of local elevator organization.
U. of Minn. Agric. Expt. Sta. Bul. 251. 55 p.
1929.
- (12). Nelson, N. R.
A determination of desirable financial and
operating ratios for cooperative elevators in
southwestern Kansas. Unpublished thesis,
Kansas State College of Agriculture and Applied
Science. 108 p. 1937.
- (13). Post, R. E.
Farmers' elevators in the spring wheat area of
South Dakota. S. Dak. Agric. Expt. Sta. Bul.
282. 90 p. 1933.
- (14). Price, H. Bruce and Arthur, Charles M.
Management problems of farmers' elevators.
U. of Minn. Agric. Expt. Sta. and U. S. Dept.
of Agric. B. A. E. Bul. 224. 94 p. 1925.
- (15). Robotka, Frank.
Retail credit in Iowa farmers elevators.
Iowa Agric. Expt. Sta. Bul. 283. 53 p. 1931.

APPENDIX

Table 1. Some detailed 1936-37 data on 51 southwestern Kansas elevators used in the compilation of previous tables and charts.

Elevator number	Location	Accounts and notes receivable	Current assets	Capital stock outstanding	Total liabilities	Retail sales in per cent of total sales	Capacity of elevator	Side-line sales 1936-37	Retail sales 1936-37	Total sales 1936-37	Per cent retail sales for credit	Bad debts 1936-37	Total current receivables
1	Dillwyn	\$ 342.32	\$ 17,840.19	\$ 7,875.00	none	2.9	23,500 bu.	\$ 3,905.61	\$ 4,088.95	\$ 142,622.34	60	\$ 78.60	\$ 98.93
2	Macksville	4,319.16	11,221.10	7,700.00	none	4.8	25,000	4,613.26	4,813.26	100,412.10	32	0	500.00
4	Radium	9,247.22	20,871.73	9,725.00	270.24	12.6	16,000	32,888.71	38,168.15	302,884.84	77	222.09	2,945.93
6	Stafford Ind.	7,896.35	17,593.63	13,750.00	3,560.53	11.5	18,000	18,199.15	19,765.79	171,513.92	50	1,118.70	985.82
7	Stafford	6,326.54	21,044.62	9,625.00	9,954.03	18.8	17,000	31,831.42	44,034.60	233,895.60	40	214.96	1,032.02
9	Zenith	5,298.92	21,321.52	6,000.00	5,406.09	11.7	15,000	24,458.26	30,051.65	255,851.15	60	209.86	1,747.96
10	Burdett	9,070.22	51,922.74	10,000.00	11,997.96	31.0	15,000	110,317.15	110,539.77	357,677.98	59	0	7,076.36
11	Garfield	5,940.03	18,189.82	4,850.00	12,305.59	24.0	15,000	34,637.71	34,687.71	144,566.89	80	92.67	1,364.36
12	Rozel	5,712.04	24,334.58	25,100.00	4,656.67	23.8	30,000	55,979.17	56,479.17	237,748.40	63	0	4,899.38
14	Sanford	12,070.61	24,254.25	84,500.00	9,205.19	18.2	20,000	47,605.48	50,166.84	276,460.29	41	620.38	1,646.76
15	Vaughn	1,989.64	13,378.43	7,000.00	2,937.89	9.1	15,000	11,656.99	11,656.99	128,557.04	12	4.09	144.13
16	Cimarron	11,295.10	23,532.25	48,148.00	none	61.1	110,000	39,388.64	60,812.31	99,454.67	37	1,061.75	1,543.49
20	Haggard	16,281.22	19,915.92	15,625.00	12,294.85	30.0	50,000	21,550.91	24,140.00	80,507.91	50	0	1,960.36
22	Montezuma	8,340.54	11,781.07	15,000.00	11,107.99	61.1	17,000	28,645.74	34,236.48	56,047.43	35	0	850.00
23	Fowler	39,737.08	78,992.08	72,325.00	7,325.23	43.1	300,000	153,947.51	187,137.99	433,734.77	58	1,422.92	6,192.11
24	Bucklin	906.53	5,173.40	1,200.00	1,600.00	33.4	13,000	11,844.70	16,912.61	50,658.76	32	0	282.68
25	Spearville	21,768.23	36,038.66	22,925.00	2,527.94	38.4	20,000	50,514.06	60,514.06	157,667.40	28	38.45	8,342.00
26	Wright	26,318.81	46,006.37	18,300.00	16,493.99	41.8	65,000	87,834.67	97,834.67	233,772.68	66	218.14	8,000.00
27	Haven	3,388.02	19,152.29	3,720.00	none	7.0	17,000	6,779.49	27,151.62	389,749.53	15	13.45	998.05
28	Partridge	5,124.71	18,628.52	18,150.00	571.00	12.6	31,000	24,826.32	30,517.17	241,614.64	58	345.22	3,000.63
32	Gray	2,029.02	10,502.91	5,525.00	129.00	5.4	10,000	4,882.86	5,193.47	96,416.60	53	12.39	500.00
33	Trousdale	7,293.80	13,669.80	6,300.00	4,827.73	19.0	15,000	9,790.19	11,644.50	61,249.35	50	753.64	1,116.54
34	Bushton	5,240.49	40,874.32	6,000.00	26,482.49	16.8	23,000	62,868.60	64,374.77	382,627.80	68	88.14	5,240.49
35	Protection	8,862.81	23,283.95	4,650.00	6,553.11	30.8	18,000	68,983.29	83,328.21	270,345.70	50	3,307.63	3,695.45
37	Holyrood	4,659.89	17,949.17	10,525.00	6,529.30	2.7	27,000	6,118.16	6,638.01	248,405.42	50	153.66	838.64
39	Offerle	38,572.27	72,492.64	13,000.00	14,117.27	29.8	28,000	75,501.72	81,501.72	273,546.48	49	1,980.57	4,049.17
41	Albert	1,972.93	10,893.90	15,000.00	4,126.47	18.4	10,000	24,261.83	24,261.83	132,075.00	41	0	1,500.00 (est.)
42	Meade	32,011.63	66,880.04	59,025.00	58,835.11	75.3	152,500	143,045.45	172,318.61	228,748.33	41	0	5,572.82
43	Plains	1,150.82	14,002.42	23,870.00	24,261.48	38.0	237,000	25,858.90	40,999.42	107,999.53	16	31.21	51.96
44	Dodge City	30,333.39	70,842.82	27,800.00	15,320.06	52.3	55,000	202,752.23	239,632.80	458,194.15	51	914.87	11,847.86
46	Greensburg	8,462.55	23,419.22	25,050.00	17,431.83	30.6	97,000	57,471.41	79,017.19	257,883.46	30	0	133.47
47	Rush Center	3,983.16	14,766.99	14,640.00	1,271.60	37.9	10,000	19,927.60	25,785.44	67,969.89	41	381.46	516.75
200	Alden	1,292.25	14,294.85	12,525.00	1,737.21	31.1	21,000	34,678.86	62,309.79	200,461.31	41	0	980.00
201	Lewis	35,623.75	49,227.33	7,700.00	3,588.65	27.0	32,000	20,296.87	26,273.44	97,311.43	68	1,354.41	9,998.89
202	Bloom	5,274.30	12,547.28	12,100.00	4,993.81	18.0	20,000	13,436.09	16,346.93	90,964.11	78	622.71	1,393.33
203	Minneola	5,036.42	20,001.55	29,250.00	28,759.76	26.1	186,000	60,095.09	73,613.32	281,547.99	28	754.73	2,276.69
204	Sublette	3,036.09	13,668.05	18,200.00	6,758.68	85.5	30,000	39,890.95	50,590.95	59,180.39	36	0	1,924.60
205	Inman	1,974.34	6,982.04	6,009.79	13,342.70	5.6	16,000	none	10,000.00	177,111.04	6	1,358.03	35.21
206	Corwin	7,474.47	22,322.28	9,700.00	6,866.69	26.6	11,500	55,087.70	71,735.75	269,729.71	50	205.40	2,739.52
207	Ransom	2,020.23	7,877.53	19,625.00	10,692.31	28.9	29,000	37,339.52	50,872.65	164,248.22	28	390.03	646.09
209	Timken	1,954.21	4,560.95	9,400.00	9,689.73	38.2	15,000	13,507.77	15,513.25	40,551.33	20	15.70	653.06
210	Lorraine	152.14	4,843.69	6,000.00	35.00	5.3	20,000	9,452.50	13,015.54	245,863.96	49	20.85	91.31
211	Garden City	23,960.06	79,568.14	60,300.00	16,824.27	88.9	155,000	131,960.39	277,543.33	312,162.40	20	1,658.91	12,396.38
212	Hanston	4,084.42	10,057.79	9,100.00	2,670.41	26.6	10,000	29,203.97	31,529.56	118,511.15	44	210.04	1,801.52
215	Kiowa	1,687.97	23,670.86	23,500.00	2,756.13	30.7	15,000	28,617.00	36,872.80	120,113.80	37	145.64	1,592.62
216	Brenham	752.63	6,499.19	7,950.00	1,600.00	2.3	28,000	1,723.66	1,970.16	86,903.05	17	446.96	67.30
217	Sharon	1,231.83	3,459.77	4,830.00	2,713.00	13.7	12,000	6,357.17	8,305.68	60,772.98	24	186.39	620.96
218	Kismet	3,819.31	6,973.03	4,950.00	13,901.05	36.2	63,000	19,587.05	21,187.05	58,488.11	48	0	538.39
219	Kingsdown	2,341.42	11,168.22	7,400.00	8,969.65	14.1	28,000	8,099.55	9,704.47	68,816.02	42	908.74	484.52
220	Dighton	2,360.13	28,540.16	15,150.00	24,513.11	28.8	290,000	26,557.35	44,265.68	153,698.74	37	514.45	2,242.12
221	Ness City	1,212.14	10,152.60	19,200.00	359.89	36.0	22,000	28,330.66	31,760.64	88,129.81	44	483.42	1,212.14
Ave. 51		8,847.73	23,866.40	17,563.58	8,928.88 (39) 9,688.78	27.91	49,382	40,531.56	51,604.25	183,831.87	43.3	442.38 (39) 578.49	2,556.25

Table 2. Average credit items in 51 southwestern Kansas elevators.

CREDIT ANALYSIS

<u>Accounts Receivable (Total)</u>	<u>\$4,635.55</u>	One year ago.....	<u>\$ 4,933.76</u>
Charge sales for the year as per accounts receivable - dr.....			<u>\$21,837.66</u>
Less collections (accounts receivable - cr.) represented by:			
Accounts charged off.....	\$ 250.63		
Accounts turned to notes.....	\$ 202.66		
Prorations and stock interest applied on accounts.....	\$ 656.17		
Cash collected on charge accounts.....	<u>\$21,026.41</u>		<u>\$22,135.87</u>
Net increase or decrease the past year.....			<u>\$ 298.21</u>
Amount of charge sales carried as tickets in inventory (not shown in acc'ts receiv. - dr.)*End of year.....	\$ 0	Total for year.....	\$ 25.50
Total charge sales for the year (acc'ts rec. - dr. plus volume of charge tickets in invent. for the year plus notes taken at time of sale).....			<u>\$22,468.69</u>
Sideline sales for the year.....			<u>\$40,531.56</u>
Retail grain sales..... Wheat \$3,386.69 Other Grains \$7,629.42 Total			<u>\$11,016.11</u>
Total retail sales			<u>\$51,547.67</u>
Per cent of retail sales sold strictly for cash			<u>% 56.5</u>
Age of accounts receivable:			
*Under 1 year (Am't of this year's chg. acc'ts still on books) %	55.4		\$ 2,433.15
Between 1 and 3 years.....	40.4		\$ 2,010.26
Outlawed accounts.....	4.2		\$ 192.14
Per cent of total acc'ts estimated collectible today %	45.0	After harvest	% 82.4
Per cent of accounts receivable with stored wheat in elevator or warehouse receipts as security.....			% 2.8
Per cent of accounts receivable with members.....			% 55.5
Per cent of patrons who practically always pay cash.....			% 54.5
Number of individuals having accounts.....			# 129
Largest account owed by any one individual.....			\$ 368.85
<u>Notes Receivable (Total)</u>	<u>\$ 4,212.18</u>	One year ago.....	<u>\$ 4,276.00</u>
Accounts turned to notes.....	\$ 231.54		
Notes taken on current year's business at time of sale.....	\$ 605.55		
Notes taken for capital stock this year.....	\$ 40.63		
Unpaid interest added to face of note.....	\$ 65.62		\$ 943.34
Less cash collected on notes.....	\$ 741.80		
Less prorations and stock interest applied on notes.....	\$ 96.31		
Less notes charged off.....	\$ 169.05		\$ 1,007.16
Net increase or decrease the past year.....			<u>\$ 63.82</u>
Age of notes receivable:			
Under 1 year - including renewals.....	% 55.1		\$ 2,321.83
Between 1 and 2 years.....	% 20.6		\$ 863.90
Over 2 years.....	% 24.3		\$ 1,026.45
Number over 5 years - included in above.....	# 1.96		\$ 363.82
Per cent of total notes estimated collectible today %	20.58	After harvest	% 50.72
Per cent of total notes originally incurred more than 2 years ago.....			% 67.60
*Amount of notes taken at time of sale that are still on the books.....			\$ 123.10
Is unpaid interest on notes added to face of note, or is it added to an interest receivable account? Note = 28, Int. Req. = 5, Neither = 18...			
Is interest discounted if entire note is paid? Yes = 32, No = 19.....			
Per cent of notes with members..%	57.58	Notes due to machinery.....	% 2.15
Amount of notes that are stock notes.....			\$ 288.90
Number of different individuals giving notes...#	23.5	No. of notes held..	# 24.7
Largest note owed by any one individual.....			\$ 492.19
Total amount of bad debts written off the past 6 years.....			\$ 2,815.89
*Current receivables (Total of the 3 items above which are starred).....			<u>\$ 2,556.25</u>