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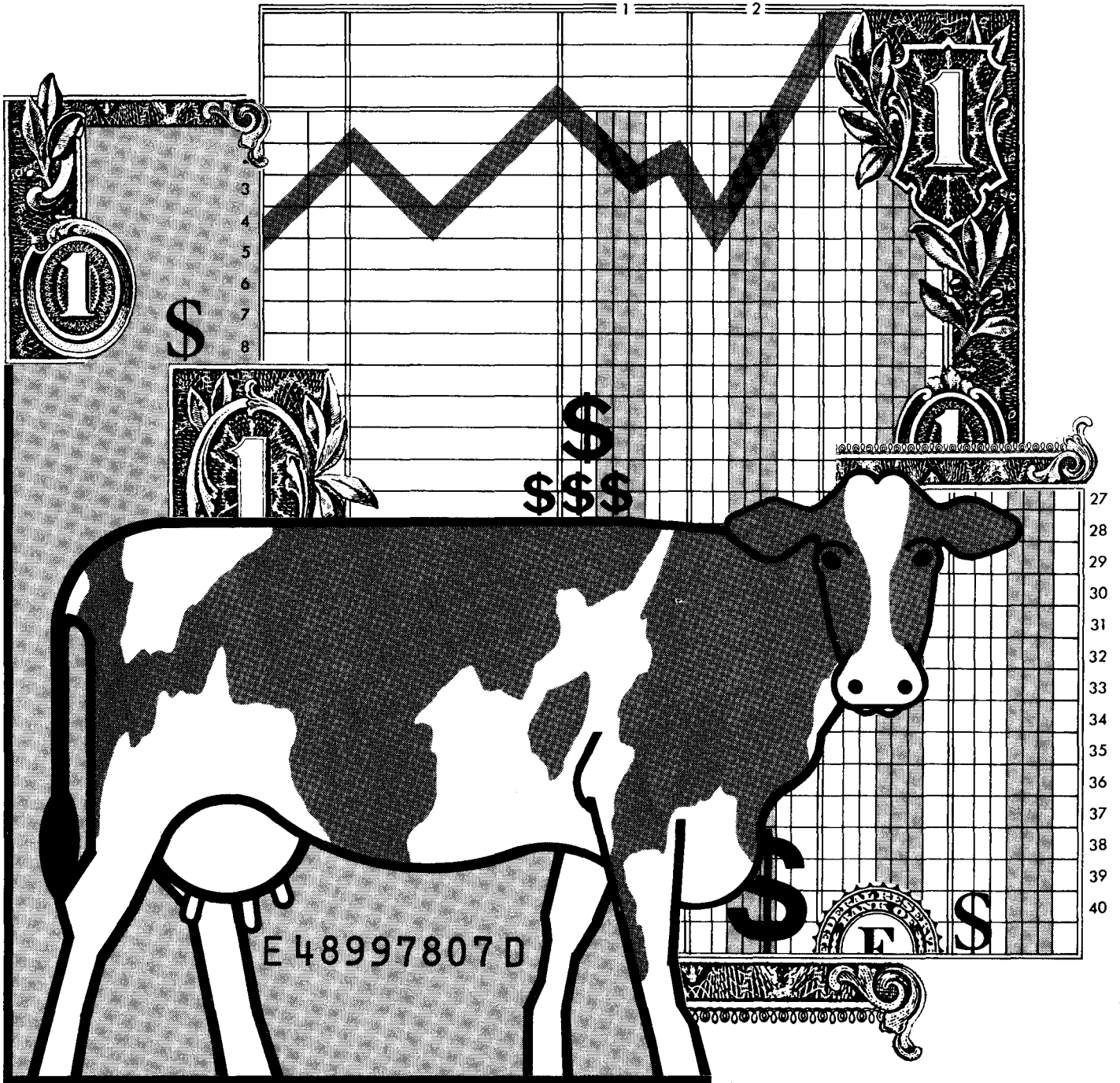
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Financial Performance of Dairy Cooperatives

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Financial Performance of Dairy Cooperatives

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Abstract

Combined balance sheets and operating statements were used to develop benchmark financial ratios for dairy marketing cooperatives. Data from 291 cooperatives were summarized for five types of dairy cooperatives, then by the types and three size combinations. Both type and size of cooperative made differences in most of the 16 financial ratios calculated as well as in the common size balance sheets and operating statements.

Key words: Finance, dairy, cooperatives, milk, ratios

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Highlights

Balance sheets and operating statements, as well as total raw milk receipts and percentage sold raw, were used to develop benchmark financial ratios for dairy marketing cooperatives. Data from 291 cooperatives, representing 67 percent of all dairy marketing cooperatives and 87 percent of the raw milk received (or bargained for) by cooperatives, were summarized for five types and then a combination of three types and three sizes of cooperatives.

Both type and size of cooperative made considerable difference in most of the calculated ratios. For instance, the current ratio averaged 1.25, but varied from 1.03 for large bargaining type cooperatives to 1.80 for small bargaining-operating cooperatives. The total liabilities-to-equity ratio ranged from 0.78 for both small bargaining-operating and small bargaining-type cooperatives to 2.61 for the largest bargaining-type cooperatives. The net margins as a percentage of equity went from 7.1 percent for small bargaining-operating cooperatives to 29.8 percent for large manufacturing and bottling cooperatives to a high of 41.0 percent for the largest bargaining organizations, with an overall average of more than 20 percent. However, the amount of equity by type and size also varied considerably, so findings must be interpreted cautiously.

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DATA SOURCE

Dairy cooperatives, like most businesses, experience varying degrees of financial success. Financial success can be measured in different ways and different criteria are used for the same measure depending on the function of the business. Because of this diversity, it is helpful to have an industry benchmark or averages with which to compare individual cooperative reports.

An analysis of a fairly recent survey affords an opportunity to present some industry averages that will be helpful in evaluating differences among dairy cooperatives. The overall survey was reported earlier in ACS Research Report 40, "Marketing Operations of Dairy Cooperatives." Included in that survey of all known dairy marketing cooperatives was a request for brief balance sheets and income statements as well as a host of other data. A consolidated balance sheet and a consolidated operating statement for all responding cooperatives were presented in ACS Research Report 40. Using the underlying individual cooperative data, with further sorting and analysis, it is possible to develop some financial measurement "benchmarks" from this data set.

Size of Sample

In 1980, some 435 cooperatives were identified as being actively engaged in dairy marketing. The total amount of raw milk handled or bargained for by these cooperatives (including intercooperative transfers) was about 107.9 billion pounds.¹ Of the 435 cooperatives, 291 provided a usable balance sheet, operating statement, and at least some physical volume data. These 291 cooperatives (67 percent of the total) handled (or bargained for) about 93.7 billion pounds of raw milk, or 87 percent of the total. While the sample of 291 is large enough to be representative, it is somewhat biased toward the larger cooperatives. Therefore, the analysis that follows needs to be used with this caution in mind.

¹When intercooperative transfers were taken out, the net amount was 95.6 billion pounds or almost 77 percent of total volume of milk sold by farmers to the Nation's plants and dealers.

Data Limitations

Business firms have a variety of methods of keeping and reporting their financial data. To try to minimize some of the differences caused by different accounting procedures and to minimize respondent burden, the data requested in this survey were limited to major accounting line items. Therefore, the measures of financial success are limited to the few that can be calculated from the brief balance sheets and operating statements.

The survey requested data for the fiscal year ending before April 1, 1981. Because of many different yearending dates, the data used in this report cover more than the calendar year 1980. However, most of the data reflect operations during that year. Although many things have changed since 1980, these data should still be helpful in making comparisons among cooperatives.

Financial benchmarks are likely to be different for different sizes of cooperatives as well as for cooperatives performing different functions. Therefore, the financial measures have been summarized by type and size of dairy marketing cooperative.

TYPE OF COOPERATIVE

For this report, five types of cooperatives were identified according to how they sold the majority of their physical volume of raw milk:

1. If the cooperative manufactured most of its Grade A and manufacturing grade milk into cheese, butter, powder, and/or other manufactured products, then it was classified as a manufacturing (MFG) type.
2. If the cooperative processed a majority of its raw milk for fluid-class I uses (milk for drinking and closely related uses), then it was classified as a bottling type of cooperative.
3. If the cooperative sold 50 percent or more of its milk in a raw form to someone else to process, then it was classified as a

bargaining cooperative. This includes cooperatives that might be a part of a federation that processed the majority of its member cooperatives' milk. The bargaining cooperatives were further divided into three additional groups depending on the extent of milk handling. Bargaining cooperatives that did some processing and/or manufacturing of milk were classified as bargaining-operating (B-O).

4. The bargaining cooperatives that actually received some milk at a plant or pump over station but sold it in raw form were classified as bargaining with receiving stations (B-W-R).

5. The final bargaining group includes those cooperatives that did not handle raw milk and were classified as bargaining with no handling, or simply pure bargaining (PB).

The combined balance sheets and operating statements of the five types of cooperatives are shown in appendix table 1. Comparisons of these financial reports are facilitated by calculating several ratios or percentages. These ratios permit comparisons to be made without having to be directly concerned with the absolute numbers.

Relative Importance

Before comparing each of the types with respect to various selected financial performance criteria, it is helpful to examine the relative importance of each type of cooperative within the sample. By making comparisons between the types, it is possible to see why the type classifications may be meaningful.

More than 30 percent of the respondent cooperatives were classified as manufacturing cooperatives but they accounted for only slightly more than 21 percent of the raw milk receipts and 22 percent of the dollars of dairy sales (table 1). However, this group of cooperatives accounted for more than 34 percent

of the fixed assets and nearly 47 percent of the net margin generated by this sample of cooperatives.

The next largest was the bargaining cooperatives with receiving stations group, accounting for nearly 27 percent of the respondents. However, this group accounted for only 14 percent of raw milk receipts, 2 percent of fixed assets, 4 percent of total assets, 6 percent of dollar of dairy sales, and less than 4 percent of the net margins.

The pure bargaining group accounted for nearly one-fourth of the respondent cooperatives. However, they bargained for only 14 percent of the raw milk, generated almost 13 percent of the dairy sales and 10 percent of the net margins, and accounted for only 2 percent of the fixed assets and less than 2 percent of all assets.

Only 33 cooperatives were in the bargaining-operating group which represented only 11 percent of the sample. However, they accounted for 54 percent of raw milk receipts, 52 percent of dairy sales, 47 percent of fixed assets, 49 percent of total assets, and almost 30 percent of net margins.

While there were fewer bottling cooperatives—only 7 percent of the sample—they controlled 15 percent of fixed assets, 11 percent of all assets, and accounted for nearly 11 percent of the net margins. This was despite the fact they had only 4 percent of the raw milk receipts and not quite 7 percent of the dollar sales of dairy products.

Thus, it can be seen that the different types of cooperative had different relative importance depending on the criteria used. The selected financial ratios would be expected to be different for each of the types because the underlying numbers going into the ratios are not in the same relative proportions.

Table 1—Selected measures of all cooperatives reporting, by type

Item	Type of cooperative				
	Manufacturing	Bottling	Bargaining-operating	Bargaining with receiving station	Pure bargaining
Number of cooperatives	89	21	33	78	70
Number of cooperatives	30.6	7.2	11.3	26.8	24.1
Raw milk receipts	21.1	4.2	53.7	7.0	14.0
Fixed assets	34.1	15.0	47.0	1.7	2.2
Total assets	29.8	10.0	49.4	4.0	6.8
Dairy sales	22.4	6.6	52.2	6.1	12.7
Net margins	46.5	10.6	29.6	3.7	9.6

Balance Sheet Analysis

To make comparisons of balance sheets, it is helpful to convert them to common size statements, that is, express each item in the balance sheet as a percentage of total assets (table 2). These balance sheets in percentage terms can then be directly compared without having to worry about the relative weight of each type of cooperative.

Bottling, MFG, and B-O cooperatives had a relatively higher percent of their assets in fixed assets when compared to the other two bargaining groups. Other assets included investments in other cooperatives as well as other types of assets. Since several pure bargaining type of cooperatives have formed federations to own facilities, the nearly 21 percent in "other assets" may be explained by this investment in a federated structure.

In terms of liabilities and equity, it can be seen that the manufacturing and bottling cooperatives used a greater percent of equity capital than did the bargaining type of organization. All five types of cooperatives had fairly high current liabilities, reflecting accrued payments to their members for milk.

One of the shortrun risks of business is the inability of a firm to meet its current obligations. Conceivably, a firm could have a thriving business, but be so starved for working capital that it is unable to pay current bills. Therefore, one of the questions that arises is how liquid are the assets of the firm. A measure of overall liquidity is that of current assets as a percentage of total assets. This percentage ranged from about

52 percent for bottling cooperatives to 72 percent for the B-W-R cooperatives (table 2).

Another short-term measure to examine is one designed to measure overall short-term solvency. This ratio is current liabilities to total liabilities plus equity or simply the current liabilities as a percentage of total assets. Using this ratio to measure solvency, it can be seen that the more bargaining oriented cooperatives operate closer to an insolvent position than did the manufacturing and bottling cooperatives.

Probably the most popular measure of liquidity or short-term solvency is that of the current ratio. This ratio basically asks the question, are there enough assets that can be quickly converted to cash (current assets) to cover the current liabilities? For all 291 cooperatives in this sample, the current ratio was 1.25 (table 3). This means there were only 25 percent more current assets than current liabilities—a fairly low liquidity cushion. However, the nature of the current assets and current liabilities should make it not necessary to have a high current ratio. That is, the current assets likely represent a high proportion of milk and dairy products that can be sold easily for cash as well as a high proportion of cash received for milk already delivered instead of the usual high proportion of accounts receivable. Also, the current liabilities are likely to have a high proportion of payments due to member-owners for their milk shipments. The cooperatives with no handling facilities, e.g., the pure bargaining group, had on the average a very low current ratio of only 1.07. This low ratio probably reflects the fact that these cooperatives had basically no inventory thus all their current assets were financially very liquid, probably in the form of cash. The other

Table 2—Consolidated balance sheet expressed as a percentage of total assets, by type of dairy cooperative

Item	Type of cooperative					Total all Types
	Manufacturing	Bottling	Bargaining-operating	Bargaining with receiving station	Pure bargaining	
Percent						
Current assets	60.8	52.2	65.4	72.0	71.1	63.3
Fixed assets	28.9	37.7	24.1	10.8	8.1	25.3
Other assets	10.3	10.1	10.5	17.2	20.8	11.4
Total assets	100.0	100.0	100.0	100.0	100.0	100.0
Current liabilities	47.0	36.6	52.8	62.0	66.4	50.7
Long-term liabilities	12.3	20.8	18.2	3.4	4.8	15.2
Total liabilities	59.3	57.4	71.0	65.4	71.2	65.9
Equity	40.7	42.6	29.0	34.6	28.8	34.1
Liabilities and equity	100.0	100.0	100.0	100.0	100.0	100.0

extreme was for the bottling cooperatives with a 1.43 current ratio. These cooperatives may need to maintain a higher degree of liquidity to cover questionable accounts receivables and to cover the possibility of having to dispose of the inventory.

One of the first things to examine in the longer run analyses is the total size of the capital structure. An obvious measure is the average total assets used by each cooperative. The overall average was about \$8.6 million. However, there was a fairly wide range for the five types of cooperatives, with the bargaining with receiving station type having only \$1.3 million. This compares with bottling cooperatives having more than \$12 million and the bargaining-operating cooperatives having nearly \$37.6 million in total assets (table 3).

Another measure to examine in the long run includes the amount of fixed assets. These assets set the fixed expenses in the operation. The average cooperative had about 25 percent of its assets as fixed or slightly more than \$2 million each. The bargaining-with-no-handling group averaged less than \$200,000 in fixed assets, indicating they did not tie up a large proportion of their capital in fixed facilities. The bargaining with receiving station group of cooperatives had only about \$138,008 each. This lower figure could be somewhat surprising because they do own at least some handling facilities. But it probably reflects older facilities that were depreciated and thus had very low book values. Conversely, it can be seen that the bargaining-operating type of cooperatives were heavily committed to fixed plant facilities because they had an average investment of more than \$9 million in fixed assets.

Net working capital—the difference between total current assets and total current liabilities—represents the amount that

would be left free and clear if all current debts were paid off. The average dairy cooperative had slightly less than \$1.1 million in working capital in 1980 (table 3). Two of the bargaining groups had only slightly more than \$100,000 each whereas the bargaining-operating group averaged more than \$4.7 million in working capital.

A long-term measure of the part of assets provided by the owners is equity as a percentage of total assets. For the average cooperative in 1980, members' equity was 34 percent of total assets (table 2). However, the pure bargaining cooperatives' members had equity of only 29 percent of the assets compared with the bottling cooperative members' 43 percent.

Overall, the dairy cooperative members' equity represented slightly more than 69 percent of the net asset value (table 3).² The bargaining with receiving station group had equity equal to 91 percent of net assets whereas members of the bargaining-operating group owned less than 62 percent of net assets.

A longer term measure that usually is considered important in measuring the health of cooperatives is the ratio of total debt to equity. This ratio gives some measure of the kind of problem lenders might have in recovering their money in the event of business failure. From the data set for this study, the closest thing available to total debt is total liabilities. Thus, the ratio of total liabilities to equity is a proxy for this important ratio. For the average dairy cooperative, this ratio was 1.9 to 1 with bottling having the lowest ratio (1.35) and the pure bargaining group having the higher degree of insolvency at 2.47.

²Net assets are defined here as total assets less current liabilities.

Table 3—Selected financial ratios, by type of cooperative

Item	Unit	Type of cooperative					Total all types
		Manufacturing	Bottling	Bargaining-operating	Bargaining with receiving station	Pure bargaining	
Current ratio	Dollars	1.29:1	1.43:1	1.24:1	1.16:1	1.07:1	1.25:1
Assets per cooperative	\$1,000	8,418	12,020	37,569	1,272	2,425	8,627
Fixed assets per cooperative	\$1,000	2,433	4,529	9,037	138	196	2,180
Working capital per cooperative	\$1,000	1,157	1,872	4,737	128	114	1,088
Equity as percentage of net assets	Percent	76.8	67.2	61.5	91.0	85.8	69.2
Total liabilities to equity	Dollars	1.46:1	1.35:1	2.44:1	1.89:1	2.47:1	1.93:1
Long-term liabilities as a percentage of capitalization	Percent	23.2	32.8	38.5	9.0	14.2	30.8
Long-term liabilities to equity	Dollars	0.30:1	0.49:1	0.63:1	0.10:1	0.17:1	0.45:1

One can also look at long-term liabilities over capitalization, with capitalization defined as long-term liabilities plus equity. In this case, the average dairy cooperative had lenders and other liability holders providing nearly 31 percent of the permanent capital. However, again the bargaining oriented groups had a much lower liability participation. It was 9 percent for the B-W-R and 14 percent for the pure bargaining group. This compares with more than 38 percent for the B-O group, about 33 percent for the bottlers, and 23 percent for the manufacturing group.

The measure of total liabilities as a percentage of total assets shows the bargaining-operating group of cooperatives were fairly highly leveraged with 81 percent of the assets provided by liabilities (table 2). The lowest level was in the bottling group with only 57 percent of total assets provided by liabilities.

Some liabilities are not interest-bearing debt. Thus, another leverage measure that may be more useful is the ratio of long-term liabilities to equity. Most long-term liabilities are interest-bearing so this ratio gives a somewhat different picture of debt versus equity. For the 291 dairy cooperatives the long-term liabilities to equity ratio was 0.45 to 1 (table 3). The bargaining-operating cooperatives used the most long-term debt relative to equity with a ratio of 0.63 to 1 whereas the B-W-R group had the lowest with only 0.1 to 1 ratio.

Profitability Analysis

Profitability may vary more from year to year than does the capital structure. Therefore, it is important to reemphasize

that this analysis is based primarily on 1980 data. Because the industry and general economy have since changed, these benchmarks need to be interpreted accordingly.

The basic statement on profitability is provided by the operating statement (see appendix table 1). As with the balance sheet, a comparison of the operating statements is made more meaningful by converting the items into a percentage figure, this time as a percentage of total sales and other operating income (table 4).

All dairy marketing cooperatives were primarily involved in selling members' milk, with more than 97 percent of the operating income generated by dairy products. The bottling group had 12.5 percent of its income generated from nondairy sales, probably reflecting "rounding out" a product line for delivery to retail outlets. The B-W-R group had higher nondairy sales than average, probably reflecting a larger farm supply business than is typical of other dairy marketing cooperatives. Other operating income included income received for hauling members milk, services other than sales, patronage refunds from other cooperatives, and so forth. Because many of the pure bargaining and the B-W-R cooperatives are federated, they would be expected to receive a greater proportion of their income from patronage refunds from that source.

The gross margins received by the cooperatives varied widely between types of cooperatives. Gross margins for the bottling cooperatives averaged more than 20 percent whereas the pure bargaining group averaged only 3.4 percent. All the dairy cooperatives had a weighted average gross margin of 10

Table 4—Consolidated operating statement expressed as a percentage of total sales and other operating income, by type of dairy cooperative

Item	Type of cooperative					Total all types
	Manufacturing	Bottling	Bargaining-operating	Bargaining with receiving station	Pure bargaining	
	<i>Percent</i>					
Dairy sales	98.2	87.3	98.5	93.0	96.9	97.1
Nondairy sales	1.2	12.5	.4	4.0	1.4	1.8
Other operating income	.6	.2	1.1	3.0	1.7	1.1
Total sales and other operating income	100.0	100.0	100.0	100.0	100.0	100.0
Cost of goods sold	89.5	79.6	89.5	95.1	96.6	90.0
Gross margin	10.5	20.4	10.5	4.9	3.4	10.0
Operating, sales and administrative expenses	8.2	18.4	9.5	4.3	2.6	8.7
Other income (expenses)	.2	(.3)	(.3)	.1	.1	(.1)
Net margins	2.5	1.7	.7	.7	.9	1.2

percent. Functions performed by bottling cooperatives are much more involved than functions performed by pure bargaining organizations. Thus, gross margins would be expected to reflect differences in operating costs.

In general, average cost of operations, sales, and administration of cooperatives varied in the same direction as did gross margins. However, the bargaining-operating group had higher expenses than cooperatives that were primarily manufacturing even though they had nearly identical gross margins.

Net margins for cooperatives, which would be called net profit in noncooperative firms, averaged 1.2 percent of sales and other operating income. Because members of manufacturing and bottling cooperatives assumed greater risk in trying to produce products with higher value added, it would be expected that these cooperatives would have higher net margins. Manufacturing cooperatives averaged 2.5 percent of the sales and operating income as a net margins and bottling cooperatives had 1.7 percent.

Because the member-producers are interested in their investment, an important measure is the net margins as a percentage of equity (table 5). For all types of dairy cooperatives, the members earned an average of 20 percent on their equity investment in 1980. The highest return (34.2 percent) was for the pure bargaining group, but this group also had the lowest equity in terms of percent of assets (28.8 percent). The next highest return (26.5 percent) was for the

manufacturing cooperatives, which had the next to the highest percentage equity (40.7 percent). The bargaining-operating group had the lowest return with only 14.3 percent but also had relatively low equity investment as a percentage of assets (29 percent). The bottling group had only a 17.1 percent return on equity with equity equal to nearly 43 percent of their assets. The B-W-R cooperatives had a 18.8 percent return on their 34.6 percent investment.

Because not all investment is provided by members, it is useful to look at the percentage return on the total assets employed. In this measure, the average return dropped below 7 percent. Also, the rankings and relative ranges of values changed substantially over the return on equity. The manufacturing type of cooperatives received the highest return on all the investment in assets at 10.8 percent and the B-O group had the lowest return at 4.1 percent.

Another measure related to profitability is the turnover ratio of sales over total assets. This ratio is an indicator of the efficiency with which the cooperative utilizes its resources. Because the pure bargaining group has few assets its turnover rate was more than 11 times, followed by the bargaining with receiving station group at almost 10 times. The manufacturing and bottling groups had an asset turnover ratio of slightly more than four.

Relating sales to net working capital gives an indication of how efficient working capital is employed. Overall, the 291 dairy cooperatives had a net working capital turnover ratio of 46.85.

Table 5—Selected profitability ratios for dairy marketing cooperatives, by type of cooperative

Item	Unit	Type of cooperative					Total all types
		Manufacturing	Bottling	Bargaining-operating	Bargaining with receiving station	Pure bargaining	
Dairy sales per cooperative	\$1,000	36,290	45,077	227,822	11,318	26,055	49,489
Nets margins per cooperative	\$1,000	907	875	1,555	83	239	597
Net margins as a percentage of equity	Percent	26.5	17.1	14.3	18.8	34.2	20.3
Net margins as a percentage of total assets	Percent	10.8	7.3	4.1	6.5	9.9	6.9
Total sales and other operating income per dollar of total assets	Dollars	4.39	4.30	6.15	9.56	11.08	5.91
Total sales and other operating income per dollar of net working capital	Dollars	31.92	27.60	48.80	95.42	235.02	46.85
Dairy sales per hundredweight of raw milk receipts	Dollars	16.29	24.21	14.95	13.48	13.90	15.37
Net margins per hundredweight of raw milk receipts	Dollars	0.41	0.47	0.10	0.10	0.13	0.19

This ratio ranged from a low of 27.6 for the bottling group to a high of 235 for the pure bargaining group. The other groups averaged as follows: B-W-R, 95.4; B-O, 48.8; and MFG, 31.9.

Another set of measures is the profitability measures per hundredweight of milk sold. Because of the consolidated nature of the data available, measures based on the amount of raw milk received or bargained for might be misleading. However, for comparison between the cooperatives or over time, these measures should show profitability and efficiency. Dairy sales per hundredweight of raw milk receipts gives some indication of the degree of value added by the cooperative.³ The bottling type cooperatives had a much higher value added type of product, with \$24 generated for each 100 pounds of raw milk. On the lower end, bargaining type cooperatives had only \$13.48 to \$13.90 generated per hundredweight of milk received.

The last profitability ratio to look at is the net margins per hundredweight. This measure along with actual pay price gives the true bottom line figure for a member of a particular cooperative. The average cooperative made about 19 cents a hundredweight, while the manufacturing cooperative made about 41 cents and bottling about 47 cents. On the lower end, the pure bargaining group made only 13 cents and the B-W-R and the B-O groups each averaged 10 cents per hundredweight. These margins must be considered in relation to the level of member equity investment needed to generate the earnings and to the net pay for milk the member-producers received.

SIZE OF COOPERATIVE

When looking at the various financial measures for each of the types of dairy cooperatives there was always the question, "Does size cause the difference instead of type?" To examine this question the data were also sorted and summarized by various size groupings.

To show the maximum amount of data without disclosing an individual cooperative's data, the size groups were held to small, medium, and large, with some types combined. Because bottling and manufacturing cooperatives had many similar financial ratios, these groups were analyzed together as "processing" types. Likewise, the bargaining with receiving station group had many similarities with the pure bargaining group so the two were analyzed by size as simply "the bargaining group."

Size can be measured in many ways—dollar sales, assets, employees, members, and so forth. For this presentation, size

³Value added is not totally measured by sales per hundredweight because in many cooperatives some dairy sales are generated from purchased dairy products.

was measured on the basis of raw milk receipts. Cooperatives receiving three-fourths of a billion pounds of milk a year were considered large, while a small cooperative was one that received less than 25 million pounds a year.

The consolidated balance sheets and income statements by type and size are summarized in appendix tables 2 through 5 and should be examined by ratios to see the major differences.

The mix of type of cooperative by size is summarized in table 6. Using different measures as criteria will cause different conclusions as to relative importance of type within size. For instance, 30 percent of the largest group of cooperatives were classified as manufacturing or bottling. Yet this group accounted for only 16 percent of the large group's raw milk receipts and more than 40 percent of this group's net margins. In the medium-size category, the manufacturing and bottling cooperatives account for nearly 45 percent of the number of cooperatives but had about 91 percent of all the fixed assets, 59 percent of the dairy sales, and 86 percent of the net margins.

Balance Sheet Analysis

For the manufacturing and bottling cooperatives, it can be seen that size made little difference in the asset distribution (table 7). The medium-size processing cooperatives had slightly higher "other assets" relative to total assets than did either the small or large group. But overall, the asset distribution was fairly close to the average. On the equity and liability side, larger processors tended to have a slightly higher percentage of liabilities than did the small or medium-size group, but again no great difference existed by size.

The bargaining-operating cooperatives also had relatively little variation in their asset structure by size groupings (table 8). The midsize group of bargaining-operating cooperatives had slightly more "other assets" than did the larger or smaller group. Perhaps this reflects more use of joint operations; thus more "outside" investments. Size groupings did show more differences in the liability-equity side of the balance sheet. The members of larger B-O cooperatives contributed only 29 percent of the capital whereas the members of the small B-O cooperatives had more than 56 percent in equity. The smaller B-O cooperatives may be closer in operations and finance to the bargaining with receiving group than they are with the larger bargaining-operating cooperatives. Many of the smaller bargaining-operating cooperatives processed a very small proportion of their milk. Some may have run a depreciated butter-churn on an occasional basis to produce butter as a service for their members rather than actually trying to operate efficient plants to help tailor milk for others to process.

There are many similarities in the standardized balance sheet of the small bargaining type of cooperative and the small

Table 6—Distribution of cooperatives by size and type

Item	Pounds of raw milk received			All cooperative reporting
	Less than 25 million	25 million to 749.9 million	750 million and over	
	<i>Number</i>			
Cooperatives reporting:				
Manufacturing and bottling	35	66	9	110
Bargaining-operating	4	15	14	33
Bargaining	75	66	7	148
Total	114	147	30	291
	<i>Percent</i>			
Total number of cooperatives:				
Manufacturing and bottling	30.7	44.9	30.0	37.8
Bargaining-operating	3.5	10.2	46.7	11.3
Bargaining	65.8	44.9	23.3	50.9
Total	100.0	100.0	100.0	100.0
Raw milk receipts:				
Manufacturing and bottling	33.1	53.4	16.4	25.3
Bargaining-operating	2.7	5.3	70.0	53.7
Bargaining	64.2	41.3	13.6	21.0
Total	100.0	100.0	100.0	100.0
Fixed assets:				
Manufacturing and bottling	58.0	90.7	31.8	49.1
Bargaining-operating	3.0	4.1	65.8	47.0
Bargaining	39.0	5.2	2.4	3.9
Total	100.0	100.0	100.0	100.0
Total assets:				
Manufacturing and bottling	45.0	79.2	24.2	39.9
Bargaining-operating	3.2	5.3	68.2	49.4
Bargaining	51.8	15.5	7.6	10.7
Total	100.0	100.0	100.0	100.0
Dairy sales:				
Manufacturing and bottling	40.3	59.3	18.6	29.0
Bargaining-operating	3.5	4.5	69.3	52.2
Bargaining	56.2	36.2	12.1	18.8
Total	100.0	100.0	100.0	100.0
Net margins:				
Manufacturing and bottling	39.4	86.3	40.3	57.1
Bargaining-operating	2.1	4.2	45.4	29.6
Bargaining	58.5	9.5	14.3	13.3
Total	100.0	100.0	100.0	100.0

Table 7—Consolidated balance sheet expressed as a percentage of total assets for manufacturing and bottling cooperatives, by size of cooperative

Item	Pounds of raw milk received			All manufacturing and bottling cooperatives
	Less than 25 million	25 million to 749.9 million	750 million and over	
	<i>Percent</i>			
Current assets	62.1	58.1	59.1	58.6
Fixed assets	29.4	29.7	33.0	31.1
Other assets	8.5	12.2	7.9	10.3
Total assets	100.0	100.0	100.0	100.0
Current liabilities	39.6	40.6	49.5	44.4
Long-term liabilities	17.8	12.7	16.5	14.4
Total liabilities	57.4	53.3	66.0	58.8
Equity	42.6	46.7	34.0	41.2
Total liabilities and equity	100.0	100.0	100.0	100.0
	<i>Number</i>			
Cooperatives reporting	35	66	9	110

Table 8—Consolidated balance sheet expressed as a percentage of total assets for bargaining-operating cooperatives, by size of cooperative

Item	Pounds of raw milk received			All bargaining-operating cooperatives
	Less than 25 million	25 million to 749.9 million	750 million and over	
	<i>Percent</i>			
Current assets	68.8	64.9	65.4	65.4
Fixed assets	21.2	19.8	24.2	24.1
Other assets	10.0	15.3	10.4	10.5
Total assets	100.0	100.0	100.0	100.0
Current liabilities	38.2	53.9	52.8	52.8
Long-term liabilities	5.6	7.3	18.5	18.2
Total liabilities	43.8	61.2	71.3	71.0
Equity	56.2	38.8	28.7	29.0
Total liabilities and equity	100.0	100.0	100.0	100.0
	<i>Number</i>			
Cooperatives reporting	4	15	14	33

Table 9—Consolidated balance sheet expressed as a percentage of total assets for bargaining type cooperatives, by size of cooperative

Item	Pounds of raw milk received			All bargaining cooperatives
	Less than 25 million	25 million to 749.9 million	750 million and over	
	<i>Percent</i>			
Current assets	56.1	76.6	70.4	71.5
Fixed assets	17.2	8.8	7.8	9.1
Other assets	26.7	14.6	21.8	19.4
Total assets	100.0	100.0	100.0	100.0
Current liabilities	38.6	67.0	68.3	64.8
Long-term liabilities	5.3	4.3	4.0	4.3
Total liabilities	43.9	71.3	72.3	69.1
Equity	56.1	28.7	27.7	30.9
Total liabilities and equity	100.0	100.0	100.0	100.0
	<i>Number</i>			
Cooperatives reporting	75	66	7	148

Table 10—Consolidated balance sheet expressed as a percentage of total assets for all reporting cooperatives, by size of cooperative

Item	Pounds of raw milk received			All dairy cooperatives
	Less than 25 million	25 million to 749.9 million	750 million and over	
	<i>Percent</i>			
Current assets	59.2	61.3	64.2	63.3
Fixed assets	22.8	25.9	25.1	25.3
Other assets	18.0	12.8	10.7	11.4
Total assets	100.0	100.0	100.0	100.0
Current liabilities	39.0	45.4	53.2	50.7
Long-term liabilities	10.9	11.1	16.9	15.2
Total liabilities	49.9	56.5	70.1	65.9
Equity	50.1	43.5	29.9	34.1
Total liabilities and equity	100.0	100.0	100.0	100.0
	<i>Number</i>			
Cooperatives reporting	114	147	30	291

bargaining-operating cooperatives (table 9). Both groups had about 56 percent of the capital coming from equity. However, the B-O type cooperatives did have more fixed assets than the bargaining group that sold all of its milk raw.

For the bargaining group, the asset distribution is considerably different among the size classifications. The smaller cooperatives have relatively more fixed assets and more "other assets." Given the difference among size groups in asset distribution and in equity position it is a little surprising to see the similarities in long-term liabilities among size groups—ranging from 4 percent to 5.3 percent of total assets.

When all types of cooperatives are summarized, there appear to be differences in asset structures by size groupings (table 10). The smaller cooperatives tended to have more of their assets in the "other" category. However, the relatively heavy weight of bargaining groups in the "small" cooperative classification may have had more influence on this number than did size. When looking at the equity percent, there appeared to be a distinct trend from large to small. Although bargaining-operating cooperatives tended to be heavier weights in the large group and to have relatively lower equity, it appeared that the equity percent was inversely related to the size of the cooperative. That is, the larger cooperatives had a lower equity as a percentage of assets than did the smaller size groups.

The first liquidity measure examined previously was current assets as a percentage of total assets (tables 7-10). No apparent pattern emerged based on size—the lowest percent was 56.1 percent for small bargaining cooperatives—whereas the highest was 76.6 percent for the medium-size bargaining group. In most cases, there seemed to be more variation among types than sizes within a type.

The second measure of liquidity examined was the current liabilities as a percentage of total assets. In this case, there appeared to be a relationship to size and type. For each type of cooperative, the small group had a higher level of liquidity with the largest group being the least liquid based on this percentage. Also within a size category, in every case the bargaining type of cooperatives were the least liquid while the manufacturing and bottling cooperatives had the lowest percent of current liabilities.

The current ratio also indicates a relationship between size and liquidity (table 11). The smallest current ratio was for the large bargaining group (1.03) whereas the highest ratio was for the smallest bargaining-operating cooperatives (1.80). For each of the three types, the smaller group showed the most liquidity while the largest showed the least liquid position.

Turning again to the longer run measures, two of the things to look at are total and fixed assets per cooperative. As would be

expected, the cooperatives handling the most milk had the highest fixed and total assets (table 11). The bargaining type cooperatives in each size group had the fewest assets. The large bargaining-operating cooperatives had substantial higher average fixed and total assets than any other group.

Net working capital closely paralleled the distribution of both fixed and total assets per cooperative. The major difference appears to be that the cooperatives in the large groups had proportionally more assets than they did more working capital.

Small cooperatives were generally the most solvent group when measured by equity as a percentage of net assets. However, in the case of manufacturing and bottling cooperatives, the midsize group's members provided a higher percentage of their net assets in terms of equity than either the large or small group.

The solvency measure of total liabilities to equity showed the large-size group in each of the three type categories to be the least solvent. Also, the small bargaining-operating cooperatives had the same ratio as the small bargaining group; this suggests similarities in their operations.

Turning to the lender-oriented solvency measure of long-term liabilities as a percentage of capitalization, it can be seen that the larger group in each type category generally used more debt financing. However, the midsize group of the bargaining category had a slightly higher percentage than the large group. Also, the midsize group of manufacturers and bottlers had a somewhat lower percentage of long-term liabilities than did the smaller cooperatives.

The final measure in this portion of the analysis was the long-term liabilities to equity ratio. For each of the three types, the larger size cooperatives tended to have larger long-term liabilities relative to equity than did the average for their group. The 14 large bargaining-operating cooperatives had a considerably higher ratio (0.65 to 1) than did any of the other groups. The lowest proportion of long-term liabilities was found in the smallest bargaining and bargaining-operating groups.

Profitability Analysis

Within each of the three types of cooperatives, the larger ones had a higher dairy sales as a percentage of total operating income than the smaller ones (tables 12-15). The higher percentage of nondairy sales of the small processing cooperatives and the small bargaining cooperatives suggests they had to branch out into other lines of business to survive.

Gross margin and expense percentages were higher for small manufacturing and bottling cooperatives than for the larger groups. This could reflect the larger percentage of nondairy sales and/or an indication of some economic inefficiencies

Table 11 – Selected balance sheet ratios by type and size of cooperative

Item	Unit	Pounds of raw milk received			All cooperatives reporting
		Less than 25 million	25 million to 749.9 million	750 million and over	
Current ratio:					
Manufacturing and bottling	Dollars	1.57:1	1.43:1	1.19:1	1.32:1
Bargaining-operating	Dollars	1.80:1	1.20:1	1.24:1	1.24:1
Bargaining	Dollars	1.46:1	1.14:1	1.03:1	1.10:1
All	Dollars	1.52:1	1.35:1	1.21:1	1.25:1
Assets per cooperative:					
Manufacturing and bottling	\$1,000	664	8,370	47,332	9,106
Bargaining-operating	\$1,000	418	2,470	85,789	37,569
Bargaining	\$1,000	357	1,633	19,208	1,818
All	\$1,000	453	4,743	58,716	8,627
Fixed assets per cooperative:					
Manufacturing and bottling	\$1,000	195	2,486	15,640	2,834
Bargaining-operating	\$1,000	88	488	20,754	9,037
Bargaining	\$1,000	61	143	1,492	165
All	\$1,000	103	1,230	14,725	2,180
Working capital per cooperative:					
Manufacturing and bottling	\$1,000	150	1,459	4,524	1,294
Bargaining-operating	\$1,000	128	272	10,838	4,737
Bargaining	\$1,000	63	158	404	121
All	\$1,000	92	754	6,509	1,088
Equity as percentage of net assets:					
Manufacturing and bottling	Percent	70.5	78.6	67.2	74.0
Bargaining-operating	Percent	91.0	84.3	60.8	61.5
Bargaining	Percent	91.4	86.8	87.4	87.9
All	Percent	82.1	79.7	63.8	69.2
Total liabilities to equity:					
Manufacturing and bottling	Dollars	1.35:1	1.14:1	1.95:1	1.43:1
Bargaining-operating	Dollars	0.78:1	1.57:1	2.48:1	2.44:1
Bargaining	Dollars	0.78:1	2.49:1	2.61:1	2.23:1
All	Dollars	1.00:1	1.30:1	2.34:1	1.93:1
Long-term liabilities as a percentage of capitalization:					
Manufacturing and bottling	Percent	29.5	21.4	32.8	26.0
Bargaining-operating	Percent	9.0	15.7	39.2	38.5
Bargaining	Percent	8.6	13.2	12.6	12.1
All	Percent	17.9	20.3	36.2	30.8
Long-term liabilities to equity:					
Manufacturing and bottling	Dollars	0.42:1	0.27:1	0.49:1	0.35:1
Bargaining-operating	Dollars	0.10:1	0.19:1	0.65:1	0.63:1
Bargaining	Dollars	0.09:1	0.15:1	0.14:1	0.14:1
All	Dollars	0.22:1	0.26:1	0.57:1	0.45:1

Table 12—Consolidated operating statement expressed as a percentage of total sales and other operating income, by size of manufacturing or bottling cooperative

Item	Pounds of raw milk received			All manufacturing and bottling cooperatives
	Less than 25 million	25 million to 749.9 million	750 million and over	
	<i>Percent</i>			
Dairy sales	89.1	92.7	99.1	95.5
Nondairy sales	10.4	6.6	.6	4.0
Other operating income	.5	.7	.3	.5
Total sales and other operating income	100.0	100.0	100.0	100.0
Cost of products sold	81.9	84.6	90.1	87.1
Gross margin	18.1	15.4	9.9	12.9
Operating, sales and administrative expenses	17.1	13.1	7.7	10.7
Other income (expenses)	.2	.1	(¹)	.1
Net margins	1.2	2.4	2.2	2.3

¹Other expenses of less than 0.1 percent.

Table 13—Consolidated operating statement expressed as a percentage of total sales and other operating income, by size of bargaining-operating cooperative

Item	Pounds of raw milk received			All bargaining-operating cooperatives
	Less than 25 million	25 million to 749.9 million	750 million and over	
	<i>Percent</i>			
Dairy sales	93.3	91.8	98.7	98.5
Nondairy sales	6.0	6.6	.2	.4
Other operating income	.7	1.6	1.1	1.1
Total sales and other operating income	100.0	100.0	100.0	100.0
Cost of products sold	92.0	92.2	89.4	89.5
Gross margin	8.0	7.8	10.6	10.5
Operating, sales and administrative expenses	7.7	6.4	9.6	9.5
Other income (expenses)	.5	.1	(.3)	(.3)
Net margins	.8	1.5	.7	.7

Table 14—Consolidated operating statement expressed as a percentage of total sales and other operating income by size of bargaining cooperative

Item	Pounds of raw milk received			All bargaining cooperatives
	Less than 25 million	25 million to 749.9 million	750 million and over	
<i>Percent</i>				
Dairy sales	83.4	96.3	96.3	95.6
Nondairy sales	15.4	2.8	.2	2.3
Other operating income	1.2	.9	3.5	2.1
Total sales and other operating income	100.0	100.0	100.0	100.0
Cost of products sold	94.4	96.3	96.0	96.1
Gross margin	5.6	3.7	4.0	3.9
Operating, sales and administrative expenses	4.4	3.5	2.8	3.2
Other income (expenses)	(¹)	.2	(.1)	.1
Net margins	1.2	.4	1.1	.8

¹Other income of less than 0.1 percent.

Table 15—Consolidated operating statement expressed as a percentage of total sales and other operating income by size of all types of dairy cooperatives

Item	Pounds of raw milk received			All dairy cooperatives
	Less than 25 million	25 million to 749.9 million	750 million and over	
<i>Percent</i>				
Dairy sales	85.9	93.9	98.5	97.1
Nondairy sales	13.2	5.3	.3	1.8
Other operating income	.9	.8	1.2	1.1
Total sales and other operating income	100.0	100.0	100.0	100.0
Cost of products sold	89.5	89.1	90.4	90.0
Gross margin	10.5	10.9	9.6	10.0
Operating, sales and administrative expenses	9.4	9.4	8.4	8.7
Other income (expenses)	.1	.2	(.2)	(.1)
Net margins	1.2	1.7	1.0	1.2

associated with the smaller size. Almost the same situation existed for the bargaining group except the largest size group had slightly higher gross margin percentages than the medium-size group. Because expenses were not higher, the higher gross margin percentage reflects a slightly stronger bargaining position. When looking at the bargaining-operating group, the gross margin and expenses follow a different pattern than the other two groups. For these B-O cooperatives, the largest category had the highest gross margins and the highest expenses. The small- and medium-size groups of B-O cooperatives followed patterns similar to the other small- and medium-size groups of cooperatives.

For all types of cooperatives, the midsize group averaged the highest net margins as a percentage of total sales and other operating income. This was true for the manufacturing and bottling groups as well as for the bargaining-operating group. However, for the bargaining group, the midsize group had the lowest net margin percentages. In each of the size categories, the manufacturing and bottling cooperatives had the highest net margins as a percentage of total sales and other operating income.

From an investment point of view, the first measure examined by size was net margins as a percentage of equity (table 16). In two of the three types of cooperatives, the larger sized group earned the highest net margins based on their equity. For the bargaining-operating cooperatives, the midsize group had higher net than the large group. Perhaps the larger bargaining-operating cooperatives took on "marketwide" services, such as balancing, without being able to capture adequate compensation for the service.

Looking at all the assets, net margins as a percentage of total assets had a very similar pattern to return on equity. The larger the size group, the greater the return on assets. An exception was the bargaining-operating group, which had the best return in the midsize group.

The turnover ratio of total sales and other operating income per dollar of total assets indicated that the 66 midsize bargaining type cooperatives were the most efficient sales producers with \$12.41 of sales for every dollar of assets. Least efficient were the 82 midsize manufacturing and bottling cooperatives with only \$4.13 of sales and other operating income per dollar of total assets. In each of the three type categories, the largest cooperatives generated more sales per dollar of assets than the smallest size group, although the midsize group was not consistent with this statistic.

There was a very large range of total sales and other operating income per dollar of net working capital. This was true not only between type of cooperative but also between sizes within type. The seven largest bargaining type cooperatives were able to generate more than \$473 of sales and other operating income per dollar of working capital, while the four

smallest bargaining-operating cooperatives were only able to generate an average of \$16.50. In each of the three types, medium-size cooperatives were more efficient in using working capital than were the smaller groups. Likewise, the larger cooperatives were more efficient than the middle sizes.

The measure of value added used earlier—dairy sales per hundredweight—when compared by type and size gives a much less clear picture of relationships. The highest dairy dollar sales per hundredweight was for the small bargaining-operating cooperatives whereas the lowest was the smallest bargaining group.⁴

The final ratio examined was the net margins generated for each 100 pounds of raw milk received. The highest net margins were recorded for the midsize manufacturing and bottling group. The second highest return were for the largest manufacturing and bottling group followed by the smallest manufacturing and bottling cooperatives. The lowest net margins were generated by the midsize bargaining group. Again, it should be noted that net margins should be evaluated in conjunction with net prices paid to members.

⁴The picture may be distorted because of heavy purchases of dairy products instead of raw milk.

Table 16—Selected profitability ratios by type and size of dairy marketing cooperative

	Unit	Pounds of raw milk received			All cooperatives reporting
		Less than 25 million	25 million to 749.9 million	750 million and over	
Dairy sales per cooperative:					
Manufacturing and bottling	\$1,000	2,632	32,045	218,815	37,968
Bargaining-operating	\$1,000	1,967	10,701	524,981	227,822
Bargaining	\$1,000	1,712	19,518	184,290	18,288
All	\$1,000	2,003	24,243	353,637	49,489
Net margins per cooperative:					
Manufacturing and bottling	\$1,000	35	831	4,783	901
Bargaining-operating	\$1,000	17	178	3,470	1,555
Bargaining	\$1,000	24	92	2,185	157
All	\$1,000	27	432	3,564	597
Net margins as a percentage of equity:					
Manufacturing and bottling	Percent	12.5	21.3	29.8	24.0
Bargaining-operating	Percent	7.1	18.6	14.1	14.3
Bargaining	Percent	12.2	19.6	41.0	27.9
All	Percent	12.1	21.0	20.3	20.3
Net margins as percentage of total assets:					
Manufacturing and bottling	Percent	5.3	9.9	10.1	9.9
Bargaining-operating	Percent	4.0	7.2	4.0	4.1
Bargaining	Percent	6.8	5.6	11.4	8.6
All	Percent	6.1	9.1	6.1	6.9
Total sales and other operating income per dollar of total assets:					
Manufacturing and bottling	Dollars	4.45	4.13	4.66	4.37
Bargaining-operating	Dollars	5.05	4.72	6.20	6.15
Bargaining	Dollars	5.75	12.41	9.96	10.52
All	Dollars	5.14	5.44	6.12	5.91
Total sales and other operating income per dollar of net working capital:					
Manufacturing and bottling	Dollars	19.69	23.69	48.81	30.73
Bargaining-operating	Dollars	16.50	42.85	49.07	48.80
Bargaining	Dollars	32.71	128.43	473.06	157.67
All	Dollars	25.39	34.24	55.16	46.85
Dairy sales per hundredweight of raw milk receipts:					
Manufacturing and bottling	Dollars	18.10	18.00	17.17	17.60
Bargaining-operating	Dollars	18.75	13.88	14.97	14.95
Bargaining	Dollars	13.01	14.16	13.47	13.76
All	Dollars	14.85	16.19	15.13	15.37
Net margins per hundredweight of raw milk receipts:					
Manufacturing and bottling	Dollars	0.24	0.47	0.38	0.42
Bargaining-operating	Dollars	.16	.23	.10	.10
Bargaining	Dollars	.19	.07	.16	.12
All	Dollars	.20	.29	.15	.19

Appendix

Appendix table 1 – Consolidated balance sheet and operating statement, for dairy cooperatives, by type

Item	Type of cooperative					Total all types
	Manufacturing	Bottling	Bargaining-operating	Bargaining with receiving station	Pure bargaining	
<i>1,000 dollars</i>						
Balance sheet:						
Current assets	455,179	131,768	810,697	71,450	120,806	1,589,900
Fixed assets	216,578	95,114	298,231	10,765	13,697	634,385
Other assets	77,467	25,532	130,842	17,022	35,266	286,129
Total assets	749,224	252,414	1,239,770	99,237	169,769	2,510,414
Current liabilities	352,201	92,459	654,376	61,505	112,801	1,273,342
Long term liabilities	92,203	52,447	225,245	3,381	8,107	381,383
Total liabilities	444,404	144,906	879,621	64,886	120,908	1,654,725
Equity	304,820	107,508	360,149	34,351	48,861	855,689
Total liabilities and equity	749,224	252,414	1,239,770	99,237	169,769	2,510,414
Operating statement:						
Dairy sales	3,229,801	946,626	7,518,126	882,777	1,823,840	14,401,170
Nondairy sales	37,872	136,040	29,374	37,525	26,004	266,815
Other operating expenses	19,792	2,418	81,254	28,642	31,482	163,588
Total operating income	3,287,465	1,085,084	7,628,754	948,944	1,881,326	14,831,573
Cost of products sold	2,943,336	863,400	6,828,336	902,807	1,816,806	13,354,685
Gross margin	344,129	221,684	800,418	46,137	64,520	1,476,888
Operating, sales and administrative expenses	269,097	200,028	725,275	40,337	49,939	1,284,676
Other income (expenses)	5,682	(3,272)	(23,821)	665	2,138	(18,608)
Net margins	80,714	18,384	51,322	6,465	16,719	173,604
<i>Number</i>						
Other data:						
Number of cooperatives	89	21	33	78	70	291
<i>1,000 pounds</i>						
Raw milk received	19,822,465	3,910,718	50,280,887	6,547,111	13,119,696	93,680,877

Appendix table 2—Consolidated balance sheet and operating statement, for manufacturing and bottling cooperatives, by size

Item	Pounds of raw milk received			All manufacturing and bottling cooperatives
	Less than 25 million	25 million to 749.9 million	750 million and over	
<i>1,000 dollars</i>				
Balance sheet:				
Current assets	14,436	320,913	251,598	586,947
Fixed assets	6,825	164,106	140,761	311,692
Other assets	1,969	67,405	33,625	102,999
Total assets	23,230	552,424	425,984	1,001,638
Current liabilities	9,187	224,587	210,886	444,660
Long term liabilities	4,144	70,054	70,452	144,650
Total liabilities	13,331	294,641	281,338	589,310
Equity	9,899	257,783	144,646	412,328
Total liabilities and equity	23,230	552,424	425,984	1,001,638
Operating statement:				
Dairy sales	92,111	2,114,979	1,969,337	4,176,427
Nondairy sales	10,724	151,194	11,994	173,912
Other operating expenses	523	15,870	5,817	22,210
Total operating income	103,358	2,282,043	1,987,148	4,372,549
Cost of goods sold	84,664	1,931,247	1,790,825	3,806,736
Gross margin	18,694	350,796	196,323	565,813
Operating, sales and administrative expenses	17,696	298,339	153,090	469,125
Other income (expenses)	236	2,358	(184)	2,410
Net margins	1,234	54,815	43,049	99,098
<i>Number</i>				
Other data:				
Cooperatives reporting	35	66	9	110
<i>1,000 pounds</i>				
Raw milk received	508,868	11,752,643	11,471,672	23,733,183

Appendix table 3—Consolidated balance sheet and operating statement, bargaining-operating cooperatives, by size

Item	Pounds of raw milk received			All bargaining-operating cooperatives
	Less than 25 million	25 million to 749.9 million	750 million and over	
<i>1,000 dollars</i>				
Balance sheet:				
Current assets	1,149	24,060	785,488	810,697
Fixed assets	354	7,320	290,557	298,231
Other assets	167	5,669	125,006	130,842
Total assets	1,670	37,049	1,201,051	1,239,770
Current liabilities	638	19,978	633,760	654,376
Long term liabilities	93	2,678	222,474	225,245
Total liabilities	731	22,656	856,234	879,621
Equity	939	14,393	344,817	360,149
Total liabilities and equity	1,670	37,049	1,201,051	1,239,770
Operating Statement:				
Dairy sales	7,868	160,522	7,349,736	7,518,126
Nondairy sales	506	11,632	17,236	29,374
Other operating expenses	63	2,772	78,419	81,254
Total operating income	8,437	174,926	7,445,391	7,628,754
Cost of goods sold	7,762	161,205	6,659,369	6,828,336
Gross margin	675	13,721	786,022	800,418
Operating, sales and administrative expenses	653	11,188	713,434	725,275
Other income (expenses)	45	141	(24,007)	(23,821)
Net margins	67	2,674	48,581	51,322
<i>Number</i>				
Other data:				
Cooperatives reporting	4	15	14	33
<i>1,000 pounds</i>				
Raw milk received	41,960	1,156,257	49,082,670	50,280,887

Appendix table 4—Consolidated balance sheet and operating statement, for both categories of bargaining type cooperatives, by size

Item	Pounds of raw milk received			All bargaining cooperatives
	Less than 25 million	25 million to 749.9 million	750 million and over	
<i>1,000 dollars</i>				
Balance sheet:				
Current assets	15,026	82,607	94,623	192,256
Fixed assets	4,598	9,423	10,441	24,462
Other assets	7,139	15,757	29,392	52,288
Total assets	26,763	107,787	134,456	269,006
Current liabilities	10,319	72,194	91,793	174,306
Long term liabilities	1,420	4,691	5,377	11,488
Total liabilities	11,739	76,885	97,170	185,794
Equity	15,024	30,902	37,286	83,212
Total liabilities and equity	26,763	107,787	134,456	269,006
Operating statement:				
Dairy sales	128,388	1,288,200	1,290,029	2,706,617
Nondairy sales	23,772	37,328	2,429	63,529
Other operating expenses	1,797	11,816	46,511	60,124
Total operating income	153,957	1,337,344	1,338,969	2,830,270
Cost of goods sold	145,371	1,288,272	1,285,970	2,719,613
Gross margin	8,586	49,072	52,999	110,657
Operating, sales and administrative expenses	6,817	46,345	37,114	90,276
Other income (expenses)	63	3,334	(594)	2,803
Net margins	1,832	6,061	15,291	23,184
<i>Number</i>				
Other data:				
Cooperatives reporting	75	66	7	148
<i>1,000 pounds</i>				
Raw milk received	986,883	9,100,282	9,579,642	19,666,807

Appendix table 5—Consolidated balance sheet and operating statement, all dairy marketing cooperatives, by size

Item	Pounds of raw milk received			All dairy marketing cooperatives
	Less than 25 million	25 million to 749.9 million	750 million and over	
<i>1,000 dollars</i>				
Balance sheet:				
Current assets	30,611	427,580	1,131,709	1,589,900
Fixed assets	11,777	180,849	441,759	634,385
Other assets	9,275	88,831	188,023	286,129
Total assets	51,663	697,260	1,761,491	2,510,414
Current liabilities	20,144	316,759	936,439	1,273,342
Long term liabilities	5,657	77,423	298,303	381,383
Total liabilities	25,801	394,182	1,234,742	1,654,725
Equity	25,862	303,078	526,749	855,689
Total liabilities and equity	51,663	697,260	1,761,491	2,510,414
Operating statement:				
Dairy sales	228,367	3,563,701	10,609,102	14,401,170
Nondairy sales	35,002	200,154	31,659	266,815
Other operating expenses	2,383	30,458	130,747	163,588
Total operating income	265,752	3,794,313	10,771,508	14,831,573
Cost of goods sold	237,797	3,380,724	9,736,164	13,354,685
Gross margin	27,955	413,589	1,035,344	1,476,888
Operating, sales and administrative expenses	25,166	355,872	903,638	1,284,676
Other income (expenses)	344	5,833	(24,785)	(18,608)
Net margins	3,133	63,550	106,921	173,604
<i>Number</i>				
Other data:				
Cooperatives reporting	114	147	30	291
<i>1,000 pounds</i>				
Raw milk received	1,537,711	22,009,182	70,133,984	93,680,877

**U.S. Department of Agriculture
Agricultural Cooperative Service**

Agricultural Cooperative Service (ACS) provides research, management, and educational assistance to cooperatives to strengthen the economic position of farmers and other rural residents. It works directly with cooperative leaders and Federal and State agencies to improve organization, leadership, and operation of cooperatives and to give guidance to further development.

The agency (1) helps farmers and other rural residents develop cooperatives to obtain supplies and services at lower cost and to get better prices for products they sell; (2) advises rural residents on developing existing resources through cooperative action to enhance rural living; (3) helps cooperatives improve services and operating efficiency; (4) informs members, directors, employees, and the public on how cooperatives work and benefit their members and their communities; and (5) encourages international cooperative programs.

ACS publishes research and educational materials and issues *Farmer Cooperatives* magazine. All programs and activities are conducted on a nondiscriminatory basis, without regard to race, creed, color, sex, or national origin.