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Northeast Dairy Cooperative Financial Performance, 1984-1990

by

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PREFACE

Brian M. Henehan is Extension Associate and Bruce L. Anderson is Associate Professor in the Department of Agricultural Economics. The authors acknowledge Thomas M. Wenger, a former graduate student, for his work in collecting financial data used in this paper as well as Curt Meeder for his help in entering financial data into the spreadsheet developed for this analysis. This paper was prepared for publication by Mary Jo DuBrava.

NORTHEAST DAIRY COOPERATIVE FINANCIAL PERFORMANCE, 1984-1990

by Brian M. Henehan and Bruce L. Anderson

Over the past seven years the dairy industry in the Northeast has been very dynamic. Shifts in government policy, implementation of milk supply control programs, periodic weather problems, shrinking numbers of dairy farmers have all affected the operation and performance of dairy cooperatives. How have Northeast dairy cooperatives fared over the past seven years through all of this uncertainty? This paper will analyze the financial performance of a group of key dairy cooperatives operating in the Northeast during the period 1984-1990.

Annual reports of five Northeast cooperatives were used to collect the financial data used in this study. The following cooperatives are included in the analysis: Agri-Mark, Allied Federated Cooperative, Dairylea, Eastern Milk Producers and Upstate Milk Cooperatives. In 1989, these five cooperatives handled a total of 7.25 billion pounds of milk produced by 9,181 members.[1]

Individual cooperative financial statements were combined to produce an aggregate operating statement and balance sheet for the years 1984 through 1990, (Tables 1 and 2). A set of financial ratios were calculated from the aggregate statements (Table 3).

The only source of income for many bargaining cooperatives is member dues. As dairy cooperatives evolved from bargaining into operating organizations most continued to charge members' dues. Other types of operating cooperatives (fruit and vegetable, grain, supply, etc) have long since stopped charging dues. In order to indicate the importance of dues to the total revenue and net income of dairy cooperatives, we have included dues as a separate item in the operating statements.

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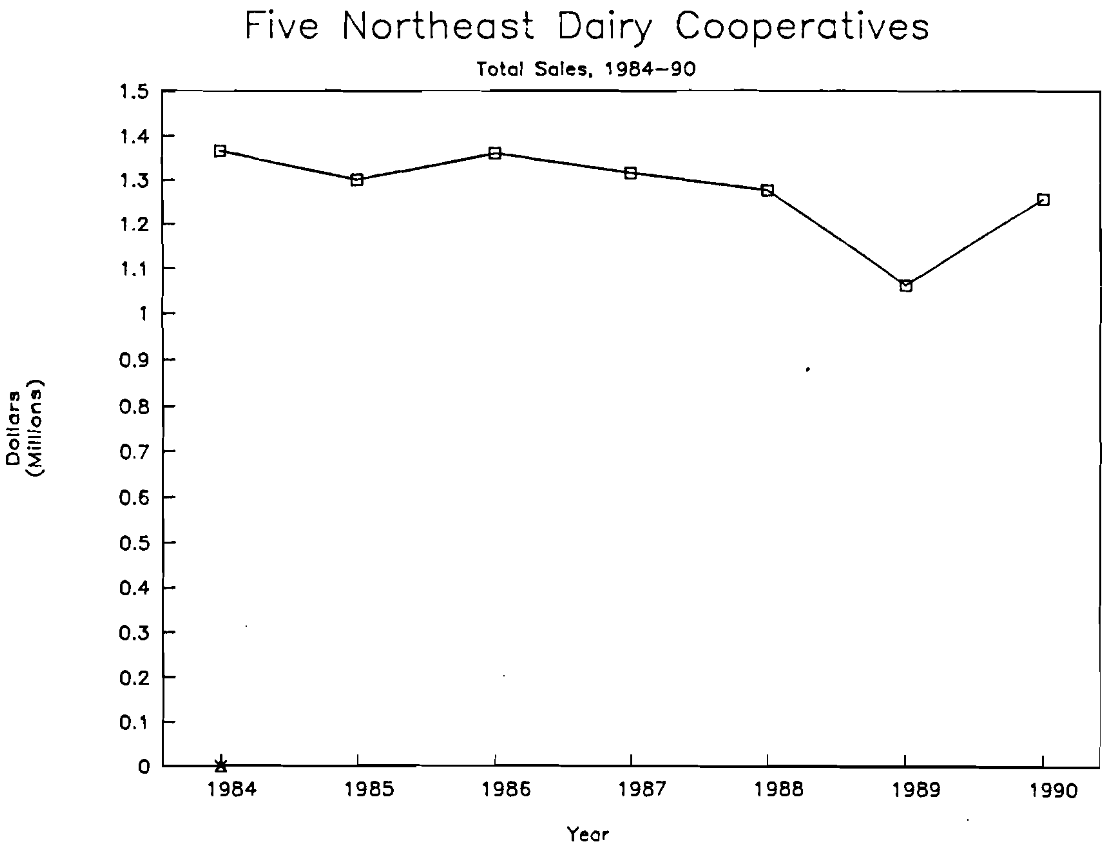
[1] "Top Fifty U.S. Dairy Cooperatives". Hoard's Dairymen, October 10, 1990.

Another occasional source of income for all types of firms is extraordinary items. This includes such things as: gain on the sale of land, buildings and equipment, the settlement or re-adjustment of pension funds or savings generated by tax loss carry forwards. These too have been segregated in order to identify their use and impact on the bottom line of Northeast dairy cooperatives.

<u>Total Sales</u>

Total sales for the five cooperatives in 1990 were slightly over $1.25 billion (Figure 1). Although 1990 total sales were 18% higher (likely due to higher prices) than the previous year, sales have continued on a gradual downward trend from the 1984 level of $1.4 billion.

Figure 1.

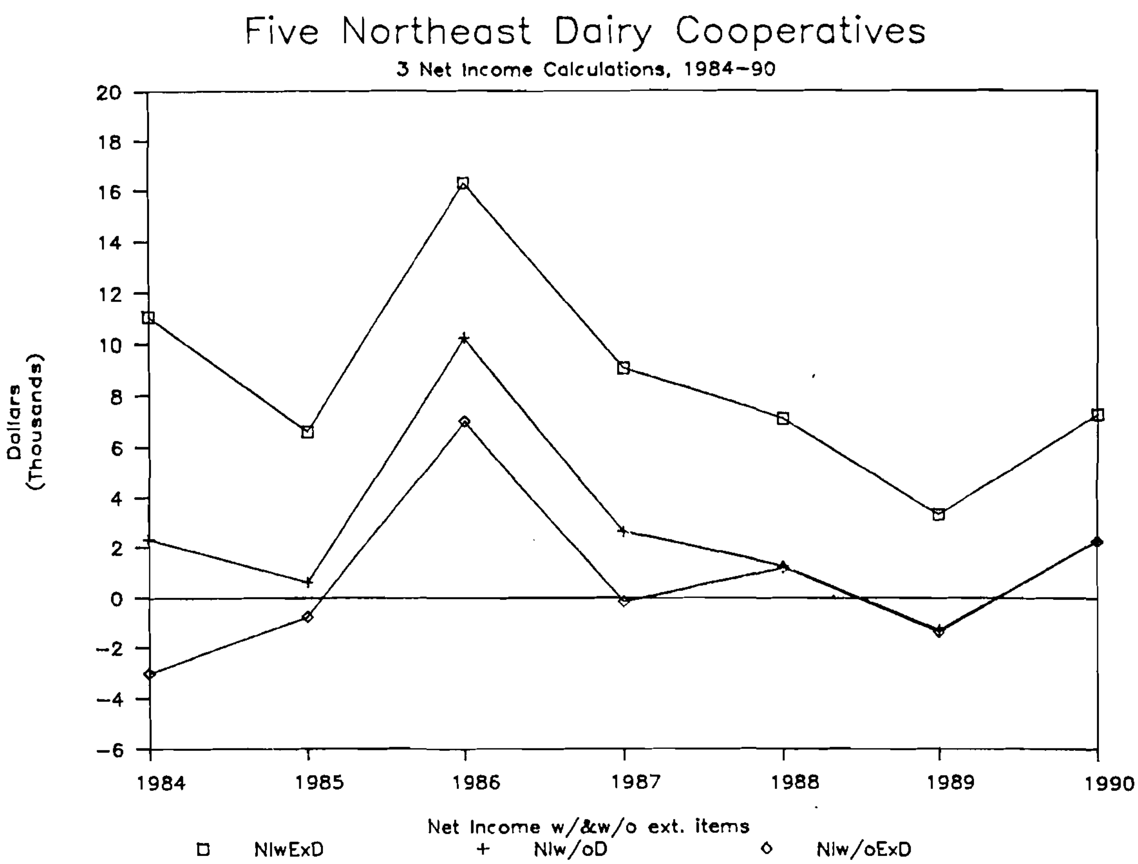


Revenues and Net Income

For the purpose of this analysis, net income was calculated using three methods: 1) net income including revenue from member dues and extraordinary items, 2) net income excluding member dues, and 3) net income excluding both dues and extraordinary items.

The first calculation of net income included both types of non-operating income. Member dues were combined with other types of member service charges and included in determining net income. Income from extraordinary items such as sales of assets, revenues from pension plans, settlements and adjustments and savings from loss carried forward were also included in the initial calculation of net income. Figure 2 indicates the three net income calculations for the years, 1984-90.

Figure 2.



Total net income for 1990 including dues and extraordinary items was $7.3 million dollars (the top line). That was 18% below the previous six year average of $8.9 million, but higher than the $3.3 million in 1989.

When dues are excluded from revenues, adjusted net income over the seven year period drops on average by 73%, (the middle line). Without dues revenue, adjusted net income was about $4 million less in each year. In fact, in 1989 the exclusion of dues results in an aggregate $1.3 million loss. But in 1990, this net income increased to $2.3 million in profits.

The exclusion of both extraordinary items and members dues from revenues reduces net income further (the bottom line in Figure 2). It should be noted that since 1989 there have been no significant extraordinary items contributing to net income. The greatest impact appeared in 1984 when the exclusion of extraordinary items amounting to $5.4 million changed a positive net income of $2.4 million into a loss of $3 million.

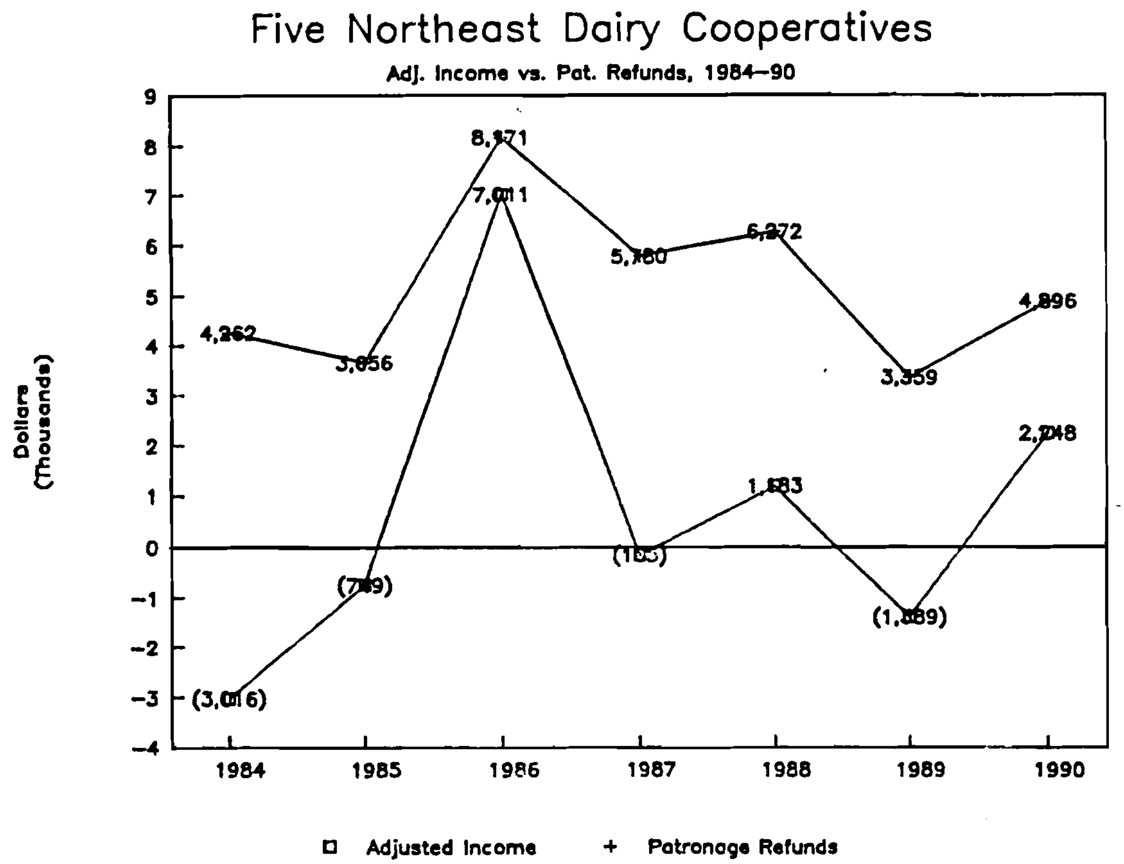
Members dues and extraordinary income have had a significant effect on net income for this group of dairy cooperatives. Without these sources of non-operating income, cooperatives would have incurred losses for four out of the last seven years.

The elimination of non-operating sources of income in determining net income assists in identifying actual earnings from operations and emphasizes the role which these two sources of non-operating revenues have had on the total net income reported by Northeast cooperatives.

Patronage Refunds

In 1990, cooperatives paid out to members a total of $4.9 million in patronage refunds based on the volume of milk they marketed. The level of patronage refunds has varied over the seven years from a high of $8.2 million in 1986 to a low of $3.4 million in 1989. Over the seven year period the annual average amount of patronage refunds paid to members was $5.2 million for the five cooperatives (top line in Figure 3.).

Figure 3.



It should be noted that on aggregate, patronage refunds to members have been greater than adjusted net income (bottom line in Figure 3.) in each of the last six years. What is happening is that for these cooperatives, patronage refunds represent a partial rebate of the dues charged to members over the year. Put differently, aggregate cooperative operations are not sufficient to fund their organizations. Dues are necessary to cover a portion of operating costs. This is typical for all types of bargaining organizations, and not just dairy cooperatives.

Balance Sheet

An examination of the aggregate balance sheet (Table 2), helps to assess the financial condition of this group of cooperatives over the past seven years. In 1990, the aggregate book value of total assets was $301 million decreasing from a 1984 level of $309 million. Both total current assets and fixed assets in 1990 are lower than in most years in this period. This is because several cooperatives in this group have sold fixed assets and restructured operations. Fixed assets decreased from a high of $84 million in 1987 to $55 million in 1990.

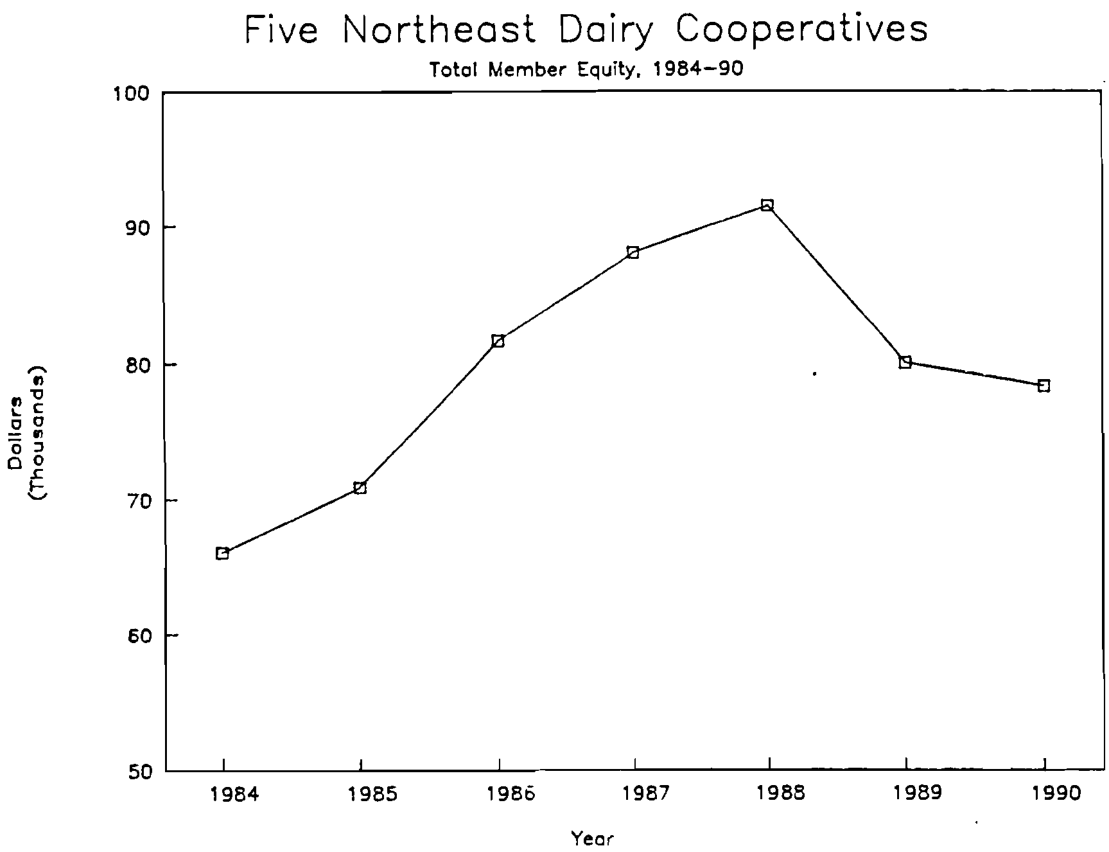
Inventory levels in 1990 of $16.7 million were the highest for the seven year period. This was primarily due to the high prices of cheese, non-fat dry milk and butter. Investments, primarily in other cooperatives and the Springfield Bank for Cooperatives, have grown from $14.6 million in 1984 to $22.3 million in 1990. On the liabilities side of the balance sheet, short term notes payable dropped significantly from $44 million in 1984 to $20 million in 1985 and have remained rather constant through 1990. Accounts payable to members have declined from $76 million in 1984 to $69 million in 1990 as the volume of milk handled and number of members have declined. Other accounts payable have also decreased from a 1984 level of $45 million to a 1990 level of $30 million. Consequently, total current liabilities have decreased from $187 million in 1984 to $138 million in 1990.

Long term debt rose from $55.3 million in 1984 to a peak of $94.4 million in 1987 with the biggest jump occurring between 1984 to 1985 when, approximately $20 million of short term debt (Notes Payable) were transferred to long term debt. Since 1987, long term debt has gradually declined to $80.8 million in 1990.

Total member equity, (Figure 4), rose from $66.1 million in 1984 to a high of $91.5 million in 1988 and dropped to $78.3 million in 1990.

This decrease is due to a number of factors. Perhaps the most important was that one cooperative made an organizational change that eliminated a significant amount of accumulated deficits and equity whose book value probably exceeded its actual value. While the re-organization did reduce equity, it also made the revised numbers a more accurate representation of actual value. A second factor contributing to the decrease in equity was the decrease in fixed assets and total assets. Finally, the highly competitive market for milk supplies caused some cooperatives to modify their equity programs in order to retain and attract members.

Figure 4.



Key Financial Indicators

Financial statement data can be further evaluated by analyzing key financial ratios. There are limitations to this approach given the different reporting procedures used by individual cooperatives as well as the different types of operations each cooperative is involved in. The reader should use care in interpreting these ratios. Having said that, ratios can provide a useful gauge of cooperative performance. Financial ratios were calculated using the aggregate data to measure cooperative solvency, liquidity, asset management and profitability, (see Table 3).

Solvency Measures

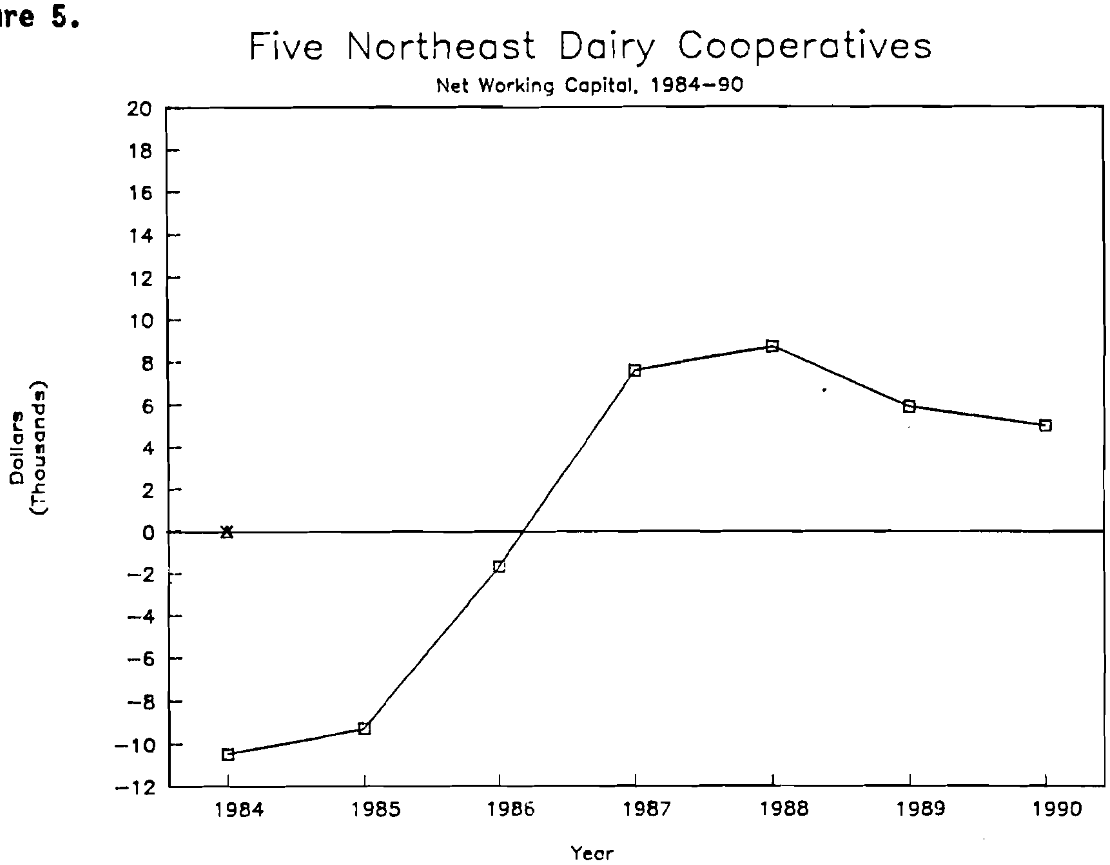
The debt ratio, (percentage of total assets financed by both current liabilities and long term debt) declined from 79% in 1984 to 72% in 1990. The long term debt to long term capital ratio increased from 46 % in 1984 to 52% in 1990 after fluctuating up and down several percentage points during the period. Long term debt to equity rose from .85 in 1984 to 1.08 in 1990. Although the debt ratio dropped slightly over this period, this group of cooperatives remains highly leveraged. The level of long term debt has grown faster than the level of member equity. However, some of this growth was due to converting a portion of short term debt into long term debt. Typically long term financing is less risky than short term financing.

Liquidity Measures

The current ratio, (the amount of current assets relative to current liabilities) rose from .94 in 1984 to 1.04 in 1990. While such a low ratio could signal trouble in many industries low current ratios are typical for the dairy industry, where the operations of federal milk marketing orders play an important role. The quick ratio, (current assets less inventories relative to current liabilities) rose from .88 in 1984 to .97 for 1987 through 1989 and dropped to .92 in 1990. Times interest earned, (earnings before interest and taxes divided by interest), measures a firms ability to meet interest expenses with earnings before taxes and interest. This ratio rose from 1.67 in 1984 to 4.02 in 1990. This significant improvement is a very healthy sign and indicates the five cooperatives have a much greater coverage of these interest expenses. Net working capital, (Figure 5) rose over the same time period from a negative $10.5 million to just over $5 million.

Comparing 1990 to the two previous years, these cooperatives saw a somewhat lower liquidity situation as measured by the quick and current ratios, and net working capital. However, this should not be a major concern especially in light of the re-organizations that occurred which require lower levels of working capital.

Figure 5.



Asset Management

Management of accounts receivable improved as the number of days in receivables dropped from 41 days in 1984 to 33 days in 1990. Inventory turnover, (cost of goods sold divided by inventory) dropped from 90.6 in 1984 to 71.4 in 1990. The sharp decrease in 1990 reflected the tendency of some organizations to build inventory of expensive commodities in a market with short supplies. Fixed asset turnover, (sales divided by fixed assets) rose to 22.74 in 1990 from a low of 15.37 in 1988. The increase represents a change in some operations and a lower level of fixed assets. Total asset turnover, (sales divided by total assets) remained relatively constant though the seven year period ending at 4.17 in 1990.

These ratios can not be used to evaluate the effectiveness of individual cooperative strategies for managing assets but can shed some light on general trends. Except for inventory turnover in 1990, these measures of asset management generally have remained constant or improved during the period 1984-90.

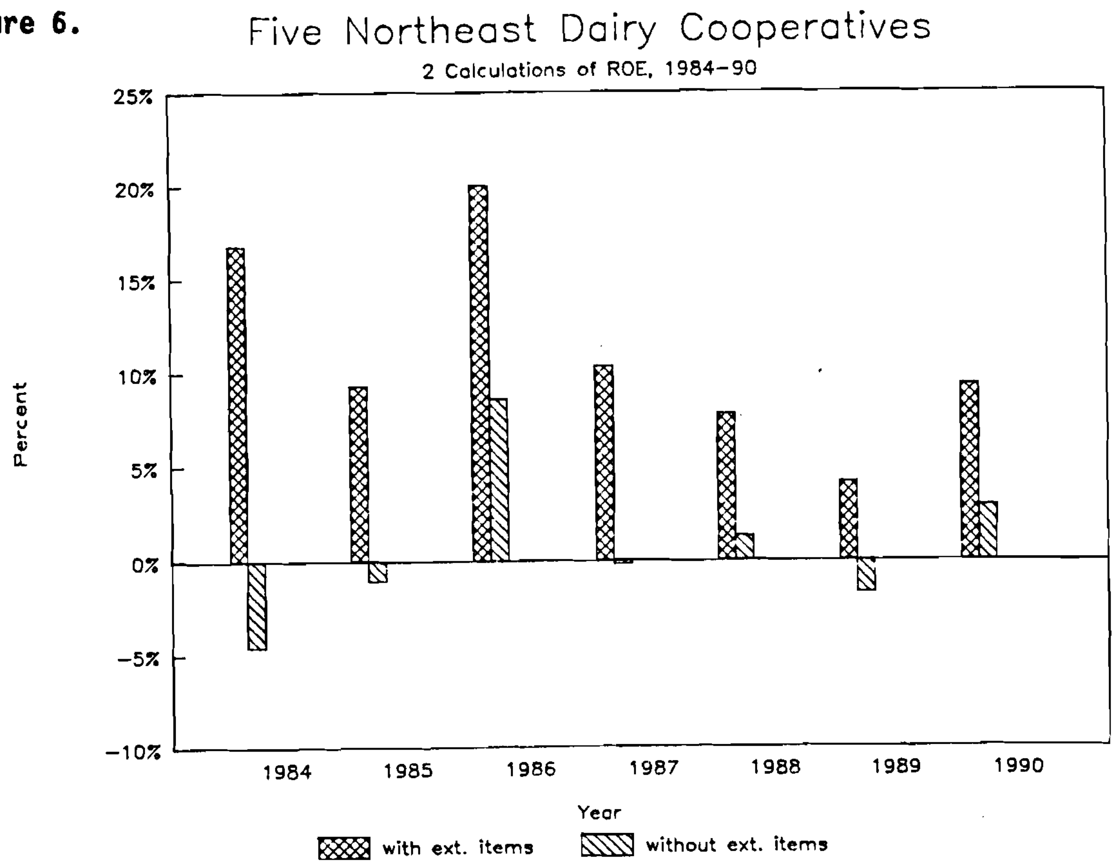
Profitability

The gross margin on sales rose and fell over the period and reached a low of 5.4% in 1990. Some of this decrease is due to the reduced margins accompanying the change of one organization from being an operating cooperative to becoming a bargaining cooperative. Second, as milk supplies became tight dairy cooperatives paid higher premiums instead of generating a high net margin at the end of the year. Finally, competitive pressures also reduced gross margins.

Net margins, return on total assets, and return on equity were calculated both with and without income from extraordinary items and member dues. The net margin as reported (not reduced by extraordinary items and dues) remained flat throughout the period ending at 0.6% in 1990. Adjusting net margins to exclude income from extraordinary sources and member dues, results in three years showing losses and the other four years at or close to break even. Return on total assets averaged 2.7% over the period with 1990 showing a 2.4% return on total assets. Return on total assets adjusted for extraordinary items and dues show a negative return for four out of the seven years and a 0.7% return in 1990. Return on equity, (Figure 6) averaged 11.1% over the period with 1990 showing a 9.3% return. The adjusted return on equity shows a negative return for four out of the seven years and ended in 1990 with a 2.9% return on equity.

An analysis of these measures of profitability indicates weak financial performance by the group, especially when adjusted for extraordinary items and dues. The elimination of non-operating types of income significantly decreases net margins, returns on total assets and returns on equity and points towards poor earnings from operations as well as very low or negative returns on investment.

Figure 6.



Conclusions

As evidenced by the data presented on this paper the financial situation of the major Northeast dairy cooperatives has stabilized and improved especially when compared to 1984 and 1985.

Some of the important improvements include:

* A lower proportion of debt to total assets and a higher proportion of equity.
* While long tern debt has increased there was a larger absolute decrease in short term credit, reducing the riskiness of debt financing.
* Liquidity as measured by the current ratio and quick ratio have improved.
* Aggregate net working capital increased from a negative amount to a positive level.
* Interest coverage made a very healthy improvement.
* Accounts receivable decreased significantly and are now in a very reasonable range.
* Net margins as reported have been constant even in the presence of fierce competition, for milk supplies.
* In the last three years extraordinary items have not been used to increase net income.

Despite these improvements, there are several areas which deserve continued attention and improvement. They include:

* Total revenues have trended downward and efforts must be made to stabilize and increase cooperative sales.
* Net income has been small and has mostly been the result of member dues and in earlier years extraordinary items. The current dairy environment will likely result in higher net income.
* Cooperatives may need to become less dependent on member dues to cover the cost of operations.
* While some improvement has occurred, cooperatives must continue to reduce debt, specifically long term debt.
* Organizations should continue to improve liquidity by increasing the proportion of current assets to current liabilities.

* Good inventory management lapsed in 1990 and we expect the results of that lapse to show up on 1991 financial statements through the write-down of inventories. Vigilance in inventory management is essential.

* Finally greater attention must be paid to bottomline returns which improve net income, return on total assets and return on equity.

Although the financial position of Northeast cooperatives has stabilized and achieved some important improvements, members should expect their organizations to continue to improve financial performance.

Table 1. AGGREGATE OPERATING STATEMENT FOR FIVE NORTHEAST DAIRY COOPERATIVES, 1984-1990

ITEM	1984	1985	1986	1987	1988	1989	1990
	$1000						
Total Sales	1,365,907	1,299,237	1,359,720	1,314,805	1,275,395	1,062,598	1,256,628
Cost of Product Sold	1,159,190	1,085,182	1,100,120	1,088,314	1,060,618	974,903	1,189,209
Gross Margin	206,717	214,055	259,600	226,491	214,777	87,695	67,419
Operating Expenses	205,171	2 13,092	250,617	221,503	208,365	87,575	60,661
Depreciation	7,484	7,449	10,153	10,754	11,122	6,997	6,836
Basic Serv Charges/Dues	(8,732)	(6,019)	(6,077)	(6,413)	(5,893)	(4,603)	(5,021)
Other Expense (income)	(11,295)	(11,503)	(16,769)	(10,917)	(10,782)	(8,019)	(5,791)
Earnings (Losses) before int. and taxes	14,090	11,035	21,676	11,563	11,964	5,745	10,734
Net Interest	8,417	4,646	5,776	4,298	4,201	2,031	2,672
Earnings (losses) before taxes w/o extraordinary items	5,672	6,389	15,900	7,265	7,763	3,714	8,062
Extraordinary Items	5,361	1,332	3,250	2,811	41	97	18
Earnings (losses) before taxes	11,034	7,721	19,150	10,075	7,804	3,811	8,080
Taxes (tax benefits)	(44)	1,119	2,812	1,017	687	500	793
Net Income (losses) with dues and extraordinary items	11,078	6,602	16,338	9,058	7,117	3,310	7,287
Net Income (losses) w/o extraord. items	5,716	5,270	13,088	6,248	7,077	3,213	7,269
Net Income (losses) w/o dues	2,345	583	10,261	2,646	1,224	(1,292)	2,266
Net Income (losses) w/o dues and extraordinary items	(3,016)	(749)	7,011	(165)	1,183	(1,389)	2,248
Patronage Refund	4,262	3,656	8,171	5,780	6,272	3,359	4,896

Table 2. AGGREGATE BALANCE SHEET FOR FIVE NORTHEAST DAIRY COOPERATIVES, 1984-1990

ITEM	1984 ALL CO-OPS	1985 ALL CO-OPS	1986 ALL CO-OPS	1987 ALL CO-OPS	1988 ALL CO-OPS	1989 ALL CO-OPS	1990 ALL CO-OPS
	$1000	$1000	$1000	$1000	$1000	$1000	$1000
Current Assets							
Cash and Securities	8,274	10,121	15,878	12,486	14,137	12,483	10,404
Receivables							
Trade	116,036	109,417	107,435	101,542	95,831	96,711	98,755
Non-Trade	38,111	20,546	24,360	35,378	30,669	21,480	16,618
Inventories	12,792	9,662	10,204	12,132	13,578	9,870	16,657
Other	1,261	1,309	1,280	1,154	1,114	853	979
Total Current Assets	176,475	151,055	159,157	162,692	155,330	141,397	143,413
Investments	14,624	16,265	17,692	17,454	16,725	22,734	22,318
Net Fixed Assets	66,513	74,918	81,961	84,481	82,972	57,056	55,270
Other Assets	51,489	64,831	66,898	76,435	73,260	87,011	80,437
Total Assets	309,100	307,069	325,708	341,063	328,287	308,198	301,437
Current Liabilities							
Notes Payable	44,379	19,906	18,450	21,900	22,472	18,600	19,250
Current Portion	10,727	11,435	11,250	9,297	9,024	8,247	8,942
Accounts Payable							
Producer/Members	76,287	75,223	71,589	69,582	65,785	65,705	69,448
Other	45,407	44,624	46,402	43,581	39,482	33,369	30,366
Other Current Liab.	10,144	9,132	13,146	10,755	9,869	9,603	10,389
Total Current Liab.	186,944	160,320	160,837	155,115	146,633	135,525	138,396
Long Term Debt	55,335	74,271	80,692	94,436	86,378	88,935	80,803
Other Liabilities	769	1,646	2,595	3,463	3,803	3,772	3,913
Total Long Term Liab.	56,104	75,917	83,287	97,899	90,181	92,706	84,716
Total Liabilities	243,048	236,237	244,125	253,014	236,814	228,231	223,112
Member Equity							
Allocated	80,967	83,012	88,598	93,152	95,670	69,655	68,065
Unallocated	(14,916)	(12,180)	(7,014)	(5,104)	(4,197)	10,311	10,260
Total Member Equity	66,051	70,832	81,584	88,048	91,473	79,967	78,325
	309,100	307,069	325,708	341,063	328,287	308,198	301,437

Table 3. AGGREGATE FINANCIAL RATIOS FOR FIVE NORTHEAST DAIRY COOPERATIVES, 1984-90

	1984	1985	1986	1987	1988	1989	1990
SOLVENCY MEASURES							
Debt Ratio	79%	77%	75%	74%	72%	74%	74%
L-T Debt to L-T Capital	46%	52%	51%	53%	50%	54%	52%
L-T Debt to Equity	0.85	1.07	1.02	1.11	0.99	1.16	1.08
LIQUIDITY MEASURES							
Current Ratio	0.94	0.94	0.99	1.05	1.06	1.04	1.04
Quick Ratio	0.88	0.88	0.93	0.97	0.97	0.97	0.92
Times Interest Earned	1.67	2.38	3.75	2.69	2.85	2.83	4.02
Net Working Capital (*1000)	($10,470)	($9,265)	($1,680)	$7,577	$8,696	$5,872	$5,017
ASSET MANAGEMENT							
Days in Receivables	41	36	35	37	36	40	33
Inventory Turnover	90.61	112.31	107.82	89.71	78.12	98.77	71.39
Fixed Asset Turnover	20.54	17.34	16.59	15.56	15.37	18.62	22.74
Total Asset Turnover	4.42	4.23	4.17	3.86	3.89	3.45	4.17
PROFITABILITY							
Gross Margins on Sales	15.1%	16.5%	9.1%	17.2%	16.8%	8.3%	5.4%
Net Margins on Sales*	0.8%	0.5%	1.2%	0.7%	0.6%	0.3%	0.6%
Net Margins on Sales**	-0.2%	-0.1%	0.5%	-0.0%	0.1%	-0.1%	0.2%
Return on Tot. Assets*	3.6%	2.2%	5.0%	2.7%	2.2%	1.1%	2.4%
Return on Tot. Assets**	-1.0%	-0.2%	2.2%	-0.0%	0.4%	-0.5%	0.7%
Return on Equity*	16.8%	9.3%	20.0%	10.3%	7.8%	4.1%	9.3%
Return on Equity**	-4.6%	-1.1%	8.6%	-0.2%	1.3%	-1.7%	2.9%

* Includes income from extraordinary items and member charges.
** Excludes income from extraordinary items and member charges.

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