United States
Department of
Agriculture

Rural Business–
Cooperative
Service

USDA

Top 100 Cooperatives 1996 Financial Profile

Reprinted from *Rural Cooperatives* magazine,
September—December 1997

Record Gross Revenues Do Not Translate Into Higher Net Margins for Largest Co-ops

Continued Expansion of Assets Shows Greater Reliance On Debt by Farmer Co-ops

Leveraging the Future? Higher Debt Levels Among Large Ag Co-ops May Be Cause for Concern

Top 100 Cooperatives 1996 Financial Profile

Reprinted from *Rural Cooperatives* magazine, September-December 1997

April 1998

Record Gross Revenues Do Not Translate Into Higher Net Margins for Largest Co-ops

David S. Chesnick

Agricultural Economist
USDA Rural Business-Cooperative Service

Editor's Note: This is the first of three articles which provide an overview of how the nation's 100 largest agricultural cooperatives (based on gross sales) performed in 1996. Parts II and III follow on successive pages.

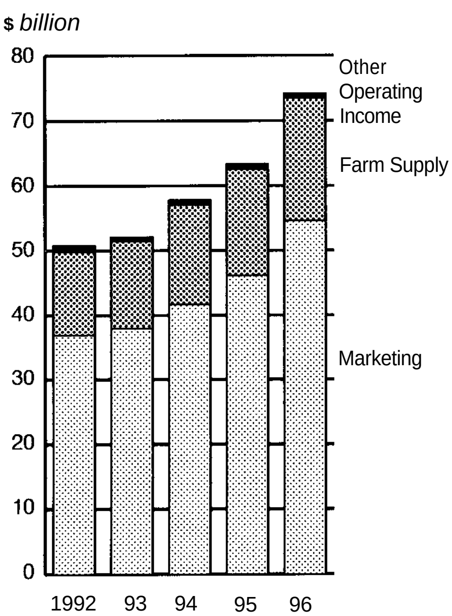
The nation's 100 largest agricultural cooperatives reported record revenues for the second year in a row in 1996. Operating revenues totaled more than $74 billion, up nearly $11 billion from the 1995 record (figure 1). However, net margins for the year were down.

Strategic alliances, higher grain prices and increases in value-added processing by cooperatives were major contributors to the rise in revenues. However, 52 percent, of that increase was realized by just two cooperatives — Farmland Industries Inc., Kansas City, Mo., and Harvest States Cooperatives, St. Paul, Minn. They represented nearly a quarter of total operating revenue for the 100 largest co-ops, up from 20 percent in 1995.

Marketing sales continue to show tremendous gains, increasing more than 18 percent, to $55 billion, from the $46 billion recorded in 1995. This increase doubles the gain made the previous year. While three-quarters of the cooperatives that market their members' products had higher sales in 1996 than in 1995, 75 percent of the gain was generated by just 10 cooperatives. Grain sales accounted for about 65 percent of the total increase, followed by milk sales, which accounted for about 20 percent of the increase.

Farm supply cooperatives enjoyed substantial sales gains in 1996, following a year of relatively small gains in 1995. Farm supply sales rose 15 percent, to nearly $19 billion. However, 70 percent of that gain was due to five cooperatives. Sales increased for nearly every category of farm supplies, with 85 percent. of the increase attributed to higher feed, fertilizer and petroleum sales.

Figure 1 — **Sources of Total Revenue**



Prior years restated

Table 1- **Consolidated statement of operations, 199596, top 100 cooperatives**

Operating statement	1996	1995	Difference	Percent Change
	---- Thousand	Dollars ----		
Revenues				
Marketing	54,631,508	46,224,113	8,407,395	18.2
Farm Supply	18,933,572	16,421,488	2,512,084	15.3
Total Sales	73,565,080	62,645,601	10,919,479	17.4
Other Operating Revenues	711,369	757,852	(46,483)	-6.1
Total Operating Revenues	74,276,449	63,403,453	10,872,996	17.1
Cost of Goods Sold	67,438,087	56,607,951	10,830,136	19.1
Gross Margin	6,838,362	6,795,502	42,860	0.6
Expenses				
Operating Expenses	5,355,551	5,140,926	214,625	4.2
Net Operating Margins	1,482,811	1,654,576	(171,765)	-10.4
Other Revenues (Expenses)				
Interest Expense	(591,013)	(499,804)	(91,209)	18.2
Interest Revenue	99,626	103,925	(4,299)	-4.1
Other Income	186,086	129,476	56,610	43.7
Other Expenses	(31,329)	(33,185)	1,856	-5.6
Patronage Revenue	162,153	139,757	22,396	16.0
Net Margins from Operations	1,308,334	1,494,745	(186,411)	-12.5
Non-Operating Revenue (Expenses)	5,450	2,881	2,569	89.2
Net Margins	1,313,784	1,497,626	(183,842)	-12.3
Distribution of Net Margins				
Cash Patronage Dividends	338,204	435,972	(97,768)	-22.4
Retain Patronage Dividends	620,607	628,829	(8,222)	-1.3
Nonqualified Noncash Patronage	43,644	28,821	14,823	51.4
Dividends	26,833	23,090	3,743	16.2
Unallocated Equity	170,330	240,291	(69,961)	-29.1
Income Tax	114,166	140,623	(26,457)	-18.8
Total Distribution	1,313,784	1,497,626	(183,842)	-12.3

Other operating revenues were down nearly $46 million. These revenues are generally earned from services (such as storage, handling, spreading and other services provided to members). Although service revenue contributes an average of only 1 percent of total operating revenues, some cooperatives rely heavily on service revenue to boost their bottom line. For example, one cooperative received more than 35 percent of its operating revenue from receipts for services.

Cost of goods sold increased $10.8 billion in 1996, up 1 percent from 1995. This gain nearly surpassed the increase in total operating revenues, due most likely to increases in grain prices paid to members. However, substantial increase in farm supply sales, which carry higher margins, should have produced a relatively smaller increase in the cost of goods sold.

Operating expenses rose nearly 4.5 percent, to $5.4 billion, largely reflecting increased labor costs. Labor statistics obtained from 44 of the largest agricultural cooperatives showed labor expenses increased 7.5 percent from the previous year If this sample is representative of the population, nearly 60 percent of the increase in operating expenses will be attributed to labor expenses.

Despite increased operating expenses, mergers and consolidation among cooperatives in the past few years have helped streamline their operations. For example, operating expenses as a percent of total sales continue to show small declines in each of the past 5 years. In 1992, total operating expenses consumed 11 percent of total revenues. By 1996, this ratio was down to 7 percent. This would imply that cooperatives are continuing to improve on the use of their resources.

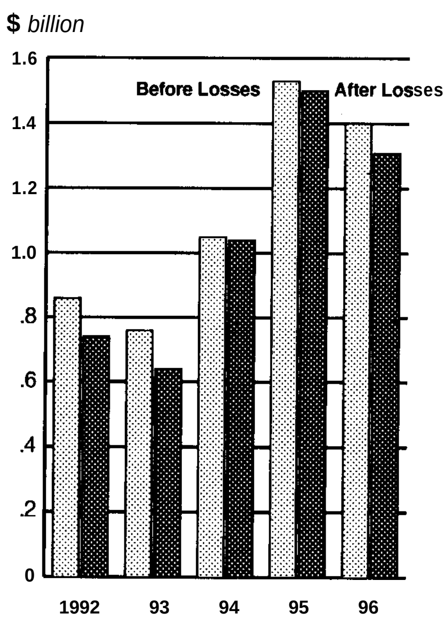
Other Income and Expenses

Income and expenses not directly related to the day-to-day operations fall into the category of "other income and expenses." These include patronage refunds received from other cooperatives, interest income and expense, gain/loss on the sale of equipment, and any other income/expense not related directly to operations. These expenses often relate to financing and investing activities of the cooperative.

Increased debt by cooperatives pushed up their interest expenses. Interest expense jumped 18 percent, or $91 million, to a record $591 million in 1996. This marks the third year in a row for double-digit increases in interest payments. On the other hand, interest revenue dropped 4 percent from a high of $103 million in 1995.

Patronage refunds (cash and non-cash) received from other cooperatives climbed 16 percent. Of the $162 million in patronage refunds, 27 percent was in cash. The rest were allocated non-cash patronage refunds. Seven cooperatives would have had an operating loss without patronage refunds.

Figure 2— **Net Margins/Losses**



Prior years restated

Net Margins

In 1996, net margins before taxes and extraordinary items were $1.3 billion. This is down 12.5 percent from the 1995 record. Higher cost of goods sold and labor expenses were the main reasons for the lower margins. Despite the decline, net margins from operations still posted the second highest level since USDA began tracking the largest agricultural cooperatives.

One cause for the drop in net margins was the number of cooperatives suffering losses during 1996. Nine cooperatives ended 1996 with a loss, up from six co-ops in 1995. Net margins before losses were $1.4 billion in 1996 (figure 2). Losses amounted to $86.6 million. However, 73 percent of the loss was attributed to one cooperative.

Non-operating Revenue

Non-operating revenues include gains or losses from discontinued operations, accounting changes and other extraordinary revenue or expenses not associated with operations. In 1996, these revenue sources reached $5.5 million, up 90 percent from 1995. However, that was not enough to boost net margins above 1995 levels.

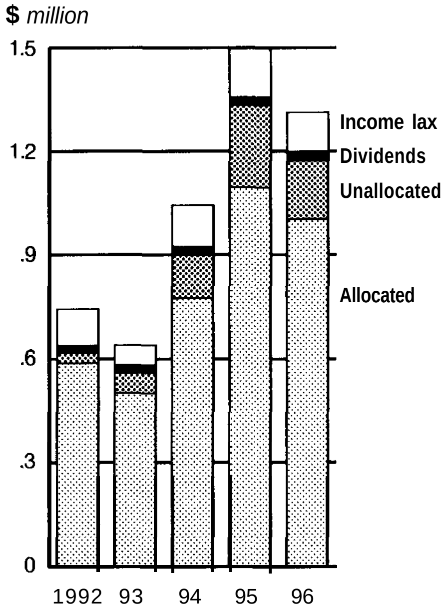
Distributions of Net Margins

Cooperatives not only had fewer margins to distribute in 1996, but also paid out less cash as a percentage of total margins allocated (figures 3 and 4). In 1995, the largest agricultural cooperatives paid out $436 million (30 percent) of allocated equity in cash. By 1996, this figure was down to $338 million (26 percent).

The value of non-cash qualified patronage refunds declined from $629 million in 1995 to $621 million in 1996, a drop of 1 percent. But, as a percent of total distribution, cooperatives retained a higher percentage of their patronage refunds in 1996 (47 percent) than in 1995 (42 percent).

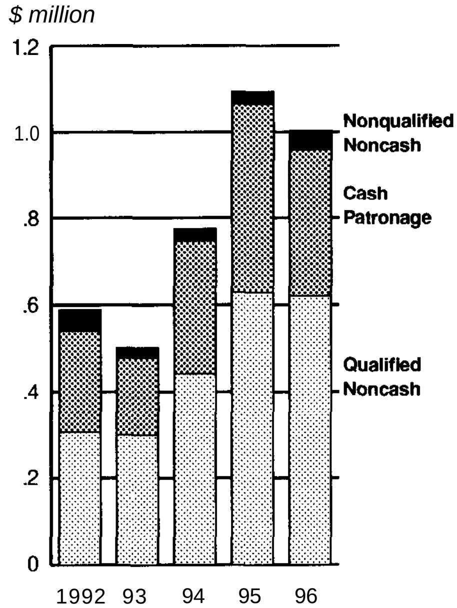
Although non-qualified non-cash patronage refunds represent 3.3 percent

Figure 3 — **Distribution of Net Income**



Prior years restated

Figure 4 — **Patronage Refunds**



Prior years restated

Table z-Total **revenue by commodity group, 1996-96, top 100 cooperatives**

Total revenue	1996	1995		
	---- *Thousand*	*Dollars - - - -*	*Difference*	*Percent Change*
Cotton	2,346,263	2,694,323	(348,060)	-12.9
Dairy	18,460,584	16,707,931	1,752,653	10.5
Diversified	17,120,864	13,780,646	3,340,218	24.2
Fruit & Vegetable	7,473,799	7,101,667	372,132	5.2
Farm supply	9,193,881	8,137,604	1,056,277	13.0
Grain	16,390,219	11,635,134	4,755,085	40.9
Poultry & Livestock	1,122,000	1,175,679	(53,679)	-4.6
Rice	1,108,834	1,157,156	(48,322)	-4.2
Sugar	1,060,005	1,013,313	46,692	4.6

Table 3— **Net margins by commodity group, 1995-96, top 100 cooperatives**

Net margins	1996	*1995*		
	---- *Thousand*	*Dollars - - - -*	*Difference*	*Percent Change*
Cotton	70,862	64,691	6,171	9.5
Dairy	216,559	190,661	25,898	13.6
Diversified	365,339	339,809	25,530	7.5
Fruit & Vegetable	14,441	143,646	(129,205)	-89.9
Farm Supply	558,024	506,655	51,369	10.1
Grain	76,037	249,539	(173,502)	-69.5
Poultry & Livestock	1,317	355	962	271.0
Rice	11,029	10,211	818	8.0
Sugar	2,812	(7,941)	10,753	*

* Cannot take percentage increase from a negative base.

of total net margin distribution, the value jumped 50 percent, to $44 million, between 1995 and 1996. However, most of the increase was due to a single cooperative. Although these non-qualified patronage refunds add flexibility to the distribution mix, they are slowly losing favor with cooperatives. In the 1980s as many as 15 cooperatives used this form of allocation, but the number dropped to six co-ops in 1996.

Whether by regulation or cooperative policy, dividends usually play a minor role in distributing cooperatives' net income. However, the amount of dividends paid has increased in recent years. Before 1992, the average amount of dividends paid ranged between $13 million and $18 million. Since 1992, that amount has steadily increased, from $20 million to $27 million in 1996. Dividends paid on stock investment differs from patronage dividends or patronage refunds, which are based on the amount of business done with the cooperative.

Generally, unallocated equity or retained earnings are accumulated from non-member business. In 1996, unallocated equity levels declined. Cooperatives retained nearly 30 percent less of their earning than in 1995. This marks an abrupt change in the trend over the past five years. In 1992, the largest cooperatives retained $29 million. By 1995, this value stood at $240 million and in 1996 it dropped to $170 million.

Even though cooperatives have a special tax status, they still pay income taxes. In 1996, cooperatives paid more than $114 million in income taxes, 19 percent less than in 1995. As a percent of net margins, the largest agricultural cooperatives paid an average tax rate of 9 percent, unchanged from 1995.

Revenues by Commodity Group

In 1996, three commodity groups had lower sales than in 1995 (table 2). However, the drop in sales for these three cooperatives (cotton, poultry & livestock and rice) was overshadowed by the tremendous gains made by the other commodity groups. The biggest gainers were grain, diversified, dairy and farm supply cooperatives. However, the drop in net margins for grain and fruit & vegetable cooperatives more than offset the gains made by the other commodity groups, resulting in lower net margins for all cooperatives (table 3).

Grain cooperatives had the largest increase in sales, up 41 percent to $16.4

billion. The average prices for all grains in 1996 neared record levels. However, the high prices also pushed up payments to members and caused gross margins to drop 10 percent, to $593 million. Operating expenses increased 20 percent, to $492 million, half of which was due to higher labor costs. Consequently, net margins of $76 million were the lowest in the past five years.

The diversified cooperatives had the second highest increase in total revenues, up 25 percent, to $17 billion. Most of the increase was due to higher sales for grain (up 53 percent) and livestock (up 19 percent). Operating expenses increased a modest 5 percent while net margins rose 8 percent, to $365 million.

Due to a combination of higher prices and larger quantities, total revenues for dairy cooperatives hit $18.5 billion, up 10 percent from 1995. However, higher prices also pushed up cost of goods sold by 12 percent, to $1.8 billion. This lowered gross margins by 4 percent. Despite higher labor costs, dairy cooperatives cut operating expenses by 5 percent, thereby minimizing the effect of lower gross margins. Operating income was off only 1 percent from 1995. The $22 million increase in patronage refunds from other cooperatives helped push net margins up 12 percent to $214 million.

Farm supplies had another good year. Total revenues are up 13 percent, or $1 billion, reaching $9.1 billion. Even though cost of goods sold and operating expenses each increased by 8 percent, net margins reached the highest level to date. At $558 million, farm supply cooperatives also had the highest net margins of all commodity groups.

After two years of net losses as a commodity group, sugar cooperatives finally turned their operations around, posting $2.8 million in net margins. Although sales and gross margins have been increasing during the past five years, expenses increased faster. In 1996, the rate of increase for expenses slowed to 12 percent. Consequently, net operating margins increased 19 percent, to $14 million. Sugar cooperatives also had a 20 percent decease in interest expense which lead to the first positive net margins in the past three years.

Total revenue dropped for three commodity groups: rice, cotton, and poultry & livestock. Yet, all showed increases on their bottom line.

Rice cooperative revenues dropped 4 percent during 1996 while gross margins were down $14 million. However, this group was able to cut expenses by 7 percent, or $21 million, ultimately resulting in an B-percent increase in net margins, to $11 million.

Cotton cooperatives faced a different situation. In 1996, cotton prices and volume were less than in 1995. Revenues dropped 13 percent in 1996 to $2.3 billion. However, cost of goods sold declined by 14 percent, to $2.1 billion. This combination caused gross margins to increase 5 percent, to $211 million. The cotton cooperatives held operating expenses to a l-percent increase. Net margins increased 10 percent to $71 million — the highest amount since USDA began tracking the largest agricultural cooperatives.

While revenues and cost of goods sold both dropped 5 percent for poultry & livestock cooperatives, gross and net operating margins remained virtually unchanged. However, the poultry & livestock cooperatives continued to lose money on operations. Net operating losses were $6 million in 1996 and 1995. Yet, interest and other income were enough to offset operating losses in 1996, thereby pushing net margins to $1.3 million compared with $0.4 million in 1995. ■

Continued Expansion of Assets Shows Greater Reliance On Debt by Farmer Co-ops

David S. Chesnick

USDA/RBS Cooperatives Services
Agricultural Economist

Editor's note: This is the second of three articles. The last article in the series follows this one.

The balance sheets of the nation's 100 largest cooperatives show that they continued to experience significant growth in 1996, although not quite as dramatic as the growth spurt seen in 1995 (figure 1). The rate of growth in combined assets was nearly 9 percent in 1996, down from 15 percent in 1995, but still is a strong indicator of economic health for the nation's largest cooperatives.

The balance sheet certainly does not tell all, but it does provide a good snapshot of the overall financial strength of the bust ness at one point in time. The assets side of the balance sheet presents all the resources that the cooperative has invested. The other side indicates the sources from which these invested funds were financed. In other words, we see what the cooperative owns and who lays claim to these assets.

Total combined assets for the top 100 U.S. agricultural cooperatives stood at $25.6 billion in 1996, a $2-billion increase from 1995. The diversified and grain cooperative groups recorded the largest gains. Nearly two-thirds of the total combined increases in total assets were attributed to these two commodity groups. This expansion was fueled by higher levels of debt. Both short-term and long-term debt together increased 13.4 percent while total equity increased by only 7.5 percent (table 1).

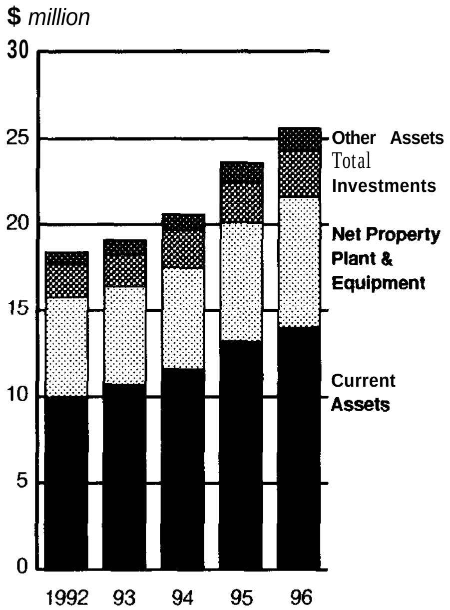
Current Assets Climb Slightly

While the growth of total assets in 1995 was fueled by the expansion of current assets, the growth of current assets in 1996 lagged behind growth in total assets. Current assets (comprised of cash, accounts receivable, inventory and "other" current assets) showed a modest gain of 6 percent, to $14 billion, when compared to 1995's growth rate of 14 percent. The percent of total assets represented by current assets declined from 56.1 percent in 1995 to 54.7 percent in 1996.

Most of the gains in current assets were in the form of inventory and accounts receivable (figure 2). Cash balances declined $60 million, to $850 million, by the end of 1996. That represents a 6.5-percent drop from 1995. Although dairy, fruit & vegetable and grain cooperatives increased their cash position, it was not enough to overcome the decline registered by all other commodity groups.

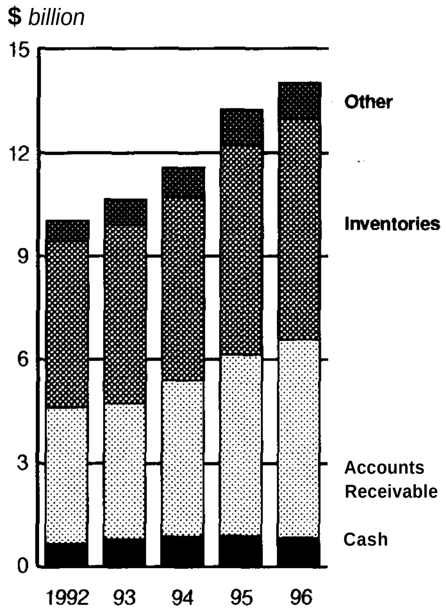
Accounts receivable ended the year at $5.7 billion, a $497 million (9.5 percent) increase, the largest gain in current assets. This increase in accounts receivable was proportional to the increase in sales in 1996. Nearly half of this increase can be attributed to diversified cooperatives with

Figure 1 — **Asset Composition, Top 100 Cooperatives, 1992-96**



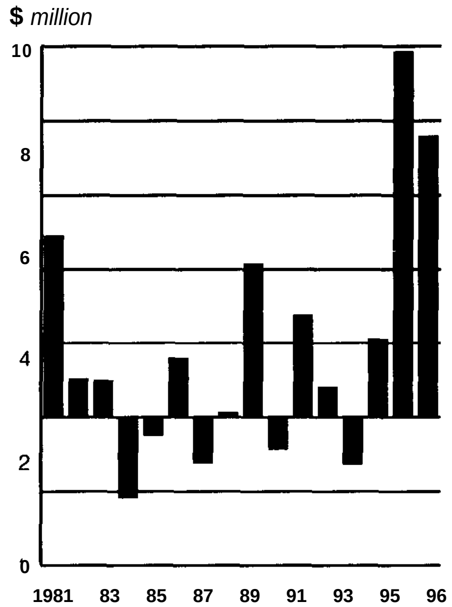
Prior years restated

Figure 2 — **Combined Current Assets, Top 100 Cooperatives, 1992-96**



Prior years restated

Figure 3 — **Yearly Change in Fixed Asset Investment, 1981-96**



Prior years restated

Table 1— **Combined balance sheet-Top 100, 1995-96**

Assets	1996	1995	Difference	% Change
		thousand $		
Current Assets				
Cash	849,857	908,920	(59,063)	(6.50)
Accounts Receivable	5,716,496	5219,664	496,832	9.52
Inventory	6,413,999	6,082,713	331,286	5.45
Other Current Assets	1,040,453	1,030,300	10.153	0.99
Total Current Assets	14,020,805	13.241597	779,208	5.88
Investment				
Bank of Cooperatives	435,016	408,031	26,985	6.61
Other Cooperatives	1,475,156	1,184,458	290,698	24.54
Other Investments	773.445	699.343	74.102	10.60
Total Investments	2,683,617	2,291,832	391,785	17.09
Net PP&E	7,638,136	6,879,190	758,946	11.03
Other Assets	1,302,491	1,195,849	106,642	8.92
Total Assets	25,645,049	23,608,468	2,036,581	8.63
Current Liabilities				
Short-term Debt				
Current Portion of Long-term Debt	898,788	406,921	491,867	120.88
Banks for Cooperatives	1,897,484	1,846,247	51,237	2.78
Commercial Banks	728,987	626,882	102,105	16.29
Notes Issued by Cooperatives	322,651	261,739	60,912	23.27
Other Nonfinancial Entities	27,047	24,394	2,653	10.88
Commercial Paper	108,699	147,767	(39,068)	(26.44)
Government Sources	44,981	27,464	17,517	63.78
Other Sources	5,436	4,459	977	21.91
Total Short-term Debt	4,034,073	3,345,873	688,200	20.57
Accounts Payable	3,497,859	3,176,943	320,916	10.10
Member Payables	403,939	478,747	(74,808)	(15.63)
Patron and Pool Liabilities	1,436,920	1,531,972	(95,052)	(6.20)
Other Current Liabilities	1.632.793	1.505.034	127.759	8.49
Total Current Liabilities	11,005,584	10,038,569	967,015	9.63
Long-term Debt				
Bank for Cooperatives	2,729,007	2,445,978	283,029	11.57
Bond Issued by Cooperative	1,295,591	1,069,879	225,712	21.10
Commercial Banks	683,878	395,416	288,462	72.95
Insurance Companies	419,225	445,643	(26,418)	(5.93)
Industrial Development Bonds	196,780	212,641	(15,861)	(7.46)
Capital Lease	57,702	54,460	3,242	5.95
Other Nonfinancial Entities	6,452	6,769	(317)	(4.68)
Government Source	1,064	930	134	14.41
Other Sources	208.797	128.304	80.493	62.74
Total Long-term Debt	5,598,496	4,760,020	838,476	17.61
Less Current Portion	4,699,708	4,353,099	346,609	7.96
Other Liabilities and Deferred Credits	674,362	618,943	55,419	8.95
Total Noncurrent Liabilities	5.374.070	4.972.042	402.028	8.09
Total Liabilities	16.379.654	15.010.611	1.369.043	9.12
Minority Interest	227,034	187,745	39,289	20.93
Member Equity				
Preferred Stock	1,749,589	1,619,691	129,898	8.02
Common Stock	600,817	568,909	31,908	5.61
Equity Certificates and Credits	5,022,918	4,654,440	368,478	7.92
Unallocated Capital	1.665.037	1.567.072	97.965	6.25
Total Equity	9,038,361	8,410,112	628,249	7.47
Total Liabilities and Equity	25,645,049	23,608,468	2,036,581	8.63

farm supply and grain cooperatives accounting for most of the rest.

The next largest increase was in inventories, which climbed 5.4 percent in 1996. This increase of $33 1 million boosted the total to $6.4 billion. However, the increase in inventories did not keep up with the sales level. This could mean cooperatives do not expect to sustain the higher sales volume in 1997 or they are becoming more efficient with their inventory management. This is especially true with the diversified cooperatives, which had a 25-percent increase in revenues but only a .5-percent increase in inventory. Dairy, farm supply and grain co-ops — which had the largest increase in inventories — all had revenue increase as well. Cotton and rice cooperatives had elevated inventory levels but the revenues declined, which is cause for concern.

Investments Hit Record Highs

Cooperatives invest in both non-cooperative and cooperative ventures (table 2). Investment in non-cooperative businesses generally indicates investments in joint ventures or other for-profit subsidiaries. Investments in other cooperatives usually indicates business done with other cooperatives, including CoBank and St. Paul Bank for Cooperatives. Total investment increased 17.1 percent, to $1.9 billion, a new record that surpassed the previous mark of $1.6 billion set in 1984.

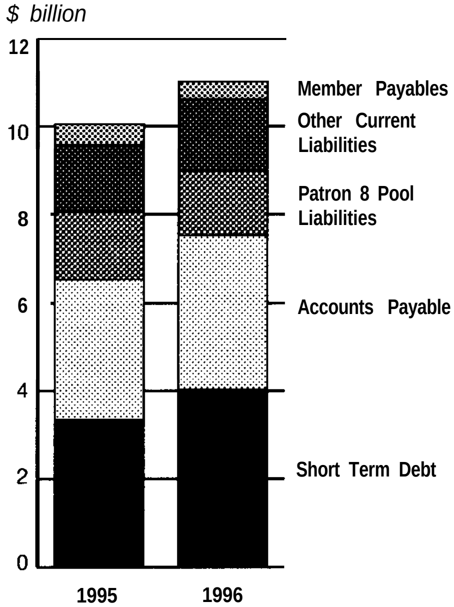
Cooperative investment in other cooperatives (excluding financial cooperatives) increased almost 25 percent, to $1.5 billion. Out of a total increase of $291 million, 70 percent reflected an ownership level of less than 20 percent and usually represents allocated non-cash patronage refunds. Diversified cooperatives provided the bulk of the increase with farm supply and grain cooperatives each contributing their share.

Investments that exceeded 20 percent ownership in other cooperatives increased 31 percent, to $87 million. When investments exceed 20 percent ownership, it usually represents joint ventures established to move more member products into the marketplace or to add value to the product. Leading the way in this area was the dairy cooperative group, which was responsible for 80 percent of the total increase.

Investment in financial cooperatives increased 6.6 percent, to $435 million. Grain cooperatives were the only commodity group that substantially increased their investments in financial cooperatives. The diversified and cotton cooperative groups each decreased their investment while the rest of the commodity groups were close to the overall average increase.

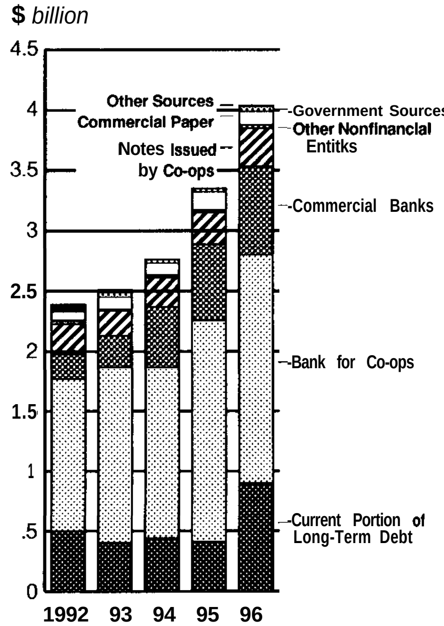
Investments in non-cooperative businesses increased 10.6 percent, to $773 million in 1996. This increase was stimulated mostly by a few diversified, grain and sugar cooperatives which invested in value-added businesses. Dairy cooperatives had a 50-percent drop in non-cooperative

Figure 5 -Current **Liabilities, Top 100 Cooperatives, 1996-96**



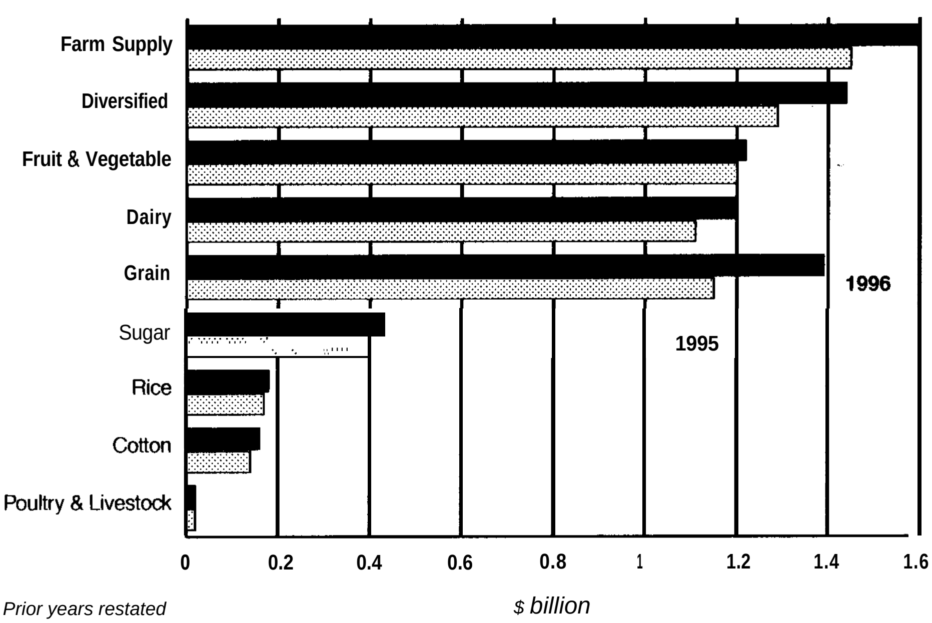
Prior years restated

Figure 6 — **Sources of Short-Term Debt, Top 100, 1992-96**



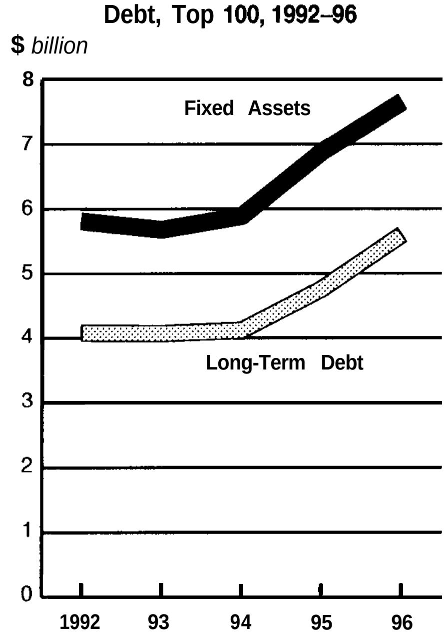
Prior years restated

Figure 4 — **Net Property, Plant, & Equipment, by Commodity Group**



Prior years restated

Figure 7 — **Fixed Assets and Long-Term Debt, Top 100, 1992–96**



Prior years restated

investment due to consolidations. However, the combined amount of non-cooperative investment to total assets has remained steady at 3 percent over the past two years.

Fixed Assets Continue to Expand

Businesses invest in fixed assets (plant, property and equipment) in order to build for the future. Cooperatives are no exception and have invested heavily in fixed assets throughout the past two years. During this time, their total investment in fixed assets is greater than in the prior 14 years combined (figure 3). Fixed assets, which account for 30 percent of all assets, increased 11 percent to end 1996 at $7.6 billion. Although more than two-thirds of the largest cooperatives invested in fixed assets, a large part of this increase can be attributed to only a few cooperatives. These few cooperatives were distributed throughout various commodity groups. As figure 4 illustrates, all commodity groups increased their amount of fixed assets.

Current Liabilities Push Upward

Current liabilities climbed 9.6 percent in 1996, to $11 billion, surpassing all other liabilities. Leading the increase was short-term debt, which increased 21 percent to more than $4 billion (figure 5). However, this does not mean cooperatives are relying more on short-term borrowing to finance their operations (figure 6). Current portions of long-term debt were the driving force behind much of this increase. With a total combined increase of short-term debt of $688 million, current portions of long-term debt accounted for 71 percent of this increase.

Current portions of long-term debt were up 12 1 percent from 1995 to $899 million in 1996. All commodity groups showed higher current portions of long-term debt. This is due to higher fixed capital expenditures over the past few years. Yet, most of the increases cannot be attributed to higher long-term debt. Eighty percent of the increase can be attributed to one cooperative reclassifying its debt from long-term to current debt.

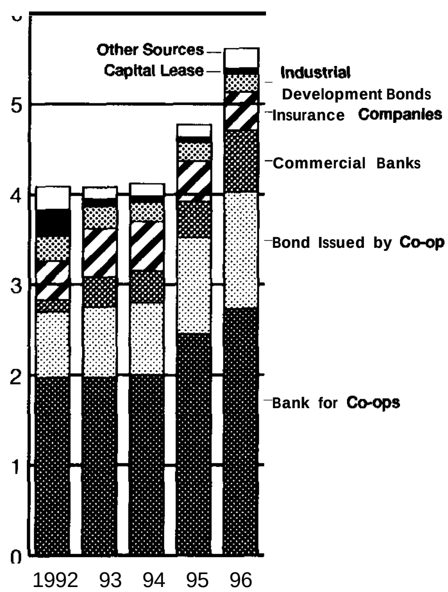
Short-term borrowing from commercial banks increased 16 percent, to $729 million. Diversified cooperatives rely more on commercial banks to fund their operations than other commodity groups. Yet, all the other commodity groups — with the exception of grain and cotton — relied more on commercial banks to fund their operations in 1996.

Although the cooperative banks hold 47 percent of total short-term debt ($1.9 billion), they only realized an increase of $51 million. Only grain and cotton cooperatives increased the amount of short-term funds borrowed from the cooperative banks. Grain cooperatives, needing large amounts of working capital to pay for their members' products, increased their short-term debt held by cooperative banks by $227 million. Short-term debt of cotton cooperatives increased $11 million. All other commodity groups carried less short-term debt from cooperative banks.

Other fund sources — including commercial paper, notes issued by the cooperative, government sources, and other non-financial institutes — increased 9 percent, to $509 million. Leading the increase were diversified, farm supply and fruit & vegetable cooperatives, with $92 million in new notes issued. Cotton cooperatives replaced $36 million worth of notes with $26 million from government sources and $9 million of commercial paper.

Accounts payable increased $320 million (10 percent) to $3.5 billion, yet, as a percent of total sales, it remained fairly

Figure 8— **Sources of Long-Term Debt, Top 100, 1992-96**



Prior years restated

Table 2— **Co-op investment from 1992-1996, Top 100 agricultural cooperatives**

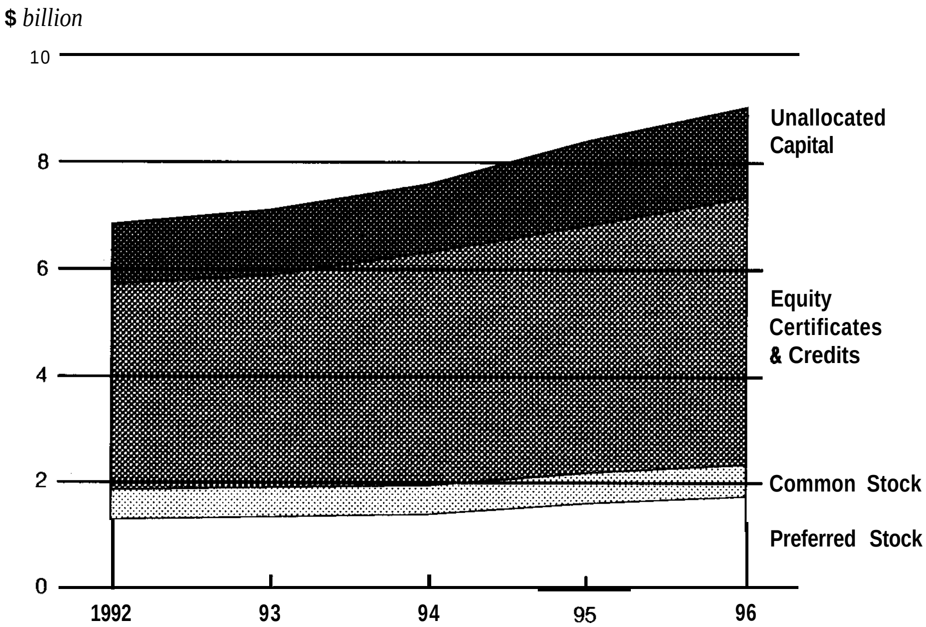
	1992	93	94	95	96
			thousand $		
Bank for Cooperatives	359,448	371,913	385,986	408,031	435,016
Other Cooperatives					
20 percent or less	718,439	777,004	790,618	905,881	1,109,370
More than 20 percent	139,628	181,530	229,211	278,577	365,786
Other Businesses					
20 Percent or less	47,468	39,087	39,181	157,423	123,837
More than 20 percent	200,616	177,924	168,856	61,900	101,913
Other Investments	393,279	388,079	566,021	480,020	547,695
Total Investment	**1,858,878**	**1,935,537**	**2,179,873**	**2,291,832**	**2,683,617**

steady at 5 percent throughout the past five years. Diversified, farm supply and, to a lesser extent, dairy cooperatives accounted for nearly the whole increase in trade accounts payable.

On the other hand, liabilities owed to members in the form of cash patronage and cash dividends payable decreased. As mentioned in the earlier article, cooperatives paid out less of their earnings to members. This shows up in the member payable account, which dropped $75 million (15 percent), to $404 million.

Funds owed to members in the form of patron and pool liabilities decrease by $95 million, ending the year at $1.4 billion. Although dairy and fruit & vegetable cooperatives had an increase in patron and pool liabilities, their $79 million increase was not enough to offset the drop in farm supply and grain cooperatives. This is especially surprising given the increase in grain prices.

Figure 9 — Growth in Equity, Top 100, 1992-96



Long-Term Debt Posts Record High

Total combined long-term debt, including debt currently owed, reached a record $5.6 billion in 1996, a 17-percent increase from 1995. This is the first time since USDA began tracking the largest agricultural cooperatives that long-term debt has exceeded $5 billion. As mentioned earlier in this article, fixed assets and current portion of long-term debt have shown significant increases throughout the past two years. As would be expected, this coincides with the increase in long-term debt (figure 7). Businesses try to match the term structure of debt with that of their assets.

Long-term debt less current portion increased 8 percent, to $4.7 billion. Figure 8 illustrates the largest creditors by far continue to be cooperative banks, which held 49 percent of the total long-term debt. These cooperative lending institutions increased the amount of debt they held by 11.6 percent, to $2.7 billion. Cotton, gram, rice, sugar and poultry & livestock cooperatives rely on this source for the majority of their long-term financing. Dairy and fruit & vegetable cooperatives are shifting away from the cooperative banks and relying more on self-financing through issuance of bonds and other long-term notes.

The next largest sources of debt financing are bonds issued by cooperatives. Although bond issues are only used by 27 cooperatives, they account for 27 percent of these cooperatives' total long-term debt. Cooperatives issued $1.3 billion in bonds, up $226 million from 1995. Like the trend for all long-term debt, bond issues have taken off in the past two years. Diversified cooperatives are by far the largest users of bonds for long-term financing. Forty-four percent of their total long-term debt is in the form of bonds and notes.

Commercial banks also increased the amount of cooperative debt they hold to $683 million, nearly double the $395 million in co-op debt they held in 1995. The largest user of commercial banks continues to be diversified cooperatives, which accounted for nearly half of all debt held by commercial banks. Farm supply and fruit & vegetable cooperatives also rely on commercial banks for part of their long-term financial strategy.

Other sources of debt (such as insurance companies, government sources, leases, industrial development bonds, etc.) increased 5 percent, to $890 million. Diversified and farm supply cooperatives accounted for 65 percent of these other sources of long-term debt.

The total combined liabilities for the largest agricultural cooperatives increased $1.4 billion, or 9.1 percent, to $16.4 billion. The bulk of the increase came from long-term debt including its current portion. While a few cooperatives used a wide variety of financing long-term, most cooperatives used a single source for most of their funding.

Minority Interest

When an outside investor has a stake in a consolidated subsidiary of a cooperative, those investors are said to hold a minority interest in the subsidiary. The amount of minority interest held in cooperatives subsidiaries increased by 2 1 percent in 1996, to $227 million. This is the highest amount since 1992, when the amount of minority interest first reached $200 million. However, 80 percent of the increase was due to acquisitions by one cooperative that previously did not have a history of having minority interest.

Member Equity

One of the more positive aspects of studying the largest agricultural cooperatives is that combined members' equity set record amounts in each year but one, 1992 (figure 9). However, there is a negative side to this increase. Over the past three years, the growth in member equity has not kept pace with the growth in assets. As cooperatives become more leveraged, a downturn in the agricultural economy could provide disastrous consequences. This will be especially true as the agricultural sector becomes more market oriented with less government involvement.

Preferred stock may represent investments by employees and the general public as well as members. In other instances, retained patronage refunds and per-unit retains are classified as preferred stock. Whatever the reason, the combined value of preferred stock increased $129 million, or 8 percent, to $1.7 billion in 1996.

Most of the increases were due to reclassifications of written notices of allocation to preferred stock, not due to investments from outside the cooperative community Farm supply cooperatives issued 75 percent of the total outstanding preferred stock.

Although there are a few cooperatives that use common stock as notices of allocation, it is generally issued for voting rights. The difference between common stock in IOFs and cooperatives is that cooperatives will only issue one share of voting stock per member, where investors in IOFs can own many shares of voting stock.

Common stock represents less then 7 percent of total equity outstanding. In 1996, common stock increased 6 percent, to $601 million. Most of this increase was due to diversified cooperatives which used common stock for payment of patronage refunds to patrons who do not meet membership criteria.

Equity certificates and credits are the largest segment of allocated equity and represent more than 50 percent of total equity outstanding. Combined cooperative certificates and credits surpassed $5 billion for the first time in 1996. Although cash patronage refunds were lower this year, a higher percentage of net margins were in the form of non-cash patronage.

In 1995, a total of 44 percent of allocated equity was in the form of equity certiicates. By 1996, that percentage was up to 51 percent. Fruit & vegetable cooperatives were the only commodity group to realize a decrease in the amount of equity certificates.

Unallocated equity is generally income from non-member business and other income on which the cooperative has paid taxes. It is typically used as a reserve to offset losses incurred. In 1996, unallocated equity was up 6 percent, to $1.7 billion. This represents 18 percent of total equity outstanding.

With the exception of grain and fruit & vegetable cooperatives, all cooperative commodity groups increased the amount of their unallocated equity Fruit & vegetable cooperatives took the largest hit, writing off more than $18 million from unallocated equity. ■

Leveraging the Future?

Higher Debt Levels Among Large Ag Co-ops May Be Cause for Concern

David S. Chesnick

Agricultural Economist
USDA Rural Business-Cooperative Service

Part III of series.

A Latin proverb states: "No gain is as certain as is that which proceeds from the economical use of what you already have." In other words, the use of a cooperative's resources in an efficient manner should produce a healthy return to members.

This raises an interesting question. How do you determine whether a cooperative is using its financial resources efficiently? The first two articles of this series examined the combined income statement and balance sheet of the nation's largest agricultural cooperatives. This third and final article in the series will try to interpret this data to determine how well cooperatives are using their resources.

The nation's 100 largest agricultural cooperatives have experienced phenomenal growth in sales and assets during the past few years. However, a few cooperatives accounted for most of the gain. The big question that needs to be examined is: are cooperatives putting themselves in a position where a downturn in the economy can cause tremendous damage?

As expressed throughout this series of articles, cooperatives are accumulating a record amount of debt to fund their expansion. As cooperatives become more leveraged, slight changes in revenue can have a tremendous effect on whether or not a cooperative has patronage refunds to return to members at year end. Increased sales help the cooperatives maintain a liquid position. However, higher expenses, especially for labor, continue to eat into the bottom line, as illustrated in the slumping profitability ratios, examined below. While some cooperatives are positioning themselves for the 2 1st century, others may find the next century will not be so favorable.

How USDA Evaluates Co-op Performance

The tools USDA uses to analyze cooperative financial performance include four types of primary measurements:

- Liquidity, which shows the cooperative's ability to meet short-run obligations.
- Leverage, which shows the risk associated with financing and the cooperatives' ability to meet its long-term and short-term obligations.
- Activity, which shows the efficiency with which the cooperative uses its assets.
- Profitability, which shows the net return on the cooperative's operations.

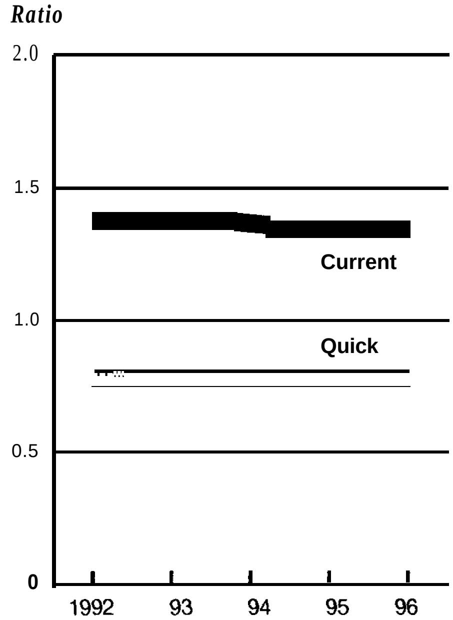
Liquidity

The most common liquidity ratios used today are the current and quick ratios. Both evaluate the cooperative's short-term liquidity, measured by the degree to which it can meet its short-term obligations. Liquidity implies the ability to convert assets into cash in the current period. Liquid assets include cash, marketable securities, accounts receivable, inventories and other debt that is to be paid to the cooperative within the current fiscal year. Creditors who have a short-term interest in the cooperative will want to know if it can satisfy its commitment in case the cooperative has a cash-flow problem. Figure 1 illustrates both current and quick ratios from 1992 to 1996.

The current ratio is calculated by dividing total current assets by total current liabilities. As figure 1 shows, the liquidity of the largest agricultural cooperatives has slowly eroded since 1993. The major cause of this decline was the increased reliance on short-term debt over the past few years. Cash balances were also down 6.5 percent in 1996.

Table 1 lists the ratios by commodity type for 1996. The liquidity trend in cotton, dairy, grain, poultry/livestock and rice cooperatives is declining. On the other hand, diversified cooperatives strengthened their liquid position, but were unable to pull up the overall average. The rest of the commodity groups remained steady over the past five years. Except for grain and poultry/livestock cooperatives, the largest agricultural cooperatives are still maintaining a current ratio well above 1. Poultry/livestock cooperatives were the least liquid, with current liabilities greater than current assets.

Figure 1 — Liquidity Ratios



Prior years restated

The quick ratio is calculated the same way as the current ratio, but inventories are excluded from the current assets. Many analysts believe that inventories cannot be converted to cash as quickly as the other current assets during liquidation. Also, if the inventory needs to be liquidated, the cash value will in all likelihood be much less than the book value. Therefore, it can be argued that the quick ratio is a better measure of liquidity

Despite the drop in the current ratio, the quick ratio increased slightly in 1996. Cooperatives did not have as large of an inventory buildup as they had in 1995.

Table 1—Ratios by commodity type for 1996

	Current Ratio	Quick Ratio	Debt To Assets	Long-Term Debt To Equity	Times Interest Earned	Total Assets Turnover	Fixed Assets Turnover	Gross Profit Margin	Net Operating Margin	Return On Total Assets BIE	Return On Members Equity
	Ratio				Times			Percent			
Cotton	1.78	1.22	49.37	0.27	6.50	5.11	24.45	17.24	6.05	18.30	19.22
Dairy	1.26	0.90	62.51	0.33	9.03	5.47	25.15	7.85	1.31	7.63	18.41
Diversified	1.85	1.15	66.34	1.33	4.48	2.52	11.49	11.54	1.11	8.48	14.40
Fruit/Vegetable	1.37	0.63	67.61	0.70	1.84	2.19	12.15	22.66	0.29	3.56	3.01
Farm Supply	1.52	0.78	55.37	0.38	7.49	2.69	12.70	15.18	3.85	9.41	12.98
Grain	1.08	0.52	65.58	0.28	1.95	3.72	13.82	7.72	-0.54	6.47	8.72
Poultry/Livestock	0.97	0.96	81.23	0.96	2.95	7.43	66.65	2.28	-1.24	3.84	4.65
Rice	1.32	0.51	58.94	0.30	1.51	2.28	6.36	30.16	0.56	5.14	2.10
Sugar	1.33	0.65	57.56	0.84	2.41	1.33	2.24	22.80	0.43	2.95	1.51

This is evident by the way the current ratio dropped while the quick ratio increased. Cotton, dairy and rice cooperatives were the exception. Cooperatives in all three of these commodity groups had larger increases in their inventory in relation to other current assets, thereby lowering their quick ratio.

The poultry/livestock commodity group shows some interesting trends. While generating the lowest current ratio, this commodity group has one of the highest quick ratios. Poultry/livestock cooperatives do not carry much inventory. Less than 2 percent of their total current assets include inventory, while the average for all the largest cooperatives is more than 45 percent.

Leverage

If assets are the building blocks for a cooperative's future, the capital structure is the cement that holds it together. Equity is the basic risk capital put up by members of the cooperative. There must be some equity within the capital structure to help a co-op bear the risk associated with doing business. Debt is the use of someone else's capital for a fixed cost. Thus, if the fixed cost of the debt is lower than the returns those funds generate, the excess returns will accrue to the members. On the other hand, if the revenues are less than the fixed cost of the debt, member equity takes will have to absorb the loss. This is the concept of leverage.

The first leverage ratio, debt-to-asset, is calculated by dividing total liabilities by total assets. This represents assets claimed by outside interests. Figure 2 shows how this ratio has been moving during the past five years. Except for 1994, creditors are laying claim to more assets each year. However, two commodity groups (farm supply and cotton) are bucking this trend and are using a higher percent of equity to finance cooperative operations in 1996. Of these two groups, only cotton cooperatives had a ratio of less than one-half On the other hand, poultry/livestock members owned less than 20 percent of their cooperatives' assets. The other commodity groups all had slight increases in the ratio of total debt to assets and did not deviate much from the total average.

The second leverage ratio is long-term debt-to-equity Since both equity and long-term debt take a long-run view of financing, they provide a useful comparison. After showing substantial declines throughout the 1980s, this trend reversed in 1994. Since 1994, the priority of debt financing has taken on a more prominent role for the top agricultural cooperatives. Figure 3 illustrates this point. In 1994, the value stood at 0.42, by 1996 long-term debt-to-equity reached 0.48.

The biggest users of long-term debt continue to be the diversified cooperatives. These co-ops held $1.7 billion of long-term debt and were the only group of cooperatives with a ratio of more than 1. Their long-term debt to equity ratio was 1.33. Sugar and poultry/livestock cooperatives also have experienced tremendous increases in the amount of long-term debt incurred compared with member equity. The ratio for sugar cooperative jumped from 0.56 in 1995 to 0.84 in 1996 while the poultry/livestock cooperatives jumped from 0.77 to 0.96.

The last leverage ratio is times interest earned (TIE). This ratio is primarily used to look at interest payments and determine whether the cooperative has enough net income to cover those payments. It is calculated by dividing earnings (before interest and taxes) by interest payments. A note of caution is needed here. This ratio looks at the minimum payments needed. It does not include other fixed payments such as principle and lease payments.

As expected with the surge in debt accumulation, the average TIE dropped from 6.5 in 1995 to 4.9 in 1996 (figure 4). Pushing this decline were dairy, fruit/vegetable and grain cooperatives. However, dairy co-ops still maintain the highest average TIE of all commodity groups. Despite the large increase in the debt of diversified cooperatives, their TIE ratio continues to improve. Another surprise is the trend for poultry/livestock cooperatives. With all the accumulation of debt over the past few years, their TIE (while still below average) showed substantial improvement. Less positive, 10 cooperatives did not have enough income to cover their interest expense. This is up from six co-ops in 1995.

Activity

Where the first two types of ratios examined the capital structure and the cooperative's ability to meet its fixed obligations, the next two look at the operating performances. Activity ratios reveal how much revenue is generated by each dollar invested in the cooperatives assets. The higher the ratio the more efficient the assets are used.

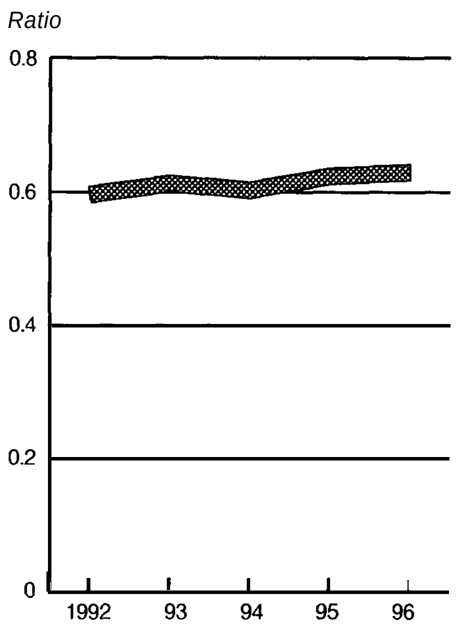
The first activity ratio, local asset turnover, is calculated by dividing total revenues by local assets. Local assets are total assets less investments in other coop eratives.

The average local asset turnover for the largest agricultural cooperatives hit a five-year high of 3.83 (figure 5) in 1996. This dramatic increase was caused by both higher record revenues and a higher proportion of assets held as investments in cooperatives. In 1995, investments in other cooperatives represented 6.75 percent of total assets. By 1996, that number stood at 7.45 percent. Compared to other commodity groups, dairy, cotton and poultry/livestock cooperatives average less assets, which helps explain their high turnover ratios.

The second activity ratio, fixed asset turnover, looks at how efficiently the cooperative uses its fixed assets. It must be noted that this ratio could be misleading. A cooperative with fully depreciated assets could have a high ratio due to the low book value of its fixed assets. On the other hand, a cooperative that is expanding its operations could have a temporarily depressed ratio because the new capacity is not fully used at this time. Therefore, other information — such as the average age left on the fixed assets and how much new equipment is purchased — will be needed to help interpret the fixed asset turnover ratio.

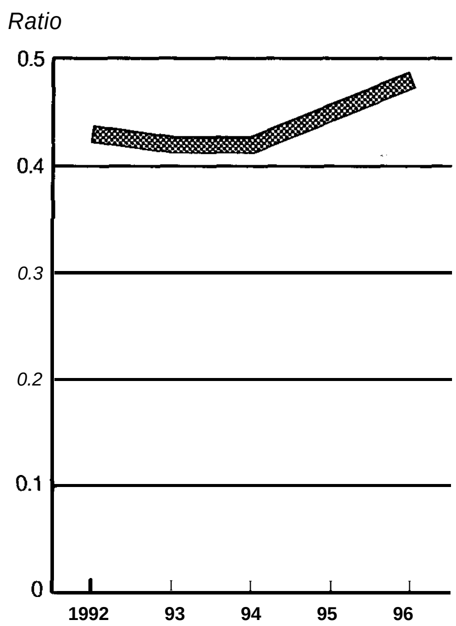
Cooperatives are purchasing fixed assets at a record rate. In 1996, cooperatives purchased $1.5 billion of fixed assets, the highest amount since USDA began tracking it. Net fixed assets also hit a new high of $7.6 billion during the same period. The average age left on fixed assets is calculated by dividing their net fixed assets by current depreciation expense. The average age left for fixed assets owned by the largest 100 cooperatives is 8.81 years, the longest it has been in 10 years. This further indicates cooperatives are purchas-

Figure 2— Debt-To-Asset Ratio



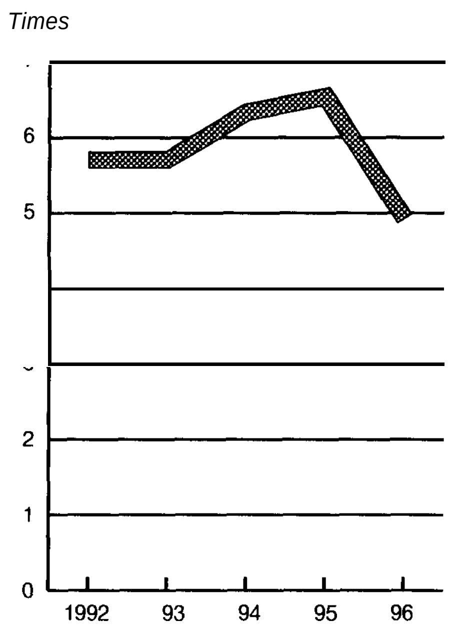
Prior years restated

Figure 3— Long-term Debt-To-Equity



Prior years restated

Figure 4 -Times-Interest-Earned



Prior years restated

ing new equipment to replace their old, worn-out fixed assets at a record pace.

With this in mind, we turn our attention to figure 6, which illustrates the fixed asset turnover ratio for the past five years. This ratio is up from 17.8 in 1995 to 18.1 in 1996. Cooperatives are expanding their operations and their fixed asset turnover ratio is also increasing. This would imply that the average cooperative is using its assets more efficiently to generate higher sales. However, not all commodity groups reaped the benefits of their fixed asset investments. Only four out of nine commodity groups showed higher efficiencies. These include dairy, diversified, fruit/vegetable and grain.

Cotton, rice, and poultry/livestock cooperatives averaged less revenue in 1996 than in 1995. This, coupled with greater investments in fixed assets, depressed their turnover ratios. Sugar cooperatives did not produce enough revenue to cover their investments so they experienced a significant drop in their fixed asset ratio. Revenue for farm supply cooperatives was greater than investment, but one cooperative had such a dramatic drop in its ratio that is depressed the overall average turnover ratio for that commodity group.

Profitability

Because cooperatives often have other objectives in addition to generating returns for their members, their profitability ratios may be lower than for investor-owned firms. However, comparisons for a single cooperative or group of cooperatives over time can be very informative. The four profitability ratios used in this report include gross margin percent, net operating margins, return on total assets and return on member equity

Gross margins are the excess of revenues above the cost of goods sold. All operating and non-operating expenses plus payment of patronage refunds, dividends and income taxes must be covered by the gross margins. Gross margins also indicate the pricing policy of the cooperative. In other words, is the cooperative charging enough for the products sold or paying too much for member products to cover its expenses.

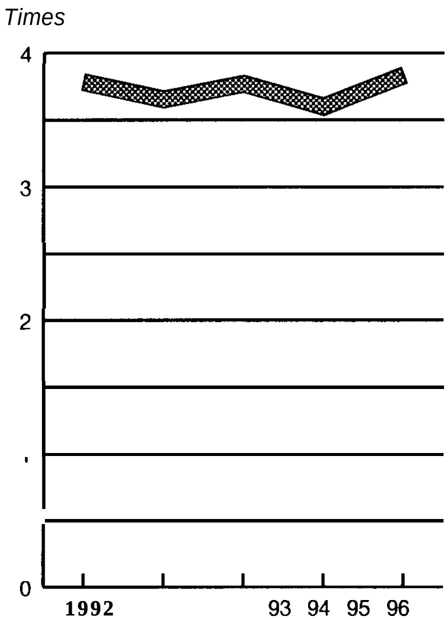
Figure 7 illustrates the five-year trend for average gross margin as a percent of total revenue for the nation's 100 largest agricultural cooperatives. Although gross margins have increased during this time, gross margins as a percent of total revenues have dropped. However, not all is gloom and doom. Cotton and sugar cooperatives reversed their downward trend and posted an increase in gross margins. Cotton cooperatives increased their gross margin percent from 15.4 percent in 1995 to 17.2 percent in 1996 while sugar cooperatives moved from 20.7 to 22.8 percent during the same time.

The largest decline in gross margin percents occurred in the dairy, grain and fruit/vegetable cooperatives. These three commodity groups were the main reason for the decline in the average ratio — most likely due to higher prices paid to member-producers. Grain cooperatives suffered the largest drop, declining from 10.8 percent to 7.7 percent between 1995 and 1996. Dairy and fruit/vegetable cooperatives dropped from 8.4 to 7.8 percent and 23.9 to 22.6 percent, respectively

Net operating margins look at the profitability of cooperative operations. It is calculated by taking the gross margin and subtracting operating expenses and interest, then dividing by total revenue. Non-operating items (patronage refunds, interest income, gains/losses on the sale of assets, and any other extraordinary revenues or expenses not directly related to operations) are not included in the calculation.

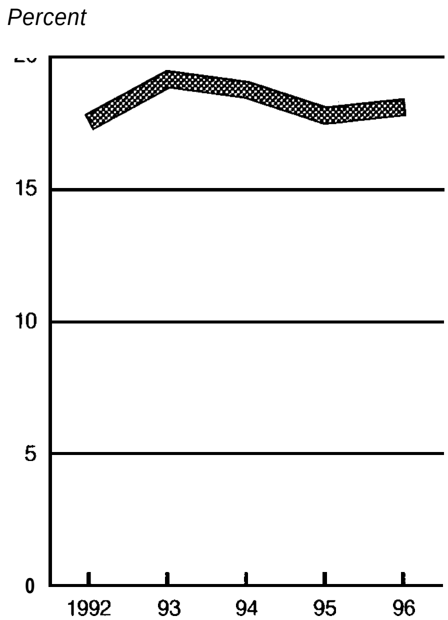
Figure 8 shows that after hitting a record high of 1.7 percent in 1995, net operating margins slipped to 1.2 percent, near the pre- 1994 average. Lower margins and higher operating expenses squeezed

Figure 5 — **Local Asset Turnover**



Prior **years restated**

Figure 6 — **Fixed Asset Turnover**



Prior years restated

operating margins in 1996. The number of cooperatives with operating losses dropped substantially, from 23 co-ops in 1992 to 13 co-ops in 1993. Throughout the next three years, the number of cooperatives operating with a loss climbed steadily, reaching 2 1 in 1996. Most of the cooperatives with operating losses were in the sugar, grain and poultry/livestock commodity groups. Although the sugar and poultry/livestock groups still posted operating losses, their 1996 losses were smaller than in 1995. The higher prices paid to members of the grain commodity group pushed their operating losses higher.

Cotton cooperatives had the highest net operating margins, 6.1 percent, a dramatic improvement from 4.4 percent in 1995. Farm supply cooperatives also had high net operating margins. However, they dropped from 4.5 percent in 1995 to 3.9 percent in 1996.

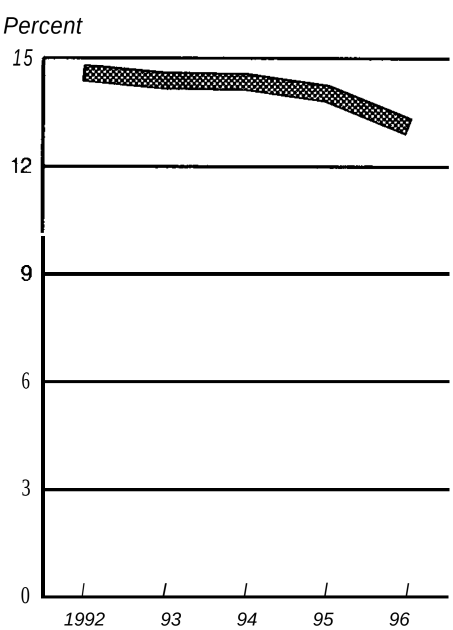
Return on total assets is calculated by taking net income before taxes and interest divided by total assets. This ratio looks at the overall return on total assets. After inching up throughout most of the 1990s, the return on total assets took a downward turn in 1996.

The two commodity groups that contributed most to this decline were grain and fruit/vegetable co-ops. These two groups had the biggest hit to their net income in 1996. Cotton cooperatives were the only other group that had a decline in return on total assets. However, cotton cooperatives continued to have the highest ratio of any group, 18.3 percent. All of the other commodity groups realized increases in return on asset ratios. However, they did not increase enough to overcome the drop in the cotton, grain and fruit/vegetable groups. Diversified and rice cooperatives had the largest increase in their return on assets.

The last ratio compared in this report is the return on member equity. It is calculated by dividing the net margins after interest and taxes by total member equity Interest is a return to creditors while taxes are a return to government, so interest and taxes must be removed to get the true return on equity

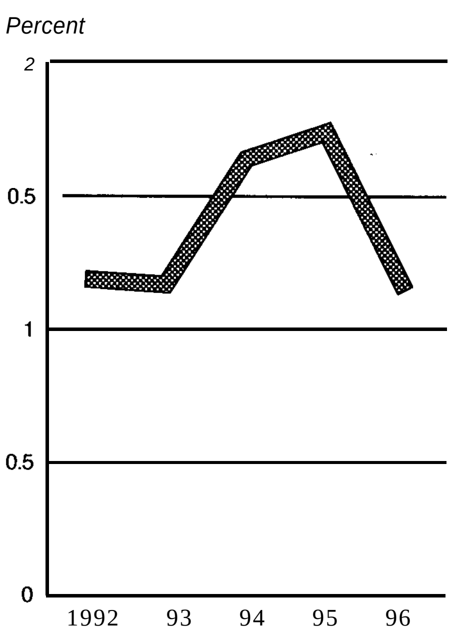
After four years of improving returns on member equity, the trend dropped in 1996. Forty-seven of the 100 largest agricultural cooperatives had lower returns to member equity in 1996. Most were found in the grain and fruit/vegetable cooperative groups. Within the other commodity groups, there were enough gainers to offset any cooperatives with declining return on member equity The largest gains made by the different commodity groups were the dairy, diversified and the poultry/livestock cooperatives. Sugar cooperatives finally had positive returns to member equity given that the prior two years they averaged negative returns. ■

Figure 7 — **Gross Profit** Margin



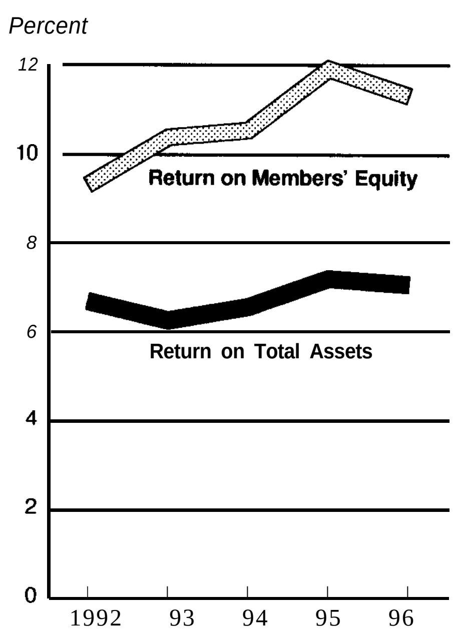
Prior years restated

Figure 8— **Net Operating Margin**



Prior years restated

Figure 9— **Returns on Operations**



Prior years restated

U.S. Department of Agriculture

Rural Business-Cooperative Service

Stop 3250

Washington, D.C. 20250-3250

Rural Business-Cooperative Service (RBS) 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 cooperative segment of RBS (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. RBS also publishes research and educational materials and issues *Rural Cooperatives* magazine.