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FINANCIAL ANALYSIS OF KANSAS AGRICULTURAL COOPERATIVES
WITH IMPLICATIONS FOR MEMBER EQUITY RETIREMENT

by

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CHAPTER I

INTRODUCTION

Cooperatives in Perspective

As farmer cooperatives grow and expand, the need for capital grows as well. A cooperative by its very nature has in the past relied primarily on its farmer members for supplying this capital. But just as a cooperative's need for capital is growing, so is the farmer's need for capital as he himself engages in a very capital intensive operation. Combine this with the trend that shows a decrease in the total number of farmers puts even more of a burden on the farmers that remain and in turn on the cooperative that relies so much on those owner members.

Cooperatives then have relied heavily on the revolving fund method of financing for supplying the cooperative with adequate amounts of equity. There is a growing concern among cooperative leaders and members that this equity is not being returned back to the owner members properly. In many cases a cooperative will retain this equity without having any systematic program for returning this equity back to members. When a cooperative member retires from farming and no longer is an active cooperative member, the patron expects the cooperative to return to him his share of equity that has accumulated over the years. Many cooperatives, however, do not retire this equity.

As a result some of the equity in a cooperative belongs to members who are no longer actively engaged in farming and whose interest in the cooperative has diminished.

This issue of returning equity back to members, often called member equity retirement, is receiving more and more attention. Some people such as Robert Williams, General Manager of Wisconsin's Dairy Cooperatives, feels "equity revolvment plans will be mandated by law within three to seven years."¹ Mr. Williams' feelings may be correct. In a report to the congress by the comptroller general, several ways were recommended to improve equity redemption practices of farmer cooperatives. One of these recommendations was to enact legislation making it mandatory for cooperatives to retire the retained equities to members within a certain period of time.²

Objectives

This analysis is designed to outline the potential difficulty a cooperative may encounter when introducing and maintaining a member equity retirement plan.

Data obtained from studies done of Kansas farmer cooperatives in 1970 and 1977 will be used to discuss and illustrate some of the implications a member equity retirement plan may have on a cooperative's

¹Robert Williams, "Equity Retirement A Necessity As Well As An Objective," Cooperation Making It Work, (Washington D.C.: American Institute of Cooperation, 1978), p. 275.

²U.S., Comptroller General, Report to the Congress of the United States on Cooperatives, CED-79-106, (1979).

financial structure. Cash flow projections will be simulated to better illustrate the seriousness of the problem.

This study may help those interested in the problem of member equity retirement to understand the complexities involved. Although no specific plan is proposed, it is the hope of this author that enough interest may be stimulated so that others may pursue a workable solution.

Previous Studies

In recent years member equity retirement has become a crucial issue throughout the cooperative sector. However, upon searching cooperative literature one discovers that little formal study has been done on this subject until recently.

Manuel was one of the first to study the problem of member equity retirement. He discovered that of all cooperatives in Kansas in 1950, only 10 percent, or 35 associations, reported having a policy that retired the control or the financial interests, or both, of inactive members. The problem is magnified by realizing that nearly half of the cooperatives active in 1950 were organized before 1920. This means that many cooperative members are now of retirement age. Manuel stressed the importance of keeping the cooperative owned and controlled by active members. Failure to do so may jeopardize a cooperative's effectiveness and sound financial structure.¹

¹Milton Manuel, Retiring Control and Equities of Inactive Co-op Members, Agricultural Experiment Station, Circular 346, Kansas State University-Manhattan, March 1957.

A more recent study concerning equity redemption practices was made by Farmer Cooperative Service in 1974. The study showed that 71 percent of all farmer cooperatives in the United States have some sort of equity redemption program. However, only 32 percent had a systematic program for retiring equity. A systematic program was defined as a program that is carried out quite regularly and where the financial requirements can be considered in financial budgeting.¹

Paul Hummer in his study done of Oklahoma cooperatives identified the difficulty cooperatives may have in retiring member equity. He discovered that in many cooperatives over 25 percent of the equity was owned by members over age 65. Several of the cooperatives sampled had retired less than \$1000 worth of equity in their operating history. He concluded that in many cooperatives, net earnings alone would not be sufficient to refund the proper amount of equities.²

When discussing member equity retirement one must also discuss a cooperative's financial management because retirement plans have a significant impact on a cooperative's financial structure.

Much has been written about financing farmer cooperatives. Some feel that cooperatives should move toward a more permanent form of equity capital and away from the revolving fund method of financing.

¹Phillip Brown and David Volkin, Equity Redemption Practices of Agricultural Cooperatives, Farmer Cooperative Research Report No. 41 (Washington: Farmer Cooperative Service, April 1977).

²Paul D. Hummer, "Ownership and Retirement Potentials of Equity Capital in Farmer Cooperatives," Oklahoma Current Farm Economics 47 (December 1974): 17-21.

The feeling here is that the revolving fund method of financing is no longer useful today, at least in its present form.

Russell C. Enberg in a study done for the Bank for Cooperatives in 1964 suggests a possible departure from revolving capital to a more permanent form of equity capital such as common and preferred stock.¹

Michael Cook points out that the issue of returning equity capital stems from the basic method of financing farmer cooperatives. This problem has been magnified by the growth of these cooperative associations. Cook explains that the constraint that may have the largest impact on cooperative structure and growth is the problem of accumulating as well as redeeming member equity capital. He feels that although the revolving fund method of financing has served its purpose in the past, it is currently too prohibitive when a cooperative is growing and expanding at an accelerated rate.²

Dahl and Dobson, in their study of Wisconsin farm supply cooperatives, found that cooperatives could reduce financing costs by using more permanent equity capital, more long term debt, and less revolving capital. They discovered that a cooperative's liquidity and solvency levels could be adequately maintained when a cooperative was paying 40 percent and 60 percent of the patronage allocation in cash. The problem of financing came when equity retirement programs were

¹Russell C. Enberg, Financing Farmer Cooperatives, (Banks For Cooperatives, 1965).

²Michael L. Cook, "Returning Equity Capital to Member-Patrons," paper presented at the Cooperative Legal-Financial Workshop, Stevens Point, Wisconsin, 3-5 January 1978.

introduced. With a retirement program the cooperatives debt burden increased significantly, causing solvency to be reduced to rather unfavorable levels.¹

E. Wilson supports a Basic Capital Financing Plan for cooperatives. He advocates a basic principle of fair and equitable treatment for all members. He emphasizes using as much debt capital as possible as well as paying in cash as much of the allocated patronage as possible.²

¹Wilmer A. Dahl and W. D. Dobson, Reducing Financing Costs and Financial Management Problems of Cooperatives, Research Report R2791, University of Wisconsin-Madison, June 1976.

²E. Walter Wilson, "A Basic Financing Plan for Cooperatives," University of Georgia, Personal Files of Milton Manuel, Manhattan, Kansas.

CHAPTER II

THE DATA

Data Sources

Balance sheet and income statement data were obtained for all Kansas agricultural cooperatives for fiscal year 1970 and fiscal year 1977. Two different data sources, however, need to be identified.

The 1970 data were originally collected for an earlier study dealing with the financial management of Kansas agricultural cooperatives.¹ The data for the study were collected by C. R. Rock and Co., a Hutchinson, Kansas accounting firm which audits most Kansas agricultural cooperatives. Cooperatives were identified by code number only, to insure anonymity. Data for 257 Kansas agricultural cooperatives were provided. However, because some financial statements were incomplete, data for 247 cooperatives were used in this study.

Data for 1977 were provided by the Wichita Banks for Cooperatives for a research project concerning agricultural cooperatives in Kansas. Complete financial information was provided for 212 cooperatives. Just as in 1970, cooperatives here also were identified by code number only, to insure anonymity.

¹Robert D. Hollinger et al., Financial Management of Kansas Agricultural Cooperatives, Agricultural Experiment Station, Bulletin 617, Kansas State University-Manhattan, August 1978.

Because the accounting statements provided by the two data sets were derived by use of similar accounting practices, it is felt that comparison of the two data sets is justified.

Classification of the Data

Two alternatives of classifying cooperatives were considered. Because some cooperatives included in this study are engaged in marketing of farm products, some are engaged in providing farm supplies, and some a combination of both, classification according to cooperative type was one alternative considered. The second alternative was to classify cooperatives in terms of size, either by assets or sales volume.

The decision was made to classify cooperatives according to type. Although this method of classification may appear to be a simple method, it is justified because cooperatives do differ in terms of investment and operating margin depending on whether or not a cooperative handles farm supplies and/or grain. It was also chosen because of the growth cooperatives have experienced over this time period, both in terms of sales volume and assets. A large cooperative in 1970 may only be considered a small to medium size cooperative in 1977. The concern then was that the result might be an overall bias towards small cooperatives in 1970, and towards large cooperatives in 1977.

Cooperatives are classified into three types; marketing, supply, and marketing and supply. A marketing cooperative is defined in this study as a cooperative where grain sales as a percent of total sales accounts for two-thirds or more of total dollar volume. A supply

cooperative is defined as a cooperative where supply sales as a percent of total sales accounts for two-thirds or more of total dollar volume.

A marketing and supply cooperative is a cooperative engaged in both marketing and supply activities where neither the marketing or supply activities accounts for two-thirds of total dollar volume.

CHAPTER III

UNDERSTANDING THE COOPERATIVE STRUCTURE

Cooperative Principles

Before one can fully understand and appreciate the complexity of the equity redemption problem, it is important to understand some basic cooperative principles that give cooperatives their distinctive character.

Abrahamsen defines a cooperative as "a business voluntarily owned and controlled by its member patrons and operated for them and by them on a nonprofit basis."¹

There are three basic principles that distinguish a cooperative association from other forms of business. They are service at cost, democratic control, and limited returns on equity capital.²

Service at cost is fundamental to the very nature of cooperative business enterprise. A cooperative in and of itself has no profits but instead provides goods and services to members at cost. All receipts above costs, referred to as net margins or net savings, are returned to the patron based on the amount of business the patron did

¹Martin A. Abrahamsen, Cooperative Business Enterprise, (New York: McGraw-Hill Book Company, 1976), p. 3.

²Ibid., p. 50.

with the cooperative. The net margins become income of the patron and not the cooperative. These net margins are returned to the patron in what is often called patronage refunds. It is the return of these net margins in the form of patronage refunds that allows a cooperative to operate at cost.

The principle of democratic control basically means one member one vote regardless of the amount of equity stock the member has with the cooperative. A cooperative's objective is service at cost and not on profit on capital invested. Thus the control lies with the member patron rather than with the amount of capital invested.

Limited returns on equity capital relates closely to the two prior principles. Members invest in the cooperative to provide the capital necessary for a cooperative to maintain financial soundness and not to invest for investments sake. This is done so the cooperative can maintain a service at cost position. Should members be able to invest in a cooperative for investment sake, the emphasis of a cooperative would then be to protect the returns on investment. This could have a damaging effect on the very purpose and nature of cooperatives.

Sources of Capital

Just like any business a cooperative needs capital to remain in business. Capital is needed to finance growth as well as to maintain normal operations from day to day. It is important to understand the uniqueness of cooperative capital structure before one probes the issue of member equity retirement.

A cooperative has two basic sources of capital, equity capital or borrowed capital. Borrowed capital, as seen in Chapter IV, is becoming increasingly important. The Bank for Cooperatives provides the majority of these funds. However, it is the equity capital that bears further discussion.

Equity capital is the capital supplied by member patrons. It represents that portion of assets that is owned by members. Equity capital is important to the financial structure of a cooperative for three basic reasons. First of all it serves as a measure of a member's interest in the cooperative and the willingness to support it. It also indicates to lenders the feasibility of lending capital to the cooperative. Finally it serves as a cushion for a cooperative to fall back on should it suffer from an abnormal year.¹

Equity capital can be classified into two categories, permanent capital and nonpermanent capital. Permanent capital consists of common and preferred stock, membership fees, and unallocated reserves. Nonpermanent capital consists of deferred patronage, per unit retains, and allocated reserves.

Common and preferred stock may be acquired in one of two ways. Stock may be acquired by purchasing a share or shares of stock, or it may be acquired gradually by transferring a member's deferred patronage to stock. Membership fees serve essentially the same purpose in non-stock cooperatives.

¹Ibid., p. 291.

Unallocated reserves are a form of permanent capital because these reserves are not allocated to members and therefore will not be revolved back to members. The cost of this permanent capital is that these reserves cannot be claimed as an exclusion from net savings for tax purposes. According to cooperative law, reserves must be allocated if they are to be excluded from net savings.¹

The nonpermanent form of capital may be broadly classified as allocated equity. The most traditional method of acquiring this allocated equity is through the revolving fund method of financing.

The capital acquired from the revolving fund method of financing is from either noncash patronage refunds or from per unit capital retains. This simply means that these funds are retained in the cooperative for a certain length of time then revolved back to the members. This has been a cooperative's primary source of equity capital over the years. Cooperatives are now, however, finding it difficult to return this equity to members in a reasonable amount of time.

Allocated reserves, as mentioned, is a nonpermanent form of equity capital. These are the reserves that are specifically allocated to members. This equity may or may not be revolved on a systematic basis. However, one thing is certain. It must be returned to members upon a member's death or retirement.

¹Farmer Cooperative Service, Legal Phases of Farmer Cooperatives, Research Report 100, (Washington D.C.: U.S. Government Printing Office, 1976).

The advantage of having allocated reserves instead of unallocated reserves is that allocated reserves may be excluded from net savings for tax purposes. It is difficult to determine from the data just how much of the reserves account is allocated and how much is unallocated.

CHAPTER IV

FINANCIAL ANALYSIS

Growth

Cooperatives have been a part of Kansas for over one hundred years. The oldest consumer cooperative in the United States dates back to 1876 in Cadmus, Kansas.¹ This first cooperative was primarily interested in purchasing groceries and other household supplies. Today, however, cooperatives serve a variety of functions and play a vital part in the Kansas economy.

Since the days of the first consumer cooperative in 1876, cooperatives have grown and expanded rapidly. Nowhere is this growth more evident than in the period from 1970 to 1977. During this period cooperative numbers have declined from 257 to 217, but cooperative size has increased dramatically. This is evident from the fact that sales from Kansas cooperatives have nearly tripled since 1970 and total assets of all cooperatives have more than doubled. Both of these growth areas may be explained further.

¹Florence E. Parker, The First 125 Years (Superior, WI.: Cooperative Publishing Association, 1956), p. 64.

Sales

Cooperatives have shown substantial growth in terms of sales since 1970. Table 1 is a cumulative frequency distribution which illustrates this point. In 1970, 48 percent of Kansas cooperatives had sales of less than one million dollars. The same size category in 1977, however, had just 6 percent of all Kansas cooperatives. In 1977, 45 percent of the cooperatives had sales in excess of 4 million dollars compared to 1970 where just 6 percent of all cooperatives fall in this size category.

TABLE 1

CUMULATIVE FREQUENCY DISTRIBUTION OF KANSAS
COOPERATIVES ACCORDING TO SALES IN 1970 AND 1977.

Average Sales Per Cooperative	Cumulative Percent of Total Number of Cooperatives	
	1970	1977
Under 250,000	8	0
250,000 - 499,999	21	3
500,000 - 999,999	48	6
1,000,000 - 1,999,999	81	23
2,000,000 - 2,999,999	90	42
3,000,000 - 3,999,999	94	55
4,000,000 - 4,999,999	98	67
5,000,000 - 6,999,999	98.5	82
7,000,000 - 8,999,999	99.5	90
9,000,000 - 10,999,999	99.5	94
11,000,000 - 14,999,999	100.0	97
15,000,000 And Over		100

Growth of cooperatives according to sales can be further illustrated with a graph of the cumulative frequency distribution as presented in Figure 1. The line of the graph has shifted significantly to the right since 1970 indicating the substantial increase in sales.

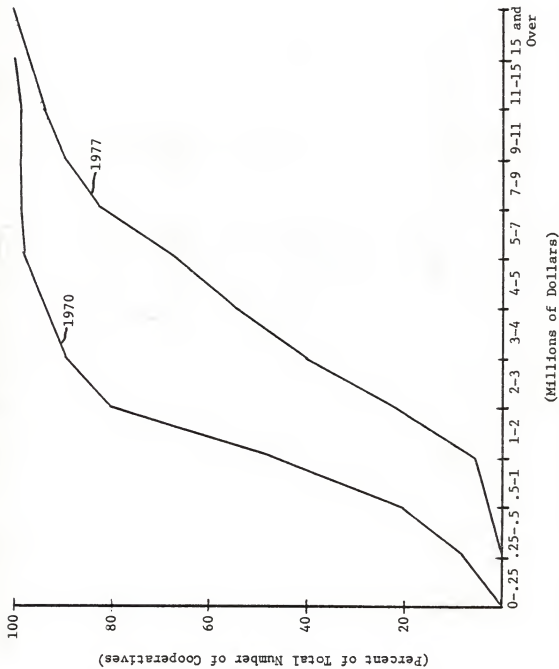


Figure 1. Distribution of sales among Kansas cooperatives in 1970 and 1977.

Total sales dollars of all Kansas cooperatives exceeded the 1 billion dollar mark in 1977 with sales totalling \$1,000,737,639. This compares to a 1970 total sales figure of \$353,595,194. The average net sales figure for each cooperative increased from \$1,431,559 in 1970 to \$4,716,967 in 1977. This is an average net sales increase per year of \$469,344 or 32.7 percent. If these figures are adjusted for inflation using 1970 as the base year, the increase since 1970 is 78 percent, or an average annual increase of 11 percent.

The data concerning the different types of cooperatives are also interesting to observe. Table 2 shows how the three types of cooperatives compare with each other in terms of actual sales dollars, actual cooperative numbers, as well as percentage figures for each.

According to Table 2, marketing, and marketing and supply cooperatives have remained relatively constant since 1970, both in terms of percentage of total sales and in percentage of total cooperatives. Supply cooperatives, on the other hand, show significant change since 1970. The number of supply cooperatives has declined from 50 in 1970 to 19 in 1977. The share of total sales represented by supply cooperatives has decreased from 14 percent to 5 percent over the 7 year period. It becomes particularly evident to see the decline in the volume of supply cooperatives when observing that total sales dollars of supply cooperatives have increased only slightly from \$49,145,445 in 1970 to \$53,250,805 in 1977.

TABLE 2

COMPARISON OF THE THREE CLASSIFICATIONS OF KANSAS
COOPERATIVES IN 1970 AND 1977 IN TERMS OF
SALES AND THE NUMBER OF COOPERATIVES.

	Sales		Number of Cooperatives	
	Dollars	Percent of Total	Number	Percent of Total
1970				
Marketing	132,855,673	37	92	37
Supply	49,145,445	14	50	20
Marketing and Supply	<u>171,594,076</u>	<u>49</u>	<u>105</u>	<u>43</u>
TOTAL	353,595,194	100	247	100
1977				
Marketing	419,617,568	42	88	42
Supply	53,250,805	5	19	9
Marketing and Supply	<u>527,869,266</u>	<u>53</u>	<u>105</u>	<u>49</u>
TOTAL	1,000,737,639	100	212	100

These individual cooperative categories may also be viewed in terms of average sales figures for each cooperative as presented in Table 3. All cooperative categories show growth over the 7 year period. When adjusting these data for inflation, grain cooperatives have increased sales by 79 percent since 1970 for an average annual increase of 11 percent. Marketing and supply cooperatives increased 66 percent for an average annual increase of 9.5 percent. Supply cooperatives increased 54 percent since 1970 for an average annual increase of 7.7 percent.

TABLE 3
 AVERAGE SALES DATA FOR COOPERATIVES
 IN 1970 AND 1977.

	Average Sales Per Cooperative
1970	
Marketing	1,444,083
Supply	982,908
Marketing and Supply	<u>1,634,229</u>
All Categories Combined	1,431,559
1977	
Marketing	4,768,381
Supply	2,802,674
Marketing and Supply	<u>5,027,326</u>
All Categories Combined	4,716,967

Table 4 shows the concentration of sales among Kansas farmer cooperatives during the two years studied. Concentration levels have remained practically unchanged for the period. In 1970 and 1977, 7 percent of the cooperatives had 25 percent of the total sales. Twenty one percent of the cooperatives had 50 percent of the sales in both 1970 and 1977. So although cooperatives are getting larger, the concentration of cooperatives in terms of sales remains practically unchanged.

TABLE 4
 CONCENTRATION OF KANSAS COOPERATIVES ACCORDING
 TO SALES IN 1970 AND 1977.

	25 Percent of Total Sales	50 Percent of Total Sales	75 Percent of Total Sales
	----- Percent of Cooperatives -----		
1970	7	21	48
1977	7	21	42

Assets

Just as in sales volume, cooperatives in Kansas have shown substantial growth in terms of assets as well. Table 5 illustrates this growth. In 1970, 74 percent of all cooperatives had assets of less than 1 million dollars. In 1977, however, this same size category had just 17 percent of all cooperatives. In 1977, 28 percent of the cooperatives had assets in excess of 3 million dollars compared to just 4 percent in 1970.

TABLE 5
 CUMULATIVE FREQUENCY DISTRIBUTION OF KANSAS
 COOPERATIVES ACCORDING TO ASSETS IN 1970 AND 1977.

	Cumulative Percent of Total Number of Cooperatives	
	1970	1977
Under 100,000	4	0
100,000 - 499,999	38	7
500,000 - 999,999	74	17
1,000,000 - 2,999,999	96	72
3,000,000 - 4,999,999	99	92
5,000,000 - 9,999,999	100	98
Over 10,000,000		100

The graph in Figure 2 further emphasizes this point. The line showing the percent of cooperatives in relationship to average asset size has shifted to the right indicating this growth.

Total asset dollars for all Kansas cooperatives totalled \$215,781,263 in 1970 for an average asset figure per cooperative of \$873,608. Total asset dollars for all Kansas cooperatives totalled \$528,759,927 in 1977 for an average asset figure per cooperative of \$2,494,150. The result is an average annual increase in assets of \$231,614 or an annual percentage increase of 27 percent. Adjusting these figures for inflation using 1970 as a base, assets increased on a per cooperative basis annually by \$67,278 or a growth rate of 7.8 percent.

It is once again possible to look at the different types of Kansas cooperatives in terms of asset size and growth. Marketing and supply cooperatives are on the average, slightly larger than marketing cooperatives and much larger than supply cooperatives. These figures are detailed in Table 6.

Marketing cooperatives have shown the most growth since 1970, increasing 197 percent or an average annual increase of 28 percent. Supply cooperatives increased 170 percent, for an average annual increase of 24 percent, while marketing and supply cooperatives increased 158 percent, or an average annual increase of 23 percent.

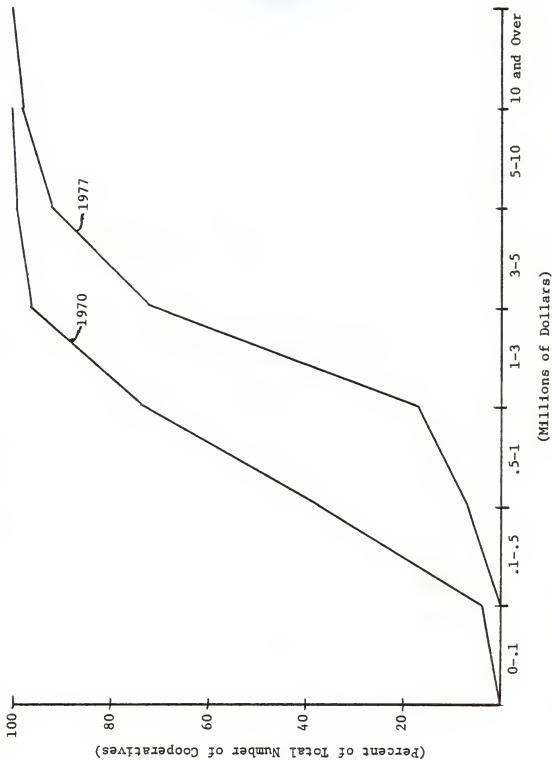


Figure 2. Distribution of total assets among Kansas cooperatives in 1970 and 1977.

TABLE 6

COMPARISON OF THE THREE CLASSIFICATIONS OF KANSAS COOPERATIVES
IN 1970 AND 1977 IN TERMS OF ASSETS.

	Average Assets Per Cooperative
1970	
Marketing	619,980
Supply	809,726
Marketing and Supply	<u>1,050,356</u>
All Categories Combined	873,608
1977	
Marketing	1,674,906
Supply	2,407,114
Marketing and Supply	<u>2,715,339</u>
All Categories Combined	2,494,150

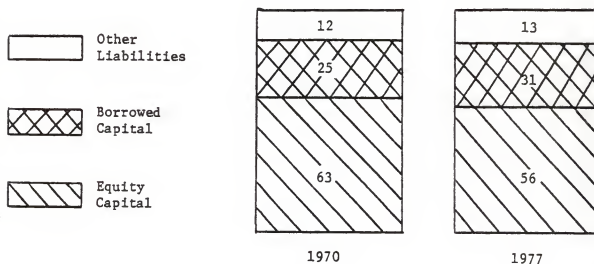
Financial Structure

Like any business, a cooperative needs a sound financial structure for it to be an effective part of the business community. Each member owns a part of the cooperative and expects the cooperative to function towards the best interest of each member. For members to obtain maximum benefits, a cooperative must maintain a sound financial structure.

When measuring the financial structure of Kansas cooperatives, the concern is with the percentage relationship between the creditors' interest in the assets and the owners' interest in the assets. Generally, the higher the owners' interest in the assets the stronger the

balance sheet. According to the 1977 data, as seen in Table 7, 56 percent of total assets is represented by net worth, 31 percent by borrowed capital, and 13 percent by other liabilities. Other liabilities may include such items as accounts payable, taxes payable, and patronage dividends payable. The result is that 56 percent of the assets belong to the owners and 44 percent belong to the creditors.

TABLE 7
FINANCIAL STRUCTURE OF COOPERATIVES
IN KANSAS IN 1970 AND 1977.



This financial structure differs considerably from the structure seen in 1970. In 1970, 63 percent of total assets was represented by equity capital, 25 percent in borrowed capital, and 12 percent in other liabilities. This change is especially significant since cooperatives

have traditionally been known for reliance on equity capital. Cooperatives seem to be moving towards use of more borrowed capital and less use of equity capital.

The financial structure concerning the three types of cooperatives can also be compared (see Table 8). All individual categories of cooperatives show the same overall tendencies as do the cooperatives for all categories combined.

TABLE 8
FINANCIAL STRUCTURE OF INDIVIDUAL COOPERATIVE
CATEGORIES IN KANSAS IN 1970 AND 1977.

	Marketing	Supply	Marketing and Supply
Equity Capital			
1970	67	59	61
1977	58	49	55
Borrowed Capital			
1970	22	27	26
1977	28	40	32
Other Liabilities			
1970	11	14	13
1977	14	11	13

Supply cooperatives seem to show the most drastic change since 1970. Equity capital has dropped from 59 percent to 49 percent from 1970 to 1977. Borrowed capital, on the other hand, has increased from 27 percent to 40 percent over the same period. Other liabilities decreased from 14 percent to 11 percent. By combining other liabilities

with borrowed capital, one discovers that in 1977 creditors supplied 51 percent of total capital while owners supplied the other 49 percent.

The other two cooperative categories, marketing, and marketing and supply, show change also, but not to the extreme that supply cooperatives do. Marketing cooperatives show a decrease in equity from 67 percent in 1970 to 58 percent in 1977. Borrowed capital during this same period increased from 22 percent to 28 percent. The equity in marketing and supply cooperatives has also decreased from 61 percent in 1970 to 55 percent in 1977. Borrowed capital increased from 26 percent to 32 percent over the same period.

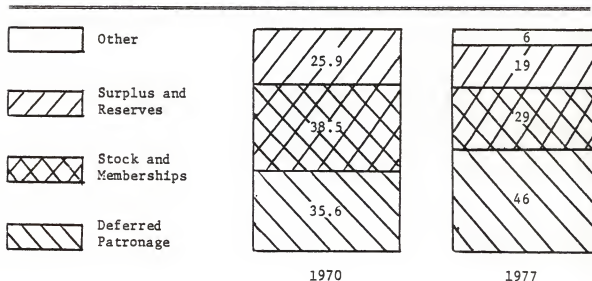
Equity Capital

Because of the decline in equity capital, it becomes especially important to know the source of that equity capital. There are basically four categories of cooperative equity (see Table 9). The categories are surplus and reserves, stock and memberships, deferred patronage, and other equity. Other equity may include such items as part paid stock, accelerated ammortization, as well as others.

Some distinct tendencies can be noted concerning equity capital. Deferred patronage has increased significantly from 35.6 percent in 1970 to 46 percent in 1977. Stock and memberships, a more permanent form of equity capital, has shown a drastic decrease from 38.5 percent in 1970 to 29 percent in 1977. It is interesting to note that in 1970 there was more equity in the form of stock and memberships (38.5 percent) than in the form of deferred patronage (35.6 percent). In 1977,

however, there is more equity in the form of deferred patronage (46 percent) than in stock and memberships (29 percent).

TABLE 9
CLASSIFICATION OF EQUITY CAPITAL IN
KANSAS COOPERATIVES IN 1970 AND 1977.



Surplus and reserves, sometimes referred to as retained earnings, decreased from 25.9 percent in 1970 to 19 percent in 1977.

Deferred patronage deserves special attention because of its prime importance to the revolving fund method of financing and member equity retirement. Deferred patronage has shown a tremendous increase since 1970, both as a percent of total equity and in actual dollars as well. Total deferred patronage dollars of all Kansas cooperatives has nearly tripled from \$48,150,678 in 1970 to \$136,336,952 in 1977 (see Table 10). The increase on the average per cooperative is from \$195,734 in 1970 to \$643,099 in 1977. This is an average annual increase of 33 percent. Adjusting for inflation, using 1970 as the base year, the average annual increase is 7.6 percent.

TABLE 10
 DEFERRED PATRONAGE OF KANSAS COOPERATIVES
 IN 1970 AND 1977.

	Total Dollars	Average Per Cooperative
1970	48,150,678	195,734
1977	136,336,952	643,099

The entire issue of equity capital is extremely important because a cooperative needs a strong equity base for it to remain financially sound. It becomes a concern then that 46 percent of equity capital is in the form of deferred patronage, the most nonpermanent form of equity capital. In terms of total capitalization, deferred patronage not only accounts for 46 percent of equity capital, but actually supplies capital for 25.7 percent of all assets owned by the cooperative.

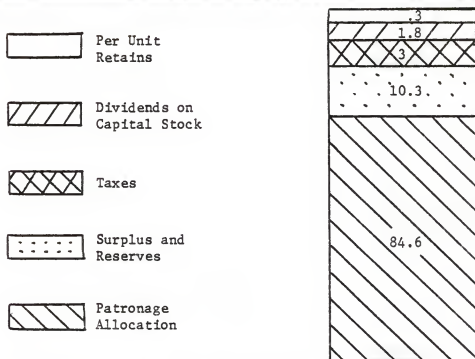
Net Savings

Combined net savings and net losses in terms of total dollars for all cooperatives in Kansas in 1970 was \$11,526,643 compared to \$36,856,363 in 1977. This results in an average net savings figure per cooperative of \$46,667 in 1970 and \$173,851 in 1977. Adjusting for inflation, using 1970 as the base year, the average net savings figure is \$46,667 in 1970 and \$93,973 for 1977.

In 1970, 32 of the 247 cooperatives had net losses totalling \$701,270 for an average net loss per cooperative of \$21,915. In 1977, 16 of the 212 cooperatives had net losses totalling \$765,049 for an average loss per cooperative of \$47,816.

The distribution of net savings for those cooperatives with net savings, for fiscal year 1977 is presented in Table 11. As shown, 84.6 percent of net savings is distributed as patronage allocation, 10.3 percent as surplus and reserves, 3 percent as taxes, 1.8 percent as dividends on capital stock and just .3 percent as per unit retains. Data for the 1970 net savings distribution were unavailable.

TABLE 11
DISTRIBUTION OF NET SAVINGS IN 1977.



Net operating savings, meaning those savings which exclude patronage and stock dividend income from regional affiliates, merits separate consideration. A review of net operating savings reveals that 53 cooperatives or 21 percent of all cooperatives experienced losses from local operations in 1970 and 83 cooperatives or 39 percent of all cooperatives experienced losses from local operations in 1977 (see Table 12).

TABLE 12
NET OPERATING SAVINGS FOR KANSAS COOPERATIVES
IN 1970 AND 1977.

	Net Operating Savings and Losses	No. of Cooperatives with a Net Loss		Total Net Losses
		Percent of		
		Actual	Total	
1970				
Marketing	3,634,656	14	15	251,868
Supply	633,345	19	38	243,444
Marketing and Supply	<u>2,648,055</u>	<u>20</u>	<u>19</u>	<u>649,173</u>
TOTAL	6,916,056	53	21	1,444,485
1977				
Marketing	9,227,478	10	11	366,520
Supply	(440,924)	12	63	799,110
Marketing and Supply	<u>7,824,351</u>	<u>61</u>	<u>58</u>	<u>2,033,503</u>
TOTAL	16,610,905	83	39	3,149,133

Marketing cooperatives have the fewest losses with 15 percent of marketing cooperatives experiencing a loss from local operations in 1970 and only 11 percent experiencing a loss in 1977. On the other hand, 38 percent of supply cooperatives experienced a net loss from local operations in 1970. This figure soared to 63 percent in 1977.

A figure which is not included in Table 12 but which was calculated is the percentage that net operating savings is of total net savings. This ratio is computed by dividing net operating savings, or those savings from local operations, by total net savings. The result is that in 1970, 60 percent of total net savings was a result

of local operations. In 1977 only 45 percent of total net savings came from local operations. The remaining 55 percent came from regional affiliates.

Financial Condition

Ratio analysis is often used to measure the performance of a business. If used properly, this type of analysis can be very helpful in understanding just how effectively a business is operating. It should be emphasized, however, that these ratios are merely indicators. Ratios may sound the warning signal but do not isolate the underlying cause of the problem.

Several basic financial ratios were used in this study to help determine the financial condition of Kansas farmer cooperatives. The use of ratios here was certainly not exhaustive but were used merely to provide some idea of how cooperatives are performing. The three areas of interest are liquidity, solvency, and profitability.

Liquidity

Liquidity levels are measured primarily here by use of the current ratio and working capital figures. The current ratio is defined as current assets divided by current liabilities. Working capital is defined as current assets minus current liabilities.

The liquidity level of Kansas cooperatives, as measured by the current ratio, has dropped significantly since 1970. The current ratio of all Kansas cooperatives in 1970 was 1.6 compared to 1.5 in 1977.

This analysis can be pursued to the three types of Kansas cooperatives as well. All three categories show the same unfavorable movement of lower liquidity levels as do cooperatives as a whole. Supply cooperatives show the largest decrease in liquidity, falling from 1.65 in 1970 to 1.43 in 1977. The data concerning current ratios are summarized in Table 13.

TABLE 13
CURRENT RATIOS OF KANSAS COOPERATIVES
IN 1970 AND 1977.

	Aggregate	Marketing	Supply	Marketing and Supply
1970	1.6	1.64	1.65	1.55
1977	1.5	1.53	1.43	1.49

Working capital seems to be moving in a favorable direction both in terms of all Kansas cooperatives combined as well as within each cooperative category.

Total dollars of working capital available to Kansas cooperatives has more than doubled since 1970. Total working capital increased from \$31,131,048 in 1970 to \$76,906,592 in 1977. The average working capital for each cooperative increased also from \$125,963 in 1970 to \$335,144 in 1977.

By adjusting for inflation, using 1970 as the base year, working capital for all Kansas cooperatives in 1970 is \$31,131,048 and in 1977 is \$41,571,130. Average working capital for each cooperative is

\$125,963 in 1970 and \$181,159 in 1977. Working capital data are summarized in Table 14.

TABLE 14
WORKING CAPITAL DATA FOR KANSAS COOPERATIVES
IN 1970 AND 1977.

	Marketing	Supply	Marketing and Supply	Total
	<u>Actual Dollars</u>			
1970	10,844,056	5,161,571	15,125,417	31,131,048
1977	31,393,914	4,516,210	40,996,468	76,906,592
	<u>Average Working Capital Per Cooperative</u>			
1970	117,870	103,231	144,051	125,963
1977	356,749	237,695	390,442	335,144
	<u>Average Working Capital Per Cooperative In 1970 Dollars</u>			
1970	117,870	103,231	144,051	125,963
1977	192,837	128,484	211,049	181,159

Supply cooperatives seem to show the most unfavorable working capital position. Working capital for each supply cooperative on the average in 1977 was \$237,695, compared to \$356,749 for marketing cooperatives, and \$390,442 for marketing and supply cooperatives.

After looking at working capital available, it is interesting to look at working capital requirements of Kansas cooperatives. Working capital requirements are measured by dividing current assets by total sales (see Table 15).

TABLE 15
WORKING CAPITAL REQUIREMENTS OF KANSAS COOPERATIVES
IN 1970 AND 1977.

	Marketing	Supply	Marketing and Supply	All Categories Combined
1970	20.90	26.70	24.80	23.70
1977	21.50	28.10	23.80	23.10

Supply cooperatives require the largest amount of working capital, with \$28.10 being required for each \$100 of sales in 1977. This is interesting in view of the fact that of three cooperative categories, supply cooperatives had the least amount of working capital available, as shown in Table 14.

Marketing and supply cooperatives required \$23.80 of current assets for each \$100 of sales. Marketing cooperatives had the lowest working capital requirements, requiring just \$21.50 of current assets for each \$100 of sales.

Working capital requirements increased slightly from 1970 to 1977 for supply, and marketing cooperatives, while decreasing slightly for marketing, and supply cooperatives. For all categories combined, \$23.10 of current assets is required for each \$100 of sales in 1977. There is practically no change from 1970 where \$23.70 of current assets was required for each \$100 of sales.

Solvency

Solvency, as used in this study, is measured by net worth as a percentage of total assets. It was felt this ratio is the most understandable of all ratios considered. It is designed to reflect the portion of a business's capital requirements that is supplied by the owners.

Solvency levels show a substantial decline from 1970 to 1977 for all cooperatives combined as well as for all individual cooperative categories. The data, as presented in Table 16, show that for all cooperatives combined, solvency has dropped from 62.5 percent in 1970 to 55.8 percent in 1977.

TABLE 16
SOLVENCY RATIOS OF ALL KANSAS COOPERATIVES
IN 1970 AND 1977.

	Marketing	Supply	Marketing and Supply	All Categories Combined
1970	66.8	58.4	60.7	62.5
1977	57.5	49.0	55.2	55.8

Supply cooperatives show the most unfavorable movement in terms of the solvency ratio. The net worth to asset ratio is down to 49 percent in 1977 compared to 58.4 percent in 1970. Marketing, and marketing and supply cooperatives show a decline in solvency levels as well, but not to the degree that supply cooperatives do.

It is interesting to discuss both liquidity and solvency simultaneously in view of the three cooperative categories. Data summarizing this information are presented in Table 17.

TABLE 17
SOLVENCY AND LIQUIDITY RATIOS OF ALL KANSAS
COOPERATIVES IN 1970 AND 1977.

	1970		1977	
	Liquidity	Solvency	Liquidity	Solvency
Supply	1.65	58.4	1.43	49.0
Marketing	1.64	66.8	1.53	57.5
Marketing and Supply	1.55	60.7	1.49	55.2
Aggregate	1.60	62.5	1.50	55.8

In 1970 marketing and supply cooperatives had the lowest liquidity ratio at 1.55 while supply cooperatives had the lowest solvency ratio at 58.4. In 1977, however, supply cooperatives have both the lowest liquidity, 1.43, and the lowest solvency, 49.0. Should this trend continue, supply cooperatives could be in serious financial trouble.

Profitability

The profitability of a cooperative can be measured by using many different financial ratios. In this study, three profitability ratios were cited. They are intended to measure return on member equity, operating margin, and total return on investment.

The return on member equity can be measured by net savings as a percent of total equity. Net savings includes the net operating savings

from local operations as well as the patronage and stock dividend income from regional cooperative affiliates. The return on equity ratio indicates the profitability of the capital supplied by the owners of the cooperative. The results are presented in Table 18.

TABLE 18
RETURN ON EQUITY OF KANSAS COOPERATIVES
IN 1970 AND 1977.

	Marketing	Supply	Marketing and Supply	Aggregate
1970	9.9	8.1	7.7	8.5
1977	13.3	6.9	12.4	12.5

Return on member equity increased from 8.5 percent in 1970 to 12.5 percent in 1977 for all cooperative categories combined. Supply cooperatives indicate a decrease from 8.1 percent in 1970 to 6.9 percent in 1977, while marketing, and marketing and supply cooperatives show an increase since 1970.

The operating margin is another measure of a cooperative's profitability. The operating margin ratio is computed by dividing net operating savings by total sales. This ratio is designed to express earnings per dollar of sales. It helps a cooperative manager to study the effect of product pricing and cost control on the operating return on local investment.¹ The net savings figure here excludes patronage and stock dividend income from regional affiliates. This information

¹Hollinger, Financial Management, p. 6.

is presented in Table 19. The operating margin ratio has declined from 2.3 percent in 1970 to 1.6 percent in 1977. Supply cooperatives experienced a net loss in 1977 of \$440,924. The resulting operating margin is -.8 percent. Marketing and supply cooperatives also showed a decline from 1.9 percent in 1970 to 1.5 percent in 1977.

TABLE 19
OPERATING MARGIN OF KANSAS COOPERATIVES
IN 1970 AND 1977.

	Marketing	Supply	Marketing and Supply	Aggregate
1970	1.8	2.9	1.9	2.3
1977	2.2	-.8	1.5	1.6

The total return on investment ratio is computed by dividing net savings by total assets. Net savings here does include stock dividend and patronage income from regional affiliates. This ratio is designed to measure the overall results of the cooperative's total investments. It should help to show whether the manager and board of directors are making good decisions.¹

This ratio, for all cooperative categories combined, has increased from 5.3 percent in 1970 to 7.0 percent in 1977. Supply cooperatives, however, decreased from 4.8 percent in 1970 to 3.4 percent in 1977 (see Table 20).

¹Ibid., p. 7.

TABLE 20

TOTAL RETURN ON INVESTMENT FOR KANSAS COOPERATIVES
IN 1970 AND 1977.

	<u>Marketing</u>	<u>Supply</u>	<u>Marketing and Supply</u>	<u>Aggregate</u>
1970	6.6	4.8	4.6	5.3
1977	7.6	3.4	6.9	7.0

CHAPTER V

THE LARGEST COOPERATIVES

The largest cooperatives in Kansas are given separate attention in this study to see to what extent they compromise certain aspects of cooperative structure. The 25 largest cooperatives, according to sales volume, were examined from the 1970 data and the largest 21 cooperatives, according to sales volume, were examined from the 1977 data. These cooperatives represent the largest 10 percent of all cooperatives conducting business in fiscal years 1970 and 1977.

The 25 cooperatives in 1970 consist of 8 marketing cooperatives, 6 supply cooperatives, and 11 marketing and supply cooperatives. The 21 cooperatives in 1977 consist of 10 marketing cooperatives, 2 supply cooperatives, and 9 marketing and supply cooperatives.

The 25 largest cooperatives in 1970 comprise just 10 percent of all cooperatives but account for 33 percent of total sales volume, 32 percent of total assets, 31 percent of total member equity capital, and 31 percent of total borrowed capital.

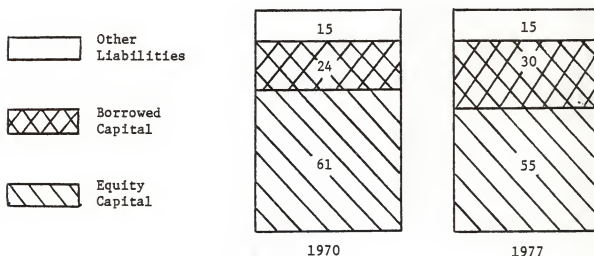
The 21 largest cooperatives in 1977 comprise just 10 percent of all cooperatives but account for 30 percent of total sales volume, 29 percent of total assets, 28 percent of total member equity capital, and 28 percent of total borrowed capital.

Financial Structure

The financial structure of the largest cooperatives has changed significantly since 1970. When compared to cooperatives in 1970, cooperatives in 1977 show more reliance on borrowed capital and less reliance on equity capital. This is evidenced by the fact that equity capital, measured as a percent of total assets, decreased from 61 percent in 1970 to 55 percent in 1977, while borrowed capital increased from 24 percent in 1970 to 30 percent in 1977 (see Table 21). This is much the same pattern as seen in the financial structure of all cooperatives in Chapter IV.

TABLE 21

FINANCIAL STRUCTURE OF THE LARGEST COOPERATIVES IN 1970 AND 1977.

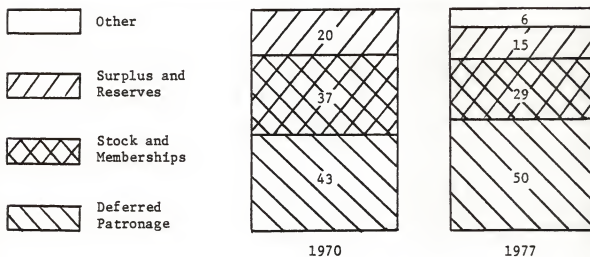


Equity Capital

The makeup of equity capital has changed significantly since 1970. Deferred patronage has increased from 43 percent of total equity in 1970 to 50 percent of total equity in 1977. Stock and memberships, on the other hand, declined from 37 percent of total equity in 1970 to 29 percent in 1977. The change then is away from permanent forms of equity capital, such as stock and memberships, and towards more non-permanent forms of equity capital, such as deferred patronage (see Table 22).

TABLE 22

CLASSIFICATION OF EQUITY CAPITAL OF THE LARGEST
COOPERATIVES IN 1970 AND 1977.



The reason deferred patronage as a form of equity capital has increased from 43 percent to 50 percent is because total deferred patronage dollars for the largest cooperatives increased from \$18,227,032 in 1970 to \$41,778,835 in 1977. An average deferred patronage figure for each cooperative is then \$729,086 in 1970 and \$1,989,468 in 1977. This is an increase of 173 percent over the 7 year period for an average annual increase of 24.7 percent.

Net Savings

Total net savings of all Kansas cooperatives nearly tripled from \$4,230,161 in 1970 to \$12,269,392 in 1977. The average net savings figure for each cooperative was \$169,206 in 1970 but increased to \$584,257 in 1977. In 1970, 2 of the 25 cooperatives experienced a net loss totalling \$162,922. In 1977, 1 of the 21 cooperatives experienced a net loss of \$17,974.

Net operating savings, meaning those net savings which exclude patronage and stock dividends from regional affiliates, is given separate consideration. A review of Table 23 reveals that 4 cooperatives in 1970 experienced a net loss from local operations, while 2 cooperatives experienced a net loss in 1977.

The two supply cooperatives in 1977 had a total net loss figure of \$238,853. This is a result of one cooperative having a net loss of \$293,971, and the other cooperative having net savings of \$55,118. None of the 9 marketing and supply cooperatives experienced a net loss in 1977.

TABLE 23
NET OPERATING SAVINGS OF THE LARGEST COOPERATIVES
IN 1970 AND 1977.

	Net Operating Savings and Losses	No. of Cooperatives with a Loss		Total Net Losses
		Percent of		
		Actual	Total	
1970				
Marketing	891,297	1	12.5	92,882
Supply	659,634	1	16.6	18,684
Marketing and Supply	<u>1,478,640</u>	<u>2</u>	<u>18.0</u>	<u>161,586</u>
TOTAL	3,029,571	4	16.0	273,152
1977				
Marketing	2,259,970	1	10.0	24,330
Supply	(238,853)	1	50.0	293,971
Marketing and Supply	<u>4,459,229</u>	<u>0</u>	<u>0</u>	<u>0</u>
TOTAL	6,480,346	2	9.5	318,301

There is considerable difference between the largest cooperatives in 1977 and all cooperatives in 1977 in terms of net operating savings. Only 9.5 percent of the largest cooperatives in 1977 experienced a net loss. When all cooperatives are considered, however, 39 percent experienced net losses from local operations.

The amount of total net savings that is acquired from local operations can be measured by dividing net operating savings by total net savings. There is a decrease in this ratio from 71.6 percent in 1970 to 52.8 percent in 1977. These ratios can be compared to the ratios for all cooperatives as discussed in the previous chapter where 60

percent of total net savings was acquired from local operations in 1970 and 45 percent in 1977. It seems then that the largest cooperatives supply a larger amount of total net savings from the earnings of the local operation than when all cooperatives in Kansas are considered.

Financial Condition

Liquidity and solvency levels of the largest cooperatives follow much the same pattern as that of all Kansas cooperatives. Liquidity, as measured by the current ratio, shows a more severe decline, however, for the largest cooperatives. The current ratio dropped from 1.63 in 1970 to 1.44 in 1977. Solvency, as measured by net worth as a percent of total assets, has declined as well from 60.7 percent in 1970 to 54.4 percent in 1977.

Working capital requirements, as measured by current assets as a percent of total sales, declined slightly since 1970 from \$24.40 to \$22.20. The largest cooperatives require \$22.20 in current assets for each \$100 of sales compared to \$23.00 for all Kansas cooperatives.

Profitability, as measured by return on member equity, and total return on investment increased since 1970. Total return on investment, as measured by dividing net savings by total assets, increased from 6.1 percent in 1970 to 8.0 percent in 1977. Return on member equity, as measured by dividing net savings by total member equity, increased from 10.1 percent in 1970 to 14.7 percent in 1977. The operating margin measured by dividing net operating savings by total sales decreased from 2.6 percent in 1970 to 2.1 percent in 1977.

Much of the data discussed in this chapter are summarized in Table 24.

TABLE 24
 COMPARISON OF ALL COOPERATIVES IN KANSAS
 TO THE LARGEST TEN PERCENT OF
 KANSAS COOPERATIVES.

	All Cooperatives 1970	Top 10 Percent 1970	All Cooperatives 1977	Top 10 Percent 1977
Average Assets Per Cooperative	872,855	2,764,877	2,494,150	7,296,552
Average Sales Per Cooperative	1,431,559	4,631,859	4,716,967	14,377,225
Average Net Savings Per Cooperative	46,667	169,206	173,851	584,257
Average Deferred Patronage Per Cooperative	195,734	729,081	643,099	1,989,468
Current Ratio	1.60	1.63	1.50	1.44
Solvency	62.5	60.7	55.8	54.4
Working Capital Requirements	23.6	24.4	23.0	22.2
Return on Equity	8.5	10.1	12.5	14.7
Total Return on Investment	5.3	6.1	7.0	8.0
Operating Margin	2.3	2.6	1.6	2.1

CHAPTER VI

THE ROLE OF DEFERRED PATRONAGE

This chapter is designed to help one better understand the role and impact of deferred patronage in a cooperative's financial structure. Deferred patronage, as a part of a cooperative's equity capital has increased substantially in recent years. A brief discussion concerning this increase will be made. Net savings and its relationship to deferred patronage will also be discussed. Finally, the revolving of this deferred patronage will be analyzed, both from the standpoint of the cash required for maintaining a revolving plan, as well as the impact a plan would have on cooperative solvency.

All figures used in this chapter and the following chapter come from the study done of Kansas farmer cooperatives in 1970 and 1977. Averages of this actual data for the respective years were found. It is these averages that are used here and in Chapter VII. It should be mentioned that there was of course variance in the data and as a result the figures used, and the resulting analysis, are not intended to represent any one specific cooperative. However, because these averages were obtained from actual accounting statements of most Kansas cooperatives, it is felt these figures are representative of cooperatives in Kansas.

Background Information

Deferred patronage plays an important role in the issue of revolving funds and member equity retirement. The majority of funds in the nonpermanent form of equity capital is represented by deferred patronage. It is these funds that the majority of cooperatives in Kansas are having difficulty revolving and/or retiring.

Deferred patronage is very basic and in fact essential to the concept of a cooperative operating under service at cost. It is through this mechanism that cooperatives are able to return to patrons any net margins that may have accrued over the year. Deferred patronage refunds may be defined as "a distribution by a cooperative of the margin over expenses which it is under a prior mandatory obligation to make to its patrons."¹ It is by this method of retaining or deferring a portion of a member's total patronage that cooperatives acquire a large amount of capital.

A brief review of the facts concerning deferred patronage discussed in Chapter IV may be helpful. It is important to realize that deferred patronage is increasing in Kansas farmer cooperatives in both actual dollars as well as in the percentage of total equity. In 1970 the total dollars of deferred patronage for all Kansas cooperatives was approximately 48 million dollars, or an average dollar figure for each cooperative of slightly less than \$196,000. In 1977 the total dollars of deferred patronage for all Kansas cooperatives was approximately 136 million dollars or an average dollar figure for each

¹Farmer Cooperative Service, Legal Phases, p. 364.

cooperative of \$643,099. On a percentage basis, the data show that in 1970 deferred patronage represented 35.6 percent of total equity. In 1977 this same figure has increased to 46 percent.

It quickly becomes obvious that just as cooperatives have grown rapidly in terms of total assets, equity in the form of deferred patronage has grown rapidly as well. As noted earlier, deferred patronage on the average has increased by \$63,909 per year from 1970 to 1977. It is because of the rapid growth of cooperatives as well as this tremendous increase in deferred patronage that cooperative leaders have become skeptical of the revolving fund method of financing.

What implications might this increase in deferred patronage have for a cooperative's financial structure as well as a member equity retirement plan? Several key points need to be made.

This increase in deferred patronage is having an effect on the permanent-nonpermanent capital mix. In any business it is important to have a substantial amount of permanent equity capital. Cooperatives are no exception. It becomes a concern then that since 1970 cooperatives have shown a trend toward more nonpermanent capital. Stock and memberships have decreased from 38.5 percent of total equity in 1970 to 29 percent in 1977. On the other hand, deferred patronage has increased from 35.6 percent of total equity in 1970 to 46 percent in 1977. Many cooperative leaders feel it is necessary to have more permanent equity capital where there is no commitment for revolving this capital. The trend seems to be just the opposite.

Because of this increase in deferred patronage there are of course more dollars that need to be returned to patrons. This makes it very

difficult for a cooperative to maintain a short revolving period. Out of necessity cooperatives have resorted to long and sometimes inconsistent revolving periods. Some cooperatives, in fact, have failed to revolve these funds altogether.

This becomes especially critical to the farmer member who has capital requirements in his own farming operation. It becomes a basic economic problem of allocating a scarce resource, in this case capital, among different capital intensive operations, the farm and the cooperative. A farmer cannot afford to let his capital stay in a cooperative for 10 or 15 years without receiving some kind of return on that investment.

Each year a cooperative waits to start a systematic revolving plan it becomes more difficult to introduce one because of the increase in the fund each year. The backlog of deferred patronage becomes more of a burden each year to those cooperatives who have no revolving plan.

Relationship to Net Savings

To fully understand the problem of deferred patronage, it is important to understand a cooperative's net savings or net margins because deferred patronage is a function of net savings. In 1977 the average net savings figure for Kansas cooperatives was \$173,851. The distribution of this net savings is presented in Table 25, both in terms of actual dollars and percentages. The distribution of net savings is important because it is the noncash portion of the patronage allocation that is retained by the cooperative and accumulated as deferred patronage.

TABLE 25
DISTRIBUTION OF NET SAVINGS IN 1977.

	Percent	Dollars
Total Patronage Allocation	84.6	147,078
Cash Allocation (30%)		44,123
Noncash Allocation (70%)		102,955
Per Unit Retains	1.8	3,129
Dividends on Stock	.3	522
Surplus and Reserves	10.3	17,907
Taxes	<u>3.0</u>	<u>5,215</u>
TOTAL NET SAVINGS	100.0	173,851

As seen in Table 25, patronage allocation accounts for the largest percentage of the total net savings distribution. In 1977, 84.6 percent of net savings, or \$147,078 is distributed in the form of patronage allocation. Of the 84.6 percent, 30 percent, or \$44,123, is distributed to the member in cash. The remaining 70 percent, or \$102,955, is in noncash patronage. It should be mentioned that the 30 percent cash allocation figure was felt to be used most often by Kansas cooperatives; however, 20 percent cash allocation was also used quite frequently.

Surplus and reserves account for 10.3 percent of the distribution while taxes required only 3 percent of net savings in 1977.

This mix between cash and noncash allocation means that, given a net savings figure of \$173,851 and a 30 percent-70 percent cash-noncash split, \$102,955 is being retained in the cooperative as deferred

patronage for the year. Only \$44,123 is paid back to the patrons in the form of cash.

In the short run it would appear that the \$102,955 retained in the cooperative is a good way to finance a cooperative. However, the burden this puts on a cooperative in future years when it comes time to revolve or retire this equity must not be overlooked.

It becomes absolutely essential that the source of a cooperative's net savings is understood. Where did the local cooperative acquire the \$173,851? How much of the \$173,851 is available to the local cooperative in cash? The point here is that just as a patron of a local cooperative receives patronage allocation both in cash and non-cash from the local cooperative, so does a local cooperative receive patronage allocation both in cash and noncash from regional cooperatives. As a result, not all of the \$173,851 represents cash that is readily available for cash transactions.

In reviewing 1977 net savings data it was discovered that 45 percent of net savings came from local operations and 55 percent was a result of patronage allocation received from regional cooperatives. Of the 55 percent from the regional, only 44 percent was in cash allocation while 56 percent was in the form of noncash allocation (see Table 26).

The cash available to the cooperative from net savings is then, the savings acquired from local earnings (\$78,233) and the savings acquired from the cash allocation from the regional cooperative (\$42,072) for a total of \$120,305. The point to be made here is

that of the \$173,851, only \$120,305 is actually in the form of cash. Part of it, or \$53,546 is in the form of noncash regional allocation.

TABLE 26
SOURCE OF NET SAVINGS IN 1977.

	Percent	Dollars
Net Savings Acquired From:		
Local Earnings	45	78,233
Regional Patronage	55	
Cash Allocation (44%)		42,072
Noncash Allocation (56%)		<u>53,546</u>
		<u>95,618</u>
TOTAL NET SAVINGS		<u>173,851</u>

By carrying the analysis a step further it is possible to see how much of the \$120,305 remains for cooperative use after the cash outflow items in the net savings distribution are accounted for (see Table 27). The cash outflow items are considered to be taxes (5,215), dividends on stock (522), and cash allocation to members (44,123). The total of these cash outflow items is \$49,860. The \$49,860 represents the total cash outflow requirements resulting from the net savings distribution as presented in Table 25. The difference between \$120,305 and \$49,860 is \$70,445. The \$70,445 is the amount of cash available for use within the cooperative after cash outflow items from the net savings distribution are considered.

TABLE 27

CASH FLOW FROM NET SAVINGS IN 1977.

Cash Inflow From Net Savings:		
Local Earnings	78,233	
Cash Allocation From Regional	<u>42,072</u>	
Total Cash Inflow		120,305
Cash Outflow From Net Savings:		
Cash Patronage Allocation	44,123	
Dividends on Stock	522	
Taxes	<u>5,215</u>	
Total Cash Outflow		<u>49,860</u>
TOTAL CASH AVAILABLE		<u>70,445</u>

Revolving Plans

It is now possible to discuss the impact a systematic revolving plan would have on a cooperative. The concern here is to introduce and maintain a relatively short term revolving period without putting undue financial strain on the cooperative. Much of the analysis will be based on 1977 data. This is because the 1977 data are more recent and more complete than the 1970 data.

The discussion will consider a 5 year and a 10 year revolving period. The purpose here is to understand the cash flow requirements necessary to maintain the revolving plan as well as the affect such plans would have on a cooperative's solvency.

Several ideas must be understood. The idea of the revolving plan is to revolve back to patrons the present deferred patronage of \$643,099

in the 5 or 10 years. Cash flow requirements resulting from this will be given. Equal annual cash payments will be assumed. In reality these cash payments will most likely fluctuate from year to year; however, for the purposes here, equal cash payments will be used.

The net change in total deferred patronage dollars within the cooperative resulting from the 5 or 10 year revolving plan will also be given. At the same time deferred patronage is being revolved back to patrons, deferred patronage dollars are also coming into the cooperative in the form of noncash patronage allocation. These separate transactions will result in a total change in the balance of deferred patronage dollars. It should be mentioned that the deferred patronage dollars flowing into the cooperative is assumed to be \$102,955 each year. This is because a net savings figure of \$173,851 is being assumed for each year in the revolving plan. As shown in Table 25, the noncash portion of patronage allocation, given a net savings figure of \$173,851, is \$102,955.

Ten Year Revolving Plan

A 10 year revolving plan will be considered first. A 10 year revolving plan means revolving back deferred patronage over a 10 year period. In Table 28 the 10 year period is from 1977 to 1987. The emphasis here is not on the actual years involved, but rather on the number of years included in the revolving period. The time period begins in 1977, because data are available from the 1977 study.

The deferred patronage balance in 1977 is given as \$643,099. The annual cash payment required for the 10 years is \$64,309. This

is a result of dividing \$643,099 by 10, to get ten equal cash payments. The first cash payment is made in 1978.

TABLE 28

CASH REQUIREMENTS AND DEFERRED PATRONAGE BALANCE
RESULTING FROM A TEN YEAR REVOLVING PERIOD.

Year	Annual Cash Payment	Increase in Deferred Patronage	Decrease in Deferred Patronage	Net Change In Deferred Patronage	Balance
1977	----	----	----	----	643,099
1978	64,309	102,955	64,309	38,646	681,745
1979	64,309	102,955	64,309	38,646	720,391
1980	64,309	102,955	64,309	38,646	759,037
1981	64,309	102,955	64,309	38,646	797,683
1982	64,309	102,955	64,309	38,646	836,329
1983	64,309	102,955	64,309	38,646	874,975
1984	64,309	102,955	64,309	38,646	913,621
1985	64,309	102,955	64,309	38,646	952,267
1986	64,309	102,955	64,309	38,646	990,913
1987	<u>64,309</u>	102,955	64,309	38,646	1,029,559
	643,099				

The decrease in deferred patronage each year is by the same amount as the required cash payment, or \$64,309. The increase in deferred patronage each year is \$102,955. As previously mentioned, this is taken from Table 25 which showed the noncash portion of the net savings distribution as \$102,955. The net change in deferred patronage each year is a net

increase of \$38,646 (102,955-64,309). This is an increase over the 10 year period of \$386,460. The deferred patronage balance at the end of the 10 year plan is \$1,029,559.

Even with a revolving period of 10 years the cash payment required each year is \$64,309. This is a substantial amount considering that cash available from net savings is only \$70,445. Of course a cooperative will also have cash available from depreciation, because depreciation is a noncash expense.

A point that must not be overlooked is the ending balance in deferred patronage of \$1,029,559. Deferred patronage increased each year by \$38,646 because more patronage was retained in the cooperative each year than what was being revolved back to patrons. As a result, at the end of 10 years deferred patronage has grown from \$643,099 to \$1,029,559. Should another 10 year revolving plan be adopted in 1988, the annual cash payment required would be \$102,956. This is a substantial increase from the \$64,309 required in the current 10 year plan.

Affect on Cooperative Solvency

Given this rapid revolvment of equity, there is concern for a cooperative's solvency. This is because if the equity that is revolved out of the cooperative is not adequately replaced, a cooperative's solvency will suffer.

From the data in the 1977 study, balance sheet accounts could be totalled, and averages found. These averages are presented in Table 29. This is the balance sheet, as it would appear in 1977, before the 10

year revolving plan went into effect. The solvency ratio at this time is 55.8 percent.

TABLE 29
BALANCE SHEET IN 1977.

<u>Assets</u>		<u>Liabilities</u>	
Current Assets	1,087,187	Current Liabilities	724,416
Fixed Assets	<u>1,406,963</u>	Long Term Liabilities	<u>377,693</u>
Total Assets	2,494,150	Total Liabilities	1,102,109
		<u>Equity</u>	
(Net Worth/Assets = 55.8%)		Deferred Patronage	643,099
		Common Stock	190,146
		Preferred Stock	197,622
		Memberships	10,691
		Per Unit Returns	2,866
		Reserves	269,390
		Other	<u>78,227</u>
		Total Equity	1,392,041

A balance sheet for 1987 can also be derived with the help of the marginal analysis provided in Table 30. Table 30 is a table showing the average annual change in various balance sheet accounts from 1970 to 1977. Total assets increased on the average each year from 1970 to 1977 by \$231,614. Total liabilities increased on the average each year by \$111,000, and equity increased on the average by \$120,614 each year. For the analysis it is assumed that these same increases from 1970 to 1977 will also hold true for 1977 to 1987.

TABLE 30

BALANCE SHEET OF 1970 TO 1977 MARGINAL
ANALYSIS OVER THE SEVEN YEARS

<u>Assets</u>		<u>Liabilities</u>	
Current Assets	107,514	Current Liabilities	73,153
Fixed Assets	<u>124,100</u>	Long Term Liabilities	<u>37,847</u>
 Total Assets	 231,614	 Total Liabilities	 111,000
 <u>Equity</u>			
		Deferred Patronage	63,909
		Stock and Memberships	26,924
		Other Equity	<u>29,781</u>
		Total Equity	120,614

A balance sheet for 1987 can now be derived as presented in Table 31. Table 31 shows the balance sheet of a cooperative after 10 years of revolving back the \$643,099 of deferred patronage. Total assets in 1987 total \$4,810,290. This is a result of an average annual increase of \$231,614. The equity increase is \$953,510. Instead of equity increasing \$120,614 every year as shown in Table 30, equity increased only \$95,351 each year. This is because deferred patronage increases only \$38,646 (as shown in Table 28) with a 10 year revolving period compared to the \$63,909 which was the average annual increase from 1970 to 1977. It is assumed that liabilities make up the difference that is lost by the decrease in equity. The results, as seen in Table 31, show a solvency ratio of 48.7 percent, well below the 55.8 percent before the 10 year revolving plan was adopted.

TABLE 31
BALANCE SHEET IN 1987.

<u>Assets</u>		<u>Liabilities</u>	
1977 Balance	2,494,150	1977 Balance	1,102,109
Increase	<u>2,316,140</u>	Increase	<u>1,362,630</u>
Total	4,810,290	Total	2,464,739
 (Net Worth/Assets = 48.7%)		 <u>Equity</u>	
		1977 Balance	1,392,041
		Increase	<u>953,510</u>
		Total	2,345,551

Five Year Plan

A five year plan might also be considered using the same method as used for the ten year plan. The time period involved is from 1977 to 1982. The deferred patronage balance in 1977 is again given as \$643,099. Instead of dividing \$643,099 by 10, however, \$643,099 must be divided by 5 to represent five equal cash payments. The annual cash payment required is \$128,620 (see Table 32). The first cash payment is in 1978.

The net change in deferred patronage each year is a decrease of \$25,665. The ending balance in deferred patronage is \$514,774. This is a decrease of \$128,325 from the beginning balance of \$643,099. The cash payment required each year to maintain a five year revolving plan is \$128,620. It is very difficult for a cooperative to be able to maintain this kind of cash payment given a net savings figure of \$173,851.

TABLE 32

CASH REQUIREMENTS AND DEFERRED PATRONAGE BALANCE
RESULTING FROM A FIVE YEAR REVOLVING PERIOD.

Year	Annual Cash Payment	Increase in Deferred Patronage	Decrease in Deferred Patronage	Net Change In Deferred Patronage	Balance
1977	----	----	----	----	643,099
1978	128,620	102,955	128,620	-25,665	617,434
1979	128,620	102,995	128,620	-25,665	591,769
1980	128,620	102,955	128,620	-25,665	566,104
1981	128,620	102,955	128,620	-25,665	540,439
1982	<u>128,620</u>	102,955	128,620	-25,665	514,774
	643,099				

Affect on Cooperative Solvency

The solvency level with a five year plan is also a concern. In this plan, compared to the ten year plan, the \$643,099 is being re-
 volved back to patrons twice as fast. As a result, the solvency is
 lower in the five year plan than the ten year plan. Table 33 presents
 a balance sheet for a cooperative in 1982. The solvency level here
 has dropped to 42.4 percent. The solvency level has dropped to this
 level because deferred patronage is decreasing by \$25,665 each year.
 From 1970 to 1977 the data showed that deferred patronage was increas-
 ing by \$63,909. The difference between these figures, or \$89,574, is
 assumed to come from borrowed capital. Therefore, creditors are
 supplying a much larger source of capital than before a revolving
 plan was adopted.

TABLE 33
BALANCE SHEET IN 1982.

<u>Assets</u>		<u>Liabilities</u>	
1977 Balance	2,494,150	1977 Balance	1,102,109
Increase	<u>1,158,070</u>	Increase	<u>1,002,870</u>
Total	3,652,220	Total	2,104,979
<u>Equity</u>			
(Net Worth/Assets = 42.4%)		1977 Balance	1,392,041
		Increase	<u>155,200</u>
		Total	1,547,241

Summary

The revolvment of this deferred patronage seems to represent a conflict of ideals. On one hand a cooperative is trying to maintain a short term revolving fund so that a patron's capital is not kept with the cooperative for an unreasonable amount of time. On the other hand, if a cooperative retires equity too quickly, without providing for adequate equity replacement, the financial structure of a cooperative may move towards an unfavorable position and possibly jeopardize the investment of all members.

It is also interesting to note that given the ten year revolving period as shown in Table 28, the balance of deferred patronage in 1987 is \$1,029,559. This is of course given a constant net savings figure of \$173,851. It does outline an additional problem, however. Should the cooperative maintain a ten year revolving period, beginning in

1988 the cooperative would begin to revolve the \$1,029,559. The annual cash payment required would then be \$102,956.

It is important that a cooperative maintain some kind of balance between the deferred patronage retained each year and the deferred patronage revolved each year. If a cooperative retires it too quickly this may jeopardize a cooperative's financial soundness. Should deferred patronage be retired too slowly it will present a financial burden in future years.

CHAPTER VII

MEMBER EQUITY RETIREMENT

Background Information

Not until recently has so much been written and said concerning the issue of member equity retirement. The concern over retirement of member equities is certainly well deserved. The problem is not a simple one. It is complex, covering a broad range of cooperative principles and characteristics all having implications for a cooperative's financial soundness.

Member equity retirement, as discussed in this chapter, refers to retiring only that portion of a cooperative's equity which is owned by members age 65 and over. In a member equity retirement plan the concern is with the age of the members. In the revolving of deferred patronage, as discussed in the previous chapter, the concern is with the age of the equity. In a revolving fund the oldest equity is revolved or retired first, whereas in a retirement plan the equity of the oldest member is retired first. If a member equity retirement plan is adopted and maintained, the revolvment of deferred patronage refunds as discussed in Chapter VI will not be adopted and maintained. This is the trade off involved. It is not likely that a cooperative will be able to finance both a retirement plan for members age 65 and

over as well as a retirement or revolving plan of deferred patronage refunds. So in effect the consideration here is either a revolving plan for deferred patronage refunds as discussed in Chapter VI or a member equity retirement plan as discussed in this chapter. It might, however, be the goal of a cooperative to some day have both.

Again, just as in Chapter VI, all figures used in this chapter came from actual data obtained in the 1970 and 1977 studies. This chapter focuses primarily on the 1977 study because the data are much more recent than the 1970 study and also because the data provided in the 1977 study are more complete, at least for the purposes here. Various balance sheet accounts were totalled, and averages found. It is these averages that are used in the analysis in this chapter. Because of the variance in the data, some average figures presented here will differ significantly from totals of actual cooperatives in the state. However, because these averages were obtained from actual data of most Kansas cooperatives, it is felt these figures are representative of cooperatives in Kansas.

If a cooperative is to keep two of its basic characteristics, democratic control and service at cost, retirement of owner control and member equities is essential. The principle of democratic control is altered when a retired or inactive member's control is not transferred to active members. Retirement of equity is also required if a cooperative is to operate under the principle of service at cost. When a member retires, the equity that member has with a cooperative needs to be returned to the retired member, or the retired member is

simply subsidizing future members by allowing them to use his investment "free of charge."

A cooperative may need to retire equity for several reasons. A member may die, retire from farming, or move from the community. Any one of these reasons makes it necessary for a cooperative to utilize a retirement plan.

Retirement plans and management strategy dealing with retirement plans will vary with cooperatives. The plan needs to be adapted to best fit each individual association. The analysis here deals with retiring equity of only those members who reach age 65. No estimate is made for those members who leave the community or die before the age of 65.

Data Required

A key data item a cooperative needs when considering equity retirement is the age and equity distribution of members. Once the cooperative knows the ages of its members, it can then apply the amount of equity each member owns to that age distribution and derive an equity distribution. The cooperative is then able to determine how much equity is owned by members age 65 and over as well as the equity corresponding to all other age groups.

A retirement plan can have such an impact on a cooperative's cash flow and financial structure that it is important for a cooperative to know how much equity will need to be retired in any one year. With this information it is possible for a cooperative to accurately project cash requirements of the retirement plan in future years.

Information concerning age and equity distribution was not provided by the data source and the gathering of this information was not within the scope of the study. Therefore, an assumption was made and an age and equity distribution were estimated for members of Kansas cooperatives with the help of two previous studies, one from Oklahoma and one from Kansas.

In the 1972 Oklahoma study, data were obtained showing the age distribution of cooperative members as well as the distribution of cooperative equity among the age groups.¹ There seemed to be a rather high correlation between the distributions when comparing the percent of cooperative members in an age group and the percent of equity owned by those members. The meaning here is that if 20 percent of the members are over age 65, then 20 percent of total equity within a cooperative is owned by members over age 65 as well.

In a study done in Kansas in 1976 the ages of cooperative members were determined.² This age distribution is summarized in Table 34. As seen, 18.9 percent of total membership in Kansas in 1976 belongs to members over age 65, 71.3 percent of the members are between age 35-65, and 9.8 percent are under age 35.

¹Hummer, Farm Economics, pp. 17-21.

²Milton L. Manuel, Allen L. Hurley, and Richard Phillips, Information Programs Used by Kansas Farmer Cooperatives, Kansas Agricultural Experiment Station, Bulletin 612, Kansas State University-Manhattan, October 1977.

TABLE 34
 AGE DISTRIBUTION OF COOPERATIVE MEMBERSHIP
 IN KANSAS IN 1976.

Age	Percent of Total Membership
Under 35	9.8
35-65	71.3
Over 65	18.9

By assuming that the same relationship experienced in Oklahoma cooperatives between age distribution and equity distribution holds true for Kansas cooperatives, an equity distribution for Kansas cooperatives can be derived. The result, as seen in Table 35, shows that 20 percent of a cooperative's total allocated equity is owned by members over age 65, 70 percent is owned by members age 35-65, and 10 percent is owned by members under 35.

TABLE 35
 ESTIMATED EQUITY DISTRIBUTION.

Age	Percent of Total Equity
Under 35	10
35-65	70
Over 65	20

Of course it must be understood that the equity distribution as presented in Table 35 is used only as a guideline in hope that this equity distribution is fairly representative of all Kansas cooperatives. It is not meant or intended to be a distribution that fits each and every cooperative in the state. It is possible that some cooperatives may have only 10 percent of their equity owned by members over age 65 while for another cooperative, members over age 65 may own 25 percent of the equity. It is felt, however, that this distribution does give a fair representation for Kansas cooperatives.

The percentage most crucial to a cooperative when introducing a plan is that percentage of equity owned by members age 65 and over. In Table 35 this percentage is 20 percent. The 20 percent figure represents the equity that a cooperative needs to retire as soon as possible because this is equity owned by members of retirement age. For some cooperatives this may be such a substantial amount of equity that it may take years before it can all be retired. Other cooperatives may decide to borrow the necessary funds required to retire the equity immediately.

The analysis presented in this chapter assumes that upon retirement, all equity of a member will be retired. This is done to simplify the problem. In reality a cooperative may decide that a member should keep enough stock so that the membership with the association remains. This is especially true should the member still be active in the association upon reaching age 65. It is unlikely that an association would find it desirable to sever the membership of an active member.

The equity to be retired is all equity allocated to patrons of the cooperative. This is equity in the form of stock, memberships, deferred patronage, per unit capital retains, and that portion of surplus and reserves allocated to members.

The amount of surplus and reserves that is actually allocated to members is difficult to know with exact certainty. The law states that for a cooperative to comply with Section 521 tax exempt status, all surplus and reserves must be allocated to members.¹ The problem is that the number of cooperatives complying with Section 521 status is not known. In an effort to make a reasonable estimate, the assumption is that half of surplus and reserves is allocated to members.

Table 36 outlines the allocated equity within a cooperative in 1977. Deferred patronage makes up the largest portion of allocated equity, with \$643,099. The total amount of allocated equity in 1977, based on these average figures was \$1,179,119. The \$134,695 of surplus and reserves represents one half of the total average amount of surplus and reserves in a cooperative in 1977.

¹Tax exempt status is discussed in detail in Lee F. Schrader and Ray A. Goldberg, Farmers' Cooperatives and Federal Income Taxes (Cambridge, Mass.: Ballinger Publishing Company, 1975), pp. 20-24.

TABLE 36

FORMS OF ALLOCATED EQUITY IN A
COOPERATIVE IN 1977.

Equity	Dollars
Deferred Patronage	643,099
Stock and Memberships	398,459
Surplus and Reserves	134,695
Per Unit Retains	<u>2,866</u>
TOTAL	1,179,119

By applying the equity distribution percentages of Table 35 to the actual dollar figures of allocated equity in Table 36, it is possible to see how allocated equity is distributed among various age groups in Kansas cooperatives. The data are presented in Table 37. Members over age 65 own \$235,824 of equity, members age 35-65 own \$825,383, and members under age 35 own \$117,912 of equity.

TABLE 37

AVERAGE EQUITY DISTRIBUTION OF KANSAS
COOPERATIVES IN 1977.

Age	Percent		Total Allocated Equity		Equity Distribution
Over 65	20	x	1,179,119	=	235,824
35-65	70	x	1,179,119	=	825,383
Under 35	10	x	1,179,119	=	<u>117,912</u>
					1,179,119

Regional Cooperative Participation

Due to the increased concern over retirement of equities, some regional cooperatives have developed programs whereby the regional will assist their local member cooperative in introducing and maintaining a retirement plan. Because most local cooperatives in Kansas belong to Farmland Industries, the Ownership Retirement Program adopted by Farmland Industries in 1972 is explained here.

The benefits of an Ownership Retirement program, such as Farmland's are as follows:¹

1. It places priority on redeeming the equities of those members to whom it is most urgent - estate settlements and retirements.
2. It helps to keep the ownership of the cooperative in the control of active member patrons.
3. It promotes long range financial planning and member equity maintenance.
4. It helps members to better understand how a cooperative is financed.
5. It places value on the member patron's remaining investment in the local cooperative because of the establishment of qualifications and procedures for equity redemption.
6. It also offers a local member cooperative the opportunity to increase the percentage of cash to be paid to members from the current year's patronage allocation.

A regional will participate with a local cooperative because the regional affiliate, such as Farmland, recognizes that a portion of the member patrons' investment in the local cooperative is represented in

¹Farmland Industries Inc., "Farmland Ownership Retirement," (Farmland Industries Bulletin, 1977).

the local cooperative's investment in Farmland. The program then is designed to redeem that proportion of a local cooperative's investment in Farmland that is represented in a payment to an estate or retired member.¹

The program adopted by Farmland is designed to assist local cooperatives with a retirement plan by means of cash participation. Several guidelines are set up for participation. Some of the more basic points are listed here. Farmland will participate only in a member's earned equities. Farmland offers no participation for purchased or paid in equity capital. Farmland will not participate in payment to members under the age of 65. Only payments made by the member association during the calendar year are eligible for participation. In order to receive cash payment from Farmland a cooperative must submit its Farmland shares of common stock in an amount equal to or greater than the amount of cash requested from Farmland.²

To determine to what degree Farmland will participate with the local in a retirement plan, the local cooperative must fill out forms which will determine what proportionate share of participation Farmland will contribute. That proportionate share is basically determined by dividing the local cooperative's investment in Farmland by the members' earned equity in the local cooperative.³ This proportionate share for each cooperative in the state was not calculated but instead an average

¹Ibid.

²Ibid.

³Farmland Industries Inc., "Farmland Ownership Retirement," (Farmland Industries Bulletin, November 1978).

figure was used. Upon contacting Farmland Industries, it was discovered that their average proportionate share of cash participation is 25 percent. To determine the amount of cash that Farmland will provide, the 25 percent is then multiplied by the amount of earned equities redeemed by the local cooperative. It is assumed that the 25 percent is representative for all cooperatives in Kansas and will be used in the following analysis.

One must now distinguish between that equity which is eligible for Farmland's participation and that which is not eligible. As mentioned, Farmland will participate in members' earned equities such as deferred patronage, per unit retains, and surplus and reserves. These equity accounts are shown in Table 36. The total from deferred patronage (\$643,099), per unit retains (\$2,866), and surplus and reserves (\$134,695) is \$780,660 in 1977.

It is not only important to have an equity distribution of total equity as shown in Table 37, but also an equity distribution for that equity which Farmland will participate (see Table 38), as well as for that equity which Farmland will not participate (see Table 39). This is required in order to project accurate cash payment requirements resulting from the adoption of a member equity retirement plan.

TABLE 38
 DISTRIBUTION OF EQUITY WHICH FARMLAND INDUSTRIES
 WILL PARTICIPATE.

Age	Percent		Total Equity		Equity Distribution
Over 65	20	x	780,660	=	156,132
35-65	70	x	780,660	=	546,462
Under 35	10	x	780,660	=	<u>78,066</u>
					780,660

Of the equity eligible for Farmland participation, \$156,132 is owned by members over age 65, \$546,462 is owned by members age 35-65, and \$78,066 is owned by members age 35 and under.

TABLE 39
 DISTRIBUTION OF EQUITY WHICH FARMLAND INDUSTRIES
 WILL NOT PARTICIPATE.

Age	Percent		Total Equity		Equity Distribution
Over 65	20	x	398,459	=	79,692
35-65	70	x	398,459	=	278,921
Under 35	10	x	398,459	=	<u>39,846</u>
					398,459

Of the equity which Farmland will not participate, \$79,692 is owned by members over age 65, \$278,921 is owned by members age 35-65, and \$39,846 is owned by members under 35 years of age.

Retirement Plans

It is now possible to look specifically at member equity retirement plans. A five and ten year retirement period will be discussed. Cash flow requirements of these two plans will be shown. The affect the plans would have on a cooperative's solvency will also be reviewed.

The only difference between the five and ten year plan is how soon the equity owned by members age 65 and over (\$235,824) is retired. If it is retired in five years, the cash payment required each year by the local cooperative will be higher than if it is spread over a ten year period. Once a cooperative has retired the backlog of equity owned by members age 65 and over, the concern can be with just that equity of members who turn age 65 in that given year. So although a five and ten year plan is discussed here, it is the intention that once a member equity retirement plan is adopted it will be maintained throughout the life of the cooperative. The plans discussed here are five and ten year plans only because the cost of retiring the backlog of equity of members age 65 and over (\$235,824) is spread over a five or ten year period.

A brief explanation concerning the approach taken in developing the five and ten year plans may be helpful. There will be three tables of information provided for each plan.

The first table will show the amount of equity that will be retired over the five or ten year period. The total equity retired will of course be that equity belonging to members age 65 and over or \$235,824. The \$235,824 will be divided between that portion that

Farmland will participate, or \$156,132, and that portion that Farmland will not participate, or \$79,692. As each year passes there will be more members turning age 65. With each passing year then a portion of the equity in the 35-65 age group will belong to members over age 65. It is assumed that the equity belonging to the 35-65 age group is distributed equally. The result is that simply one-thirtieth of the equity in the 35-65 age classification is graduated to the over age 65 age classification each year. One-thirtieth of \$825,383 is \$27,513. Again this \$27,513 will be divided between that portion that Farmland will participate in, or \$18,216, and that portion that Farmland will not participate, or \$9,297. The total amount of equity to be retired in the given time period will be shown.

The second table will show the cash payments required each year to maintain the given plan. This is where the Farmland Ownership Program becomes important. The table will show the gross cash payment required, meaning that payment required if Farmland had no cash participation plan with the local. The net cash payment required will also be shown. This is the annual cash payment required of the local cooperative when Farmland's cash participation is taken into consideration.

The third table will show the cooperative balance sheet after the retirement plan has been in effect for five or ten years. The balance sheet is derived in the same manner as in the previous chapter. It is designed to show the affect a retirement plan has on solvency. This information will be presented starting in 1977. This is because much of the information used in the analysis was obtained from the 1977

study. Again the emphasis here is not with the actual year or years specified but on the time period involved.

Ten Year Plan

A ten year plan will be considered first. Table 40 shows the total amount of equity which must be retired over the ten year period. In 1977, \$235,824 of member equity is owned by members age 65 and over and therefore needs to be retired. Of the \$235,824, \$156,132 is in equity that Farmland will participate and \$79,692 is in purchased or paid in capital or that capital that Farmland will not participate. From 1977 to 1987 more members turn age 65 and thus more equity, or \$27,513 needs to be retired each year. Total equity retired over the ten year period is \$510,950.

TABLE 40

EQUITY OF MEMBERS AGE 65 AND OVER
FOR THE NEXT TEN YEARS.

<u>Year</u>	<u>Participating Equity</u>	<u>Nonparticipating Equity</u>	<u>Total Equity To Be Retired</u>
1977	156,132	79,692	235,824
1978	18,216	9,297	27,513
1979	18,216	9,297	27,513
1980	18,216	9,297	27,513
1981	18,216	9,297	27,513
1982	18,216	9,297	27,513
1983	18,216	9,297	27,513
1984	18,216	9,297	27,513
1985	18,216	9,297	27,513
1986	18,216	9,297	27,513
1987	<u>18,216</u>	<u>9,297</u>	<u>27,513</u>
	338,292	172,662	510,950

The annual cash payment required each year is presented in Table 41. The gross cash payment required each year is \$51,059. This is also the amount of equity that is flowing out of the cooperative each year as a result of the retirement plan. Farmland participates by 25 percent so that 75 percent of participating equity, or \$25,372 ($33,829 \times .75 = 25,372$), must be paid in cash by the local cooperative each year. Add this to the \$17,266 and the net cash payment required by the local cooperative each year is \$42,638. The first cash payment is made in 1978. The difference between \$510,590 and \$426,382 is \$84,208. The \$84,208 is the amount that Farmland will offer in cash participation over the 10 years.

TABLE 41
ANNUAL CASH PAYMENT REQUIRED OVER
THE TEN YEAR PERIOD.

Year	Gross Payment	Participating Equity	Nonparticipating Equity	Net Cash Payment
1977	----	----	----	----
1978	51,059	25,372	17,266	42,638
1979	51,059	25,372	17,266	42,638
1980	51,059	25,372	17,266	42,638
1981	51,059	25,372	17,266	42,638
1982	51,059	25,372	17,266	42,638
1983	51,059	25,372	17,266	42,638
1984	51,059	25,372	17,266	42,638
1985	51,059	25,372	17,266	42,638
1986	51,059	25,372	17,266	42,638
1987	<u>51,059</u>	<u>25,372</u>	<u>17,266</u>	<u>42,638</u>
	510,590			426,382

Affect on Solvency

When retiring equity it is important to consider the impact such a plan will have on cooperative solvency. The solvency level in 1977, before a retirement plan is adopted, is 55.8 percent. A balance sheet is presented in Table 42 to show the solvency level after a retirement plan has been maintained for 10 years. The balance sheet is derived in the same manner as in the previous chapter. The solvency level has dropped to 52.4 percent.

It appears the plan as described here is reasonable, both from a cash flow standpoint, and also from a solvency standpoint. An annual cash flow requirement of \$42,638 is significant but not unrealistic for the average cooperative to meet. The solvency level of 52.4 percent seems to be within the realm of financial soundness.

TABLE 42

BALANCE SHEET IN 1987 WITH A TEN
YEAR RETIREMENT PLAN.

<u>Assets</u>		<u>Liabilities</u>	
1977 Balance	2,494,150	1977 Balance	1,102,109
Increase	<u>2,231,932</u>	Increase	<u>1,145,922</u>
Total Assets	4,726,082	Total Liabilities	2,248,031
(Net Worth/Assets = 52.4%)		<u>Equity</u>	
		1977 Balance	1,392,041
		Increase	<u>1,086,010</u>
		Total Equity	2,478,051

Five Year Plan

Some cooperatives may want to retire the equity over a shorter period such as five years. The same procedures used in the ten year plan can be used here as well.

Table 43 shows that \$373,389 must be retired over the five years. Of the \$373,389, \$247,212 is in equity which Farmland will help to retire and \$126,177 is in equity which Farmland offers no participation.

The cash flow requirements are presented in Table 44. The gross payment required each year is \$74,678. This is the amount of equity retired each year. However, because of Farmland's cash participation plan, the cash payment required by the local cooperative is just \$62,317. The difference between \$373,389 and \$311,585 is \$61,804. The \$61,804 is the amount of Farmland's cash participation.

TABLE 43
EQUITY OF MEMBERS AGE 65 AND OVER
FOR THE NEXT FIVE YEARS.

Year	Participating Equity	Nonparticipating Equity	Total Equity To Be Retired
1977	156,132	79,692	235,824
1978	18,216	9,297	27,513
1979	18,216	9,297	27,513
1980	18,216	9,297	27,513
1981	18,216	9,297	27,513
1982	<u>18,216</u>	<u>9,297</u>	<u>27,513</u>
	247,212	126,177	373,389

The cash payment required each year in a five year plan, \$62,317, is considerably higher than the \$42,638 in the ten year plan. The \$62,317 is a substantial amount considering that cash available from net savings, given a net savings figure of \$173,851, is only \$70,445.

TABLE 44
ANNUAL CASH PAYMENT REQUIRED OVER
THE FIVE YEAR PERIOD.

Year	Gross Payment	Participating Equity	Nonparticipating Equity	Net Cash Payment
1977	----	----	----	----
1978	74,678	37,082	25,235	62,317
1979	74,678	37,082	25,235	62,317
1980	74,678	37,082	25,235	62,317
1981	74,678	37,082	25,235	62,317
1982	<u>74,678</u>	37,082	25,235	<u>62,317</u>
	373,389			311,585

Affect on Solvency

The balance sheet of a cooperative in 1984 is presented in Table 45. A five year plan is more difficult to maintain. An annual cash payment of \$62,317 may be more than a cooperative's cash flow can withstand. The solvency ratio of 50.6 percent is a concern but is not so low that a cooperative's financial soundness is in immediate danger. Depending upon each individual association, and the amount of net savings available, a cooperative may not find a five year plan feasible for their particular management strategy.

TABLE 45

BALANCE SHEET IN 1982 WITH A FIVE
YEAR RETIREMENT PLAN.

<u>Assets</u>		<u>Liabilities</u>	
1977 Balance	2,494,150	1977 Balance	1,102,109
Increase	<u>1,096,264</u>	Increase	<u>671,354</u>
Total Assets	3,590,414	Total Liabilities	1,773,463
 (Net Worth/Assets = 50.6%)		 <u>Equity</u>	
		1977 Balance	1,392,041
		Increase	<u>424,910</u>
		Total Equity	1,816,951

CHAPTER VIII

SUMMARY AND CONCLUSIONS

The emphasis of this paper has been on the relationship between the financial structure and condition of farmer cooperatives, and the retirement of member equity. The basic concern is that of being able to retire member equity while maintaining the financial soundness of the cooperative.

A cooperative must be financially sound before a member equity retirement plan can be adopted. The financial condition of a cooperative must be kept sound if a retirement plan is to be maintained. This requires a strong balance sheet in terms of both liquidity and solvency.

Adequate liquidity is of vital importance in any business. Cooperatives are no exception. As seen in earlier chapters, however, liquidity has declined significantly since 1970. Adequate liquidity levels will be even more difficult to maintain should a cooperative adopt a member equity retirement plan because of the additional cash that must flow from the cooperative each year. Should a cooperative allow liquidity to dip too low, it may hamper its ability to retire member equity effectively and efficiently.

The liquidity problem in and of itself is of no great concern if solvency ratios are being maintained at adequate levels. A cooperative

may simply borrow more term debt and solve liquidity problems rather quickly. However, when declining liquidity ratios are accompanied by declining solvency ratios the problem becomes of greater concern. Just like liquidity, solvency has moved in an unfavorable direction since 1970. There seems to be more use of debt capital and less use of equity capital. The combination of low liquidity and low solvency makes it difficult for a cooperative to attract more term debt. This makes it more difficult for a cooperative to adopt and maintain a retirement plan.

Another key point is that there is movement towards use of more nonpermanent equity capital and away from permanent equity capital. Deferred patronage is increasing in both dollars as well as in the percentage of total equity it represents. Stock and memberships, on the other hand, a source of more permanent equity capital, has declined in recent years.

With the increase in deferred patronage there is more capital that must be systematically revolved or retired to members. This makes it increasingly difficult for a cooperative to maintain a reasonably short revolving period. Deferred patronage refunds help to finance a cooperative in the short run, but puts a burden on the cooperative in future years when it comes time to revolve back these refunds to patrons.

The result is an increase in the conflict between a farmer's own operation and that of the farmer's cooperative. A farmer can ill afford to invest in a cooperative year after year without eventually being returned some of that investment. It is in the best interest

of both the cooperative and the farmer to have a systematic method of revolving or returning this equity.

Farmer cooperatives in Kansas have shown dramatic growth in recent years. Financing this rapid growth presents a tremendous challenge. Capital needs are intensified as a result of this growth. Capital is needed to maintain current operations, finance growth, as well as maintain a systematic revolving plan. The problem then is allocating capital, be it borrowed capital or equity capital, among alternative needs. A member equity retirement plan is certainly one of those needs.

Financing growth represents another need, however. Fixed assets alone have increased on the average by \$124,100 each year since 1970. Financing these assets presents a big enough challenge itself. Financing a member equity retirement plan as well only complicates the problem.

It becomes important that a cooperative is able to finance at least part of the retirement plan through net savings to help ease the solvency and liquidity concern. A critical situation could occur should a cooperative experience low net savings in a year when a large amount of equity needs to be retired. Should this occur, an association may be forced to borrow a substantial amount of capital to maintain the plan.

A revolving fund for deferred patronage and a member equity retirement plan were given special attention in separate chapters. It should be understood that in a revolving fund for deferred patronage, the concern is with the age of the equity, where in a member equity retirement plan, the concern is with the age of the members.

It is unlikely that a cooperative would be able to financially support both plans. Normally a cooperative has either a member equity retirement plan or a revolving fund for deferred patronage refunds.

It appears from the data that it would be easier to introduce and maintain a retirement plan rather than a short term revolving period on revolving fund capital. A retirement plan requires, on the average, a smaller annual cash payment plus it maintains solvency ratios at much more acceptable levels.

Intertwined in all the discussion there is a key point which must not be overlooked. A cooperative must strive to achieve equitable treatment for all members. This is not always an easy objective to realize.

If a cooperative has only a retirement plan where equity of members age 65 and over is retired, it is unfair to younger members. A member who is 30 years old would then need to wait 35 years to receive capital back from the cooperative. On the other hand, if a cooperative has only a revolving fund and no retirement plan it becomes unfair to the retired or inactive member. The retired member would simply be allowing active members to use the capital "free of charge."

In the long run the objective of a cooperative may be to have both a member equity retirement plan and a short term revolving period on revolving fund capital. This would provide a more equitable situation to both older and younger members.

A more realistic possibility, however, may be for a cooperative to have a retirement plan, while at the same time increase the cash portion of patronage allocation from 20 or 30 percent to 50 or 60

percent. Studies have shown that it is possible for a cooperative to increase the cash portion of patronage allocation to 40 or 60 percent without jeopardizing its liquidity or solvency. A larger cash allocation would help to slow down the increase in deferred patronage refunds.

Manuel may have summarized it best when he said "Paramount in all deliberations is that a sense of fairness prevail: Fairness to the retiring member as well as those continuing in the association."¹

¹Manuel, Retiring Control, p. 15.

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FINANCIAL ANALYSIS OF KANSAS AGRICULTURAL COOPERATIVES
WITH IMPLICATIONS FOR MEMBER EQUITY RETIREMENT

by

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Much attention has been given cooperatives in recent years. The primary focus of this attention concerns the retirement of member equities. It is generally felt that a member's equity is being retained within the cooperative for an unreasonable length of time. Increased pressure is being put on cooperatives to correct this situation. The concern is so great, in fact, that systematic retirement plans may soon be mandated by law. Should retirement plans become mandatory, many cooperatives would face serious financial difficulty.

The main concern when dealing with equity retirement is that of being able to maintain the financial soundness of a cooperative while simultaneously retiring member equity. The objective of this paper was to understand the current status of Kansas agricultural cooperatives in terms of financial structure and discuss its relationship to member equity retirement. The purpose was to get some feel for the seriousness of the problem among Kansas cooperatives.

Data for all Kansas agricultural cooperatives were collected for fiscal year 1970 and fiscal year 1977. Balance sheet and income statements were provided. No statistical analysis was done but many different balance sheet accounts were totalled and averages found. Several different accounting items showed significant change since 1970. Many of these changes have a great deal of significance in terms of equity retirement.

Deferred patronage, because of its vital importance to this entire issue, was given special consideration. It was discovered that deferred patronage has increased dramatically in recent years.

This increase generates all the more concern because if deferred patronage is allowed to increase too rapidly, the chances of a cooperative adopting a retirement plan and remaining financially sound are severely hampered.

Equity retirement of members over age 65 was dealt with specifically. Many cooperatives are trying to adopt plans where equities of inactive members, and particularly members over age 65 are retired. The feasibility of such plans was discussed and cash flow requirements were projected.

The study was not intended to draft a policy that all cooperatives could implement for their particular association. It does, however, outline the current status of Kansas agricultural cooperatives and some of the changes that have developed in recent years. The relationship of these changes to member equity retirement and the implications involved, however, were thoroughly discussed.