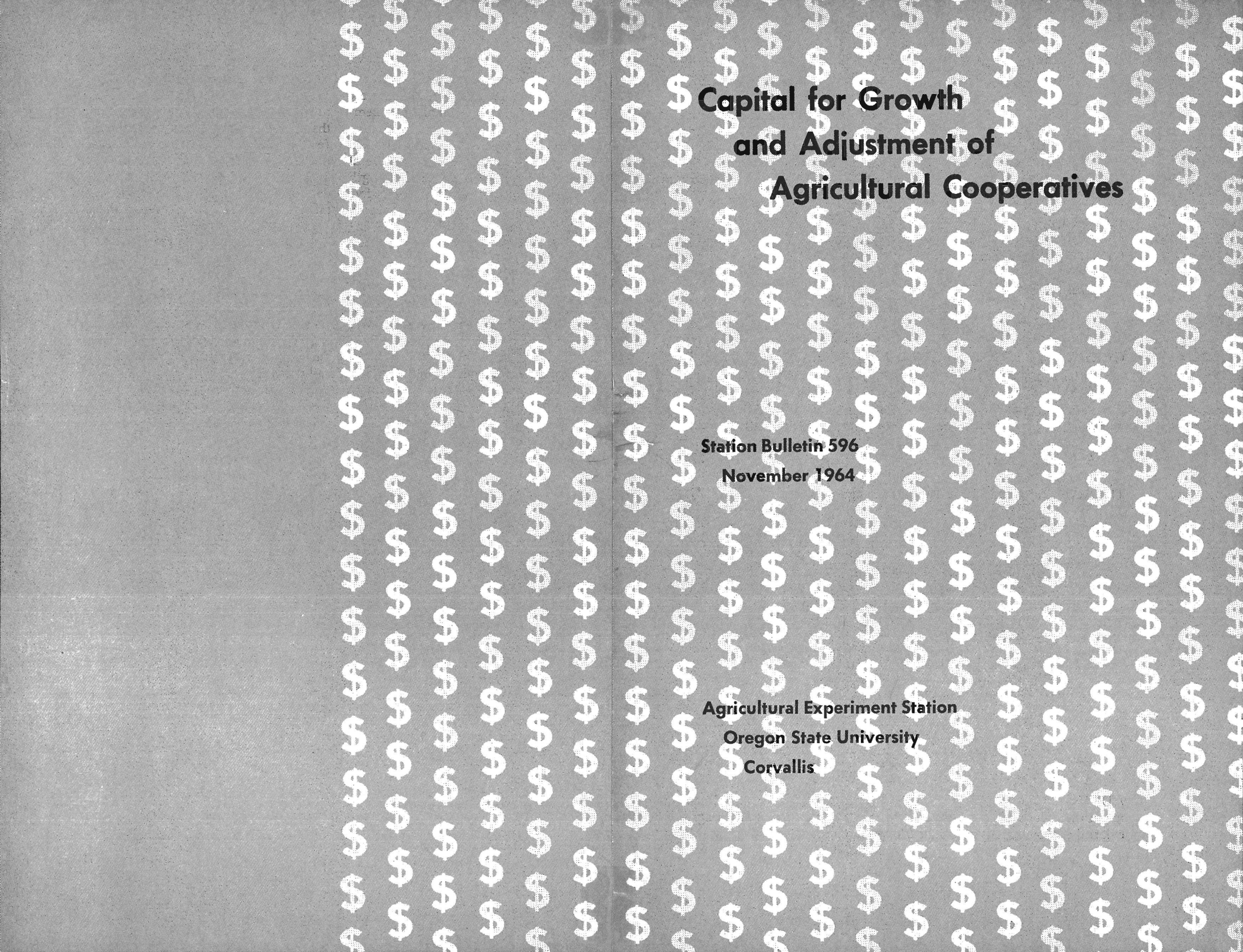

Capital for Growth and Adjustment of Agricultural Cooperatives

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Capital for Growth and Adjustment of Agricultural Cooperatives

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CONCLUSIONS

Agricultural cooperatives will require increasing amounts of capital for growth and adjustment in the future. Long-range financial planning will be essential if these needs are to be adequately met.

The development of an overall financial policy involves planning in advance and matching appropriate capital sources to anticipated needs. The combination of sources employed should be a result of a consciously designed program, with balance, flexibility, and simplicity in the capital structure as its objectives. Capital structure problems are not solved when a firm has reached a certain size or point in its development. Financial planning must be a continuous and dynamic process.

The projected balance-sheet approach can be used to estimate future capital requirements of firms once a realistic sales target has been set. A farm supply cooperative should plan to increase dollar sales by 45% in the next 10 years, if it expects to keep pace with inflation and growth of the market for farm supplies, and to increase its share of the market by 5%. It is assumed that the same rate of inflation will prevail in the next 10 years as in the past, and that farmers will continue to increase their use of certain supplies such as feed, fertilizer, and pesticides. Total assets needed to support this volume can be expected to increase from 50 to 65% of sales. Some change in capital structure emphasis from the revolving fund to preferred stock or certificates of equity over the 10-year projection is considered necessary. Of course, there is nothing to prevent cooperatives from regularly revolving common and preferred stock, but few follow this practice.

Several cooperatives have been able to achieve a growth rate equal to or exceeding that of the plan in this study; but frequently the revolving fund term has been lengthened to provide the necessary increase in equity capital. Firms which have made a policy of financing expansion or major adjustments with newly invested capital (preferred, certificates of equity, common stock) have been the most successful.

Cheese and butter manufacturing is a declining industry in Oregon; production of manufacturing milk is decreasing due to urban expansion, growth of specialty crops, and the appeal of the Grade A market to large producers. A decline in volume of 25% in 10 years is believed imminent as a conservative projection for a dairy-products manufacturing firm. A capital structure is outlined which relies heavily on the revolving fund to maintain capital. One firm has been able to hold down unit costs in the face of a declining supply of raw product with the use of frequent innovation and efficient management. It has fulfilled its objective of providing a continuing,

stable, and reliable market outlet for its producer members and has developed a sound financial position while maintaining declared policies for revolving member equities. Of course, the future of firms in a declining market situation is uncertain.

Total revenue is reasonably predictable on an annual basis for grain cooperatives, because of the characteristic nature of patronage commitments and low turnover of members. However, over a period of years, uncertainty regarding government programs makes long-term volume predictions more difficult. Government storage programs can influence revenue directly, and during the postwar period these programs provided grain cooperatives with a large source of income. As a result, some of these firms have achieved a net worth/total assets ratio of more than 95% and have shortened their revolving terms by several years. However, in view of their sound financial condition, more might have been done in the way of returning benefits of the association to members. Cooperatives have access to borrowed funds at a more favorable rate than that available to individual producers. A net gain would accrue to the membership, therefore, if each firm were to borrow operating capital and return more equity funds to producers for use in their farm operations.

The revolving fund procedure has provided a simple, sensible, and economic method of accumulating capital. However, the potential annual yield of new capital from this source may be reduced in the years ahead. The decline in net margins per dollar of sales and the change in the 1962 Revenue Act, which requires that 20% of net margin be paid in cash, are the two main reasons for reaching this conclusion. This study makes it clear that future capital requirements in growing firms are likely to be large. Incremental capital requirements in the future will occur in substantial "lumps" or blocks, and the timing of sources will be critical. Retained earnings may not be able to meet all of these requirements.

INTRODUCTION

Many agricultural cooperatives in Oregon have experienced financial problems in recent years, because of changes in the economic environment in which they operate. This situation has not been confined to newly formed or small associations. Some large, well-established cooperatives are also faced with a declining net returns position and have reason to be concerned about the future. Financial viability is a necessary condition for growth. Changing technology in agriculture has created a need for changes in the facilities and services offered by cooperatives. The incremental capital necessary to finance this growth and adjustment underlines the desirability of long-range financial planning.

Scope and procedure

From a basic outline of the major capital needs in business and a reference to the problems of cooperatives in particular, some capital requirements are set up for selected farm supply, dairy-products manufacturing, and grain marketing associations. A basic assumption made in establishing capital needs in this study was that the firms under consideration have been in operation for some time; that they fill

a recognized need in the community they serve; and that they have achieved a reasonable degree of success to date. The problem is one of projected future needs, from a given point in time.

Financial data for the past 10 to 12 years were collected from representative firms whose major activities were farm supplies, dairy-products manufacturing, and grain marketing. The past performance of these associations determines to some extent the composition of the plans developed in this study. A plan for each type of cooperative is developed and its projection over a 10-year period is employed to depict a functional capital structure. The plan is then compared with actual operating cooperatives. Attention is given to the feasibility and probable results of conforming to the particular plan.

CAPITAL NEEDS AND PLANNING

Capital is essential for the operation of any business enterprise, regardless of its basic structure or activity. Farm production, manufacturing, trading, and service ventures all must have some degree of investment in assets. The form or combination that such assets take and the magnitude of assets in total will depend on each firm's individual circumstances. Outside factors contribute as much as, if not more than, internal decision in determining the need for and availability of resources in a business enterprise.[1] While it is obvious that the commitment of funds by a business will be limited by their availability, there is frequently no clear-cut pattern evident in the interrelationships of sources and uses of capital.

Fixed Assets

> Perhaps the biggest single step in business finance is the decision to buy—or not to buy—additional plant and equipment. With the possible exception of wage settlements under collective bargaining, no other decision is likely to involve the disposal of so much money at a single throw. Nor are there any other single acts that fix so irrevocably the course of a firm's future."[2]

Ultimately, the objective of investment in fixed assets is identical to that of working capital—to increase service and hence return on total investment. The immediate purpose at the time of actual funds outlay, however, may be more precise, e.g., expansion of capacity for producing existing or new products (services), replacement of existing but obsolete facilities to cut costs or produce more benefits, and replacement of worn-out or otherwise unserviceable assets. Investment in facilities, as a proportion of total assets, depends on the nature of a business' operations and varies widely with technological development and industry characteristics. Some types of operations lend themselves well to renting or leasing facilities.

Characteristically, investments in fixed assets can be planned in advance, they are made in substantial units, they lack liquidity, and they are irreversible. Purchases of plant and equipment create a financial commitment that will be

[1] J. H. Bonneville, and others, *Organizing and Financing Business* (Prentice-Hall, 1959), p. 381.

[2] Robert Lindsay, and Arnold W. Sametz, *Financial Management: An Analytical Approach* (Richard D. Erwin, 1963), p. 550.

binding over a period of years, thus reducing the flexibility of future policies. The investment is retrievable only over an extended period and even then subject to uncertainty. Changes in demand or price and obsolescence are very real dangers; and the loss sustained from a forced sale of obsolete or excess facilities can be considerable. These aspects of fixed assets serve to emphasize the desirability of financial planning with respect to their acquisition. Before taking such action, careful consideration should be given to prospects for recovery of cost and a reasonable return on investment.

Overall Financial Planning

In addition to the magnitude of total capital needs, the timing of future drains of capital on a business must be known in order to make adequate provision possible. Some degree of control can be exerted over capital needs only if a prediction or estimate is made in advance. Forecasted needs provide the necessary guidelines for planning capital procurement from one or more alternative sources.

Debt versus equity capital

Debt capital has certain points in its favor. Borrowed funds can often be obtained for a rate of interest which is lower than the dividend rate required to attract equity funds; voting control of the firm need not be sacrificed in return for new capital; and the principle of financial leverage can be employed to increase net returns to equity shareholders. Some general restraints exist, however, which limit management's ability to go beyond certain points in either direction.

> First and foremost, the amount and stability of earnings set the foundation for all negotiation for long-term capital. Second, management will seek flexibility to maneuver in the event of unexpected changes. Third, trading on equity is limited by the fact that the investors' appraisal of the quality of debt declines as the proportion of debt rises.[3]

[3]Arnold Haseley, and Leon Garoian, *Management news for agricultural business,* Oregon Coop. Ext. Serv., Corvallis, March 1962.

The case of grain marketing cooperatives in Oregon suggest that full advantage of borrowing for working capital purposes is not being taken to realize maximum benefit for members. Substantial growth has occurred in the owned portion of total assets in recent years, reaching net worth to total assets ratios of from 85 to 99% for some firms. While it is desirable that the members have substantial investments in the association, they are faced with the need for capital on their farms as well, and must borrow it, typically at relatively unattractive rates of interest. With the advantage of an extremely low debt to equity ratio, the associations are in a position to benefit their members by borrowing on more favorable terms for working capital and returning a greater share of each year's earnings to members for use on their farms. The net result could be an increased return on total investment (on- and off-farm), and/or improved services for the members.

The precise contractual nature of debt-servicing costs and the possibility that earnings will not remain stable and at a satisfactory level, create the need for relative risk considerations in choosing between debt and equity capital. While the direct cost of borrowed funds may be less than estimated alternative-costs for an equal amount of equity capital, the advantage can be

more than offset by the risk of default. Obligations to investors are binding, whereas owners can forego profits or even sustain losses in the event of a sudden decrease in earnings.

Internally generated capital

Major additions are made to a firm's equity capital by the retention of internally generated funds. This source is usually considered separately because of the direct role played by management in its determination. Since growth rate and rate of earnings are controlled to some extent from within, this partially governs the need for outside financing in the form of new capital stock or borrowings. The long-term trend has been one of increased emphasis on internal financing; Table 1 shows that almost 66% of total financing for all corporations in the United States in 1957-1961 was internal. Much of the increase has been due to the growing importance of depreciation allowances. The absolute amount of retained earnings has increased during the postwar years, but needs for investment have grown relatively faster, with the result that in proportion to total financing, retained earnings have actually declined. Their importance as a source of funds for expansion, therefore, has weakened.

Table 1 also shows that while there has been a trend away from external financing, the composition of external sources has changed as well, with the proportion of short-term debt declining in favor of stock. This would seem to indicate a greater use of equity funds for working capital and reliance on borrowed capital for investment in fixed plant and equipment.

The ability of a firm to achieve a substantial degree of growth from internal sources is a function of (1) size of additions to invested capital; and (2) net increases in earnings resulting from the additions. Since it has been assumed that growth is an essential objective of most business firms, a satisfactory return on investment should be a likely prospect, and a significant proportion of internally generated funds should be retained if a firm intends to rely heavily on internal capital sources for expansion.

Objectives of a financial plan

The exact type of overall financial plan that will be used by a firm is governed by a number of factors. The number of variables that enter into the decisions will be determined by a combination of internal and external forces. Evaluation of alternatives is always made more complex by the time

Table 1. Sources of corporate funds, all U. S. corporations, 1947-56 and 1957-61 (percent of total)

Sources	1947-56	1957-61
	%	%
Internal—retained profits	26	17
—depreciation	38	49
External—stock issues	6	8
—long-term debt	15	16
—short-term debt	15	10
	100	100

Source: Robert Lindsay and Arnold W. Sametz, *Financial Management: An Analytical Approach* (Richard D. Irwin, 1963), p. 348.

factor. Decisions must be based on current conditions; but techniques which are satisfactory for the present may be rendered obsolete by constantly changing conditions. As a result, nearly all the decisions are compromises between obvious current advantages and possible long-term disadvantages.

The magnitude and timing of future capital needs are to a large extent unpredictable. Even when needs are estimated within limits, no precise, objective standard can be used to measure capital adequacy. It is a matter of judgment and individual circumstance. Obvious cases of surplus or severe capital shortage can be recognized, but not quantified; the degree of shortage or surplus depends on the assumptions made, and there is no way to remove subjective consideration from this aspect of financial policy.[4]

Most business firms expect to grow larger than they are, but it is not always easy to know the exact direction in which to grow, or what limits to set. Planning will depend on whether growth in the level of operations comes in "lumps" or is continual and comes in small units. There is no simple answer as to how far in advance total commitments should be planned.

With such a degree of uncertainty in the conditions faced, and the need for maintaining the confidence of patrons and investors alike, a firm should strive for three major objectives in designing its overall financial plan: balance,[5] flexibility, and simplicity.

CAPITAL STRUCTURE PLANS FOR COOPERATIVES

Capital structure plans developed in this section are designed to serve only as illustrations or examples of one way in which the problem of capital requirements can be approached through financial planning. The capital mix used in each plan is based partly on the actual situation of one or more Pacific Northwest cooperatives which are representative of the type being considered, but it may not reflect exactly the policies of any firm in particular. Rather, the composite seeks to combine desirable features from each, with some further modifications based on generally accepted economic and financial reasoning as to what is desirable and sound. The result in each case is a capital structure which is hypothetical, but nevertheless reasonable and possible for cooperatives to achieve. Actual experiences of firms will be cited to indicate how well some existing cooperatives have been able to approximate the plans as constructed. More attention is given the supply cooperative plan than the others, in order to illustrate the reasoning involved.

From the "ideal" financial structure at a point in time, as suggested by the plan in each case (farm supply, dairy-products manufacturing, and grain marketing), a projection of future levels is made for sales volume and total assets and their financing. Guidelines for composition and growth of capital structures provided by these projections will then be compared to trends displayed by representative cooperatives in the past. The purpose of com-

[4] E. W. Walker and W. H. Baughn, *Financial Planning and Policy* (Harper, 1961), p. 506.

[5] Some capital should be borrowed even though members are willing and able to supply all requirements. Furthermore, some proportion of the equity capital should be of a fairly permanent nature, i.e., common stock, preferred stock, and/or certificates.

parison will not be to evaluate past performance, but rather to indicate whether the suggested goals are more likely to be achieved through continuation of present policies, or whether major changes in direction are in order.

A Plan For a Farm Supply Cooperative

While several measures of firm size may be employed, the most common yardstick for comparison appears to be that of gross annual sales. By this standard, Pacific Northwest supply cooperatives range in size from less than $250,000 to over $1,250,000; however, the majority have sales of $1,000,000 or less, with several in the $500,000 range. A representative figure of $600,000 per year was chosen for this plan. The product mix reflects a reasonable balance between the major categories of farm supplies and equipment sold by cooperatives. Table 2 shows the breakdown of sales by category.

Several Oregon cooperatives were established originally as petroleum supply firms and continue to show a concentration of sales in that direction; one or two others have acquired farm implement dealerships, thus greatly expanding the equipment and hardware portion; others, as a policy, do not handle certain product lines. However, the particular mix presented here has been approximated by a number of firms and is within reach of all of them.

It is reasonable for currently successful firms to strive for and expect to achieve some degree of expansion and growth in the future. Since sales are used here as a measure of size, growth in sales figures is the appropriate goal to examine. Three major factors are evident in the need for expansion of total sales in terms of dollars: (1) inflation, (2) growth of the market itself, and (3) the firm's ambitions or goals concerning its share of the market.

If for no other reason, dollar sales must increase to keep up with inflation. This growth, as measured by the index of wholesale prices for all commodities, was 1.6% per year from 1950 to 1962.[6] It is assumed that the same rate will continue for the next 10 years. This means that a 17.24% increase in the dollar volume of sales will be necessary simply to offset the effects of inflation. In the absence of evidence to the contrary, such an assumption will be made, and the amount will be rounded to 17% for use in the plan.

The growth of farmers' production expenses, consisting primarily of expenditures for supplies and equipment, gives an indication of the potential

[6] *Statistical Abstract of the U. S.*, Department of Commerce, Bur. of Census, Washington, D. C., 1942-62.

Table 2. Product mix of a farm supply cooperative

Product	Percent of total sales
All petroleum products	45
Fertilizer and chemicals	20
Small equipment and hardware	25
Tires, batteries and accessories	10
TOTAL	100

Table 3. Current farm operating expenses, total and selected components Oregon, 1949 to 1962[1]

Year	Feed	Fertilizer and lime	Repairs and operation of capital items	Misc.[2]	Total
			Million dollars		
1949	45.4	5.9	37.8	22.2	180.7
1950	49.1	8.9	39.4	23.6	192.6
1951	61.9	8.8	43.1	31.3	227.2
1952	59.3	9.5	46.5	29.0	215.9
1953	48.2	10.0	47.0	28.7	201.8
1954	46.6	10.4	46.0	29.1	200.2
1955	46.8	11.6	47.1	29.7	204.6
1956	48.8	11.6	48.8	33.4	212.4
1957	48.5	14.1	50.8	31.9	219.4
1958	53.0	13.0	51.0	32.6	225.7
1959	56.0	13.5	53.4	35.7	231.7
1960	55.7	13.7	52.5	37.3	227.4
1961	55.7	15.0	52.3	39.3	239.5
1962	60.8	13.9	52.9	41.4	257.1

[1] *The Farm Income Situation,* USDA, ERS, July 1963. (Supplement.)
[2] Includes pesticides, harness, blacksmithing, hardware, veterinary medicines, dairy, and nursery and greenhouse supplies.

market for farm supply cooperatives. As shown in Table 3, total current operating expenses in Oregon rose from $192.6 million in 1950 to $257.1 million in 1962, an increase of 33.5% over the 12-year period. It can be seen that some individual categories of supply expenditures grew even more rapidly. This rate could, however, decrease in the future. However, in order to allow for the possibility of new changes in technology and increased mechanization, an estimate of 21% is used for the projected period.

Total sales

Combining the factors for inflation and growth of the market, the cooperative is faced with the task of increasing sales by 38% in order to simply maintain its position in the market. This should be regarded as the minimum goal for a viable firm. Some farm supply cooperatives may find themselves continually altering product mix and adjusting their direction of operation to meet changing conditions. Most of them, however, have an implicit, if not explicit, objective of expanding to some degree their share of the available market. Past trends indicate that cooperatives, as an industry group, have in fact made moderate gains in their position in the farm supply and equipment field, compared with expenditures of all farmers. Figure 1 shows the relative trends.

For this plan, the goal of increasing the firm's share of the market by 5% over a period of 10 years has been chosen. In order to achieve this increase over and above the effects of inflation and expansion of the market itself, actual volume in dollars must increase by an amount equal to 1.38 x 5%, or approximately 7%, during the projected period. The total increase desired in dollar sales, therefore, will be 38 plus 7, or 45%, resulting in a figure of $870,000 in the target year. Figure 2 illustrates the current and projected sales for the plan.

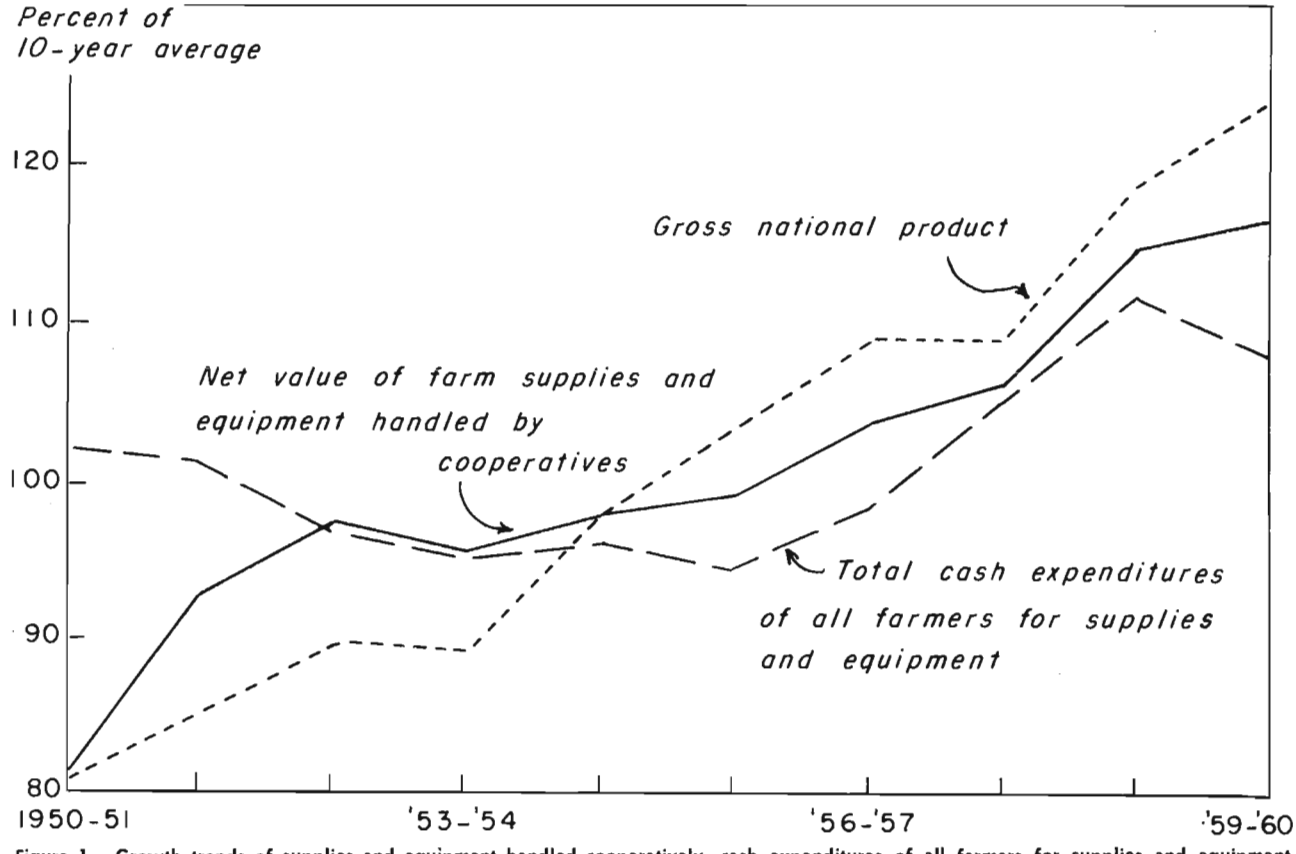

Figure 1. Growth trends of supplies and equipment handled cooperatively, cash expenditures of all farmers for supplies and equipment, and gross national product, 1950-60.

SOURCE: *Methods of Financing Farmer Cooperatives*, H. H. Hulbert, and others, USDA, FCS, General Report 32, 1957, p. 46.

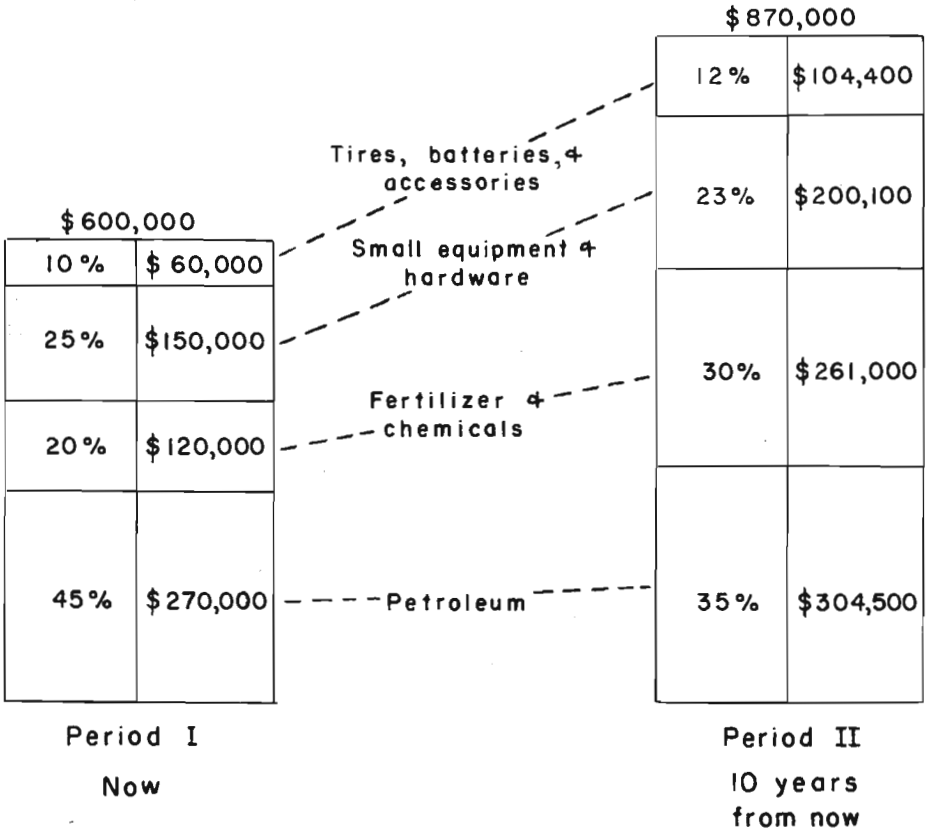

Figure 2. Current and projected sales for a farm supply cooperative.

The changes in composition of total sales as shown are results to be expected, with an overall increase in volume under the assumed conditions. A projection of prevailing market conditions would support the relative decline of petroleum sales as indicated. While the trend of technological change continues, farmers' purchases of petroleum products remain relatively stable in physical terms. The product is not used exclusively by farmers, and price competition is severe for many Pacific Northwest cooperatives; they face a market which is oversupplied, each dealer striving to increase volume at the expense of others. With little or no prospect of price increases or growth of the market potential, cooperatives may expect petroleum sales to increase only slightly and decline as a proportion of total sales. Prospects for fertilizer and chemicals, on the other hand, have reason for much improvement in the future. Oregon farmers' expenditures for fertilizer and lime increased from $8.9 million in 1950 to $13.9 million in 1962 (Table 3). Changes in technology and further specialization in crops and production methods point to increased use of chemicals other than fertilizer. These products, used almost exclusively by farmers, lend themselves to bulk han-

dling and easy storage. Farmer cooperatives are in a good position to provide service in these fields. The large investment required in fixed plant and facilities, particularly for the handling of liquid fertilizer, effectively controls the number of suppliers in an area and encourages the handling of large volumes, so that facilities are used to capacity. All of these factors point to a greater share of sales in this direction. Small equipment and hardware again are more stable in terms of volume purchased by farmers. As a cooperative grows larger, it should become more diversified in the service it offers and inventories carried.[7] Tires, batteries, and accessory sales are shown as increasing slightly, reflecting the increasing degree of mechanization.

Total assets

The operation of any business requires some assets. The amount of total assets needed to support and create a given volume of sales depends on several factors, the primary one in most cases being the type of product(s) handled. Sales policies and relationships with suppliers also have a bearing through the effects of accounts receivable and inventory burdens. Farm supply cooperatives in Oregon have experienced substantial increases in the costs of doing business over the past decade. To keep pace with the technological advances and increased mechanization in farming, cooperatives have had to provide a broad range of services, often requiring the purchase of complex equipment and facilities. The introduction of liquid fertilizer, for example, involves large outlays for storage tanks and distributing apparatus. Frequently the cooperative finds itself needing to finance equipment for custom application of chemicals, lime, and fertilizer to relieve its members of this burden. Sales will vary from year to year, depending on crop and weather conditions, while much of the assets investment is long-term and binding. The result has been a trend in the past for total assets to increase as a percentage of total sales.

In determination of total assets required in this plan, consideration was given to generally accepted financial principles, product mix being used, and past successes of Oregon cooperatives with similar operations. A figure of $300,000 or 50% of sales is used for the current operating year. In line with the expected trend for all farm supply firms and with the hypothesis that as a supply cooperative grows in absolute size it will become involved in more diverse activities and services to members (some of which may operate at less than optimum capacity), total assets of the model are increased in relation to total sales over the projected period. They will amount to $565,000, or 65% of total volume in the tenth year. Figure 3 shows the totals and components for the current and projected period.

The indicated changes in composition can be explained largely in terms of growth of the firm and its total assets over the projected period. Cash is shown to decrease slightly as a proportion of total assets. This reflects the gradual reduction in relative need (in terms of dollars) for liquid funds as a firm increases in size. Cash and liquid reserve holdings are subject to certain minimum-quantity require-

[7] In some cases, cooperatives have felt the need to carry a major farm implement line and have added a full agency to their operations. This is not included in the plan, however, since it is not typical of supply associations in Oregon.

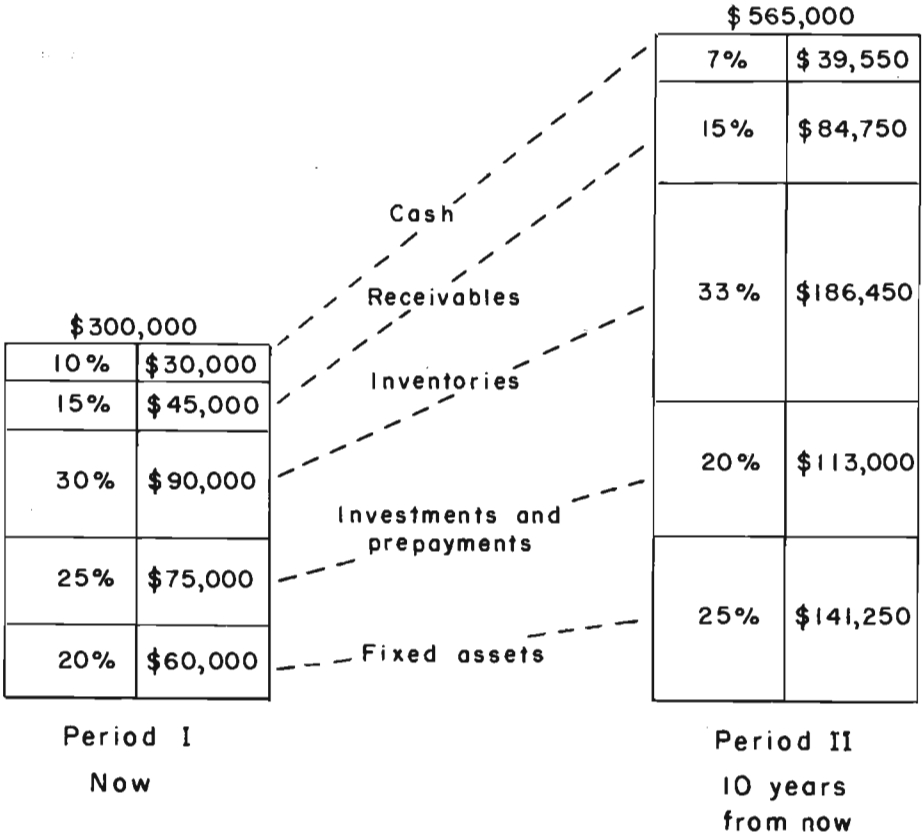

Figure 3. Current and projected total assets for a farm supply cooperative.

ments which may keep the amount on hand for day-to-day operations and contingencies out of proportion in a small firm. Accounts receivable as a proportion of total assets will vary with a firm's sales policies. Since any changes in policy with regard to credit terms are usually brought about primarily to meet or gain advantage over competition, their magnitude and timing are difficult to predict. Therefore, in spite of a noticeable trend in recent years toward more liberal credit terms being offered, for the purposes of this study it will be assumed that policies will remain essentially the same throughout the period projected.[8] The share of assets invested in inventories frequently remains constant unless a major change in product mix occurs. In the farm supply field, however, the greater diversity of stocks and services expected of a large cooperative may more than offset its relative effi-

[8] A gradual increase in the accounts receivable portion of total assets due to more generous terms being offered may be partly offset by the fact that a larger and more diversified farm supply cooperative is in a relatively stronger position to "hold the line" on members' accounts, as it has more to offer in the way of service and benefits in return for prompt payment.

ciency in inventory turnover. This has been assumed, in projecting an increase of inventories from 30 to 33% of total assets.

There will be some actual increase in dollars invested by a growing association in its wholesale cooperatives. These are essential assets for most retail cooperatives. This is pointed out in a recent study which suggests that the relationship should be strengthened: "In future market structures, the relatively small retail association will find it increasingly difficult to survive unless tied to a multimillion dollar wholesale cooperative of which it is part owner."[9]

Fixed assets account for a more obvious part of the increase in total assets from 50 to 65% of total sales. The trend has been toward slower turnover of fixed assets for all farm supply cooperatives. The more complex equipment needed to service mechanized agriculture and the greater diversity of inventory and services (some of which may be marginal operations) expected from a larger cooperative are largely responsible for the increased share of total assets invested in fixed plant and facilities. Unlike other components, fixed assets characteristically come in "lumps" and as a result cannot be expected to grow in exact proportion to volume.[10]

The capital structure

Whereas the relationship of total assets to planned or expected sales volume can be determined as a matter of policy and within limits altered over time, the capital structure or total sources of funds, by definition, must exactly equal the total assets. In the short run, a firm's capital structure is fixed; its total assets are determined by the total sources of funds available. Over a longer period, management can take the approach of setting a target or goal for total assets, and, through conscious effort and planning, cause the capital structure to meet this predetermined level. The actual composition as well as the total amount of capital needed by successful cooperatives is the concern of this study. A variety of sources are available; the question facing each firm, once total requirements have been determined, is that of which sources to use and in what combination to best meet its needs.

Figure 4 illustrates a capital structure designed to finance these requirements. The combination of sources used here incorporates a degree of balance, flexibility, and simplicity, and is realistic for supply cooperatives within the size range being considered in this study.

The current liabilities portion of the capital structure consists primarily of accounts payable, short-term borrowings, and accrued expenses and is assumed to maintain a more or less constant proportion as the firm expands.

Capital borrowed from the Bank for Cooperatives, commercial banks, or other lending institutions consists of long-term loans for facilities. This, together with short-term borrowings (included under current liabilities), should be a key element in the capital structure of every cooperative. Balance between borrowing capital and other sources of funds is important. Long-term borrowed capital is shown

[9] *A decade of performance by Oregon farm supply cooperatives,* G. E. Korzan, Oreg. Agric. Expt. Sta. Cir. of Info. 606, 1961.

[10] In most cases, additions to plant and equipment not only must be purchased in "blocks" or "lumps" but must be financed for some time before any increase in sales or earnings will accrue. This adds to the problem of raising sufficient capital.

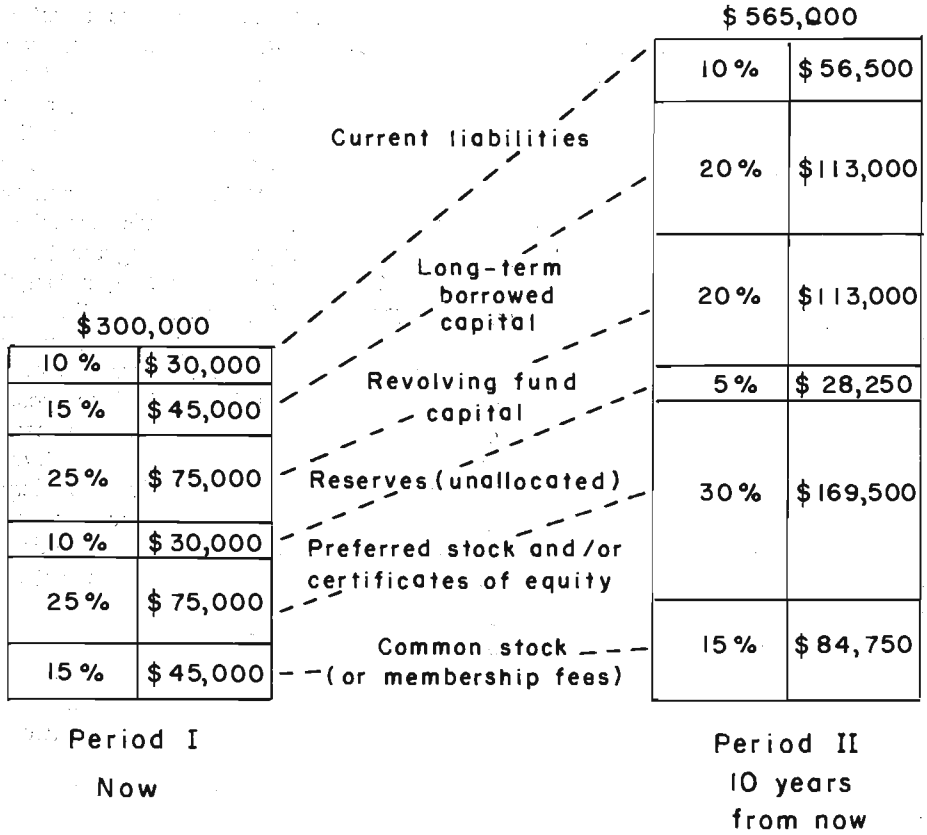

Figure 4. Current and projected capital structure of a farm supply cooperative.

to increase from 15 to 20% over the decade because revolving fund capital is likely to become more difficult to acquire.

Borrowed funds frequently can be shown to be a more economical source than equity capital. The availability of borrowed funds can act as a limitation on their use. However, a firm should have no severe problems in this regard if it has maintained a sound financial position (net worth/total assets), successful operations, and a good reputation in the past.

The desirability of bank borrowings in the capital structure of some large diversified farm cooperatives may stem less from the need of the association itself than from the benefits that could accrue to members and their farm businesses as a result. A large organization in reasonably sound condition can readily obtain funds for seasonal inventory financing and other purposes without endangering its position, and at a more favorable rate than individual members are able to borrow for farm operations.

The projection in Figure 4 shows an overall financing program which gives considerable emphasis to bank borrowings and preferred stock or certificates of indebtedness and indicates some shift away from revolving fund capital and reserves. A reasonable balance is maintained throughout the plan be-

tween debt and equity, and between the alternative sources of equity capital. Reserves, as might be expected, represent a smaller proportion of total financing because nonallocated earnings seem less likely in the years ahead.

A cooperative should review its financial position each year in relation to goals of the overall plan and make changes in direction if necessary. Changes can be made without strain if the capital structure is not limited by excessive use of binding long-term contracts. Changes in technology are unpredictable and may alter the entire pattern of farming in an area, rendering present operations of the cooperative obsolete in a few years. In actual operation, as the firm's performance is checked against the projection, allowance can be made for changes in exogenous factors or errors in the original assumptions.

Plan compared with operating cooperatives

How does the capital structure and its projection compare with the actual situation of farm supply cooperatives? What major deviations exist in the combination of sources, and what has been the relative success of firms using them? Examples of historical data on financial operations, conditions, and policies of three fairly typical firms will be presented to suggest some answers to these questions.

The total volume of sales (and its growth rate), in providing a measure of the economic need for a cooperative, sets the starting point from which total assets and capital structure requirements are determined. During the past decade, the performance of Oregon farm supply cooperatives has been characterized by growth in sales volume. Tables 4, 5, and 6 list approximate data and trends for three firms. Cooperative "A", for example, is typical of those in the "small" (under $250,000 annual sales) volume range. The approximate composition of assets and capital structure clearly resembles the plan. Product mix changed somewhat over time, with expansion of specialty crops in the area causing an increase in the market for irrigation supplies and hardware. This cooperative achieved an increase in volume of 28% over the past 8 years, or the equivalent of 35% in 10 years. While on the surface this may appear satisfactory, real gains are less than desirable for a small firm, assuming the rates of inflation and potential market growth set forth earlier. Cooperative "B", while maintaining a relatively static combination of services, increased sales by 19% in 10 years. Exceptional growth was achieved by Cooperative "C", which was able to increase sales by 93% in a decade, 88% of it in the last six years. Substantial shifts in emphasis and introduction of new services to meet changing technology appear to be largely responsible in this case.

Some further details on the composition and financing of total assets and policies employed by these selected cooperatives during recent periods of growth (or decline) are appropriate for comparison with the plan.

Cooperative "A", as did the plan, used preferred stock as a major source of capital and gradually replaced a large portion of it with a revolving fund and common stock. No definite promotional effort was used to recall the interest-bearing stock; as shares were turned in, they were simply not reissued.

Additions to fixed assets, designed to increase volume, were financed entirely by lengthening the revolving

Table 4. Total sales, total assets, and capital structure—Cooperative "A", 1955-62

	Year							
	1955	1956	1957	1958	1959	1960	1961	1962
Total sales (thousand dollars):[1]	163	178	185	204	198	219	205	212
Net margin percentage (percent of total sales):	3.05	4.82	5.18	5.51	5.92	8.25	5.43	4.58
Total assets (thousand dollars):	76	86	100	108	106	114	118	137
Total assets / Total sales (percent)	46.7	48.7	53.7	52.8	53.4	52.0	57.5	64.5
Composition of assets (percent of total):								
Cash	4.2	3.2	2.4	1.0	2.5	2.6	2.7	2.3
Receivables	17.6	20.4	19.7	23.0	22.1	25.6	26.2	25.1
Inventories	23.3	27.5	34.2	32.6	31.0	25.7	27.3	32.6
Investments and prepayments	33.0	31.9	30.1	31.8	33.7	37.0	35.4	30.3
Fixed assets	21.9	17.0	13.6	11.6	10.7	9.1	8.4	9.7
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Composition of capital structure (percent of total):								
Current liabilities	2.7	6.4	10.5	10.0	2.3	2.8	8.8	15.9
Long-term borrowed capital	3.9	3.8	4.0	4.6	4.7	.....	.....	3.7
Revolving fund	34.8	36.0	37.7	39.1	40.9	47.0	40.0	34.9
Reserves	14.9	7.3	.....	.....	2.2	2.5	4.0	6.0
Preferred stock	26.5	23.9	20.4	18.6	18.9	16.9	13.8	10.2
Common stock	17.2	22.6	27.4	27.7	31.0	30.8	33.4	29.3
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

[1] In 1962, the product mix was: petroleum, 67.9%; fertilizer and chemicals, 8.4%; and small equipment and hardware, 23.7%.

Table 5. Total sales, total assets, and capital structure—Cooperative "B", 1951-60

	Year									
	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960
Total sales (thousand dollars):[1]	363	388	451	440	469	422	454	390	390	411
Net margin percentage (percent of total sales):	4.68	2.48	5.03	1.30	2.12	1.42	4.60	1.49	2.09	1.37
Total assets (thousand dollars):	218	202	221	223	236	261	251	248	254	250
Total assets / Total sales (percent)	59.9	51.9	48.9	50.6	50.4	62.1	55.2	63.7	65.0	60.9
Composition of assets (percent of total)										
Cash	5	9	9	4	4	5	3	3	2	4
Receivables	11	11	14	17	15	15	18	17	15	15
Inventories	38	29	28	31	37	38	38	40	40	38
Investments and prepayments	28	32	31	24	23	23	24	25	25	26
Fixed assets	18	20	18	23	21	18	17	16	17	16
	100	100	100	100	100	100	100	100	100	100
Composition of capital structure (percent of total):										
Current liabilities	8	6	7	6	9	13	5	7	9	8
Long-term borrowed capital	20	10	11	14	14	17	14	13	12	14
Revolving fund	40	51	47	49	46	43	45	45	48	49
Reserves	12	6	12	7	7	6	12	6	7	5
Preferred stock	9	10	10	10	9	9	10	10	10	10
Common stock	8	11	11	12	12	11	12	14	13	13
	100	100	100	100	100	100	100	100	100	100

[1] In 1961, the product mix was: petroleum, 45%; tires, batteries and accessories, 2%; hardware, 19%; and fertilizer and chemicals, 32%.

Table 6. Total sales, total assets, and capital structure—Cooperative "C", 1955-60

	Year					
	1955	1956	1957	1958	1959	1960
Total sales (thousand dollars):[1]	633	697	735	820	943	1,033
Net margin percentage (percent of total sales):	3.18	5.35	3.20	4.04	4.86	3.37
Total assets (thousand dollars)	387	521	538	631	659	762
Total assets / Total sales (percent)	61.0	74.7	72.9	76.9	70.0	73.8
Composition of assets (percent of total):						
Cash	5	4	5	3	2	2
Receivables	10	9	11	15	15	12
Inventories	35	36	34	35	38	46
Investments and prepayments	39	30	30	27	27	26
Fixed assets	12	21	20	19	17	16
	100	100	100	100	100	100
Composition of capital structure (percent of total):						
Current liabilities	3	5	4	4	4	6
Borrowed capital	.....	13	9	15	12	16
Long-term revolving fund[2]	93	75	74	68	67	60
Reserves	.....	.....	.....	.....	.....	.....
Preferred stock (certificates of equity)	4	7	13	13	17	18
Common stock	.....	.....	.....	.....	.....	.....
	100	100	100	100	100	100

[1] In 1961, the product mix was: petroleum, 25%; tires, batteries and accessories, 16%; machinery, parts and hardware, 43%; and fertilizer and chemicals, 16%.

[2] Includes allocated reserves.

fund period. While the period is relatively short at present, pressures likely in the near future could increase reliance on this source, if no newly invested equity capital were forthcoming.

In comparison to the plan, Cooperative "B" has relied more heavily on the revolving fund, slightly more on borrowed capital, and less on common and preferred stock for its financing in the past. Its product mix approximately resembles that of the plan and has changed very little in the past 10 years. Total assets were 51% of sales 10 years ago; they are 61% currently. Shortage of working capital has been a persistent problem for this association. This was caused in part by heavy investment in inventories and difficulty in controlling receivables, which are the concern of internal management.[11] A considerable amount of financing was provided by short-term notes of members, which were later replaced entirely by outside financing in the form of bank loans, most of which were on longer terms. Additions to plant and equipment were financed by some new outside borrowing and by lengthening the revolving fund period, a process which has continued for seven or eight years. The death benefit policy is not specified in bylaw form, but a loose commitment is made to pay the stock portion immediately and to revolve the book credits in their turn. Planning in advance and securing finances for more expansion and modernization of facilities will be necessary again in the near future in order to maintain a competitive position.

[11] An independent auditor pointed out that in 1960 this cooperative's inventories represented 72% of current assets, compared to an average of 38% in other similar associations. The need for strengthening credit policies is also frequently mentioned in auditor's reports on Cooperative "B."

Borrowed capital and, to an increasing extent, preferred stock (certificates of equity) have played an important part in the capital financing plan of Cooperative "C" since 1955. Sales volume increased by 88% in that time, and the introduction of new services, plus additions to fixed assets and inventories required to support such growth, created the need for substantial increments of equity capital.[12] The proportion provided by retained earnings has declined steadily, however.

Advance planning and financing of new product lines or facilities before their need becomes urgent (and a margin of business is lost to competitors) has been a policy of this association. Typically, members were informed of the advantages and estimated cost of a potential new service made desirable by changes in technology. If and when a substantial portion of the cost was raised in new equity capital (interest-bearing certificates), the expansion was implemented. Thus, members were made aware of the cost and importance of each new service provided by their cooperative.

In this association, the certificates of equity issued are kept active and circulating by members, who can take advantage of an investment opportunity while financing the cooperative. (The interest rate was recently increased to six from four %). No attempt is made to promote this source of capital beyond what is actually needed, however, as it is desirable for future requirements to avoid heavy interest expense and maintain a reserve of members

[12] The installation of storage and distribution facilities for liquid fertilizer, for example, required an initial outlay of nearly $100,000. Additional amounts were needed to finance applicator units and inventories for the first year's operations.

willing to invest. Newly invested capital is used for expansion of facilities only while current earnings and depreciation support operations and replacement. Cooperative "C" strives to keep depreciation allowances reserved for replacement, carrying over from one year to the next the portion not actually used for that purpose. If more funds are needed for working capital in any year, they are borrowed. While this policy may appear rigid in the short run, it does avoid the possible difficulties occasioned by cumulative pressures, and in that way adds to the firm's overall flexibility. During a period of rising sales, the temptation for many cooperatives is to retain most of the expanded earnings and to finance expansion and working capital from the revolving fund. Cooperative "C" has kept a substantial portion of current earnings flowing back to its members. It has made cash refunds of 25% from association earnings and has passed on a portion of the wholesale cooperative's refunds in cash as well. This measure enhances member relations by serving as a reminder of current benefits from patronage. The revolving period for earnings allocated to book credits is 11 years at present.

Death benefit provisions for member equities involve a degree of acceleration for revolving book credits. In addition to the regular revolving of the oldest credits (e.g., 11 years), cash redemption of newer allocations are made up to a maximum of $750 per member, or a total of $3,000 for the association, in any one year. Certificates are purchased for cash immediately and resold to other members. Management and directors feel that a goal for equitable handling of earnings should be in the neighborhood of a 50% cash patronage refund and a 50% allocation to the revolving fund, with a revolving period of 10 to 12 years.

A Plan for a Dairy-Products Manufacturing Cooperative

Dairy-products manufacturing cooperatives, as do other marketing cooperatives, differ basically in the nature of their operations from farm supply firms. A marketing cooperative is usually an integral part of the farm business and, as such, is reasonably assured of handling all or most of each member's production of the commodity involved. Patronage commitments are usually made on a longer term basis, i.e., one crop year or production period. This is in contrast to the farm supply business where each transaction, on a day-to-day basis, must meet the test of competition and provide satisfaction in order to ensure future volume. A firm whose operations consist of pooling (and/or processing) and selling a commodity to a few buyers and returning the proceeds to producers has another advantage over one which must solicit patronage on an individual basis from many buyers who are also its owners. The former will have large volumes of funds moving through the business during the normal course of operations, making it a relatively simple matter to "siphon off" or withhold the amount necessary to cover operating costs, a margin for refunds, and, when necessary, additional financing for expansion for facilities and service.

To the extent that this can be done through management of prices paid to farmers, marketing cooperatives are in a position to plan and achieve their goals of margins and capital financing.

External conditions facing dairy-products manufacturing plants in Oregon are those of a declining industry. Butter production in the state declined from 17.5 million pounds in 1950 to 10 milion pounds in 1963. Cheese production decreased 20% in the last decade, while it increased 30% for the United States as a whole. Shortage of raw product has been the cause of this decline; small milk producers are disappearing and larger operators find it more profitable to concentrate on the fluid milk or "Grade A" market. Increased land values (due to urban expansion) and competition from specialty crops in the Willamette Valley have eliminated many of the small shippers in that area. As a result, milk-products manufacturing plants are faced with excess capacity and increasing unit costs. Flexibility of financial position and efficient use of technology are essential for survival under such conditions. Careful management is needed to keep unit costs within the range of competitive operation.

The objective of a milk-products manufacturing cooperative should be the provision of a continuing, stable, and reliable market outlet for its producer members. Conditions in the industry suggest that any significant growth in volume would be an unrealistic objective for Oregon dairy cooperatives in the future, unless some major change in market structure, such as consolidation or mergers, occurs. The plan presented here portrays a declining volume situation of a magnitude that is expected to develop over the next decade.

Total sales

The decline in volume—in physical terms—of butter, cheese, and ice cream production in Oregon has more than offset the effects of inflation on dollar sales during the past 10 years. Butter production declined 30% and cheese 20% in that period. Total sales of manufactured dairy products by firms in this study are generally reflected by the projection in Figure 5. Factors apparent in market and consumption patterns are the basis of the future trends indicated for product mix, viz., butter decreasing as a percentage of the total; cheese increasing slightly; and ice cream, milk powder, and other products increasing from 10 to 15%. Table 7 indicates past trends in the per capita consumption of butter, cheese, and ice cream. Substitute products have decreased the effective demand for butter. Cheese consumption has been rising and promises to provide a ready market in the future.

The category "ice cream, milk powder, and other" used in the plan is shown to increase as a percentage and in absolute amount. This projection is based on the expected increase in the use of instant and prepared foods.

Table 7. Apparent civilian per capita consumption of dairy products in the United States, selected calendar years

	1947-49 avg.	1957-59 avg.	1960	1961	1962	1963
			Pounds			
Butter	10.6	8.2	7.5	7.4	7.2	6.7
Cheese	7.0	7.9	8.4	8.6	9.1	9.3
Ice cream	18.7	18.4	18.3	18.0	17.9	18.1

Source: *National Food Situation*, USDA, May 1964.

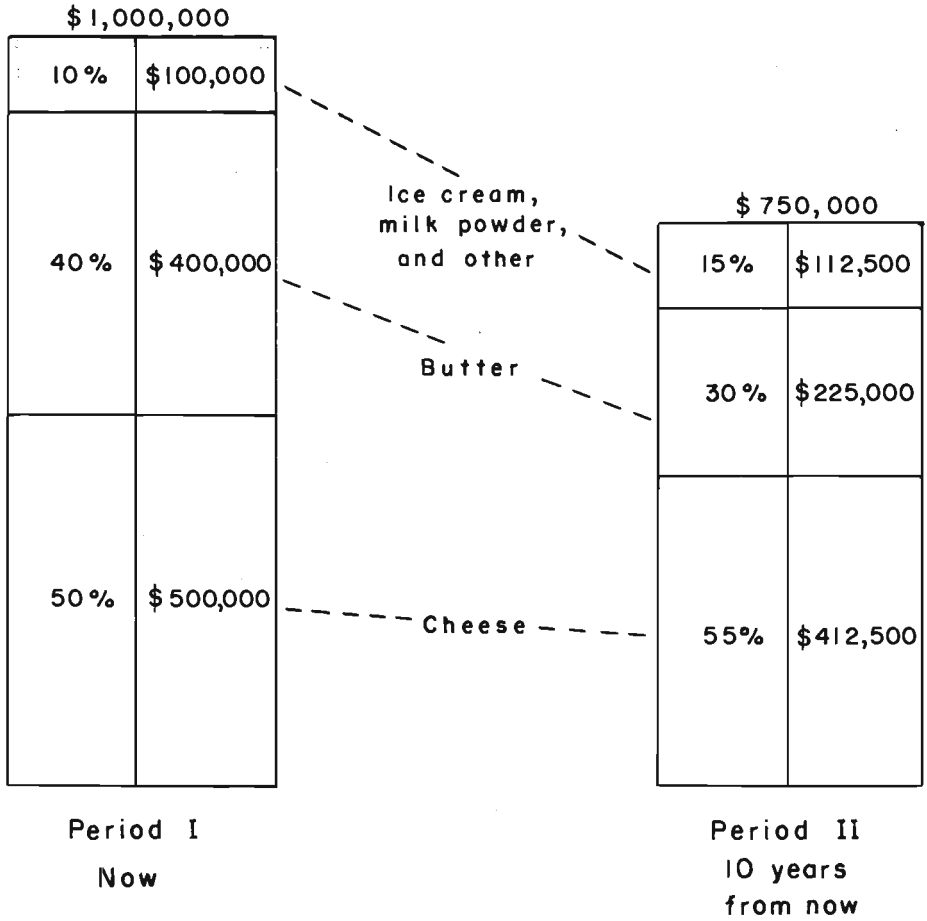

Figure 5. Current and projected total sales for a dairy-products manufacturing cooperative.

which will utilize milk powders and other more processed forms.

Total assets

As was pointed out in the discussion concerning supply cooperatives, increasing costs have resulted in a slower turnover of total assets. In the case of dairy-products manufacturing firms, additional pressure is exerted by the decline in volume being processed by existing facilities. The projection in Figure 6 shows an increase in total assets as a percentage of sales over 10 years and an increase in fixed assets as a proportion of the total. Inventories are shown to decrease somewhat as a percentage of total assets over time.

The capital structure

Figure 7 indicates a continued general use of the revolving fund over the projected period. The revolving fund procedure of retaining the net earnings or part of net proceeds to pay off those who contributed at an earlier time needs to be maintained if at all possible in this situation. A cooperative that anticipates no increase in volume would have problems selling pre-

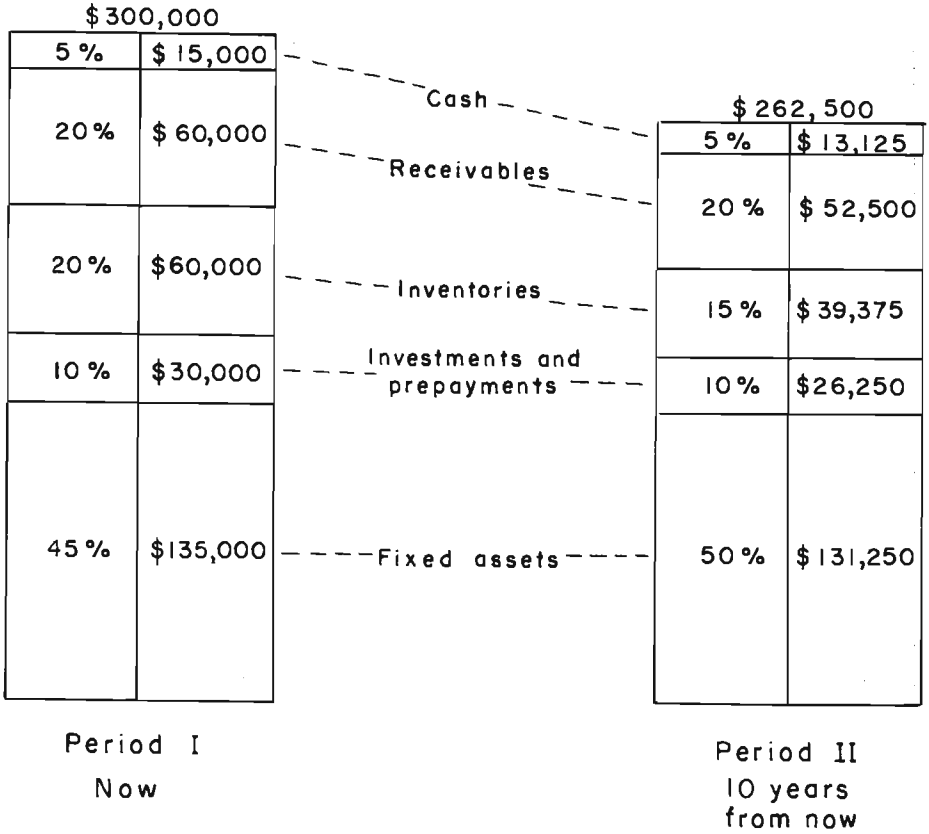

Figure 6. Current and projected total assets for a dairy-products manufacturing cooperative.

ferred stock or other equities. Furthermore, no large amounts of capital are likely to be needed for plant or equipment.

The revolving fund procedure explicitly shows members that their equities will be revolved out of the association in case of merger, sale, or dissolution if at all possible. This is more than can be said for some common stock (or membership fees) and some certificates of equity.

Plan compared with operating cooperatives

Only a few comments will be made with regard to showing the reliability of this plan, because the same kind of reasoning is employed here as in the discussion of the supply firm.

In recent years, one cooperative purchased a local fluid milk plant partly as a move to protect its own supply of raw product for manufacturing and partly to increase volume. Volume declined steadily from 1950 through 1957. In 1963, volume of business exceeded one million dollars, a substantial growth over the low volume of $724,000 in 1957.

No cash investment is required to become a member in this cooperative, since the $10 membership share can be earned through retains. The policy in recent years has been to pay high

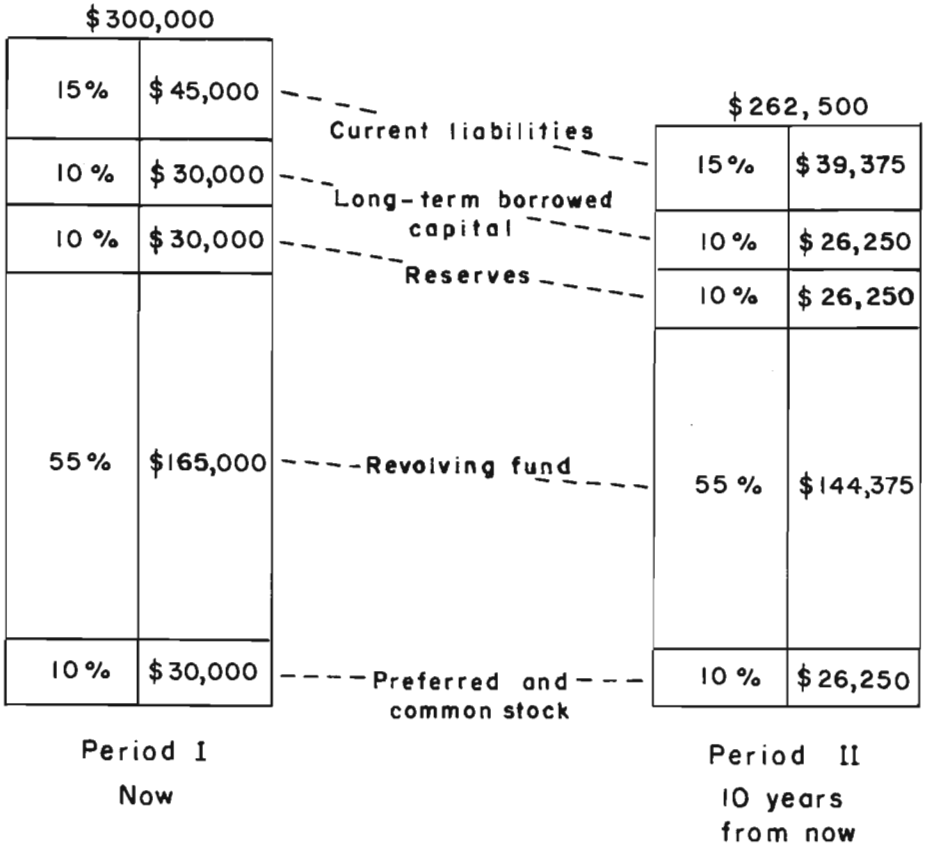

Figure 7. Current and projected capital structure for a dairy-products manufacturing cooperative.

prices to shippers, with the result that there is little or no margin at the end of the year for distribution or retirement of old equities. The major capital source for operations is the depreciation allowance. No outstanding equities of members or former members have been revolved as yet; no interest has been paid on them; and no plans exist at this time for their future retirement. Death benefits provide only for repurchase of the $10 membership share or its conversion to preferred stock. This capital structure is one in which present members are being highly subsidized by former members. They have, in effect, "inherited" the use and benefits of the association, complete with equity financing. Former members received a lower total pay-out, since a portion of their savings was retained for operation of the business and expansion of facilities, whereas present shippers receive full payment of net margins in the form of higher prices for their milk and are not contributing to the financing of the association.

Another cooperative more closely resembles the model firm in this study. It handles Grade A milk for its members only as a central collection agent, and it is not engaged in retail distribution. The supply of raw product has

been declining steadily over the past decade, as more and more small shippers discontinued milk production in favor of specialty crops. Membership totaled 3,400 in 1942, 1,800 in 1952, and 760 in 1962. Butter production decreased by 61% and cheese production by 30% from 1954 to 1961. It is clear that under such circumstances, capital needs for expansion of facilities are likely to be small or zero. The pressure of declining volume on unit costs is a major problem, and advantage must be taken of every efficiency in management and processing innovations to simply maintain the present position. Increments of capital are needed for periodic modernization of equipment and other adjustments in operations.

While approximately 40% of the total financing comes from the revolving fund, the proportion in reserves has been increased in recent years. At the same time, a plan has been carried out to lengthen the revolving term by redeeming one-half the value of old equities in cash and one-half in certificates which are revolved one term later. This "reduced payment" method avoids a complete interruption in revolvement, which might undermine the confidence of members. Equities of deceased members are paid in cash, subject to maximum limits of $1,000 per individual or $5,000 for the association each year until completely refunded, regardless of the revolving term in effect. Book credits of members who discontinue operations or move from the area are revolved in the normal term.

Alternatives open to this firm are limited. The fluid milk market in the area is saturated and expensive to enter. Conversion to another type of operation, e.g., fruit or vegetable processing, would be expensive and inappropriate for the present membership. The cooperative has fulfilled its original objectives in providing a market outlet and service for its producer members. Changed conditions may eventually eliminate milk production and the need for a cooperative in the area. Termination of business and the sale of assets at that time, if it occurs, should not be interpreted as failure, but rather as a wise economic decision.

A Plan for a Grain Marketing Cooperative

Characteristics of marketing (as opposed to supply) cooperatives are particularly evident in the case of grain marketing firms. Membership turnover is typically low, and a majority of the members usually market their total production through the association. Volume is therefore predictable, at least on an annual basis, in terms of the average yield in the area and acreage planted by members. Capital sources can be planned considerably in advance of estimated needs.

Size of firm

The largest single outside factor affecting the fortunes of grain cooperatives is the trend in government programs for wheat and other grains. The direction of these policies over a period of time not only influences total production and market price, but, in the case of storage programs, can determine the extent of a direct source of revenue for many firms. During the postwar period, government storage programs resulted in an unexpected source of income for Oregon grain marketing cooperatives.[13] This has en-

[13] Revenues from government storage of grain in their facilities accounted for over 50% of total revenues for representative firms during the peak period of 1955-56.

abled those with storage facilities to realize a higher rate of return on their investment in fixed assets and to build up their equity position in a much shorter period of time. The role that will be played by storage in the future revenue position of grain cooperatives is uncertain.

Because the future price of wheat is so uncertain, it may be better to indicate the size of the firm in bushels rather than dollar volume of business. Therefore, the size is established at two million bushels, increasing by 10% in 10 years due to increase in average yield and/or acquisition of new members.[14] A capital structure to support this volume is outlined and rationalized in the final paragraphs of this study.

The capital structure

This plan (Figure 8) suggests increasing emphasis on borrowed capital and common stock and preferred stock (including membership fees), but the revolving fund still remains

[14] This small increase in size, of course, gives no consideration to possible mergers. It is believed several of these firms may merge in the next 10 years.

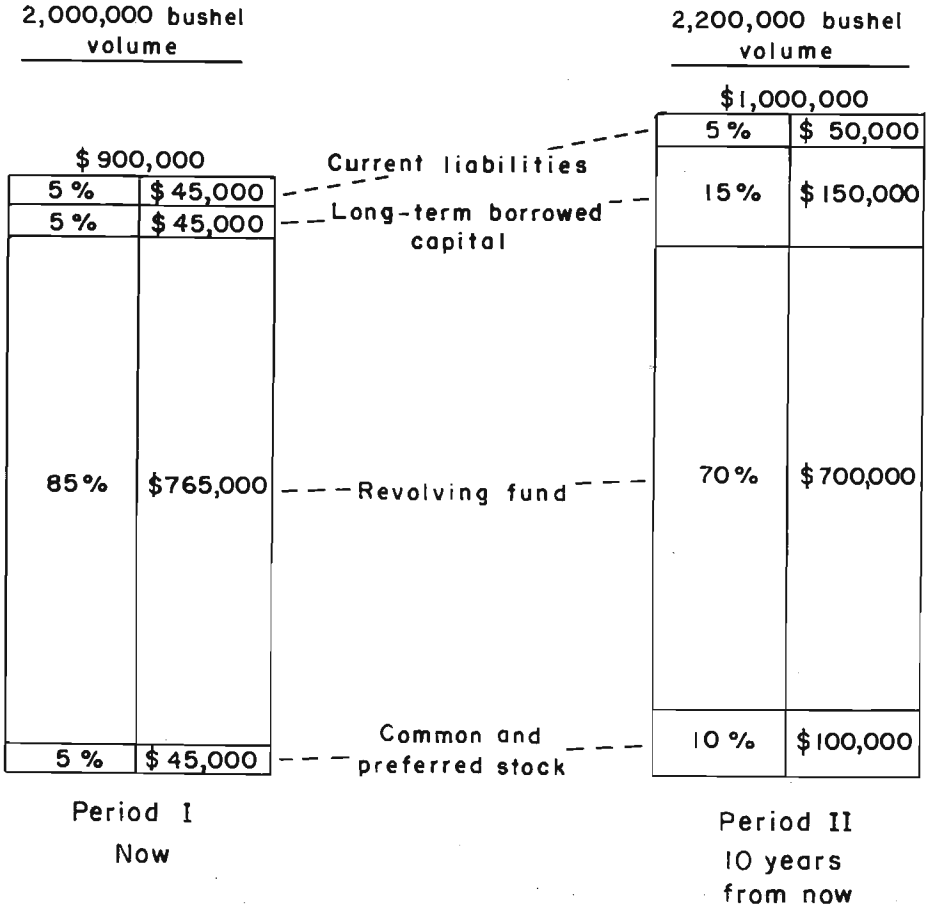

Figure 8. Projected capital structure for a grain marketing cooperative.

the principal source of capital. Some of the larger firms had revenue of $200,000 from storage in some years. Revenue from this source is likely to be down substantially in the future. Managers are concerned about maintaining net income when much of the revenue from storage may be lost. Loss of net income will slow down the turnover of the revolving fund.

More so than in some other types of business, a large complement of fixed assets is needed to begin operations in grain marketing, and subsequent additions to facilities come in large "lumps" or "blocks" as well. This suggests the need for borrowing large sums at the outset, secured by mortgages on the facilities purchased. Once substantial size has been attained and facility loans are paid off, some borrowing can still be desirable to give balance to the capital structure.

The complete absence of long-term debt as a part of total financing characterizes several grain cooperatives in Oregon. Between 65 and 95% of total financing is now provided by the revolving fund. These firms were able to increase their ratio of net worth to total assets from an average of less than 60% in 1952 to over 95% in 1962. A reduction in the length of revolving term was accomplished during the same period.

While this is an impressive record from the standpoint of achieving a sound financial position for the firm, more might have been done for the benefit of members and their farm businesses. In most cases, members are in need of additional capital to finance their farm operations. A cooperative in sound condition is able to borrow funds for operating capital at a much more favorable rate than individual members themselves. By borrowing a portion of its total assets, a firm could return more of the invested equity and proceeds of operations to its members. Borrowing 15%, or even more, of total long-term capital would allow a reduction in outstanding member equity holdings and a shortening of the revolving period. That portion returned would either be used for working capital on the farm or saved by the members. In either case, additional net benefit is realized by members. An obsession with the goal of becoming "debt-free" for its own sake is not in line with desirable objectives for cooperatives.

THE REVOLVING FUND METHOD OF FINANCING

The foregoing plans and discussion have projected total future capital requirements for selected cooperatives and suggested a capital structure designed to adequately meet those needs. How much of the total should come from outside sources? How much should come from the members? What is the best method of acquiring equity capital? These are basic questions facing a cooperative when it determines the nature of its financial structure. Plans in this study have stressed several alternatives for raising member capital. Some Oregon cooperatives employ a variety of sources, but most have relied heavily on the revolving fund.

Terminology used in reference to funds obtained by the method in question varies widely. In this study, "the revolving fund," "revolving book credits," or "book equities" will be used to include all equity funds obtained from

members through authorized deductions or earnings retained from current operations. They may be evidenced by certificates of equity issued to members or by credit to individual patrons on the books of the association. In principle, funds thus obtained are held as additions to total capital, and, when the association has reached the point where its financial position warrants it, capital supplied by the current year's patrons is used to start retiring the oldest outstanding revolving fund investments supplied by patrons of earlier years.

The principle of distributing margins or savings according to patronage or individual use is unique to cooperatives. An "equitable" method of financing is desired so that the capital furnished by each member bears a relationship to his patronage. As a solution to this problem, many cooperatives have adopted the revolving fund plan.

While an association may provide in its bylaws for a fixed revolving fund period, in most cooperatives the length of this term is reviewed and determined each year by the board of directors. The fixed revolving period is regarded as a disadvantage by many, as it restricts flexibility in management of the total capital fund:

> Most of the disadvantages of revolving fund financing reported by associations could be avoided by leaving the actual period of revolution to the discretion of the board of directors. Thus, associations would not be required to revolve capital in a year when it was financially inadvisable to do so.[15]

On the other hand, however, an indefinite policy of revolving, subject to review and delay each year, may encourage laxity in management of the firm's total finances, and can have the effect of undermining members' confidence in their cooperatives. Successful operation of the revolving fund plan must be based on an adequate understanding by the members of its operation and of the financial objectives of the association.

It is conceded that the revolving fund method is "equitable" and "businesslike" as a means of raising equity capital. However, its characteristics suggest that its use, as a proportion of total financing, should be limited. A balanced and flexible financial structure cannot rely on a fluctuating level of earnings for all of its foundation and growth capital.

The major weakness in a policy of using retained earnings for all permanent facilities and expansion is that the source cannot be controlled to match any long-range plan of expenditures. A period of declining or negative margins is often the time when additional funds for expansion and modernization of facilities are most needed. It is true that during the period of rapid growth in sales and substantial margins after the war, many cooperatives used the revolving fund almost exclusively and found that it worked rather well. It supported the objective that producers and members who benefit from a cooperative should provide the bulk of the risk capital required, and the fund was a relatively simple and easy way of generating equity financing. In fact, an important practical feature of the revolving fund method has been the ease, simplicity, and economy of achieving additional capital. The procedure of simply withholding savings or part of net proceeds at the end of the year and advising

[15] H. H. Hulbert, and others, *Revolving fund method of financing farmer cooperatives,* USDA, FCS, Gen. Rept. 41, 1958, p. 60.

each member of the amount of money he had "invested" or "loaned" to the association was easier than actively seeking new investment from the members.

Oregon cooperatives have relied heavily on the revolving fund. Several firms have had to increase the length of the revolving term in the past five years. Three have revolved nothing since 1955, two since 1950, and one since 1936. What began as a method of accumulating member capital on a circulating or revolving basis has apparently bogged down. This acts as a detriment to the overall confidence of members in their cooperative and will adversely effect its ability to accumulate funds in the future.

Alternatives suggested in this study consist primarily of increasing the use of common and/or preferred stock, in some cases, with some increased use of borrowed funds. To simply conclude that more and more common and preferred stock must be sold may be an unrealistic solution, since it can be sold only in an environment of confidence, which many cooperatives find difficult to establish. However, if members were made aware of the need for invested capital and the benefits which could accrue to them as owners and patrons of a well-financed cooperative, they would be more inclined to support their association with both some invested funds and patronage. In this respect, member education is a vital part of any cooperative's overall financial program.