

# **A Comparison of Traditional and Newly Emerging Forms of Cooperative Capitalization**

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## Abstract

This paper compares the traditional forms of capitalization used by American co-ops to newly emerging forms. It is based on an in-depth review of several case co-ops. A broad framework is provided that may be beneficial in more extensive studies of capitalization practices of cooperatives and similar organizations. It is divided into three parts.

Part One outlines the alternative capitalization forms being used by cooperatives and their antecedents, where conversions to other structures and forms have occurred. Two basic capitalization forms have been used by cooperatives: traditional (open) and new generation (closed). Cooperatives using both forms have elected to add new capitalization features, such as use of publicly listed stock, or have elected to convert to different forms, such as an LLC or a C corporation. Several perceived advantages have motivated these changes besides the traditional advantages utilized by cooperative corporations, limited liability and single taxation. They include access to capital, liquidity and appreciability of stock.

Part Two provides a brief description of the nature and experience of several modern cooperative organizations using the framework presented in Part One. The descriptions are based on in-depth case studies. The case study selections are from a broad cross-section of cooperatives that include the following: (1) Mid-Kansas Cooperative (traditional, centralized, local grain marketing and farm supply using only internally generated equity); (2) Land O'Lakes (traditional, centralized and federated, regional dairy marketing and processing and farm supply using only internally generated equity and registered debt financing); (3) CHS Cooperatives (traditional, primarily federated, regional grain marketing and processing and farm supply, with the recent addition of publicly listed preferred stock); and (4) U.S. Premium Beef (new generation, centralized, regional beef processing using closely held but tradeable common stock and proposal to convert to an LLC with member and non-member tradeable stock). In addition brief mention is made of other cooperatives including (5) Dakota Growers Pasta (new generation, centralized, regional durum wheat processing with recent conversion to C corporation); (6) South Dakota Soybean Processing (new generation, centralized regional soybean processing with conversion to LLC); (7) Pro-Fac and Birds Eye Foods (new generation centralized regional frozen vegetable processing with publicly listed stock and transition of processing entity, Birds Eye, to majority ownership by investor-oriented partner likely to exit through an IPO) and (8) Gold Kist (traditional, centralized regional poultry processing with proposed conversion to publicly traded C corporation).

Part Three will briefly outline some of the challenges facing cooperatives in the future with reference to capitalization.

## **Introduction**

Agricultural cooperatives in the United States, Canada and Europe have played an important role in providing competitive market access to agricultural producers. In the U.S. the market share of marketing and farm supply co-ops has generally been increasing for the last 50 years, suggesting that they have been relatively successful businesses. However, capitalization has been a problem because of the unique co-op traditional business form that relies primarily on internally generated equity from operations, usually in the form of retained patronage refunds, and debt from bank financing. Equity in these types of co-ops is like debt. Member-patron-owners expect their retained patronage refunds to be redeemed at par value on some systematic basis such as age of patron, revolving fund, base capital or, in the worst case, estate settlements.

Cooperative scholars have studied cooperative capitalization issues. At least three approaches have been taken. The first approach is to study the internal accounting mechanics of equity management and to evaluate the performance of various approaches such as base capital (Barton). The second approach is to study the property rights issues of cooperative equity investment with special attention to three well-known problems, free rider, horizon and portfolio (Constantine). The third approach is to evaluate alternative discrete organization models from an ownership rights perspective (Chaddad and Cook). This approach hypothesizes seven alternative models, from a pure traditional cooperative at one extreme to a pure investor-oriented firm at the other extreme. This set of models is in the context of a topology that can be used to describe the existence of or transition to new organizational models, such as new generation cooperatives and conversion to a cooperative that includes various forms of member and non-member investment.

This paper examines several case cooperatives in the U.S. that have experimented with different capitalization approaches. It develops and utilizes a generic financial accounting framework, especially as it relates to cooperative equity capitalization or equity management and income distribution, to describe the different approaches taken. The future challenge is to be able to integrate this framework, that describes actual practice, into the property rights and ownership rights perspectives in a way that enhances the power of these two approaches to help scholars improve their research and to help decision makers make better decisions using the results of that research.

## **Alternative Equity Capitalization Forms**

Cooperative equity capitalization in the U.S. is in transition. Cooperatives are experimenting with several approaches. They vary from fine tuning the traditional approaches to converting to publicly traded “C” corporations. Eight examples are listed in Table 1.

Capitalization structure is the result of making specific strategic choices. Most cooperatives are still primarily traditional in structure and practice. Both traditional and new generation cooperatives are considering making “fine tuning” and other changes that are controversial and may lead to very different structures over time. These strategic choices include:

1. Choice of solvency level: high to low
2. Choice of allocated versus unallocated ownership: high to low
3. Choice of high or low common stock level, where common stock is non-revolving (not redeemed by systematic methods such as age of patron and revolving fund)
4. Choice of using publicly listed equity, such as preferred stock.
5. Choice of balance sheet equity management (pro-active versus passive) and patron account equity management (use of redemption methods such as age of patron, revolving fund, base capital, etc.).

6. Choice business form including transition or conversion of part or all of the business to a new generation co-op, LLC or C corporation.

The ability to make changes or motivation to make changes is often driven by the current solvency, profitability and equity structure (unallocated or retained earnings proportion). Past strategic choices and profitability have led to the current situation and will determine future capitalization structures. Solvency, profitability and equity structure vary widely from state to state in the U.S. for local co-ops as illustrated in Figures 1-3.

A description of cooperative capitalization in a financial accounting framework begins with the balance sheet as illustrated in Figure 4. The first choice is debt versus equity, as noted in Figures 5 and 6. But the focus of this paper is primarily on equity structure and the way in which equity is created and managed. We will assume a co-op has chosen the appropriate level of total equity and is attempting to determine the mix of equity types or classes to achieve this total equity objective.

Equity structure can be described by the mix of equity classes a co-op chooses to use. Each class can be described by its source of funds, ownership rights and relative permanency. Figure 7 provides a taxonomy of equity classes within this framework. Equity can be obtained from operations, either as patronage income or nonpatronage income, or by direct purchase by investors. Traditional co-ops rely on very little purchased equity. Some co-ops, such as Mid-Kansas Cooperative (MKC), require patrons to purchase one share of common stock or its equivalent to become a member or patron at a cost of \$50. Other co-ops, like CHS, have no purchase requirement for membership. However, CHS has recently introduced a publicly listed preferred stock available for purchase by the public at \$25 per share. The mix of patronage and nonpatronage sources varies widely but 20-30 percent nonpatronage is common.

Many co-ops are concerned about the stability or permanency of their equity because, for most co-ops, equity has been like debt, payable or redeemable at some time in the future. They feel they have lost control of the equity financing on their balance sheet, especially when profitability is highly variable or low. Nonpatronage income has been attractive because it is a source of permanent capital, that is, equity that does not ever need to be redeemed or repurchased by the company.

However, most income is patronage sourced. It can be distributed in a way to create permanent, semi-permanent or revolving equity, in terms of permanency. Revolving equity is that equity eligible for redemption using standard systematic redemption methods, such as age of patron, revolving fund, percentage pool and base capital. Semi-permanent equity is eligible for redemption only under special circumstances, such as the death of a natural person patron-owner, or the exit of a corporate or other patron-owner, such as due to bankruptcy or retirement.

Patronage and nonpatronage income can be distributed in several ways as illustrated in Figure 8. A specific distribution strategy is illustrated in Figure 9 for an income of \$1,000,000 which is 90 percent patronage and 10 percent nonpatronage. The most common distribution is as a qualified patronage refund, part in cash and part retained. Figure 9 illustrates the minimum cash distribution of 20 percent to qualify as a qualified distribution under U.S. tax law, meaning the distribution is qualified as a deduction from the taxable income of the cooperative and is taxable income to the patron under a single tax or partnership tax model. This creates allocated equity in individual patron accounts and is summarized on the balance sheet.

Nonqualified distributions can be made to retained patronage refunds, which is unusual, or to retained earnings, which is fairly common. We will not explain here all the complexity of nonqualified distributions. However, note that the strategic choice, high retained earnings, is implemented by distributing patronage income to retained earnings, incurring income taxes at the co-op level, and thereby creating more permanent capital instead of revolving capital. Many U.S.

cooperatives are moving strongly in this direction, which will change the equity structure of the co-op as illustrated in Figure 7 and the balance sheet (Figure 4).

In general, U.S. cooperatives are seeking more control over the equity component of their balance sheet. Many have moved in the direction of more permanent and semi-permanent capital. More and more traditional cooperatives have increased the size of common stock requirements of producer-patron-owners from low amounts, \$25-\$50, to high amounts, \$1,000-\$2,000, and increased the level of retained earnings by distributing not only nonpatronage income to retained earnings but a significant portion of patronage income to retained earnings, such as 50 percent or more. One consequence of this is lower proportionality of investment. Another is the temptation it creates among the owners to sell the co-op to get their “share” of the unallocated equity, or more correctly, to get their residual claimant share of the market value of the co-op before they exit as a patron and owner.

Traditional co-ops have tended to take a passive approach to managing their total pool of equity capital by allowing the redemption program for allocated equity to drive the size of the patron accounts. Examples are trying to maintain an age of patron program at age 65 or a revolving fund at 15 years. In other words, they are managing the patron account first and the total balance sheet last, losing control of their balance sheet. A more proactive approach, which managed total equity first by achieving an equity or solvency target and determining a corresponding redemption budget equal to the surplus equity, would directly address the disadvantage of revolving allocated equity by operating from the premise that all equity is permanent until decided otherwise. It would also clearly implement the reality that patron-owners are the residual claimants, and equity is not like debt.

New generation co-ops (NGCs) have addressed the proportionality, permanent equity, liquidity and market value questions to some extent by using a capitalization model that utilizes a high level of purchased and tradeable common stock. However, the capital structure of these co-ops evolve over time towards that of traditional co-ops by creating retained patronage refunds (revolving equity) and retained earnings (permanent, unallocated equity). And NGCs continue to be faced with the need to access capital to support growth and to provide a liquid market for their stock that reflects or captures the market value of the business. Several, including the highly profitable such as USPB, and the unprofitable such as Pro Fac, have engaged in conversion activities to address these problems, even though they have a more desirable capitalization structure than traditional co-ops.

With this equity capitalization framework we can review in detail the situations facing four different case firms. These cases will more effectively illustrate the many different capitalization strategies being pursued by U.S. cooperatives.

## **Case Firm Descriptions**

### ***Mid-Kansas Cooperative***

**Overview.** Mid-Kansas Cooperative (MKC) is the largest retail or local grain marketing and farm supply cooperative in the state of Kansas. Since MKC’s founding in 1965, as a result of the consolidation of three small local co-ops, it has grown and expanded in the south central area of the state through mergers with three other neighboring cooperatives in 1991, 1995 and 2003 and the acquisition of other assets formerly owned by non-cooperative businesses.<sup>1</sup> MKC has

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<sup>1</sup> Information about the history and operations of Mid-Kansas Cooperative is available at: <http://www.mkcoop.com>.

also entered into several joint ventures, primarily with neighboring cooperatives. The largest is a grain marketing joint venture company, Team Marketing Alliance, LLC (TMA), currently owned in partnership with three other local cooperatives. TMA serves as the grain marketing division for all four local cooperatives.<sup>2</sup> MKC now owns a majority interest, about 57 percent, of TMA as a result of the most recent merger in 2003. As a result, its reported sales have jumped from \$34 million in 2002 to \$175 million in 2003. A large part of the increase is due to the change in how grain sales are reported. Prior to 2003 grain sales were reported by TMA but not by MKC and its partners. After the 2003 merger, TMA sales were consolidated with those of MKC in MKC's audited financial reports.

**Capitalization.** MKC has a simple and traditional approach to capitalization that is shared by most agricultural cooperatives in the U.S. In the U.S. there are about 3,100 agricultural cooperatives and approximately 3,000 are local cooperatives or smaller regional cooperatives. At least 2,000 are grain marketing and/or farm supply local cooperatives that take a capitalization approach similar to MKC. MKC has two generic classes of allocated equity, common stock and retained patronage refunds. The initial cash investment required by a member to become a patron and owner is very small, the purchase of one share of common stock for \$50. All additional equity investment is obtained from income or operations in the form of retained equity. All patronage sourced income is distributed as patronage refunds, in "qualified" form, 35 percent of which is paid as a cash patronage refund and 65 percent as a retained patronage refund, an additional equity investment by the patron. Therefore, this income is taxable income for the patron and "qualified" as deductible from the taxable income of the cooperative. All non-patronage sourced income is distributed as retained earnings and is therefore taxable income of the cooperative. Approximately 20 percent of total income is non-patronage sourced. The member is expected to accumulate a total of \$300 in common stock which is accomplished by transferring the first \$250 of retained patronage refunds to common stock. Common stock is semi-permanent capital, eligible for redemption only under special circumstances, which is almost always due to the death of the patron and a subsequent estate settlement payment. Retained patronage refunds is revolving capital and eligible for redemption on a special and systematic basis using a combination of redemption methods including estate settlements, age of patron and revolving fund.

MKC is more proactive than most local co-ops in managing the equity component of the balance sheet. They first determine the total equity desired and then calculate the amount of excess equity that can be redeemed. This redemption budget is divided among the patron equity accounts using a priority system that gives first priority to estate settlements, second priority to age of patron redemptions and third priority to revolving fund redemptions.

MKC has a history of being innovative and forward thinking in the design of its capitalization or equity management program. The board and CEO have conducted several studies that examined different alternatives and are currently following a plan with two main features. First, when the last three co-ops merged with MKC separate equity pools were established to preserve the allocated, retained patronage refund type equity being transferred into MKC. These pools are designated as Class B, Class C and Class D common stock. This allowed MKC to manage each equity pool in a way that preserved a win-win outcome for the current owners of MKC and the new owners coming in from each of the three absorbed co-ops. Second, the primary method of redeeming equity from the largest equity class of MKC, called preferred stock (a misnomer, since this equity is actually the collection of retained patronage refunds, not

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<sup>2</sup> Information about the ownership and operations of Team Marketing Alliance is available at: <http://www.tmagrain.com>.

true preferred stock), is being changed from reliance on the age of patron, oldest first method to a revolving fund method. This largest class of this equity is eligible for redemption to those who have become age 67. MKC is phasing out the age of patron redemption program for this class of equity and phasing in a revolving fund redemption. The revolving fund method is the most popular systematic redemption method used by U.S. co-ops. Age of patron is the second most popular. Class B, C and D common stock is only redeemed using estate settlements and age of patron for ages ranging from 67 to 72, depending on the class.

A revolving fund is considered a more flexible and fair method of managing the amount of equity each patron-owner is expected to have invested in the co-op. A revolving fund is better at achieving the goal of having customer-patrons achieve an ownership level that is proportional to use or patronage, an ideal promoted by many cooperative scholars. If this ideal is achieved, so that investment is proportional to patronage, then the distribution of income as a patronage refund is both a return on use (or on sales or patronage) and a return on investment, similar to a dividend on equity investment that is uniform or consistent for all customer-patron-owners. Most investors or owners tend to understand and prefer a return on investment orientation rather than the traditional cooperative orientation of return on use or patronage. This achieves both. MKC is also considering dropping the revolving fund method and introducing the base capital method, which would improve the proportionality of investment by each patron.

### *Land O'Lakes*<sup>3</sup>

**Overview.** As a cooperative, Land O' Lakes (LOL) was owned by the patrons who used its products and services. These patrons included dairy producers that supplied fluid milk to Land O'Lakes and farmers that use its products such as animal feed and services such as crop nutrient application. There were over 11,000 producers and 1,300 local cooperatives that owned Land O'Lakes.

Land O'Lakes was a national food and agricultural cooperative, founded in 1921 through the federation of 320 Minnesota cooperative creameries. The company had grown into one of the largest agri-food companies in the US, with more than \$6.3 billion (not including joint ventures) in net sales revenue in 2003. It had more than 11,000 producer-members and 1,300 local community cooperative members who actively participated in its governance through a 24-member elected board of directors. Land O'Lakes was headquartered in Arden Hills, Minnesota, in the Minneapolis-St. Paul metropolitan area, and operated 200 processing, manufacturing, warehousing and distribution facilities throughout the country and employed about 8,000 people.

Land O'Lakes' business was divided into two main segments: Dairy Foods and Agricultural Services. The Dairy Foods group was divided into two broad segments, value added (focusing on retail, deli, specialty products and food service products) and industrial (focusing on procurement and manufacturing activities, along with the sale of bulk cheeses, dried cheese, and whey products (used for processed foods, sports drinks, and nutritional supplements) to industrial and high volume customers (ex: mozzarella sales to large pizza chains and manufacturers).

**Capitalization.** Between 1921 and 2004 Land O'Lakes (LOL) evolved from a pure federated dairy cooperative to a mixed centralized and federated cooperative with multiple business units. The dairy foods or marketing business that began in a federated structure is now in a centralized structure, a transition typical of most large U.S. dairy co-

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<sup>3</sup> Information about Land O'Lakes is available on the LOL web page at <http://www.landolakesinc.com/> and the SEC web page at <http://www.sec.gov/cgi-bin/browse-edgar?company=&CIK=&filenum=333-84486&State=&SIC=&owner=include&action=getcompany> .

ops. Today, dairy producers are direct members of LOL. The agricultural services or farm input marketing businesses have always been in a federated structure. Members are local agricultural marketing and farm supply retailers who buy farm products from producers and sell farm supplies to producers. These retailers are organized as local cooperatives whose members are producers.

On the dairy foods side each dairy patron who is eligible and desires to be a voting member must pay a membership fee of \$1, which becomes one share of Class B common stock (“capital stock”) and conveys one vote. There were 4,914 voting dairy producer members in 2003. All other dairy foods customers, eligible and desiring patron status (i.e., eligible to receive patronage refunds and become an owner) who are not eligible for voting membership also must pay the \$1 membership fee, which becomes Class D common stock. There were 1,142 Class D non-voting patrons in 2003.

The agricultural services or farm supply side includes three main business units, feed, agronomy and seed, which operate in a federated structure with local co-ops as members. Each patron co-op eligible and desiring membership must pay a membership fee of \$1,000, which becomes one share of Class A common stock and conveys voting power. There were 1,094 voting members in 2003. All other customers, eligible and desiring patron status, must also pay a \$1,000 membership fee, which becomes one share of Class D common stock. There were 190 Class D patrons in 2003. It is common practice in large regional cooperatives like LOL and CHS to assign other regional co-ops to this non-voting patron status. This would allow a regional like CHS to do business with LOL on a patronage basis but would not allow them voting power.

Each of the four business units is a separate patronage pool, some with a set of sub-pools, and each operates with a separate operating statement and balance sheet as four semi-autonomous businesses in terms of income distribution, balance sheet management and capitalization or equity management. Each business unit has two or more patronage pools but each has only one revolving equity pool. Until 1996 all revolving equity pools were redeemed using the revolving fund method.

The dairy business distributes patronage income as a qualified patronage refund, 20 percent in cash and 80 percent retained. Non-patronage income is distributed to retained earnings.

Total dairy equity is not proactively managed to achieve an exact equity or solvency target and a corresponding equity redemption budget representing the amount of “surplus” equity above the target. Instead, individual patron accounts are proactively managed using a base capital approach only at the patron account level and only in terms of income distribution but not redemptions. Redemptions are made based on special circumstances including death, age and inactivity as noted below. Total equity at the balance sheet level becomes the outcome of the combination of income distribution rules and the redemption rules.

The base capital target of each patron is \$2.75 per cwt. of milk delivered annually. If the patron is under the target or underinvested, the patron receives a qualified patronage refund that is 20 percent in cash and 80 percent retained and the patron does not receive an equity redemption. This increases the patron’s account at the maximum rate possible when using a qualified distribution. Once the patron achieves or exceeds the base capital target the cash patronage refund is increased to 100 percent and the patron account is increased at the minimum rate possible, an increase of zero. This base capital approach only adjusts the income distribution to each individual patron based on the patron’s under or over-investment status.

Most base capital programs manage both the balance sheet and the patron accounts by determining a total equity target for the balance sheet and the respective patron accounts. Patron accounts are then managed by calculating a redemption for each of the over-invested patrons. Some programs do adjust the cash patronage rate depending on the under and over-investment status.

Redemption rules use a combination of three methods, estate settlements, age of patron and base capital, depending on the status of the patron. Patrons who die receive an estate settlement payment of 100 percent of their account (allocated equity comprised of common stock and revolving equity). Patrons who become age 75 and are retired also receive 100 percent of their account. Patrons who are active, as a producer and patron of LOL, receive 100 percent of their revolving equity when they become age 75 but may continue to do business and accumulate additional revolving equity after age 75 through the income distribution process. If a patron “exits the system” before death or age 75 and continues to be an active producer but not an active patron of LOL, redemptions are made using a base capital like 12 year moving average formula that redeems 100 percent of the account over the 12 year period.

The consequence of this redemption program is that LOL loses some control of the equity component of dairy foods balance sheet. A significant portion of the redemptions are caused by patrons dieing, becoming age 75 or choosing to leave the system. However, they do manage the individual patron accounts proactively by expecting a “base capital” investment tied to volume of business and they increase the size of the account of under-invested patrons as fast as possible from the patronage refund source of equity.

The farm supply business has three primary business units, feed, agronomy and seed, whose member-patrons are local cooperatives, and all three units distribute income in a similar manner. Patronage income is distributed as a qualified patronage refund, 30 percent in cash and 70 percent retained. Non-patronage income is distributed to retained earnings.

Farm supply equity is managed independently within each separate business unit’s balance sheet. Equity in each pool, and in aggregate for the farm supply group, is not proactively managed to achieve an equity or solvency target and determine an equity redemption budget that redeems the surplus equity above the target. Each pool has a different redemption program but all pools redeem equity to local co-op patron-owners using three methods.

The first method is a special redemption of revolving equity based on estate settlement payments made by local co-ops to the local’s producer-members. LOL uses a “look-through” approach, looking through the local co-op member to the producer. If the local pays an estate settlement to the producer-member then LOL makes a corresponding redemption of the local’s investment in LOL based on a pro-rata formula. The formula is unique for each local and is the local’s LOL investment divided by the total allocated equity of the local derived from retained patronage refunds.

The second method is a revolving fund redemption of revolving equity. Each business unit has its own pool of revolving equity and, in theory, each pool could have a different length of revolving fund. Each pool would redeem equity based on the amount of surplus equity, given the profitability of the unit and the corresponding income distribution that provided new equity, the growth of the assets and the solvency or equity target adopted by the pool to finance assets. In practice, all pools are maintained at the same length of revolving fund. The revolving fund redemptions in all equity pools were

temporarily suspended after 2000 to help strengthen the overall LOL balance sheet following the substantial growth of the feed unit through the purchase of Purina Mills.

The third method is a special redemption to “inactive” local co-op patrons. In the past, patrons who were classified as “inactive” due to bankruptcy or other reasons had their equity divided into 12 equal segments and one segment was redeemed each year. This special redemption provided treatment for local co-op members similar to the treatment for dairy producer members who “left the system.”

Long-term debt financing uses a combination of traditional bank financing and various notes, bonds and securities. Long-term debt totaled almost \$1.1 billion in 2003. About \$245 million was bank financing. In 1998 \$191 million of 30-year highly subordinated capital securities were issued and due in 2028 at 7.45 percent. In 2001, \$350 million of 10-year senior unsecured notes, a registered security, were issued to help finance the Purina Mills purchase and are due in 2011 at 8.75 percent. In 2003, \$175 million of 7-year senior secured notes were issued to help restructure debt and are due in 2010 at 9.0 percent.

Future capitalization priorities are to get equity from operating profits, get cash investments from members if LOL can convert some dairy processing units to the new generation or closed co-op model, get equity from joint venture partners and get equity from public Initial Public Offerings (IPOs) connected to a defined business unit. Capitalization is expected to be driven by business needs and opportunity with business performance a more important factor than being tied to the traditional co-op model of being farmer-owned and user-driven.

## *CHS<sup>4</sup>*

**Overview.** CHS Inc. is the largest agricultural cooperative in the U.S. and does business in a region from the Great Lakes to the Pacific Northwest and from the Canadian border to Texas. It is both a federated and centralized cooperative that markets and processes grain and provides farm supplies, primarily to its members who include about 1,100 local cooperatives and 50,000 direct producer members. Direct producer members do around 22 percent of the patronage business and own around 22 percent of the revolving equity. Local co-op members do around 78 percent of the patronage business and own 78 percent of the revolving equity. Total revenues in 2003 were \$9.4 billion. It is headquartered in Inver Grove Heights, Minnesota, in the Minneapolis-St. Paul metropolitan area. The forerunner of CHS, Cenex Harvest States, was formed in 1998 by the merger of two regional cooperatives, Cenex and Harvest States Cooperatives. But its history traces back to the formation of North Pacific Grain Growers (NPGG) in 1929, the formation of Farmers Union Grain Terminal Association (GTA) in 1938 and the formation of Cenex (formerly Farmers Union Central Exchange) in 1931. NPGG and GTA merged in 1983 to form Harvest States Cooperatives.

CHS operates in five business segments: Agronomy, Energy, Country Operations and Services, Grain Marketing, and Processed Grains and Foods. Agronomy and Energy provide wholesale distribution of inputs needed for crop and livestock production. Country Operations purchases and markets grain from producers and includes the firm’s retail operations that provide agronomy and energy inputs. Grain Marketing purchases and resells grains and oilseeds from

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<sup>4</sup> Information about CHS is available on the CHS web page at <http://www.chsinc.com/> and the SEC web page at <http://www.sec.gov/cgi-bin/browse-edgar?action=getcompany&CIK=0000823277&owner=include> .

Country Operations and other firms. Processed Grains and Foods converts grains and oilseeds into value-added products.

**Capitalization.** The primary source of equity capitalization is from operations, in the form of retained patronage refunds and retained earnings. In addition, CHS has recently started selling publicly listed and exchanged preferred stock on the NASDAQ exchange.

Each of the five business units has a separate operating statement and a separate patronage pool or set of sub-pools. Each unit has a related income distribution program but there is significant uniformity in the way income is distributed across pools. However, the total equity on the balance sheet and the balance sheet itself is managed at the company or consolidated level.

Income is divided into two components, patronage and non-patronage. Non-patronage income is distributed to retained earnings, less corporate income taxes. Also, up to 10 percent of patronage income is designated as taxable income to CHS and distributed to retained earnings and income taxes. The remaining patronage income is distributed as a qualified patronage refund, 30 percent in cash and 70 percent retained. In 2003 total income before taxes was \$136.5 million. It was distributed as \$33.8 million to retained earnings, \$12.7 million to income taxes and \$90 million, or 66 percent, to patronage refunds, of which 70 percent or \$63 million was retained as additional equity. Therefore, additional equity obtained from operations was \$96.8 million, the sum of retained earnings and retained patronage refunds.

Total equity is not proactively managed to achieve an exact equity or solvency target and a corresponding equity redemption budget equal to surplus equity. Instead, a combination of factors are used to determine the amount of redemptions.

There are five general classes of equity, but only three are significant. CHS is a membership or non-stock cooperative rather than a stock cooperative and therefore does not have common stock. Also, CHS does not charge a membership fee and have a class of equity to signify membership and minimum membership investment. This is very unusual.

The first significant class is unallocated retained earnings (“unallocated capital reserve”), obtained from the distribution of income as previously noted. In 2003, equity totaled \$1.48 billion. Retained earnings totaled \$220 million or about 15 percent.

The second significant class is allocated retained patronage refunds (“capital equity credits”). This class totaled \$1.09 billion or about 74 percent of total equity. This is a revolving class of equity and is redeemed at the discretion of the board as per board policy. The total redemption budget for this class of equity is based on the policy of paying 50 percent of its net income in cash to patrons<sup>5</sup>. In 2003, total cash payments were about \$57.6 million, of which \$27 million was cash patronage refunds, leaving about \$31 million for equity redemptions since the first priority of cash distribution is the cash patronage refund equal to 30 percent of patronage refunds. The second priority, the residual distribution, is for equity redemptions. The current board policy has two provisions, one for direct producer members and the other for local co-op members. Direct producer members receive a redemption of 100 percent of their account under two

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<sup>5</sup> Many cooperatives have adopted the 50 percent rule, but it is not a recommended practice. A more effective approach is to manage the balance sheet proactively by achieving a solvency or equity target and allow the redemption payment to be the distribution of “surplus” equity. Then profitability will be the main driver of equity redemptions, given the asset base that must be financed by debt and equity, as it should be, and owners will get the residual distribution of profits.

circumstances, their death, as an estate settlement, and when they become age 72. This redemption, and other contractual redemption obligations to direct producer members, has first priority on the redemption budget. Local co-op members receive a pro-rata amount of their equity balance redeemed that was retained more than 10 years prior. This is a form of a percentage pool or percentage of all equities redemption method. The percentage is selected each year by the board but is normally the rate needed to distribute the residual portion of the redemption budget. In 2003, total redemptions to direct producer members and to local co-op members were \$31.1 million or about 2.9 percent of total revolving equity.

The third significant class is preferred stock. In November 2001 CHS offered publicly listed preferred stock tradeable on the NASDAQ exchange for the first time. This first offering was for up to \$50 million of 8% Cummulative Redeemable Preferred Stock with a \$1 par value and a minimum purchase requirement of \$1,000. They ended up selling about \$9.5 million in 2001 and 2002. The primary purpose was to provide additional cash to achieve the goals of CHS that included reducing short-term debt, financing growth and redeeming members' revolving or retained patronage refund equity. A longer term goal was to put in place a capitalization alternative that would make it possible for members to convert or exchange their revolving equity for preferred stock. Local co-op members of CHS could also acquire this preferred stock and enable a similar exchange with their own producer members.

In late 2002 sales of this "Old Preferred" was suspended and in January 2003 a "New Preferred" issue of 8% Cummulative Redeemable Preferred Stock with a \$25 par value was offered for sale and \$86.3 million was sold. Beginning in March 2003, Old Preferred was redeemed and exchanged for New Preferred (\$7.5 million) or cash (\$2.0 million). As of the fiscal year end on August 31, 2003, CHS had \$93.7 million of preferred stock outstanding or about 6 percent of total equity.

Then in March of 2004 an additional \$13.0 million of preferred stock was issued and used to redeem \$13.0 million of revolving equity in a non-cash transaction. The equity redeemed was held by local co-ops, had been outstanding for over 10 years, and would have otherwise been redeemed for cash by the pro-rata method. This did not directly increase cash but it did increase working capital since it reduced a redemption payable. The amount of equities redeemed with each share of preferred stock issued was \$27.10, which was the closing price per share of the stock on the NASDAQ National Market on March 2, 2004. As of May 31, 2004 CHS had \$105.7 million of preferred stock outstanding.

Long-term debt financing uses a combination of traditional revolving term bank financing and private placement financing with insurance companies. In 2003 total long-term debt, including the current portion, was \$663.2 million, of which \$168 million was bank financing and \$480 million was private placement. Bank financing debt cost ranged from 2 to 13 percent. Private placement cost ranged from 5 to 7.9 percent. The weighted average interest cost of all long-term debt was 6.5 percent.

### ***U. S. Premium Beef<sup>6</sup>***

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<sup>6</sup> Information about USPB is available on the USPB web page at <http://www.uspremiumbeef.com/> and the SEC web page at <http://www.sec.gov/cgi-bin/browse-edgar?company=&CIK=1289237&filenum=&State=&SIC=&owner=include&action=getcompany>.

**Overview.** U.S. Premium Beef (USPB) was established on July 1, 1996 as a new generation or closed cooperative. A group of beef producers that included Doug Laue (custom backgrounder and cattle feeder), Terry Nelson (commercial cow-calf producer, backgrounder, and cattle feeder), Terry Ryan (commercial cattle feeder), and Steve Hunt, who was a fifth generation cattleman, had met that previous fall to discuss different options for adding value to their animals. After looking at different business organizations, they decided that a closed membership cooperative offered the best chance of success.

In the fall of 1996, they held a series of meetings with prospective members in several states in the Great Plains region to discuss the cooperative. An initial membership drive was led by new CEO Steve Hunt and several of the new directors. The membership fee was \$500 with an additional registration fee of \$0.50 per head on cattle that the member expected to be delivered to U.S. Premium Beef, if the formation was successful.

U.S. Premium Beef considered three alternatives: building a plant, buying a plant, or partnering with someone else. They decided to pursue the latter alternative with Farmland Industries, at the time the largest agricultural cooperative in the U. S. and the primary owner of the fourth largest beef processor, Farmland National Beef, because it would provide them access to a recognized brand and looked at six different companies.

On July 31, 1997, U.S. Premium Beef signed a letter of intent to purchase up to 50 percent of Farmland National Beef, a company owned primarily by Farmland Industries, the largest agricultural cooperative in the U. S. A stock offering was held that fall with one share valued at \$55 per head. U.S. Premium Beef also required \$50 per head in debt to finance the investment. More than \$38 million was raised in the first offering that closed in November 1997. On December 1, 1997, U.S. Premium Beef became an owner in Farmland National Beef. A second stock offering was held later that month that resulted in U.S. Premium Beef owning 29 percent of the company. There were 412 voting shareholders who owned 691,845 voting shares as of July, 2004. The rationale for investing in Farmland National Beef was that it gave them an opportunity to expand if they wanted and they had a recognizable brand.

Farmland Industries declared bankruptcy in late May 2002. U.S. Premium Beef and a minority partner, which included a management group and NBPCo, bought the remaining 71 percent (valued at \$232 million) on Wednesday, August 6, 2003. The company is now called National Beef Packing LLC and U.S. Premium Beef is the majority owner.

Over 1,850 producers in 37 states are members. Of these members, over 400 producers in 26 states constitute the ownership of U.S. Premium Beef. The difference between the members and owners is due to the fact that U.S. Premium Beef allows owners to lease shares. The cooperative has two types of membership. Lifetime members pay a \$500 fee and associate members can join for a year at \$100 annually. Voting rights are given to members who have at least 100 shares of stock where one share of stock represents the annual right and obligation to deliver one animal. The delivery agreement requires a member to deliver the same number of animals per month (“even slots”) or to deliver animals during one or more months each year (“odd slots”).

A seven member board of directors governs U.S. Premium Beef. The membership is comprised of all segments in the cattle industry including cow-calf producers, seedstock producers, commercial cattle feeders, and stocker operators.

Membership in U.S. Premium Beef allows shares to be leased by members from other members who own the stock. Cow-calf operators who own shares can partner with feedlots to retain ownership. There are no geographic restrictions on the location of the feedyards.

USPB is the majority owner in National Beef Packing Company, LLC (NBP), which has processing and fabrication plants located in Liberal and Dodge City, KS, as well as further

processing facilities in Hummels Wharf, PA, Moultrie, GA, and Kansas City Steak Company in Kansas City, KS. National Beef also owns National Carriers, a 700-unit refrigerated trucking operation. NBP is the nation's fourth largest beef packer, processing 3.2 million head of cattle per year.

USPB member cattle are marketed under the U.S. Premium Beef™ brand and numerous NBP product lines including Farmland Black Angus Beef®, Farmland Certified Premium Beef®, and Black Canyon Angus Beef®, in addition to Certified Angus Beef®. USPB member cattle are also marketed direct to consumers through Kansas City Steak Company, a high quality, portion control and mail order company owned by National Beef Packing Company.

In early 2004 USPB filed with the U.S. Securities and Exchange Commission (SEC) its intention to convert from a Kansas cooperative corporation to a Delaware LLC. A vote of the membership was taken on August 18, 2004 and it passed overwhelmingly. USPB became an LLC effective August 30, 2004.

**Capitalization.** USPB was initially capitalized, beginning in 1997, as a new generation co-op when over 400 member-patron-investors purchased 691,845 common stock shares at \$55 per head, eventually raising about \$39.5 million. They choose the more restrictive 521 form to speed formation and reduce the cost of registering and issuing securities. Since that time they have been a very profitable business, earning around a 25 percent return on total equity and upwards of 50 percent on common equity. Patronage income has been distributed as patronage refunds with 40 percent paid in cash and 60 percent retained. Retained patronage refunds were \$49.5 million in 2003. Nonpatronage income was distributed to retained earnings, creating a tax paid surplus, which amounted to \$9.4 million in 2003.

USPB has not redeemed any of the revolving retained patronage refunds and has no current plans to do so. The holders of this equity are the 412 common stock holders and the 1400 other patrons who lease stock, all of whom receive patronage refunds associated with delivering finished beef animals.

Current plans are to convert to a Delaware LLC from a Kansas cooperative corporation. There are several motivations for the conversion including (1) better handling of increasing nonpatronage income currently limited due to its 521 status, (2) limitations on access to equity capital due to the reluctance of producers to invest, (3) the ability to maintain the current benefits of delivery including grid pricing and carcass data, (4) greater growth, earnings and market access potential, (5) ability to better address the disconnect between member and patron investors and non-delivery problems, (6) increase in share liquidity and value efficiency including the ability to convert retained equity, both allocated and unallocated, to tradeable stock shares, and (7) increased tax efficiency on income distribution as dividends instead of patronage refunds.

Several alternative business forms were evaluated including (1) remaining an NGC, (2) converting to a C corporation or S corporation, (3) converting to a "Wyoming cooperative that is a hybrid of a co-op and an LLC and (4) converting to an LLC along with the other investor-partners in the processing company, National Beef Processing. While there were advantages and disadvantages of each, the LLC was selected as the best choice overall.

The proposed LLC structure will convert each existing common stock share into two shares of stock, Class A and Class B. A will continue to represent delivery rights and its traditional advantages to producers who deliver, such as grid pricing and carcass data. A will receive 33 percent of the income distribution in the form of dividends, not

patronage refunds. B will be investment oriented stock and will receive 67 percent of the income distribution, also as dividends. Its initial book value will be determined by assigning to it the value of the retained patronage refunds and retained earnings at the time of the conversion. In other words, both non-stock allocated and unallocated equity that is currently not tradeable and therefore not liquid or appreciable will be converted to stock that is. In the beginning, A and B will be linked, and must trade as combined units among eligible holders. Eventually it is expected that they will be unlinked and B will be open to purchase by passive investors. The LLC will continue to benefit from the limited liability and single-tax advantages of a cooperative corporation.

### *Case Firm Comparisons*

Historical financial performance information has been prepared for the four case cooperatives on over 28 different measures for the years 1996 through 2003 where data from annual reports and SEC filings were available. Complete data for USPB was only available for 2002-03. Selected balance sheet and income information is provided in Tables 2-5, along with some financial measures. This information was compared to a database of similar cooperative businesses based on SIC code classifications. The number of comparable firms varied from about 800 to 880, depending on the year and measure selected.

We have selected three measures to illustrate the differences in the four co-ops as well as differences among U.S. co-ops in the national database of cooperatives. The three measures are the profitability measure, return on equity (ROE), the solvency measure, equity to assets (ETA), and the equity structure measure, retained earnings to total equity (RETE).

Profitability is highly variable and is, of course, a major driver of equity capitalization. As Figure 10 illustrates, profitability varied from 3.6 percent for MKC to 25.1 percent for USPB. The percentile ranking from the national profile is also reported. MKC was in the 36<sup>th</sup> percentile (P36) while USPB was P99. And the ROEs corresponding to some standard percentiles of P25, P50, P75 and P95 are reported. Note the high variability in profitability and what many would consider a relatively low profitability profile compared to other industries.

Profitability is also trending down. Figure 11 shows the trend of ROE for the years, 1996-2003, for both MKC and the national profile with P25, P50 and P75 reported. Note also, that in 2003 the P25 performance was negative, suggesting that at least 25 percent of these cooperatives suffered a loss. MKC has generally been performing above P75 but in 2003 it experienced a large loss due to the bankruptcy of Farmland Industries and the writedown of \$5.6 million in Farmland investment.

Solvency is highly variable and is an indication of the debt and equity capitalization structure. Profitability certainly influences solvency as does cost of capital and risk. As Figure 12 illustrates, case firm solvency in the most recent year, 2003, varied from 24.3 percent for USPB to 38.9 percent for CHS. The P25 value was 41.2 percent and the P75 value was 67.7 percent.

Solvency is also trending down, as Figure 13 illustrates. The MKC value has been around P25 for most years but is currently around P10. A declining solvency is likely due to two factors, lower profitability, which provides less new equity, and lower cost of debt, which encourages more borrowing.

Equity structure is highly variable as measured by the amount of unallocated equity, compared to total or allocated equity. RETE measures the proportion of total equity that is unallocated. As Figure 14 illustrates, RETE varies from 8.6 percent for LOL to 29.1 percent for CHS in 2003. P25 is 22.8 percent while P75 is 58.3 percent. This suggests that at least 25 percent of cooperatives have more unallocated equity than allocated equity. An interesting question is, "How high can it get before members are tempted to sell the co-op to get their residual rights share?"

RETE has been trending up, as Figure 15 illustrates. This could be due to more nonpatronage business by co-ops or the distribution of more patronage income to retained earnings. Note that MKC was around P50 most of the time but dropped to P20, or 19.9 percent in 2003. A primary factor was the distribution of about 50 percent of the loss, caused in large part by the Farmland investment writedown, to retained earnings. Although USPB's RETE is relatively low at 9.5 percent, their proposal to convert to an LLC would convert this unallocated equity to allocated equity, one of the motivations for the conversion.

### **Challenges in the Future**

U.S. cooperatives are in a period of transition and experimentation. In addition to the formation of many new generation cooperatives over the last 15 years, many cooperatives are considering various changes in their capitalization strategies.

Some of the challenges are based on the context or environment in which this experimentation and transition is occurring. These challenges include (1) declining profitability and solvency, (2) increasing unallocated equity due to increased nonpatronage business, (3) investment in too many assets, creating a drag on profits, (4) preference for higher levels of total equity, and especially for permanent equity, and (5) preference for higher levels of semi-permanent equity, such as common stock.

These trends, preferences and strategies have led to a declining proportionality of investment by patron-owners of cooperatives. And they have positioned co-ops to be more investor-oriented and less patron-oriented in their capitalization strategies. The impact of this mind-set and situation is causing co-ops to have a very different capitalization structure.

There is high interest in changing the capitalization structure of both traditional and new generation cooperatives, especially through the introduction of tradeable stock and conversion to other business forms such as LLCs and C corporations. The impact of these changes is uncertain.

Most co-ops are relatively small and are not likely to introduce tradeable stock, especially the listed, highly regulated type of stock. Their challenge is to fine tune the more traditional model by using superior equity capitalization approaches, including using proactive balance sheet management and redemption methods such as revolving fund and base capital.

But in the end, the challenge will be to be competitive and profitable. Many models, including the traditional model, work very effectively when profitability is high. And high profitability does not preclude conversion to other business forms, as the case of U.S. Premium Beef illustrates.

## References

- Amanor-Boadu, V., M. Boland, D. Barton, B. Anderson and B. Heneham. "Birds Eye Foods, Inc." ACCC Case Study Series No. 03-06, Dept of Ag Econ, KSU, 2003 (8 pages).
- Ariyaratne, Chatura B., Allen M. Featherstone, Michael R. Langemeier and David G. Barton, "Measuring X-Efficiency and Scale Efficiency for a Sample of Agricultural Cooperatives, *Agricultural and Resource Economics Review*, 29/2 (October 2000) 198-207.
- Barton, David G. and Royce L. Schmidt, "An Evaluation of Equity Redemption Alternatives in Centralized Cooperatives," *Journal of Agricultural Cooperation* 3(1988)39-58.
- Barton, David G., Ted C. Schroeder and Allen M. Featherstone, "Evaluating the Feasibility of Local Cooperative Consolidations: A Case Study," *Agribusiness*, 9, May, (1993):281-294.
- Boland, M.A., C. Freberg, D. Barton, and J. Katz. "Dakota Growers Pasta." *Case Research Journal*, 21, 2 (Spring 2001): 35-56.
- Boland, M.A. and D. Barton. "American Crystal Sugar Company." *Journal of Finance Case Research* 4,1 (January 2002)
- Boland, M.A., C. Freberg, D. Barton and J. Katz. "Dakota Growers Pasta: Vertical Integration in Durum Wheat and the Pasta Manufacturing Industry." ACCC Case Study Series No. 02-01, Dept of Ag Econ, KSU, 2002 (23 pages).
- Boland, M.A., V. Amanor-Boadu, and D. Barton. "Land O'Lakes: Issues in Portfolio Management." *International Food and Agribusiness Management Review*, in press.
- Boland, M.A. and D. Barton. "South Dakota Soybean Processors: Future Directions and Strategy." ACCC Case Study Series No. 02-14, Dept of Ag Econ, KSU, 2002 (21 pages).
- Boland, M.A. and D. Barton. "U.S. Premium Beef." ACCC Case Study Series No. 03-01, Dept of Ag Econ, KSU, 2003 (4 pages).
- Chaddad, F.R. and M. Cook. "Understanding New Cooperative Models: An Ownership-Control Rights Typology." *Review of Agricultural Economics*. 26, 3: 348-360.
- Coltrain, David, David Barton and Michael Boland. "Differences Between New Generation Cooperatives and Traditional Cooperatives." Staff Paper

No. 01-08. Dept of Ag Econ, Kansas State University, March 2001 (10 pages).

Cook, M.L. "The Future of U.S. Agricultural Co-operatives: A Neo-Institutional Approach." *American Journal of Agricultural Economics*. 77 (December 1995): 1153-1159.

Harris, A., B. Stefanson, and M. Fulton, "New Generation Co-operatives and Cooperative Theory." *Journal of Co-operatives* 11 (1996): 15-22.

Hendrikse, G. and J. Bijman. "Ownership Structure in Agrifood Chains: The Marketing Cooperative." *Amer. J. Agr. Econ.* 84 (February 2002): 104-19.

Iliopoulos, C. "Long-term financing in US and European Agricultural Co-operatives: Emerging Methods for Ameliorating Investment Constraints." Paper presented at NCR-194 Conference (October 2003).

Katz, J. and M.A. Boland. "U.S. Premium Beef." *Supply Chain Management Journal* 5, 2 (2000): 99-109. Republished at editor's request in *British Food Journal*, in press.

Royer, J.S. "Cooperative Principles and Equity Financing: A Critical Discussion." *J. Agr. Coop.* 7 (1992): 79-98.

Schrader, L.F. "Equity Capital and Restructuring of Cooperatives as Investor-Oriented Firms." *J. Agr. Coop.* 4 (1989): 41-53.

Table 1. Case Cooperative Strategies

## Experimentation by Cooperatives

<b>Current Form</b>	<b>Future Form</b>	<b>Case Example</b>
<b>Traditional local:</b>	<b>fine tune</b>	<b>Mid-Kansas Cooperative</b>
<b>Traditional regional:</b>	<b>fine tune registered debt</b>	<b>Land O'Lakes</b>
<b>Traditional regional:</b>	<b>fine tune listed preferred stock</b>	<b>CHS</b>
<b>New generation:</b>	<b>mix of NGC &amp; TC conversion to LLC</b>	<b>US Premium Beef</b>
<b>New generation:</b>	<b>conversion to LLC</b>	<b>South Dakota Soybean Processors</b>
<b>New generation:</b>	<b>conversion to private C Corp.</b>	<b>Dakota Growers Pasta</b>
<b>New generation:</b>	<b>conversion to private C Corp.</b>	<b>Pro Fac &amp; Birds Eye</b>
<b>Traditional regional:</b>	<b>conversion to public C Corp.</b>	<b>Gold Kist</b>

Table 2.

**Mid-KS Cooperative Financials**

	1999	2000	2001	2002	2003
<b>Sales</b>	69,236,904	81,972,661	39,927,489	34,391,952	173,511,513
<b>Net Income</b>	2,266,664	2,044,346	1,892,968	1,324,983	-4,606,583
<b>Assets:</b>					
<b>Current Assets</b>	19,787,456	23,433,048	9,990,088	12,636,069	41,422,425
<b>Investments</b>	5,665,396	5,857,784	6,736,418	7,185,491	5,949,177
<b>Net Fixed Assets</b>	8,433,146	8,950,556	8,818,472	9,066,838	12,366,667
<b>Other Assets</b>					
<b>Total Assets</b>	<b>33,885,997</b>	<b>38,241,388</b>	<b>25,544,978</b>	<b>28,888,398</b>	<b>59,738,268</b>
<b>Liabilities:</b>					
<b>Current Liabilities</b>	17,337,790	20,983,216	7,804,480	10,918,438	38,268,266
<b>Long-Term Liabilities</b>	2,148,158	2,130,495	2,100,039	2,063,102	3,791,324
<b>Member's Equity:</b>					
<b>Common Stock</b>	759,099	778,242	776,808	772,729	1,185,375
<b>Preferred Stock</b>	0	0	0	0	0
<b>Retained Patronage Refunds</b>	8,423,273	8,732,479	8,805,235	8,897,459	12,705,484
<b>Total Allocated Equity</b>	9,182,372	9,510,721	9,582,043	9,670,188	13,890,859
<b>Retained Earnings</b>	5,253,153	5,644,365	6,058,416	6,236,669	3,454,234
<b>Total Member's Equity</b>	<b>14,435,525</b>	<b>15,155,086</b>	<b>15,640,459</b>	<b>15,906,857</b>	<b>17,345,093</b>
<b>Minority Interest Equity</b>	-35,475	-27,409			333,585
<b>Total Liabilities and Equity</b>	<b>33,885,997</b>	<b>38,241,388</b>	<b>25,544,977</b>	<b>28,888,397</b>	<b>59,738,268</b>
<b>Solvency Ratios:</b>					
<b>Leverage (LTD/E)</b>	0.149	0.141	0.134	0.130	0.219
<b>Ownership (E/A)</b>	0.426	0.396	0.612	0.551	0.290
<b>Adjusted Ownership (E/(A-CL))</b>	0.872	0.878	0.882	0.885	0.808
<b>Ownership with MI Equity ((E+MI)/A)</b>	0.425	0.396	0.612	0.551	0.296
<b>Retained Earnings Proportion (RE/E)</b>	0.364	0.372	0.387	0.392	0.199
<b>Profitability Ratios:</b>					
<b>Return on Equity (ROE)</b>	15.70%	13.49%	12.10%	8.33%	-26.56%
<b>Return on Sales (ROS)</b>	3.27%	2.49%	4.74%	3.85%	-2.65%

Table 3.

**CHS Financials**

	1999	2000	2001	2002	2003
<b>Sales</b>	6,328,618,000	8,435,805,000	7,753,012,000	7,731,867,000	9,270,734,000
<b>Net Income</b>	86,000,000	87,388,000	178,554,000	126,138,000	123,841,000
<b>Assets:</b>					
<b>Current Assets</b>	1,271,425,000	1,531,298,000	1,371,036,000	1,750,377,000	1,912,573,000
<b>Investments</b>	427,896,000	451,211,000	467,953,000	496,607,000	532,893,000
<b>Net Fixed Assets</b>	968,333,000	1,034,768,000	1,023,872,000	1,057,421,000	1,122,982,000
<b>Other Assets</b>	120,010,000	155,403,000	194,458,000	177,322,000	239,520,000
<b>Total Assets</b>	<u>2,787,664,000</u>	<u>3,172,680,000</u>	<u>3,057,319,000</u>	<u>3,481,727,000</u>	<u>3,807,968,000</u>
<b>Liabilities:</b>					
<b>Current Liabilities</b>	1,052,380,000	1,317,075,000	1,065,756,000	1,501,262,000	1,453,835,000
<b>Long-Term Liabilities</b>	549,277,000	565,256,000	642,149,000	601,372,000	759,777,000
<b>Member's Equity:</b>					
<b>Common Stock</b>	0	0	0	0	0
<b>Preferred Stock</b>	0	0	0	9,325,000	93,702,000
<b>Retained Patronage Refunds</b>	981,329,000	1,030,569,000	1,090,261,000	1,133,399,000	1,177,755,000
<b>Total Allocated Equity</b>	981,329,000	1,030,569,000	1,090,261,000	1,142,724,000	1,271,457,000
<b>Retained Earnings</b>	234,983,000	212,515,000	170,892,000	146,914,000	203,054,000
<b>Total Member's Equity</b>	<u>1,117,636,000</u>	<u>1,164,426,000</u>	<u>1,261,153,000</u>	<u>1,289,638,000</u>	<u>1,481,711,000</u>
<b>Minority Interest Equity</b>	68,371,000	125,923,000	88,261,000	89,455,000	112,645,000
<b>Total Liabilities and Equity</b>	<u>2,787,664,000</u>	<u>3,172,680,000</u>	<u>3,057,319,000</u>	<u>3,481,727,000</u>	<u>3,807,968,000</u>
<b>Solvency Ratios:</b>					
<b>Leverage (LTD/E)</b>	0.491	0.485	0.509	0.466	0.513
<b>Ownership (E/A)</b>	0.401	0.367	0.413	0.370	0.389
<b>Adjusted Ownership (E/(A-CL))</b>	0.644	0.628	0.633	0.651	0.629
<b>Ownership with MI Equity ((E+MI)/A)</b>	0.425	0.407	0.441	0.396	0.419
<b>Retained Earnings Proportion (RE/E)</b>	0.210	0.183	0.136	0.114	0.137
<b>Profitability Ratios:</b>					
<b>Return on Equity (ROE)</b>	7.69%	7.50%	14.16%	9.78%	8.36%
<b>Return on Sales (ROS)</b>	1.36%	1.04%	2.30%	1.63%	1.34%

Table 4.

**LOL Financials**

	1999	2000	2001	2002	2003
<b>Sales</b>	5,612,981,000	5,756,265,000	5,864,858,000	5,846,864,000	6,320,456,000
<b>Net Income</b>	21,399,000	102,932,000	71,488,000	98,887,000	83,538,000
<b>Assets:</b>					
<b>Current Assets</b>	1,545,222,000	1,224,287,000	1,367,482,000	1,378,128,000	1,555,693,000
<b>Investments</b>	459,981,000	465,849,000	568,130,000	545,592,000	506,641,000
<b>Net Fixed Assets</b>	461,808,000	467,783,000	675,277,000	579,860,000	624,631,000
<b>Other Assets</b>	233,113,000	315,424,000	480,489,000	742,742,000	711,191,000
<b>Total Assets</b>	<u>2,700,124,000</u>	<u>2,473,343,000</u>	<u>3,091,378,000</u>	<u>3,246,322,000</u>	<u>3,398,156,000</u>
<b>Liabilities:</b>					
<b>Current Liabilities</b>	1,183,170,000	900,136,000	922,295,000	1,169,474,000	1,096,641,000
<b>Long-Term Liabilities</b>	733,233,000	713,166,000	1,272,761,000	1,111,648,000	1,342,120,000
<b>Member's Equity:</b>					
<b>Common Stock</b>	2,073,000	2,345,000	2,305,000	2,190,000	2,125,000
<b>Preferred Stock</b>	0	0	0	0	0
<b>Retained Patronage Refunds</b>	694,980,000	768,941,000	805,860,000	873,659,000	882,547,000
<b>Total Allocated Equity</b>	697,053,000	771,286,000	808,165,000	875,849,000	884,672,000
<b>Retained Earnings</b>	71,782,000	33,668,000	28,351,000	35,664,000	11,984,000
<b>Total Member's Equity</b>	<u>768,835,000</u>	<u>804,954,000</u>	<u>836,516,000</u>	<u>911,513,000</u>	<u>896,656,000</u>
<b>Minority Interest Equity</b>	14,886,000	55,087,000	59,806,000	53,687,000	62,739,000
<b>Total Liabilities and Equity</b>	<u>2,700,124,000</u>	<u>2,473,343,000</u>	<u>3,091,378,000</u>	<u>3,246,322,000</u>	<u>3,398,156,000</u>
<b>Solvency Ratios:</b>					
<b>Leverage (LTD/E)</b>	0.928	0.886	1.522	1.220	1.497
<b>Ownership (E/A)</b>	0.285	0.325	0.271	0.281	0.264
<b>Adjusted Ownership (E/(A-CL))</b>	0.507	0.512	0.386	0.439	0.390
<b>Ownership with MI Equity ((E+MI)/A)</b>	0.290	0.348	0.290	0.297	0.282
<b>Retained Earnings Proportion (RE/E)</b>	0.093	0.042	0.034	0.039	0.013
<b>Profitability Ratios:</b>					
<b>Return on Equity (ROE)</b>	2.78%	12.79%	8.55%	10.85%	9.32%
<b>Return on Sales (ROS)</b>	0.38%	1.79%	1.22%	1.69%	1.32%

Table 5.

**USPB Financials**

	1999	2000	2001	2002	2003
<b>Sales</b>	428,561,000	566,136,000	572,418,150	697,409,364	871,773,906
<b>Net Income</b>	12,728,000	19,150,000	15,152,959	15,755,673	24,229,858
<b>Assets:</b>					
<b>Current Assets</b>				23,573,094	311,280,050
<b>Investments</b>				83,105,413	0
<b>Net Fixed Assets</b>				128,028	210,606,927
<b>Other Assets</b>				364,356	119,322,744
<b>Total Assets</b>	103,931,000	123,346,000	128,429,000	107,170,891	641,209,721
<b>Liabilities:</b>					
<b>Current Liabilities</b>				15,804,254	172,364,151
<b>Long-Term Liabilities</b>				8,948,897	316,477,921
<b>Member's Equity:</b>					
<b>Common Stock</b>				39,474,756	39,510,556
<b>Preferred Stock</b>				0	0
<b>Retained Patronage Refunds</b>				37,090,469	49,480,090
<b>Total Allocated Equity</b>				76,565,225	88,990,646
<b>Retained Earnings</b>				5,852,515	9,413,778
<b>Total Member's Equity</b>				82,417,740	98,404,424
<b>Minority Interest Equity</b>	0	0	0	0	53,963,225
<b>Total Liabilities and Equity</b>				107,170,891	641,209,721
<b>Solvency Ratios:</b>					
<b>Leverage (LTD/E)</b>				0.109	3.216
<b>Ownership (E/A)</b>				0.769	0.153
<b>Adjusted Ownership (E/(A-CL))</b>				0.902	0.210
<b>Ownership with MI Equity ((E+MI)/A)</b>				0.769	0.238
<b>Retained Earnings Proportion (RE/E)</b>				0.071	0.096
<b>Profitability Ratios:</b>					
<b>Return on Equity (ROE)</b>				19.12%	24.62%
<b>Return on Sales (ROS)</b>	2.97%	3.38%	2.65%	2.26%	2.78%

Figure 1. Local Co-op Solvency, Selected States

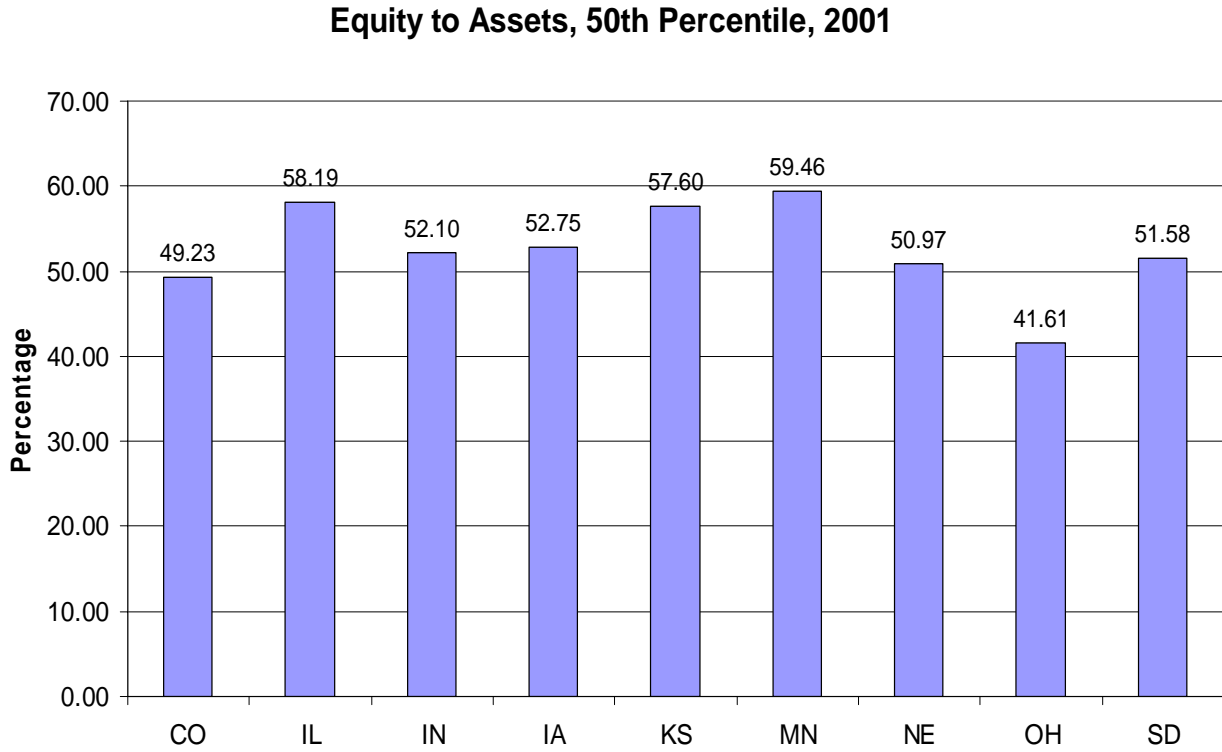


Figure 2. Local Co-op Profitability

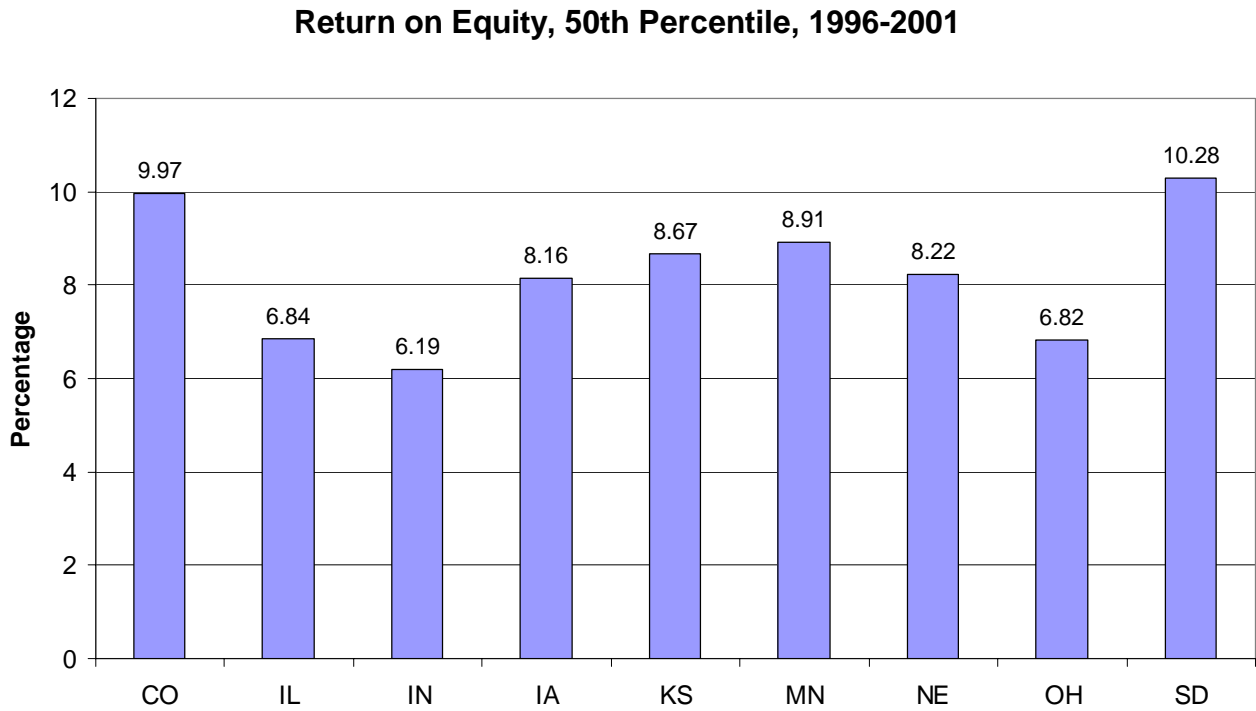
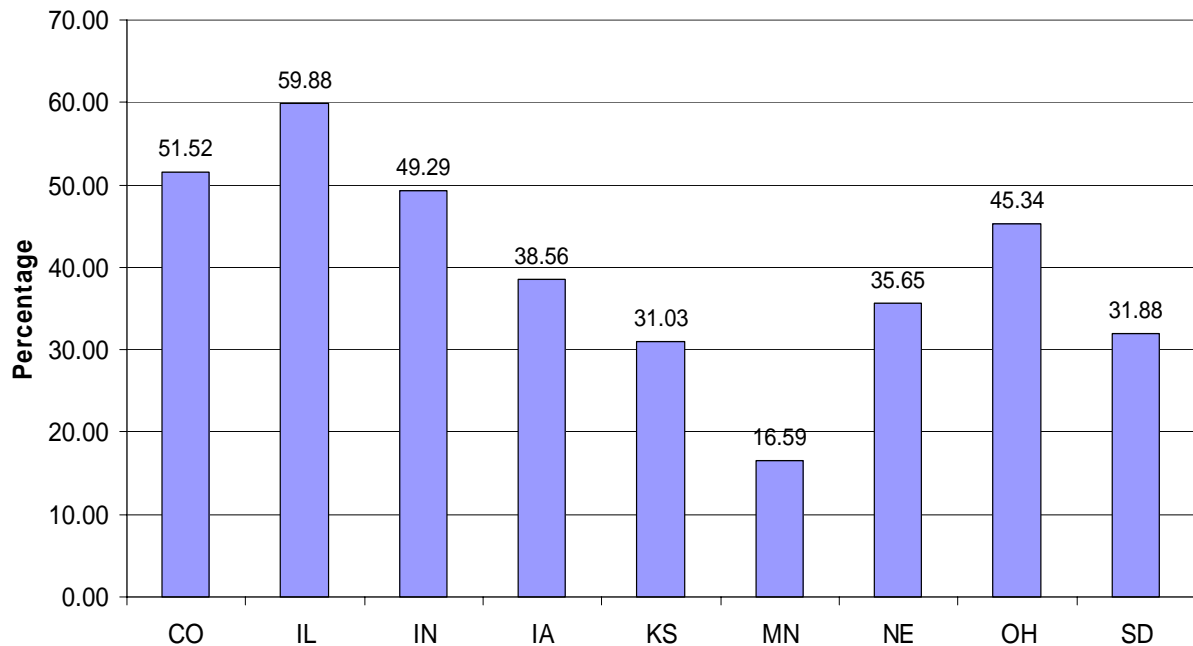


Figure 3. Local Co-op Equity Structure

### Retained Earnings to Total Equity, 50th Percentile, 2001



**Figure 4. Beginning Balance Sheet Illustration**

Assets			Liabilities and Members Equity		
	%	\$		%	\$
<b>Current Assets</b>	<b>30%</b>	<b>\$3,000,000</b>	<b>Current Liabilities</b>	<b>20%</b>	<b>\$2,000,000</b>
Cash	10%	\$1,000,000	Accounts Payable	5%	\$500,000
Receivables	5%	\$500,000	Loans Payable	10%	\$1,000,000
Inventories	15%	\$1,500,000	Patronage Refunds Payable	3%	\$250,000
			Equity Redemptions Payable	3%	\$250,000
<b>Investments</b>	<b>20%</b>	<b>\$2,000,000</b>	<b>Long-Term Liabilities</b>	<b>20%</b>	<b>\$2,000,000</b>
Regional Stock	20%	\$2,000,000	Bank Loans Payable	18%	\$1,750,000
Other Stock	0%	\$0	Contracts Payable	3%	\$250,000
<b>Net Fixed Assets</b>	<b>50%</b>	<b>\$5,000,000</b>	<b>Members Equity</b>	<b>60%</b>	<b>\$6,000,000</b>
Land	15%	\$1,500,000	Allocated		
Buildings	15%	\$1,500,000	Common Stock	10%	\$1,000,000
Equipment	20%	\$2,000,000	Preferred Stock	0%	\$0
			Retained Patronage Refunds	40%	\$4,000,000
			Unallocated		
			Retained Earnings	10%	\$1,000,000
<b>Total</b>		<b>\$10,000,000</b>	<b>Total</b>		<b>\$10,000,000</b>

#### Financial Structure

##### Liquidity

Working Capital (CA-CL)	\$1,000,000
Current Ratio (CA/CL)	1.50

##### Solvency

Equity to Assets (ME/A)	60%
Debt to Equity (LTL/ME)	33%

Figure 5. Capital Structure Factors: Debt versus Equity

Factor	Amount of Equity
1. Least cost financing - equity costs more than debt	Low
2. Risk - ag co-ops have high risk	High
3. Profitability - ag co-ops have low profitability	Low
<b>Conclusion: Minimize equity, given risk and profitability</b>	

Figure 6. Capital Structure Choice Matrix

		<u>Risk</u>	
		Low	High
<u>Profitability</u>	Low	Moderate Solvency ETA: 50-60%	High Solvency ETA: 60-75%
	High	Low Solvency ETA: 35-50%	Moderate Solvency ETA: 50-60%

Figure 7. Equity Capitalization Alternatives

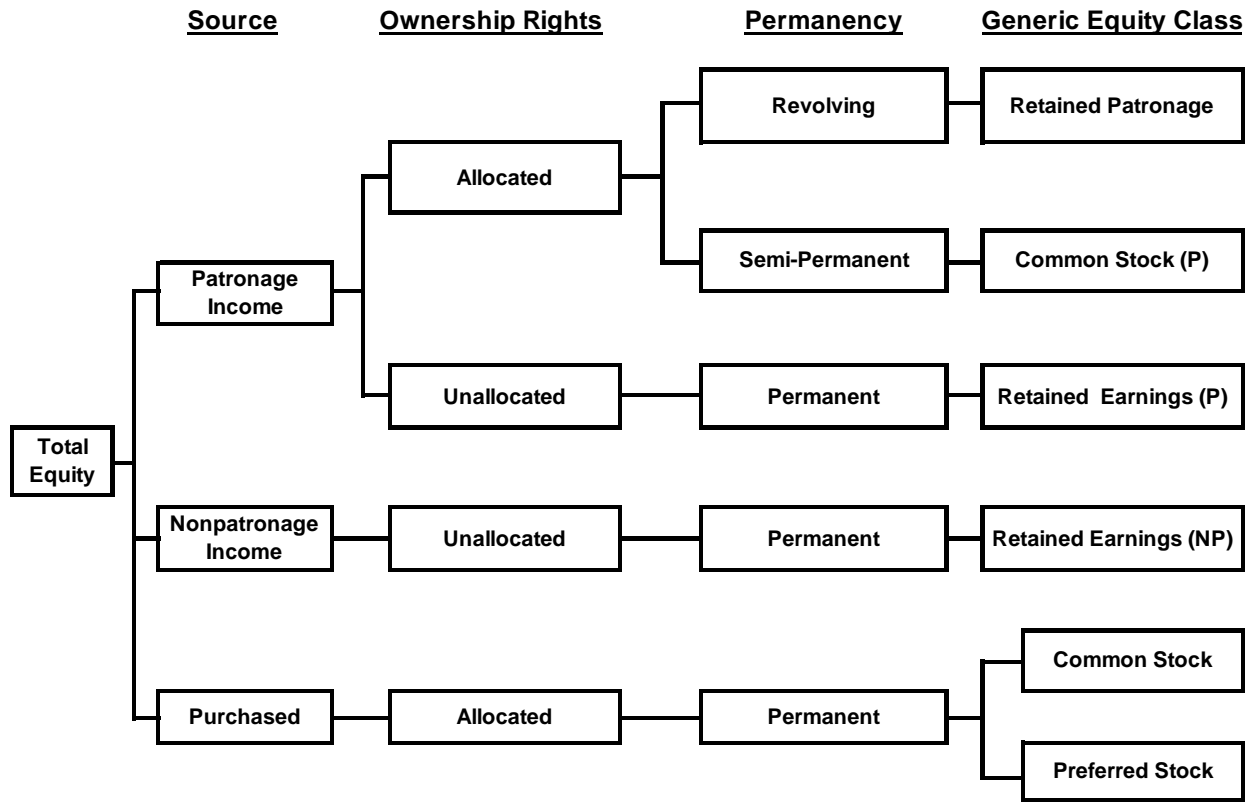


Figure 8: Income Distribution Alternatives

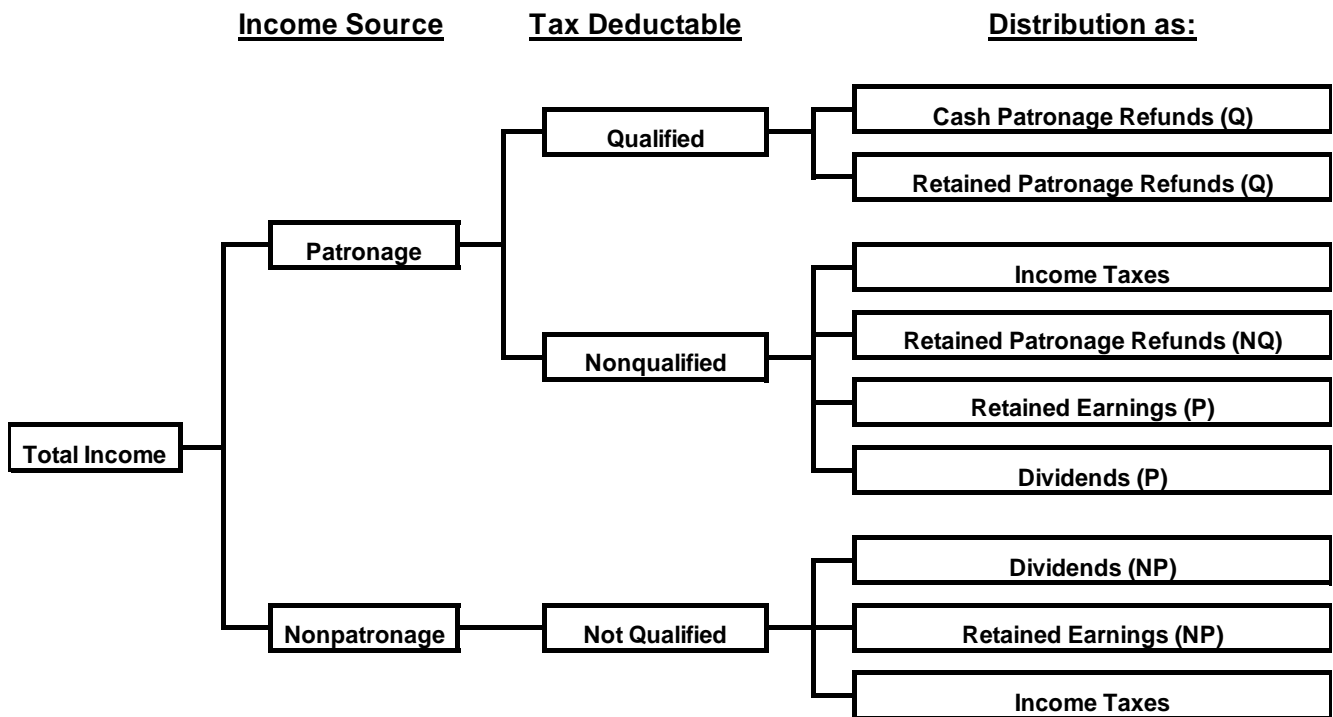


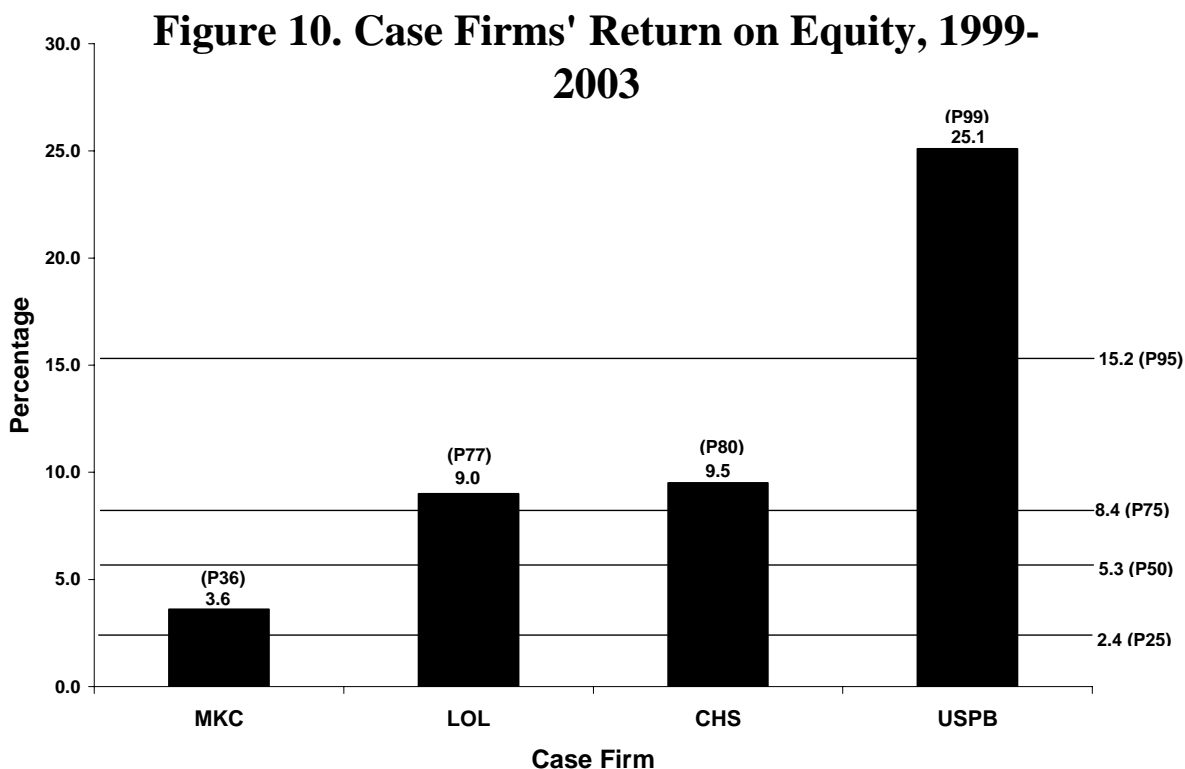
Figure 9.

### Income Distribution Alternatives Case 1: Low Cash Patronage Refunds (20%)

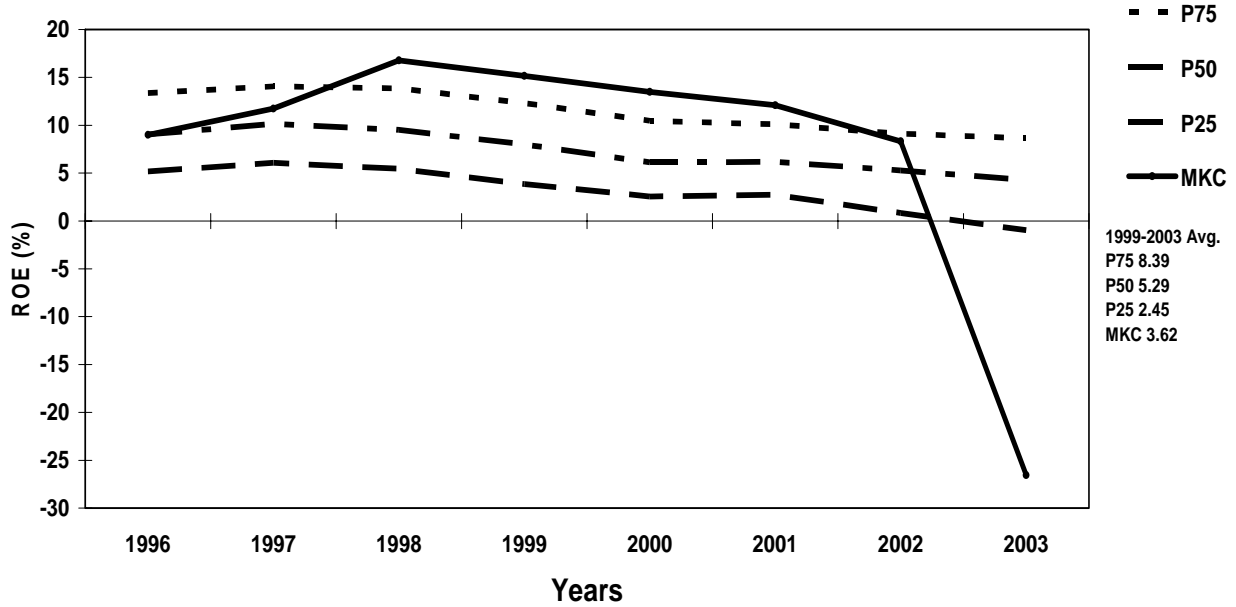
	Income Before Tax	Tax <sup>1</sup>	Income After Tax	Retained Equity Investment
1. Dividends on PS: 8%	\$0	\$0	\$0	
2. Retained Earnings	\$100,000			
a. Non-patronage	\$100,000	\$30,000	\$70,000	\$70,000
b. Patronage	\$0	\$0	\$0	\$0
3. Patronage Refunds	\$900,000			
a. Qualified (deductible)	\$900,000			
(1) Cash	\$180,000		\$180,000	
(2) Retained	\$720,000		\$720,000	\$720,000
b. Nonqualified Retained	\$0	\$0	\$0	\$0
4. Per Unit Capital Retains	\$0			
a. Qualified (deductible)	\$0		\$0	
b. Nonqualified	\$0	\$0	\$0	
<b>Total</b>	<b>\$1,000,000</b>	<b>\$30,000</b>	<b>\$970,000</b>	<b>\$790,000</b>

Income Component	Split of Income Component				Total %
	First Part	%	Second Part	%	
Total Income	Patronage	90%	Nonpatronage	10%	100%
Patronage Income	Patronage Refunds	100%	Retained Earnings	0%	100%
Patronage Refunds	Qualified	100%	Nonqualified	0%	100%
Qualified PR	Cash PR	20%	Retained PR	80%	100%

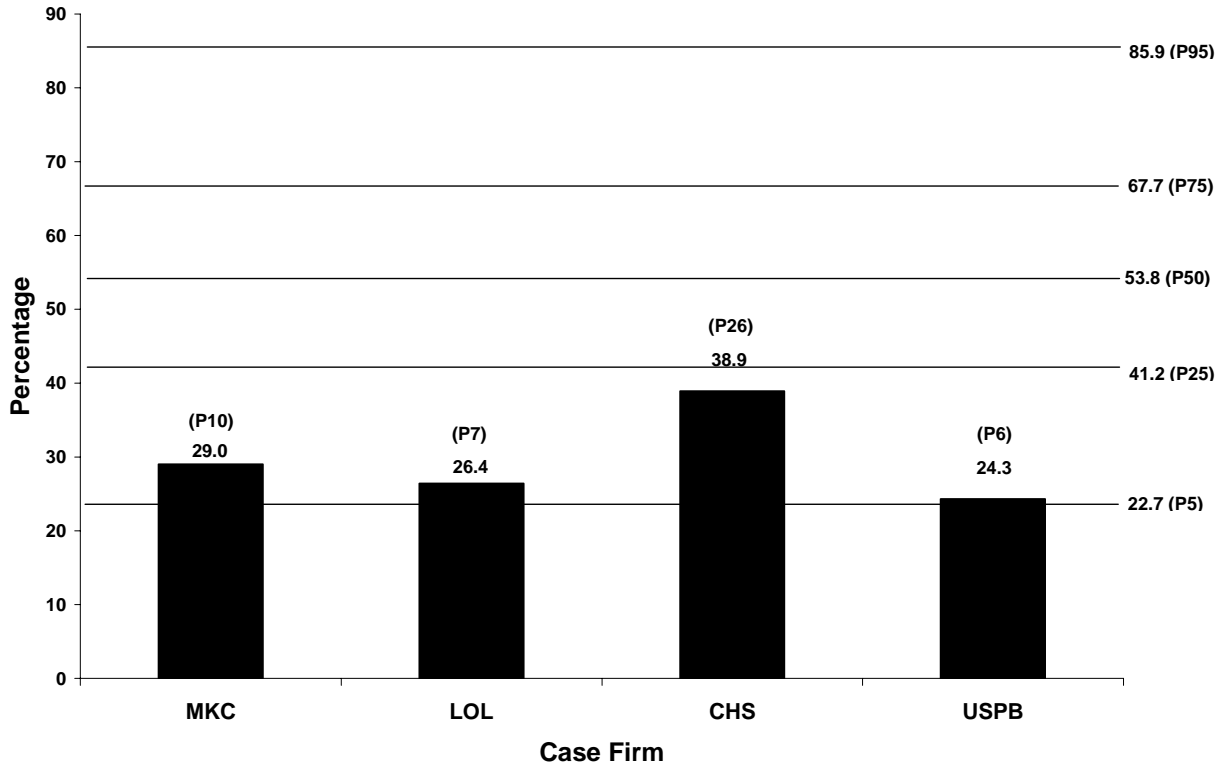
1. Income tax rates: 20% ≤ \$50,000; then 40% > \$50,000 (\$10,000 + \$20,000 = \$30,000).
2. Minimum of 20% required.



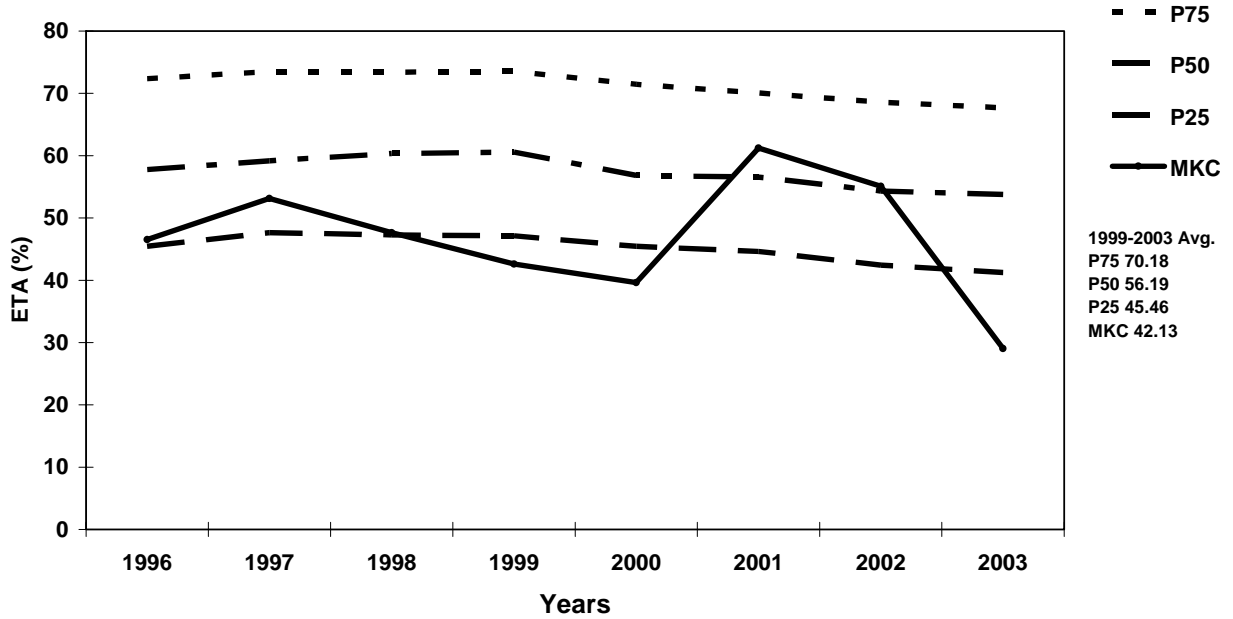
**Figure 11. Return on Equity  
Mid-Kansas Cooperative Association and United States  
Cooperatives percentiles, 1996-2003**



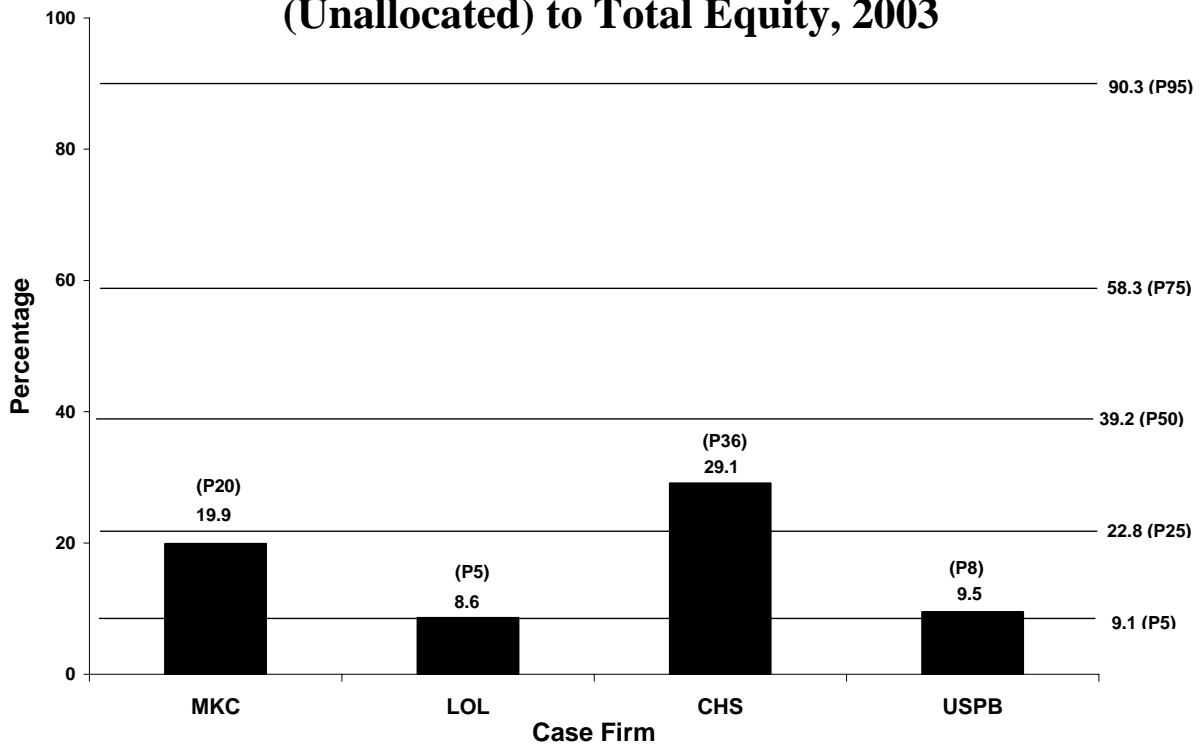
**Figure 12. Case Firms' Equity to Assets, 2003**



**Figure 13. Equity to Assets  
Mid-Kansas Cooperative Association and United States  
Cooperatives percentiles, 1996-2003**



**Figure 14. Case Firms' Retained Earnings  
(Unallocated) to Total Equity, 2003**



**Figure 15. Retained Earnings to Total Equity  
Mid-Kansas Cooperative Association and United States  
Cooperatives percentiles, 1996-2003**

