



**AgEcon** SEARCH  
RESEARCH IN AGRICULTURAL & APPLIED ECONOMICS

*The World's Largest Open Access Agricultural & Applied Economics Digital Library*

**This document is discoverable and free to researchers across the globe due to the work of AgEcon Search.**

**Help ensure our sustainability.**

Give to AgEcon Search

AgEcon Search

<http://ageconsearch.umn.edu>

[aesearch@umn.edu](mailto:aesearch@umn.edu)

*Papers downloaded from **AgEcon Search** may be used for non-commercial purposes and personal study only. No other use, including posting to another Internet site, is permitted without permission from the copyright owner (not AgEcon Search), or as allowed under the provisions of Fair Use, U.S. Copyright Act, Title 17 U.S.C.*

***Innovative Financial Strategies That Work:  
Kanza Cooperative Association***

**Financial Strategy Case Study  
of  
Kanza Cooperative Association  
Iuka, Kansas**

**Prepared for  
2011 K-State Symposium on Cooperative Issues  
K-State Alumni Center  
Manhattan, Kansas  
August 30, 2011**

**By  
Dr. David Barton  
Arthur Capper Cooperative Center  
Kansas State University**

## Introduction

Kanza Cooperative Association (Kanza or KCA) is a medium-sized grain marketing and farm supply local cooperative. KCA has 19 facilities in 11 different communities in Pratt and Stafford counties in south-central Kansas. KCA focuses on grain and agronomy business, has grown due to mergers with neighboring co-ops and has been relatively profitable. Most of KCA's profits have come from local earnings, not regional cooperative patronage refunds or other income. In the six years, 2005-2010, KCA's sales increased from \$64.3 million to \$122.0 million and net income increased from \$790,920 in 2005 to \$5,049,267 in 2010, with about 50% coming from local or operating income. If other income from gain on FCStone investment is not included in total income, amounting to about \$7.0 million over these six years, then local income is about 65% of total income before taxes.

Financial performance has been relatively high and is expected to be high in the future. Return on equity has ranged from 6.4% in 2005 to as high as 29.5% in 2008 and has averaged about 16% over the last six years. Asset growth has also been strong, supporting the rapid sales increases. Net fixed assets have increased from \$9.7 million to \$19.0 million over this time. Balance sheet liquidity and solvency have also been strong. Working capital increased from \$3.9 million to \$11.5 million, and debt to equity has ranged from 16% to 27% and was 27% in 2010. Growth has been financed primarily with new equity investment created by retaining earnings as allocated retained patronage refunds and unallocated retained earnings. Total equity increased from \$12.3 million in 2005 to \$28.3 million in 2010.

KCA expects to continue growing even if it does not expand its marketing footprint and trade area through mergers. Corn production is growing in the area as it is in much of the Great Plains region of the country. It believes there will be a need for greater grain marketing and agronomy marketing capacity in the future.

The challenge for KCA will continue to be to sustain or improve profitability, maintain a strong balance sheet by financing growth with high proportions of new equity, and improve its income distribution and equity management programs as much as possible. It is clear to the leadership team, namely, the board of directors and executive management, the future will be more risky but filled with opportunity. The leaders also know they can't rely in the future on unexpected profit from one-time opportunities such as the past gain KCA made on its FCStone investment. KCA expects to rely on its core businesses, marketing grain and supplying agronomy inputs, for future profits.

Kanza has had an on-going interest in improving its financial performance and strategies. The board has focused on financial strategy issues at recent board retreats and has taken advantage of educational opportunities to improve its knowledge and understanding of cooperative finance and strategy formation and implementation. One of the topics at the 2008 board retreat was education on the topic of strategic thinking. A one-half day seminar on how to formulate and implement company strategy was presented by Dr. David Barton. General discussion at the 2008 and 2009 board retreats stimulated interest in getting a better idea about the specific financial strategies appropriate for KCA going forward. KCA directors and executives have also attended various educational programs offered to cooperative leaders by Kansas State University, such as the annual Symposium on Cooperative Issues, and by the

Kansas Cooperative Council, such as the Director Development Program courses on governance, finance and strategy.

In August 2010 KCA decided to focus a major part of its January 2011 board retreat on strategic financial planning. The previous five years of high growth, high profitability, high risk and increasing opportunity convinced the leadership team it needed to evaluate its current financial strategies and formulate and implement strategies that would protect and enhance the future success of KCA. Relatively high profitability and the potential increase in cash flow and equity investment provided by the Section 199 tax benefit gave KCA some options it had not faced before. On the mind of many of the leaders was an interest in not only protecting and enhancing performance but also improving the current income distribution and equity redemption programs by returning more cash to patron-owners. To provide the appropriate information for strategic decision making at the 2011 board retreat KCA decided to commission a comprehensive financial planning project and present the results at the retreat to better inform decision making discussions.

This case summarizes the current status of the financial planning project initiated by Kanza Cooperative Association (Kanza or KCA) in 2010 to (1) evaluate the current financial and equity management program of KCA, (2) construct and evaluate alternative financial strategies and (3) select an improved financial and equity management program.

The Arthur Capper Cooperative Center (ACCC) at Kansas State University (KSU) was engaged to assist the leadership team through this strategic thinking, evaluation and policy making process. The leadership team included the CEO, Bruce Krehbiel, CFO, Brad Riley, and board of directors. The parties from KSU were Dr. David Barton, Professor and Director of the ACCC (Professor Emeritus and Director Emeritus as of August 1, 2011), Chuck Mickelsen, Information Technology Specialist, and Seleise Barrett, Educational Program Manager. In addition, KCA's banker, Vern May, Senior Relationship Manager with CoBank, and KCA's auditor, Mike Meisenheimer, CPA with Lindberg Vogel Pierce Faris, participated in the planning, evaluation and reporting process.

Dr. David Barton has conducted research on co-op finance issues, has educated co-op leaders on co-op finance and has assisted many co-ops evaluate and improve their financial strategies. A sophisticated and flexible financial planning simulator has been developed by David Barton and Chuck Mickelsen to support these research, education and service projects.

The service project for Kanza had two distinctive phases. Phase 1 started in August 2010 and consisted of a four-part process. It (1) educated the leadership team on the principles of cooperative finance and alternative approaches to co-op finance and equity management, (2) evaluated the current financial and equity management program, (3) constructed and evaluated alternative financial strategies using the current financial position and expected financial performance with the help of a pro forma financial simulator and with guidance from the leadership team, and (4) presented the financial impacts of those alternative strategies in a Phase 1 report presented at the board retreat on January 13-14, 2011. Some policy decisions have been made since the board retreat due to the Phase 1 project.

Phase 2 started in February 2011, is on-going, and so far has consisted of a four part process. The process (1) updated and refined the Phase 1 base financial projection, (2) selected and modified the Phase 1 set of financial strategies of highest interest plus added additional strategies to better fit the financial objectives of KCA, (3) evaluated these modified and additional financial strategies, and (4) produced the written Phase 2 report. The leaders at the 2011 board retreat provided feedback that guided a refinement of the financial strategies and the related financial performance projections used in Phase 2.

A Phase 2 written report was provided to the leadership team in July 2011. The Phase 2 written report has not been presented to the leadership team in a retreat setting at this point in time. Feedback from the leadership team may lead to additional analyses before future financial strategy and policy is established. Additional policy refinements and decisions will be discussed and finalized by the leadership team at the annual board retreat in January 2012 when the final project report is presented.

The Phase 1 and Phase 2 projects were organized around addressing four broad strategic thinking questions:

1. Where are we?
2. Where do we want to go?
3. How do we get there?
4. What decisions need to be made now?

Between now and the annual board retreat in January the leadership team is focusing on addressing more completely the fourth question, "What decisions need to be made now?"

An ideal approach to answering this question in the finance area is to construct a concise written policy or set of related policies on financial strategies including (1) a profitability or income generation policy, (2) an income distribution policy, (3) an asset investment growth policy, (4) a balance sheet management policy and (5) an equity management policy, including investment and redemption. In general, the suggested order to consider the policy topics is in the order listed, recognizing that they are interrelated. The Phase 1 and 2 analyses generally followed this priority order when constructing and evaluating alternative strategies. The financial planning simulator accounted for all these factors in a comprehensive and simultaneous way to produce pro forma financial statements, such as operating statements, balance sheets, cash flow statements, and other financial reports.

Everything is interrelated in a business like Kanza and should be recognized to the extent possible in establishing finance policy. The business management functions of governance (organizational behavior and management), strategy, finance, operations, marketing and human resources are interrelated to each other. All five of the finance policy areas are interrelated and require the use of a comprehensive financial model to evaluate the policy alternatives, even if evaluated in a mental or subjective way, without rigorous quantitative analysis.

The leadership team believes these policies should be flexible and robust so they can accommodate a variety of financial situations in the future, not just the financial performance assumptions used in the

financial projections made in the Phase 1 and 2 projects. Financial performance in the future may be higher or lower than projected, asset investment growth may be higher or lower than projected, and government policy on taxation may change. For example, the Phase 2 projections included a direct estimate of the impact of the Section 199 tax benefit to Kanza, given the way Kanza intended to utilize the deduction. This deduction provided a substantial benefit and had a significant impact on the balance sheet, cash flows including the redemption budget cash flow and the ability to redeem equity under various redemption strategies. This tax benefit is a component of the income distribution assumptions and the implied income distribution policy but Section 199 may be modified or eliminated in the future. Phase 1 and 2 projections did not evaluate and compare financial strategies with and without this benefit.

Phase 1 evaluated four alternative fixed asset growth scenarios and selected growth scenario 1 to use in Phase 2. Only one base sales and profitability projection was made in Phase 1 and Phase 2. This projection was viewed as the most likely (“normal”) profit outcome. The impacts of low and high profitability outcomes were not evaluated. The financial projections were for the ten year period, 2010-2019. This time period was considered sufficiently long to demonstrate the financial dynamics and consequences of alternative new policies compared to current policies.

## **Where are we?**

The leadership team addressed the first strategic thinking question, *Where are we?*, by concentrating on three topics:

1. Understanding the co-op finance principles and business model.
2. Understanding the past and expected financial situation and performance.
3. Understanding past and current practices compared to best practices with respect to balance sheet management, income distribution and equity management, including equity redemption.

**Co-op finance principles and business model.** Education on the principles of co-op finance was provided to assist in determining best practices compared to Kanza’s current practices. The principles of cooperative finance were reviewed by the leadership team in a one-day co-op finance seminar prior to the board retreat to help the leadership team understand the interrelationships in their co-op’s financial model and how to construct financial strategies and policies that reflect these relationships and explore trade-offs. The seminar helped leaders understand the general financial accounting framework, including the basic financial statements, how to evaluate performance and how to establish financial policies for liquidity, solvency and other objectives. The seminar also focused on the unique financial aspects of the co-op business model, with emphasis on income distribution, balance sheet management and equity management.

Most of the leadership team attended the Kansas Cooperative Council’s Director Development Program Course 2 on Basic Cooperative Finance taught by David Barton, Kansas State University, and Brad

Stephens, CoBank, in Wichita on December 14, 2010. These financial principles were reviewed at the board retreat in January 2011 and applied to the specific situation faced by Kanza.

After reviewing these principles it was decided to apply the best practices of co-op finance. In general, Kanza's leadership concluded it could improve how it distributed income, how it practiced balance sheet management and how it managed patron equity accounts through its equity redemption program. These general objectives were translated into specific elements for inclusion in the strategies used in Phase 1. They were refined further in the Phase 2 project.

**Past and expected financial performance.** The Phase 1 project evaluated the historical financial performance of Kanza over the last six years, 2005-2010. A summary of past performance was provided in the introductory section of this case. This and other information was used to inform the leadership team on likely future performance. The 2009 year-end financial position, including the 2009 FYE balance sheet, was the beginning financial position for the projections. Phase 1 projections for 2010 were calibrated to include year-to-date financial conditions since they were made mid-year. Phase 2 projections for 2010 were made after the end of 2010 and were calibrated to include year-end financial conditions.

The analysis of past and present financial performance concluded Kanza had been a relatively high performing company, in terms of profitability. All things considered, the 2010 FYE balance sheet was considered adequate in terms of liquidity and solvency. However, KCA was more leveraged than the leadership team found comfortable for the future. Due to increased risk in the expected economic environment, there was an interest in evaluating the impact of increasing liquidity and solvency levels as long as it didn't prevent Kanza from growing (adding fixed assets), paying adequate cash patronage refunds, and redeeming equity on an acceptable basis. It was clear future profitability would be a major driver of what was possible.

The patron equity account data and business volume history of all patron-owners, as of September 2010, was analyzed to understand the current status of patron-owner equity investment by equity class, birth year of owners, and the year equity was retained in allocated equity accounts. Financial projections used this detailed equity account information at the patron-owner level as the starting point to project future equity investment by patrons over the projection period, 2010-2019. The future pattern of business of each patron was estimated using a five year history of 1099 data. This expected pattern of business was used in the financial projections to update individual patron equity accounts in each projected year based on the assumptions made about income distribution, equity investment and equity redemption policies.

This kind of detailed updating of patron equity investment, year by year, was essential in this project to be able to accurately estimate the impact on patron equity accounts of alternative profitability, growth, balance sheet management, income distribution and equity redemption policies. As a minimum, it was essential to be able to estimate changes in equity investment, summarized by equity class, birth year of patron-owners and year retained. In the case of Kanza, tracking equity investment by individual patron-

owners was necessary because current equity redemption policies require adjusting common and participating stock investment at the time of an age of patron redemption.

**Current versus best practices or policies.** Best practices establish policy or expectations in the five fore mentioned areas. The five areas are (1) profitability, (2) income distribution, (3) asset investment growth, (4) balance sheet management and (5) equity management, including investment and redemption. They are based on the principles of cooperative finance and the unique situation each company faces. Policies express general intent and specific measures, where appropriate. A brief, very general description follows of Kanza's current practices or policies. They are compared to best practices based on cooperative finance principles and the experience and judgment of the project leader, Dr. David Barton after over 25 years of research and education on co-op finance issues and conducting financial planning projects for many cooperatives.

**Profitability.** As described earlier, Kanza has a history of high profitability with by far most profit coming from local operations. It also receives significant profits from patronage refunds coming from regional cooperatives. For a short period of time it was able to realize substantial profits from the gain on its investment in FCStone. The operating statements for 2008-09 are shown in Exhibit 16.

Best practices require a mindset that a co-op cannot make too much money, if it is competitive in the marketplace, cost efficient, practices sustainable balance sheet management and operates on a cooperative basis to achieve the best interests of the members. In other words, a farmer co-op should be viewed as an extension of all the farm or patron-owner businesses. Local assets and operations should provide most of the profits. Money-losing operations should be fixed or eliminated. One business unit or one group of patron-owners should not subsidize other units or groups of patron-owners.

**Income distribution.** Income distribution alternatives in cooperatives are numerous and not widely understood. With the advent of the Section 199 tax benefit the options have become even more complex. The Kanza income distribution policy with and without the Section 199 options are illustrated using the Barton Income Distribution Model in Exhibits 1 and 2.

Kanza uses a very common income distribution program. Total income before taxes is divided between non-patronage and patronage income. The historical and expected split is 23% to non-patronage and 77% to patronage. This is a relatively high non-patronage rate compared to many cooperatives. Non-patronage income is taxed at the co-op level and the after-tax amount is retained in unallocated retained earnings.

Over time this high non-patronage rate has caused unallocated retained earnings balances on the balance sheet to grow to a relatively high proportion of total equity. At the end of the 2010 fiscal year unallocated equity equaled about 54% of total equity. This percentage is expected to grow in the future. There are advantages and disadvantages to high levels. Some co-op finance experts caution that high levels may tempt to members to sell the co-op to get their share of the unallocated equity, or more precisely their share of the residual assets which is likely to be much higher than book value of their allocated equity.



Patronage income is distributed as a qualified patronage refund and a cash rate of 35% is paid in the year of distribution. The retained patronage refunds are distributed to the equity class, patronage ledger credits. Almost all new allocated equity is created from generation of profits and the retention of a portion of the patronage income as an equity investment by patron-owners.

The current income distribution policy of Kanza has been effective and the policy going forward is expected to be similar, with the exception of utilizing the Section 199 tax benefit as long as it is available. Their policy can be characterized as the “pure co-op” philosophy because all patronage income is distributed to patrons as patronage refunds, except for the portion of patronage income distributed to retained earnings when utilizing the Section 199 deduction.

Best practices in income distribution focus on two key factors, equity creation and after-tax cash flow to patrons. The most important factor is the requirement to generate enough new equity to finance the assets of the co-op in conformity with the balance sheet management policies for liquidity and solvency. Since those policies and the asset growth decisions or outcomes drive the need for financial capital, debt and equity, this can cause the co-op to change income distribution policies. For example, it may be necessary to reduce the normal cash patronage rate from a rate like 35% to the minimum for qualified distributions, 20%. This change is consistent with the balance sheet management philosophy that patron-owners get what is left over, even if a 20% cash patronage refund creates a negative after-tax cash flow to patrons in the year of distribution. However, this is unusual. Most co-ops pay a higher than minimum cash patronage rate on qualified distributions. The practical minimum should be the rate that covers the marginal tax rates of most patrons. The highest performing co-ops generally pay much more. Rates of 50% or more are encouraged for the highest performing co-ops who have achieved sufficiently high liquidity, solvency and proportionality of patron equity investment.

A strongly recommended alternative to the traditional distribution of patronage income as qualified retained patronage refunds is the use of a non-qualified distribution, especially for the more profitable and financially strong co-ops. This translates to an income distribution policy based on the goal of distributing income in such a way that patrons only pay taxes on what they receive in cash from the co-op, as cash patronage refunds and redemptions of non-qualified retained patronage refunds.

Kanza is currently utilizing the Section 199 benefit. Essentially this benefit provides the opportunity for the co-op to create new equity, tax free, on the co-op balance sheet or pass through the benefit to the patron. This increases the number of income distribution options and the complexity of the decision making. Exhibit 2 illustrates the choice set.

Based on numerous factors Kanza has chosen to calculate the tax benefit on grain business only and to retain the benefit at the co-op level. A small non-patronage benefit is available and shown on the diagram as representing only 1.4% of the 23% non-patronage share of total income. The patronage income benefit is 10.5% of the 77% patronage share of total income or about 8% of total patronage income. This tax free equity is retained as unallocated retained earnings.

An option some experts recommend is retaining the Section 199 benefit as a non-qualified retained patronage refund since it creates allocated equity. This is consistent with the pure co-op approach

because all patronage income is distributed to patrons and the benefit eventually accrues directly to the patron as a cash distribution at the time of redemption. More research is needed to validate what might be in the best interests of patrons by measuring after-tax cash flow to patrons. This alternative is one Kanza may want to evaluate before its annual board retreat in January 2012.

**Balance sheet management.** Kanza has a strong balance sheet with respect to current liquidity and solvency, as described earlier. Exhibit 3 shows the 2008 and 2009 fiscal year-end balance sheets. Kanza carefully manages liquidity, specifically working capital, when managing the balance sheet day to day, month to month and year to year as it makes other finance decisions related to asset investment, financing of the assets and distribution of income from the business consider working capital impacts. Kanza manages equity investment carefully but not as strictly as working capital, due to the nature of its equity redemption program. Kanza redeems equity to natural person patron-owners when they reach age 72. This policy introduces high variability in redemption cash flows.

Best practices put a high priority on managing risk, in terms of liquidity for the short-run and solvency for the short-run. Because of higher risk in recent years and expectations of high risk in the future relatively high liquidity and solvency objectives are recommended. This means maintaining a strong balance sheet is a very high priority. Given all other policies and outcomes, strict balance sheet management requires the achievement of set liquidity and solvency objectives. Normally, this means the residual distribution of cash is to equity redemptions. In other words, the lowest priority equity redemption gets what is left over or in surplus above what is needed to achieve the liquidity and solvency objectives.

**Asset investment growth.** Assets have three main components: current assets, investment assets (equity investment in other businesses) including investments in regional co-ops and joint venture companies, and fixed assets. The primary focus in the Phase 1 and 2 projects was fixed asset investment.

Current assets are highly variable due primarily to variability in both volumes and prices of commodities handled by grain marketing and farm supply co-ops like Kanza. Kanza manages this asset in response to seasonal and market factors with the help of lines of credit and working capital objectives. Current asset projections for receivables and inventory were based on their historical relationships to sales.

Investment in regional co-ops and other businesses is more stable. Investment generally has two components, regional and other (such as joint ventures).The regional investment is not easily controllable and yet still must be financed. The regional income distribution and equity management programs vary from regional to regional and do not match up to most local co-op programs. This was true for Kanza. Financial planning needs to account for this variability, the expected trend in investment and the expected income and cash flow. Kanza has little or no control over regional investment except through its choice of with whom to do business. Kanza has more control over joint venture investment. Regional co-op and joint venture investment was projected for major investment relationships, including CHS, Land O'Lakes and CoBank, based on the nature of the income distribution and equity management policies of those companies.

Fixed asset investment in local operations is highly controllable. Kanza is disciplined in evaluating fixed asset needs and opportunities each year. A history of high profitability overall suggests Kanza has chosen fixed asset investments wisely.

Best practices focus especially on fixed asset investment in local operations since it is the most controllable asset investment. Fixed asset growth is a major driver of business performance and should be managed based on profitability expectations and financing capability within the balance sheet management policies on liquidity and solvency.

**Equity management.** Equity management covers four primary topics. First is an equity class description for each class in terms of eight characteristics: (1) whether allocated or not, (2) whether qualified or non-qualified, (3) whether held as stock shares or book credits, (4) stock par value per share if stock, (5) the priority of claims, (6) voting power, if any, (7) dividend payments or eligibility to pay dividends, and (8) eligibility of various types of customers, patrons, owners or members to hold the class. Second is the equity investment policy for each equity class with respect to source of investment, such as cash purchase or retained patronage refunds. Third is the equity redemption policy for each equity class, including the priority of redemption when classes compete for limited funds due to a redemption budget. Fourth is the relationship between equity classes if the equity management policy includes transfers between classes or conversions of one class to another.

The more critical characteristics of Kanza's equity management structure and policies will be briefly described. Kanza's primary equity management interest is in evaluating alternative equity redemption policies or programs, expressed as redemption program strategies.

*Equity class descriptions.* Kanza's largest equity class is unallocated retained earnings, obtained primarily from retaining after-tax non-patronage income. Some co-ops retain part of patronage income into retained earnings. Kanza currently does this only from the portion of patronage income eligible for the Section 199 tax benefit. In general it is recommended that retained earnings obtained from patronage income be identified as a separate equity class. This results in two classes of unallocated equity, retained earnings from patronage income (RE-PI) and retained earnings from non-patronage income (RE-NPI). The financial projections made in Phase 1 and 2 track future income distributions in this way.

Kanza's allocated equity is sub-divided into three broad types of equity. Two generic stock classes are common stock and participating stock. Common stock has a par value of \$100 per share and is held by voting patrons or members. Participating stock has a par value of \$100 and is held by non-voting or non-member patrons. Because of past mergers there are some sub-classes associated with previous stock classes that are treated differently with respect to investment and redemption in some cases, or haven't been combined in the account records with equivalent classes. The third generic class is a book credits class identified as patronage ledger credits (PLC). PLC is created from the distribution of qualified retained patronage refunds to the PLC class of equity.

*Equity investment policy.* The first share of common or participating stock is obtained from a cash purchase by the voting member patron or non-voting patron. A total of \$1,000 of stock investment

is expected but the balance of stock after the first share is obtained from qualified retained patronage refunds. All retained patronage refunds distributed after the patron has achieved the \$1,000 stock investment requirement are invested in the PLC class of equity.

*Equity redemption policy.* Kanza uses two types of redemption methods. For eligible owners Kanza redeems PLC equity and stock equity exceeding \$300 in value as an age of patron oldest first redemption at age 72, expressed in shorthand as AP/O72. For eligible owners Kanza redeems all stock and PLC equity as an estate settlement, expressed in shorthand as ES.

All owners hold either common stock or participating stock. If the owner is a natural person stock is redeemed as an ES following their death, if applied for and approved by the board. An AP/O72 redemption of eligible stock and 100% of PLC equity is paid only to eligible natural persons. Natural persons are eligible only if they have a birth year in the accounting records. If a patron continues patronage business after receiving an age of patron redemption the additional PLC equity is redeemed as an estate settlement. Owners who are natural persons but don't have a birth year in the accounting records only receive an estate settlement redemption. Owners who are not natural persons do not receive any type of equity redemption.

The equity redemption program is defined as the combination of equity redemption methods used. The current Kanza program is categorized as the base strategy and is labeled as strategy S0 ("S zero"). The program is expressed in shorthand as  $S0=ES+AP/O72$ . If there is a limit on the size of the redemption budget, a normal condition when practicing strict balance sheet management, the priority of redemption is ES, then AP/O72.

The current Kanza redemption program does not use the full set of best practices as described earlier. The current program is unable to achieve strict balance sheet management and high proportionality of patron equity investment. There are four specific, interrelated disadvantages to the current program:

1. The redemption program is too inflexible to be able to adjust redemption cash flow to achieve working capital and solvency objectives, a requirement of best practice balance sheet management. This is because redemptions are triggered by special events, namely, a natural patron death or the achievement of age 72. Complete flexibility would require choosing not to redeem estates or redeem 100% of the eligible equity investment of those becoming age 72. Although co-ops have the legal power to use this discretionary authority most co-ops are reluctant to use the power for political and related economic reasons.
2. The AP/O72 redemption method results in highly variable and inflexible cash flows. For example, in 2010 the 1939 birth group (becomes age 72 in 2011) had total patronage ledger credit investment of \$407,353. The 1941 birth group had total investment of \$99,434. This high variability from year to year is characteristic of age of patron programs and makes it difficult to manage the balance sheet.
3. The AP/O method is relatively poor at managing individual patron equity accounts in a way that maintains equity investment as proportional to use as possible, a recommended goal in the cooperative business model.

4. Only natural persons receive equity redemptions. Patrons with other business forms, like partnerships and corporations, are not eligible for equity redemptions. In 2009 Kanza had a total of 2199 patron-owners holding PLC equity. Of those, 593 or 27% would not be able to receive redemptions because of their business form or lack of a birth year in the records, if a natural person.

The Kanza leadership team considered changes to the redemption program to improve the overall equity management program. It was decided to introduce a more preferred redemption method to the redemption program. The general preference order of redemption methods, from lowest to highest, is estate settlements (ES), age of patron oldest first (AP/O), percentage pool or percentage of all equities (PP), age of patron prorated (AP/P), revolving fund (RF) and base capital (BC).

The leadership team decided to evaluate the addition of a revolving fund redemption and the possible phase-out of the age of patron redemption. The new redemption program was expressed as ES+AP/O72+RF. It has the potential to achieve best practice performance in balance sheet management and equity management.

*Equity class relationships.* Kanza has an interesting policy controlling the way it manages stock investments by patron-owners whether they are voting members or non-voting patrons. Voting members hold common stock and non-voting patrons hold participating stock. Kanza expects patron-owners to accumulate a total of \$1,000 in common or participating stock before adding equity from retained patronage refunds to the primary equity class of patronage ledger credits (PLC). But when a patron achieves age 72 that stock requirement is reduced to \$300 so any amount over \$300 of stock is also redeemed along with the PLC investment balance. After age 72 future business and associated retained patronage refunds are invested back in the PLC equity class. This equity is redeemed later based on the redemption policy. The only way the traditional policy, represented by S0, redeems accumulations after age 72 is as an estate settlement. However, redemption policies using a revolving fund, such as ES+AP/O72+RF, have the ability to redeem this equity before it becomes an estate settlement.

The financial planning simulator was modified to make the appropriate equity investments and equity redemptions during the income distribution and equity redemption transactions in each projected year for each patron, given the starting position of each patron at the beginning of 2010. In other words, due to the nature of the Kanza policy, income distribution, equity investment and equity redemption are managed at the individual patron level for each strategy, including S0.

## **Where do we want to go?**

The Phase 1 project evaluated the difference between the current financial strategies and alternative strategies, including a modification in the redemption program to include a revolving fund to improve balance sheet management and the proportionality of patron equity investment. The Phase 1 project also evaluated the impact of alternative growth strategies. The Phase 2 project evaluated additional financial strategies, based on the analysis of the Phase 1 strategies.

Phase 1 constructed seven strategies, S0-S6. S0 represented the current policy. These strategies are described later in more detail. The Phase 2 project refined the strategies used to address this question. It modified the three Phase 1 strategies, S0-S2, and added eight additional strategies, S7-S14, also described later.

Three key policy decisions were made by the leadership team after the Phase 1 project. The decisions guided the work in Phase 2. First, it was decided to implement balance sheet management more rigorously by using a specific solvency target. Phase 2 examined three different sets of solvency targets, characterized as high, moderate and low.

Second, it was decided to improve the redemption program by adding a revolving fund redemption with the additional possibility of phasing out the age of patron redemption method. Several different combinations of solvency targets and age of patron redemption phase-out rates were selected for further analysis. The ultimate goal was to improve balance sheet management and patron equity account management by more strictly adhering to liquidity and solvency targets and by selecting equity redemption programs that are more effective in achieving liquidity and solvency targets and more effective in achieving the highest possible proportionality of patron equity investment.

Third, it was decided to restructure the patronage ledger credit (PLC) equity to make it more suitable for use by a revolving fund. Some year retained equity record entries are not accurate due to transfers from one accounting system to another within Kanza and from absorbed companies due to mergers. This resulted in all previous allocated equity being lumped into one year retained, such as 2003. Kansas State University has developed a restructuring process that spreads out the allocated equity of every affected patron-owner over previous years of business with the co-op (e.g., 1960-2010) in a fair and rational way. This facilitates the use of a revolving fund. This process has been used with several co-ops in a similar situation. A separate, detailed report was prepared for Kanza outlining how this restructuring was accomplished. The Phase 2 projections used restructured equity to make the financial projections.

The first objective, to implement strict balance sheet management by choosing a working capital target and a solvency target, is not possible by using the current income distribution program with a fixed cash patronage refund of 35% and an inflexible cash redemption with the current redemption program of estate settlements and age of patron redemptions at age 72. The current redemption program is expressed as  $S0=ES+AP/O72$ .

The second objective, to achieve a higher proportionality of equity investment to use for each patron, is substantially improved by using a revolving fund in addition to or in lieu of an age of patron redemption. Proportionality of equity investment measures the extent to which a patron's equity investment in any year is proportional to or parallels the amount of business the patron does with the co-op in that year. This is viewed as a highly desirable characteristic of cooperative equity management programs and is a measure of fair and equitable treatment of patrons.

The third objective, to restructure the PLC equity class, facilitates the use of a revolving fund and treats patrons, especially those without a birth year, in a more fair and equitable way.

Therefore, the primary focus is on three topics of interest. First, the leadership team wanted to evaluate the impact of taking a more strict approach to balance sheet management. This meant strictly managing liquidity or working capital, which Kanza had been doing, and strictly managing solvency, which Kanza had not been doing due to the nature of their equity redemption program. Strictly managing solvency means managing financial actions to achieve a specific policy target, such as 50% equity to assets or the equivalent debt to equity ratio such as 15%. A consequence is the ability to derive a redemption budget that controls the total amount of cash flow to all types of redemptions, combined.

Kanza traditionally has redeemed 100% of patron equity to the estates of patrons who died (estate settlement) and redeemed 100% of a patron's equity, except for a common or participating stock residual investment of \$300, when the patron becomes age 72 (age of patron, oldest first, at age 72). Estate settlements are unpredictable and age of patron redemptions vary widely from year to year, meaning Kanza loses control of its ability to manage the working capital and solvency of the balance sheet. Therefore, this traditional approach to equity management and redemptions would normally cause redemptions to be more or less than the calculated redemption budget. In turn, this causes solvency to be more or less than the board policy target for solvency. In Kanza's case, due to relatively high profitability, all of the available redemption budget would generally not be used with the current redemption program. It was believed that a more aggressive redemption program could be used to increase redemptions to patrons and still protect the balance sheet but it wasn't clear what the best financial strategy would be.

Second, the leadership team wanted to evaluate alternative redemption programs that fit the objective of balance sheet management with use of a specific solvency target and with patron equity account management designed to be more fair and equitable. It was also believed a more flexible program, such as one that used a revolving fund redemption, would have several benefits. Three benefits would be (1) the ability to redeem only the amount required to achieve the solvency target, (2) the ability to manage individual patron equity accounts so that patrons were more closely invested proportional to use than the current age of patron redemption program allowed, and (3) the ability to redeem equity to patrons with no birth year who do not currently receive age of patron redemptions.

Third, the leadership team wanted to restructure the equity to correct for inaccuracies in the year retained information. This would make the use of a revolving fund more effective and as fair as possible. Kanza has a situation that is common with most co-ops that use the age of patron redemption method. The problem is due to the fact most co-ops have patron-owners in their records that don't have birth years assigned. This means it is not possible to directly use an age of patron redemption method to redeem equity to those owners. Some of these owners are natural persons who have not provided a birth year. Others are partnerships, corporations, LLCs or other legal entities that are not natural persons and therefore don't have a birth year. In some cases it is possible to use a look-through method if multiple owners are all natural persons. Then ownership shares can be determined as well as birth years for the owners. But in general, age of patron redemptions are handicapped by the fact some owners don't have birth years.

Kanza has approximately \$1.56 million out of \$9.56 million held by patrons with no birth year. This is about 16% of the patronage ledger credit equity that potentially will not be eligible for an equity redemption unless the patron is a natural person and dies, creating an estate settlement claim.

This is an issue of fairness. Should some patron-owners, using a legal form that does not accommodate a birth year, be denied the opportunity to receive a redemption payment? Since some legal forms like LLCs and corporations don't normally die it is possible those patron-owners would never receive a redemption payment under the current redemption program. A revolving fund addresses this issue in a fair and equitable way. Other redemption methods, including percentage pool (percentage of all equities) and base capital also address this issue.

## How do we get there?

The general policy choices on three critical financial strategy issues were determined in the Phase 1 project when addressing the previous strategic question, Where do we want to go? Those three critical but general issues were (1) whether or not to implement balance sheet management with a strict solvency target, (2) whether or not to implement an improved redemption program and (3) what asset growth strategy to use. The decisions made at the conclusion of the Phase 1 project were to implement balance sheet management, to implement an improved equity redemption program that included a revolving fund and to grow according to the Scenario 1 growth path. But additional analysis was needed to determine the specific policies and strategies that will best achieve the objectives related to solvency and redemption programs, given the growth path and expected financial performance. In other words, more information was needed on the choices of how to achieve these objectives and the consequences of these choices, in the form of specific policies or strategies. The growth strategies evaluated in the Phase 1 project are summarized and then a more extensive description is provided of the alternative policies and strategies evaluated in the Phase 2 project.

**Phase 1.** Phase 1 evaluated three strategies using a no growth assumption (fixed asset investment equaled depreciation expense) to compare the traditional equity redemption program, S0, with two additional strategies, S1 and S2, designed to demonstrate better balance sheet management and patron account management. Kanza was interested in improving its equity redemption program by either adding a revolving fund redemption to the use of estate settlements and age of patron, represented in S1, or possibly phasing out the age of patron redemption while simultaneously phasing in a revolving fund redemption, represented in S2.

The S0 redemption program is represented by the relationship,  $S0=ES+AP/O72$ . First priority of redemption is estate settlements (ES) and the second priority is age of patron, oldest first at age 72 (AP/O72) with those becoming age 72 receiving 100% of their equity in eligible equity classes.

The S1 redemption program is represented by the relationship,  $S1=ES+AP/O72+RF$ . It operates identically to S0 except a solvency target is used to achieve strict balance sheet management. This requires the calculation of a redemption budget. The redemption budget is applied in the priority order noted: ES, then AP/O72 and any residual is applied to a revolving fund redemption, RF. Both liquidity



and solvency targets are enforced so the redemption budget is the largest amount possible that doesn't violate these financial targets.

The S2 redemption program is represented by the relationship,  $S2=ES+AP/O72(\text{phase-out \%})+RF$ . It operates identically to S1 except those patrons becoming age 72 may receive less than 100% of their account in the year they become 72. The percentage chosen is reduced over time with the intent of dropping the age of patron redemption when the rate goes to 0%. At that point the redemption program is simplified to  $S2=ES+RF$ .

Those who are approaching age 72 have been expecting to get 100% of their eligible equity redeemed when they become age 72. They can be expected to resist any changes if they are worse off under a new redemption program. Therefore it is important to work out a transition program that reduces the resistance of those patrons. The basic strategy is to introduce revolving fund redemption payments prior to age 72 so that those getting less than 100% of their eligible equity redeemed at age 72 have received enough revolving fund redemptions before age 72 to offset the reduction due to receiving less than 100%. This win-win outcome facilitates the transition.

A phase-out series of rates is chosen for each strategy with the objective of achieving a win-win cash flow outcome for those becoming age 72. For example, S2 had a series over the 10 years, 2010-2019, of 100% in 2010 and then a reduction of 10% each year to 90%, 80%, etc. The RF redemption still receives the residual of the redemption budget but this share increases as the AP/O share declines. The Phase 1 project demonstrated the concept with S2 but did not explore the ideal phase-out rate. The choice of the phase-out series has a major impact on the achievement of a win-win outcome. Phase 2 did explore the impact on cash flows of the traditional plan, S0 in Phase 1, versus other strategies using different phase-out rates. That information is presented later when discussing the Phase 2 project strategies and results.

Phase 1 also made a very rough estimate of the impact of using the Section 199 tax benefit. Kanza chose to distribute the amount of the deduction for patronage income to unallocated retained earnings. The non-patronage income proportion of 23% was raised to 30% as a rough proxy of the effect. A more sophisticated direct calculation was used in Phase 2.

There are several alternative ways to distribute the Section 199 benefits. We assumed Kanza would retain all the benefits at the co-op level and create tax free unallocated retained earnings from a portion of the patronage income. We also utilized whatever non-patronage income that was eligible for a Section 199 tax benefit. Other alternatives include passing the benefit on to patrons as a pass through or distributing patronage income as non-qualified retained patronage refunds. Some co-ops use a combination of alternatives depending on their situation. These can be explored at a future time if of interest.

Phase 1 also evaluated several alternative fixed asset investment growth strategies of interest to Kanza. The intent was to determine the feasibility and desirability of various growth strategies. Four additional strategies, S3-S6, were constructed. Each used the same assumptions as S1, except for the no growth assumption in S1 that was replaced by four alternative growth scenarios. They are summarized below:

S3: Maximum growth possible that achieves the liquidity and solvency targets and still maintains the traditional equity redemption program of ES+AP/O72 with no redemption budget left to apply to a revolving fund redemption.

S4: Management specified growth scenario 1 that is labeled “grain facility upgrades.”

S5: Management specified growth scenario 3 that is labeled “grain upgrades with 2017 flat storage added.”

S6: Management specified growth scenario 2 that is labeled “grain and agronomy facility upgrades.”

Based on this evaluation, management recommended that all Phase 2 strategies with a growth assumption be based on the selection of growth scenario 1.

**Phase 2.** Phase 2 evaluated eight alternative strategies, S7-S14, and used the Scenario 1 growth assumptions in each. The additional strategies used the same assumptions as strategy S2 except for variations in two other policy factors: solvency level and age of patron phase-out speed. Alternative solvency target policies were none, high, moderate and low. Alternative AP/O72 phase-out speeds were none, fast, moderate and slow. Not all combinations were feasible or logical so the possible total number of combinations of 16 (4x4) was reduced to 8. Values for the solvency target and phase-out rate are set for each strategy, S7-S14, for each year of the ten year projection, 2010-2019. They are defined in Exhibit 4.

One major refinement made in Phase 2 was the direct estimation of the tax benefits of Section 199 in a more realistic way. The non-patronage income distribution assumption was reduced from 30% (a proxy to represent a higher proportion of total income being distributed to unallocated retained earnings due to Section 199) to the actual expected rate of 23%. A review of the Section 199 rules and the way in which Kanza’s accounting and tax adviser, Mike Meisenheimer, calculated the Section 199 benefit and its distribution was incorporated into the simulator. Compare Exhibits 2 and 3 to see how this was incorporated in Phases 1 and 2, respectively.

A base strategy, S7, was constructed and used as a baseline on redemption cash flow and proportionality when evaluating whether patrons would be expected to achieve a win-win cash flow if Kanza chose to use any other strategies than S7 and which strategies had the best proportionality performance. S7 used only the traditional equity redemption program of estate settlements and age of patron redemptions to those turning age 72. S7 did not have a solvency target or a phase-out of age of patron redemptions. S7 was the same as S0 except it used growth scenario 1 instead of the no growth assumption. It was expressed as S7=ES+AP/O72.

S8 is the same as S7 except it includes a solvency target and the addition of a revolving fund redemption. It was expressed as S8=ES+AP/O72+RF. The age of patron redemption was not phased out.

S9-S14 are the same as S8 except they include selected combinations of a solvency target choice (high, moderate or low) and an AP/O72 phase-out rate (fast, moderate or slow). See Exhibit 4 for the details

on the assumptions made. The purpose behind looking at these combinations is to determine the impact on cash flow to patrons, especially those becoming age 72 during the 10 year projection period, given the choice of different solvency levels and phase-out rates. The ultimate intent is to find combinations that provide a win-win cash flow outcome for all patrons in a redemption program transition which replaces the age of patron redemption with a revolving fund redemption.

*Analysis of strategies S7-S14.* The eight strategies, S7-S14, were compared on the basis of six key factors. The six factors are:

1. Financial performance, including profitability, solvency, size and growth of assets and sales. Liquidity is also of critical interest but working capital was managed to achieve a target level consistent with the balance sheet management philosophy. See Exhibits 5-9.
2. Cash flow, including total cash flow to all patrons and cash flow to patrons by birth year. See Exhibits 10-11.
3. Proportionality of patron equity investment using the proportionality index. See Exhibit 12.
4. Redemption performance metric for AP/O and RF methods. See Exhibit 13 for the revolving fund length metric.
5. Equity turnover rates of allocated equity. See Exhibit 14.
6. Equity structure showing change in mix of permanent, semi-permanent and revolving allocated equity. See Exhibit 15.

Some factors are more important than others at this stage of the analysis. At this stage the focus is on evaluating alternative equity management programs (solvency targets and redemption programs) and selecting the most effective program, all things considered. The most critical question to address at this stage, given the commitment to balance sheet management and a transition to a higher performing redemption program that includes a revolving fund redemption, is how do the strategies perform on two key factors, cash flow and proportionality?

*Cash flow.* The most important cash flows to track are those to the patrons most concerned about a transition that introduces the use of a revolving fund redemption and phases out the age of patron redemption. Those are the patrons becoming age 72 in the next few years. Our projections measured the cash flow to birth groups becoming age 72, 1938-47, for the projection years 2010-2019. Exhibit 11 contains the metrics of interest.

First, determine if every birth year is expected to experience a win-win cash flow in the transition. A win-win is achieved if the net present value of the cash flow of any alternative strategy, S8-S14, is higher than the cash flow from the current policy, S7. Exhibit 11 makes that comparison.

Strategy S7 is the baseline and all birth years are 100%. The simple question is do the other strategies generate cash flows that fall below or above S7 cash flows for each birth year? And if they fall below is it significant? Significance can be viewed in terms of the percentage received or the dollars received. For example, the lowest performance is by S9. S9 has the highest solvency target, ending at 54% equity to assets in 2019, meaning the redemption budget will be lower than strategies like S12-S13 with a moderate target ending at 50.5%, or S14 with a low target ending at 47%. Also, S9 has a fast phase-out

rate, meaning less is paid out as an age of patron redemption. S10 has a better result than S9 because the phase-out rate is slower. Both have the same solvency target. If high solvency is important one possible strategy is to use a slow phase-out rate, as shown in S11. So how important is the solvency target compared to the ability to create a better win-win set of outcomes using a lower solvency target? The leadership team should look at this set of choices and try to select the one that is the best, all things considered.

Strategies S8 and S14 are equal or better than S7 for all birth years. S13 falls below for the 1947 birth group. S11 and S12 fall short for the 1946-47 birth groups. S9 and S10 fall short for 1945-1947 birth groups. But in all cases the percentage differences from 100% are small and the dollars are small, on average. The largest average annual cash flow deficiency is for S9 and the 1947 birth group, with a value of minus \$252.41.

*Proportionality.* The proportionality performance of each strategy is measured by the proportionality index. The index at the end of the projection, in 2019, is reported in Exhibit 12. The set of strategies, S0-S2, are no growth strategies so are not comparable to S7-S14, which use the Scenario 1 growth strategy. Clearly, adding a revolving fund improves proportionality and phasing out the age of patron redemption improves proportionality even more. S1 is better than S0, with values of 0.938 versus 0.876, because it introduces a revolving fund but keeps the age of patron redemption. This is an improvement of 7% by S1 over S0. S2 is better than S1, with values of 0.988 versus 0.938, because it phases out age of patron by 2019 and uses only estate settlements and a revolving fund. This is an improvement of 5% by S2 over S1 but an improvement of 13% by S2 over the traditional program, S0. Similar improvements are made when comparing S7-S14. Note that S9-S14 all have similar proportionality performances.

The basic message is that a revolving fund redemption method is much more effective in achieving high proportionality than the age of patron redemption method. In addition, a revolving fund facilitates the use of balance sheet management and provides substantially more flexibility than a program using age of patron. Also, a revolving fund is more fair and equitable to those without birth years.

### **What decisions need to be made now?**

Following are a series of interrelated comments that are a mix of summarizations, conclusions and recommendations. This is a synthesis of the information provided in the Phase 2 project that will help address the fourth strategic question, What decisions need to be made now?

There are eleven sets of comments. The second through the sixth were directly evaluated in the Phase 1 and Phase 2 analyses. The first and seventh through eleventh could be evaluated at some future time, if of interest.

1. **Profitability.** Profitability is the most important driver in determining the relative performance of any financial strategy. Improving and maintaining profitability should be the primary focus of financial policy-making. Kanza has a recent history of relatively high profitability and the projections for 2010-2019 maintained profitability at the recent

historical levels. The Phase 1 and Phase 2 projects made a profitability projection consistent with this history. Phase 2 had higher cash flows and equity redemptions than Phase 1, primarily due to using a more accurate and more direct estimation of the benefits of Section 199, everything else equal. If profitability ends up being significantly above or below the projections it will have substantial impacts on the ability to implement the strategies as presented and the performance of those strategies in terms of cash flow, proportionality and other metrics. If the benefits of Section 199 are reduced or eliminated the performance metrics will also decline. However, the philosophy of balance sheet management integrates all the factors in financial strategy formation and execution. This gives Kanza the ability to adjust its strategies to fit the situation it faces in any year.

2. **Balance sheet management.** Rigorous balance sheet management is strongly recommended. This includes requiring the achievement of a working capital or related liquidity target, the achievement of a solvency target and the computation of an equity redemption budget as the residual use of available funds. It is based on the philosophy that the co-op business is an extension of the patron-owners' businesses, that the co-op business and balance sheet should be protected to enable it to serve patrons, and that patron-owners get what is left over. This makes the job of executives, individual directors and the board of directors much easier since policy is guided primarily by an economically and philosophically sound long-run, sustainable view of the business model of Kanza.
3. **Fixed asset investment.** Fixed asset investment purchases and the implied growth of net fixed assets is a key driver of the primary financial metrics of interest, such as profitability, liquidity, solvency, cash flow to patrons and proportionality of patron equity investment. A likely growth scenario, scenario 1, was used in the projections. However, Kanza may decide to change the growth pattern for good reasons. A change will not limit the ability to practice balance sheet management or make a transition to a better equity redemption program. It will change the cash flow dynamics but not the overall attractiveness of these policies. Solvency targets and age of patron redemption method phase-out rates can be adjusted if necessary to accommodate different situations.
4. **Working capital.** The choice of a working capital target is a key driver. The target chosen, \$10 million in 2010 with a growth of 3% per year (paralleling the sales growth projection), is consistent with the CoBank working capital covenant. Due to the higher financial volatility and risk faced by grain marketing and farm supply retail businesses like Kanza, a lower working capital target is not recommended. A higher target is possible but will reduce the cash flow to redemptions and the ability to create a win-win cash flow to patrons turning the age of 72.
5. **Solvency.** The choice of a solvency target in each year is critical. Three patterns were evaluated for the years, 2012-2017. No targets were set for 2010 and 2011. The year 2010 was history and 2011 was not controlled due to the fact no revolving fund redemption was expected to be used at the conclusion of the 2011 year.
  - a. The low solvency pattern used a target of 47% equity to assets in all years, 2012-2019. This was close to the expected solvency level at the end of 2011, after estate settlement redemptions and age of patron redemptions, of 46.5%. This target was

used only for strategy S14 and was paired up with an age of patron redemption fast phase-out. A low solvency target provides the largest redemption cash flow budget possible. This high redemption cash flow ended up providing a clear win-win cash flow for all birth years when phasing out the age of patron redemption method and it produced the highest proportionality ratio of any strategies. However, risk management may be a much higher priority than redemption cash flow. If that is the case, a higher solvency target should be selected.

- b. The moderate solvency pattern used a target of 47% in 2012 and increased it gradually to 50.5% in 2019. S12 and S13 used this target. Cash flow was good and only birth years 1946-47 were below the win-win target of 100%. Proportionality was also high. The moderate solvency target allowed the use of a fast or moderate phase-out rate for age of patron redemptions with very close to win-win cash flow. This solvency pattern may be the best, all things considered, if high risk doesn't convince Kanza to select a high solvency target, like 54% by 2019.
  - c. The high solvency pattern used the target of 47% in 2012 and increased it gradually to 54% in 2019. This should be the choice if the future is expected to be extremely risky. The slower AP/O72 phase-out speed, moderate or slow, can be selected if necessary to get close enough to win-win cash flow.
6. **AP/O72 phase-out rate.** The choice of the phase-out rate or pattern for phasing out the AP/O72 equity redemption method is critical to achieve a win-win outcome. The S8 strategy has no phase-out. This is not recommended since it keeps a highly inflexible and variable cash flow requirement that is relatively high, even when used in combination with a revolving fund. It also favors patron-owners with a birth year at the expense of those without one. The solvency decision normally should be given higher priority than the speed of transition out of using the AP/O72 redemption method. It is a somewhat subjective judgment on how far below a win-win outcome of 100% is acceptable for a given birth year. Note that the revolving fund length in any strategy is relatively short, a decision factor noted next. The revolving fund length by 2019 varies from 5 years for strategies S9-S11, to 4 years for strategies S12-S13, to 3 years for S14. These are very short revolving fund lengths compared to those achieved by most co-ops. Even the 1947 birth group is not likely to be unhappy with a 5 year revolving fund by the year it would normally get its age 72 redemption, 2019, even if the rate was zero % and no age of patron redemption was given. This short revolving fund length perception should be very affirming, especially for those who normally would keep doing business after age 72 and now will get revolving fund redemptions instead of needing to wait for an estate settlement.
7. **Proportionality, revolving fund length and allocated equity turnover rate.** The preferred financial strategy is one that achieves high proportionality, a short revolving fund length and a high allocated equity turnover rate. These three factors are highly correlated. Proportionality is reported in Exhibit 12. Revolving fund length is reported in Exhibit 13. Allocated equity turnover rate is reported in Exhibit 14. Strategies S9-S14 all have relatively high performance compared to most other co-ops and to the traditional Kanza equity redemption program of S7.

8. **Cash patronage rate.** The cash patronage rate should be set high enough to cover the marginal income tax obligations of most patrons. All strategies used a cash patronage rate of 35%. This is an acceptable rate to most patrons since it covers the marginal income taxes of most patrons when using a qualified distribution of patronage refunds, as Kanza currently uses. A higher cash rate should be considered at some point because it has a strong positive impact on patron-customer views of the co-op. Higher cash patronage would likely increase business from patrons. However, it is not recommended the rate be increased until the AP/O72 redemption method is phased out, since higher cash patronage will reduce equity redemption cash flow and make the phase-out more difficult. In other words, there is a trade-off between cash patronage rate and the length of the revolving fund. But in 5-10 years, depending on growth and profitability, a higher cash patronage rate, such as 50%, may be preferred to a very short revolving fund of 3-5 years.
9. **Qualified versus non-qualified distributions.** The choice of qualified versus non-qualified patronage refund distributions has a major impact on cash flows. Only qualified distributions were used in the projections. However non-qualified distributions have advantages when used in combination with the Section 199 tax benefit and have advantages in the long-run capitalization of the co-op. Many co-op finance experts believe that patrons would prefer non-qualified distributions since the effective outcome would be, patrons only pay taxes on cash they receive from the co-op as either cash patronage refunds (always qualified) or redemption of non-qualified equity.
10. **Section 199 tax benefit.** There are many different ways to utilize the Section 199 tax benefit. The Phase 2 project assumed the grain business would produce a significant tax benefit through the ability to apply a relatively high value for per-unit retains paid in money (PURPIM) on patronage grain volume and use of other factors. It also assumed the benefit was retained at the co-op level by creating unallocated retained earnings from the corresponding portion of the patronage income that could be distributed with no income tax. Many other scenarios can be evaluated including different ways to distribute income and claim the benefit, including non-qualified distributions and a pass through to patrons. Another possibility to evaluate is the complete elimination of this tax benefit at some time in the future.
11. **Regional co-op income distribution and equity management programs.** Regional co-op income distribution and equity management programs have a major impact on cash flows in a local co-op. They must be projected to determine the likely financial condition of the co-op in the future. The Phase 1 and Phase 2 projects included an estimate of the impacts of several regional co-op programs on Kanza, given its expected volume of business with each co-op. The major co-op's individually estimated were CoBank, CHS and Land O'Lakes, based on their current programs.

There is sufficient information from the Phase 1 and Phase 2 project reports to make most of the financial policy choices of highest interest at the present time. Additional strategies can be formulated and analyzed if necessary to support the policy-making process.

There are two key ideas to keep in mind when establishing financial policy and an implementation plan. First, the board of directors should maintain maximum flexibility within the boundaries of the law and Kanza's bylaws. In a rapidly changing environment this makes it more likely the board can maximize the benefits to patrons who use, own and control the co-op. This is accomplished by clearly outlining the parameters of board discretion. Second, the board should review Kanza's bylaws to confirm it has the authority to utilize a revolving fund redemption method without changing the bylaws. A change in bylaws may be required. If so, it normally requires a vote by the membership.



Exhibit 1

**Barton Cooperative Income Distribution Model: Kanza Phase 2 S0-S2, S7-S14**

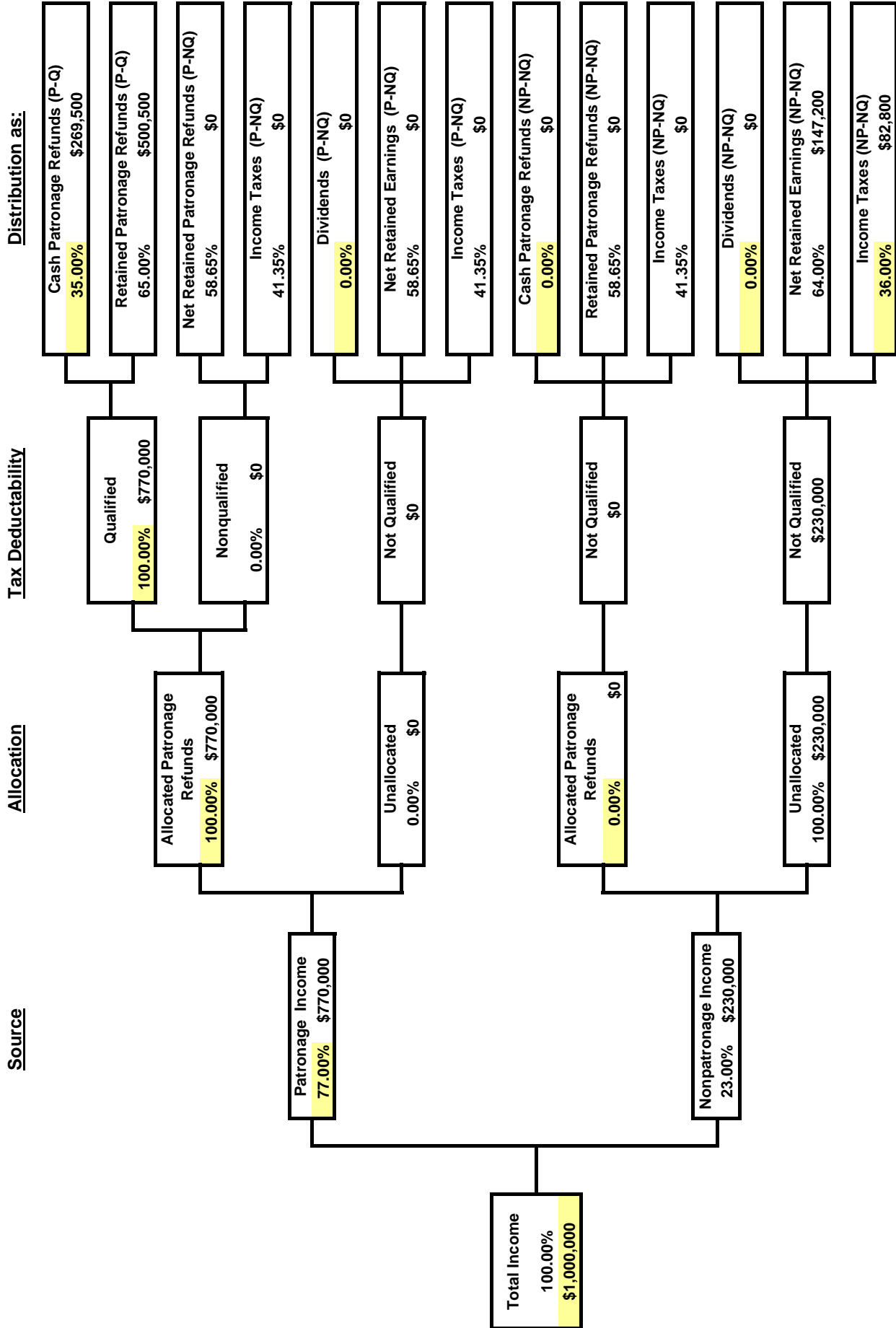


Exhibit 2

**Barton Cooperative Income Distribution Model with Section 199: Kanza Phase 2 S0-S2, S7-S14**

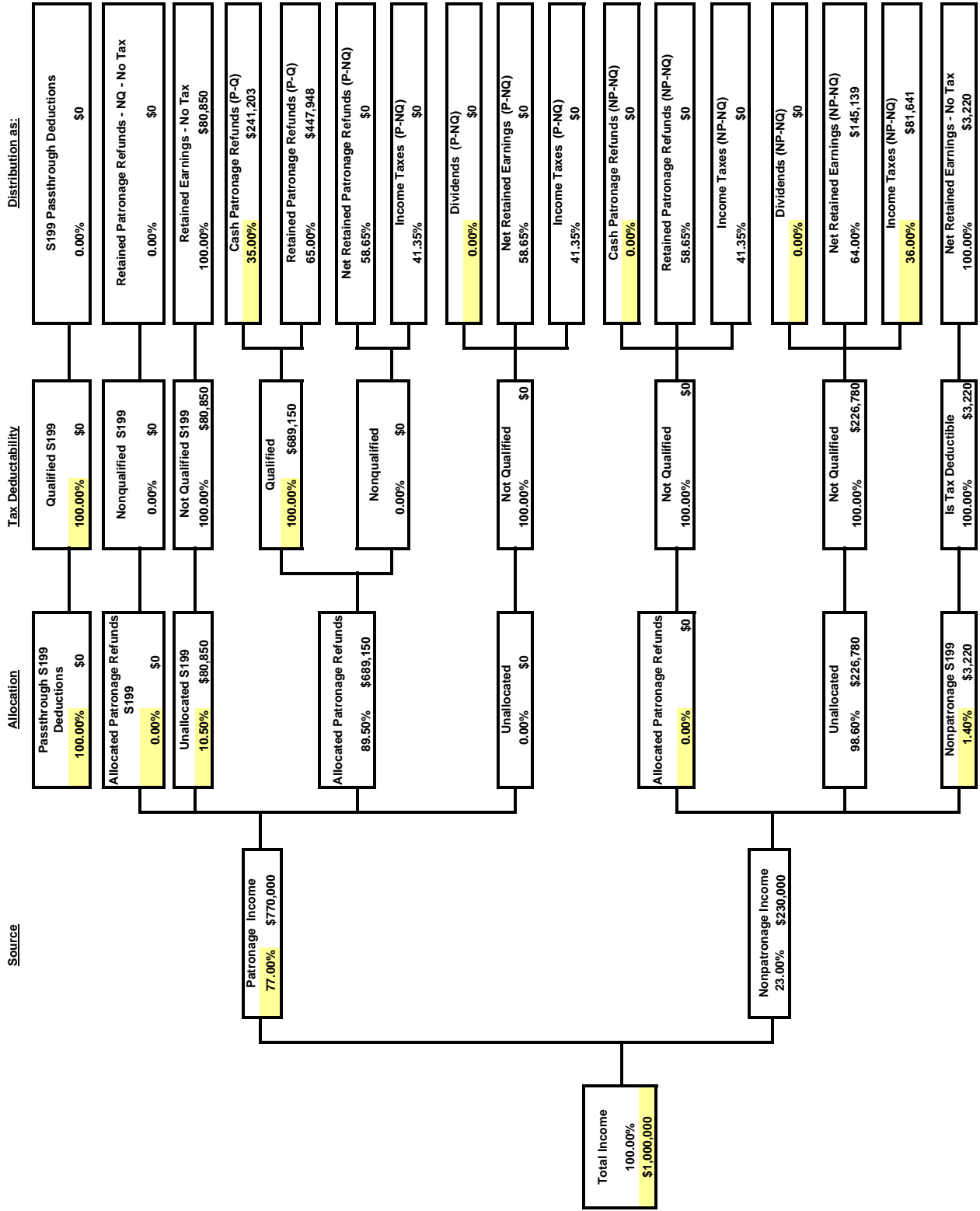


Exhibit 3

Kanza Cooperative Association  
Tuka, Kansas

BALANCE SHEET  
December 31, 2009 and 2008

	ASSETS		LIABILITIES AND MEMBERS' EQUITY	
	2009	2008	2009	2008
<b>CURRENT ASSETS</b>			<b>CURRENT LIABILITIES</b>	
Cash	\$2,294,960.75	\$2,179,189.81	Grains payable	\$ 6,969,462.96
Investments securities available-for-sale	436,200.00	884,228.00	Accounts, taxes and expenses payable	3,096,728.53
Accounts and notes receivable - trade	1,768,232.76	2,016,404.99	Collections received in advance	2,000,901.22
Allowance for doubtful accounts	(50,000.00)	(50,000.00)	Grain storage collected in advance	1,872.00
Grains receivable - trade	11,449,129.61	12,688,913.34	Current maturities of notes payable	11,782,224.55
Grain storage receivable	874,640.26	703,821.70	Current maturities of certificates of indebtedness	322,745.58
Prepaid inventories	1,183,191.10	5,355,672.51	Current maturities of capital lease obligations	15,139.96
Hedge margin deposits	815,367.62	0.00	Patronage dividends payable	1,092,071.87
Other receivables	1,770,071.68	1,746,591.23	Deferred income taxes	0.00
Inventories	15,237,313.96	7,161,992.47	Income taxes payable	454,634.49
<b>TOTAL CURRENT ASSETS</b>	<b>35,779,107.74</b>	<b>32,686,814.05</b>	<b>TOTAL CURRENT LIABILITIES</b>	<b>25,735,781.16</b>
<b>INVESTMENTS</b>				
Corporate stock and limited liability companies	4,676,599.45	4,157,682.52	<b>LONG-TERM, LIABILITIES, excluding current maturities</b>	
<b>PROPERTY, PLANT AND EQUIPMENT</b>			Notes payable	3,018,408.00
Cost	39,952,097.38	36,633,278.54	Certificates of indebtedness	1,611,795.60
Accumulated depreciation	(24,815,385.27)	(23,544,210.36)	Capital lease obligations	79,917.29
<b>NET PROPERTY PLANT AND EQUIPMENT</b>	<b>15,136,712.11</b>	<b>13,089,068.18</b>	Grain contracts payable	146,800.21
<b>OTHER ASSETS</b>			<b>TOTAL LONG-TERM LIABILITIES</b>	<b>4,856,921.10</b>
Franchise fees	847.15	1,982.75	<b>MEMBERS' EQUITY</b>	
Goodwill	28,515.00	0.00	Common stock	1,138,450.00
<b>TOTAL OTHER ASSETS</b>	<b>29,362.15</b>	<b>1,982.75</b>	Participating stock	122,400.00
<b>TOTAL ASSETS</b>	<b>\$55,621,781.45</b>	<b>\$49,935,547.50</b>	Patronage ledger credits	9,197,388.06
			Deferred patronage dividends	602,882.97
			Retained earnings	13,973,549.14
			Accumulated other comprehensive income (loss)	(5,590.98)
			<b>TOTAL MEMBERS' EQUITY</b>	<b>25,029,079.19</b>
			<b>TOTAL LIABILITIES AND MEMBERS EQUITY</b>	<b>55,621,781.45</b>
<b>Liquidity</b>				
Working capital (CA-CL)	\$10,043,326.58	\$9,813,726.38	Equity to Assets (ME/TA)	45.00%
Current ratio (CA/CL)	1.39	1.43	Adjusted Equity to Assets (ME/(TA-CL))	83.75%
			Debt to Equity (LTL/ME)	19.41%
			Retained Earnings to Equity (RE/ME)	55.83%
				49.80%

### Exhibit 4

Table 9.2.1. S7-S14 Strategy Assumptions		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Year:											
S7 Solvency: None	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
AP/O72 PO Rate: None	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
S8 Solvency: High	N/A	N/A	47.0%	48.0%	49.0%	50.0%	51.0%	51.0%	52.0%	53.0%	54.0%
AP/O72 PO Rate: None	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
S9 Solvency: High	N/A	N/A	47.0%	48.0%	49.0%	50.0%	51.0%	51.0%	52.0%	53.0%	54.0%
AP/O72 PO Rate: Fast	100%	100%	100%	90%	80%	70%	60%	60%	40%	20%	0%
S10- Solvency: High	N/A	N/A	47.0%	48.0%	49.0%	50.0%	51.0%	51.0%	52.0%	53.0%	54.0%
AP/O72 PO Rate: Moderate	100%	100%	100%	90%	80%	70%	60%	60%	45%	30%	15%
S11 Solvency: High	N/A	N/A	47.0%	48.0%	49.0%	50.0%	51.0%	51.0%	52.0%	53.0%	54.0%
AP/O72 PO Rate: Slow	100%	100%	100%	90%	80%	70%	60%	60%	50%	40%	30%
S12 Solvency: Moderate	N/A	N/A	47.0%	47.5%	48.0%	48.5%	49.0%	49.0%	49.5%	50.0%	50.5%
AP/O72 PO Rate: Fast	100%	100%	100%	90%	80%	70%	60%	60%	40%	20%	0%
S13 Solvency: Moderate	N/A	N/A	47.0%	47.5%	48.0%	48.5%	49.0%	49.0%	49.5%	50.0%	50.5%
AP/O72 PO Rate: Moderate	100%	100%	100%	90%	80%	70%	60%	60%	45%	30%	15%
S14 Solvency: Low	N/A	N/A	47.0%	47.0%	47.0%	47.0%	47.0%	47.0%	47.0%	47.0%	47.0%
AP/O72 PO Rate: Fast	100%	100%	100%	90%	80%	70%	60%	60%	40%	20%	0%

Exhibit 5

Figure 9-3. Return on Equity

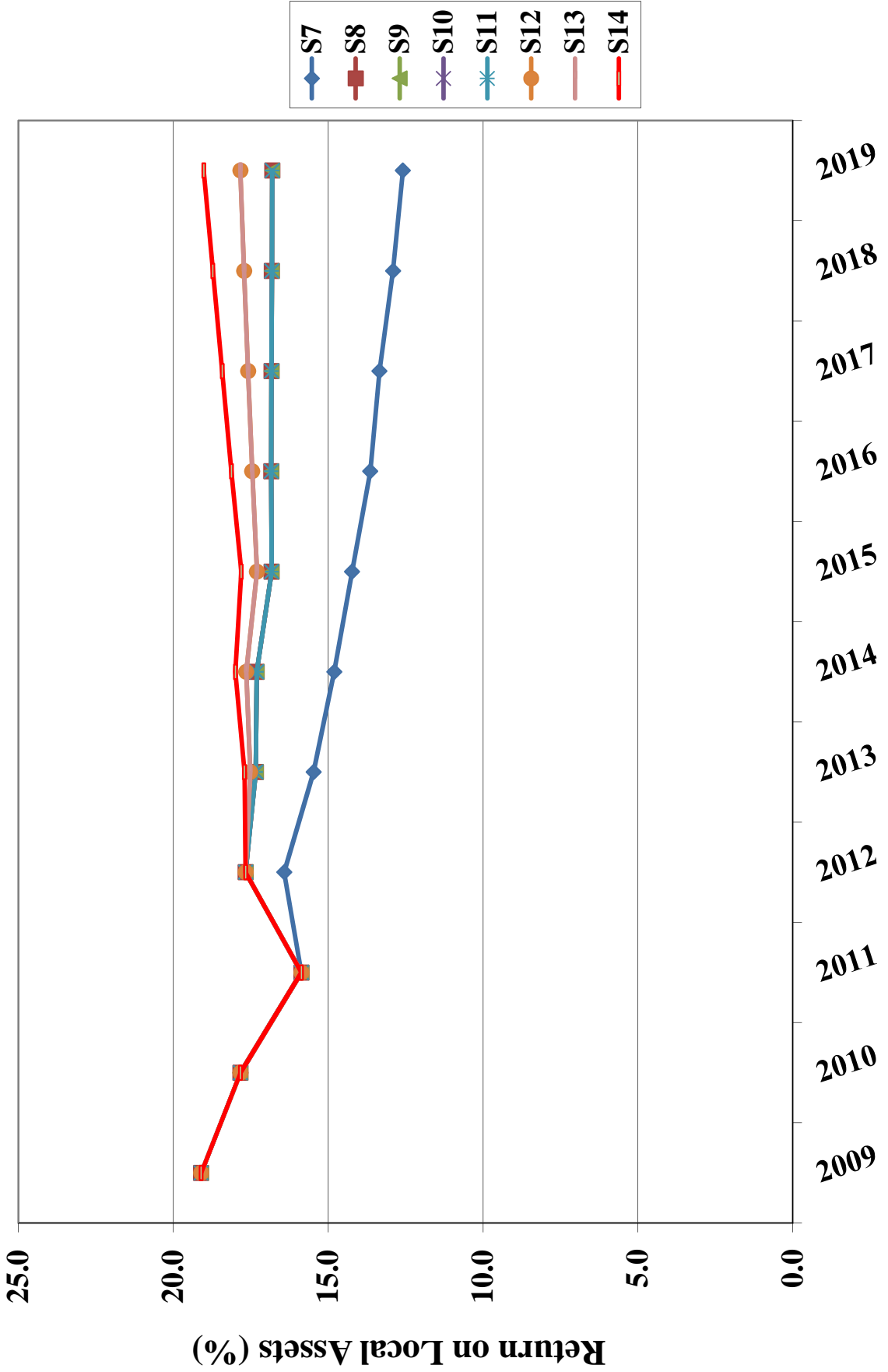


Exhibit 6

Figure 9-5. Working Capital

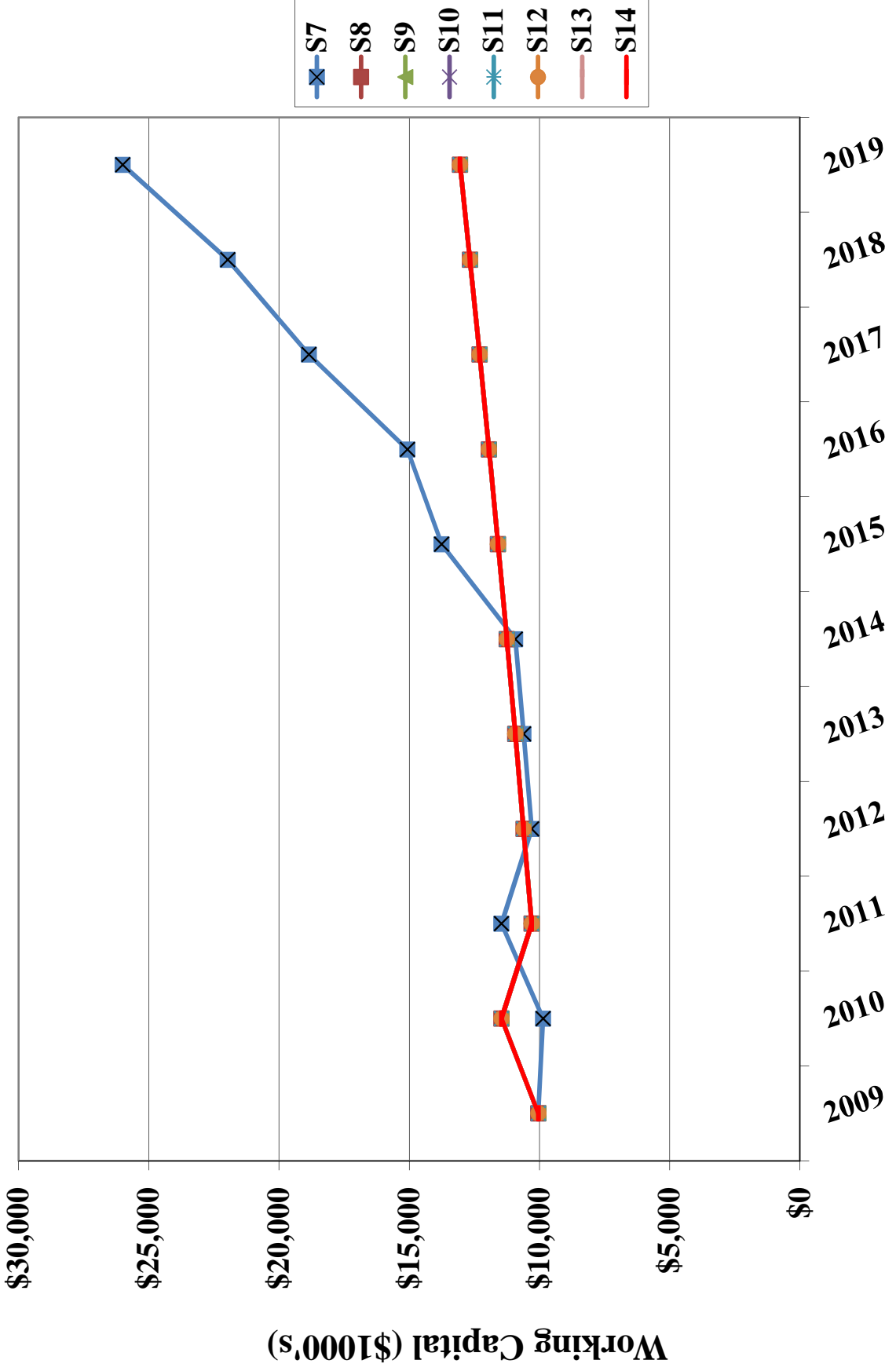


Exhibit 7

Figure 9-6. Equity to Assets

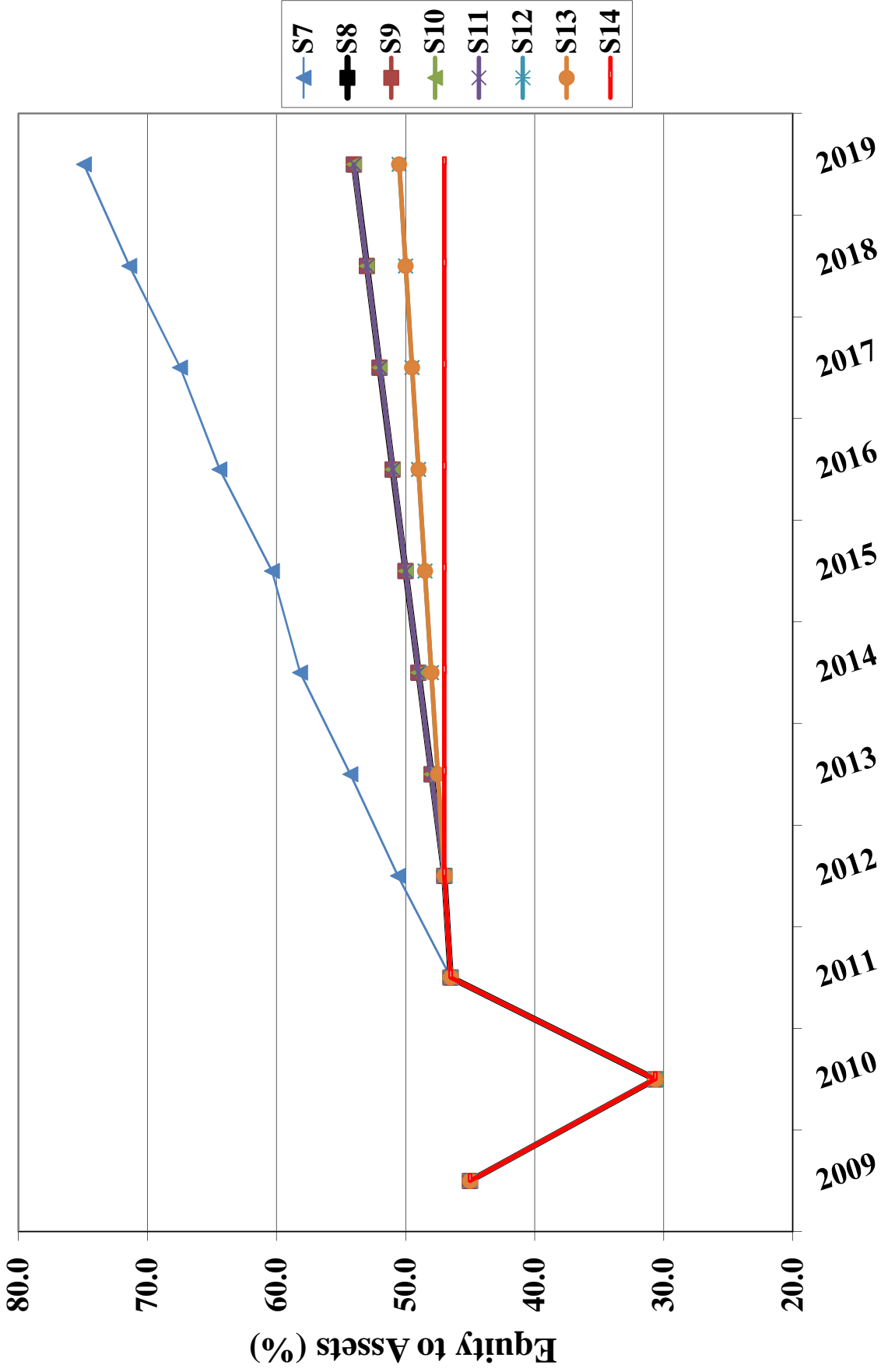


Exhibit 8

Figure 9-10. Total Investments

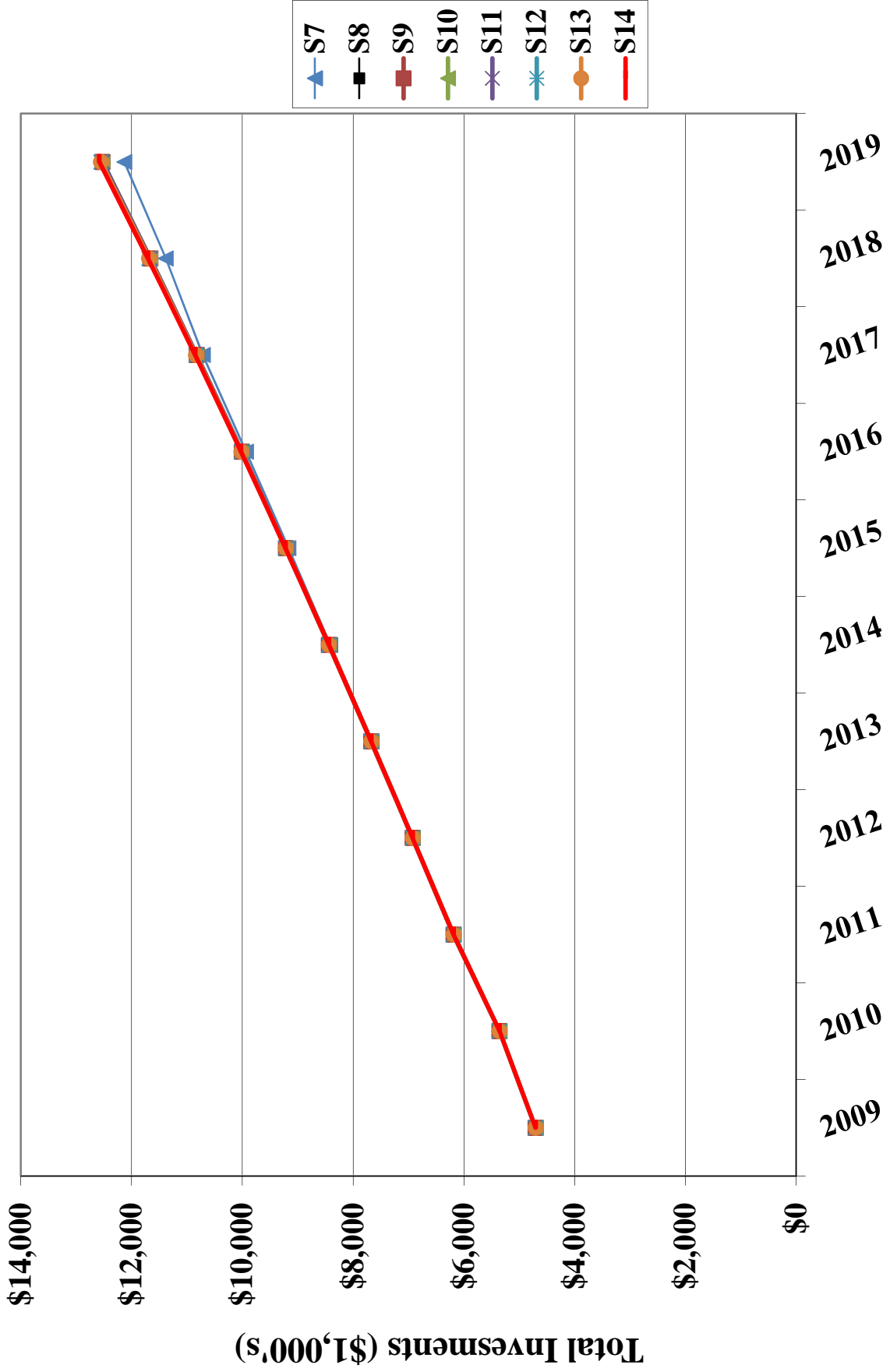
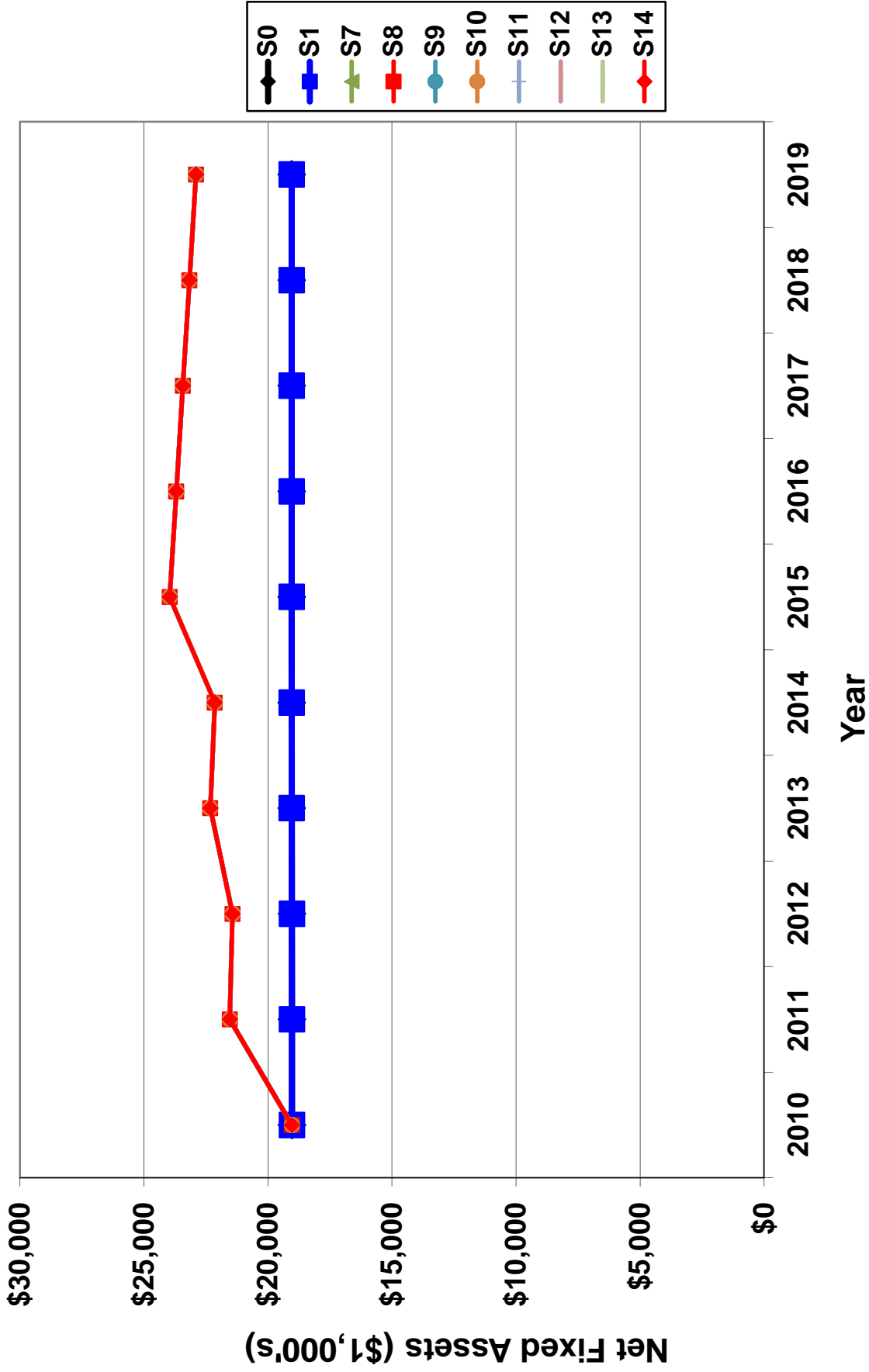


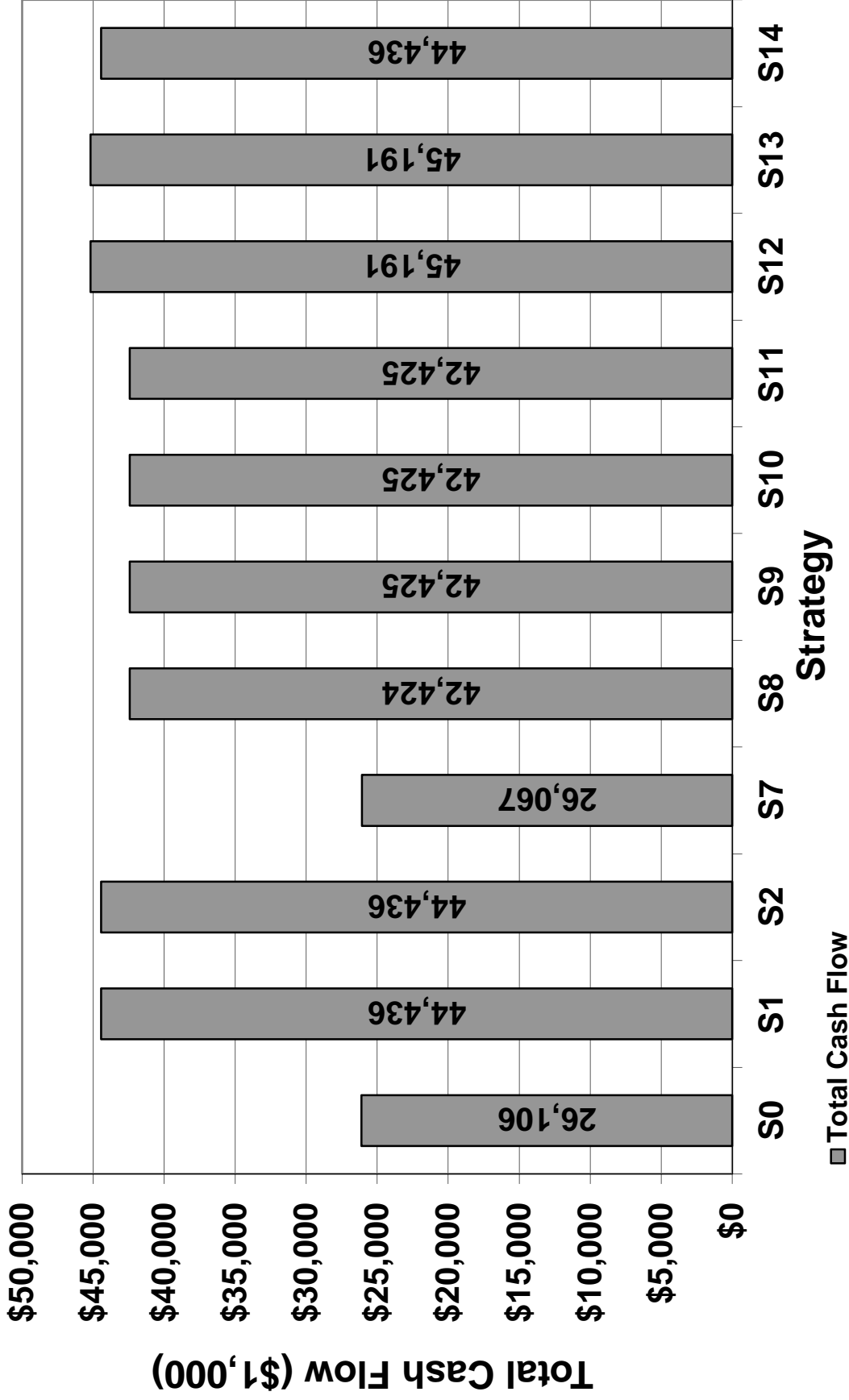


Exhibit 9

Figure 9-11. Net Fixed Assets



# Figure 9-19. Present Value of Total Cash Flow to Patrons by Strategy, 2010-2019



## Exhibit 11

Table 9.1.9. Total Discounted Cash Flows to Birth Year Groups S7-S14 as a percentage of S0 by Strategy for Birth Years of Patrons turning age 72, 2010-2019

Strategy:	S7	S8	S9	S10	S11	S12	S13	S14
<i>Solvency Target:</i>	N/A	High	High	High	High	Moderate	Moderate	Low
<i>Phase-Out Rate:</i>	N/A	N/A	Fast	Moderate	Slow	Fast	Moderate	Fast
1938	100.00%	124.53%	126.97%	126.72%	126.46%	134.54%	134.35%	142.12%
1939	100.00%	111.75%	113.27%	113.10%	112.94%	117.92%	117.80%	122.66%
1940	100.00%	108.09%	109.61%	109.44%	109.27%	114.38%	114.25%	119.14%
1941	100.00%	104.65%	105.05%	104.91%	104.76%	109.04%	108.93%	113.07%
1942	100.00%	103.83%	103.52%	103.38%	103.24%	107.35%	107.24%	111.35%
1943	100.00%	106.11%	103.41%	103.36%	103.32%	105.92%	105.81%	110.01%
1944	100.00%	105.83%	100.84%	100.77%	100.71%	103.19%	103.14%	106.19%
1945	100.00%	108.47%	99.27%	99.96%	100.66%	102.80%	103.27%	106.20%
1946	100.00%	109.41%	94.33%	96.12%	97.94%	98.92%	100.28%	103.48%
1947	100.00%	111.80%	89.87%	93.05%	96.29%	95.48%	98.06%	101.01%

Source Table 9.1.6

**Figure 9-22. Proportionality Index in 2019, S0-S2, S7-S14, Patronage Ledger Credits**

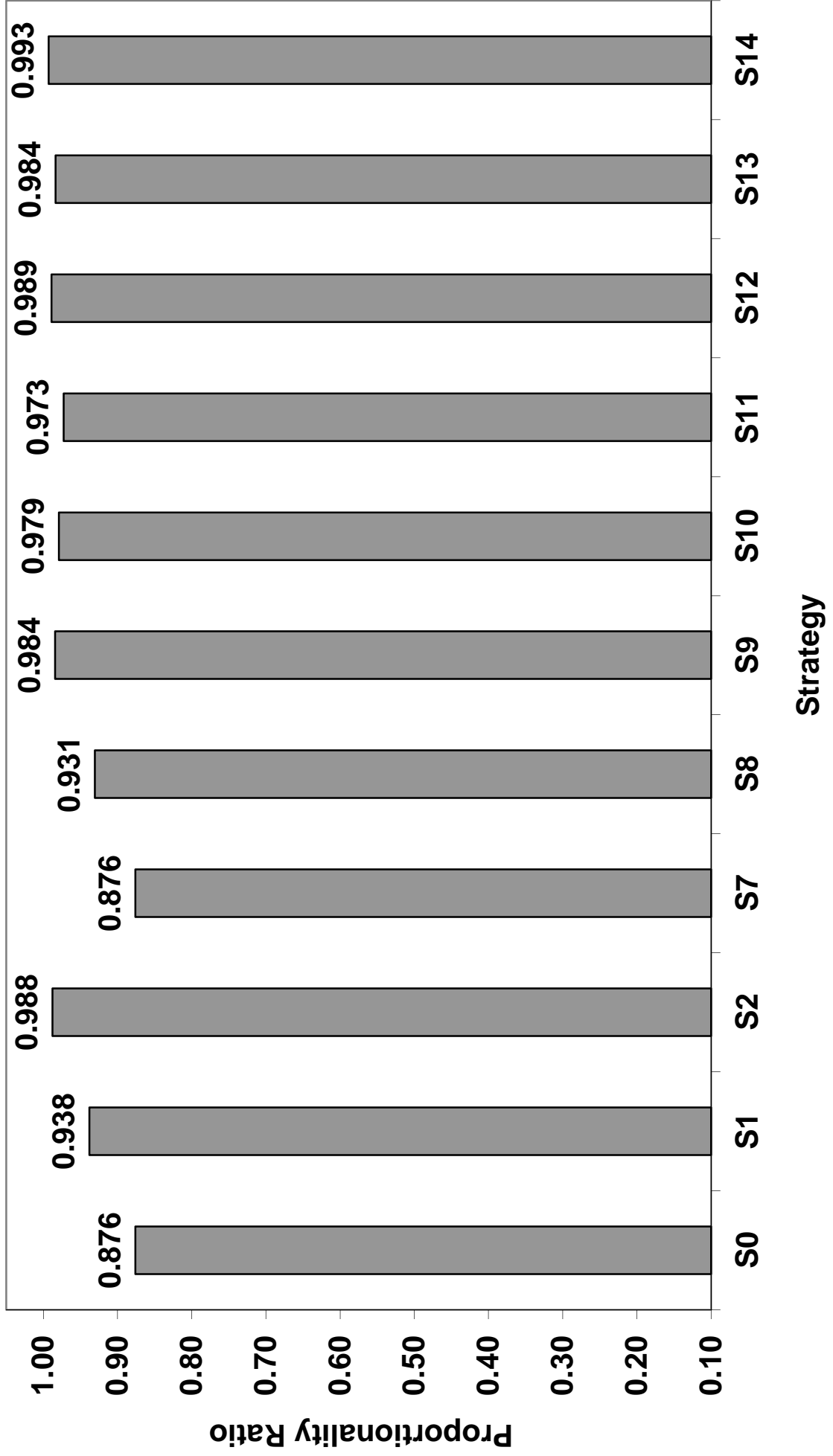
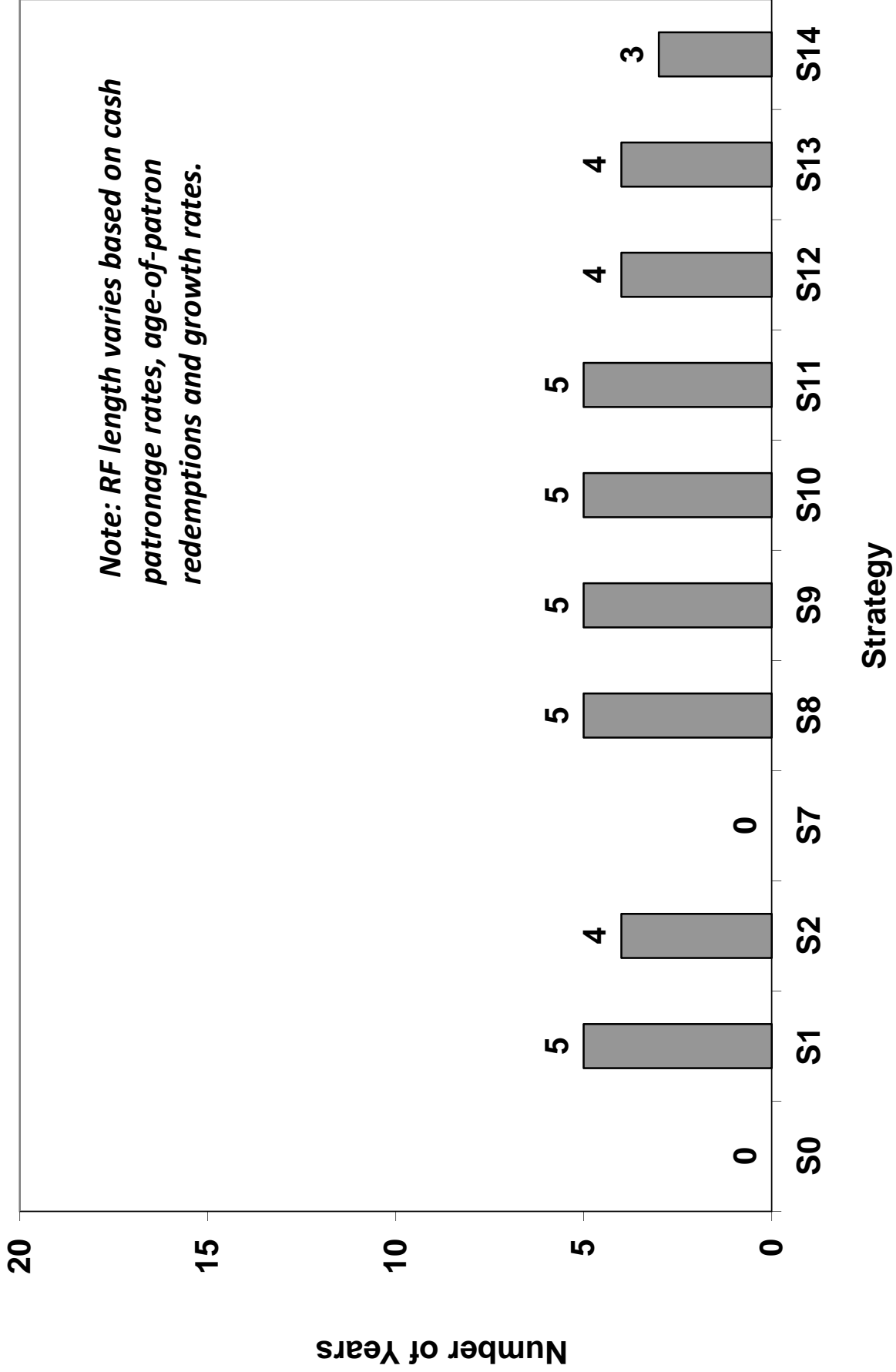


Exhibit 13

# Figure 9-27. Revolving Fund Length in 2019 by Strategy



**Figure 9-17. Average Turnover Percentage, 2010-2019: All Allocated Equity**

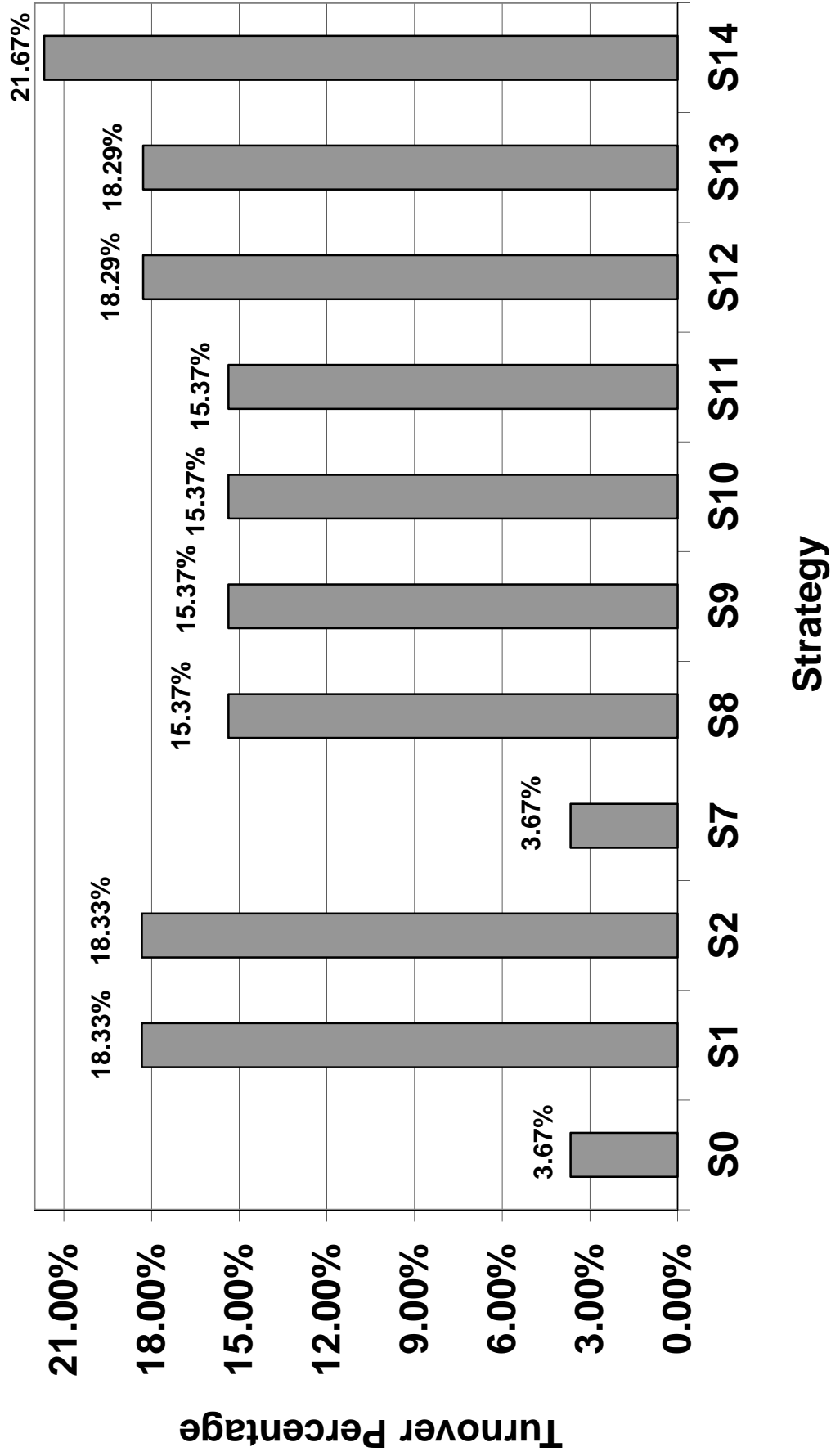
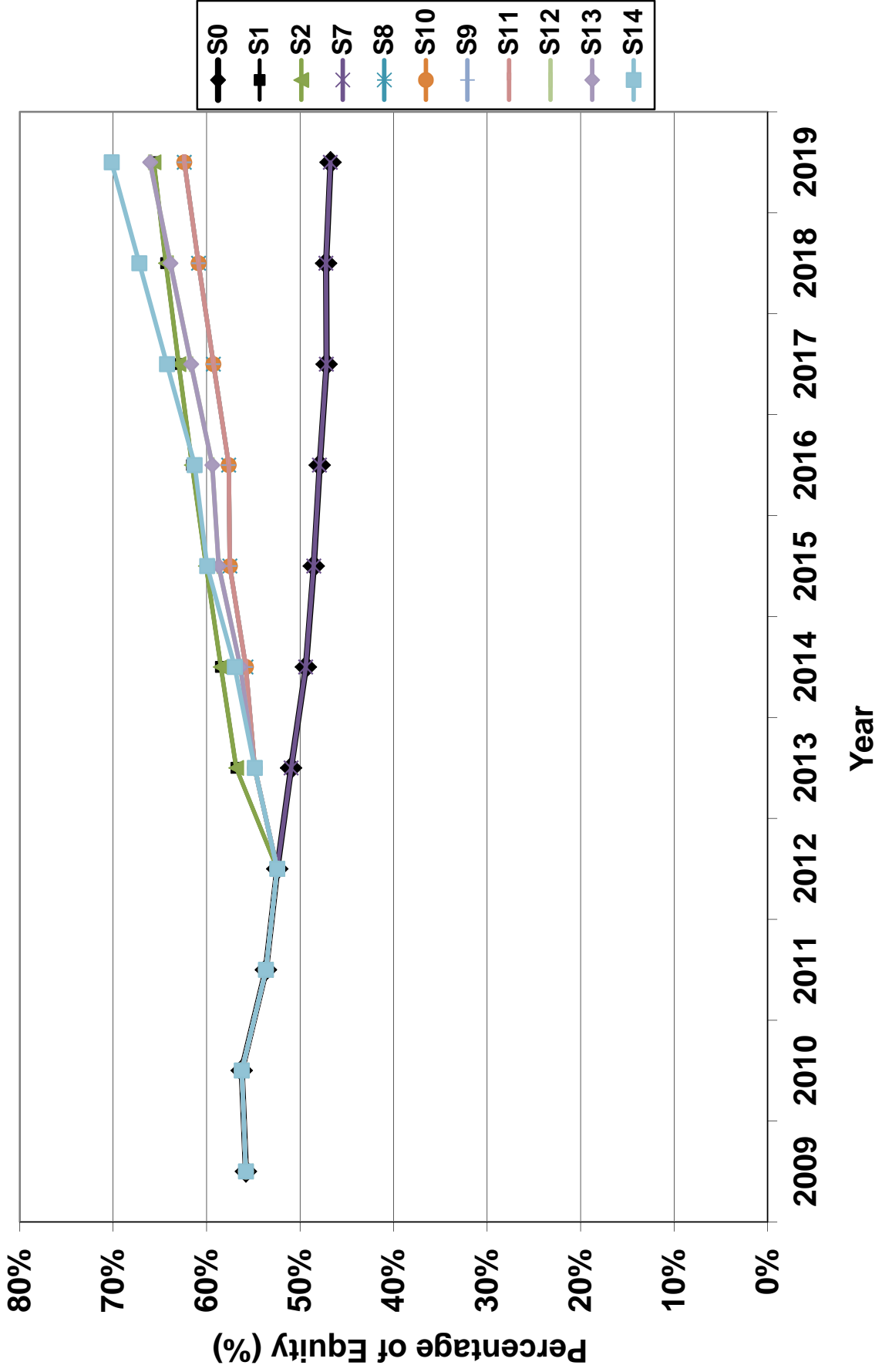


Exhibit 15

**Figure 9-25 Percentage of Equity: Retained Earnings, 2009-2019**



## Exhibit 16

Kanza Cooperative Association  
Iuka, KansasIncome Statements  
For Years Ended December 31, 2009 and 2008

	2009	2008
SALES		
Grain	\$ 58,572,348.49	95,337,348.60
Supply	41,623,268.99	55,348,499.72
TOTAL SALES	100,195,617.48	150,685,848.32
COST OF SALES		
Grain	54,388,803.22	90,301,952.61
Supply	34,723,343.95	46,943,072.46
TOTAL COST OF SALES	89,112,147.17	137,245,025.07
LOWER OF COST OR MARKET VALUATION LOSS	0.00	(1,499,014.91)
GROSS MARGIN ON SALES	11,083,470.31	11,941,808.34
OTHER OPERATING INCOME		
Storage and handling	1,645,046.30	1,116,963.54
Finance charges	108,578.18	146,591.64
Crop production services	1,059,323.29	1,135,030.26
Feed services	184,232.98	212,284.59
Trucking income	1,335,520.53	1,365,838.40
Drying income	479,344.57	169,498.68
Labor income	600,086.37	472,330.14
Sundry	93,874.74	205,772.51
TOTAL OPERATING EXPENSES	5,506,006.96	4,824,309.76
GROSS INCOME FROM LOCAL OPERATIONS	16,589,477.27	16,766,118.10
OPERATING EXPENSES		
Personnel costs	5,978,624.05	5,582,953.93
Fixed expenses	3,252,795.91	4,365,981.00
Other operating expenses	3,964,125.62	3,781,527.61
TOTAL OPERATING EXPENSES	13,195,545.58	13,730,462.54
EARNINGS FROM LOCAL OPERATIONS	3,393,931.69	3,035,655.56
OTHER EARNINGS (LOSS)		
Patronage dividends	1,091,508.85	1,500,307.46
Investment income	730,968.61	3,189,231.72
Dividends on stock	18,409.50	6,241.50
Gain on involuntary conversion	0.00	160,990.61
TOTAL OTHER EARNINGS	1,840,886.96	4,856,771.29
EARNINGS (LOSS) BEFORE INCOME TAXES	5,234,818.65	7,892,426.85
INCOME TAXES	(454,871.61)	(1,418,622.66)
NET EARNINGS (LOSS)	4,779,947.04	6,473,804.19
DISTRIBUTIONS OF NET EARNINGS		
Patronage Dividends	1,694,954.84	3,740,552.66
Retained Earnings	3,084,992.20	2,733,251.53
TOTAL	4,779,947.04	6,473,804.19
Financial Performance		
Return on Sales (NE/TS)	4.77%	4.30%
Return on Local Assets ((LE)/(TA-TI))	6.66%	6.63%
Return on Equity (NE/ME)	19.10%	29.50%