

**WORLD COUNCIL OF CREDIT UNIONS
TOOLKIT SERIES**

Number 4



PEARLS MONITORING SYSTEM

by:

David C. Richardson
World Council of Credit Unions
5710 Mineral Point Road
Madison, Wisconsin, 52701, USA

April, 2009

© 2009 The World Council of Credit Unions

The World Council of Credit Unions Toolkit Series presents the tools and methodologies developed in the field of credit union development carried out through World Council of Credit Unions activities.

For further information on this series please contact:

World Council Information Center
P.O. Box 2982
Madison, Wisconsin 53701-2982
USA

PEARLS Monitoring System

EXECUTIVE SUMMARY

Many different financial ratios and “rules of thumb” have been promoted for financial institutions worldwide, but few have been consolidated into an evaluation program that is capable of measuring both the individual components and the system as a whole. Since 1990, the World Council of Credit Unions, Inc. has been using a set of financial ratios known as “PEARLS.”

Each letter of the word PEARLS measures key areas of CU operations: **P**rotection, **E**ffective financial structure, **A**sset quality, **R**ates of return and cost, **L**iquidity and **S**igns of growth. The use of the PEARLS evaluation system accomplishes the following objectives:

A. OBJECTIVES

1. Executive Management Tool

Monitoring the performance of the credit union is the most important use of the PEARLS system. It is designed as a management tool that goes beyond the simple identification of problems. It helps managers find meaningful solutions to serious institutional deficiencies. For example, the PEARLS system is capable of identifying a credit union with a weak capital base, and can also identify the probable causes (e.g., insufficient gross income, excessive operating expenses, or high delinquency losses).

Use of the system permits managers to quickly and accurately pinpoint troubled areas, and to make the necessary adjustments before problems become serious. In essence, PEARLS is an "early warning system" that generates invaluable management information.

2. Standardized Evaluation Ratios and Formulas

The use of standardized financial ratios and formulas eliminates the diverse criteria used by credit unions to evaluate their operations. It also creates a universal financial language that everyone can speak and understand. One result can be enhanced communication that facilitates a greater understanding of the main concepts along with a commitment to achieve greater uniformity in the quality and strength of each individual credit union, by improving deficient operational areas.

3. **Objective, Comparative Rankings**

The combined use of the standardized accounting system and the PEARLS performance indicators produces a completely new type of information: comparative credit union rankings.

Historically, it was impossible to compare one credit union with another due to the diverse criteria and reporting formats that existed. The standardization of financial information eliminates the diversity and provides an effective tool for comparing credit union performance on a national basis.

One particularly important aspect of the PEARLS comparative rankings is its objectivity. No qualitative or subjective indicators are included in the rankings. This differs from the U.S. CAMEL system that gives management a numerical rating based upon the examiner's overall subjective judgment. By avoiding subjective assessments, it is possible to present objective reports to the credit unions that are substantiated by financial information taken from their balance sheets. The objective ranking system permits open discussion of problems with Boards of Directors and management. It is particularly useful in situations where a credit union is at the bottom of the ranking scale. No time is lost debating different points of view, and leadership can become more focused in seeking solutions to the problems affecting their institutions.

4. **Facilitate Supervisory Control**

In addition to its usefulness as a management tool, the PEARLS system provides the framework for a supervisory unit at the National Federation. National Associations can use the financial ratios generated by PEARLS to conduct quarterly or monthly analyses of all key areas of credit union operations. These evaluations are invaluable for spotting trends and detecting areas of concern among the affiliates. With the standardization of the key financial ratios, all interested parties are looking at the same thing--what is important to the examiner is also important to the credit union manager.

The introduction of the PEARLS evaluation system can change the role of National Association examiners to that of verifying the financial information used in calculating the ratios. If errors are found, they are relatively easy to correct and often provide management with further insight to their operations. The Federation examiners should play a key role in preserving the credibility of the financial information and ratios reported by the credit unions.

B. PEARLS VS. CAMEL

The PEARLS system can be adapted to the specific needs of mature or emerging Credit Union Movements. An early attempt was made to adapt the U.S. CAMEL ranking system to credit

unions by the World Council of Credit Unions, Inc., but too many modifications were needed. In particular, the CAMEL system possessed two major deficiencies that limited its effectiveness:

1. The CAMEL system does not evaluate the financial structure of the balance sheet. This was a critical area of concern in many countries since modernization implies a major restructuring of credit union assets, liabilities and capital. Balance sheet structure has a direct impact on efficiency and profitability. These areas are critically important for effective and sustainable credit union operations in a competitive environment.
2. CAMEL does not consider growth rates. In many countries, growth of total assets is a key strategy used to address the problems that accompany monetary devaluations and runaway inflation. In a relatively hostile macro-economic environment, the credit unions have to sustain aggressive growth if they are to preserve the value of their assets.

The failure of the CAMEL system to evaluate financial structure and growth is indicative of its current application in the United States. CAMEL was created as a supervisory tool, not a management tool. The main concern of the CAMEL ratios is to protect the solvency of the institution and the safety of member deposits. It is not designed as a tool for the analysis of all key areas of credit union operations.

C. COMPONENTS OF PEARLS

The PEARLS system is uniquely different. It was first designed as a management tool, and later became an effective supervisory mechanism. Each letter of the name "PEARLS" looks at a different, but critical aspect of the credit union:

1. P = Protection

Adequate protection of assets is a basic tenet of the new credit union model. Protection is measured by 1) comparing the adequacy of the allowances for loan losses against the amount of delinquent loans and 2) comparing the allowances for investment losses with the total amount of non-regulated investments. Protection against loan losses is deemed adequate if a credit union has sufficient provisions to cover 100% of all loans delinquent for more than 12 months, and 35% of all loans delinquent for 1-12 months.

Inadequate loan loss protection produces two undesirable results: inflated asset values and fictitious earnings. Most credit unions are not anxious to recognize loan losses, and much less, to charge them off against earnings. That unwillingness leads to widespread abuse of the principles of safety and soundness. Reported net income is overstated, asset values are inflated, provisions for loan losses are inadequate, and member savings are not adequately protected.

Many credit unions are not concerned about the inadequacy of their allowances for loan

losses since they view their capital reserves as the primary source of protection against loan losses. This erroneous idea is gradually changing as management becomes convinced that it is much easier and less painful to use the allowances for loan losses as the primary source of protection, rather than having to get approval from the membership to diminish capital reserves because of losses.

The World Council of Credit Unions, Inc. promotes the principle that the allowance for loan losses is the first line of defense against non-performing loans. The PEARLS system evaluates the adequacy of protection afforded to the credit union by comparing the allowance for loan losses to loan delinquency.

2. **E = Effective Financial Structure**

The financial structure of the credit union is the single most important factor in determining growth potential, earnings capacity, and overall financial strength.

The PEARLS system measures assets, liabilities and capital, and recommends an "ideal" structure for credit unions. The following ideal targets are promoted:

Assets

- * 95% productive assets composed of loans (70-80%), and liquid investments (10-20%)
- * 5% unproductive assets composed of primarily fixed assets (land, buildings, equipment etc.)

Credit unions are encouraged to maximize productive assets as the means to achieve sufficient earnings. Since the loan portfolio is the most profitable asset of the credit union, the World Council of Credit Unions, Inc. recommends maintaining 70-80% of total assets in the loan portfolio. Excess liquidity is discouraged because the margins on liquid investments (e.g., savings accounts) are significantly lower than those earned on the loan portfolio. Non-Earning assets are also discouraged because once purchased, they are often difficult to liquidate. The only effective way to maintain the ideal balance between productive and unproductive assets is by increasing the volume of productive assets.

Liabilities

- * 70-80% member deposit savings

A healthy percentage of deposit savings indicates that the credit union has developed effective marketing programs and is well on its way to achieving financial independence

It also indicates that members are no longer "saving" in order to borrow money, but are instead saving because of the competitive rates offered.

Capital

- * 10-20% member share capital
- * 10% institutional capital (undivided reserves)

Under the new capitalization system, member shares are de-emphasized and replaced with institutional capital. This capital has three purposes:

a. Finance Non-Earning Assets

Since the institutional capital has no explicit interest cost, its primary function is to finance all non-income generating assets of the credit union (i.e., land, buildings and equipment). If sufficient capital is unavailable, the credit union is forced to use more expensive deposit savings or member shares to finance the difference. Even though this makes little sense, the practice is still widespread.

b. Improve Earnings

Institutional capital also has a powerful effect on the credit union's capacity to generate net income and hence, additional capital. With no explicit interest cost, capital that is lent out at market interest rates provided a 100% return to the credit union. The use of this institutional capital to finance productive assets (e.g., loans) is very profitable for the credit union. Institutional capital can be generated much faster than by relying only on the slim margins from deposit savings. For credit unions with a weak capital base, the process is much slower, since the capacity to generate sufficient capital is linked to the capacity to retain capital.

c. Absorb Losses

As a last resort, institutional capital is used to absorb losses from loan delinquency and/or operational deficits. In many countries, the law requires that any reduction in institutional capital from losses must be approved by the General Assembly. This can be a painful and oftentimes, fatal experience for credit union management. Consequently, it makes much more sense to create adequate loan loss provisions in order to eliminate non-performing assets.

The PEARLS measurement of institutional capital is a key ratio that is linked to a number of other operational areas. If deficient, it can quickly signal where

potential weaknesses might exist in other areas of the operation.

3. **A = Assets Quality**

A non-productive or non-earning asset is one that does not generate income. An excess of non-earning assets affects credit union earnings in a negative way. The following PEARLS indicators are used to identify the impact of non-earning assets:

a. Delinquency Ratio

Of all the PEARLS ratios, the delinquency ratio is the most important measurement of institutional weakness. If delinquency is high, it usually affects all other key areas of credit union operations. By using the PEARLS formula to accurately measure delinquency, credit unions are properly informed of the severity of the situation before a crisis develops. The ideal goal is to maintain the delinquency rate below 5% of total loans outstanding.

b. Percentage of Non-Earning Assets

A second key ratio is the percentage of non-earning assets owned by the credit union. The higher the ratio, the more difficult it is to generate sufficient earnings. The goal also limits non-earning assets to a maximum of 5% of the total credit union assets.

Where credit unions are in dire need of improving their poor physical image, the non-earning asset ratio can increase in the short run. An improved image is more important to the success of aggressive marketing programs than it is to keep a ratio within its limits. As new members join and deposit their savings with the credit union, the non-earning asset ratio begins to decrease as a result of increased public confidence.

c. Financing of Non-Earning Assets

While reducing the percentage of non-earning assets is important, the financing of those assets is just as important. Traditionally, credit unions use member share capital to finance the purchases of fixed assets. Under the WOCCU model, the objective is to finance 100% of all non-earning assets with the credit union's institutional capital, or with other liabilities that have no explicit financial cost. By using no-cost capital to finance those assets, credit union earnings are not unduly affected. This is one of the strong arguments supporting the capitalization of all net earnings--to upgrade old buildings and worn-out equipment.

4. **R = Rates of Return and Costs**

The PEARLS system segregates all of the essential components of net earnings to help management calculate investment yields and evaluate operating expenses.

In this way, PEARLS demonstrates its value as a management tool. Unlike other systems that calculated yields on the basis of average assets, PEARLS calculates yields on the basis of actual investments outstanding. This methodology assists management in determining which investments are the most profitable.

It also permits the credit unions to be ranked according to the best and worst yields. By comparing financial structure with yields, it is possible to determine how effectively the credit union is able to place its productive resources into investments that produce the highest yield. These powerful analysis techniques help management stay abreast of the financial performance of the credit union.

Yield information is computed on four main areas of investment:

a. Loan Portfolio

All interest income, delinquent interest penalties and commissions from lending operations are divided by the total amount invested in the loan portfolio.

b. Liquid Investments

All income from bank savings accounts and liquidity reserves deposited in either the National Association or regulatory body is divided by the amounts invested in those areas.

c. Financial Investments

Many credit unions invest liquidity into financial investments (e.g. government securities) that pay higher yields than bank savings accounts. This investment income is also divided by the outstanding capital invested in those instruments.

d. Other Non-financial Investments

Any investment that does not fit into the previous categories is classified as "other" non-financial investments. For many credit unions, this includes investments in supermarkets, pharmacies, schools, and residential development projects. All income from these different sources is likewise divided by the original capital investments.

Operational costs are also important. They are broken down into three main areas:

e. Financial Intermediation Costs

This area evaluates the financial costs paid on deposit savings, member shares, and external loans. Unlike commercial banks that try to minimize financial costs, credit unions should try to pay as high a rate as possible without jeopardizing the stability of the institution.

In many instances, a poor growth rate for deposit savings is linked to non-competitive interest rates. Likewise, dividends on member share capital are closely monitored to ensure that credit unions are not taking advantage of their members by paying substandard dividend yields on their share capital.

f. Administrative Costs

Another critical area requiring close analysis is administrative costs. Many credit unions are highly competitive with commercial banks on interest rates for deposits and loans, but their administrative costs are much higher on a per unit basis. Costs are higher because of the smaller loan size. Fixed administrative expenses could not be spread over a larger loan amount. For example, the fixed costs to make a US\$1,000 loan are almost identical to those of a US\$10,000 loan. High administrative costs are one of the main reasons why many credit unions are not profitable. The "ideal" target recommended by the PEARLS system is to maintain administrative costs between 3-10% of average total assets.

g. Provisions for Loan Losses

The final cost area evaluated by PEARLS separates the costs of creating provisions for loan losses from other administrative costs. This can be facilitated by the use of clear accounting nomenclature. Traditional accounting standards usually include loan loss provisions as part of the overall administrative costs. In reality, the creation of adequate provisions represents a completely different type of expense. It is directly linked to experienced credit analysis and effective loan collection techniques. By isolating this expense from the other administrative costs, it is possible to get a much clearer picture of weak credit administration practices in the credit union.

By segregating income and expenses into the previously mentioned areas, the PEARLS ratios can accurately pinpoint the reasons why a credit union is not producing sufficient net income.

5. **L = Liquidity**

Effective liquidity management becomes a much more important skill as the credit union shifts its financial structure from member shares to more volatile deposit savings. In many movements following the traditional model, member shares are very illiquid and most external loans have a long payback period, therefore there is little incentive to maintain liquidity reserves. Liquidity is traditionally viewed in terms of cash available to lend--a variable exclusively controlled by the credit union. With the introduction of withdrawable savings deposits, the concept of liquidity is radically changed. Liquidity now refers to the cash needed for withdrawals--a variable the credit union can no longer control.

The maintenance of adequate liquidity reserves is essential to sound, financial management in the WOCCU credit union model. The PEARLS system analyzes liquidity from two perspectives:

a. Total Liquidity Reserves

This indicator measures the percentage of savings deposits invested as liquid assets in either a National Association or a commercial bank. The "ideal" target is to maintain a minimum of 15% after paying all short-term obligations (30 days and under).

b. Idle Liquid Funds

Liquidity reserves are important but they also imply a lost opportunity cost. Funds in checking accounts and simple savings accounts earn negligible returns, in comparison with other investment alternatives. Consequently, it is important to keep idle liquidity reserves to a minimum. The "ideal" target of this PEARLS ratio is to reduce the percentage of idle liquidity to as close to zero as was possible.

6. **S = Signs of Growth**

The only successful way to maintain asset values is through strong, accelerated growth of assets, accompanied by sustained profitability. Growth, in and of itself, is insufficient. The advantage of the PEARLS system is that it links growth to profitability, as well as to the other key areas by evaluating the strength of the system as a whole. Growth is measured in five key areas:

a. Total Assets

Growth in total assets is one of the most important ratios. Many of the formulas used in the PEARLS ratios include total assets as the key denominator. Strong, consistent growth in total assets improves many of the PEARLS ratios. By comparing the growth in total assets to other key areas, it is possible to detect changes in the balance sheet structure that could have a positive or negative impact on earnings. The ideal goal for all credit unions is to achieve real positive growth (i.e., net growth after subtracting for inflation) each year.

b. Loans

The loan portfolio is the most important and profitable credit union asset. If growth in total loans keeps pace with growth in total assets, there is a good likelihood that profitability will be maintained. Conversely, if loan growth rates drop, this suggests that other, less profitable areas are growing more quickly.

c. Savings Deposits

With the new emphasis on savings mobilization, savings deposits are the new cornerstones of growth. The growth of total assets is dependent on the growth of savings. The rationale for maintaining aggressive marketing programs is that it stimulates growth in new savings deposits that in turn, affect the growth of other key areas.

d. Shares

Although member share savings are de-emphasized under the WOCCU model, some credit unions may maintain a dependence on shares for growth. If growth rates in this area are excessive, it usually signals an inability of the credit unions to adapt to the new system of promoting deposits over shares.

e. Institutional Capital

Institutional capital growth is the best indicator of profitability within credit unions. Static or declining growth trends in institutional capital usually indicates a problem with earnings. If earnings are low, the credit union will have great difficulty in adding to institutional capital reserves. One of the indisputable signs of success of a robust credit union in transition is a sustained growth of institutional capital, usually greater than the growth of total assets.

THE "PEARLS" MONITORING SYSTEM GOALS

© 2009 World Council of Credit Unions

QUICK KEY TO "PEARLS"

AREA	PEARL	DESCRIPTION	GOALS (EXCELLENCE)
P = PROTECTION	P1	Allowance for Loan Losses / Delinquency >12 months	100%
	P2	Net Allowance for Loan Losses / Delinquency 1-12 months (WOCCU Standard)	35%
	P2X	Net Allowance for Loan Losses / Delinquency 1-12 months (User Defined)	100%
	P3	Complete Charge-Off of Delinquent Loans >12 mos	Yes
	P4	Annual Loan Charge-offs / Average Loan Portfolio	Minimized
	P5	Accumulated Loan Recoveries/Accumulated Loan Charge-offs	>75%
	P6	Solvency	Min 111%
E = EFFECTIVE FINANCIAL STRUCTURE	E1	Net Loans/Total Assets	70-80%
	E2	Liquid Investments / Total Assets	Max 16%
	E3	Financial Investments / Total Assets	Max 2%
	E4	Non-Financial Investments / Total Assets	0%
	E5	Savings Deposits / Total Assets	70-80%
	E6	External Credit / Total Assets	Max 5%
	E7	Member Share Capital / Total Assets	Max 20%
	E8	Institutional Capital / Total Assets	Min 10%
	E9	Net Institutional Capital/ Total Assets	Min 10%
A = ASSET QUALITY	A1	Total Loan Delinquency / Gross Loan Portfolio	<=5%
	A2	Non-Earning Assets / Total Assets	<=5%
	A3	Net Institutional & Transitory Capital + Non Interest-Bearing Liabilities / Non-earning Assets	>200%

AREA	PEARL	DESCRIPTION	NORM
R = RATES OF RETURN & COSTS	R1	Net Loan Income / Average Net Loan Portfolio	Entrepreneurial Rate
	R2	Total Liquid Investment Income / Average Liquid Investments	Market Rates
	R3	Total Financial Investment Income / Average Financial Investments	Market Rates
	R4	Total Non-Financial Investment Income / Average Non-Financial Investments	>= R1
	R5	Total Interest Cost on Savings Deposits / Average Savings Deposits	Market Rates >Inflation
	R6	Total Interest Cost on External Credit / Average External Credit	Market Rates
	R7	Total Interest (Dividend) Cost on Shares / Average Member Shares	Market Rates >= R5
	R8	Total Gross Income Margin / Average Total Assets	Amount Needed to Cover R10, R12
	R9	Total Operating Expenses / Avg. Total Assets	<=5%
	R10	Total Loan Loss Provision Expense / Average Total Assets	Dependent on Delinquent Loans
	R11	Non-Recurring Income or Expense / Average Total Assets	Minimum
	R12	Net Income / Average Total Assets (ROA)	Dependent on E8
	R13	Net Income / Avg. Institutional + Avg. Trans Capital (ROC)	> Inflation Rate

L = LIQUIDITY	L1	S.T Investments + Liquid Assets - S.T. Payables / Savings Deposits	Min 15%
	L2	Liquidity Reserves / Savings Deposits	10%
	L3	Non-Earning Liquid Assets / Total Assets	<1%
S = SIGNS OF GROWTH	S1	Growth in Loans to Members	Dependent on E1
	S2	Growth in Liquid Investments	Dependent on E2
	S3	Growth in Financial Investments	Dependent on E3
	S4	Growth in Non-Financial Investments	Dependent on E4
	S5	Growth in Savings Deposits	Dependent on E5
	S6	Growth in External Credit	Dependent on E6
	S7	Growth in Share Capital	Dependent on E7
	S8	Growth in Institutional Capital	Dependent on E8
	S9	Growth in Net Institutional Capital	Dependent on E9
	S10	Growth in Membership	Minimum 15%
	S11	Growth in Total Assets	>Inflation + 10%

THE “PEARLS” MONITORING SYSTEM MANUAL

I. P=PROTECTION

The indicators in this section measure the adequacy of the provisions for loan losses.

P1. ALLOWANCE FOR LOAN LOSSES / DELINQUENCY > 12 MONTHS

Purpose: To measure the adequacy of the provisions for loan losses when compared to all delinquent loans over 12 months.

Accounts:

- a. Allowance for Loan Losses (Balance Sheet)
- b. Loan Balances of all delinquent loans >12 months

Formula: $\frac{a}{b}$

Goal: **100%**

P2. NET ALLOWANCE FOR LOAN LOSSES / TOTAL DELINQUENCY

Purpose: To measure the adequacy of the provisions for loan losses after deducting all delinquent loans > 12 months.

Accounts:

- a. Total Allowance for Loan Losses
- b. Total Delinquent Loans >12 months
- c. Total Balance of all Delinquent Loans outstanding from 1-12 months.

Formula: $\frac{(a-b)}{c}$

Goal: **35% of loans delinquent 1 - 12 months.**

P2X. NET ALLOWANCE FOR LOAN LOSSES / USER-DEFINED ALLOWANCES REQUIREMENT FOR DELINQUENCY 1-12 MONTHS

Purpose: To measure the adequacy of the provisions for loan losses after deducting all delinquent loans > 12 months.

Accounts:

- a. Total Allowance for Loan Losses
- b. Allowance Required for Delinquent Loans >12 months

- c. Allowances required for non-delinquent loans
- d. Allowances required for delinquent loans 1-12months (user-defined standard)

Formula:
$$\frac{(a-b-c)}{d}$$

P2X goal: **100% (of user-defined requirement for delinquency 1-12 months)**

P3. TOTAL CHARGE-OFF OF DELINQUENT LOANS > 12 MONTHS

Purpose: To measure the total charge-off of all delinquent loans > 12 months.

Account: a. Total Delinquent Loans >12 months

Formula: If (a) = 0 (Zero) then Yes, else No.

Goal: **Charge-off 100% of all Loans Delinquent > 12 months**

P4. QUARTERLY LOAN CHARGE-OFFS / TOTAL LOAN PORTFOLIO

Purpose: To measure the amount of loans charged-off from the loan portfolio in the current year. Note that the loans charged-off should be maintained in an auxiliary ledger and are not found on the balance sheet.

Accounts:

- a. Accumulated Charge-offs for Current year
- b. Accumulated Charge-offs for previous year
- c. Gross loan portfolio (excluding allowances) as of Current year-end
- d. Gross loan portfolio (excluding allowances) as of Last year-end

Formula:
$$\frac{(a-b)}{\left(\frac{(c+d)}{2}\right)}$$

Goal: **Minimize**

P5. ACCUMULATED RECOVERED CHARGE-OFFS / ACCUMULATED CHARGE-OFFS

Purpose: To measure the accumulated amount of charge-offs that have been recovered through successful collection efforts. This is a historical figure that includes all previous years.

Accounts:

- a. Accumulated Recovery of Charge-offs
- b. Accumulated Charge-offs

Formula: $\frac{a}{b}$

Goal: **100%**

P6. SOLVENCY

Purpose: Measure the degree of protection that the credit union has for member savings and shares in the event of liquidation of the credit union's assets and liabilities.

Accounts:

- a. Total Assets
- b. Allowances for Risk Assets
- c. Balance of Loans Delinquent greater than 12 months.
- d. Balance of Loans Delinquent from 1 to 12 months.
- e. Total Liabilities
- f. Problem Assets (Losses that will be liquidated)
- g. Total Savings
- h. Total Shares

Formula:
$$\frac{[(a + b) - (c + .35(d) + e + f - g)]}{(g + h)}$$

Goal: **111%**

II. E= EFFECTIVE FINANCIAL STRUCTURE

The indicators in this section measure the composition of the most important accounts on the Balance Sheet. An effective financial structure is necessary to achieve safety, soundness, and profitability, while at the same time, positioning the credit union for aggressive real growth.

EARNING ASSETS

E1. NET LOANS / TOTAL ASSETS

Purpose: To measure the percentage of total assets invested in the loan portfolio.

- Accounts:
- a. Total Gross Loan Portfolio Outstanding
 - b. Total Allowance for loan losses
 - c. Total Assets

Formula: $\frac{(a-b)}{c}$

Goal: **Between 70 - 80%**

E2. LIQUID INVESTMENTS / TOTAL ASSETS

Purpose: To measure the percentage of total assets invested in Short-term Investments.

Accounts: a. Total Liquid Investments
b. Total Assets

Formula: $\frac{a}{b}$

Goal: **Maximum 20%**

E3. FINANCIAL INVESTMENTS / TOTAL ASSETS

Purpose: To measure the percentage of total assets invested in Long-term investments

Accounts: a. Total Financial Investments
b. Total Assets

Formula: $\frac{a}{b}$

Goal: **Maximum 10%**

E4. NON-FINANCIAL INVESTMENTS / TOTAL ASSETS

Purpose: To measure the percentage of total assets invested in non-financial investments (i.e., supermarkets, pharmacies, residential housing developments etc.).

Accounts: a. Total Non-Financial Investments
b. Total Assets

Formula: $\frac{a}{b}$

Goal: **0%**

LIABILITIES

E5. SAVINGS DEPOSITS / TOTAL ASSETS

Purpose: To measure the percentage of total assets financed by savings deposits.

Accounts: a. Total Savings Deposits
b. Total Assets

Formula: $\frac{a}{b}$

Goal: **Between 70 - 80%**

E6. BORROWED FUNDS / TOTAL ASSETS

Purpose: To measure the percentage of total assets financed by external borrowing (i.e., debt obligations with other financial institutions outside of the credit union)

Accounts: a. Total Short-term loan obligations
b. Total Long-term loan obligations
c. Total Assets

Formula: $\frac{(a+b)}{c}$

Goal: **Maximum 5%**

CAPITAL

E7. MEMBER SHARES / TOTAL ASSETS

Purpose: To measure the percentage of total assets financed by Member shares.

Accounts: a. Total Member Shares
b. Total Assets

Formula: $\frac{a}{b}$

Goal: **Maximum 20%**

E8. INSTITUTIONAL CAPITAL¹ / TOTAL ASSETS

Purpose: To measure the percentage of total assets financed by Institutional Capital.

Accounts: a. Total Institutional Capital
b. Total Assets

Formula: $\frac{a}{b}$

Goal: **Minimum 10%**

E9. NET CAPITAL

Purpose: To measure the real level of institutional capital, after adjusting the allowances for risk assets to meet the standards of P1&P2, and covering any other potential losses.

Accounts:

- a. Institutional Capital
- b. Allowances for Risk Assets
- c. Balance of Loans Delinquent greater than 12 months.
- d. Balance of Loans Delinquent from 1 to 12 months.
- e. Problem Assets (Losses that will be liquidated)
- f. Total Assets

2. **Institutional Capital** is defined as all legal and non-distributable reserves, capital donations and the portion of the current year's surplus that will be retained as legal or non-distributable reserves. These reserves are not expended and no member may present an individual claim.

Formula:
$$\frac{[(a+b)-(c+.35(d)+e)]}{f}$$

Goal: Same as E8

III. A=ASSET QUALITY

The indicators in this section measure the percentage of non-earning assets that negatively impact profitability and solvency. They are: loan delinquency, non-earning assets, and the financing of non-earning assets.

A1. TOTAL LOAN DELINQUENCY / TOTAL LOAN PORTFOLIO

Purpose: To measure the total percentage of delinquency in the loan portfolio, using the criterion of outstanding delinquent loan balances instead of accumulated delinquent loan payments.

Accounts:

- a. Sum of all delinquent loan balances (a non-bookkeeping control)
- b. Total (Gross) Loan Portfolio Outstanding

Formula:
$$\frac{a}{b}$$

Goal: **Less Than or Equal to 5%**

A2. NON-EARNING ASSETS / TOTAL ASSETS

Purpose: To measure the percentage of the total assets not producing income.

Examples of Non-earning Assets:

1. Cash on hand
2. Non-interest bearing monetary checking accounts
3. Accounts receivable
4. Assets in liquidation
5. Fixed assets (Land, Building, equipment etc.)
6. Prepaid expenses and other deferrals

Accounts:

- a. Total Non-earning Assets
- b. Total Assets

Formula:
$$\frac{a}{b}$$

Goal: **Less Than or Equal to 5%**

A3. (NET INSTITUTIONAL CAPITAL +TRANSITORY CAPITAL² + NON INTEREST-BEARING LIABILITIES)³ / NON-EARNING ASSETS

Purpose: To measure the percentage of non-earning assets that are financed with institutional capital, transitory capital and liabilities without interest.

Accounts:

- a. Total Net Institutional Capital (See numerator for P7 ratio)
- b. Total Transitory Capital
- c. Total Non Interest-Bearing Liabilities
- d. Total Non-earning assets

Formula:
$$\frac{(a + b + c)}{d}$$

Goal: **Greater than or equal to 100%**

IV. R=RATES OF RETURN & COST

These indicators measure the average income yield for each of the most productive assets of the Balance Sheet. In addition, they measure the average yield (cost) for each of the most important liability and capital accounts. The yields are actual investment returns and not the typical "spread analysis" yields that are figured on the basis of average assets. The corresponding yields indicate whether the credit union is earning and paying market rates on its assets, liabilities and capital.

R1. TOTAL LOAN INCOME / AVERAGE NET LOAN PORTFOLIO

Purpose: To measure the yield on the loan portfolio.

Accounts:

- a. Total Loan income (including commissions, fees, and delinquent interest penalties) during year.
- b. Insurance Premiums paid on Loans
- c. Net loan portfolio (Net of Allowances for Loan Losses) as of Current year-end
- d. Net loan portfolio (Net of Allowances for Loan Losses) as of Last year-end

Formula:
$$\frac{a - b}{\left(\frac{c + d}{2}\right)}$$

Goal: **Entrepreneurial rate which covers financial, operating, and provisioning expenses**

² Transitory Capital includes Monetary, Educational & Social Reserves, Revalued Assets, and Undistributed Income

³ Referred to as "Zero Cost Funds"

and contributes to capital levels which maintain *INSTITUTIONAL CAPITAL* at least 10%.

R2. LIQUID INVESTMENT INCOME / AVERAGE LIQUID INVESTMENTS

Purpose: To measure the yield on all short-term investments (i.e., Bank deposits, etc.).

Accounts:

- a. Total Liquid Investment Income during year.
- b. Total Liquid Investments as of Current year-end.
- c. Total Liquid Investments as of Last year-end.

Formula:
$$\frac{a}{\left(\frac{(b+c)}{2}\right)}$$

Goal: **Highest rates possible w/o undue risk**

R3. FINANCIAL INVESTMENT INCOME / AVERAGE FINANCIAL INVESTMENTS

Purpose: To measure the yield on all long term investments (i.e., Fixed Deposits, Shares, Securities, etc.)

Accounts:

- a. Total Financial Investment Income
- b. Total Financial Investments as of Current year-end.
- c. Total Financial Investments as of Last year-end.

Formula:
$$\frac{a}{\left(\frac{(b+c)}{2}\right)}$$

Goal: **Highest rates possible w/o undue risk**

R4. NON-FINANCIAL INVESTMENT INCOME / AVERAGE NON-FINANCIAL INVESTMENTS

Purpose: To measure the yield on all non-financial investments which do not belong to categories R1-R3. Typically, this is income from supermarkets, pharmacies, rental properties and residential housing developments.

Accounts:

- a. Total Non-Financial Investment Income
- b. Total Non-Financial Investments as of Current year-end.
- c. Total Non-Financial Investments as of Last year-end.

Formula:
$$\frac{a}{\left(\frac{(b+c)}{2}\right)}$$

Goal: **Rate greater than R1**

R5. FINANCIAL COST: SAVINGS DEPOSITS / AVERAGE SAVINGS DEPOSITS

Purpose: To measure the yield (cost) of Savings Deposits.

- Accounts:
- a. Total Interest Paid on Savings Deposits
 - b. Total insurance premium paid on Savings Deposits
 - c. Total Taxes paid by Credit Union on Savings Deposit Interest
 - d. Total Savings Deposits as of Current year-end.
 - e. Total Savings Deposits as of Last year-end.

Formula:
$$\frac{(a+b+c)}{\left(\frac{(d+e)}{2}\right)}$$

Goal: **Rates which protect the nominal value of the savings deposits (>Inflation)**

R6. FINANCIAL COST: BORROWED FUNDS / AVERAGE BORROWED FUNDS

Purpose: To measure the yield (cost) of all Borrowed Funds

- Accounts:
- a. Total Interest Paid on Borrowed Funds
 - b. Total Borrowed Funds as of Current year-end
 - c. Total Borrowed Funds as of Last year-end

Formula:
$$\frac{a}{\left(\frac{(b+c)}{2}\right)}$$

Goal: **Same or lesser yield (cost) than R5**

R7. FINANCIAL COST: MEMBER SHARES / AVERAGE MEMBER SHARES

Purpose: To measure the yield (cost) of Member Shares.

- Accounts:
- a. Total Dividends paid on Member Shares
 - b. Total insurance premium paid on Member Shares
 - c. Total Taxes paid by credit union on Dividends on Shares
 - d. Total Member Shares as of Current year-end
 - e. Total Member Shares as of Last year-end

Formula:
$$\frac{(a + b + c)}{\left(\frac{(d + e)}{2}\right)}$$

Goal: **Same or greater yield than R5**

R8. GROSS MARGIN / AVERAGE TOTAL ASSETS

Purpose: To measure the gross income margin generated, expressed as a yield on all assets, before subtracting operating expenses, provisions for loan losses, and other extraordinary items.

- Accounts:
- a. Loan Interest Income
 - b. Liquid Investment Income
 - c. Financial Investment Income
 - d. Non-Financial Investment Income
 - e. Other Income
 - f. Interest Cost of Savings Deposits
 - g. Dividend or Interest Cost of Member Shares
 - h. Interest Cost of Borrowed Funds
 - I. Total Assets as of Current Year-end
 - j. Total Assets as of Last Year-end

Formula:
$$\frac{((a + b... + e) - (f + g + h))}{\left(\frac{(i + j)}{2}\right)}$$

Goal: **To generate sufficient income to cover all operating expenses and allowances for loan losses and provide for adequate increases in institutional capital.**

R9. OPERATING EXPENSES / AVERAGE TOTAL ASSETS

Purpose: To measure the cost associated with the management of all Credit Union assets. This cost is measured as a percentage of total assets and indicates the degree of operational efficiency or inefficiency.

- Accounts:
- a. Total Operating Expenses (exclusive of Provisions for loan losses)
 - b. Total Assets as of Current year-end
 - c. Total Assets as of Last year-end

Formula:
$$\frac{a}{\left(\frac{(b + c)}{2}\right)}$$

Goal: **<10%**

R10. PROVISIONS FOR LOAN LOSSES / AVERAGE TOTAL ASSETS

Purpose: To measure the cost of losses from risk assets such as delinquent loans or uncollectible accounts receivable. This cost is different than other operational expenses and should be separated to highlight the effectiveness of Credit Union collection policies and procedures.

Accounts:

- a. Total Current Year Provision Expense of all Risk Assets
- b. Total Assets as of Current year-end
- c. Total Assets as of Last year-end

Formula:
$$\frac{a}{\left(\frac{(b+c)}{2}\right)}$$

Goal: **Enough to cover 100% of delinquent loans >12 months and 35% for loans delinquent 1-12 months.**

R11. NON-RECURRING INCOME OR EXPENSES / AVERAGE TOTAL ASSETS

Purpose: To measure the net amount of non-recurring income and expenses. These items typically should not be a significant amount if the Credit Union is specializing in Financial Intermediation.

Accounts:

- a. Total Non-Recurring Income or Expenses (Current Year)
- b. Total Assets as of Current year-end
- c. Total Assets as of Last year-end

Formula:
$$\frac{a}{\left(\frac{(b+c)}{2}\right)}$$

Goal: **Minimum possible**

R12. NET INCOME / AVERAGE TOTAL ASSETS

Purpose: To measure the adequacy of earnings and also, the capacity to build Institutional Capital.

Accounts:

- a. Net Income (After dividends)
- b. Total assets as of Current year-end
- c. Total assets as of Last year-end

Formula:
$$\frac{a}{\left(\frac{(b+c)}{2}\right)}$$

Goal: **>1% and enough to attain the goal of E8**

IV. L=LIQUIDITY

The liquidity indicators show whether the Credit Union is effectively managing its cash so that it can meet deposit withdrawal requests and liquidity reserve requirements. In addition, idle cash is also measured to insure that this non-earning asset does not unduly affect profitability.

L1. LIQUID INVESTMENTS (+) LIQUID ASSETS (-) SHORT-TERM PAYABLES / SAVINGS DEPOSITS

Purpose: To measure the adequacy of the liquid cash reserves to satisfy deposit withdrawal requests, after paying all immediate obligations <30 days.

Accounts:

- a. Total Earning Liquid Investments
- b. Total Non-earning Liquid Assets
- c. Total Short-term Payables <30 days
- d. Total Savings Deposits

Formula:
$$\frac{(a + b - c)}{d}$$

Goal: **Minimum 15%**

L2. LIQUIDITY RESERVES / SAVINGS DEPOSITS

Purpose: To measure compliance with obligatory Central Bank, CFF, or Other Liquidity Reserve Deposit requirements.

Accounts:

- a. Total Liquidity Reserves (Earning Asset)
- b. Total Liquidity Reserves (Non-earning Asset)
- c. Total Savings Deposits

Formula:
$$\frac{(a + b)}{c}$$

Goal: **10%**

L3. NON-EARNING LIQUID ASSETS / TOTAL ASSETS

Purpose: To measure the percentage of total assets that are invested in non-earning liquid accounts.

Accounts:

- a. Total Liquid Non-Earning Assets
- b. Total Assets

Formula: $\frac{a}{b}$

Goal: <1%

VI. S=SIGNS OF GROWTH

The indicators of this section measure the percentage of growth in each of the most important accounts on the financial statement, as well as growth in membership. In inflationary economies, real growth (after subtracting inflation), is a key to the long run viability of the Credit Union

S1. GROWTH IN LOANS

Purpose: To measure the year-to-date growth of the Loan Portfolio.

Accounts:

- Current Loan Portfolio balance
- Loan Portfolio balance as of Last year-end

Formula: $\left(\frac{a}{b}\right) - 1 \times 100$

Goal: **To Increase the Percentage of Total Loans Outstanding (E1) S1 must be greater than S11.**
To Maintain the Percentage of Total Loans Outstanding (E1), S1 must be equal to S11.
To Decrease the Percentage of Total Loans Outstanding (E1), S1 must be less than S11.

S2. GROWTH IN LIQUID INVESTMENTS

Purpose: To measure the year-to-date growth of liquid investments.

Accounts:

- Total Current Liquid Investments
- Total Liquid Investments as of Last year-end

Formula: $\left(\frac{a}{b}\right) - 1 \times 100$

Goal: **To Increase the Percentage of Liquid Investments (E2), S2 must be greater than S11.**
To Maintain the Percentage of Liquid Investments (E2), S2 must be equal to S11.
To Decrease the Percentage of Liquid Investments (E2), S2 must be less than S11.

S3. GROWTH IN FINANCIAL INVESTMENTS

Purpose: To measure the year-to-date growth of Financial Investments.

Accounts: a. Total Current Financial Investments
b. Total Financial Investments as of Last year-end

Formula: $\left(\frac{a}{b}\right) - 1 \times 100$

Goal: **To Increase the Percentage of Financial Investments (E3), S3 must be greater than S11.**
To Maintain the Percentage of Financial Investments (E3), S3 must be equal to S11.
To Decrease the Percentage of Financial Investments (E3), S3 must be less than S11.

S4. GROWTH IN NON-FINANCIAL INVESTMENTS

Purpose: To measure the year-to-date growth of the Loan Portfolio.

Accounts: a. Total Current Non-financial Investments
b. Total Non-financial Investments as of Last year-end

Formula: $\left(\frac{a}{b}\right) - 1 \times 100$

Goal: **To Increase the Percentage of Non-Financial Investments (E4), S4 must be greater than S11.**
To Maintain the Percentage of Non-Financial Investments (E4), S4 must be equal to S11.
To Decrease the Percentage of Non-Financial Investments (E4), S4 must be less than S11.

S5. GROWTH IN SAVINGS DEPOSITS

Purpose: To measure the year-to-date growth of Savings Deposits.

Accounts: a. Total Current Savings Deposits
b. Total Savings Deposits as of the Last year-end

Formula: $\left(\frac{a}{b}\right) - 1 \times 100$

Goal: **To Increase the Percentage of Total Savings Deposits (E5), S5 must be greater than S11.**
To Maintain the Percentage of Total Savings Deposits (E5), S5 must be equal to S11.
To Decrease the Percentage of Total Savings Deposits (E5), S5 must be less than S11.

S6. GROWTH IN BORROWED FUNDS

Purpose: To measure the year-to-date growth of Borrowed Funds.

Accounts:

- a. Total Current Borrowed Funds
- b. Total Borrowed Funds as of Last year-end

Formula: $\left(\frac{a}{b}\right) - 1 \times 100$

Goal: **To Increase the Percentage of Total Borrowed Funds (E6), S6 must be greater than S11.**
To Maintain the Percentage of Total Borrowed Funds (E6), S6 must be equal to S11.
To Decrease the Percentage of Total Borrowed Funds (E6), S6 must be less than S11.

S7. GROWTH IN MEMBER SHARES

Purpose: To measure the year-to-date growth of Member shares.

Accounts:

- a. Total Current Member Shares
- b. Total Member Shares as of Last year-end

Formula: $\left(\frac{a}{b}\right) - 1 \times 100$

Goal: **To Increase the Percentage of Total Member Shares (E7), S7 must be greater than S11.**
To Maintain the Percentage of Total Member Shares (E7), S7 must be equal to S11.
To Decrease the Percentage of Total Member Shares (E7), S7 must be less than S11.

S8. GROWTH IN INSTITUTIONAL CAPITAL

Purpose: To measure the year-to-date growth of Institutional Capital.

Accounts:

- a. Current Institutional Capital
- b. Institutional Capital as of the Last year-end

Formula: $\left(\frac{a}{b}\right) - 1 \times 100$

Goal: **To Increase the Percentage of Total Institutional Capital (E8), S8 must be greater than S11.**
To Maintain the Percentage of Total Institutional Capital (E8), S8 must be equal to S11.
To Decrease the Percentage of Total Institutional Capital (E8), S8 must be less than S11.

S9. GROWTH IN NET INSTITUTIONAL CAPITAL

Purpose: To measure the year-to-date growth of Net Institutional Capital.

Accounts: a. Current Net Institutional Capital (the definition of NIC as in E9)
b. Net Institutional Capital as of the Last year-end

Formula: $\left(\frac{a}{b}\right) - 1 \times 100$

Goal: **To Increase the Percentage of Net Institutional Capital (E9), S9 must be greater than S11.**
To Maintain the Percentage of Net Institutional Capital (E9), S9 must be equal to S11.
To Decrease the Percentage of Net Institutional Capital (E9), S9 must be less than S11.

S10. GROWTH IN MEMBERSHIP

Purpose: To measure the year-to-date growth in Membership of the Credit Union.

Accounts: a. Current Number of Members (non-bookkeeping control)
b. Number of Members as of Last year-end (non-bookkeeping control)

Formula: $\left(\frac{a}{b}\right) - 1 \times 100$

Goal: **>15%**

S11. GROWTH IN TOTAL ASSETS

Purpose: To measure the year-to-date growth of Total Assets.

Accounts: a. Total current assets
b. Total assets as of the Last year-end

Formula: $\left(\frac{a}{b}\right) - 1 \times 100$

Goal: **Greater than the inflation rate + 10%**