

# Testing a Strategic Financial Vision: Using a Simple Financial Planning Model<sup>©</sup>

**Dr. Harold M. Sollenberger**

Professor of Accounting and Information Systems  
The Eli Broad Graduate School of Management  
Michigan State University

Nearly every credit union has a strategic plan. Few other industries have a higher percentage of its members develop and use a strategic plan. These credit union plans have wide ranges of people involved, data used, and time committed to their creation and implementation. The span of effort extends from being:

- Developed over months of participatory discussions with managers and board members and inputs from other employees, even members, and other stakeholders;
- Composed during a weekend retreat with board members and senior management spending a few hours of concentrated effort; or
- Adopted using any one of many gradations between these two extremes.

The quality of the resulting plans is just as varied. Often, effort and time invested is related to the value of the end product. Significant participation and broad "buy in" by those involved directly impact the strength of the strategic plan. The arguments and debates build a commitment for a strong strategic mission, direction, and goals on almost a word-by-word level.

For this paper, the task is to test a credit union's strategic financial goals over an extended time period, using a simple simulation model that creates future balance sheets, income statements, and financial ratios. The focus is on capturing the key financial aspects of the strategic plan – in a **strategic financial vision** (SFV). This vision is often expressed in the form of financial ratios – percentages, multiples, dollars per some parameter, or some other quantitative measure. Typically, the SFV will have goals for growth, margins, liquidity, earnings, and productivity. These differ from asset/liability policy parameters, goals, and limits. They represent a small set of quantified measurements that define the financial direction and future of the credit union. This set will likely have as few as four and no more than ten financial measures.

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## Briefly, the Financial Model

The accompanying model used to test the strategic financial goals is very simple – no million dollar investment, no complicated macros, and no hundred page manual. It is a single Excel spreadsheet, built from scratch in days, not man-years. Attachment 1 shows the balance sheet and income statement formats. The basic characteristics include:

- Ten asset and six liability and equity accounts as a starting balance sheet;
- Seven interest income, four interest and dividends expense, and three non-interest accounts as the income statement starting point linked to balance sheet accounts;
- Both long-term fixed-rate and short-maturity accounts for investment, loan, and deposit accounts;
- A target equity percentage for setting a strategic “ideal equity“ goal;
- The ability to test both independent-variable and dependent-variable goals;
- Balance sheet balancing, using daily borrowings and investments accounts;
- No accruals or adjustments, using only cash flows except for the provision account accrual;
- No prepayments for loans or early withdrawals for time deposits;
- Balance sheets account balances, using end of period values for statements and two-point average values for interest and dividend calculations;
- Monitoring balance sheet composition changes, using asset mix percentages;
- A ten-year planning horizon for long-term testing;
- An assumption that goals are constant over the entire planning horizon, subject to manual intervention; and
- A set of planning assumptions, asset/liability policy guidelines, yield curves, and historic relationships provided by management.

Any user can add to the model in any desired way – more accounts, more intricate relationships, or more complex planning assumptions, for example. The goal is to examine the relationships among financial goals, starting with a given financial position.

A simple balance sheet planning model was the objective. After long searches, including commercial products, academic research tools, consulting applications, and credit union model-using managers, a practical solution became apparent – build it yourself. It has particularly salient advantages: cheap, simple to use, easy to change, low user training costs, and easy to revise.

## Testing a Strategic Plan: The Financial Part, the SFV <sup>1</sup>

The SFV of a strategic plan can often be expressed as a list of financial ratios – goals to be achieved over some future timeframe. They can be selected with careful forethought or merely listed as an attractive-sounding set of financial targets. Their value is determined by whether these goals have been tested beyond a perfunctory level. Will they result in a financially strong credit union, ready to support the business plans built upon the strategic plan? Will they give long-term financial guidance to the credit union? Or, if extended into the future, will abnormal and even dangerous financial conditions result?

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<sup>1</sup> For an extended discussion of a strategic financial vision as part of evaluation financial performance, see Harold M. Sollenberger, *Financially “High Performing” Credit Unions: Evaluating Performance within a Strategic Financial Vision*, Filene Research Institute, Madison, WI, 2008.

The intent of this study is to suggest that strategic financial goals be tested in a simulation mode using extended time periods to uncover potential risks and financial dangers. Untested strategic goals fall prey to a number of serious problems and hazards. While sophisticated planning models are available and used by many credit unions, the goal here is to suggest that a very simple simulation model will allow a quick test of most strategic goals over long time periods.

The viability of financial goals should result from conceptually and pragmatic examinations. First is the basic philosophy; and the second, of course, is the realm of calculation issues.

## **Philosophical Issues**

**Approaches to testing the strategic plan.** Strategic planners have different approaches to testing their long-term game plans. First and least desirable is do nothing. Write it, approve it, and maybe use it. More likely this strategic plan is more window dressing than a useful management tool.

Second is to review carefully the member-oriented business plan, while letting the financial results fall where they may. The SFV is either not coherently outlined in the strategic plan or it ranks well down the list of planning priorities. These overlook the fact that the SFV should be the backbone of any strategic plan. No business plan has a chance of success if the financial underpinnings lack focus, content, and credibility.

Another nearly equally fatal approach is to assume that the SFV is the sum and substance of the entire strategic plan. Credit unions are financial institutions. But they are member owned and member service driven. Success must be defined in forms of membership satisfaction. Forgetting these essentials places the financial cart before the member horse.

A fourth wrong-directed approach is to focus on single issues – such as net income, member growth, loan or deposit growth, high member service ratings, community awards, or even superior productivity measures. Narrow sets of goals waste credit union resources by not realizing the need for balance. Managers must remember that specific financial goals within a strong SFV are very important ingredients in successfully achieving a well-designed strategic plan.

Enough said – a balanced approach is essential in tying the SFV to the entire strategic plan.

**A coherent SFV - common sense applied to long-term financial planning.** A credit union should have a definite basic strategy expressed as a mission for or a vision of its future. The financial goals should be linked, cover various risks, support competitive strategies, and provide a basis for implementing strategic decisions. Strengths cover weaknesses. The issue is whether the SFV is coordinated with the rest of the strategic plan.

Too often emotion, tradition, and other factors, many illogical, cause the set of strategic financial goals to be essentially nonfunctional. This often results from a quickly created strategic plan or a financial plan that is too optimistic, non-challenging, or just lacking in direction. In the short term, this lack of common sense leads to an uncoordinated attack. In the long term, incompatible or directionless financial targets diffuse management efforts and lead to muddled decision making.

Strategic plans often begin with market positioning concerns. Financial support for aggressive competitive plans is critical. From another perspective, solving operating and other problems often requires financial strengths and protections. The SFV needs to recognize these and support the unified strategy – financial issues cannot stand alone.

## Key Testing Issues

A few calculating and modeling concerns stand out from the beginning.

**Distinguishing between strategic goals and other forecasting targets.** There are only a few strategic financial goals – maybe a half dozen, certainly 10 or less. But, to forecast balance sheets and income statements, many more variables are needed. For example, loan growth may be a strategic goal, but growth of individual loan accounts breaks down the loftier goal into pragmatic steps. Thus in the simulation, some strategic goals will be monitored for achievement versus used as an initial model parameter. This leads to the concept of independent and dependent variables.

**Strategic goals as independent or dependent variables.** In testing strategic goals, some are inputs to the planning process and become constants through out the entire timeframe. Others are not possible to insert directly into the calculation formulas; rather they are outputs that must be monitored for success or fulfillment. Loan growth is likely to be an example of an independent variable, while ROA would likely be a dependent variable. Of course the model can be designed to key on any goal, as independent or dependent.

Independent variables are needed to run the forecast and will be provided by the model user. Attachment 1, columns B and C, shows calculation rules for the majority of financial statement accounts. Most of these are forecast targets, subsets of strategic goals and independent variables. Attachment 2 shows three sets of data and ratios. The first set includes additional goals and/or parameters to begin the 10-year simulation – more independent variables. The second set is a limited list of ratios that are monitored based on the forecast financial statements. These include both dependent and independent variables. The third set is the strategic goals used by this credit union from its SFV. There are nine strategic goals – two are independent variables and seven are dependent variables.

**A long-range view of the financial plan: the problems of compounding.** What makes sense in the short term may not work logically and pragmatically in the long term. Allowing one variable to grow at five percent per year and another at 10 percent can create a major imbalance over an extended timeframe. This is particularly true of balance sheet relationships. Different growth rate targets for income statement sections can quickly lead to extraordinarily high net incomes or losses. In fact, this issue is perhaps the dominant reason for doing a study of a credit union's financial goals over time: Does balance exist? If not, how significant are the imbalances when they appear?

**A set of financial goals that actually work.** If goals are selected without considering their interrelationships, achieving all the goals may not be mathematically possible. Some years ago, a major regional bank published its set of five strategic financial goals on the front of its annual report. Someone forgot to test the set's internal validity. The bank had created a null solution situation. It was mathematically impossible to achieve all five goals at the same time. This is an extreme, but each set of strategic goals should be put to a logical and practical test. Simulation testing of the goals over time can tell the credit union whether its set of goals is actually reachable.

**Monitoring conflicting goals.** In a simplistic model, perhaps the toughest issue to handle is a conflict between two otherwise innocent-looking goals. An example is different growth goals for loans and deposits resulting in a possible conflict with the loans to deposits liquidity goal. Several simple and complex options are available. First, allow one or the other to dominate, likely the growth goals. Another option is to add "if statements" that become effective when the second parameter is violated, which would limit growth in the example. The question then is: Which is the

dominant constraint – the loans growth rate or the loans to deposits limit? This conflict is a prime indicator that strategic goals, operating criteria, and asset/liability policy guidelines may reflect cross purposes. A partial solution is to clearly define what is strategic, what is an asset/liability management issue, and what is an operating constraint. This is fundamental to the strategic planning and modeling process.

**Changing rates over the long term.** While the basic model assumes a continuity of assumptions and goals over the entire time period, nothing prevents the user from inserting changed values. Nevertheless, any changes to the goals or parameters need to be made visible and known, otherwise it is assumed that the original goals continue. Remember that the intent is to test the original goals over 10 years, not to create an acceptable 10-year plan.

**A minor issue: circular reasoning.** As any Excel user knows, a chicken and egg dilemma often arises. For example, the value in cell F20 depends on the value in cell G30; at the same time, cell G30 depends on cell F20. In this model, the balance sheet *must* balance, while the income statement provides net income that is added to equity. To balance assets and liabilities and equity, more assets may be needed, which earn more interest income, which generate more assets, and on and on. To circumvent this conundrum, a small error is inserted. Interest income on daily investments and expense on daily borrowings use only the beginning balance. Because in most cases the net daily funds is a relatively small amount, the impact of this misspecification is insignificant.

The above examples point to the need to plan the SFV carefully so it is in sync with the rest of the strategic plan. Immediate compatibility is important, but long-term synchronization is also important.

## Goals to Be Tested in the Financial Model

Given the financial model described above and illustrated in Attachment 1, what planning variables should be evaluated?

**Growth rates: Loans and deposits.** Monitoring growth over time is probably the key issue impacting long-term financial planning. The task begins with the two most prominent balance sheet categories. Deposits growth has been the dominant determinant of credit union growth over many years. It has been slow year to year and even sometimes negative as defined in new deposits or deposit purchasing power. Loan growth surges and then struggles. But, together these two categories, summed from the detailed and different loan and deposit accounts, dominate credit union finance in many ways.

The task is to plan or project growth in the individual accounts. For example, currently most credit unions are looking at real estate mortgages and home equity loans as growth areas, in spite of the sub-prime market problems. Yet, auto loans ebb and flow with the economy and car company financing deals.

**Incorporating a strategic “ideal capital” goal.** The model incorporates an “ideal equity” goal based on an all risks assessment. This ideal goal is developed using management and board member judgments in an iterative process.<sup>2</sup> Often, capital ratios are residuals that are in reality

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<sup>2</sup> For an approach to a comprehensive assessment of credit union risks, see Harold M. Sollenberger, “A Strategic Approach to Ideal Capital: Building a Consensus,” *CUNA CFO Council White Paper*, <http://cunacfocouncil.org>, June 2007 and Harold M. Sollenberger, “Building a Consensus on Credit Union Capital Adequacy,” *Bank Accounting & Finance*, August 2005.

after thoughts, not planned or targeted. Industry wide, the result has been to build equity levels that exceed realistic needs for capital protection.

While a given credit union may not select a target capital, the importance of the issue for competitiveness and long-term balance between member benefits and safety and soundness is great. A strategic plan that ignores capital in its planning goals has an inadequate and incomplete financial plan.

**Interest margin levels.** Net interest income is at the heart of asset/liability management, being derived from management controlling funds flows and determining interest and dividend rates. But, planning interest margin – either percentage or dollars – is difficult since margin sums all interest income and expense amounts. In this model, the margin dollars and percentage are the results of forecast balances and rates of investments, loans, deposits, and borrowings. The model uses average yields and cost of funds.

To achieve a target net interest income percentage, trial and error tests must be used along with reasonable judgments about marketplace realities. Also, it must be recognized that new rates on incremental funds booked in a given time period merge with already existing funds at their original rates. Only variable or adjustable-rate funds or funds controlled by management discretion change from their original rates during a future time period. Therefore, net interest income moves more slowly than do current rates, being both a stabilizing influence and a difficult-to-move goal. Net interest income is often a strategic goal and is monitored as a dependent variable.

**Net income and ROA levels.** Net income is also difficult to plan directly and is often a monitored goal. Net income is used strategically in ROA. ROA is the residual of all income statement items relative to the sum of all assets. The net income numerator is an attractive financial goal but is subject to interest margin issues, loan loss provision, and both non-interest income and expense variables. In the model, to use either net income or ROA as an independent variable, some other variable must be allowed to be a slack or plug value.

**Balancing sources and uses of funds.** A key to balanced funds budgeting is having sources and uses reasonably equal. In this model, daily investments and borrowings are the balancing accounts. While likely not a direct strategic goal, keeping the balancing accounts within some small parameter is helpful. Excessive borrowing adds to higher liquidity risk and probably to more expensive money. Excessive daily investment funds generally represent unproductive use of deposit dollars. A given credit union may as a policy have a net borrowed position. An asset/liability policy may limit the level of borrowing. This rule may be tied to lending levels as well.

Large daily borrowings or investments indicate disjointedness between sources and uses of cash in the credit union. Outside non-member funding, investment policies, and lending growth rates need examination to prevent larger out-of-balance situations. Commonly, once the excess begins, without controls it gets larger over time.

**Interest rate scenarios.** The basic assumption in the “plain vanilla” version of the model is that interest rates are static. Realistically, this never happens; rates go up, down, or vacillate. A desirable addition to the model is a number of interest rate scenarios that could be inserted quickly.

Interest rates could be built into the model in several ways. In the present model, all interest rates are related to specific asset and liability accounts, seen in Attachment 1. These three interest rate scenarios are in Attachment 3. The scenarios are tied to market-based yield curves with pricing differentials paralleling asset/liability management pricing policies or strategies set during the strategic planning process. Rates not carefully set can easily generate wild net interest margins, large profits or losses, and long-term impacts on equity levels.

In Attachment 3, the interest rate scenarios created are a low-range, mid-range, and high-range yield curve. Only three points on the yield curves are given – daily, short, and long (without definitions of short or long). Based on the December 2007 balance sheet, the net interest margins have been calculated to be 2.81% for low-range rated, 2.86% for mid-range, and 2.89% for high range respectively – all below the target 3.0%. A ten-year timeframe is probably far too long for a single rate pattern. It would be possible to insert high-, mid-, or low-rate time segments. More timeframes and rates could be created and used as needed.

**Operating expense levels and expense control.** Without doubt, a critical future performance area will be expense control. Productivity of people, facilities, and assets must improve if credit unions are to maintain and improve their marketplace positions. These are hidden and subtle but overwhelmingly important to the bottom line in the midst of severe competition. The “lean and mean” competitor will survive; others will flounder. Projections of expense levels and their growth are critical to the profitability of the organization.

**Member growth and member productivity.** Another troublesome area is member growth and member participation. Changes in fields of membership and market strategies often lead to strategic goals for member growth, potential members, and member loans and deposits activity. Goals can include a variety of dollars of something per member pointers. Monitoring member statistics are frequently part of key ratio reports.

**FTE growth and FTE productivity.** Likewise, full-time equivalent employees (FTE) represent key resources within credit unions. They indicate relative productivity but, dangerously, do not indicate quality of service to members. Personnel costs are consistently 50% of operating expenses. Increasing personnel output via efficient operations, technology, and training adds to the “lean” attitude necessary in credit unions for long-term survival.

These issues are key among many that impact long-term planning and decision making. Some of these issues can be built into the plan itself – independent variables. Others must be monitored as outputs of the plan – dependent variables.

## Using a Simple Financial Simulation Model to Test a SFV

K. I. S. S. says “keep it simple.” Another expression, “quick and dirty,” is one that emphasizes the need to make fast evaluations in a straightforward manner. Precision is not required nor is it necessary to exam every nuance.

**Simple enough to see the credit union as a whole.** This one page balance sheet gives a view of the entire credit union. Summary accounts hide relationships that may be important, but a very basic set gives an uncluttered overview, particularly when viewed over time. A similar and matched income statement allows earnings patterns to be observed cleanly.

**Complex enough to be believable.** Yes, total assets equals liabilities plus equity, but this equation is too simple. Long and short-term maturities, differential interest rates, risk assessments, and operating assumptions should be integrated into this model in brief and yet direct ways. The trade-offs between simple and complex should be made as necessary for accuracy and to the degree to which decisions depend on model results.

Often, key relationships get lost in the details. The task is to build strong granularity into the model and yet have it be nimble enough to answer questions correctly and quickly. Ability to model changes in goals, assumptions, and base data quickly is a major asset.

**Complex enough to test most types of strategic financial goals.** One test of complexity is whether the model can test, either directly or by monitoring, all goals in the SFV. Growth rates are generally easy to handle, either directly in individual loan and deposit accounts or by monitoring for total loans, for example. The same applies to yields, costs of funds, and margins. The number of time periods is determined by management needs. Here the timeframe used is ten years. Expense parameters such as relationship maximums and minimums, ranges, and functions of other accounts should reflect both strategic and operating goals.

**Generally, ignore unimportant and tangential issues.** Leave the details to others. A rule of accounting life is “if a ratio definition with a minor missing component can be more clearly explained to non-accountants than the ‘true’ definition, use it!” Some purists would argue with this quote, but thirty years of teaching ratio analysis prove its truth.

Accounting adjustments, cash versus accruals, distinctions among new, average, and maturing balances and rates, days of interest, early repayment functions, mark-to-market valuations, and many other variables should be built into sophisticated asset/liability management models. However, the “quick and dirty” approach applies to these accounting system details.

As a guide, Appendix A represents a minimalist’s operating manual for this model. The user has many degrees of freedom in modifying this simulation tool. The real world risks and returns rest with the modeler. The model is yours to bend, mend, and create new relevations.

## An Example

To illustrate the model in action, Attachments 1 and 2 present a fictitious credit union with financial statements, a set of ratios, and a set of strategic goals. This \$147 million credit union at December 31, 2007, uses the limited account structure discussed earlier. Nine strategic goals came from the SFV, two directly using in the model and seven by monitoring the forecast calculations, and are as follows:

<u>Strategic Goals</u>	<u>Direct / Monitored</u>	<u>Goal Target</u>
Loan Growth	Monitored	5.0%
Deposit Growth	Monitored	5.0%
Operating Expense Growth	Direct	7.5%
Loans to Deposits	Monitored	85.0%
Target Equity to Total Assets	Monitored	9.0%
Net Interest Margin	Monitored	3.0%
Loans & Deposits per Member	Monitored	\$12,000
Assets per FTE (\$000)	Monitored	\$4,000
Member Growth	Direct	2.0%

Most of the independent variables are forecast goals based on the strategic goals, the asset/liability management policies, or other planning parameters.

A few ratios from the initial forecast data show:

- Relatively balanced daily funds, with a small daily investment amount for balance purposes,
- Actual equity higher than the targeted 9%,
- Loans to deposits ratio over 90%,
- Net interest income about 2.86%, and
- ROA at 1%.

Observations about the strategic goals and the starting point include:

- Recent past loans and deposits growth rates are unknown.
- Operating expense growth is expected to be higher than both loans and deposits growth.
- To arrive at the loans to deposits ratio goal, deposits need to grow faster than loans, but both planned loans and deposits growth rates are the same.
- Net interest income needs to increase to reach the goal of 3.0%.
- Perhaps the higher margin is intended to cover the higher expense growth rate.
- Productivity measures for members and FTEs are set aggressively to promote increased productivity.
- Member growth is slow relative to the expected growth in loans and deposits.

After running the 10-year forecast, the forecast 2017 results show significant changes including:

- A decade of growth produces a \$257 million credit union – maybe more should be expected.
- A large shift to daily borrowings (over 4% of total assets) covers the mismatch in loan and deposit growth rates.
- Loans to deposits grows to over 100%, causing borrowings to jump.
- The mix of loan growth rates averages higher growth than the goal for loan growth intended.
- Investments shrink by 20%, perhaps indicating a liquidity problem particularly when combined with borrowings.
- Asset quality ratios remain relatively constant over the entire period.
- Equity continues to grow to over 12%, well exceeding the ideal equity target of 9%.
- Net income grows then falls as operating expense growth exceeds growth in net interest income.
- Assets per FTE and loans and deposits per member pass the target goal as loans and deposits grow faster than both members and FTEs.
- Long-term assets grow and long-term liabilities shrink, opening the credit union to more interest rate risk.
- By the end of the decade, operating expenses consume 100% of net interest income.
- ROE deteriorates to about 5% as ROA falls and equity grows.
- Of the nine strategic goals, three were not achieved by 2017. Two were built in as direct goals and, therefore, achieved; and four were achieved by the forecasting process.

This set of goals and planning assumptions do not create hugely different financial statements. However, compounding over 10 years does produce a very different financial position than the current statements show. These forecast changes either confirm what management already sees or is an eye-opening view of 2017.

Among the many complex and important issues not addressed include:

- Very little interest rate sensitivity analysis is available.
- Twists and turns during the 10-year period are practically ignored – rate changes, changes in the economic environment, competitive conditions, and new products and services.
- Possible changes to the strategic plan and the SFV are impossible to know and evaluate.
- If loan growth is constrained because of slow deposit growth, liquidity problems, and asset/liability policy limits on borrowings, profitability may change significantly.

While this illustration is built from a contrived set of data, the model does show the vitality of ratios, statement linkages, and the element of time. Appendix A gives suggestions for using this model.

## Summary and Conclusions

The purpose of this modeling effort is:

**to test a credit union's strategic financial goals from the strategic financial vision over an extended time period, using a simple financial simulation model.**

The paper has described the model used, the SFV, the testing issues, and the tests of key variables. Attachments 1, 2, and 3 show the structure of the model itself.

What can be concluded from the simulation activity?

**A routine step in the planning process.** Annually as part of the strategic planning updating process, the key financial goals should be examined and validated. The current actual situation creates a new starting point for the strategic goals. Goals may be adjusted or be amended as competitive and market conditions change. A test of viability is necessary.

**Improvements to the goal setting process.** If the goal setters are aware of the testing process, more care will be taken to select pertinent and significant goals. Strategic planning credibility is increased by quality financial targets and goals. Many credit unions have yet to institute a value-added strategic planning effort with broad-based participation.

**Sensitivity or lack of it.** In any constrained environment, the impacts of a given change in a goal are relevant to the planning process. Both directions are important: the impacts of a change in a goal itself (a higher deposit growth rate) or the impacts on a goal of a change in another strategic or other forecasting variable.

**Reconsideration of strategic goals because of the test results.** After testing the goals, seeing their interactions, and looking at management motivations, a new set may be needed. As an example, inclusion of an "ideal equity" target as a strategic goal may cause the elimination of ROA as a strategic goal since it is no longer a key performance target particularly if the credit union is overcapitalized. This is perhaps the most valuable long-term benefit of the testing process.

**Dramatic impacts of compounding.** Over a 10-year timeframe, different growth rates can transform financial statements in unexpected ways. No other calculation, perhaps with the exception of interest rate movements, influences the composition of asset/liability mixes and impacts the income statement bottom line. Care must be taken to set growth rates to reflect likely behavior – not excessive optimism. A dose of historical perspective can do much to produce credible future growth estimates.

**Modeling as an essential tool for looking into the long-term mirror.** Writing strategic goals, as pointed out earlier, can be done quickly or excruciatingly slowly with much debate. But, along the way, a simulation model is essential to test various goals, constraints, ranges, and other parameters built into the strategic plan. Only a computer model can handle the relationships that need to be included.

**Simple testing of financial goal compatibility giving insight into other financial issues.** By looking at 10-year patterns, clearer understanding of financial statement linkages can

be seen. Financial education of management and board members is increased by better comprehension and appreciation of the strategic financial goals themselves.

**Changes to the model itself.** Testing some goals directly as independent variables, while monitoring others as dependent variables, may need to change over time. Experience will highlight any necessary changes. In part as jesting but also in good conscious, modeling the strategic plan has a “sailboat mentality.” As soon as we have one, we see the need for a bigger and better one. Yet, as stressed, simplicity may be this model's biggest asset.

In conclusion, careful consideration and evaluation of strategic goals are fundamental to credit union strategic planning. Do it, do it well, and keep doing it!

## Appendix A

### Guidelines for Using This Model – The Operating Manual

As promised earlier, the “operating manual” is very simple and includes the following rules or suggestions for operation.

#### The Spreadsheet Format

- Color codes used in the template are:
  - Blues are independent variable inputs and starting point relationships – can be changed.
  - Dark blues are accounts that are forecast in the model – changed only if model is changed.
  - Reds are independent variable input definitions – changed only if model is changed.
  - Pinks are initial data inputs for the starting balance sheet – can be changed.
  - Greens are target levels for strategic and other goals being monitored – can be changed.
  - Black bolds are values sourced elsewhere from blues and greens – cannot be changed.
  - Maroons are related to an ideal equity position – can be changed.
  - Olives are beginning and ending balance sheet mix percentages – always calculated.
- Without changing the model itself, data should only be entered in pink, blue, and green cells.

#### Starting Tasks

To begin, easy yet important steps should be taken.

- Abstract the strategic financial goals from the SFV or the strategic plan itself if not outlined clearly. Insert these into the Strategic Goals section on Attachment 2 and tie their calculation to the spreadsheet.
- Identify these goals as either independent variables (built into the model itself) or dependent variables (calculated and monitored). Insert the independent variables into the appropriate calculation cells on the balance sheet and/or income statement.
- Develop growth rate assumptions for the non-strategic independent variables. Put these into column C for investments, loans, deposits, and other accounts such as non-interest income and expense accounts. Also, plan member and FTE growth goals.
- Set rules for cash, allowance level, charge-off rate, delinquency rate, and other relationships as needed.
- Clean the initial balance sheet and income statement database for the historical starting point by grouping accounts, eliminating aberrations, simplifying as possible, and testing for balance.
- Develop several simple “yield curves” with maturities as needed, testing for appropriate interest margins, market reasonableness, and consistency. Add these to the Interest Rate Yield Curves section shown in Attachment 3. Select the desired interest rate yield curve, and copy it into the Current Forecast cells.
- Add or delete balance sheet accounts and link income statement interest and dividend accounts as needed to customize the chart of accounts to the needs of the given credit union.
- Define the calculations needed in future period cells for forecast calculation – Year 1 through Year 10.

#### Calculation Tasks

With the initial data, calculation rules, and goal targets in place, run the 10-year simulation. This first look at the results is preliminary.

- Examine the results for reasonableness. This is a necessary but sensitive issue. Here a variety of flaws and unreasonable conditions appears and need correcting.
  - Results of incompatible goals appear as extreme values in distant years; these may require simple adjustment or complete reconsideration of the strategic goal setting process.
  - Lack of other necessary variables also appear. Missing values or calculation formula errors create unintended forecast numbers.
  - Flaws in yield curves and out of alignment growth rates may be fixed by reconsideration of non-strategic independent variables from the annual plan or asset/liability policies.
  - Significant balances in either sources or uses of funds reflect basic problems – either forecasting issues, calculation mechanics or errors, asset/liabilities incompatibilities, or strategic goal problems.
- Examine the balancing accounts – daily investments and daily borrowings. These are the balancing accounts on the balance sheet.
- Make adjustments and rerun the simulation. Repeat the review process.

## The Evaluation Process

Testing the strategic goal results is the purpose of the modeling exercise. Once the calculation review and reasonable messaging have been done, the resulting forecast can be examined for financial soundness and goal achievement.

- Compare the strategic goals' actual results in the 10<sup>th</sup> forecast year with the intended or targeted levels. The independent strategic goals will be “on target.” The dependent strategic goals may be too high or too low – only accidentally on target.
- Look at the balance sheet mix percentages, compare them to the starting point, assess their reasonableness, and carefully review unacceptable extreme values.
- Do a similar analysis of the calculated monitoring ratios, perhaps by risk area as listed in Attachment 2.
- Search for hidden conflicts among strategic goals and other guidelines, parameters, and goals.
- Search for causes of extreme or out-of-bounds values – inconsistent growth rates, expense or non-interest income problems, FTE and member growth issues, among others. Determine whether these are strategic issues.
- Now, the analysis of the strategic goals occurs. This is the crux of the analysis – the reason for the exercise.
  - Do the strategic goals have “staying power” during the 10-year plan?
  - Have the dependent strategic goals been achieved?
  - Have the independent strategic goals produced reasonable results?
  - Can adjustments be made to strengthen the long-run plan?
  - Do fundamental conflicts or inconsistencies now appear?
  - Has the 10-year plan produced a livable balance sheet?
- Test the model for how sensitive the results are relative to changes in strategic goal values. A series of “what ifs” would allow the user to see the impacts of minor changes in variable values. Minor growth goal changes may improve liquidity problems. Overly strong capital results may allow for lower ROA targets and lower interest margin targets.

These set-up, operating, and analytical suggestions are just that. The range goes from tinkering to a complete “tear apart and reassemble” option. The user becomes the designer, the analyst, the approver of results, and the risk taker.

Testing a Strategic Financial Vision: Using a Simple Financial Planning Model						Attachment 1		
<b>See copyright footnote below.</b>								
Balance Sheet	Information	Input		Base 12/31/08	Year 1		Year 2	
		Value	Mix		2009	12/31/09	2010	12/31/10
<b>Assets:</b>								
Cash	Calculate: %Dep	1.50%	1.3%	\$ 1,950		\$ 2,048		\$ 2,150
Investments - Daily	Plug: If needed	3.00%	0.9%	\$ 1,250		\$ 1,185		\$ 963
Investments - Short	Growth Forecast	4.00%	6.8%	10,000		10,400		10,816
Investments - Long	Growth Forecast	4.00%	6.8%	10,000		10,400		10,816
Total Investments			14.5%	\$ 21,250		\$ 21,985		\$ 22,595
Loans - Variable Short	Growth Forecast	8.00%	20.4%	\$ 30,000		\$ 32,400		\$ 34,992
Loans - Variable Long	Growth Forecast	3.00%	20.4%	30,000		30,900		31,827
Loans - Fixed Short	Growth Forecast	5.00%	20.4%	30,000		31,500		33,075
Loans - Fixed Long	Growth Forecast	8.00%	20.4%	30,000		32,400		34,992
Total Loans			81.6%	\$ 120,000		\$ 127,200		\$ 134,886
Allow for LL Loss	Calculate Allow	1.00%	-0.8%	(1,200)		(1,272)		(1,349)
Net Loans			80.8%	\$ 118,800		\$ 125,928		\$ 133,537
All Other Assets	Growth Forecast	5.00%	3.4%	5,000		5,250		5,513
Total Assets			100%	\$ 147,000		\$ 155,210		\$ 163,795
<b>Liabilities &amp; Equity:</b>								
Other Liabilities	Growth Forecast	5.00%	1.4%	\$ 2,000		\$ 2,100		\$ 2,205
Borrowings - Short	Plug: If needed	2.00%	0.0%	-		-		-
Member Deposits - Transact	Growth Forecast	5.00%	40.8%	\$ 60,000		\$ 63,000		\$ 66,150
Member Deposits - Short	Growth Forecast	5.00%	34.0%	50,000		52,500		55,125
Member Deposits - Long	Growth Forecast	5.00%	13.6%	20,000		21,000		22,050
Total Member Deposits			88.4%	\$ 130,000		\$ 136,500		\$ 143,325
Equity - Actual	Calculated		10.2%	15,000		16,610		18,265
Total Liabilities & Equity			100%	\$ 147,000		\$ 155,210		\$ 163,795
Ideal Equity Target	Calculate: Ideal	9.00%		\$ 13,230		\$ 13,969		\$ 14,742
Excess/(Deficit) Equity	Calculated			\$ 1,770		\$ 2,641		\$ 3,523
<b>Income Statement:</b>								
					2009	2010		
Int Income: Daily Invest'ts	Calculate: Yield C	3.00%			\$ 38	\$ 36		
Int Income: Inv Short	Calculate: Yield C	3.00%			306	318		
Int Income: Inv Long	Calculate: Yield C	3.75%			383	398		
Int Income: Lns Var Short	Calculate: Yield C	5.00%			1,560	1,685		
Int Income: Lns Var Long	Calculate: Yield C	5.75%			1,751	1,803		
Int Income: Lns Fix Short	Calculate: Yield C	5.75%			1,768	1,857		
Int Income: Lns Fix Long	Calculate: Yield C	6.25%			1,950	2,106		
Total Interest Income	Sum				\$ 7,755	\$ 8,202		
Int Exp - Daily Borrowings	Calculate: Yield C	5.00%			\$ 103	\$ 108		
Dividends: Mem Dep - Trans	Calculate: Yield C	2.00%			1,230	1,292		
Dividends: Mem Dep - Short	Calculate: Yield C	3.00%			1,538	1,614		
Dividends: Mem Dep - Long	Calculate: Yield C	4.00%			820	861		
Total Int & Dividends Exp	Sum				\$ 3,690	\$ 3,875		
Net Interest Income	Sum				\$ 4,065	\$ 4,328		
Less Provision for LL Loss	Calculated loss	0.40%			(422)	(447)		
Net Interest Income After Prov	Sum				\$ 3,643	\$ 3,880		
Add: Non-Interest Income	Growth Forecast	5.00%			1,626	1,707		
Less: Operating Expenses	Growth Forecast	7.50%			(3,659)	(3,933)		
Net Income	Sum				\$ 1,610	\$ 1,655		
Growth in Target Equity	Calculated				\$ 739	\$ 773		

Strategic Financial Vision: 10-Year Ratio Targets and Actuals						Attachment 2	
	Input		Base	Year 1		Year 2	
	Value	Mix	12/31/08	2009	12/31/09	2010	12/31/10
<b>Other Planning Information Needed:</b>							
Delinquent Loans to Loans	1.0%						
Net Charge-Offs to Loans	0.4%						
Operating Exp to Net Int In - Starting Point	90.0%						
Non-Interest Inc to Net Int Inc - Starting Point	40.0%						
Members Growth	2.0%		20,000		20,400		20,808
Full-Time Employees (FTE) Growth	2.0%		50		51		52
<b>Ratios:</b>							
	<b>Target</b>	<b>2008</b>		<b>2009</b>		<b>2010</b>	
<b>Earnings:</b>							
ROA	1.00%			1.07%		1.04%	
ROE	12.00%			10.19%		9.49%	
Yield on Earning Assets	5.50%	5.34%		5.34%		5.35%	
Cost of Funds	2.75%	2.69%		2.73%		2.73%	
Net Interest Income	3.00%	2.86%		2.80%		2.82%	
Operating Expenses to Net Interest Income	90.0%			90.0%		90.9%	
Non-Interest Income to Net Interest Income	40.0%			40.0%		39.4%	
Loans & Deposits per Member	\$ 15,000	\$ 12,500		\$ 12,926		\$ 13,370	
Assets per FTE (\$000)	\$ 4,000	\$ 2,940		\$ 3,043		\$ 3,149	
<b>Asset Quality:</b>							
Delinquent Loans to Loans	1.0%			1.0%		1.0%	
Allowance to Loans	1.0%			1.0%		1.0%	
Net Charge-Offs to Loans	0.4%			0.3%		0.3%	
Provision Expense to Loans	0.4%			0.3%		0.3%	
<b>Capital Adequacy:</b>							
Delinquent Loans to Equity	10.0%	8.0%		7.7%		7.4%	
Target Equity to Total Assets	9.0%	10.2%		10.7%		11.2%	
Deviation from Ideal Equity	0.0%	1.2%		1.7%		2.2%	
<b>Liquidity:</b>							
Loans to Deposits	85.0%	92.3%		93.2%		94.1%	
Borrowings to Total Assets	0.0%	0.0%		0.0%		0.0%	
<b>Growth:</b>							
Loan Growth	5.0%			6.0%		6.0%	
Deposit Growth	5.0%			5.0%		5.0%	
Operating Expense Growth	7.5%					7.5%	
Balanced Growth (Loans, Deposits, Equity)	10.0%			5.7%		6.2%	
Total Growth (Loans, Deposits, Equity)	25.0%			21.7%		22.2%	
<b>Interest Sensitivity:</b>							
L-T Fixed-Rate Assets to L-T Fixed-Rate Liab	200.0%			204%		207.7%	
<b>Strategic Goals:</b>							
	<b>Direct / Monitor</b>	<b>Goal</b>		<b>2009</b>		<b>2010</b>	
Loan Growth	Monitor	5.0%		6.0%		6.0%	
Deposit Growth	Monitor	5.0%		5.0%		5.0%	
Operating Expense Growth	Direct	7.5%				7.5%	
Loans to Deposits	Monitor	85.0%		93.2%		94.1%	
Target Equity to Total Assets	Monitor	9.0%		10.7%		11.2%	
Net Interest Margin	Monitor	3.0%		2.80%		2.82%	
Loans & Deposits per Member	Monitor	\$ 15,000		\$ 12,926		\$ 13,370	
Assets per FTE (\$000)	Monitor	\$ 4,000		\$ 3,043		\$ 3,149	
Member growth	Direct	2.0%		2.0%		2.0%	

Strategic Financial Vision: Interest Rate Yield Curves					Attachment 3
<b>Current Forecast Rates</b>		<u>Daily</u>	<u>Short</u>	<u>Long</u>	
Investments		3.000%	3.000%	3.750%	
Loans - Variable Rate			5.000%	5.750%	
Loans - Fixed Rate			5.750%	6.250%	
Borrowings - Daily		5.000%			
Member Deposits		2.000%	3.000%	4.000%	
<b>Low-Range Rates</b>		<u>Daily</u>	<u>Short</u>	<u>Long</u>	
Investments		2.000%	2.500%	3.000%	
Loans - Variable Rate			4.000%	4.500%	
Loans - Fixed Rate			5.000%	5.250%	
Borrowings - Daily		3.500%			
Member Deposits		1.000%	1.875%	3.500%	
Net Interest Income	2.70%				
<b>Mid-Range Rates</b>		<u>Daily</u>	<u>Short</u>	<u>Long</u>	
Investments		3.000%	3.000%	3.750%	
Loans - Variable Rate			5.000%	5.750%	
Loans - Fixed Rate			5.750%	6.250%	
Borrowings - Daily		5.000%			
Member Deposits		2.000%	3.000%	4.000%	
Net Interest Income	2.75%				
<b>High-Range Rates</b>		<u>Daily</u>	<u>Short</u>	<u>Long</u>	
Investments		6.500%	6.500%	7.000%	
Loans - Variable Rate			7.500%	10.000%	
Loans - Fixed Rate			7.250%	9.000%	
Borrowings - Daily		7.500%			
Member Deposits		4.500%	6.750%	7.000%	
Net Interest Income	2.78%				

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