Forecasting As a Tool for Strategic Planning

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The main focus of this article is to provide an overview of financial forecasting in the context of planning within religious institutes of men and women. While the approaches that institutes take to strategic planning can vary widely, the tools for financial forecasting are fairly well defined. After some introductory comments on planning, the fundamentals of forecasting will be discussed and four forecasting models will be detailed.

PLANNING AS CONTEXT

Religious institutes engage in a variety of approaches to planning for the future. In the face of scarce resources - human and/or financial, communities are even creating new terminology, such as ministry “nesting”, to capture what they are about. This article assumes that religious institutes engage in an ongoing process of planning for the future that is motivated by such imperatives as chapter directives, resource (people, property, finances) issues or outside forces and trends. These imperatives may prompt a formal strategic planning process or other less formal approaches to planning by leadership.

Approaches to Planning

Whether formal or informal, strategic planning is about matching the institute’s vision and capabilities with the opportunities being presented by the current environment. It seeks to find the best fit among the mission of the institute, its resources and the opportunities created by evolving needs and outside forces. It could also be described as a process of developing a shared vision of what the institute hopes to accomplish and determining what resources the institute has or could develop to bring about this vision.

Some institutes may focus on critical issues and build their planning processes around addressing key areas of concern such as sponsored entities, facility planning, retirement funding, or merger or consolidation with related institutes. Bryan W. Barry of the Amherst H. Wilder Foundation suggests that this approach “works well when one or two main issues drive other issues, or the issues seem sequential.”

Another approach is to develop alternative scenarios for the future. This approach can be attractive because it appears more focused on creative visioning rather than problem solving. Peter Schwartz, in his book The Art of the Long View, defines a scenario as “a tool for ordering one’s perceptions about alternative future environments in which one’s decisions might be played out.” While scenarios can sometimes be energizing for the planners, it can also be

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difficult to work through what is needed to get from the current reality to the alternative, probable future in light of the trends that are identified.

A third approach to strategic planning is the more formal and familiar goals and strategies approach. After identifying the opportunities and threats facing the religious institute, the mission and values guiding its life, and the resources available, the planners set clear goals for the next three to five years or more. All departments of the institute are expected to develop strategies for moving the institute toward the goals with identifiable timelines and persons responsible for implementation.

Some Process Considerations

All of these basic approaches to planning require time and energy to engage in the necessary analysis, reflection and discussion needed to produce a workable plan. Leadership has the responsibility to initiate and direct planning but needs input from the treasurer with regard to the projection of resources.

In addition, all members need to be engaged in the process in order to build ownership of the decisions that will need to be made. Some religious institutes have utilized the materials and consultation services from the Collaborative Viability Project (produced by LCWR, NATRI and NRRO in 1996) for self-assessment in preparation for chapter direction setting and ultimately strategic planning. Others have created their own processes that flow from their institute’s unique charism and structure.

Since strategic planning can demand skills and energies beyond the scope of the leaders and members, consultants and facilitators can be effectively utilized. As with the hiring of any outside professionals, some steps should be followed to assure a good fit between the consultant(s) and the institute. It is essential that the leadership and the members be committed to the planning process and that leadership or a planning committee, where utilized, identifies what outside assistance is needed. The planning consultant will typically be engaged to provide direction for the process and to assist the institute in dealing with the content of the planning. If specialized data-gathering or resource analysis is needed, other professionals may also need to be consulted. More detailed “Guidelines for Finding and Interviewing Professional Advisors and Consultants” are available in the Financial Management and Accounting Manual for Religious Institutes (FMAM), 3rd Edition (pp. 12-1 to 12-4). Since professional consultants are an investment in the future, it is crucial that the consultant has the necessary planning skills and be a good fit with the institute.

Role of the Treasurer/CFO

When a religious institute engages in any planning process, key components are the resource analysis and projections. Thus, the treasurer/CFO plays a critical role in providing the needed information on the institute’s financial viability and prospects for the future. In the essay entitled, “The Treasurer of the Religious Institute” (FMAM, 2-1 to 2-7), Clare Lorenzatti delineates the skills needed by the treasurer in the role of planner. Since the “financial planning function is the one that will make the institute financially viable into the future” and requires the
ability to see the big picture, it is recommended that the more technical aspects of the institute’s financial management be handled by a separate person with the appropriate skills. While it is not always feasible to separate these two roles in a small community, it will require greater creativity on the part of the institute to assure that both the technical and financial planning aspects are adequately addressed.

In situations where a planning committee is utilized, the finance officer may not be part of the planning committee itself, but it is essential that the treasurer/CFO be kept informed of the process being utilized, the questions being raised, and the alternatives being considered. Since it is not always obvious to the planners which strategies will have significant financial implications, it is recommended that the treasurer receive minutes of planning meetings or get regular briefings, if he/she is not part of the planning committee itself.

In general, the treasurer/CFO can anticipate some of the needs of the planners and decision-makers by pro-actively providing financial reports that summarize the trends in the institute’s financial and personnel resources and their implications for the future. The treasurer/CFO is also in a good position to draw attention to emerging needs having a financial impact, such as increased use of information technology. Thus, for formal or informal planning processes, the financial officer can forecast the long-term impact of current decisions and various alternative strategies being considered, using a computer-based forecasting model. The fundamentals of forecasting and four models effective for religious institutes follow.

FORECASTING AS SCIENCE AND ART

Financial forecasting can be viewed as a scientific exercise involving somewhat complex mathematical models; forecasting can also be considered a somewhat esoteric exercise in crystal ball gazing which has little or no connection with reality because it can be argued that a paper forecast can never exactly model a real situation. The view of this article is that financial forecasting combines a bit of “science” with a bit of “art”. The “scientific aspect” of forecasting involves creating and manipulating mathematical models which relate a number of variables in ways that mirror the reality of the situation being analyzed. The “art” of forecasting is the ability of the practitioner to create meaningful models of reality; to substitute appropriate proxy variables for economic variables; to judge the reasonableness of the final outcome; and to interpret the results in a meaningful way to audiences of stakeholders or decision-makers.

What is forecasting, and what can we hope to achieve by engaging in the process? Simply put, forecasting is the projection of an institute’s population, income, expenses and fund balance(s). A forecast usually starts with a status quo projection and evolves to creating other projections (scenario analyses) with which to inform the decision-making process. The basic elements of forecasting involve:

- articulating the long-range plans of the institute,
- determining basic assumptions (trend analysis),
- establishing base-year values,
- analyzing sources and uses of funds,
- population projection and
- analysis of results.
Articulating the Long-Range Plans of the Institute

It is important to remember that forecasting is a planning and decision-making tool rather than an end in itself. By definition therefore, a forecast cannot be prepared in a vacuum by the treasurer or the CFO. Decision-makers need to be involved in preparing the forecast as well as receiving the outcome of the forecast. Decision-makers such as general or provincial leadership need to be involved at every step in the development of the assumptions which are the crucial to the forecast. A number of critical assumptions for which the treasurer/CFO may need to seek counsel from leadership are:

- number of new members expected in the future,
- planned sale of property, capital campaign plans or outlays for capital expenditures,
- projected number of additional employees,
- expectations for the care of elderly members in the future and
- plans for future collaboration with other institutes or entities.

The treasurer/CFO needs to know the long-range plans of the institute in order to model the way in which these plans will affect major variables (population, income and expenses) being predicted over the chosen time-frame.

Determining Basic Assumptions

Establishing basic assumptions is often referred to as trend analysis. Trends are estimates of rates of increasing or decreasing growth. Trends can be externally or internally generated and can be based on historical patterns or be informed estimates about future rates of change. Simply put, a trend is an average annualized expected rate of change. Trends can be assumed to be constant for every year of the projection or vary at different years of the projection depending on the flexibility of the forecasting model.

External trends

External trends are “macro” factors that affect the economic environment within which the religious institute functions. Major external trends to be aware of when forecasting for religious institutes are:

- rate of inflation,
- health care inflation rate,
- utility inflation rate,
- interest rates,
- changes in government programs and
- equity and bond market returns.

In general, the long-run rate of inflation using the CPI as a proxy is 3.1% per year.³ Often, many of the variables being projected within the context of a forecast are estimated to increase at 3 or 4% annually if there is no compelling reason to expect the variable to change at a lower or higher rate than 3 or 4%.

³ US Bureau of Labor Statistics
However, some variables have inflation rates that are consistently higher or lower than the general inflation rate. For example, health care costs typically increase faster than the general rate of inflation as measured by the CPI. It is important to estimate the future rate of increase of health care expenses realistically because health care costs are often a large proportion of total expenses for a religious institute. Utilities are typically another expense that increases faster than the general rate of inflation of 3 to 4% annually. An example of a variable that increases slower than the rate of inflation is Social Security. Typically, the annualized rate of inflation for Social Security per individual per year increases at a rate between 1 and 3%.

Interest rates can be an important factor in the decision of an institute to finance a capital project with debt or equity. In fact, there are many interest rates, e.g., LIBOR, three-year treasury and the prime rate. A proxy for "the" interest rate used in a projection would be dependent on the terms of the debt-financing instrument used by a specific institute.

As an increasing number of religious institutes rely more and more on government programs to provide partial funding for the care of their elderly members, the future of these programs becomes more important to the institutes. Typically, financial forecasts assume that the government programs, e.g., title 19 nursing home, PACE, Social Security, Medicaid, SSI, and medication benefits which are in place for the religious institute in the base year will continue throughout the time period predicted. This certainly appears to be a reasonable assumption. However, many of the programs indicated above are dependent on federal and state budgets as well as federal and state legislators. It can be very instructive to estimate the savings these programs provide to the institute annually and imagine a forecast wherein the government program benefits are severely curtailed or even eliminated.

One of the major assumptions with the greatest leverage on the forecast is the investment rate assumption. It is important to keep in mind that investment rate returns in the short-run are affected by the most recent economic realities while long-run investment rate returns are better indicated by long-run historical returns in the equity and bond markets.

**Internal trends**

Internal trends are "micro" factors, i.e., rates of change that are specific to the individual religious institute. Some major internal trends to be aware of when doing a financial forecast for a religious institute are:

- changes in earning patterns of members,
- increases or decreases in administrative costs,
- facility costs,
- increases or decreases in retirement care costs,
- changes in member living expenses,
- changes in employees and employee wage inflation rates,
- development and fundraising income/expense patterns and
- expected rate of return on investments.

Changes in the earning patterns of members takes into account the number of members earning at any given time during the forecast as well as the average rate at which the per capita member’s
earnings increase from year to year. Increases in administrative and facility costs are typically major portions of the total expenses of the institute and usually increase at a steady rate for each year of the forecast despite the change in members. Retirement costs and member living expenses are dependent on the number of members in these categories as well as the inflation rate per year and must be predicted on a per capita basis in order to have an accurate forecast.

Typically, employee expenses are a significant portion of the total expenses of a religious institute in the base year and become a greater proportion of total expenses over time. Employee expenses are affected by three factors: increase or decrease in the number of employees over time, the average annual wage/benefit increase provided by the institute, and the number of additional employees needed to replace members of the institute who may be currently filling positions which will be replaced by lay employees in the future.

Development income and expenses may play a major or minor role in the financial forecast depending on the institute’s reliance on a development office. Typically, the way in which a development office is included in the forecast is directly related to the institute’s reliance on development activity. Thus, an institute with a relatively simple development effort may include the activity of the development office as a one-line item for development income and a one-line item for development expense within the operating fund. An institute with a more sophisticated development office may utilize a cost center or fund approach to model the activity of the development office. This can be done by utilizing a number of line items for specific development income and expenses as well as a development fund balance with transfers out to other funds.

As many institutes rely less on members’ earnings and more on investment income, the rate of return on investments is the assumption with the most leverage on the financial forecast. While certainly affected by the external bond and equity markets, the rate of return on investments is also an internally generated variable dependent on the overall investment policy of the institute, specifically the asset allocation of the portfolio. It is important to remember that a short 3 to 4 year past historical experience is a poor predictor of investment performance for the next ten to twelve years. During periods of above average returns (1995 to 2000), it could have been tempting to use 12% as an annualized investment rate of return. Conversely, during periods of below average returns (2001 and 2002) there may have been a tendency to utilize 0% or even a negative value for investment rate returns.

One proxy for long-run return on equity investments is the annualized nominal geometric return on equities from 1926 to 2002 of 9.9%. A proxy commonly used for long-run fixed income returns is the annualized nominal geometric return on the 5-year treasury note of 5.4%

In order to arrive at a realistic annualized long-run rate of return on investments, one needs to look at the overall equity and bond investment strategy of the institute as well as the asset

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4 Based on capitalization-weighted Ibbotson (Center for Research of Securities Prices) data comprised of NYSE returns from January 1926 to June 1962, rebalanced semi-annually; from 1962 to 2002 comprised of CRSP data using all exchanges available, rebalanced monthly.

5 Based on monthly returns of the 5-year treasury note from 1926 to 1972; from 1973 to 2002 based on monthly returns of the Lehman Brothers Intermediate Government Credit Bond Index.
allocation between the bonds and equities in the portfolio in order to determine the appropriate rate of return to use for predicting investment performance, always keeping in mind that the goal is a long-run prediction. The institute’s investment consultant should be very helpful with respect to the investment rate assumption decision.

Calculating trends
The goal of calculating a trend is to arrive at an annual rate of change that can be applied to a specific variable being predicted. For example, what is the appropriate rate of change (percent increase per year) to apply to members’ salaries each year when predicting the income variable members’ salaries? The trend factor for members’ salaries could be arrived at in a number of ways; three will be considered here.

One treasurer/CFO could take a general approach and research the typical increase in stipends or appropriate salaries in the geographic region. This would result in a percentage increase that should be reasonable if members are concentrated within a given geographic region. Another treasurer/CFO who has been in the position for a number of years may just intuitively “know” the typical salary or stipend increase per member per year.

Finally, a third treasurer/CFO could analyze past data in order to arrive at the appropriate trend to apply to the salary variable. An example follows which will illustrate two important points. The first point is how to analyze past data in order to arrive at an annualized rate of return. This point merely involves applying a rate of change formula.

The second point in the example is much more crucial to the concept of forecasting and an area where mistakes can easily be made, that is, the necessity of distinguishing between aggregate and individual data or understanding which variables are population-based and which variables are not dependent on changes in the underlying population. Assume the following salary data for a sample religious institute:

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Salary</td>
<td>$943,000</td>
<td>$959,330</td>
<td>$983,871</td>
<td>$986,459</td>
<td>$1,017,918</td>
</tr>
</tbody>
</table>

If one believes that the past salary trend is the best predictor for the future growth of salaries, one would apply the trend formula to the above data in order to arrive at the average annualized trend (rate of change) per year. The formula to be used is:

\[
((EV/BV)^{(1/N)}) - 1
\]

where: EV = ending value  
BV = beginning value  
N = number of years  
\(^\) = exponentiation

Substituting the data from our example, the formula becomes

\[
((\$943,000/\$1,017,918)^{(1/4)}) - 1
\]
which when calculated results in the outcome that salaries are decreasing at a rate of
-1.9% annually. Now add more information to the example.

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Aggregate salaries</td>
<td>$943,000</td>
<td>$959,330</td>
<td>$983,871</td>
<td>$986,459</td>
<td>$1,017,918</td>
</tr>
<tr>
<td>Number of earners</td>
<td>41</td>
<td>43</td>
<td>45</td>
<td>47</td>
<td>50</td>
</tr>
<tr>
<td>Per capita salary</td>
<td>$23,000</td>
<td>$22,310</td>
<td>$21,864</td>
<td>$20,988</td>
<td>$20,358</td>
</tr>
</tbody>
</table>

Substituting the per capita data from the example, the formula becomes

$$((23,000/20,358)^{(1/4)}) - 1$$

which when calculated results in the outcome that per capita salaries are increasing at an average rate of 3.1% annually. Thus, if the forecasting model called for the average per capita change in salaries per year, the 3.1% increase per member per year would be the correct trend estimate rather than the -1.9% decrease in aggregate salaries per year.

There are two important caveats to note about using the trend formula. First, the formula assumes that past history is a predictor of the future. If some structural or systemic change has occurred, it is possible that past historical performance is a poor predictor of future performance. For example, if an institute has recently begun to utilize government benefit programs for its elderly members, past annual increases in per capita retirement care costs may over-estimate future annual increases in per capita retirement care costs.

The second caveat with respect to use of the trend formula concerns the formula itself. Close examination of the formula reveals that the only two values used in the formula are the values in the ending and the beginning year. Thus, if the ending or beginning year value is unusually high or unusually low, the trend may be distorted. It is very important to review the historical data and use a representative ending and beginning year value for the calculation.

**Establishing Base-Year Values**

The base year refers to the actual historical year data which is used to begin the forecast. The most common custom is to use the financial data from the end of the most recent fiscal year. There is often a tendency to be sure that the base-year data “feet out” to the audit or the financial statements exactly. This is a reasonable expectation. However, base-year data needs to be carefully analyzed in order to distinguish starting points for variables which are extended out over the time period of the forecast, from one-time event variables which are not extended throughout the time period of the forecast.

For example, assume that an institute which is doing a ten-year forecast has a development office which in the past few years recorded approximately $500,000 per year in income. Using the trend formula, the treasurer finds that development income has increased approximately 5% per year, and the treasurer notes no reason to assume that this pattern will change.
Assume that in the base year chosen for the forecast starting point, the development office conducted a capital campaign and raised $1.0 million dollars for a total amount of income of $1.5 million for that one year. There is a need to distinguish the $500,000 starting point for the ongoing forecast from the $1.0 million extraordinary income raised in the base year. The base-year starting point for the line item entitled “development income” which will be increased at 5% per year for the term of the forecast should be $500,000 not $1.5 million. The $1.0 million can be included as a one-time income item for the base year only and would not be extended past the base year of the forecast.

To illustrate this point, consider compounding $500,000 at 5% for ten years which results in an amount of $814,500 at year ten. Compounding $1.5 million for ten years results in an amount of $2.4 million in year ten. The disparity in these results underscores the need to analyze base-year data carefully to distinguish between amounts to be compounded each year and amounts to be re-categorized into one-time base-year values.

Analyzing Sources and Uses of Funds

Since the chart of accounts for most institutes is many pages long, it becomes impractical to forecast each individual line item, so related line items are typically grouped together into categories. When grouping line items it is necessary to distinguish between income and expenses which are population-based (variable) and income and expenses which are not population-based (fixed). For example, the expenses associated with ground and facility maintenance are usually considered fixed because the expense is incurred irrespective of the number of people occupying the facility. Contrast this to living or health care expenses which are considered variable because they are dependent on the underlying changes in the population. A typical schema for a very simple institute might be the following.

<table>
<thead>
<tr>
<th>Sources of Funds</th>
<th>Members’ earnings</th>
<th>Social Security</th>
<th>Fundraising and donations</th>
<th>Property usage and rent</th>
<th>Investment income</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Population-based</td>
<td>Population-based</td>
<td>Not population-based</td>
<td>Not population-based</td>
<td>Not population-based</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Uses of Funds</th>
<th>Support of independent members</th>
<th>Support of retired members</th>
<th>Health care costs</th>
<th>Facilities operations</th>
<th>Administration</th>
<th>Sponsored ministries support</th>
</tr>
</thead>
</table>

The methodology for forecasting variable and fixed income and expenses differs. Typically, fixed income or expenses start with a base-year amount which is increased by a percentage rate each year to the last year of the forecast. Variable or population-based income or expenses are predicted each year by increasing the per capita value from the previous year by a certain percentage rate and then multiplying the per capita value by the underlying population which also changes from year to year.
Population Projection

The above discussion emphasizes the need to project the population of the institute in order to properly project variables which are population-based. The results of any forecast which does not differentiate between population-based and fixed variables are suspect.

In addition to providing the data for projecting population-based variables, population projection also gives the leadership and other decision-makers of the institute meaningful planning information in terms of the future patterns of increase or decrease in the various age cohorts. Population projection can also assist leadership by providing an approximation of the number of skilled, assisted and independent elderly members the institute will need to provide for in the future.

Thanks to the National Religious Retirement Office, religious institutes have the William M. Mercer Actuarial Tables for Female and Male Religious available to them. These actuarial tables have been found to be very accurate in projecting populations of members of religious institutes of women and men and have been incorporated into the two most popular forecasting models for religious institutes.

Analysis of Results

Analysis of the output of a forecast really begins with analysis of the input. When the first pages of output from a forecast are produced by any model, the treasurer/CFO needs to examine closely all base-year values and assumptions line by line for reasonableness. If base-year values and assumptions are reasonable, the output can be interpreted. The following points need to be considered when analyzing results of a financial forecast.

- Review base-year data for reasonableness and consistency with financial statements.
- Review population patterns for changes in the various age cohorts, e.g., under age 70 cohort and age 70 and over cohort.
- Review trends in the number of members needing skilled care, assisted living care and other services if the data is available.
- Note the trend of the total fund balance. Is the fund balance increasing, decreasing or staying the same? If increasing or decreasing, what is the rate of increase or decrease? If the total fund balance is decreasing, how soon will the fund be in deficit?
- Note which funds are in deficit and which funds are in surplus at the end of the forecast.
- Note major factors (major income or expense variables) which are causing funds to be in deficit or surplus.
- Compare the projected actual retirement fund balance with the projected target retirement fund needed to meet the retirement obligations of the institute.
- Determine if a crisis exists (i.e. total fund balance turns negative). If the number of years before the crisis is 1 to 5, the leadership of the institute will need to identify and implement immediate steps to avoid the impending crisis. If the crisis is more than five years away, there is some time within which to develop plans to avert financial crisis.
Presentation of results
Regardless of which forecasting model is employed, it is necessary to share the results of the forecast with the leadership and the members of the institute. Typically, the output of the forecasting model will be many pages of numbers showing the projected population, income, expense and fund balance amounts. In most instances, the raw form of the output data is not appropriate for sharing with a leadership team or group of members of the institute.

Experience has shown that "a picture is worth a thousand numbers" when a treasurer/CFO is presenting data from a forecast to a group of institute members or a leadership team. Hence, graphs can be an excellent means by which to convey the results of a forecast to an audience. Graphical analysis can also be helpful to the treasurer/CFO because graphs assist in seeing the over-all picture of the institute, identifying future trends even beyond the lifetime of the forecast and showing relationships between key variables over time.

For example, the following graphs of projected variables have been found to be very helpful in giving an audience a picture of the long-range status of the institute:

- population under age 70 and population age 70 and over,
- population by care levels (skilled, assisted, independent with services)
- income and expenses,
- total fund balance of the institute,
- various fund balances of the institute and
- projected retirement fund balance and target retirement fund balance.

While all of these graphs can be produced once a projection is done via any model, an advantage of the TRENDS forecasting model is that these graphs and many others are automatically produced.

Scenario analysis
A scenario analysis can be very helpful where a financial crisis is indicated by a forecast. For example, assume that the status quo forecast of an institute indicates impending fund balance deficits in nine years. Among a number of solutions considered to avert the crisis, the leadership of the institute considers selling land valued at approximately $1 million and utilizing a government benefit for retired members that would reduce the cost of care of the retired members by $1,200 per member per year. These modifications could be made to the status quo forecast and a second scenario could be run. Leadership would be able to see the estimated future financial leverage of these cost saving measures and be able to make a more informed decision about implementation.

Or consider the religious institute that is trying to determine how much money to set aside in a ministry fund in order to meet some future known support levels for various ministries. A scenario analysis can provide very meaningful information in this instance by modeling the initial transfer into the ministry fund, the expected income and expenses, the estimated investment earnings and the fund balance levels over time.
FORECASTING MODELS

There are various types of forecasting models and methodologies which are popular among religious institutes. For ease of discussion, the methodologies are categorized in the following manner:

- proprietary models,
- actuarial projections done by an outside consultant,
- **12-Year Cash Flow Model** and
- **TRENDS**.

It must be noted that the forecasting models to be discussed present output in nominal values rather than real values (values which have been discounted to today’s values). However, models which include a retirement needs analysis do calculate a number of real values, namely, past service liability, unfunded past service liability and present value of future benefits.

Proprietary Models

Proprietary forecasting models are those which have been developed by one institute for its use. These models are usually institute-specific, mirror the reality of the institute very closely, and in most cases cannot be transferred for use easily to another institute. Proprietary models have often been developed initially by a treasurer, CFO or member of the institute as a project or thesis requirement. Many of these models are constantly being updated and “tweaked” by the users. The advantages of proprietary models follow:

- usually understood very well by the users,
- relatively easy to use,
- adaptable and flexible,
- model the reality of the particular institute very specifically,
- are not costly to maintain and
- provide the ability to do scenario analysis.

In general, proprietary models may provide a very good forecast, however some of the shortcomings of proprietary models may be the following.

- The model may be too simple to effectively project the future reality of the institute.
- Results may be suspect if provision is not made for a population-based projection.
- Model may not include a measure of future retirement need.
- The in-house expertise must be available to run and update the model.

Actuarial Projections Done by an Outside Consultant

There are many actuarial firms and consultants which are able to provide forecasting studies for religious congregations. Especially in situations where the in-house expertise or interest is lacking, a religious institute may contract with an outside firm or consultant to provide a financial forecast.
A word of caution is necessary with respect to contracting with an outside firm for actuarial services. If the major reason for seeking an outside firm is that an in-house person is not able to set aside the time necessary to complete a forecast using an available model, there may be (and should be) concern. In order to do a thorough forecast, an outside firm needs a large amount of detailed information about the institute’s finances, its population and long-range plans. An in-house person will still have to dedicate a significant portion of her or his time to gather, organize and explain the institute’s data to the firm hired to do the forecast. If the outside firm does not require micro-data and an in-depth explanation of the institute’s future plans, beware of the outcome of the study.

There are however, advantages to enlisting an outside firm to provide a financial forecast and these are listed below.

- The in-house expertise to do a financial forecast is not available.
- Some readers place more credibility on the results of a costly study done by an outside firm.

One also needs to be aware of the following issues related to hiring an outside firm to provide a financial forecast.

- A forecast done by an outside firm is usually quite costly.
- The projection may or may not be population-based.
- The study may or may not provide a measure of retirement need (Retirement Needs Analysis)
- Model is not available to do periodic in-house scenario analysis; if scenario analysis is desired, there is usually additional cost involved.
- Working with an outside firm still requires a significant amount of in-house data preparation.

12-Year Cash Flow Model

The 12-Year Cash Flow Model, which was developed by the firm of Arthur Andersen and Lois Vanderbeke, OP, has been available to treasurers of religious institutes since 1985 through the National Religious Retirement Office. The model is a Lotus file with many formulas and macros embedded in the file. The 12-Year Cash Flow Model has been updated a number of times since its inception. In addition to providing population and financial projections, the 12-Year Cash Flow Model provides a calculation of retirement need (past service liability) and a measure of how well the institute is meeting its future retirement obligations (unfunded past service liability). The advantages of using the 12-Year Cash Flow Model for financial projections follow.

- The William M. Mercer Actuarial Tables for Female and Male Religious are embedded in the model for accurate population projections.
- Income and expense variables are correctly identified as population-based or not.
- The model provides a measure of retirement need.
- The 12-Year Cash Flow Model is sophisticated enough to mirror the institute’s reality.
- The model is fairly simple to use and good documentation is available.

A number of inherent assumptions need to be kept in mind when using the 12-Year Cash Flow Model.

- The 12-Year Cash Flow Model assumes that 100% retirement funding is the goal of the institute.
- The model allows only two funds and the user cannot control inter-fund transfers.
- The investment rate of return is restricted to specific values.
- A closed population is one of the assumptions of the 12-Year Cash Flow Model.
- All members are assumed to retire at age 70.

TRENDS: Tracking Revenue, Expense, Net assets, Demographics, Savings

The TRENDS forecasting model was developed in 2000 by Eleanor LeClair Consulting Services and is copyrighted by the National Association for Treasurers of Religious Institutes. The TRENDS model is an Excel file embedded with macros and formulas which provides an extremely flexible environment for population and financial projection. The model has been used successfully with institutes as small as 16 members and as large as 2,800 members. Some of the advantages of using the TRENDS model for forecasting follow.

- The William M. Mercer Actuarial Tables for Female and Male Religious are embedded in the model for accurate population projections.
- Income and expense variables are correctly identified as population-based or not.
- It is possible to use individual or aggregate member-specific data in order to project members’ earnings.
- Addition of new members is possible in the TRENDS model.
- The TRENDS model allows a number of retirement ages and any investment rate assumption.
- A preferred level of retirement funding can be specified by the institute.
- The use of a number of funds in addition to the operating and retirement funds is possible and users are able to control inter-fund transfers.
- An estimation of future retirement need is provided.
- An estimation of the future number of members needing assistance in the various care level categories (skilled, assisted and independent elderly) is provided.
- Charts and graphs are automatically generated by the model.

However, because the TRENDS model does allow for maximum flexibility, the following caveats need to be kept in mind when using it for population and financial projections.

- A fair amount of up-front time may be necessary to format raw data for input as base-year values.
- The high degree of flexibility allows for use of any assumptions, even if they are very unrealistic.
Other Considerations

Time frame

What is a good time frame for projection? Four to five years is a good time frame for a forecast which focuses on “the numbers”. That is, one can count on the numbers to approximate reality from the first five years of the forecast. However, predicting longer than five years in order to explore the trends of the major variables may be very instructive especially when combined with a long-range strategic plan. Developing assumptions beyond fifteen years may produce unreliable results because the further out a predication is extended, the greater the margin of error.

There is one caveat, however, to the “greater than fifteen years predication” caution and this involves population prediction. Because the *William M. Mercer Actuarial Tables for Female and Male Religious* are used to predict the population, forecasts of the closed population (forecast of base-year members only) beyond fifteen years are very reliable. The major source of unreliability for the population forecast would be if the institute predicated the open aspect of the population too conservatively or too generously, that is, the forecast included too many or not enough new members.

International institutes

A question often asked by treasurers of international religious institutes concerns the appropriateness of using the *12-Year Cash Flow Model* or *TRENDS* to project populations and finances for an international institute. Recall that the *12-Year Cash Flow Model* and *TRENDS* use the *William M. Mercer Actuarial Tables for Female and Male Religious* for the population projections.

It must be kept in mind that the actuarial tables developed by Mercer are specific to U.S. women and men religious. Unless the standard of living, availability and quality of health care, and death rates of the non-U.S. population being projected can be assumed to be very similar to U.S. women or men religious, use of the *12-Year Cash Flow Model* or *TRENDS* to project populations (and thus financial variables that are population-based) for other than U.S. institutes may be unreliable.

SOME CONCLUDING COMMENTS

Religious institutes vary greatly in charism, mission, internal culture, ethnicity, size and median age. Issues being addresses can vary widely as well. While some communities are contracting in size, others are expanding. While some communities are re-configuring by merging provinces or consolidating with institutes of like charism, others are spinning off new endeavors. While some are disposing of underutilized facilities, others are building new facilities.
No matter what the planning needs or approaches, forecasting can be an invaluable stewardship tool for understanding the current reality and the financial implications of proposed strategies for achieving the institute's mission.

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