A Model of Financial Performance Analysis Adapted for Nonprofit Organisations

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Keywords
nonprofit, ratio analysis, financial performance, mission

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Turk et al (1995) suggested that the key to analysis and measurement of the financial and operational control and impact is related to the central question: What is the organisation’s mission? Their model reflects the interrelationship between a series of questions about the mission and the financial resourcing and control of the organisation. They suggest that such a framework provides an appropriate analysis for past performance which will help an organisation chart its future direction.

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Keywords: nonprofit, ratio analysis, financial performance, mission
A Model of Financial Performance Analysis Adapted for Nonprofit Organisations

Without money, no mission, no matter now meritorious, can be achieved.  
(Bryce, 1992, p. 8)

A nonprofit organisation (NPO) has been defined as one that has "predominantly nonbusiness characteristics that heavily influence the operations of the organization" (FASB, 1980). Consequently, the starting point for a nonprofit organisation (NPO) is its mission (Drucker, 1989; Oster, 1994). Since mission is its central thrust, its reason for existence, it may neglect to use accounting information to facilitate organisational control. The key to this is oversight is often related to the culture of the organisation. The organisation is not profit-oriented; it is member oriented, and it has been successful because it can do certain operational things very well. However, many NPOs started with a "cause" and lacked a professional management orientation. By very definition an NPO is a voluntary organisation and thus many of its managers are amateur managers. An annual operating budget may be the extent of the financial planning with this budget being developed in isolation and not part of a long term strategic plan. Rather than advance planning, such organisations often tend to react to changing circumstances and events. Thus, their systems have developed as responses not as initiatives. Hence, the nature of financial management has been reactive rather than proactive.

The rise of accounting at various times in the history of many NPOs appears consistent with times of crises. The organisation may hold special meetings, special conferences, special appeals and employ facilitators to attempt to improve the situation. This is consistent with Meyer’s (1994) conclusion that “accounting arises in partially rationalized (or partially bureaucratized) settings” (1994, p. 129). He argues that

When [an] organization is relatively complete, controlling its own definition of reality, accounting becomes less necessary, and sometimes intrusive. … We thus expect to find accountants in greater numbers where [an] organization is not self-sufficient. (Meyer, 1994, pp. 129-130)

It would appear that an accounting system can operate in an organisation and yet not function as a control mechanism or as a mechanism to provide accountability. In an organisation that values informal relationships, voluntary participation and "niceness", the idea of accountability is somewhat alien. While the need is acknowledged (because who could say otherwise?), the reality is a different matter. It may be necessary to change the organisation’s culture so that accountability is incorporated as a positive value. It may be important to introduce more professional financial management. Thus the use of accounting as a control mechanism is not merely a technical system, but a socio-technical system “because it involves change in the social or cultural system which interacts with the accounting technology" (Flamholtz, 1983, p. 166).

Turk et al (1995) suggest that the key to analysis and measurement of the financial and operational control and impact is related to the central question: What is the
organisation’s mission? Their model reflects the interrelationship between a series of questions about the mission and the financial resourcing and control of the organisation. They suggest that such a framework provides an appropriate analysis for past performance which will help an organisation chart its future direction.

This paper analyses financial performance by considering ratio analysis in order to identify anomalies and focus attention on matters of significant concern to NPOs. The next section discusses the use of financial ratio analysis. The third section discusses and extends Turk et al.’s (1995) financial performance model. The final section identifies the limitations of such analysis and suggestions for how the model can be applied to individual organisations.

Financial Ratio Analysis and Mission
Ratio analysis is a well established tool to evaluate an organisation’s profitability, liquidity and financial stability (Glynn et al, 2003). As such it can be used to answer a variety of questions. Those proposed by Turk et al (1995) are shown in Figure 1

Herzlinger and Nitterhouse (1994, p. 133) use ratio analysis to answer a different set of four questions:
- Are the goals of the organisation consistent with the financial resources it needs to finance those goals?
- Is the organisation maintaining intergenerational equity?
- Is there an appropriate matching between the sources from which resources are derived, and the uses to which they are put?
- Are present resources sustainable?

This series of four does not mention “mission” per se, but there is the underlying idea of goals and focus for the organisation, which affect and are affected by the way in which resources are handled. Another alternative is to combine a number of the questions and ask: Is the organisation balancing its resources against the current and future needs of its members while providing for the long-term health of the organisation? (Langan, 1998, p. 76).

The emphasis by a nonprofit organisation on its mission is reflected in the statement of Stanley Corfman, former chief financial officer of the YWCA of the USA, that

People who are in financial capacities at NPOs [nonprofit organisations] have to understand that we budget for the mission. We don’t change the mission to suit the budget (Corfman, in interview cited by Dennis, 1997, p. 73).

This difference is also highlighted in the very features that characterise NPOs. In particular, there is "no direct relationship between resources provided and goods or services received from the organization" and "operating goals and purposes ... are not profit-based" (Martin and West, 2003, p. 185).

Whatever questions are asked, financial ratio analysis formalises and quantifies financial data to facilitate comparison within an organisation. Ratio analysis provides an efficient
means by which financial data can be reduced to a more understandable basis for evaluation of financial conditions and operating performance, by which a decision-maker can identify important relationships, and by which forecasts can be made of an organisation’s ability to pay its debts when due and to operate in a manner consistent with its mission and without leaving a deficit to be covered by future generations. Each ratio is designed to detect a certain type of symptom in relation to the underlying state of health of the organisation, with a collection of symptoms suggesting an appropriate treatment plan. The roles of five of the more commonly used ratios, summarised in Table 1, display a degree of overlap between the financial vulnerability measures and financial performance measures.

**A Model of Financial Performance Analysis**

To measure financial performance in a nonprofit organisation, it is essential to start with a consideration of the organisation’s mission (Drucker, 1990; Turk et al, 1995). It is thus appropriate to answer a series of questions as depicted in Figure 1.

Each of the questions in the model in Figure 8.1 can be answered by using financial and operational ratios. The analytical capabilities of ratio analysis have an important place in assessing an organisation’s current financial state, establishing measures for future strategies and tasks to accomplish its mission, evaluating its performance over time, and deciding how the organisation should proceed in the future (Turk et al, 1995, p. 4). Turk et al suggest specific ratios that can be used to answer each of the four key questions, but these ratios have been developed so as to be applicable for an independent higher education institution, such as a university or college. These sets of ratios are not directly transferable to a membership organisation such as are many NPOs.

Consequently, some ratios have been used as suggested by Turk et al and some have been deleted completely, while others have been modified or reconstructed to reflect the different mission and structure of voluntary organisation. The remainder of this section identifies and discusses various financial ratios that are appropriate to answer the questions in Figure 1.

*a. Are financial resources sufficient to support the mission?*

This question is primarily concerned with the sufficiency and flexibility of financial resources. It is concerned with figures on both the balance sheet and the income statement. The balance sheet is a snapshot of an organisation at a particular point in time, the balance date. Consequently, one can judge not only whether an organisation is healthy at that date, but the extent to which its resources have changed since the last snapshot, the balance date last year.

The income statement shows the operating result for a period of time. Whether this results in a surplus or a deficit indicates whether the organisation has lived within its means or not. If not, then it has been financed by past or future members, rather than the current membership, which raises the issue of intergenerational equity.
There are four primary ratios that could be used to give an indication of whether the resources of an NPO are sufficient to support its mission. These are summarised in Table 2.

b. **What financial resources are available to support the mission?**
This question is concerned with the issue of long-term financing. It addresses how the organisation uses debt to support its mission and the extent to which it generates both internal and external revenues and resources. It is important for a nonprofit organisation to be wary of investments that divert resources and focus from its mission to some other activity. This issue has been debated in many NPOs, often over a number of years. Proponents many argue that organisational fixed assets should be developed, thus providing investment that would provide externally generated sources of revenue and also be useful to the organisation itself. However, opponents of this plan claim that the NPO has a particular mission which would not be enhanced by such a proposal. This conflict has arisen for many youth organisations which own valuable property which could be developed. The balance is between recognising that their central mission is the business of youth development and leadership programs, and that therefore, whether it would be inappropriate to branch out into something else such as conference centre management.

The five primary ratios that give an indication of what financial resources are available to support the mission of an organisation are summarised in Table 3.

c. **How are financial resources used to support the mission?**
This question focuses on the central economic question of allocation of scarce resources. In considering the mission, the organisation needs to identify its core activities and its support activities, and to determine how resources are used or distributed between these areas. This issue is a contemporary one for many NPOs which have recently begun to produce their revenue and expenditure statements divided into two classifications, core and non-core activities. In the past, all activities may have been aggregated, there being no regulatory reason to do otherwise.

There are two primary ratios that give an indication of how the financial resources of an NPO can be used to support its mission are summarised in Table 4.

d. **Are financial resources applied efficiently and effectively to support the mission?**
The fourth question concerns issues of accountability and financial performance. It addresses the ways in which resources are used and asks whether there are better ways of meeting the organisation’s mission and objectives. It is concerned with an assessment of organisational productivity. Different organisations stress various elements of performance and accountability. These major strategic goals require careful measurement to answer any question about efficiency and effectiveness. The common components of a balanced approach for a profit-centred organisation include profitability measures, customer satisfaction measures, innovation measures, and internal measures of efficiency, quality and time (Horngren, Foster and Datar, 2001). However, these elements need to be expressed differently for a nonprofit organisation, because its focus
is on mission, rather than profitability. Furthermore, the five strategic goals (quality, customer satisfaction, retention, velocity and productivity) identified by Turk et al (1995), while relevant to a nonprofit educational organisation, are not all easily operationalised for a member-oriented NPO.

Quality of inputs should focus on the members, the leaders, the program, the activities and the structures, but it is often difficult to find ratios by which these can measured in an NPO. How does one judge whether quality is high? One can consider the ratio of expenditure on operations and facilities to total income, or the age of the facilities, but measuring quality in relation to people or programs is more difficult. One possible measure is the number of members per leader, assuming that better quality is delivered when this ratio is smaller. Another measure of quality is in relation to the training of the leaders.

The retention of membership is a further important goal in measuring the efficient and effective use of resources, but it may be difficult to measure this in many NPOs. Members may change sections as they reach a certain age, and they even see themselves as members into adulthood. There are often few records tracing an individual’s passage through the organisation. If membership figures were to remain static for a year, it would be difficult to assess whether the membership itself has been unchanged or whether the same number of new members started as those that officially “left”. An attempt at measuring retention rates, could be to use the change in "member" membership and the change in "leader" membership. However, the organisation would be better able to gauge its effectiveness and efficiency in the use of its resources, if it were to collect data that would make possible a clearer measurement of the strategic goal of retention.

Turk et al (1995) also considered velocity, the measure of speed involved in completing a service, as a measure of efficiency and effectiveness. Whereas this may be important in educational institutions where students will wish to complete their degree in a timely manner, it is not appropriate to a membership organisation where quality, not time is the issue.

Productivity is another of Turk et al’s goals which it is difficult to operationalise in many NPOs. Productivity concerns identifying outputs achieved as the result of inputs of resources, whether human, monetary or structural. Therefore, it would valuable to have information such as volunteer hours and use of organisational assets by both members and non-members. However, human resource productivity and financial productivity can be measured by the ratio of members to leaders, and the core service costs to the number of members.

Thus, four strategic goals are considered as indicators of whether financial resources are applied efficiently and effectively to support the mission. Ratios to measure these are explained in Table 5.
Limitations of Financial Ratio Analysis

Crunching numbers to calculate financial ratios means that one is focussing on individual trees. One also needs to take a step back and see the whole panorama of the financial analysis forest. Doing this means recognising the limitations which should be considered when interpreting the results of financial ratio analysis.

The ratios and percentages that are calculated in financial analysis focus on certain areas in isolation to rest of the organisation. It is important to interpret these figures in the correct perspective, bringing into the examination qualitative factors such as general economic conditions, the unique characteristics of the nonprofit sector and the position of the organisation being investigated within the sector and in relation to its own historical and cultural evolution.

There are also inherent limitations in the financial statement data which is used for the calculation of these ratios. Since many NPOs are not subject to accounting regulation (Sievers, 1996), the way in which its reports have been presented is entirely at the discretion of those preparing them. This means that there may be difficulties with uniformity in reporting. Even the words may be taken to mean different things. Alternatively, a term used in a financial report, may not be given the same meaning by the reader as was intended by the preparer. Furthermore, the focus of operations changes over time, making comparisons difficult.

It is not just the preparation of the reports which may be different over time, but also the accounting practices used by the organisation.

A further limitation is that of historical cost accounting. There are a number of levels of dollars in the balance sheet, with assets such as accounts receivable being stated in current dollars and non-current assets such as land being stated at historic cost. This makes comparative analysis across years difficult, particularly with the varying inflation rates of the past eighty years. In the 1920s, inflation rates were not even considered; in the 1970s, inflation was in double digit figures; today, it is between one and three percent.

Given these limitations, it is important that the interpretation of financial ratios “be tempered with consideration of the underlying data quality, the effects of flexibility in accounting, and the limitations of historical cost accounting” (Herzlinger and Nitterhouse, 1994, p. 170).

In order to operationalise this model, these ratios must be calculated and analysed for the individual organisation. Ideally, historical data, possibly for up to ten years, should be considered in developing trend analysis for the NPO. This would enhance the measurement of organisational strengths and weaknesses, and identification of planning activities on which it is necessary that the organisation focus in order to revive its financial profile in relation to its mission.
Concluding Remarks
Measurement of financial performance by ratio analysis helps identify organisational strengths and weaknesses by detecting financial anomalies and focusing attention on issues of organisational importance. Given that the mission of a nonprofit organisation is the reason its existence, it is appropriate to focus on financial resources in their relationship to mission.

The application of this financial performance model to an individual organisation will indicate a number of issues which need to be grasped. However it must be realised that these issues will not be purely financial, but bear direct relationships to the culture and traditions of the organisation - for mission is central to the heart of every NPO. This view is consistent with the challenge for "nonprofit organizations ... to explore new ways of raising the operating revenue and capital they need to pursue their mission" (Lyons et al, 1999, p.217).

To continue as a viable organisation into the future, an NPO may have to deal with some difficult issues, issues that may very well move people out of their comfort zones. The organisation's management team may need to consider advice on how to say goodbye to services, programs and assets that have outlived their time because it's vitally important in a changing environment, as your customers' or clients' needs change, that you adapt your services to meet their current and future needs (Cohen, 1999, p. 9).
References


1. Are financial resources sufficient to support the mission?

2. What financial resources are available to support the mission?

3. How are financial resources used to support the mission?

4. Are financial resources applied efficiently and effectively to support the mission?

What is the organisation’s mission?
### Table 1
Role of Financial Ratios in Financial Analysis
after Herzlinger and Nitterhouse (1994, p. 7)

<table>
<thead>
<tr>
<th>RATIO</th>
<th>ROLE IN FINANCIAL ANALYSIS</th>
</tr>
</thead>
</table>
| Asset turnover                     | Matches assets and goals  
Slow turnover assets required considerable investment and reduce flexibility                                                                              |
| Profitability and return on invested capital | Analyses intergenerational equity and the match between source and uses of money  
Neither excessive profits nor losses are desirable                                                                                                    |
| Liquidity and solvency             | Matches sources and uses of financial resources  
Is the organisation flirting with insolvency in the short-term or in the long-term?                                                                     |
| Percentage of revenues, by source  | Analyses quality of revenues and relation to mission  
Is the organisation excessively dependent on a few revenue sources?  
Are revenue sources consistent with organisation’s mission?                                                                                       |
| Percentage of expenses, by type    | Analyses quality of expenses and relation to mission  
A large percentage of fixed expenses decrease the organisation's flexibility  
Are expenses consistent with the organisation’s mission?                                                                                         |
### Table 2

**Ratios that indicate whether financial resources are sufficient to support mission**

<table>
<thead>
<tr>
<th>RATIO</th>
<th>MEASURES …</th>
<th>FORMULA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Return on net assets ratio</td>
<td>the total economic return to determine whether organisation is financially better off over time</td>
<td>change in net assets divided by total net assets</td>
</tr>
<tr>
<td>Viability ratio</td>
<td>the availability of non-current assets to cover debt should organisation need to settle its obligations quickly</td>
<td>net current assets divided by non-current liabilities</td>
</tr>
<tr>
<td>Primary reserve ratio</td>
<td>how long the organisation could operate using its current assets without relying on a surplus generated by operating activities</td>
<td>net current assets divided by total expenses</td>
</tr>
<tr>
<td>Net income ratio</td>
<td>whether core operating activities resulted in a surplus or a deficit</td>
<td>change in net assets divided by total core income</td>
</tr>
</tbody>
</table>
### Table 3
Ratios that indicate what financial resources are available to support mission

<table>
<thead>
<tr>
<th>RATIO</th>
<th>MEASURES …</th>
<th>FORMULA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating income ratio</td>
<td>the extent to which income from services to members contributes to the overall financing of the mission</td>
<td>membership service income expenses from core activities</td>
</tr>
<tr>
<td>Contributed income ratio</td>
<td>the extent to which externally generated resources contribute to overall financing of core activities</td>
<td>income from contributions expenses from core activities</td>
</tr>
<tr>
<td>Debt burden ratio</td>
<td>the cost of borrowing to overall expenditure</td>
<td>cost of debt serving total expenditure</td>
</tr>
<tr>
<td>Debt coverage ratio</td>
<td>the extent to which net operating income covers debt service payments</td>
<td>net operating income cost of debt servicing</td>
</tr>
<tr>
<td>Leverage ratio</td>
<td>the extent of financial leverage</td>
<td>unrestricted net assets total liabilities</td>
</tr>
</tbody>
</table>
### Table 4
Ratios that indicate how financial resources are used to support mission

<table>
<thead>
<tr>
<th>RATIO</th>
<th>MEASURES …</th>
<th>FORMULA</th>
</tr>
</thead>
</table>
| Membership services ratio | whether core services use a growing or dwindling share of resources | membership services expenses  
membership & general income |
| Membership support ratio | whether support services use a growing or dwindling share of resources | membership support expenses  
membership & general income |
Table 5
Ratios that indicate whether financial resources are applied efficiently and effectively to support mission

<table>
<thead>
<tr>
<th>GOAL &amp; RATIOS</th>
<th>MEASURES …</th>
<th>FORMULA</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Quality</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Members per leader ratio</td>
<td>the average size of</td>
<td>change in membership</td>
</tr>
<tr>
<td></td>
<td>operational units</td>
<td>change in no. of leaders</td>
</tr>
<tr>
<td><strong>Membership satisfaction</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total membership and</td>
<td>the consistency of demand</td>
<td>total members/leaders this</td>
</tr>
<tr>
<td>leadership trends ratio</td>
<td>for membership</td>
<td>year</td>
</tr>
<tr>
<td></td>
<td></td>
<td>total members/leaders base</td>
</tr>
<tr>
<td></td>
<td></td>
<td>year</td>
</tr>
<tr>
<td><strong>Retention</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Membership trends ratio</td>
<td>the consistency of demand</td>
<td>members this year</td>
</tr>
<tr>
<td></td>
<td>for members</td>
<td>member base year</td>
</tr>
<tr>
<td>Leader membership trends</td>
<td>the consistency of demand</td>
<td>leader membership this year</td>
</tr>
<tr>
<td>ratio</td>
<td>for membership by leaders</td>
<td>member base year</td>
</tr>
<tr>
<td><strong>Productivity</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Change in membership ratio</td>
<td>the percentage change in</td>
<td>change in membership</td>
</tr>
<tr>
<td></td>
<td>numbers of members</td>
<td>no. of members</td>
</tr>
<tr>
<td>Cost per member ratio</td>
<td>the financial productivity</td>
<td>core operating costs</td>
</tr>
<tr>
<td></td>
<td>for each dollar spent in</td>
<td>membership</td>
</tr>
<tr>
<td></td>
<td>relation to members</td>
<td></td>
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</table>