University of Maine at Farmington

Core Financial Ratios and Composite Financial Index
FY06 to FY09
The financial health of the University of Maine at Farmington (UMF) can be evaluated through the use of industry benchmarks and ratios. The following ratios and related benchmarks are derived from *Strategic Financial Analysis for Higher Education*, Sixth Edition published by KPMG; Prager, Sealy & Co., LLC; and Bearing Point. This book is widely used in the higher education industry and the most recent edition includes guidance specifically for public institutions of higher education. Ratios presented for the University of Maine System (UMS) were obtained from the January 5, 2010 *Ratio Analysis* report prepared by KPMG.

The **Primary Reserve Ratio** provides a snapshot of financial strength and flexibility by indicating how long the institution could function using its expendable reserves (both unrestricted and restricted, excluding net assets restricted for capital investments) without relying on additional net assets generated by operations. This ratio is calculated as follows:

\[
\text{Primary Reserve Ratio} = \frac{\text{Expendable Net Assets}}{\text{Total Expenses}}
\]

<table>
<thead>
<tr>
<th>FY06</th>
<th>FY07</th>
<th>FY08</th>
<th>FY09</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benchmark</td>
<td>0.400</td>
<td>0.400</td>
<td>0.400</td>
</tr>
<tr>
<td>UMF Actual</td>
<td>0.310</td>
<td>0.310</td>
<td>0.280</td>
</tr>
<tr>
<td>UMS Actual</td>
<td>0.240</td>
<td>0.276</td>
<td>0.257</td>
</tr>
</tbody>
</table>

The benchmark ratio of .40 provides about 5 months (40% of 12 months) of expenses. Over the past four years UMF has seen a decline in the number of months that its reserves will cover expenses. The reserves at the end of FY09 would provide not quite three months of expenses.

Key items that can impact the primary reserve ratio include principal payments on debt, use of unrestricted net assets to fund capital construction projects, operating results (operating revenues – operating expenses + nonoperating revenues + depreciation), endowment returns, and total operating expenses. During the past four years, UMF experienced its highest operating results and endowment returns in FY07. The primary reserve ratio remained flat, however, because of increased operating
costs, required debt payments, and use of unrestricted net assets to fund capital construction costs. Despite positive operating results in FY08 and FY09, the primary reserve ratio declined as operating costs continued to climb, endowment returns declined, and UMF invested in capital construction.

The **Net Operating Revenues Ratio** is a measure of operating results and answers the question, “Do operating results indicate that the University is living within available resources?” Operating results either increase or decrease net assets and, thereby, impact the other three core ratios: Primary Reserve, Return on Net Assets, and Viability. This ratio is calculated as follows:

\[
\frac{\text{Operating Income (Loss)} + \text{Net Non-Operating Revenues}}{\text{Operating Revenues} + \text{Non-Operating Revenues}}
\]

A target of at least 2% to 4% is a goal over an extended time period, although fluctuations from year to year are likely. A key consideration for institutions establishing a benchmark for this ratio would be the anticipated growth in total expenses.

Although UMF has experienced a positive ratio over the past four years; the ratio has declined significantly over the past two years going from 4.8% in FY07 to .9% in FY09. Growth in numerous revenue lines, including net student fees, grants and contracts, and noncapital State of Maine appropriation revenue, and containment of operating cost growth contributed to the benchmark surpassing ratio in FY07. Although total operating and total nonoperating revenues increased in FY08, they were outpaced by the growth in operating expenses. In FY09, total operating revenues again grew;
however, nonoperating revenues declined as the noncapital State of Maine appropriation was curtailed and as investment income dropped 99% from the FY08 amount. Growth in operating expenses again outpaced revenues in FY09.

As shown in the following table, the percentage changes in both revenues and expenses have fluctuated significantly over the past three years:

<table>
<thead>
<tr>
<th></th>
<th>Percentage Change</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>FY07</td>
</tr>
<tr>
<td>Operating revenues</td>
<td>6.5%</td>
</tr>
<tr>
<td>Nonoperating revenues</td>
<td>11.6%</td>
</tr>
<tr>
<td>Operating expenses</td>
<td>3.5%</td>
</tr>
</tbody>
</table>

The Return on Net Assets Ratio measures asset performance and management. It determines whether an institution is financially better off than in the previous year by measuring total economic return. It is based on the level and change in total net assets. This ratio is calculated as follows:

\[
\text{Change in Net Assets} = \frac{\text{Total Beginning of the Year Net Assets} - \text{Total Ending of the Year Net Assets}}{\text{Total Beginning of the Year Net Assets}}
\]
The nominal rate of return is adjusted for inflation (Higher Education Price Index) to arrive at the real rate. Both rates of return have been declining over the past four years and the real rate of return has been negative for the past two fiscal years.

Items that may impact this ratio include those that impact the net operating revenues ratio, along with endowment returns, capital appropriations, capital gifts and grants, capital transfers, and endowment gifts. The decline from FY06 to FY07 is attributable to a major decrease in State of Maine capital appropriation revenue as UMF had spent the vast majority of these monies prior to FY08. The FY08 and FY09 declines in the rate of return are attributable to:

- Operating expenses outpacing operating and nonoperating revenues as previously noted in the discussion of the net operating revenues ratio.
- Declines in the endowment returns not used for operations.

The **Viability Ratio** measures UMF’s expendable resources that are available to cover debt obligations (e.g., capital leases, notes payable, and bonds payable). This ratio is calculated as follows:

\[
\text{Expendable Net Assets}^* - \text{Long-Term Debt}
\]

* Excluding net assets restricted for capital investments.

<table>
<thead>
<tr>
<th></th>
<th>FY06</th>
<th>FY07</th>
<th>FY08</th>
<th>FY09</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benchmark</td>
<td>1.250</td>
<td>1.250</td>
<td>1.250</td>
<td>1.250</td>
</tr>
<tr>
<td>UMF Actual</td>
<td>1.020</td>
<td>1.100</td>
<td>1.090</td>
<td>1.020</td>
</tr>
<tr>
<td>UMS Actual</td>
<td>0.729</td>
<td>0.754</td>
<td>0.768</td>
<td>0.717</td>
</tr>
</tbody>
</table>
A ratio of 1.00 or greater indicates that there are sufficient resources to satisfy debt obligations. Like the primary reserve ratio, the viability ratio is impacted by such items as principal payments on debt, use of unrestricted net assets to fund capital construction projects, operating results (operating revenues – operating expenses + net nonoperating revenues + depreciation) and endowment returns. Issuance of new debt would also impact the ratio.

UMF’s ratio has been relatively consistent over the past four years. Declines in expendable net assets have been mostly offset by reductions in the outstanding debt as UMF has made payments on its debt obligations. Although UMF’s ratio has been lower than the industry benchmark, it indicates that UMF has had sufficient resources to satisfy its debt obligations.

The **Composite Financial Index (CFI)** creates one overall financial measurement of the institution’s health based on the four core ratios: primary reserve ratio, net operating revenues ratio, return on net assets ratio, and viability ratio. The CFI is calculated by:

- Determining the value of each ratio;
- Converting the value of each ratio to strength factors along a common scale;
- Strength factors are then multiplied by specific weighting factors; and
- The resulting four numbers are totaled to reach the single CFI score.

These scores do not have absolute precision. They are indicators of ranges of financial health that can be indicators of overall institutional well-being, when combined with nonfinancial indicators. This would be consistent with the fact that there are a large number of variables that can impact an institution and influence the results of these ratios. However, the ranges do have enough precision to be indicators of the institutional financial health, and the CFI as well as its trend line, over a period of time, can be the single most important measure of the financial health for the institution.

<table>
<thead>
<tr>
<th>Composite Financial Index</th>
<th>FY06</th>
<th>FY07</th>
<th>FY08</th>
<th>FY09</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low Benchmark</td>
<td>3.0</td>
<td>3.0</td>
<td>3.0</td>
<td>3.0</td>
</tr>
<tr>
<td>High Benchmark</td>
<td>10.0</td>
<td>10.0</td>
<td>10.0</td>
<td>10.0</td>
</tr>
<tr>
<td>UMF Actual</td>
<td>3.2</td>
<td>3.1</td>
<td>2.1</td>
<td>1.4</td>
</tr>
<tr>
<td>UMS Actual</td>
<td>2.0</td>
<td>2.5</td>
<td>1.5</td>
<td>1.6</td>
</tr>
</tbody>
</table>
A score of 1.0 indicates very little financial health; 3, the low benchmark, represents a relatively stronger financial position; and 10, the top range of the scale. UMF’s FY09 score is less than half of what the FY06 score was and indicates that UMF can now be considered to have little financial health.

Each ratio’s strength factor and the total CFI score can be evaluated on the following parameters (based on a floating scale):

<table>
<thead>
<tr>
<th>Score</th>
<th>Performance Indication</th>
</tr>
</thead>
<tbody>
<tr>
<td>-1 to 1</td>
<td>Assess institutional viability to survive</td>
</tr>
<tr>
<td>0 to 3</td>
<td>Re-engineer the institution</td>
</tr>
<tr>
<td>2 to 5</td>
<td>Direct institutional resources to allow transformation</td>
</tr>
<tr>
<td>4 to 7</td>
<td>Focus resources to compete in future state</td>
</tr>
<tr>
<td>6 to 9</td>
<td>Allow experimentation with new initiatives</td>
</tr>
<tr>
<td>8 to 10</td>
<td>Deploy resources to achieve a robust mission</td>
</tr>
</tbody>
</table>

The strength factors for the four core ratios can be mapped on a diamond to show a Graphic Financial Profile of UMF’s financial health compared to the industry benchmarks. The charts on the following page graphically display how each of the core ratios relates to one another as part of the CFI. Two institutions could have the same CFI score, yet have very different looking charts depending on the individual ratio results.

The center point of the graphic financial profile is zero. Any value that actually falls below zero defaults to the center of the graph. The maximum value in the graph is 10; thus, any actual values greater than 10 are not plotted beyond the outer diamond. The smaller, heavily lined diamond represents the low industry benchmark of 3. The institution’s ratio values are plotted and shaded to show how the institution’s health compares with the low and high benchmarks. Unless there is an unusual circumstance, an institution would want the plotting of its ratios to at least shade the entire smaller diamond.

In each of the past three years, UMF’s financial strength has been in the right hand portion of the diamond although the plotted area has been shrinking as the net operating revenues ratio has decreased. The viability ratio has stayed relatively constant and the prime reserve has declined somewhat.
University of Maine at Farmington
Core Financial Ratios and Composite Financial Index
FY06 to FY09

Graphic Financial Profile - 
FY06
CFI Score of 3.2
Primary Reserve Ratio
Return on Net Assets Ratio
2.3
1.1
Net Operating Revenues Ratio
Viability Ratio
2.4

Actual
Low Benchmark - 3

Graphic Financial Profile - 
FY07
CFI Score of 3.1
Primary Reserve Ratio
Return on Net Assets Ratio
2.3
3.3
Net Operating Revenues Ratio
Viability Ratio
2.6
6.9

Actual
Low Benchmark - 3

Graphic Financial Profile - 
FY08
CFI Score of 2.1
Primary Reserve Ratio
Return on Net Assets Ratio
2.1
0.6
Net Operating Revenues Ratio
Viability Ratio
2.9
2.6

Actual
Low Benchmark - 3

Graphic Financial Profile - 
FY09
CFI Score of 1.4
Primary Reserve Ratio
Return on Net Assets Ratio
1.8
0.0
Net Operating Revenues Ratio
Viability Ratio
1.3
2.4

Actual
Low Benchmark - 3