University of Maine at Machias

Core Financial Ratios and Composite Financial Index
FY06 to FY09
The financial health of the University of Maine at Machias (UMM) 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:

\[
\frac{\text{Expendable Net Assets}}{\text{Total Expenses}}
\]

The benchmark ratio of .40 provides about 5 months (40% of 12 months) of expenses. At the high point in FY06, UMM’s reserves only provided about ½ month of expenses. During the past two fiscal years, UMM’s total expendable net assets has had a deficit balance; thus, UMM is completely dependent on the generation of revenue to cover its 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 + net nonoperating revenues + depreciation), endowment returns, and total...
operating expenses. Over the past four years, UMM’s expendable net assets have steadily declined as operating expenses have steadily increased.

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.

UMM’s ratio has been negative for each of the past four years with the lowest point occurring in FY07 when operating revenues declined 1.4% and nonoperating revenues increased 5.6%; however, operating expenses rose 5.1%. Although still negative in FY08 and FY09, UMM’s ratio improved with the most improvement occurring in FY09. The improvement in FY09 was attributable to $212,000 in federal
stimulus monies combined with a 6.8% increase in operating revenues and only a 1.1% increase in operating expenses.

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:

\[
\text{Return on Net Assets Ratio} = \frac{\text{Change in Net Assets}}{\text{Total Beginning of the Year Net Assets}}
\]

The nominal rate of return is adjusted for inflation (Higher Education Price Index) to arrive at the real rate. 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.

Over the past four years, UMM has seen large fluctuations in its return on net assets ratio. The positive return in FY06 is attributable to a $1.5 million capital transfer from the System Office to fund deficit balances in both E&G and Auxiliary reserves. The positive return in FY09 is attributable to an $892,000 capital transfer made from the System Office as match money on a construction project funded with State of Maine capital appropriation (State bonds). Without these two transfers, the real rate of return for FY06 and FY09 would have been -2.1% and -1.09%, respectively.
The Viability Ratio measures UMM’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

A ratio of 1.00 or greater indicates that there are sufficient resources to satisfy debt obligations. For the past four years, UMM has basically had no viability with ratios barely above zero in FY06 and FY07 and negative ratios in FY08 and FY09.

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. Operating losses have had an impact on the ratio for each of the four years. Another factor impacting the FY08 and FY09 ratios are total advances of $1.1 million on the working capital loan made to UMM by the System Office to cover UMM’s FY07 and FY08 unrestricted net asset deficits.
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></th>
<th>FY06</th>
<th>FY07</th>
<th>FY08</th>
<th>FY09</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Low Benchmark</strong></td>
<td>3.0</td>
<td>3.0</td>
<td>3.0</td>
<td>3.0</td>
</tr>
<tr>
<td><strong>High Benchmark</strong></td>
<td>10.0</td>
<td>10.0</td>
<td>10.0</td>
<td>10.0</td>
</tr>
<tr>
<td><strong>UMM Actual</strong></td>
<td>1.9</td>
<td>(1.1)</td>
<td>(1.0)</td>
<td>0.5</td>
</tr>
<tr>
<td><strong>UMS Actual</strong></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. The positive CFI scores in FY06 and FY09 are attributable to UMM’s high ratios for return on net assets in those two years. As previously discussed, the System Office made large capital transfers to UMM in FY06 and FY09.
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 UMM’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.

As shown in the following charts, UMM has been and remains, financially weak. On the possible scale of 0 – 10, UMM had strength factors of zero for all four ratios in FY08 and for three ratios in FY09. As previously discussed, in FY06 and FY09 the System Office made large capital transfers to UMM, accounting for the high strength factors for return on net assets for those two years.
University of Maine at Machias
Core Financial Ratios and Composite Financial Index
FY06 to FY09

Graphic Financial Profile - FY06
CFI Score of 1.9
- Primary Reserve Ratio
- Net Operating Revenues Ratio
- Return on Net Assets Ratio
- Viability Ratio

Actual  Low Benchmark - 3

Graphic Financial Profile - FY07
CFI Score of -1.1
- Primary Reserve Ratio
- Net Operating Revenues Ratio
- Return on Net Assets Ratio
- Viability Ratio

Actual  Low Benchmark - 3

Graphic Financial Profile - FY08
CFI Score of -1.0
- Primary Reserve Ratio
- Net Operating Revenues Ratio
- Return on Net Assets Ratio
- Viability Ratio

Actual  Low Benchmark - 3

Graphic Financial Profile - FY09
CFI Score of .5
- Primary Reserve Ratio
- Net Operating Revenues Ratio
- Return on Net Assets Ratio
- Viability Ratio

Actual  Low Benchmark - 3