University of Maine at Farmington
Core Financial Ratios and Composite Financial Index
FY06 to FY11
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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*, Seventh Edition published by KPMG; Prager, Sealy & Co., LLC; and ATTAIN. This book is widely used in the higher education industry and includes guidance for both private and public institutions. Ratios presented for the University of Maine System (UMS) were obtained from the separately prepared “Core Financial Ratios and Composite Financial Index” report prepared for the UMS.

According to the above publication, there are four fundamental financial questions that need to be addressed. Analysis of four core ratios can help us answer these questions.

- Are resources sufficient and flexible enough to support the mission? - **Primary Reserve Ratio**
- Do operating results indicate the institution is living within available resources? - **Net Operating Revenues Ratio**
- Does asset performance and management support the strategic direction? - **Return on Net Assets**
- Are financial resources, including debt, managed strategically to advance the mission? - **Viability Ratio**

When combined, these four ratios deliver a single measure of UMF’s overall financial health, hereafter referred to as the **Composite Financial Index**.
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:

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

* Excluding net assets restricted for capital investments

- A ratio of .40 (provides about 5 months) or better is advisable to give institutions the flexibility to manage the enterprise.

- 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.
University of Maine at Farmington  
Core Financial Ratios and Composite Financial Index  
FY06 to FY11

- Components:

<table>
<thead>
<tr>
<th>$ in thousands</th>
</tr>
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<tbody>
<tr>
<td><strong>Expendable net assets</strong></td>
</tr>
<tr>
<td>FY06</td>
</tr>
<tr>
<td>$11,815</td>
</tr>
<tr>
<td>Expenses</td>
</tr>
<tr>
<td>$37,606</td>
</tr>
</tbody>
</table>

- At the lowest point (FY09), UMF’s reserves covered not quite three months of expenses. At the highest point (FY11), UMF’s reserves covered four months of expenses.

- During the past six years, UMF experienced its highest combined total of 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.

- In FY10, the primary reserve ratio rebounded as UMF increased unrestricted operating revenues and decreased unrestricted operating expenses. Positive endowment returns also contributed to the increase in expendable net assets.

- The primary reserve ratio increased again in FY11, reaching its highest point since FY07. The highest endowment returns experienced in the past six years are the primary contributor to the FY11 increase as operating results were lower than in FY10 and more unrestricted assets were spent on capital construction than in FY10.
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:

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

- 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.
- The authors of *Strategic Financial Analysis for Higher Education*, note the following:

  The primary reason institutions need to generate some level of surplus over long periods of time is because operations are one of the sources of liquidity and resources for reinvestment in institutional initiatives. Conversely, generating a known deficit in the short term may well be the best strategic decision a board makes, if it is an
affordable investment in its future and the deficit will clearly be eliminated through specific actions.

- Components:

<table>
<thead>
<tr>
<th></th>
<th>FY06</th>
<th>FY07</th>
<th>FY08</th>
<th>FY09</th>
<th>FY10</th>
<th>FY11</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating income (loss) plus net non-operating revenues</td>
<td>$317</td>
<td>$1,961</td>
<td>$840</td>
<td>$402</td>
<td>$1,585</td>
<td>$1,089</td>
</tr>
<tr>
<td>Operating revenues plus non-operating revenues</td>
<td>$37,923</td>
<td>$40,931</td>
<td>$42,223</td>
<td>$43,457</td>
<td>$44,577</td>
<td>$45,268</td>
</tr>
</tbody>
</table>

- UMF’s lowest ratio was in FY06 at .84%.

- 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.

- Increased operating returns in FY10 are primarily attributable to an increase in gross tuition and fees and a decrease in unrestricted operating expenses. Although grant revenues increased almost 11%, the increase did not contribute to the operating return as grant revenues are recognized to the extent of grant expenses.

- The 1.5% increase in revenues in FY11 was outpaced by a 2.8% increase in expenses as UMF spent more in the areas of academic support, operations and maintenance, student aid, and auxiliary.

- As shown in the following table, the percentage changes in both revenues and expenses have fluctuated significantly over the past five 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>Net 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. An improving trend in this ratio indicates that the institution is increasing its net assets and is likely to be able to set aside financial resources to strengthen its future financial flexibility. 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. 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.
Components:

<table>
<thead>
<tr>
<th></th>
<th>FY06</th>
<th>FY07</th>
<th>FY08</th>
<th>FY09</th>
<th>FY10</th>
<th>FY11</th>
</tr>
</thead>
<tbody>
<tr>
<td>Change in total net assets</td>
<td>$5,710</td>
<td>$3,026</td>
<td>$576</td>
<td>($1,124)</td>
<td>$3,107</td>
<td>$3,297</td>
</tr>
<tr>
<td>Total net assets (beginning of year)</td>
<td>$40,501</td>
<td>$46,211</td>
<td>$49,237</td>
<td>$49,813</td>
<td>$48,690</td>
<td>$51,796</td>
</tr>
</tbody>
</table>

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 FY10 return is attributable to the return on operations, positive endowment returns, and State of Maine capital appropriation revenue.

UMF’s nominal rate of return stayed flat in FY11 as high endowment returns and a significant increase in endowment gifts offset the decrease in operating returns (see discussion of the net operating revenues ratio). The real rate of return dropped, however, as the HEPI inflation rate went from .9% in FY10 to 2.3% in FY11.
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:

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

* Excluding net assets restricted for capital investments.

- A ratio of 1.00 or greater indicates that there are sufficient resources to satisfy debt obligations.

- 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.

- Components:

<table>
<thead>
<tr>
<th></th>
<th>FY06</th>
<th>FY07</th>
<th>FY08</th>
<th>FY09</th>
<th>FY10</th>
<th>FY11</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expendable net assets</td>
<td>$11,815</td>
<td>$12,231</td>
<td>$11,523</td>
<td>$10,345</td>
<td>$12,791</td>
<td>$15,032</td>
</tr>
<tr>
<td>Long-term debt</td>
<td>$11,598</td>
<td>$11,085</td>
<td>$10,551</td>
<td>$10,176</td>
<td>$9,780</td>
<td>$9,367</td>
</tr>
</tbody>
</table>
UMF’s ratio was relatively consistent from FY06 through FY09. Although the balance of expendable net assets fluctuated somewhat, the impact was offset by the steadily decreasing balance of debt as UMF made its annual debt service payments.

In FY10 and FY11, UMF surpassed the industry benchmark as outstanding debt again decreased and operating and endowment returns added to the balance of expendable net assets.
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. By blending these four key measures of financial health into a single number, a more balanced view of the state of the institution’s finances is possible because a weakness in one measure may be offset by the strength of another measure.

Because the CFI only measures the financial component of an institution’s well-being, it must be analyzed in context with other associated activities and plans to achieve an assessment of the overall health of the institution. A high CFI is not necessarily indicative of a successful institution, although a low CFI generally is indicative of additional challenges. When considered in the context of achievement of mission, a very high CFI with little achievement of mission may indicate a failing institution.

The CFI is calculated by:

1. Determining the value of each ratio;
2. Converting the value of each ratio to strength factors along a common scale;
3. Multiplying the strength factors by specific weighting factors; and
4. Totaling the resulting four numbers 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
in 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.

- 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.

Performance of the CFI score can be evaluated on a scale of -4 to 10 as shown on the following page.
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The overlapping arrows represent the ranges of measurement that an institution may find useful in assessing itself.

We have overlaid the scoring scale with UMF’s lowest score (FY08) and its most recent score (FY11) to assist in evaluating UMF’s performance.

January 2012
The strength factors that were used in calculating the CFI can be mapped on a diamond to show the shape of an institution’s financial health compared to the industry benchmarks. This Graphic Financial Profile can assist management in determining whether a weakness in one ratio is offset by strength in another ratio.

Illustrated below are two examples of a Graphic Financial Profile (GFP): one based on strength factors valued at the low industry benchmark of 3 and one with strength factors valued above and below the benchmark:

- The center point of the graphic financial profiles is -4 as illustrated in the Seventh Edition of *Strategic Financial Analysis for Higher Education*. An actual value that falls below -4, defaults to a value of -4 and is plotted at the center of the graph.
- The maximum value in the graph is 10; thus, an actual value greater than 10 is not plotted beyond the outer diamond.
- The smaller, heavily lined diamond represents the low industry benchmark of 3.
- The actual values of the institution’s ratio strength factors are plotted and shaded to show how the institution’s health compares with the low (3) and high (10) benchmarks.
The following graphs contain UMF’s Graphic Financial Profiles for FY06 thru FY11.

In FY06, UMF’s strength was weighted to the left side of the graph as they received $4.6 million in State of Maine capital appropriation revenues which were used for capital construction. The two capitalization ratios were just under the low industry benchmark.
In FY07, UMF’s strength shifted to the right side of the graph as operating returns surpassed the low industry benchmark. As previously mentioned in this report, the majority of available State of Maine capital appropriation monies were spent in prior years; thus, the return on net assets was not as high as in FY06.
Although now below the low industry benchmark, the weight of UMF’s strength in FY08 was still in the right side of the graph.

**Graphic Financial Profile - FY08**

**UMF**

*Strength Factors Plotted on a Scale of -4 to 10*

**CFI Score of 2.1**

- **Primary Reserve Ratio:** 2.11
- **Net Operating Revenues Ratio:** 2.84
- **Return on Net Assets Ratio:** 0.59
- **Viability Ratio:** 2.61

*Actual  □ Low Benchmark: 3  □ High Benchmark: 10*
Although at a smaller level, UMF’s strength remained in the right side of the graph for a third year in FY09. The strength factors for UMF’s capitalization ratios had been relatively consistent during the prior three fiscal years; however, in FY09, the strength factor for the primary reserve ratio fell as UMF experienced negative endowment returns.
Positive operating and endowment returns helped to replenish the primary reserve ratio strength factor in FY10 and contributed to three of UMF’s strength factors being above the low industry benchmark.

![Graphic Financial Profile - FY10](image)

UMF
Strength Factors Plotted on a Scale of -4 to 10
CFI Score of 3.0

- Primary Reserve Ratio: 2.26
- Net Operating Revenues Ratio: 5.09
- Return on Net Assets Ratio: 3.19
- Viability Ratio: 3.14

- Actual
- Low Benchmark: 3
- High Benchmark: 10
Although UMF’s FY11 CFI score of 3.2 is the same as it was in FY06 (see page 14), the shape of the plotted strength factors is more equally balanced in FY11.