Best Practices
Strategic Financial Forecasting
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University of Dayton

• Top-tier Catholic research university offering undergraduate through doctoral degrees
  ➢ Ohio’s largest independent university and among the top-10 Catholic universities nationwide
  ➢ Founded in 1850 as St. Mary’s Institute for Boys by a Marist priest on land purchased for a promise of $12,000 and a St. Joseph’s medal
  ➢ Renamed the University of Dayton in 1920
  ➢ Comprises a diverse community committed (in the Marist tradition) to educating the whole person and to linking learning and scholarship with leadership and service

“Learn, Lead and Serve”

• Academics
  ➢ College of Arts & Sciences
  ➢ Graduate School
  ➢ School of Engineering
  ➢ School of Business Administration
  ➢ School of Education and Health Sciences
  ➢ School of Law
  ➢ Professional and Continuing Education
University of Dayton

- Enrollment
  - Undergraduate ~ 7,500 FTE
  - Graduate ~ 1,480 FTE
  - Law ~ 250

- Income
  - **Operating revenues (000's)** $435,608
    - Student tuition and fees 312,893
      - Less: student financial aid (105,967)
      - Net tuition and fees 206,926
    - Government grants and contracts 72,152
    - Private gifts and grants 30,557
    - Investment return 29,239
    - Auxiliary enterprises 88,584
    - Other revenues 8,150

- Endowment (000’s) ~ $435,000

- Debt (000’s) ~ $400,000
Challenges
Dayton Challenges

• Enrollment and Financial Aid
  ➢ Meeting enrollment targets is challenging in light of the declining number of high school graduates in both Ohio and the Midwest
  ➢ Marketing
  ➢ Tuition discounting
  ➢ Affordability

• Cost control

• New revenue sources

• Healthcare costs

• Maintenance
  ➢ 388 acre campus
  ➢ 150 buildings
  ➢ 400 houses in the Student Neighborhood
Dayton Challenges

- New pricing structure
  - “Tuition Guarantee”
    - Net tuition is held flat for 4 years
    - No additional fees or surcharges
- Personnel expenses
  - Raises
  - Skyrocketing healthcare costs
- Facilities and deferred maintenance
  - Considerable investments in facilities required
- Debt
  - Constrained debt capacity (to maintain current ratings)
- Need to model the prospective financial impact of all these competing draws on resources
Key Elements of a Strategic Financial Forecasting Platform
The Problem

• At most colleges and universities, **strategic financial forecasting** is often difficult
  
  ➢ Complex (multi-variable, multi-order) relationships among key variables
  ➢ Data is often scattered among budgeting systems, accounting systems, ERP systems, and **single-focus** models
  ➢ Difficult to project a Balance Sheet
  ➢ Difficult to track Net Assets
  ➢ Most institutions are resource constrained

• Mission-level questions from key stakeholders (Board, President, finance committee, investors, rating agencies) take days, weeks, or even months to answer
  
  ➢ Answers are not comprehensively determined and are often one-dimensional
  ➢ Staff is inefficient in providing the answers because there is no single institutional analytical approach

• Stakeholders should be able to get nearly **immediate feedback** on key strategic questions

• An institution’s **strategic plan** should be crossed against a reliable **business plan** (with supporting sensitivity analysis)

We are NOT just talking about a projection of the **budget**

\[ YR_2 = YR_1 \times (1 + r) \]
The Solution

• Develop a comprehensive, fully-integrated, and totally customized strategic/financial forecasting and analysis that unites all campus-wide planning activities into a single institutional point of view

• Quantify the strategic ramifications of changing operating variables, operating initiatives, capital projects, and funding alternatives
Key Aspects of Effective Strategic Forecasting

• Establish relationships among key *independent* operational drivers
  ➢ Mimic your *business model*
  ➢ Consider *multi-order* relationships
  ➢ Develop *bottom-up* analysis (*not just YOY growth*)
  ➢ Integrate *balance sheet* items into the platform
    o Investments – cash, short-term, funds held in trust, debt-related, annuity, long-term, endowed
    o Facilities – mimic the fixed-asset note of your financial statements
    o Debt – by type, by series, by issuer
    o Space – by type, by population
    o Maintenance backlog -- FCI

• Customize output in consideration of different stakeholder needs
  ➢ GAAP-based financial statements (above and below the line)
  ➢ Cash-based Budgetary (P&L) statements – cross-walk between GAAP and Cash
  ➢ Financial ratios and other metrics
    o Rating agency ratios/metrics – benchmarks, Scorecard
    o Composite Financial Index (CFI)
    o Facilities condition index (FCI)
    o State-required metrics
    o In-house targets
Key Aspects of Effective Strategic Forecasting

• Incorporate structure that permits easy sensitivity analysis
  ➢ Operating initiatives
  ➢ Capital projects
• Check veracity of projection logic (reconcile to audited financial statements)
• Create architecture that permits easy evolution of the model
Axioms of Strategic Financial Forecasting

• Do not let the *Perfect* become the enemy of the *Good*
  ➢ Consider what you *need* versus what you *want*
  ➢ *Walk* before you *run* -- create more complexity and structure *in the future*
  ➢ Model initiatives *on the margin*
  ➢ Do not model to the *exception*
  ➢ Do not craft *false precision*
Simplify your design

Student types

Undergraduate
- Full-time \textit{(cohort-based)}
  - Entering freshman
  - Transfers
- Part-time
  - < 12 SCHs
  - Overloads
- Summer
  - I
  - II

Graduate
- Full-time \textit{(cohort-based)}
- Full-time \textit{(SCH-based)}
- Part-time
- Summer
  - I
  - II

Online
- Continuing education

\textbf{In-state} \quad \textit{versus} \quad \textbf{Out-of-state}  
\textit{(for publics)}

\textbf{X} \quad \# \textbf{of schools or colleges} \quad \textbf{X} \quad \# \textbf{programs or departments}

- Additional data requirements
- Additional structure to navigate
- Slower calculation speeds

\textbf{TO WHAT END?}
### Employee types

<table>
<thead>
<tr>
<th>Faculty</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Tenured and tenure-track</td>
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<tr>
<td>Non-tenure track</td>
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<tr>
<td>Adjuncts</td>
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<tr>
<td>Lecturers</td>
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<td>Visting</td>
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<th>Staff</th>
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<td>Exempt/non-classified</td>
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<tr>
<td>Non-exempt/classified</td>
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| Students                      |   |

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- Additional data requirements
- Additional structure to navigate
- Slower calculation speeds

**TO WHAT END?**
Do not focus on the exceptions

**Think in terms of MODELING, not Academics**

### Non-personnel expense types

**GAAP and Cash**
- General
- Materials and supplies
- Utilities
- Cost of goods sold
- Insurance
- Travel
- Renewal and maintenance
- OPEBs

**GAAP only**
- Off-setting expense for in-kind
- ARO accretion

**Cash only**
- Capitalized expenditures
- Contingency

- Additional data requirements
- Additional structure to navigate
- Slower calculation speeds

**TO WHAT END?**
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### Current Year

<table>
<thead>
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<th>100's of student types</th>
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<tbody>
<tr>
<td>1,000's of employee types</td>
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<tr>
<td>1,000's of expense object codes</td>
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### Forecast

<table>
<thead>
<tr>
<th>FY +1</th>
<th>FY +2</th>
<th>FY +3</th>
<th>FY +4</th>
<th>FY +5</th>
<th>FY +6</th>
<th>FY +7</th>
<th>FY +8</th>
<th>FY +9</th>
<th>FY +10</th>
</tr>
</thead>
</table>

- Less Structural Detail
- Do not craft a model that requires you to make detailed (imprecise) guesses regarding future assumptions
- Analyze key assumptions at a higher (coarser) structural level and perform sensitivity analysis

No false precision
Benefits
Benefits of Strategic Forecasting

- **Better decision-making**
  - Ground conversations
  - Provide feedback

- **Better capital budgeting**
  - Consider timing, cost, and funding on an integrated multi-year basis
  - Better assessment of affordability
  - Better allocation of scarce resources

- **Better communication**
  - Within the institution
  - With Trustees
  - With outside stakeholders (contributors, rating agencies, accreditation bodies, lenders)

- **Better oversight and control**
Strategic Forecasting at Dayton

• Operations
  ➢ Enrollment – prospective demographic pressures
  ➢ Pricing – Tuition Guarantee
  ➢ Aid – alternative vis-à-vis discount

• Capital projects
  ➢ Prospective financial impacts of capital investments
  ➢ Consider funding alternatives
    o Debt – impact on debt capacity and ratings
    o Gifts
    o Institutional resources

• Better information for the Board
  ➢ Pro forma GAAP-based financial statements
  ➢ Better decision-making tool
Contact Information

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