The Challenge Before Us

- Limited tuition increases
- Enrollment declines
- Low investment returns on cash
- More compliance
- Mergers & Closures
The Opportunity Before Us

- Liquidity base of higher education
- Identifying how liquid higher education is
- The concept of an internal bank
Higher Education Unique Characteristics

- Dependable deposit base
- Very seasonal cashflows
- Separation of endowment and non-endowment
- Highly decentralized organizations
- Lack of coordinated balance sheet management
University Cash Flows

Sources

- Tuition & Fees
- Grants and Other Sources
- Annual Fund Flows
- Auxilaries
- Funds from Endowment
- Quasi-Endowment Funds

Liquidity Needs

- Liquid
- Contingency
- Core
- Deep Core

Uses

- Payroll
- Operating expenses
- Facilities management
- Auxiliary services
- Debt service
Three Problems of Cash Flow

• Unsynchronized
  – Payment plans
  – External Aid

• Uneven
  – Semesters
  – Athletics

• Uncertain
  – Grants
  – Gifts
Cash Flow Timeline

- **Payables Period**: Purchase Made, Payment Made, Enroll
- **Credit Period**: Statement To Student, Student Mails Payment
- **Collection Period**: School Receives and Processes Payment, School Deposits Payment, School Receives Good Funds

- **Day’s Payables**
- **Days’ Receivables**
Objectives of Cash Forecasting

• Liquidity Management
• Financial Control
• Strategic Objectives
• Capital Budgeting
• Cost Management
• Currency Exposure
The School as a “Bank”

- Short-Term Investments
- Long-Term Investments
- Deposits
- Withdrawals
- Short-Term Borrowings
- Long-Term Borrowings
Asset and Liability Management Overview

What is ALM?

◆ Coordinate management of investment portfolios and debt.

◆ View assets and liabilities as a whole, rather than as unrelated portions of the balance sheet.

ALM Objectives

◆ Reduce net interest expense, the difference between interest paid on debt and interest earned on investments.

◆ Mitigate effect of interest rate changes on net interest expense, using variable debt to offset short-term investments or longer-term investments to offset long-term liabilities.
Evaluate Like a Bank Would

- When a new bond issue is contemplated, the amount of fixed and variable rate debt will also effect the amounts invested within the three investment portfolios and vice a versa.
  - Liquidity
  - Repayment schedules
  - Interest rate risk
Matching Asset and Liability Duration More Closely Reduces Net Interest Expense Volatility.

- **Rate Sensitive Interest Income**
- **Rate Sensitive Interest Expense**
- **Fixed Interest Income**
- **Fixed Interest Expense**
- **Net Interest Expense**
- **Interest Rate-Sensitive Assets**
- **Long-Term Assets**
- **Variable Rate Debt**
- **Fixed Rate Debt**
What Are Your Real Liquidity Needs? (Hypothetical)

Daily Liquidity Needs – assets that are accessed on a routine basis
Contingency Assets – assets unlikely to be accessed in the next 1 to 3 years
Core Cash – assets NOT likely to be accessed in the next 3 to 5 years
Deep Core Cash – assets almost never needed or restricted
Your Organization’s Financial Assets

- **Perpetuity**
- **Intraday**

**High Risk**

**Low Risk**

- **Cash Management (Banking Transactions)**
- **Cash Investments**
- **Limited Term Assets**
- **Long Term Investments**
External Environment

Economic Influences on Operating Assets

- Endowment performance
- Access to debt
- Enrollment
- State appropriations
- Giving
- Auxiliary income
Cash Review

- Concentrate All Operating Funds
- Define Allocations
  - Liquidity program - daily needs
  - Contingency program - annual needs
  - Core Cash program - all other funds
Proper Level of Liquidity

Insufficient liquidity
- Time needed to secure credit
- Credit availability

Excess liquidity
- Losing interest earnings
- Paying more interest than needed

Maintain adequate, but not excessive, liquidity.
Liquidity Dynamics

A sliding scale based on investment policy / current operating needs

Core              Limited Term              The Endowment

U.S. Government Bonds
U.S. High Yield Bonds
International Bonds
U.S. Small Cap Equities
International Equities
U.S. Large Cap Equities
Emerging Markets Equities
Private Real Estate
Private Capital
Distressed Debt
Hedge Strategies

RISK
RETURN

0%
5%
10%
15%
20%
25%
30%
0%
5%
10%
15%
20%
25%
30%

50% 3 Mo T-Bill / 50% 1-3 yr. ML Index
3-Month T-Bill
70% S&P 500 / 30% Lehman Agg.
25% S&P500 / 25% Lehman Agg.
25% 1-3 yr ML Index / 25% 3 Mo T-Bill
50% 3 Mo T-Bill / 50% 1-3 yr. ML Index

70% S&P 500 / 30% Lehman Agg.
Developing an Investment Plan

- Objectives
- Investment Policy
- Risk Tolerance
- Cash Flow Analysis
- Implementation
Using Short-Term Investments for Liquidity Management

- Precautionary and opportunistic requirements
- Earmarked funds
- Temporary surplus funds
  - Ongoing operations
  - Asset sales
  - Securities issuance
  - Seasonal performance
- Short- vs. long-term investments
  - Price risk
  - Yield pick-up
Short Term Investments

• Demand Deposit Accounts
• Money Market Deposit Accounts
• Savings Accounts
• Earnings Credit
• CDs
What are Limited Term Assets?

Limited Term Assets:

- Cash (Operating & Endowment) makes up the largest part of this asset pool. However, many other highly liquid funds that have a life expectancy of 3 to 5-years also fit into this category. Some examples: Operating Reserves, Cash Proceeds from Liability Management, Quasi Endowments, Self-Insurance Reserves, Committed Grants not disbursed, Construction Project Funds, and Bond Proceeds.
Tax Exempt Interest Rates

[Graph showing long-term and short-term interest rates from 1/1/1998 to 1/1/2014 with two lines representing different rates over time.]
Determining your Limited Term Assets

- Determining your Total Liquidity Pool
  - Commercial paper / debt issuance / credit lines
  - Internal concentration of all limited term assets
  - Gifts / fundraising proceeds / other sources of incoming cash

- Looking at the Future Demands on Cash flows
  - Daily / Weekly / Monthly expenditures
  - Capital Projects
  - Debt Repayment

- Efficiently Managing Limited Term Portfolios
  - Liquidity needs – current vs. long term
  - Credit quality constraints
  - Volatility limits & asset class restrictions
  - Discussion and/or development of Operating Funds Policy
Limited Term and Long Term Operating Investments

• **Reality**
  – Potential for significant losses
  – Accuracy of forecasts
  – Illiquidity

• **Significance**
  – Non-cash investments are not a reliable source of liquidity
  – What risk tolerance/return objective is appropriate for Operating Assets?
    • Need organizational commitment to longer time horizon
  – Accounting and budget implications
    • Lack of a smoothing mechanism
  – Are investments alongside the endowment appropriate?
    • Institutions are inherently exposed to risks in the endowment
Opportunity Cost of “Cash”

Growth of a Dollar through December 2013
Funding Capital Budgets

**HOW CAN CAPITAL PROJECTS BE FUNDED?**

- Tuition
- Other Fees
- State appropriations
- Gifts and Grants
- Endowment Income
- Earnings
Funding Capital Budgets

Source of Capital

- Cash
- Internal Loans
- Bank Loans
- Bonds
- Certificates of Participation
- Capital Leases
Why Borrow?

- Facilities and Capital Budgeting
  - Long term expenditures
  - Buy or build assets
  - Renovate assets
  - Major maintenance
  - Large equipment purchases
Higher Education Bond Market

Increased dramatically in 1980’s

Before then:

— Private institutions relied on fund raising

— Public institutions relied on state appropriations

— Better endowed, more sophisticated issuers of debt
Overall Borrowing Strategy

- Access to Capital
  - Benefits of Using Financial Leverage
  - Coordination with Capital Budgeting
Decisions/Issues to Consider in Borrowing Strategy

- Source - Debt vs. Cash
- Maturity - Short or Long
- Interest Rate Characteristics
- Secured vs Unsecured
- On-and Off-Balance Sheet Financing
Principles Regarding Use of Debt

• Unit access (Academic or Auxiliary).

• Institutional Approvals.

• Credit Rating/Debt Capacity.

• Percent of Annual Operating Expenditures for Debt Service.

• Useful Life of Asset.

• Capitalization of Interest.
Higher Education Debt Categories

- Fixed Note
- Variable Rate
- Certificate of Participation
- Line of Credit
- Commercial Paper
- Master Lease
- Government Loans
- Capital Leases
Building Blocks of the Internal Bank

Assets

- Limited Term Assets
- Cash Management

Liabilities

- Debt Portfolio

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Internal Lending Process

- Credit Analysis
- Project Approval
- Financing Agreement
- Expenditure Funding
- Debt Repayment
# Internal Bank

## Term Sheet

**Effective January 1, 2015 to June 30, 2015**

### Cash Balances

<table>
<thead>
<tr>
<th>Demand Deposits</th>
<th>Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0.20%</td>
</tr>
</tbody>
</table>

Interest is calculated and paid monthly based on the average of the opening and closing balance for the month. The interest rate in this term sheet is fixed and guaranteed until replaced by a subsequent term sheet. Deposits and withdrawals can be made at any time.

### Internal Bank Loan

<table>
<thead>
<tr>
<th>Rate</th>
<th>1-5 years</th>
<th>4.00%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rate</td>
<td>Over 5 years but less than 10 years</td>
<td>4.50%</td>
</tr>
<tr>
<td>Rate</td>
<td>Over 10 years</td>
<td>4.75%</td>
</tr>
</tbody>
</table>

Draws on internal bank loans will be specified in a Memorandum of Understanding (MOU). Interest and principal will be repaid based on a schedule specified as part of the MOU. Typically payments will be made monthly. Early repayments can be made without penalty.

### Capital Project Loan

<table>
<thead>
<tr>
<th>Rate</th>
<th>Over 5 years but less than 10 years</th>
<th>4.50%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rate</td>
<td>Over 10 years</td>
<td>4.75%</td>
</tr>
</tbody>
</table>

Interest and principal will be repaid based on a schedule specified as part of the MOU. Typically payments will be made monthly. Early repayments can be made without penalty.

### Master Leases

<table>
<thead>
<tr>
<th>Rate</th>
<th>1 to 3 year term</th>
<th>2.00%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rate</td>
<td>Over 3 years but less than 5 years</td>
<td>2.25%</td>
</tr>
<tr>
<td>Rate</td>
<td>Over 5 years but less than 7 years</td>
<td>2.50%</td>
</tr>
<tr>
<td>Rate</td>
<td>Over 7 years</td>
<td>3.00%</td>
</tr>
</tbody>
</table>

Typically the lease will begin when the equipment is accepted. Interest and principal will be repaid based on a schedule specified as part of the MOU. Typically payments will be made monthly. Early repayment can be made without penalty.

### Overdraft Loan

<table>
<thead>
<tr>
<th>Rate</th>
<th>All Terms</th>
<th>4.0%</th>
</tr>
</thead>
</table>

Interest is calculated monthly based on the average of the opening and closing balance for the month and will be subtracted from the account specified in the MOU at the end of each month. Principal repayments will be subtracted June 1 of each year from the account specified and according to the schedule specified in the MOU.
Other Asset Opportunities

- Look at all university assets.
- Determine what is core to the university.
- What assets do we manage well.
- Can assets be sold, outsourced or monetized?
- Are there opportunities to establish partnerships?
Asset Opportunity Examples

- Housing
- Energy
- Parking
- Trademarks and Licensing
- Bookstores
- Banking
- Telecommunications
- Hardware and Software