

Institute on College Futures

Michael T. Orr, Lake Forest College

David Wheaton, Macalester College

Goals for Session

- The basic financial/operating model
- Revenues and Expenses
- Projecting growth and “the slope of the line”
- The dynamics of our financial model

What we're NOT going to cover

- Types of budget (operating, capital, restricted)
- Different approaches to budgeting (incremental, zero-based, RCB, formula-based, etc.)
- Fund accounting
- Financial statements (balance sheet, statement of activities, cash flow)
- Ratio analysis (CFI, Primary reserve, viability ratio, etc.)

College Finances 101

Topics for Discussion

- Overview of expenses and revenues
- Tuition revenue and the discount rate
- Endowment fundamentals
- Financial equilibrium

ACM Institutions

- Relatively simple operating model
- Three principal expense categories
- Four major sources of revenue
- The biggest expense category is largely fixed
- The most important revenue stream is subject to volatility
- Variations will upset balance between revenues and expenses

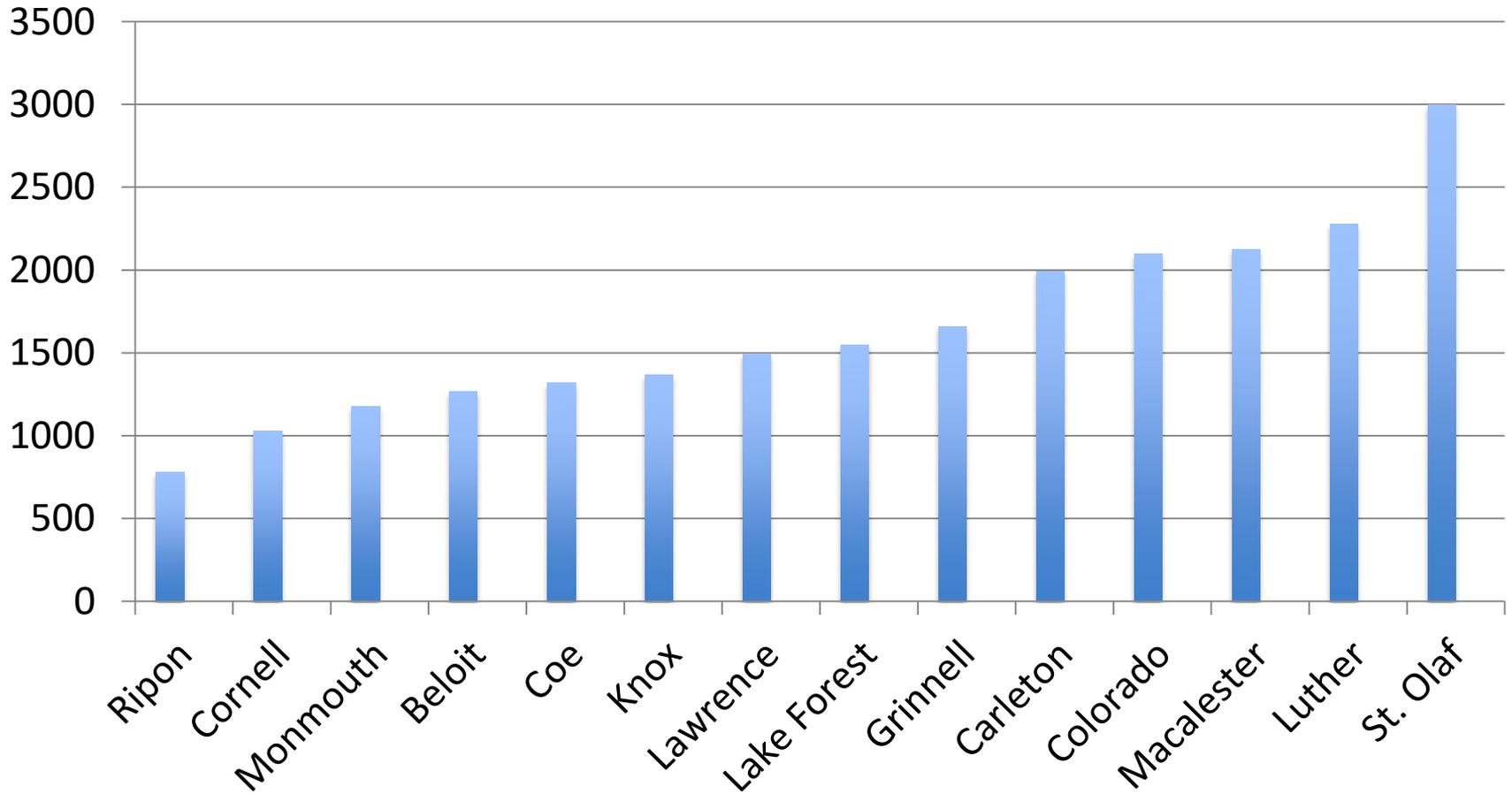
Contrast to Other Institutions

- Size (ACM vs. Penn State)
- Multiple locations
- State appropriations
- Athletics
- Medical school, law school
- Services & auxiliary enterprises

Variations within the ACM

- Student FTE
- Endowment
- Auxiliary revenue
- Annual fund gifts
- Capital investment and debt load

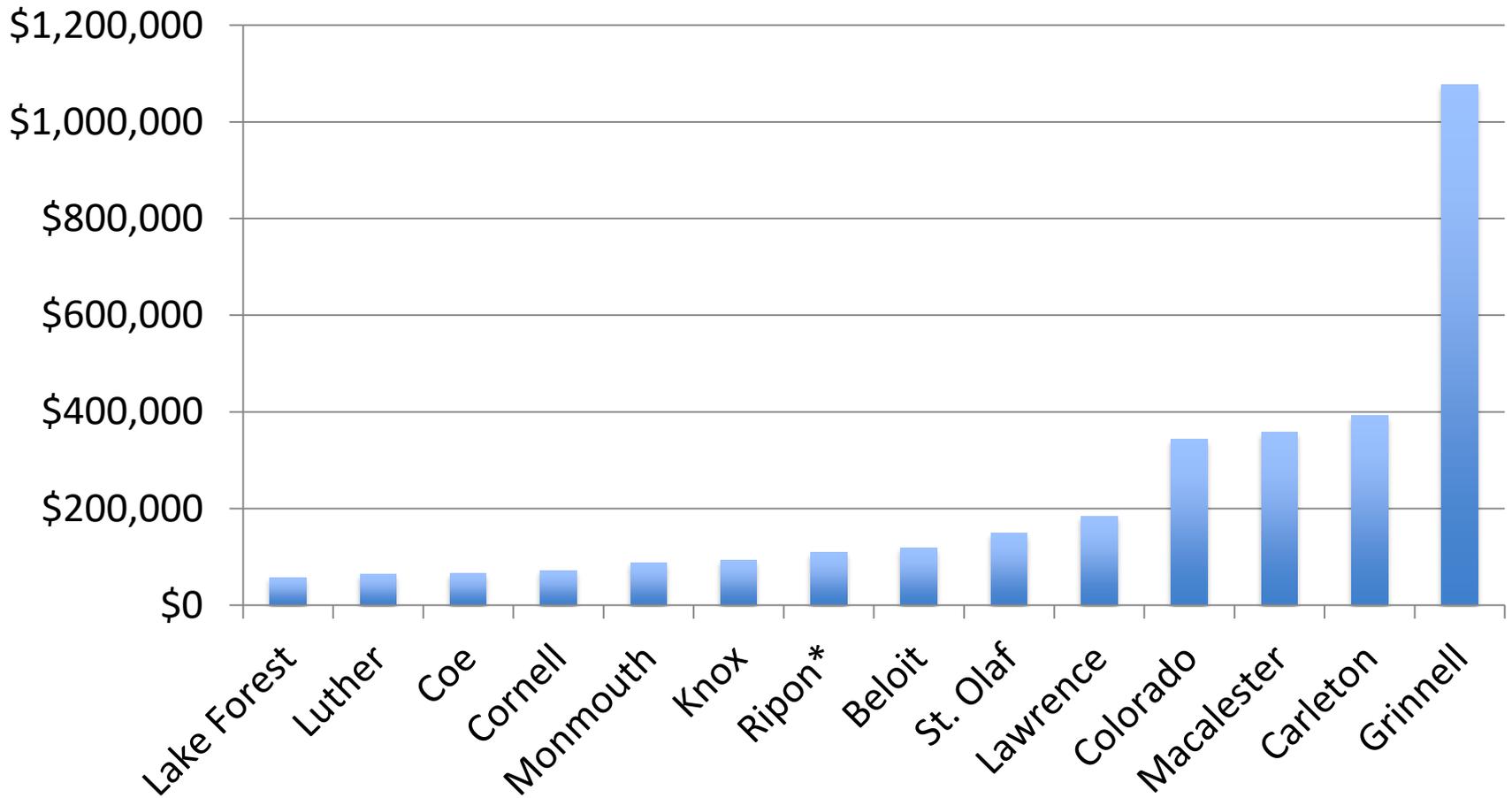
Full-time Enrollment, Fall 2015



Full-time Degree-Seeking Students; Source: ACM

Endowment Market Value per Full-time Student

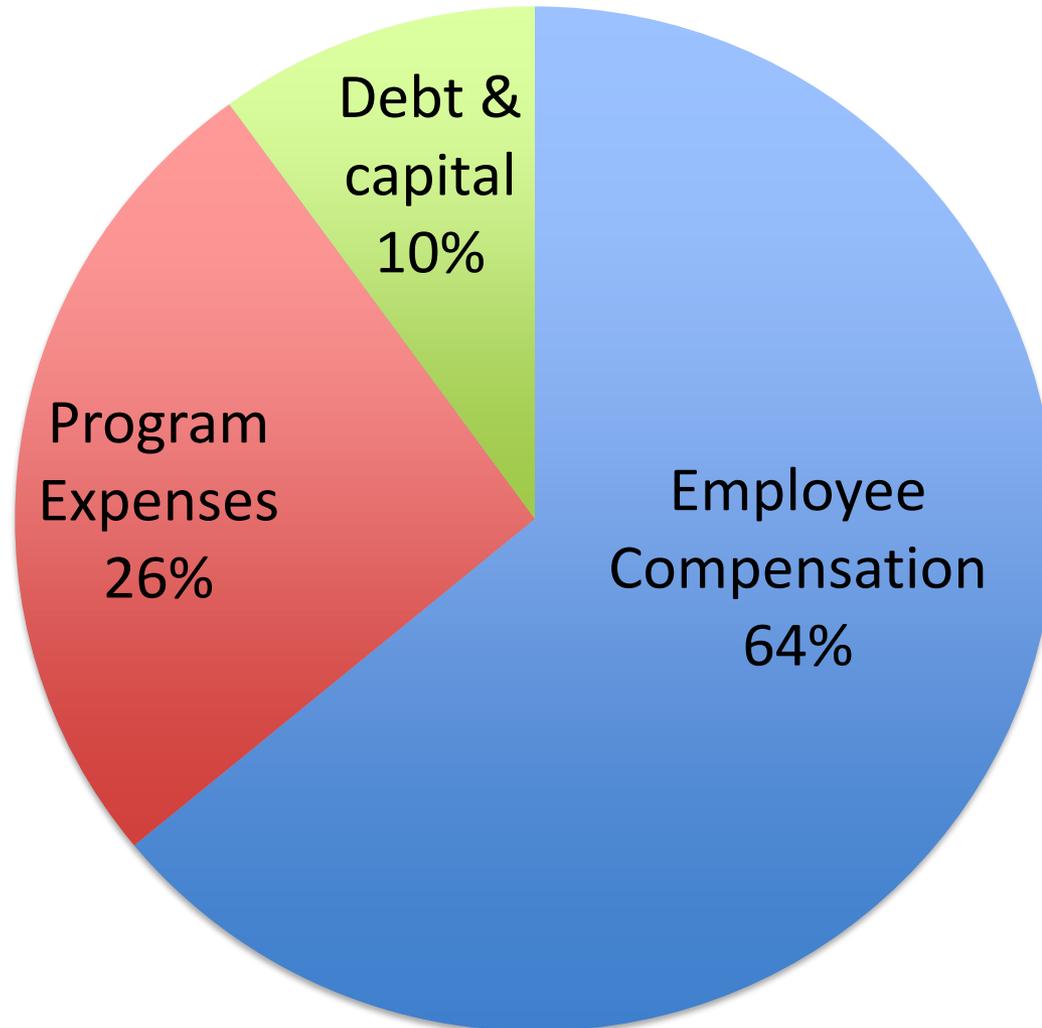
June 30, 2015



Source: NACUBO Commonfund/ACM

* No data provided by Ripon for 2016 NACUBO Commonfund Endowment Study

Expenses for a typical college



Expenses: Compensation

- Employee Compensation
 - Faculty and staff salaries
 - Student wages
 - Benefits
 - Taxes
- Number of faculty & staff
- Full-time/part-time

Expenses: Program Expenses

Department budgets

- Academic
- Student services
- Administration

Utilities

Institutional expenses

- Insurance
- Food service

Off-campus programs

Expenses: Debt & Capital

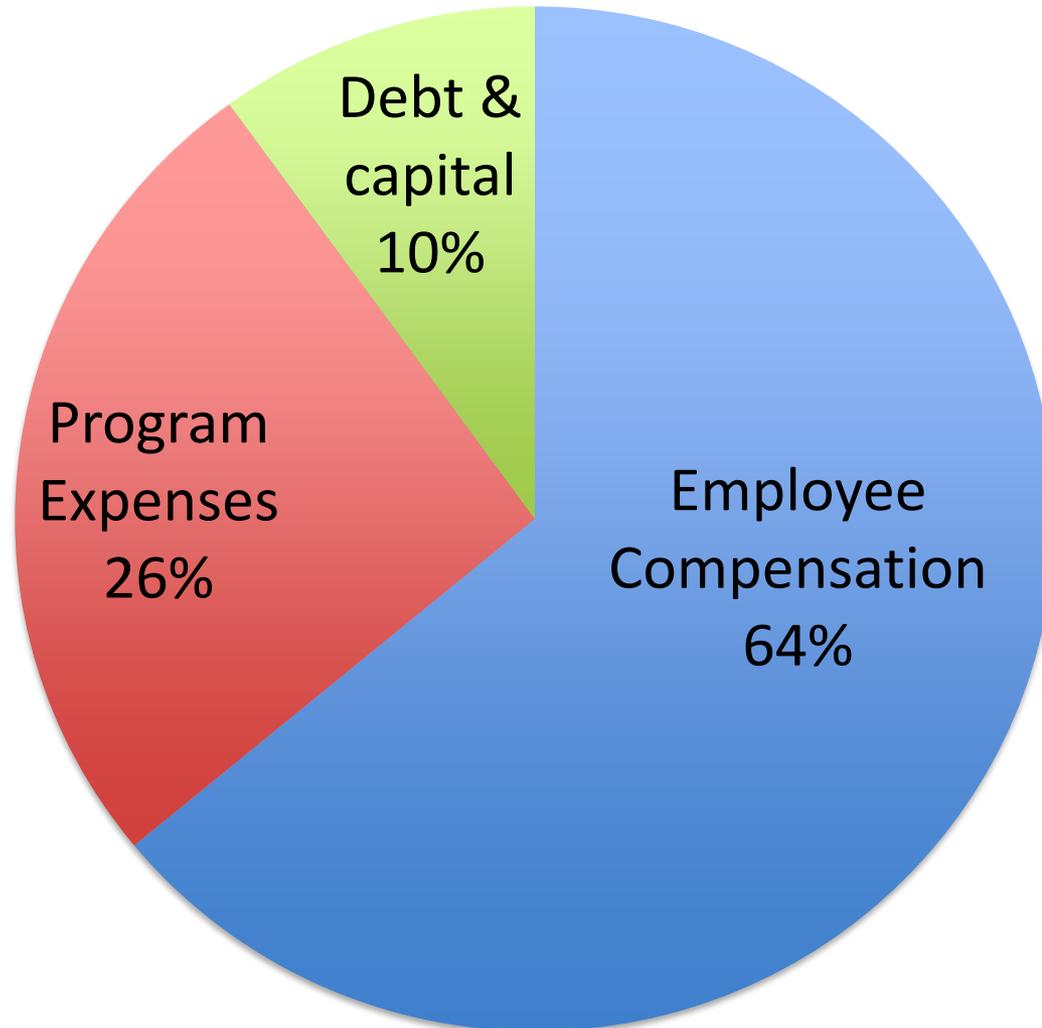
Debt Service

- Long term debt
- Interest

Capital

- Maintenance and repairs to physical plant
- Capital improvements
- Equipment and technology

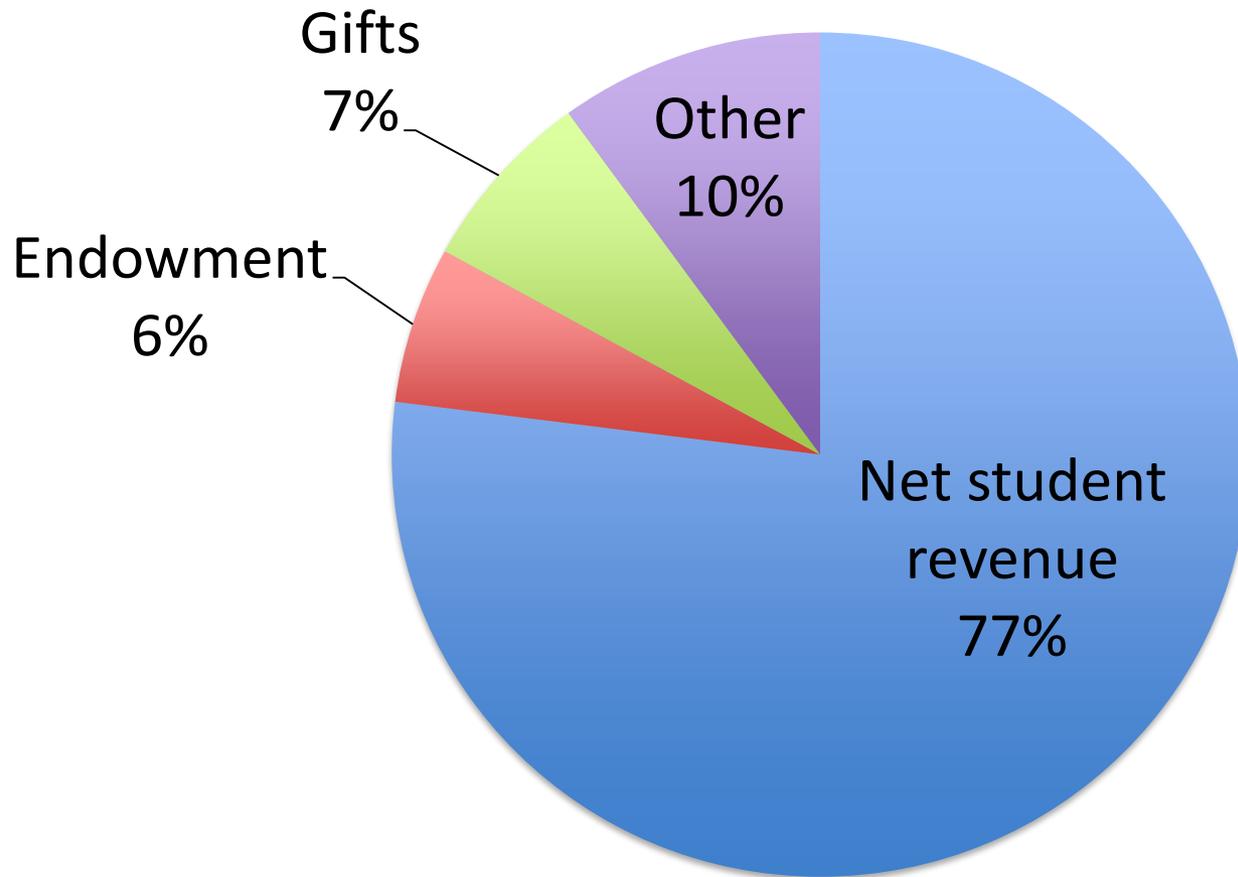
Expenses for a typical college



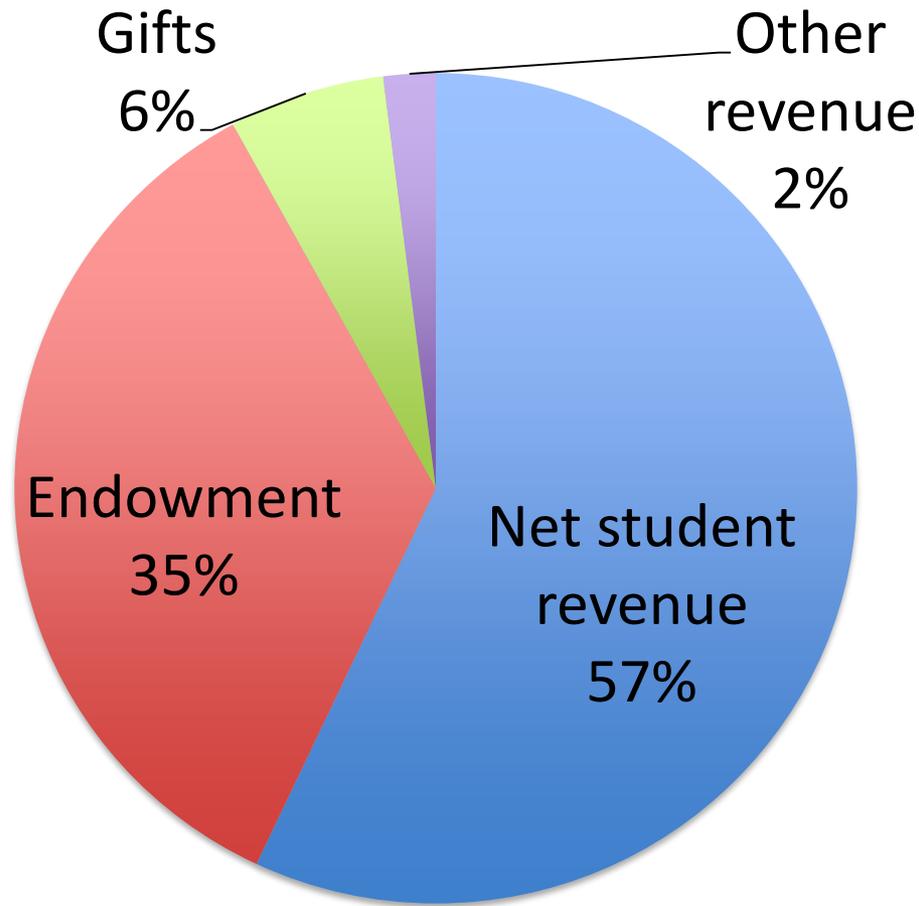
One-Time Expenditures vs. Base Budget

- “Why did ‘they’ spend \$__ on campus repairs when it’s more important to increase faculty/staff compensation?”
- Compensation is a recurring expense. Unless you are willing to impose pay cuts or eliminate positions, once you allocate funds to compensation, those dollars are “baked” into the budget.
- Repairs and capital investments are one-time expenditures.

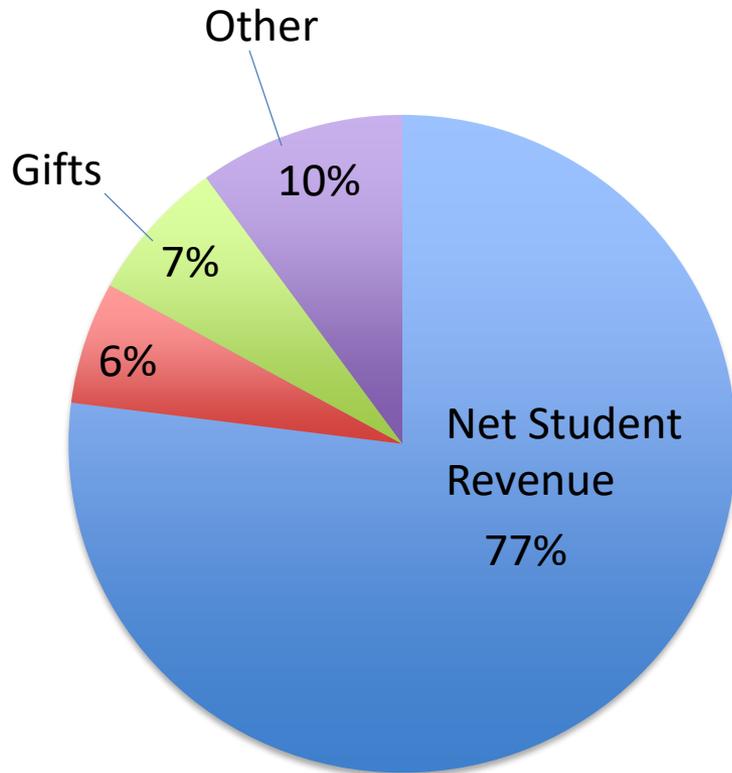
Revenues: Example 1



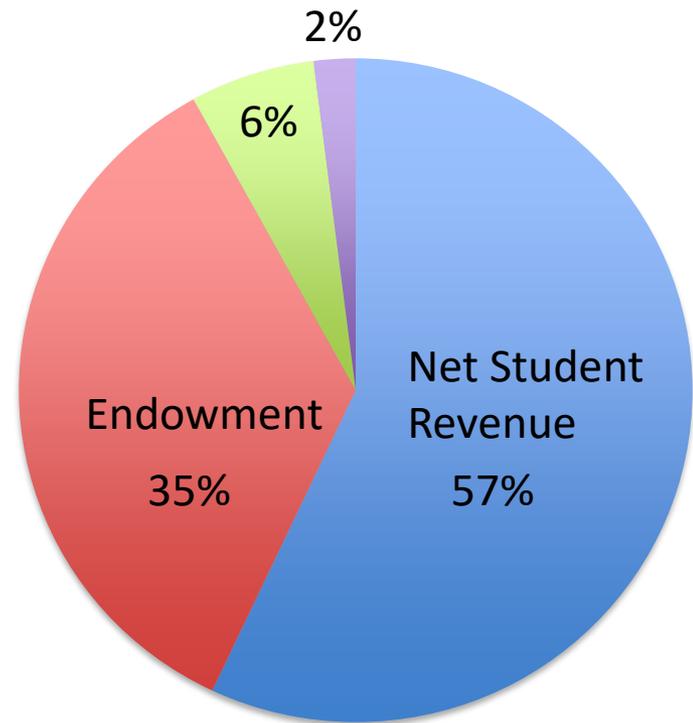
Revenues: Example 2



Comparison of revenue distribution



Example 1



Example 2

Student Revenue

- Tuition, room and board fees
- Impacted by
 - Number of students
 - Type of students
 - Undergraduate degree seeking (F/T & P/T)
 - Non-degree seeking (Special status, P/T, audit)
 - Graduate (F/T & P/T)
 - Price of tuition, room & board (“sticker price”)
 - Financial aid (aka “the discount rate”)

Some Key Definitions

- Comprehensive Fee
 - Gross tuition
 - Room charge
 - Board plan
 - Student activity fee

Some Key Definitions

- **Gross Tuition**
 - The tuition “sticker” price charged to attend the institution
- **Discount**
 - The amount that the “sticker” price is reduced by the institution
- **Net Tuition**
 - The actual dollars received as revenue

Some Key Definitions

- Financial Aid
 - Institutional gift aid (“discount”)
 - Federal, state and private grants and scholarships
 - Student & parent loans
 - Work study

Institutional Gift Aid

- Two principal forms:
 - Need-based grants (FAFSA; EFC)
 - Merit scholarships (No athletic scholarships in Div. III)
- Institutions typically fund institutional gift aid from two sources
 - Endowment distribution and gifts (designated student scholarships)
 - Revenue that the institution forgoes as an unfunded discount.

Financial Aid & the Discount Rate

Impacts Discount Rate

Institutional Gift Aid

- Funded Scholarships (Endowment & Gift income)
- Unfunded Institutional Scholarships & Grants

Does not Impact Discount Rate

Other Aid

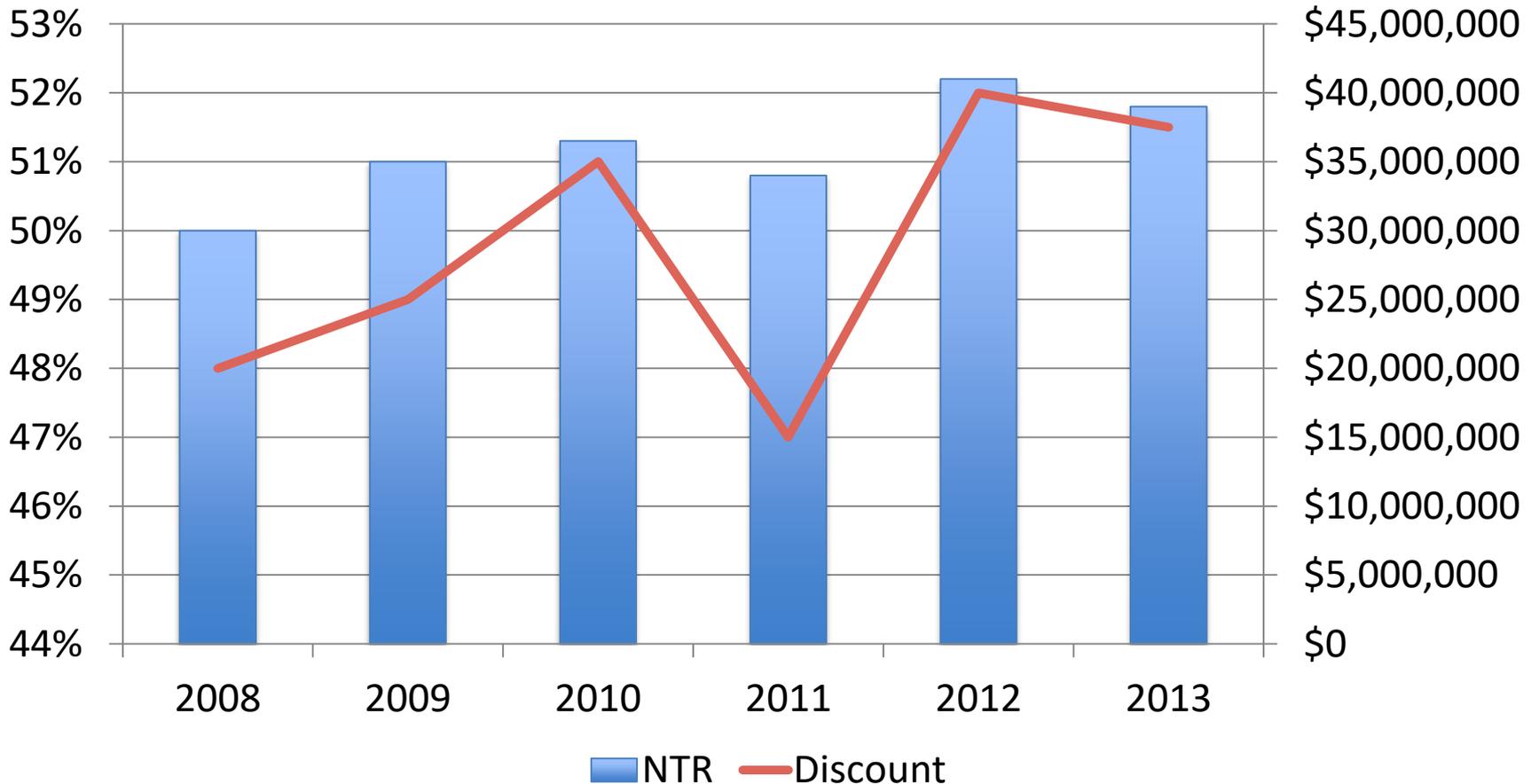
- Federal, State, and Private Grants & Scholarships
- Student Loans (Perkins, Stafford, Parent PLUS, & Private)
- Student Employment

Calculating Net Tuition & the Discount Rate

- Gross Tuition Revenue – Discount = Net Tuition

	Example 1	Example 2
Gross Tuition (“Sticker price”)	\$40,000	\$32,000
Discount	\$22,000	\$14,000
Net Tuition (Amount student pays)	\$18,000	\$18,000
Discount Rate (Discount/Sticker price)	55%	44%

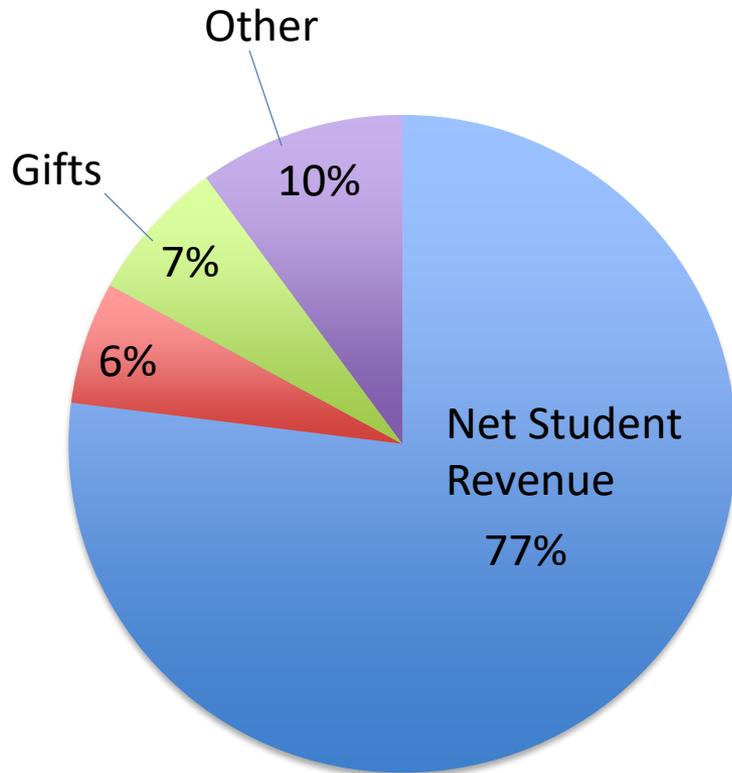
Net Tuition Revenue & Discount Rate



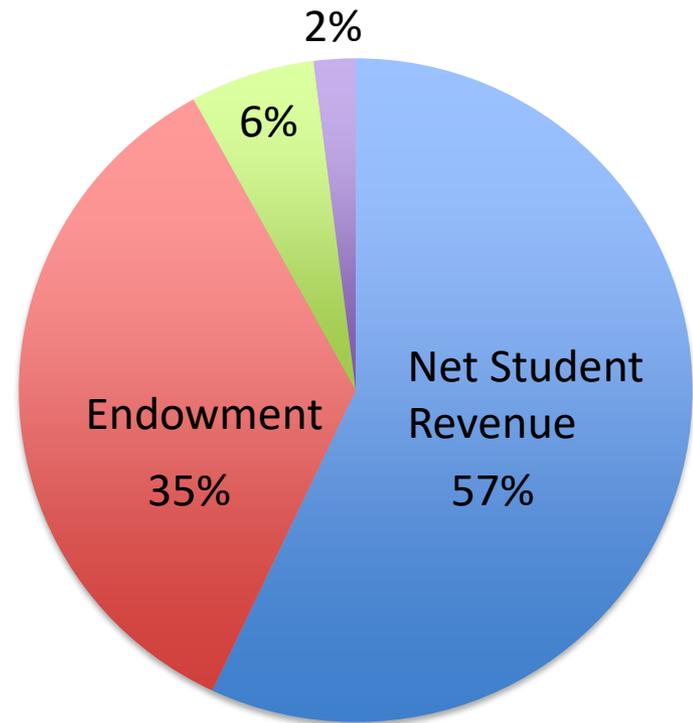
Enrollment Management: A Balancing Act

- Enroll a class of students that meets institutional aspirations
 - Academic profile
 - Diversity
 - Athletics, music programs, academic programs
 - Overall size of student body
- Manage the overall discount rate to generate sufficient net tuition revenue to cover operating expenses
- Enhancing one side of the equation will likely have a negative impact on the other

Comparison of revenue distribution



Example 1



Example 2

Other Revenue & Gifts

Other Revenue

- Summer programs & conferences
- Facility rental
- Bookstore
- External grants

Gifts

- Gifts to the Annual Fund
- Restricted vs. unrestricted
- Alumni participation rate

Endowment Fundamentals

- Preserve the corpus
 - Assets held in perpetuity
 - Quasi endowments
- Comply with donors' wishes
 - Restricted funds vs. unrestricted funds
- Safeguard endowment purchasing power

Intergenerational Equity

“The trustees of endowed institutions are the guardians of the future against the claims of the present. Their task is to preserve equity among generations.”

James Tobin, 1974

“What is Permanent Endowment Income,” *American Economic Review*, 64 (1974): 427.

Endowment Revenue

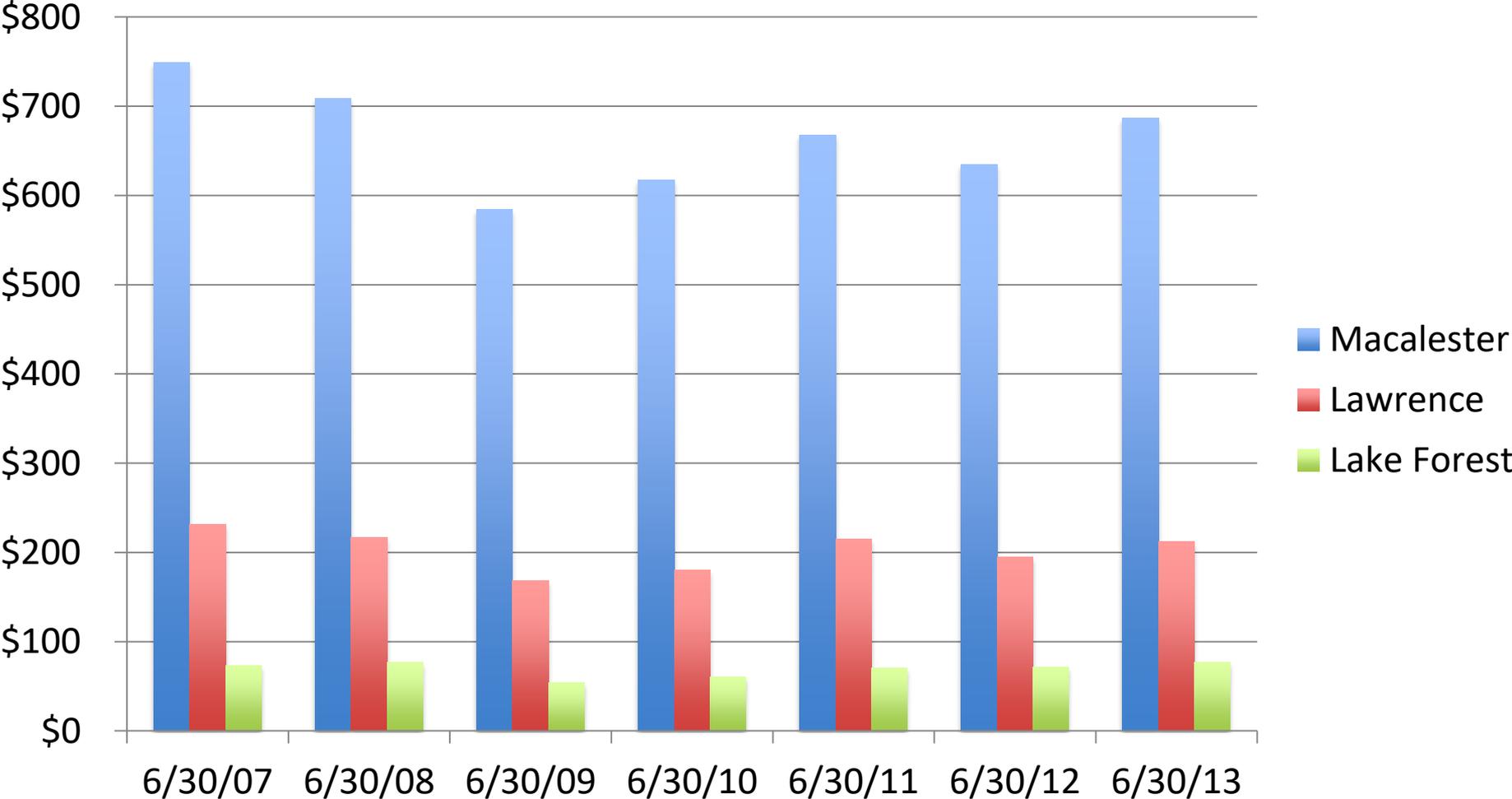
- Ensure distribution respects intergenerational equity and donor restrictions
 - Maintain the purchasing power of the endowment over the long term
 - Provide a stable flow of funds to the operating budget to provide resources to the current generation

Endowment Revenue

- Distribution impacted by
 - Rate of return on investments in endowment
 - New gifts to the endowment
 - Distribution formula
 - ❖ Moving average (e.g. 5% of the trailing 12 quarter moving average)
 - ❖ Alternative approaches: Inflation-based or hybrid
 - Spending policy

Market Volatility and Endowment Value

(Dollars in millions)



Endowment Distribution Growth

- GOAL: Investment return that will fund the endowment draw AND provide sufficient additional earnings to protect the corpus against inflation
- Example:
 - Anticipate >7.5% investment return
 - 5% endowment draw
 - 2.5% growth in endowment spending for operations
- But is this realistic?
 - 6% total return?

Endowment vs. Tuition Revenue

- A college with 1500 students
- A 5% endowment spending policy
- How much additional endowment is needed to generate revenue equivalent to a \$1000 increase in NTR per student?
 - **Total increase in tuition revenue = \$1k x 1500 = \$1.5M**
 - **Endowment required = \$1.5M/0.05 = \$30M**

Key Financial Drivers

- Net tuition revenue per student
- Rate of increase of compensation
- Endowment market returns
- Annual fund gifts
- Capital investment and debt load

Other Issues

- Rising tuition rates
- Sustainability of high tuition/high aid model
- Is there a price ceiling?
- Economic climate and financial markets
 - Family ability to pay tuition
 - Endowment value and distribution
 - Fundraising & annual fund
- Utilities and healthcare

Financial Equilibrium

- Balanced budget
- Ongoing investment in human capital
- Preservation of physical assets
- Maintenance of endowment purchasing power

Discussion Question

What do you think your faculty colleagues would identify as the most significant financial challenges or risks facing your institution?

- 1) Tuition revenue
 - Making the class
 - Controlling the discount rate
 - Not enough full-pay students
- 2) Size of the endowment/endowment revenue
- 3) Meeting financial need of students
- 4) Deferred maintenance
- 5) Low compensation
- 6) Managing rising benefit costs
- 7) Fundraising
 - Capital funding
 - Annual giving
- 8) Adding faculty/staff lines
- 9) Lowering endowment spending
- 10) Controlling expenses
- 11) Federal & state financial aid
- 12) Debt load
- 13) Something else

ACM Institute on College Futures

June 2016

Introduction and Context

- The business model for liberal arts colleges has endured for 150+ years
- Its primary funding source is student revenues, and
- Endowments vary widely in size, but
- **Institutions tend to create an operating structure designed to put virtually all of the revenue to work each year, at least in part because they are required to do so as not-for-profit organizations**
- Most ACM schools have a limited ability to diversify their revenue base in any significant way, in part due to their geographic locations



Sample income statements

- In the base case, total revenues are expressed as \$100 to eliminate debates about specific dollar amounts and to make the math on all lines easier to follow
- The examples aren't forecasts, just exhibits showing the dynamics of the math
- Expenses are generally not adjusted in the scenarios
- Growth rates are assigned to the major revenue and expense lines based upon likely trends or past patterns



Base Case

- We used the most likely trend lines
- Financial aid grows faster than tuition
- Endowment earns 6% annually, only 1% above the draw formula



Sample College - pro forma standard size income statement (2014/15 = 100)

Base case

	2015		2016	2017	2018	2019	2020	2021	2022
	Base	Growth	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8
tuition	112.9	3.5%	116.9	120.9	125.2	129.6	134.1	138.8	143.6
fin aid	(54.0)	4.5%	(56.4)	(58.9)	(61.6)	(64.4)	(67.3)	(70.3)	(73.4)
net tuition	58.9		60.5	62.0	63.6	65.2	66.8	68.5	70.2
room and board	13.2	4.0%	13.7	14.3	14.8	15.4	16.1	16.7	17.4
endowment	19.5	1.0%	19.7	19.9	20.1	20.3	20.5	20.7	20.9
gifts and other	8.4	4.0%	8.7	9.1	9.4	9.8	10.2	10.6	11.1
revenues	100.0		102.6	105.3	108.0	110.8	113.6	116.5	119.5
growth rate from prev yr			2.6%	2.6%	2.6%	2.6%	2.6%	2.6%	2.6%
compensation	60.0	4.0%	62.4	64.9	67.5	70.2	73.0	75.9	79.0
program	30.0	3.0%	30.9	31.8	32.8	33.8	34.8	35.8	36.9
debt/capital	10.0	4.0%	10.4	10.8	11.2	11.7	12.2	12.7	13.2
expenses	100.0		103.7	107.5	111.5	115.7	119.9	124.4	129.0
growth rate from prev yr			3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%
difference between inc and exp growth			-1.1%						
Net	0.0		(1.1)	(2.3)	(3.5)	(4.9)	(6.3)	(7.9)	(9.5)
Discount rate	47.8%		48.3%	48.7%	49.2%	49.7%	50.2%	50.6%	51.1%
Net tuition/FTE growth			2.6%	2.6%	2.5%	2.5%	2.5%	2.5%	2.5%

Bad case

- Net tuition growth slows due to higher financial aid growth
 - The same effect could be generated by slowing tuition increases and keeping fin aid growth unchanged
- Endowment now earns 1% less than the draw



Sample College - pro forma standard size income statement (2014/15 = 100)

Bad case - slower net tuition growth, poor endowment returns

	2015		2016	2017	2018	2019	2020	2021	2022
	Base	Growth	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8
tuition	112.9	3.5%	116.9	120.9	125.2	129.6	134.1	138.8	143.6
fin aid	(54.0)	6.0%	(57.2)	(60.6)	(64.3)	(68.1)	(72.2)	(76.6)	(81.1)
net tuition	58.9		59.6	60.3	60.9	61.4	61.9	62.2	62.5
room and board	13.2	4.0%	13.7	14.3	14.8	15.4	16.1	16.7	17.4
endowment	19.5	-1.0%	19.3	19.1	18.9	18.7	18.5	18.4	18.2
gifts and other	8.4	4.0%	8.7	9.1	9.4	9.8	10.2	10.6	11.1
revenues	100.0		101.4	102.8	104.1	105.4	106.7	107.9	109.1
growth rate from prev yr			1.4%	1.3%	1.3%	1.3%	1.2%	1.1%	1.1%
compensation	60.0	4.0%	62.4	64.9	67.5	70.2	73.0	75.9	79.0
program	30.0	3.0%	30.9	31.8	32.8	33.8	34.8	35.8	36.9
debt/capital	10.0	4.0%	10.4	10.8	11.2	11.7	12.2	12.7	13.2
expenses	100.0		103.7	107.5	111.5	115.7	119.9	124.4	129.0
growth rate from prev yr			3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%
difference between inc and exp growth			-2.3%	-2.4%	-2.4%	-2.5%	-2.5%	-2.6%	-2.6%
Net	0.0		(2.3)	(4.8)	(7.4)	(10.2)	(13.2)	(16.5)	(19.9)
Discount rate	47.8%		49.0%	50.1%	51.3%	52.6%	53.9%	55.2%	56.5%
Net tuition/FTE growth			1.2%	1.1%	1.0%	0.9%	0.7%	0.6%	0.4%

Good case

- Financial aid grows at the same rate as tuition
- Endowment earns 3% more than the draw formula



So why not just increase revenue?

- Perhaps by tapping other sources like non-traditional programs or renting the campus?
- As a general matter this isn't a bad idea as long as the revenue stream significantly exceeds the add'l costs
- What if we add a new [unnamed] revenue source that grows at an outsized rate, 10% annually, and starts with a net income of \$1.0
- Conclusion – the upside of the new revenue is swamped by the size and dynamics of the core model



Sample College - pro forma standard size income statement (2014/15 = 100)

Base case - effect of new revenue source [net \$1.0/yr with 10% growth]

	2015		2016	2017	2018	2019	2020	2021	2022
	Base	Growth	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8
tuition	112.9	3.5%	116.9	120.9	125.2	129.6	134.1	138.8	143.6
fin aid	(54.0)	4.5%	(56.4)	(58.9)	(61.6)	(64.4)	(67.3)	(70.3)	(73.4)
net tuition	58.9		60.5	62.0	63.6	65.2	66.8	68.5	70.2
room and board	13.2	4.0%	13.7	14.3	14.8	15.4	16.1	16.7	17.4
endowment	19.5	1.0%	19.7	19.9	20.1	20.3	20.5	20.7	20.9
new program [net]	1.0	10.0%	1.1	1.2	1.3	1.5	1.6	1.8	1.9
gifts and other	8.4	4.0%	8.7	9.1	9.4	9.8	10.2	10.6	11.1
revenues	101.0		103.7	106.5	109.3	112.2	115.2	118.3	121.5
growth rate from prev yr			2.7%	2.7%	2.7%	2.7%	2.7%	2.7%	2.7%
compensation	60.0	4.0%	62.4	64.9	67.5	70.2	73.0	75.9	79.0
program	30.0	3.0%	30.9	31.8	32.8	33.8	34.8	35.8	36.9
debt/capital	10.0	4.0%	10.4	10.8	11.2	11.7	12.2	12.7	13.2
expenses	100.0		103.7	107.5	111.5	115.7	119.9	124.4	129.0
growth rate from prev yr			3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%
difference between inc and exp growth			-1.0%						
Net	1.0		0.0	(1.1)	(2.2)	(3.4)	(4.7)	(6.1)	(7.5)
Discount rate	47.8%		48.3%	48.7%	49.2%	49.7%	50.2%	50.6%	51.1%
Net tuition/FTE growth			2.6%	2.6%	2.5%	2.5%	2.5%	2.5%	2.5%

So let's just add more students

- Add 100 students [5% more] permanently
- This adds revenue early on
- But the trend lines are still out of whack
- And there's no way to keep adding [residential] students
- This just postpones the problem



Sample College - pro forma standard size income statement (2014/15 = 100)

Effect of 5% more students [approx 100] permanently at avg disc rate

	2015		2016	2017	2018	2019	2020	2021	2022
	Base	Growth	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8
tuition	112.9	3.5%	122.7	127.0	131.4	136.0	140.8	145.7	150.8
fin aid	(54.0)	4.5%	(59.2)	(61.9)	(64.7)	(67.6)	(70.6)	(73.8)	(77.1)
net tuition	58.9		63.5	65.1	66.8	68.5	70.2	71.9	73.7
room and board	13.2	4.0%	13.7	14.3	14.8	15.4	16.1	16.7	17.4
endowment	19.5	1.0%	19.7	19.9	20.1	20.3	20.5	20.7	20.9
gifts and other	8.4	4.0%	8.7	9.1	9.4	9.8	10.2	10.6	11.1
revenues	100.0		105.6	108.4	111.2	114.0	117.0	120.0	123.0
growth rate from prev yr			5.6%	2.6%	2.6%	2.6%	2.6%	2.6%	2.6%
compensation	60.0	4.0%	62.4	64.9	67.5	70.2	73.0	75.9	79.0
program	30.0	3.0%	30.9	31.8	32.8	33.8	34.8	35.8	36.9
debt/capital	10.0	4.0%	10.4	10.8	11.2	11.7	12.2	12.7	13.2
expenses	100.0		103.7	107.5	111.5	115.7	119.9	124.4	129.0
growth rate from prev yr			3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%
difference between inc and exp growth			1.9%	-1.1%	-1.1%	-1.1%	-1.1%	-1.1%	-1.1%
Net	0.0		1.9	0.8	(0.4)	(1.6)	(3.0)	(4.4)	(6.0)
Discount rate	47.8%		48.3%	48.7%	49.2%	49.7%	50.2%	50.6%	51.1%
Net tuition/FTE growth			7.7%	2.6%	2.5%	2.5%	2.5%	2.5%	2.5%

We'll just raise more money...

- It's hard for annual giving to grow much faster than the economy or household income
- There are generally some opportunities to broaden the base of giving
- This is generally the smallest component of the revenue picture, so even significant increases have only a modest effect on the overall picture



Sample College - pro forma standard size income statement (2014/15 = 100)

Effect of larger annual fundraising

	2015		2016	2017	2018	2019	2020	2021	2022
	Base	Growth	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8
tuition	112.9	3.5%	116.9	120.9	125.2	129.6	134.1	138.8	143.6
fin aid	(54.0)	4.5%	(56.4)	(58.9)	(61.6)	(64.4)	(67.3)	(70.3)	(73.4)
net tuition	58.9		60.5	62.0	63.6	65.2	66.8	68.5	70.2
room and board	13.2	4.0%	13.7	14.3	14.8	15.4	16.1	16.7	17.4
endowment	19.5	1.0%	19.7	19.9	20.1	20.3	20.5	20.7	20.9
gifts and other	8.4	10.0%	9.2	10.2	11.2	12.3	13.5	14.9	16.4
revenues	100.0		103.1	106.3	109.7	113.2	116.9	120.8	124.8
growth rate from prev yr			3.1%	3.1%	3.2%	3.2%	3.3%	3.3%	3.4%
compensation	60.0	4.0%	62.4	64.9	67.5	70.2	73.0	75.9	79.0
program	30.0	3.0%	30.9	31.8	32.8	33.8	34.8	35.8	36.9
debt/capital	10.0	4.0%	10.4	10.8	11.2	11.7	12.2	12.7	13.2
expenses	100.0		103.7	107.5	111.5	115.7	119.9	124.4	129.0
growth rate from prev yr			3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%
difference between inc and exp growth			-0.6%	-0.6%	-0.5%	-0.5%	-0.5%	-0.4%	-0.4%
Net	0.0		(0.6)	(1.2)	(1.8)	(2.4)	(3.0)	(3.6)	(4.2)
Discount rate	47.8%		48.3%	48.7%	49.2%	49.7%	50.2%	50.6%	51.1%
Net tuition/FTE growth			2.6%	2.6%	2.5%	2.5%	2.5%	2.5%	2.5%

So how can this balance?

- Balancing using only one expense category
- Better net tuition performance and endowment draw
- Hybrid - better net tuition and draw and expense control



Sample College - alternative revenue and income scenarios

	Base case		Alternative Cases				
	Fiscal year 2014/2015 = 100	<i>Base Case growth rates for <u>all future</u> periods</i>	<u>Balance by changing the growth rate on <u>only the</u> expense item listed at the top of the column:*</u>			Better net tuition and endow. draw	Better net tuition and draw; cut exp. Gr. Rates by 1%
	Base		Comp	Program	Debt/Capital		
tuition	112.9	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%
fin aid	(54.0)	4.5%	4.5%	4.5%	4.5%	4.3%	4.3%
net tuition	58.9	2.6%	2.6%	2.6%	2.6%	2.8%	2.8%
room and board	13.2	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%
endowment	19.5	1.0%	1.0%	1.0%	1.0%	2.0%	2.0%
gifts and other	8.4	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%
revenues	100.0	2.6%	2.6%	2.6%	2.6%	2.9%	2.9%
growth rate from prev yr							
compensation	60.0	4.0%	2.1%	4.0%	4.0%	4.0%	3.0%
program	30.0	3.0%	3.0%	-0.7%	3.0%	3.0%	2.0%
debt/capital	10.0	4.0%	4.0%	4.0%	-7.2%	4.0%	3.0%
expenses	100.0	3.7%	2.6%	2.6%	2.6%	3.7%	2.7%
Net	0.0	-1.1%	0.0%	0.0%	0.0%	-0.8%	0.2%

* Note: the growth rate in this column is not a one time event; this would be the rate of change every year to keep the revenue and expense amounts in balance

Summary

- The trend lines for revenue and expenses are the issue
- Other revenue sources would have to grow very rapidly to have any effect on the underlying model
- Obviously, expense allocation will play a role here
- If revenue grows at 2% annually, so must expenses



Summary cont'd

- The exercise was more about raising issues than offering a prescription
- Understanding the forces at play and the dynamics of the current model are crucial elements in any discussion of next steps
- The objective here was to sensitize important constituents about the potential directions



Conclusions

- As the third spirit says in “A Christmas Carol”, these are not specters of things that will be, but they might occur if present habits go unchanged
- All is not doom and gloom
 - we’re still in a business that is respected worldwide
 - it is seen as a necessary purchase by many
 - demand is still pretty strong
- The answer is neither simple nor obvious

