Finance Literacy Understanding Financial Statements

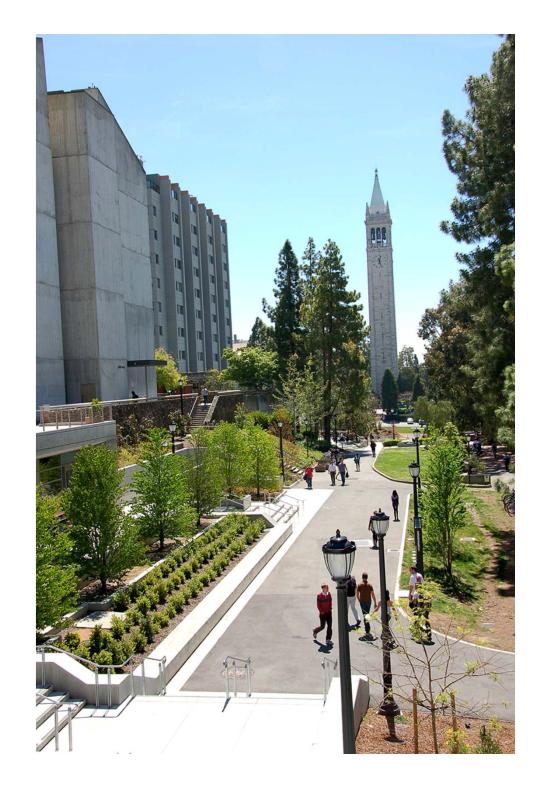
290 Hearst Mining, Memorial Building Nov 30th, 10:00 – 11:00am

Presenter: Adile Quennarouch,
Director of Finance & Capital
Asset Strategies

Office of the

Berkeley





Below are of the topics we'll cover during this session

- Why do our financial statements look the way they do?
- Why are financial statements important?
- How to crosswalk from CalPlanning to the Financial statements
- How to simplify the statements to create custom views and derive insights

On the more technical side, at the end of this session, you should be comfortable with these concepts

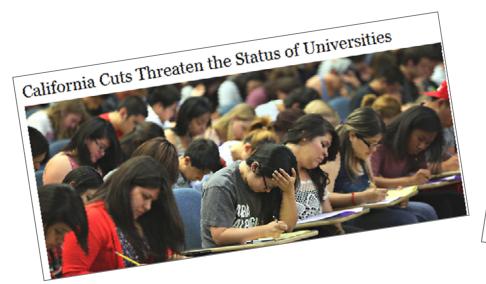
- Accrual versus Cash
- Gross Income versus Net Income
- Performance metrics such as Margins, Free Cash Flow
- Financial ratios including days cash on hand

- **1. Context** (~ 10 mins)
- 2. Financial Statements Overview (~ 30 mins)
- 3. Financial Statement Analysis (~15 mins)
- **4. Concluding thoughts** (~ 5mins)

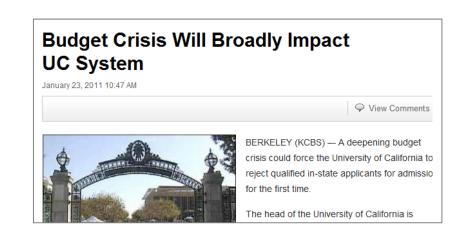
1. Context

- 2. Financial Statements Overview
- 3. Financial Statement Analysis
- 4. Concluding thoughts

Remember the headlines?

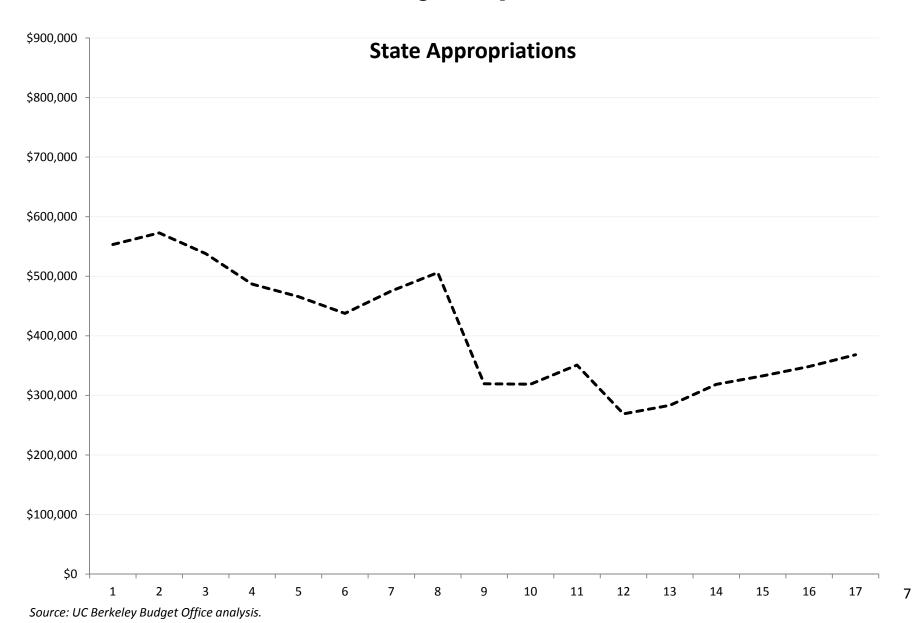






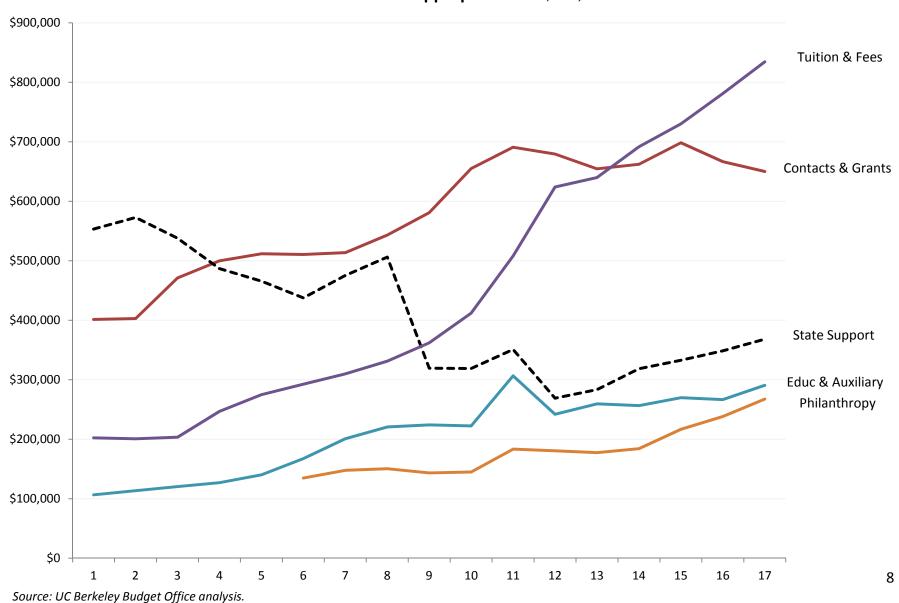


Berkeley's state support was cut by roughly half in nominal terms over a 10-year period

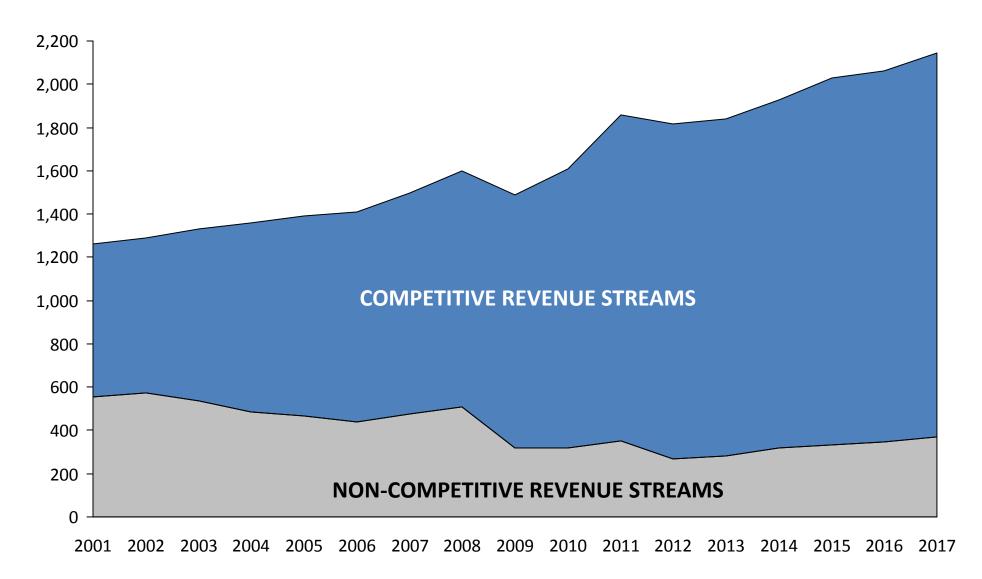


More importantly, our entire budget model has changed



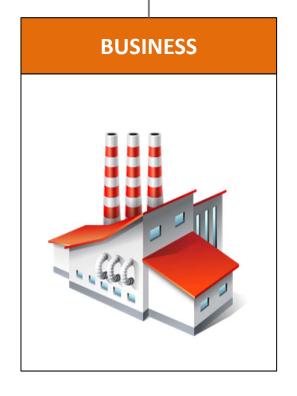


Competitive revenue streams now account for ~ 85% of our total revenue base



This change in revenue model has an impact on how we operate as a university



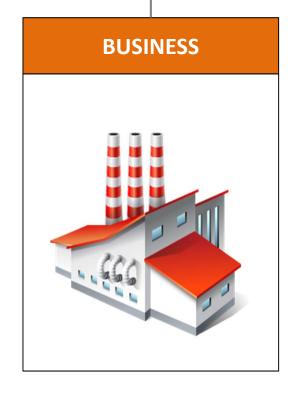






This complex structure is reflected in our financial statements









More specifically...

- 1. Fund accounting \rightarrow not every dollar is created equal
- 2. No Shareholder's equity \rightarrow Net assets
- 3. No income tax \rightarrow Non-profit
- 4. Everything else like a private company

Key takeaways

- 1. Public universities have a complex financial structure
- 2. That complexity is reflected in our financial statements

1. Context

- 2. Financial Statements Overview
- 3. Financial Statement Analysis
- 4. Concluding thoughts

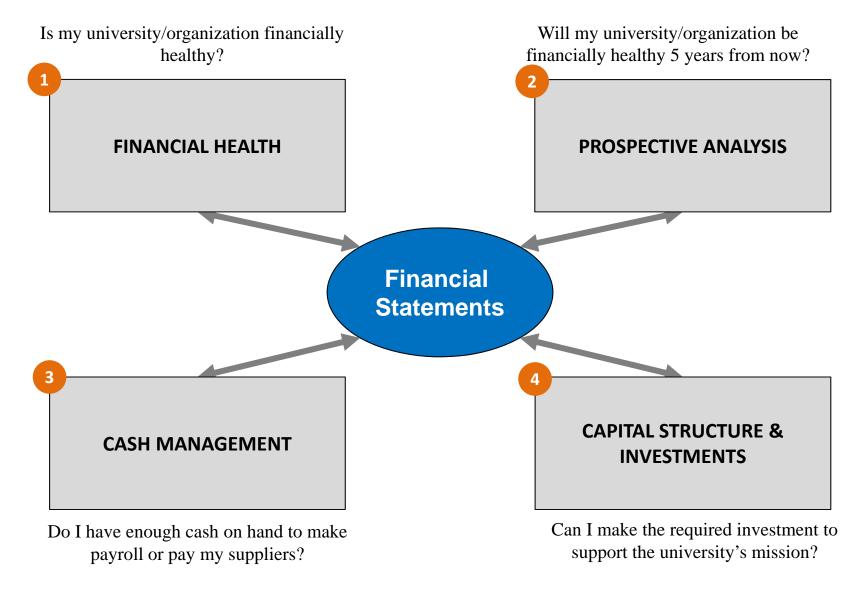
1. Context

- 2. Financial Statements Overview a) Introduction
 - b) Income Statement
 - c) Cash Flow Statement
 - d) Balance Sheet
- 3. Introduction Financial Statement Analysis
- 4. Concluding thoughts



"We're in good shape. Nobody understands our financial statement."

Why do financial statements matter?



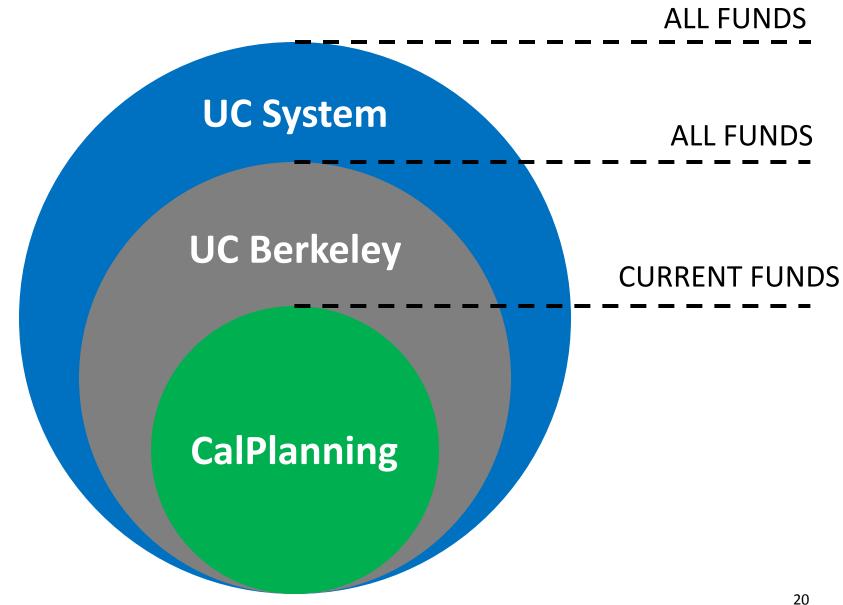
Financial statements are the language of finance

Financial statements have been around for a long time...

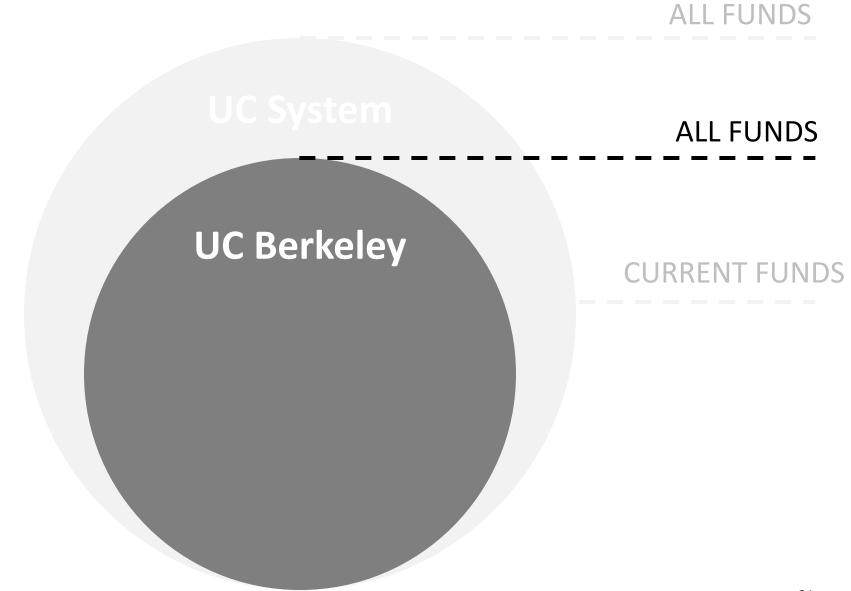


Sumerian clay tablet.
Summary account of silver for the governor 2,500 BC

There are various "levels" of statements



Where we are going to spend most of our time today



The 3 financial statements

INCOME STATEMENT	CASH FLOW STATEMENT	BALANCE SHEET
Operating Revenues	Cash Flow from Operations	Current Assets
Operating Expenses	Cash Flow from Financing	Long-term Assets
Non-Operating Revenues/Expenses	Cash Flow from Investments	Current Liabilities
Changes in Net Assets		Long-term Liabilities
		Equity/ Net Assets

The guiding principles

- Going concern
- Time period
- Objectivity and reliability
- Relevance
- Full disclosure
- Materiality
- Conservatism
- Consistency/comparability

Accrual versus cash

1. Accrual

- Income statement
- In accrual accounting, revenues are recognized when they are earned, not necessarily when cash is received
- Provides a better picture of the true economic status of a business

2. Cash

- Cash flow statement
- Cash accounting recognizes an event when a cash transaction takes place
- Easy to understand
 as cash accounting
 mimics what
 happens in your
 checking account.

3. Hybrid

- Part of the statement is using accrual accounting while the rest is based on cash accounting
- This is a nonstandard (i.e. non GAAP) view of an organization's finances.

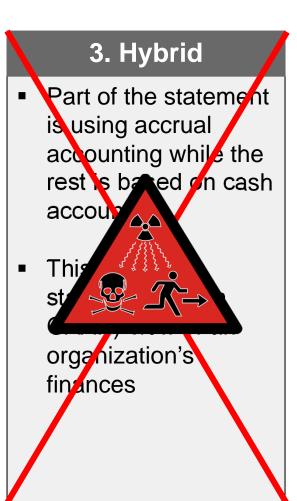
Stay away from the hybrid

1. Accrual

- Income statement
- In accrual accounting revenues are recognized when they are earned, not necessarily when cash is received
- Provides a better picture of the true economic status of a business

2. Cash

- Cash Flow statement
- Cash accounting recognizes an event when a cash transaction takes place
- Easy to understand as cash accounting mimics what happens in your checking account.



1. Context

- 2. Financial Statements Overview
 - a) Introduction
 - b) Income Statement
 - c) Cash Flow Statement
 - d) Balance Sheet
- 3. Introduction Financial Statement Analysis
- 4. Concluding thoughts

The income statement

1. Accrual

- Income statement
- In accrual accounting revenues are recognized when they are earned, not necessarily when cash is received
- Provides a better picture of the true economic status of a business

2. Cash

- Cash Flow statement
- Cash accounting recognizes an event when a cash transaction takes place
- Easy to understand
 as cash accounting
 mimics what
 happens in your
 checking account.

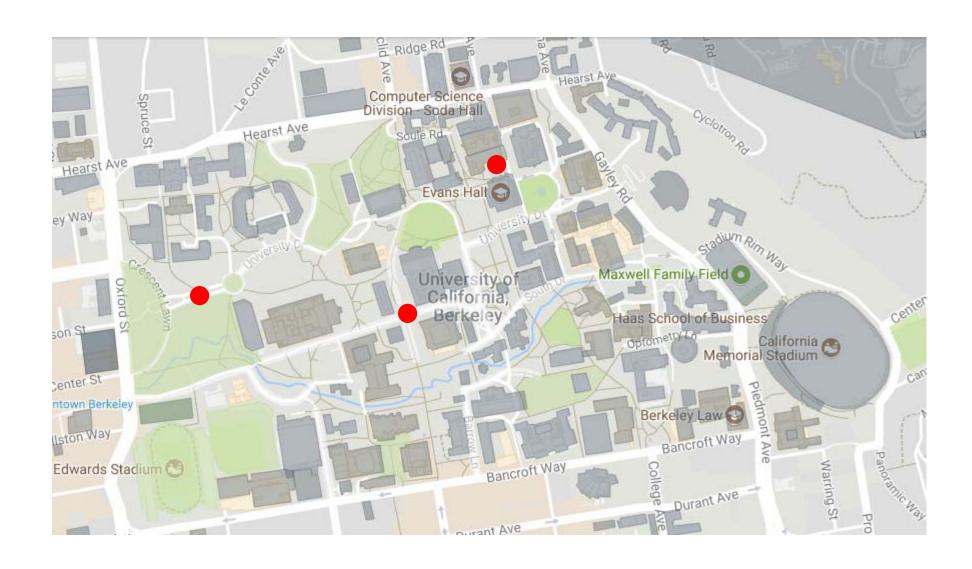
3. Hybrid

- Part of the statement is using accrual accounting while the rest is based on cash accounting
- This is a Nonstandard (i.e non GAAP) view of an organization's finances

Income statements are also called:

- SRECNA / SRECNP
- Profit & Loss statement
- P&L
- Statement of operations
- Statement of financial performance
- Earnings statement

The income statement is a construct



Income statement: the basic equation

Matching principle: the resource expenditures required to produce the revenues

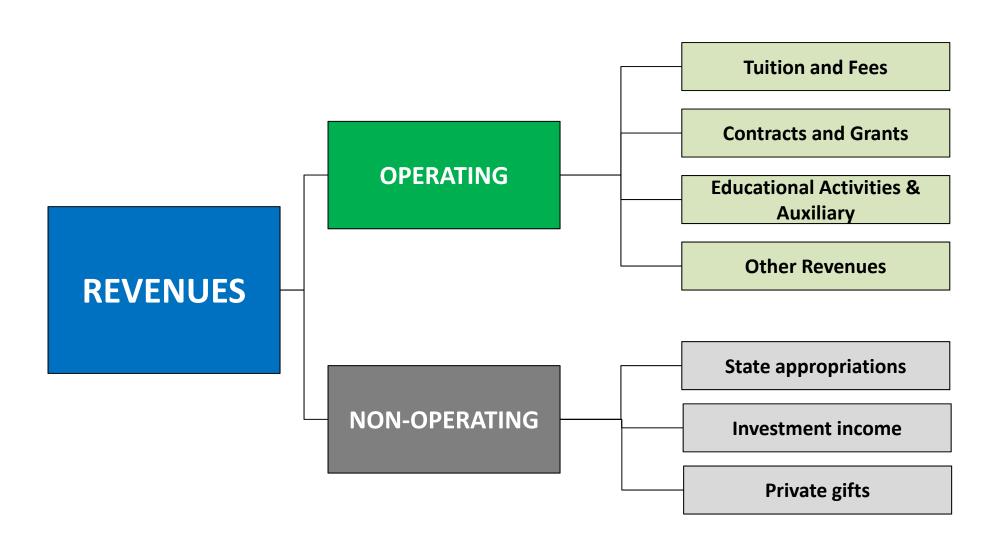
Revenues - Expenses = Net Income

Accrual Basis: recognized when they are earned, not necessarily when cash is received

"BOTTOM LINE"

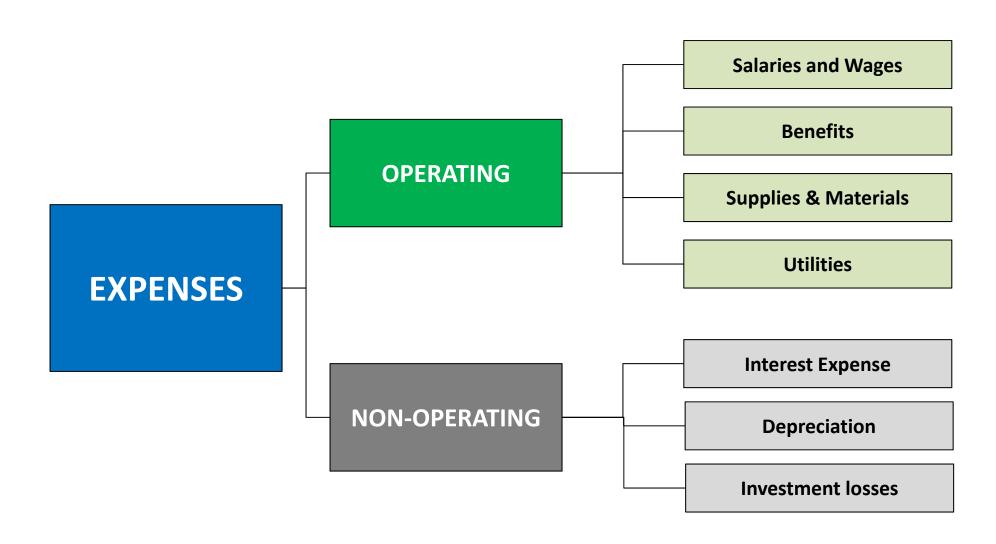
Income statement: Revenues



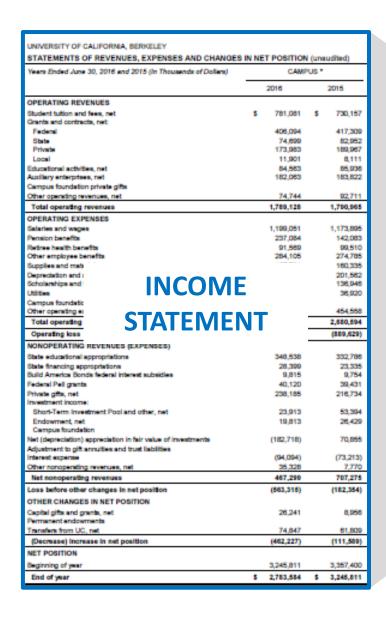


Income statement: Expenses





Simplify, simplify: creating a custom view





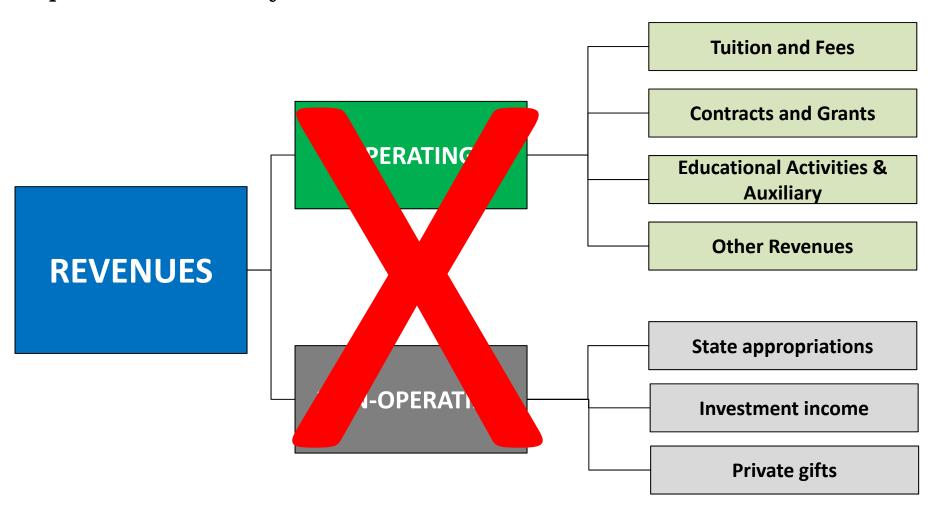


A few guiding principles to remember when simplifying

- Simplifying usually means re-organizing and/or excluding revenues/expenses.
- Simplifying almost never entails adding revenues/expenses not originally captured in the statement.
- You need a clear rationale as to why you exclude things.
- The end result should be easy to benchmark.
- The end result should be easier to explain than the original statement.

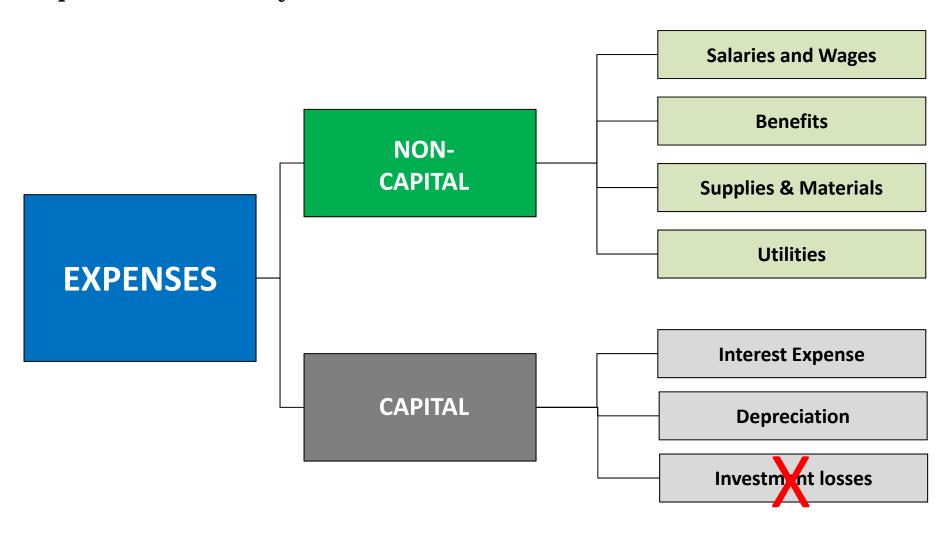
In practice, you may want to simplify things

Guiding principle: list revenues that are available to support operations in that year



In practice, you may want to simplify things

Guiding principle: list expenses that were incurred to support the operations in that year



This is how I structure things in the model: MD&A

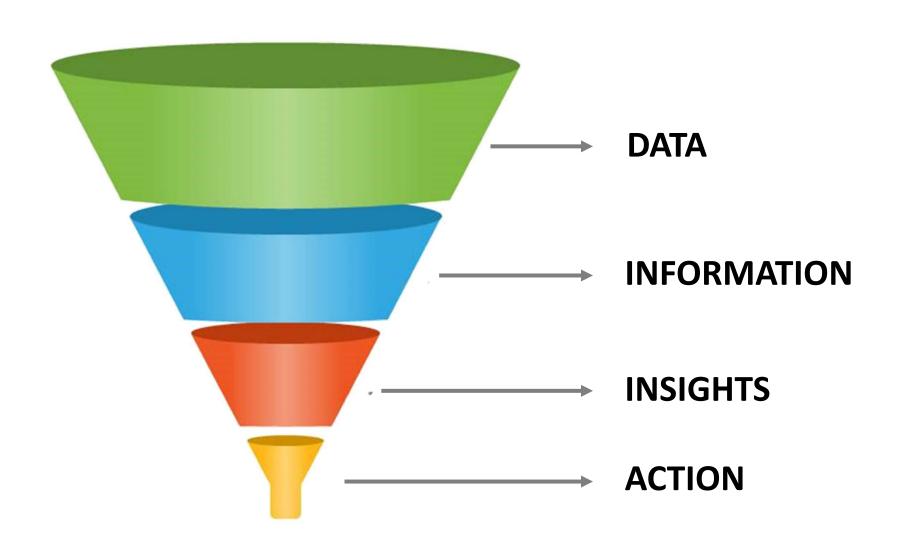
	_	2016A	
	Revenues		
	Student Tuition and Fees, net	\$781,081	
	State educational appropriations	\$348,538	
	Federal Pell grants	\$40,120	
	Federal Grants and Contracts, net	\$406,094	
	Other Grants and Contracts, net	\$260,583	Revenues
U	Educational Activities, and Aux	\$266,626	
	Private gifts, net	\$238,185	
	Investment income	\$104,866	
	Other revenues, net	\$139,824	
	Revenues supporting core activities	\$2,585,918	
	Expenses		
	Salaries and Wages	\$1,199,051	
	Benefits	\$443,517	
	Scholarships and Fellowships	\$136,510	Non-Capital Expenses
G	Utilities	\$37,529	Hon Capital Expenses
	Supplies and Materials	\$167,791	
	Other Operating Expenses	447,171	
	Expenses associated with core activities	\$2,431,569	
	Gross Income	\$154 ,349	
_			Capital Expenses
3	Depreciation and Amortization	\$218,932	Capital Expenses
	Interest expense	\$94,094	•
	Total Depreciation and Interest Exper	\$313,026	
	Net Income /(Loss)	(\$158,677)	
	net income /(Luss)	(3130,077)	

Income statement view - Why I like this view

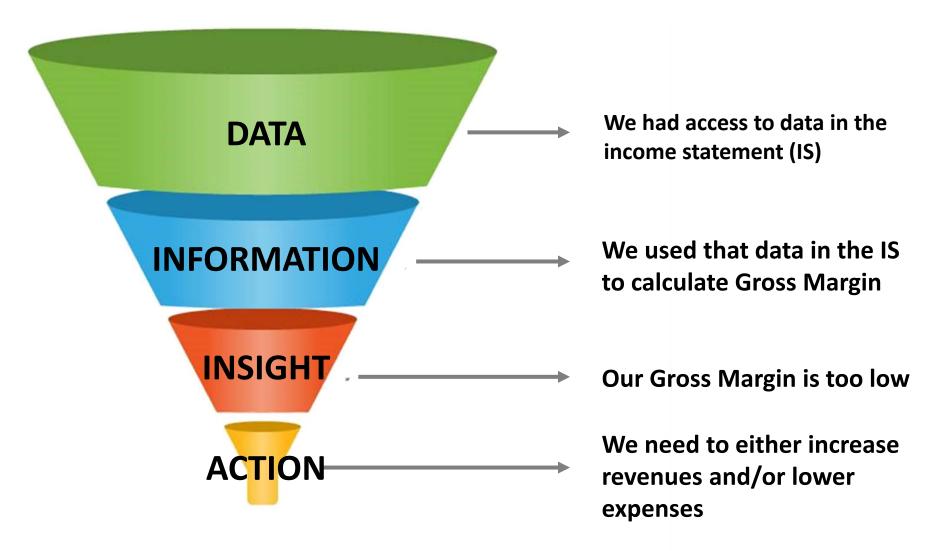
			2010A	
	·	Revenues		
		Student Tuition and Fees, net	\$781,081	
		State educational appropriations	\$348,538	
		Federal Pell grants	\$40,120	
S		Federal Grants and Contracts, net	\$406,094	
Ž		Other Grants and Contracts, net	\$260,583	
		Educational Activities, and Aux	\$266,626	
O		Private gifts, net	\$238,185	
		Investment income	\$104,866	
7		Other revenues, net	\$139,824	
8		Revenues supporting core activities	\$2,585,918	
OPERATIONS		Expenses		
		Salaries and Wages	\$1,199,051	
		Benefits	\$443,517	
		Scholarships and Fellowships	\$136,510	
		Utilities	\$37,529	
		Supplies and Materials	\$167,791	
		Other Operating Expenses	447,171	
		Expenses associated with core activities	\$2,431,569	
CAPITAL	,-·	Gross Income	\$154,349	Gross Margin
	 	Depreciation and Amortization	\$218,932	
4]	Interest expense	\$94,094	
A		Total Depreciation and Interest Exper	\$313,026	
O		Net Income /(Loss)	(\$158,677)	Net Margin

2016A

A useful framework when using financial statements



A useful framework when using financial statements



Watch your margins! "No Margin, No Mission"

Signal versus Noise – what this view does not include

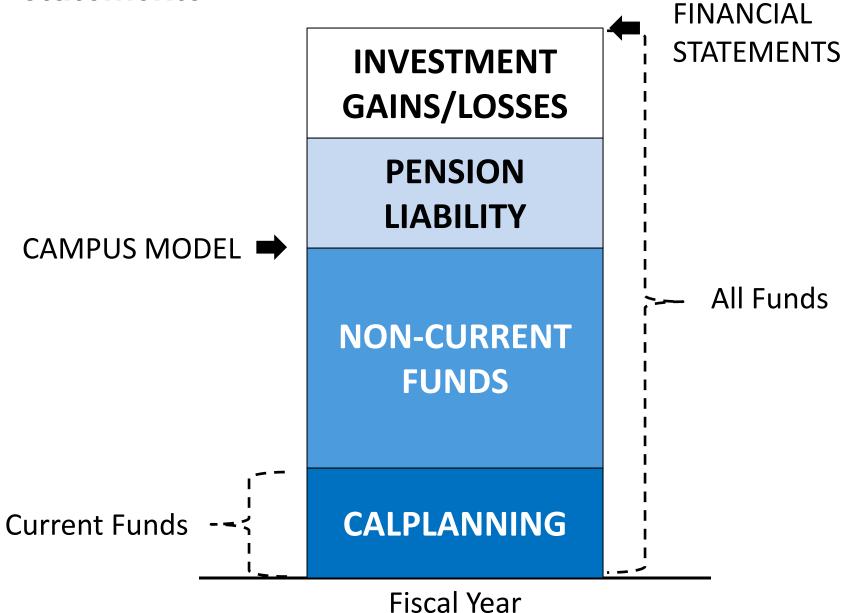
1. Investment gains/losses

	2016	2015
Net (depreciation) appreciation in fair value of investments	(182,718)	70,855

2. Unfunded pension liability

Distorts the overall picture

How to go from CalPlanning to the model to the financial statements



Key takeaways about income statement

- 1. Shows activity throughout a fiscal year
- **2. It is a construct based on accrual**Even though this bottom line reflects your true economic performance in the past year, it did not necessarily translate into a cash loss or profit
- 3. Simplify, simplify
- 4. Use your custom views to turn data into information into insights

Exercise

How big is UCLA's operating budget?

Stanford financial statements – Medical center



Stanford Health Care Consolidated Statements of Operations and Changes in Net Assets Years Ended August 31, 2016 and 2015 (in thousands of dollars)

Ther changes in unrestricted not accepts:	2016	2015
Transfer to Stanford University, net	(88,944)	(66,477)
Transfer (to) from Lucile Salter Packard Children's Hospital	(3,300)	26,600
Change in net unrealized gains on investments	1,245	(2,445)
Net assets released from restrictions used for:		
Purchase of property and equipment	973	2,288
Change in pension and postretirement liability	(80)	(19,461)
Noncontrolling capital distribution, net	(1.000)	(62)

1. Context

- 2. Financial Statements Overview
 - a) Introduction
 - b) Income Statement
 - c) Cash Flow Statement
 - d) Balance Sheet
- 3. Introduction Financial Statement Analysis
- 4. Concluding thoughts

Introducing Cash Flow statements

1. Income Statement

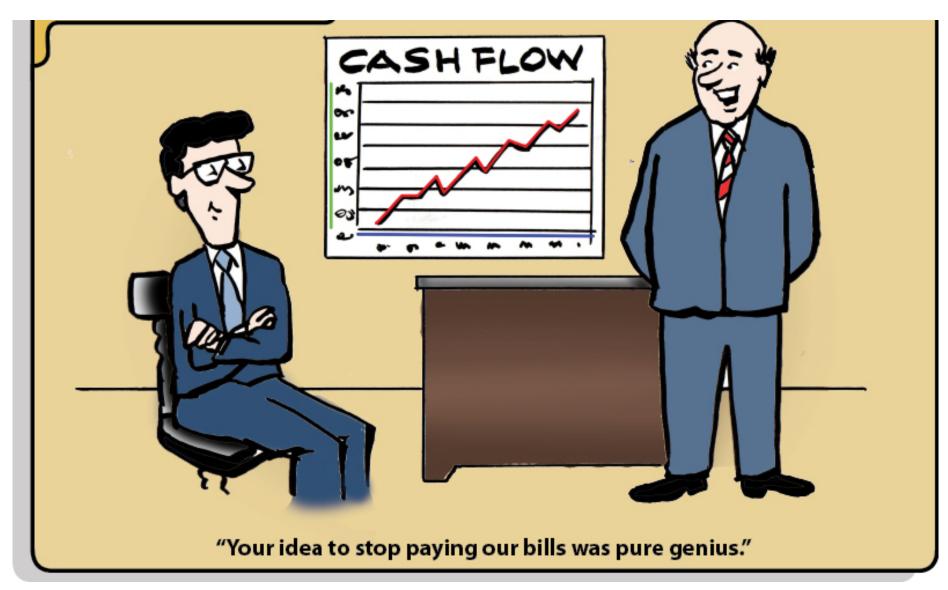
- Income statement
- In accrual accounting revenues are recognized when service is rendered, not necessarily when cash is received
- Provides a better picture of the true economic status of a business

2. Cash

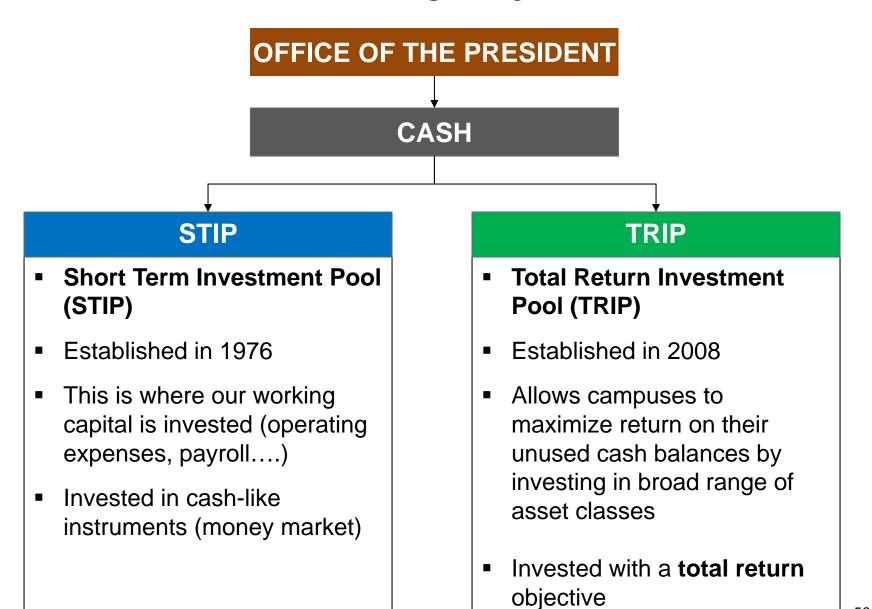
- Cash Flow statement
- Cash accounting recognizes an event when a cash transaction takes place
- Easy to understand as cash accounting mimics what happens in your checking account.

3. Balance Sheet

Before we start...



Our cash balances are managed by UCOP



How do we pay for things?

Guiding principle: We spend these resources in the order of **lowest opportunity cost** to ensure the **highest returns** on our financial assets.

Cash Lowest return: effectively zero. Pay with this first. When insufficient, receive transfer from...

Cash flow – The basic equation

Net Cash Flow from Operations

+ Net Cash Flow from Capital

+ Net Cash Flow from Investments

BOTTOM LINE

= Net Change in Cash

Net Cash from Operations

UNIVERSITY OF CALIFORNIA, BERKELEY

STATEMENTS OF CASH FLOWS (unaudited)

Years Ended June 30, 2016 and 2015 (In Th	ousands of Dollars)	CAMPUS *		
		2016		2015
CASH ELOWS EROM OPERATING ACTIVIT	TEC			
Student tuition and fees		\$ 785,448	\$	730,687
Grants and contracts	SOURCES	694,757		626,743
Educational activities	300KCL3	85,380		85,372
Auxiliary enterprises		182,341		184,863
Collection of loans from students and employ	ees	8,086		8,169
Campus foundation private gifts				
Payments to employees		(1,204,557)		(1,158,775)
Payments to suppliers and utilities		(616,379)		(624,003)
Payments for pension benefits		(132,840)		(128,440)
Payments for retiree health benefits	LICEC	(27,280)		(23,621)
Payments for other employee benefits	USES	(284,660)		(274,477)
Payments for scholarships and fellowships		(136,506)		(137,042)
Loans issued to students and employees		(8,518)		(8,993)
Payments to campus and beneficiaries				
Other receipts		52,992		70,915
Net cash used by operating activities		(601,736)		(648,602)

Net Cash from Capital

UNIVERSITY OF CALIFORNIA, BERKELEY

STATEMENTS OF CASH FLOWS (unaudited)

Years Ended June 30, 2016 and 2015 (In Thousands of Dollars)	f Dollars) CAMPUS *	
	2016	2015
CASH FLOWS FROM CAPITAL AND RELATED FINANCING ACTIVITIES	s	
State capital appropriations State financing appropriations Build America Bonds federal interest subsidies Capital gifts and grants Proceeds from the sale of capital assets	28,399 9,801 19,866 109,086	23,335 9,755 17,183 226,302
Purchase of capital assets Refinancing or prepayment of outstanding debt Scheduled principal paid on debt and capital leases Interest paid on debt and capital leases	(266,031) (52) (21,757) (105,631)	(369,621) (51) (18,733) (90,073)
net cash used by capital and related financing activities	(226,031)	(201,474)

Net Cash from Investing Activities

UNIVERSITY OF CALIFORNIA, BERKELEY

STATEMENTS OF CASH FLOWS (unaudited)

Years Ended June 30, 2016 and 2015 (In Thousands of Dollars)	ousands of Dollars) CAMPUS *	
	2016	2015
CASH FLOWS FROM INVESTING ACTIVITIES		
Purchases of investments, net of proceeds from sales and maturities of investments	(19,393)	(19,031)
Investment income, net of investment expenses	55,617	84,166
Net cash provided by investing activities	36,224	65,135

Net Cash and Cash equivalent

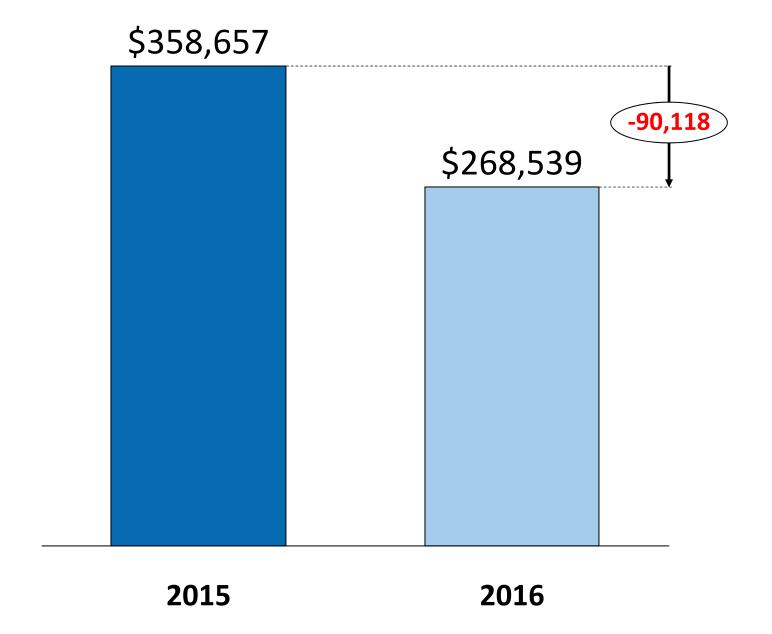
UNIVERSITY OF CALIFORNIA, BERKELEY

STATEMENTS OF CASH FLOWS (unaudited)

	CAMPUS *		3 *
	2016		2015
Net increase (decrease) in cash and cash equivalents	(90,118)		(138,183)
ash and cash equivalents, beginning of year	 358,657		496,840
Cash and cash equivalents, end of year	\$ 268,539	\$	358,657

"Cash in the bank"

Bringing it all together



Why cash flows matter?

When businesses fail, 42% of the time it's because of poor cash flow management

US Bank - 2017

In other words...

"Cash is king"

An interesting cash concept: Free cash flow

- Free cash flow (FCF) is calculated as operating cash flow minus net capital expenditures.
- FCF is the cash left after a company has covered its operating costs plus the investments in capital assets.
- It is a measure of financial performance/health.
- In the private sector, FCF represents the cash that is available for distribution to the shareholders (dividends).
- For us, it represents our ability to generate reserves.

Key takeaways about cash flow statements

1. At a high level, it is easy to understand

"Cash in the bank"

2. Can be difficult to explain in detail to non-financially savvy audiences

Lots of different pieces

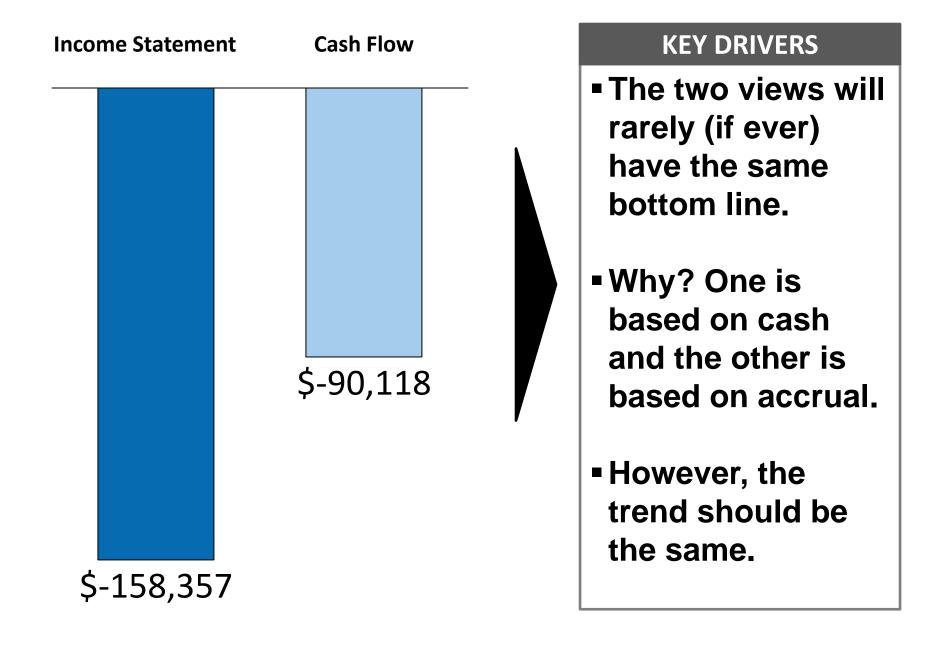
3. This is just cash

Endowment or TRIP balances are not included here

Exercise: the board/cabinet meeting



Exercise: the board meeting



1. Context

- 2. Financial Statements Overview
 - a) Introduction
 - b) Income Statement
 - c) Cash Flow Statement
 - d) Balance Sheet
- 3. Introduction Financial Statement Analysis
- 4. Concluding thoughts

Balance sheet: the basic equation

Assets = Liabilities + Net Assets

Balance sheet: Assets

UNIVERSITY OF CALIFORNIA, BERKELEY

STATEMENTS OF NET POSITION (unaudited)

At June 30, 2016 and 2015 (In Thousands of Dollars)	CAMPUS *			
	2016	2015		
ASSETS				
Cash and cash equivalents	\$ 268,539	\$ 358,657		
Short-term investments				
Investments held by trustees	1,790	1,801		
Accounts receivable, net	240,518	244,708		
Pledges receivable, net	1,582	2,726		
Current portion of notes and mortgages receivable, net	4,871	4,950		
Inventories	5,007	5,041		
Other current assets	3,524	2,964		
Current assets	525.831	620,847		
Investments	3,284,827	3,460,043		
Investments held by trustees	4,109	7,826		
Restricted bond proceeds held by UC	11,074	40,779		
Pledges receivable, net	5,077	7,533		
Notes and mortgages receivables, net	26,947	26,223		
Capital assets, net	3,962,014	3,918,971		
Other noncurrent assets	748	1,067		
Noncurrent assets	7,294,756	7,462,442		
Total assets	7,820,587	8,083,289		

Balance sheet: Liabilities

UNIVERSITY OF CALIFORNIA, BERKELEY

STATEMENTS OF NET POSITION (unaudited)

At June 30, 2016 and 2015 (In Thousands of Dollars)	CAI	MPUS *
	2016	2015
LIABILITIES		
Accounts payable	97,606	103,013
Accrued salaries	106,328	113,499
Employee benefits	23,868	26,163
Uneamed revenue	211,197	189,673
Commercial paper	114,077	67,323
Current portion of long-term debt	102,923	99,865
Funds held for others	1,824	1,588
Other current liabilities	114,684	102,551
Current liabilities	772,507	703,675
Federal refundable loans	22,721	23,134
Long-term debt	2,140,804	2,165,701
Net pension liability	1,485,336	1,122,991
Obligations for retiree health benefits	894,323	830,034
Other noncurrent liabilities	31,303	29,822
Noncurrent liabilities	4,574,487	4,171,682
Total liabilities	5,346,994	4,875,357

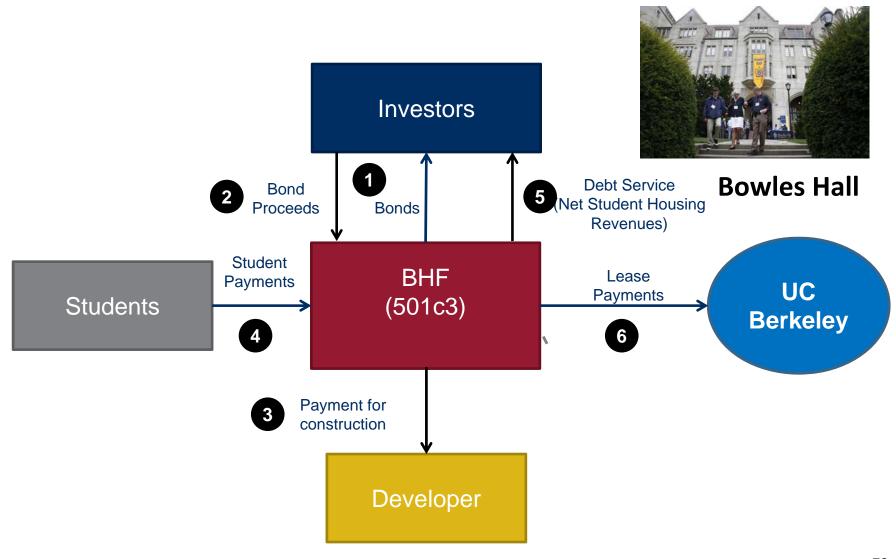
Off-balance sheet financing

- An off-balance sheet refers to financing that is not reflected on a company's balance sheet
- In other words, by using off balance sheet financing, an organization can keep large capital expenditures off their balance sheet, which is a way to keep the debt/equity ratio low



'But it didn't cost anything, dear! I did it all off balance-sheet!"

Off-balance sheet financing: a good example



Balance sheet: Liabilities

UNIVERSITY OF CALIFORNIA, BERKELEY

STATEMENTS OF NET POSITION (unaudited)

	2016	2015
LIABILITIES		
Accounts payable	97,606	103,013
Accrued salaries	106,328	113,499
Employee benefits	23,868	26,163
Uneamed revenue	211,197	189,673
Commercial paper	114,077	67,323
Current portion of long-term debt	102,923	99,865
Funds held for others	1,824	1,588
Other current liabilities	114,684	102,551
Current liabilities	772,507	703,675
Federal refundable loans	22,721	23,134
Long-term debt	2,140,804	2,165,701
Net pension liability	1,485,336	1,122,991
Obligations for retiree health benefits	894,323	830,034
Other noncurrent liabilities	31,303	29,822
Noncurrent liabilities	4,574,487	4,171,682
Total liabilities	5,346,994	4,875,357

Key takeaways about balance sheet

- 1. The balance sheet contains information about wealth and liquidity (assets and liabilities)
- 2. The balance sheet presents the university's financial position at a given point in time.
- 3. Things like off-balance sheet debt are excluded from the view.

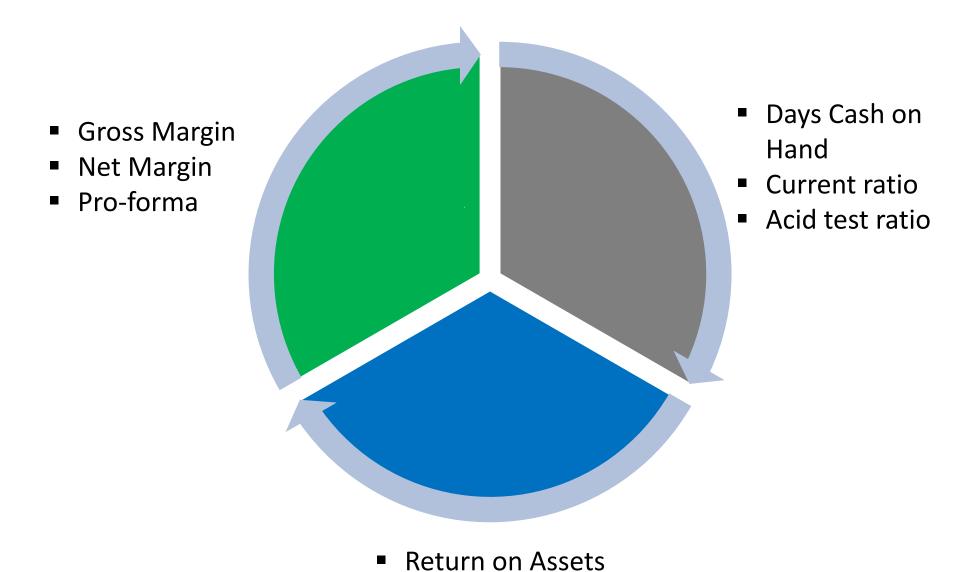
1. Context

- 2. Financial Statements Overview
 - a) Introduction
 - b) Income Statement
 - c) Cash Flow Statement
 - d) Balance Sheet

3. Financial Statement Analysis

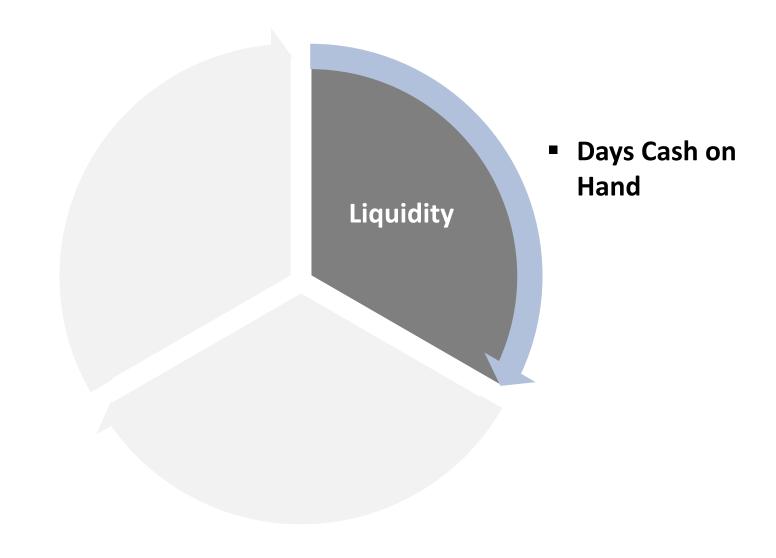
4. Concluding thoughts

Introducing Financial ratios



74

Introducing Financial ratios



Example – Days Cash on Hand

Days cash on hand =
$$\chi$$
 365 (Expenses – Depreciation)

Example – Days Cash on Hand

UNIVERSITY OF CALIFORNIA, BERKELEY

STATEMENTS OF NET POSITION (unaudited)

At June 30, 2016 and 2015 (In Thousands of Dollars)	CAMPUS *			
	2016	2015		
ASSETS				
Cash and cash equivalents	\$ 268,539	\$ 358,657		
Short-term investments				
Investments held by trustees	1,790	1,801		
Accounts receivable, net	240,518	244,708		
Pledges receivable, net	1,582	2,726		
Current portion of notes and mortgages receivable, net	4,871	4,950		
Inventories	5,007	5,041		
Other current assets	3,524	2,964		
Current assets	525,831	620,847		
Investments	3,284,827	3,460,043		
Investments held by trustees	4,169	7,826		
Restricted bond proceeds held by UC	11,074	40,779		
Pledges receivable, net	5,077	7,533		
Notes and mortgages receivables, net	26,847	26,223		
Capital assets, net	3,962,014	3,918,971		
Other noncurrent assets	748	1,067		
Noncurrent assets	7,294,756	7,462,442		
Total assets	7,820,587	8,083,289		

Calculation for Berkeley - Days Cash on Hand

Should we include TRIP in the calculation?

Cash **STIP TRIP** • STIP returns 1-• Lowest return: • TRIP returns 4effectively zero. 2% 5% Pay with this • High liquidity, • Lower liquidity, first. higher risk, low risk, low higher return. When return insufficient, When When receive transfer insufficient, insufficient, from... receive transfer receive transfer from... from...

Example – Days Cash on Hand

UNIVERSITY OF CALIFORNIA, BERKELEY

STATEMENTS OF NET POSITION (unaudited)

At June 30, 2016 and 2015 (In Thousands of Dollars)	CAMPUS *			
	2016	2015		
ASSETS				
Cash and cash equivalents	\$ 268,539	\$ 358,657		
Short-term investments				
Investments held by trustees	1,790	1,801		
Accounts receivable, net	240,518	244,708		
Pledges receivable, net	1,582	2,726		
Current portion of notes and mortgages receivable, net	4,871	4,950		
Inventories	5,007	5,041		
Other current assets	3,524	2,964		
Current assets	525.831	620,847		
Investments	3,284,827	3,460,043		
Investments held by trustees	4,109	7,826		
Restricted bond proceeds held by UC	11,074	40,779		
Pledges receivable, net	5,077	7,533		
Notes and mortgages receivables, net	26,847	26,223		
Capital assets, net	3,962,014	3,918,971		
Other noncurrent assets	748	1,067		
Noncurrent assets	7,294,756	7,462,442		
Total assets	7,820,587	8,083,289		

Example - Days Cash on Hand - TRIP

The fair value of Berkeley's investment in TRIP was \$1,034.5 million and \$1,033.0 million at June 30, 2016 and 2015, respectively.

UC Berkeley, Financial Statements, FY16, p13

Days Cash on Hand – Including TRIP

Days Cash on Hand - Benchmarks

S&P Global Ratings

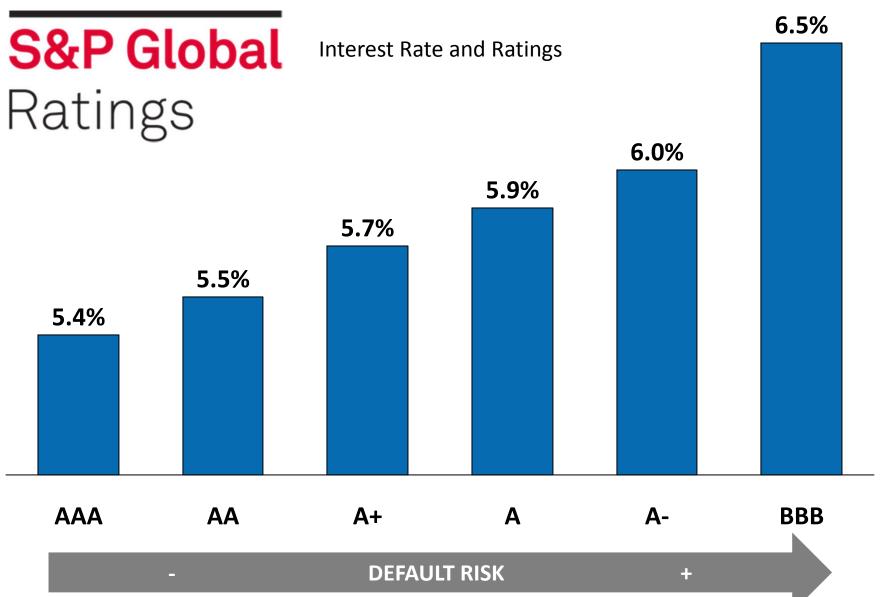
	Aaa				
Year	2012	2013	2014	2015	2016
Sample Size	15	15	15	15	15
Balance Sheet Ratios:					
Spendable Cash & Investments to Operat	6.96	7.37	8.18	8.13	7.18
Total Cash & Investments to Operating Ex	8.72	9.09	9.71	9.71	8.74
Annual Days Cash on Hand	1224	1475	1673	1748	1536
Monthly Liquidity as % of Total Cash & In	26.4	27.3	27.4	26.1	24.8
Annual Liquidity as % of Total Cash & Inv	38.7	39.6	41.6	35.6	40.3
Total Cash & Investments per Student (\$) \$1	,018,357	\$1,135,260	\$1,281,202	\$1,241,511	\$1,135,243

Financial statement analysis – Art versus Science

ART SCIENCE

Days Cash on Hand – Including TRIP

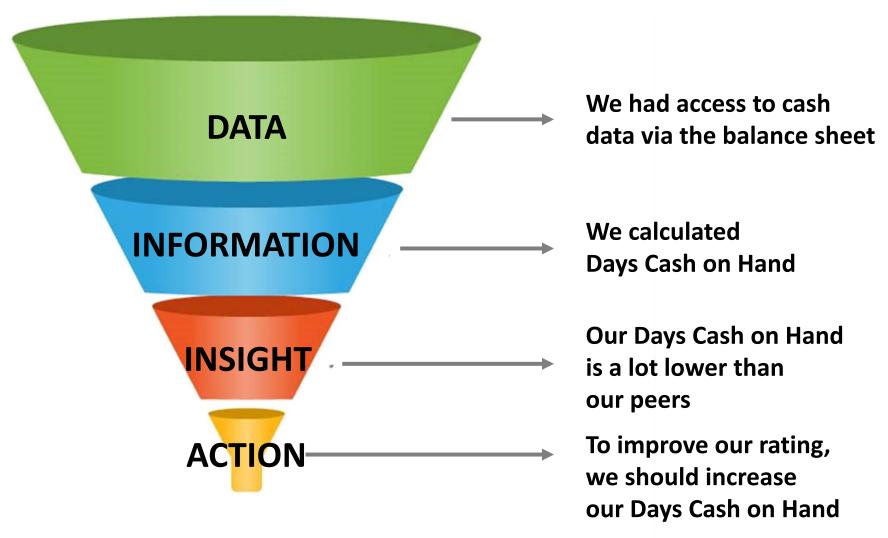
Why do we care about ratings?



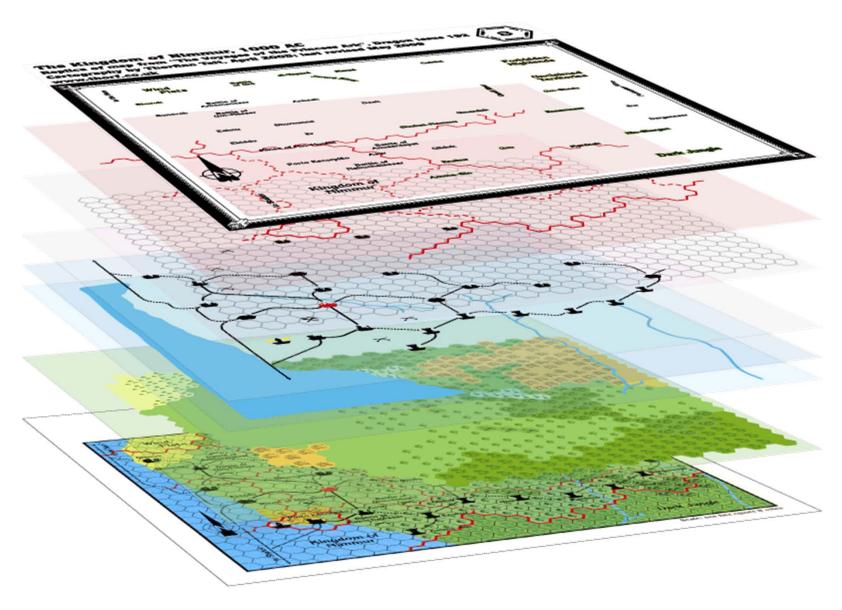
Key takeaways about financial ratios

- 1. Financial ratios use all 3 statements
- 2. Financial ratios are key to derive insights
- 3. Art versus science

So what's the insight?



Bringing it all back together



- 1. Context
- 2. Financial Statements Overview
- 3. Financial Statement Analysis
- 4. Concluding thoughts

Concluding thoughts

- 1. Financial statements are the language of finance
- 2. Watch the margins! "No Margin, No Mission"
- 3. Simplify, simplify
- 4. Turn data into information and into insights into actions
- 5. Remember that financial statements have limitations and factor those in your analysis

Thanks! Go Bears!

