

Accounting 101

Week 2



[DOTS] Coffee Chat Request

Dear _____,

I hope you are having a great day. My name is X and I am a new member of Diversity on the Street this semester. I am reaching out to see if you are available to chat sometime next week about your experiences in the club and at Cornell.

I am available at the following times:

- Monday, October #: 10-11:30am, 2-4pm
- Tuesday, October #: before 3pm
- ETC

I understand you are very busy, so if none of these times work for you, I am happy to work with your schedule.

Thank you and I am looking forward to hearing from you soon.



Your Pitch

Tell me about yourself. Walk me through your resume.

1. Start with where you are from
2. Education
3. Your value add
4. Involvement
5. Tie back into what you are applying for

**Important in
standing apart at an
information session,
in an interview, or in
a coffee chat**



What is accounting?



What is accounting?

Accounting is the measurement and communication of a business's financial information.



The Holy Trinity: 3 Financial Statements

IS: PROFITABILITY.

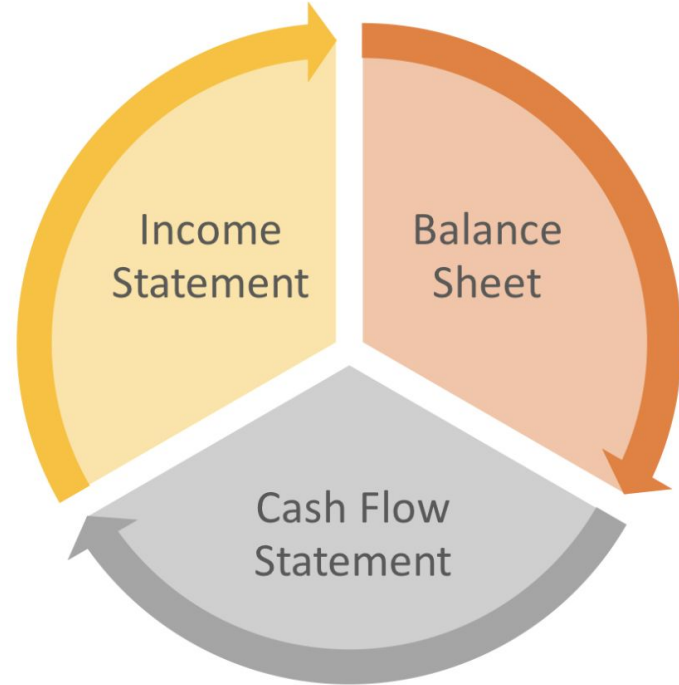
- Shows the company's revenue, expenses, taxes, and net income
- Reported as a period of time (eg: Q1-Q4 of 2018)

CFS: CASH.

- Shows the real cash generated through operations, and cash inflows/outflows from different activities
- Reported as a period of time (eg: 2017-2018)

BS: SOLVENCY.

- Shows the company's resources (aka assets), and how it got those resources (liabilities or stockholder's equity)
- Reported as a **point** in time (eg: as of Q4 of 2018)



Balance Sheet

Assets = Liabilities + Stockholder's Equity

- Assets: economic resources
 - Listed in order of liquidity
- Liabilities: financing from creditors
 - Listed in order of maturity
- Current vs Non-current

**Example Company
Balance Sheet
December 31, 2018**

ASSETS		LIABILITIES	
Current assets		Current liabilities	
Cash	\$ 2,100	Notes payable	\$ 5,000
Petty cash	100	Accounts payable	35,900
Temporary investments	10,000	Wages payable	8,500
Accounts receivable - net	40,500	Interest payable	2,900
Inventory	31,000	Taxes payable	6,100
Supplies	3,800	Warranty liability	1,100
Prepaid insurance	1,500	Unearned revenues	1,500
Total current assets	89,000	Total current liabilities	61,000
Investments	36,000	Long-term liabilities	
Property, plant & equipment		Notes payable	20,000
Land	5,500	Bonds payable	400,000
Land improvements	6,500	Total long-term liabilities	420,000
Buildings	180,000		
Equipment	201,000	Total liabilities	481,000
Less: accum depreciation	(56,000)		
Prop, plant & equip - net	337,000		
Intangible assets		STOCKHOLDERS' EQUITY	
Goodwill	105,000	Common stock	110,000
Trade names	200,000	Retained earnings	220,000
Total intangible assets	305,000	Accum other comprehensive income	9,000
Other assets	3,000	Less: Treasury stock	(50,000)
		Total stockholders' equity	289,000
Total assets	\$ 770,000	Total liabilities & stockholders' equity	\$ 770,000

The notes to the sample balance sheet have been omitted.

Income Statement

- Main stages: Net Sales, Gross Profit, Operating Income, Income before Tax, Net Income
- When is an item on the income statement? (2 rules)
 - Has an effect on taxes
 - Corresponds to the period of the IS
- Why isn't capex here?
 - Capital expenditures (CapEx) are funds used by a company to acquire, upgrade, and maintain physical assets such as property, buildings, an industrial plant, technology, or equipment.

Innovative Products, Inc.			
Income Statement			
For Year Ending December 31, 2012			
Sales			\$50,00,000
Cost of Goods Sold			
Materials	8,00,000		
Labor	11,00,000		
Overhead	6,00,000	25,00,000	
Gross Margin			\$25,00,000
Operating Expenses			
Selling Expenses	9,00,000		
Administrative Expenses	6,00,000		
Depreciation and Amortization	5,00,000	2000000	
Operating Income			\$5,00,000
Other Income & Expenses			
Interest Revenue	50000		
Interest Expense	-1,00,000		
Extraordinary items	2,00,000	1,50,000	
Income Before Tax			\$6,50,000
Income Tax (at 35%)			\$2,27,500
Net Income			\$4,22,500

Income Statement for Apple Inc (AAPL)

\$ 116.12

▲ 0.01 (+0.01%)

Volume: 14.67m

11:44 AM EST Nov 12, 2015

Statement:

View:

Income [+]

in Millions of Dollars

	09/2015	09/2014	09/2013	09/2012	09/2011
Operating Revenue	233,715	182,795	170,910	156,508	108,249
Adjustments to Revenue	N/A	N/A	N/A	N/A	N/A
Cost of Revenue	128,832	104,312	99,849	84,569	62,617
Gross Operating Profit	93,626	70,537	64,304	68,662	43,818
Selling/General/Admin Expense	(14,329)	(11,993)	(10,830)	(10,040)	(7,599)
Research & Development	(8,067)	(6,041)	(4,475)	(3,381)	(2,429)
EBITDA (Operating Income Before Depreciation)	84,505	61,813	55,756	58,518	35,604
Depreciation & Amortization	(11,257)	(7,946)	(6,757)	(3,277)	(1,814)
Operating Income	73,248	53,867	48,999	55,241	33,790
Interest Income	2,921	1,795	1,616	1,088	519
Other Income, Net	(903)	(431)	1,156	(566)	(104)
Total Income Before Interest Expense (EBIT)	73,248	53,867	48,999	55,241	33,790
Interest Expense	(733)	(384)	(136)	-	N/A
Income Before Tax	72,515	53,483	50,155	55,763	34,205
Income Taxes	(19,121)	(13,973)	(13,118)	(14,030)	(8,283)
Minority Interest	-	-	-	-	-
Net Income from Continuing Operations	53,394	39,510	37,037	41,733	25,922
Net Income from Discontinued Operations	-	-	-	-	-
Net Income from Total Operations	53,394	39,510	37,037	41,733	25,922
Normalized Income	53,394	39,510	37,037	41,733	25,922
Extraordinary Income/Loss	-	-	-	-	-
Special Income/Charges	-	-	-	-	-
Income from Cum. Effect of Acct Change	-	-	-	-	-
Income from Tax Loss Carryforward	-	-	-	-	-
Other Gains	-	-	-	-	-
Total Net Income	53,394	39,510	37,037	41,733	25,922

Why is the income statement misleading?

Cash Flow Statement

Why do we need this?

- Income statement includes non-cash revenues and expenses (A/P, A/R)
- There are real cash outflows that aren't reported on income statement because they fall outside of the reporting period of the IS (eg: prepaid expenses, capex)
- **Because of these reasons**, income statement not good indicator of real cash the company is generating



CFS: Indirect Method

- CF from Operations: Net Income modified to show real cash generated from running the business
- CF from Investing: Capex, equipment sales/purchases, etc
- CF from Financing: anything the company does related to stock, debt

Net working capital

- $NWC = \text{noncash CA} - \text{CL}$
- Increase in current assets = decrease in cash?
- Increase in current liabilities = an increase in cash?

XYZ Company
Cash Flow Statement
For the Year Ended December 31, 2015
(in millions)

	Net Income	\$12.0
	Depreciation and Amortization	4.0
	<u>Changes in other accounts affecting operations</u>	
	(Increase) / Decrease in Accounts Receivable	(0.5)
	(Increase) / Decrease in Inventory	(0.4)
	(Increase) / Decrease in Prepaid Expenses	0.3
	(Increase) / Decrease in Other Current Assets	(0.1)
	Increase / (Decrease) in Accounts Payable	(0.3)
	Increase / (Decrease) in Deferred Revenue	1.0
➔	Cash Flow from Operations	\$16.0
	Capital Expenditures	(5.0)
	Proceeds from sales of equipment	-
	Proceeds from sales of investments	-
➔	Cash Flow from Investing Activities	(\$5.0)
	Proceeds from issuance of new debt	10.0
	Proceeds from issuance of equity	-
	Dividends paid	(2.0)
➔	Cash Flow from Financing Activities	8.0
	Beginning Cash	\$16.0
➔	Change in cash	19.0
	Ending Cash	\$35.0

How do the Financial Statements link?



1. Net Income Retained Earnings Link

- Net Income on **Income Statement** (also **Cash Flow Statement**) affects Retained Earnings on **Balance Sheet** (under Stockholder Equity)

Retained Earnings = Starting RE amount + Net Income - Dividends Paid



2. Net Income Cash Link

- Net income is the last line item in the *Income Statement*
- Net income is the first line item on the **Cash Flow Statement**
- Change in NWC on **CFS** relates to CA and CL line items on **BS**
- The last line item on the **Cash Flow Statement** is Change in Cash
- This Change in cash line item is the change in cash year to year on the **Balance Sheet**



Linking Statements Together

INCOME
STATEMENT

STATEMENT OF
CASH FLOWS

BALANCE SHEET

Net income

Beginning Cash

Net Working
Capital

Current Assets &
Current Liabilities

Retained
Earnings

Net income

Ending Cash



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DELL INC.
Balance Sheet
at February 3, 2012
(dollars in millions)

ASSETS	
Current assets:	
Cash	\$13,852
Short-term investments	966
Receivables and other assets	9,803
Inventories	1,404
Other	3,423
Total current assets	29,448
Property, plant, and equipment	2,124
Long-term investments	3,404
Other noncurrent assets	9,557
Total assets	\$44,533
LIABILITIES AND STOCKHOLDERS' EQUITY	
Current Liabilities:	
Accounts payable	\$11,656
Other short-term obligations	10,345
Total current liabilities	22,001
Long-term liabilities	13,615
Total liabilities	35,616
Stockholders' equity:	
Common stock (\$0.01 par value)	34
Additional paid-in capital	12,153
Retained earnings	28,236
Other stockholders' equity items	(31,506)
Total stockholders' equity	8,917
Total stockholders' equity and liabilities	\$44,533

Example Questions

- What are the 3 financial statements?
- If depreciation increases, what happens to net change in cash on the CFS?
- Why is interest expense on the income statement, and dividends not?
- How do you get from Net Income to CF from operations?
- If accounts receivable increases, how does this affect the statements?
- If accounts receivable decreases, how does this affect the statements?



Best Way to Think Through these Questions

1. Start with **Income Statement**, **Cash Flow Statement**, and finally **Balance Sheet** effects.
2. DO memorize line item definition. Know what the line item does, how it affects at least 2 other items



Summary

	Income Statement	Balance Sheet	Cash Flow
Time	Period of time	A point in time	Period of time
Purpose	Profitability	Financial position	Cash movements
Measures	Revenue, expenses, profitability	Assets, liabilities, shareholders' equity	Increases and decreases in cash
Starting Point	Revenue	Cash balance	Net income
Ending Point	Net income	Retained earnings	Cash balance



We just went over a BROAD crash course overview of accounting.
Extra Reading (the following slides)
highly recommended



Summary of Terms

- **Depreciation and Amortization**
- **EBITDA, EBIT**
- **Net Working Capital**
- **A/R and A/P**
- **PP&E**
- **Deferred Revenue**
- **Accrued Expenses**
- **Prepaid Expenses**
- **COGS**
- **Goodwill and other intangibles**
- **Inventory**
- **Capital Expenditures**



Depreciation and Amortization (CFS, BS)

- D&A also **embedded** in **Income Statement** (sometimes in COGS, sometimes in operating expense, sometimes its own line item)
- D&A is its own line item in **Cash Flow Statement**.

- Depreciation=Value of Property, Plant and Equipment (PP&E) decreases over its useful life. Think rust on a car makes it less valuable.
- Amortization=Decrease in value of an intangible asset (copyright, patent).
- D&A is a good approximation of how much capex a company has (used by a company to acquire, upgrade, and maintain physical assets), since you are “repairing” depreciation with Capex.



EBITDA, EBIT

- Most of the time, EBIT = Operating Profit (exceptions: operating income does not include non-operating income, non-operating expenses, or other income)
- EBITDA = EBIT + Depreciation and Amort.
- Why are these used?
 - Comparability--Easy to calculate
 - They are a closer measure of true cash flow, factors out non-cash expenses such as D&A



Net Working Capital (CFS)

- $NWC = \text{Noncash current assets} - \text{current liabilities}$
- What does an increase in NWC mean? A decrease?



Accounts Receivable, Accounts Payable (BS)

- Collected within 60 days
- A/P=Short term IOU, you have to pay someone
- A/R=the opposite. You delivered a product or service, and you are waiting on someone to pay you
- If A/R decreases, that means you are collecting cash, so your cash balance will increase.
- If A/P decreases, that means you are paying off your IOU, so your cash balance will decrease.



Property, Plant, and Equipment, AKA PP&E (BS)

- 1 year or more
- DEPRECIATES
- Tangible, ex. vehicles, furniture, machinery, buildings
- Long term asset section of the balance sheet



Deferred Revenue (BS)

- LIABILITY on balance sheet
- AKA unearned revenue: advance payments a company receives for products/services that are to be performed IN THE FUTURE
- Think: gift card, rent payments, prepayment of newspaper subscription



Accrued Expenses (BS)

- Current liability on balance sheet
- Ex. interest payments on loans, wages and salaries incurred
- NOW: Expense is recognized
- LATER: Cash is paid



Prepaid Expenses (BS)

- Asset on balance sheet
- Future expenses that have been paid in advance
- Costs that have been paid but are not yet used up
- Ex. insurance coverage (buying proactive protection), equipment, rent



Cost of Goods Sold (IS)

- AKA: COGS
- The direct costs attributable to the production of the goods sold in a company (how much it costs to produce your products or services)
- Cost of materials + direct labor costs
- Income Statement, (Beg Inv from Current Assets on BS)
- $\text{COGS} = \text{Beginning Inventory} + \text{Purchases during the period} - \text{Ending Inventory}$
- $\text{Revenues} - \text{COGS} = \text{Gross Profit}$
- Does not include indirect expenses, ex. overhead costs, shipping fees



Goodwill and Other Intangibles (BS)

- An intangible asset (on acquiring company's balance sheet) associated with the purchase of one company by another
- Ex. the value of a company's brand name, solid customer base, good customer relations, good employee relations, patents
- Goodwill has an indefinite life, other intangibles have a definite, useful life, like patents or licenses

$$\textit{Goodwill} = P - (A + L)$$

- P = Purchase price of the target company
- A = Fair market value of assets
- L = Fair market value of liabilities



Inventory (BS)

- Goods available for sale and raw materials used to produce goods available for sale
- Important bc turnover of inventory represents one of the primary sources of revenue generation
- Current asset on balance sheet
- When item is sold, its carrying cost transfers to the COGS category on IS
- 3 types: raw materials, work-in-progress, finished goods
- Ex. aluminum and steel (raw), half-assembled airliner (WIP), clothes (FG)



Capital Expenditures (CFS)

- AKA: CAPEX
- Funds used by a company to acquire, upgrade, and maintain physical assets such as property, buildings, and equipment to improve its value or increase its long-term productivity
- Often used to undertake new projects/investments such as repairing a roof, purchasing a piece of equipment
- Investing activities on cash flow statement, asset on BS
- Include purchases such as buildings/warehouses, machinery/computers, business vehicles



Thank you!

