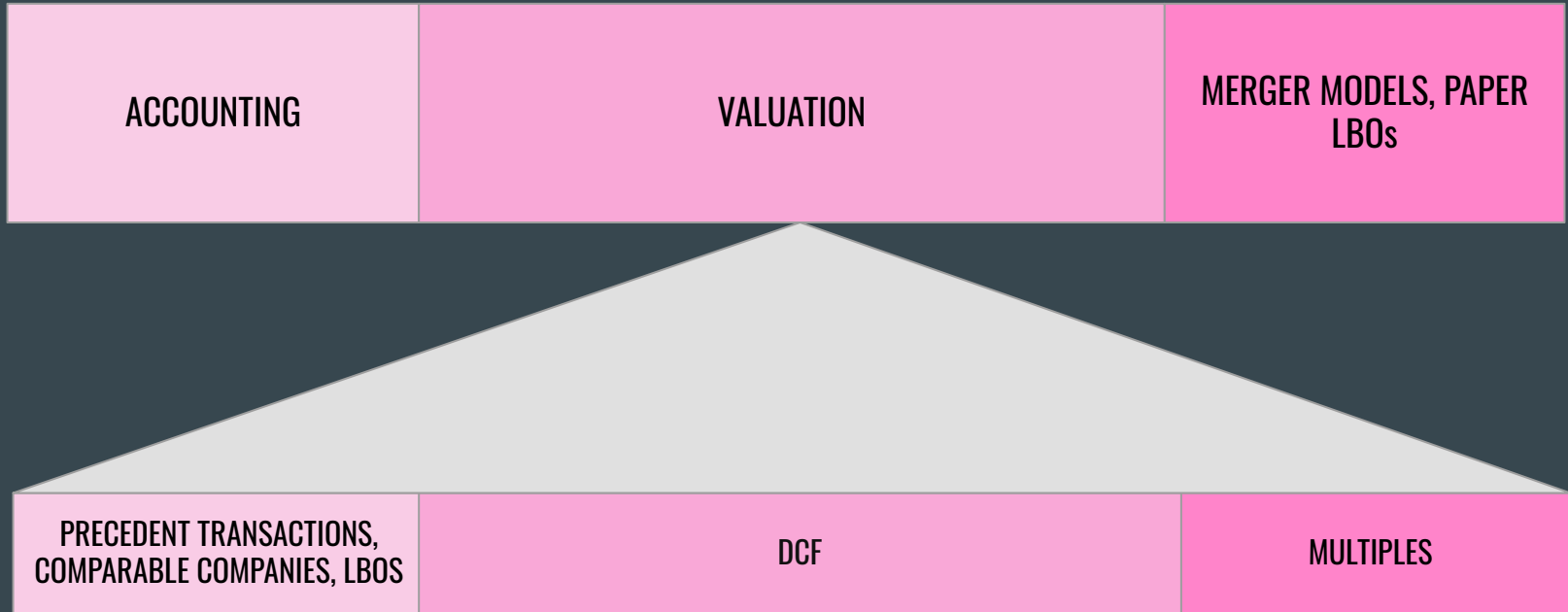


Technical Prep: Accounting

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1/16/2023

IBD Technicals



What is accounting and how is it relevant to IB?

- What is accounting?
 - Accounting is the process of recording financial transactions pertaining to a business
- What are financial statements?
 - Financial statements are concise summaries of financial transactions over a period of time and summarize a company's operations, financial position, and cash flows
- Why are they important?
 - Financial statements explain the financial health of a company, thus allowing investment bankers to analyze and value a company
 - Financial statements are the foundation of valuation

The 3 Main Financial Statements

1. The Income Statement
2. The Balance Sheet
3. The Statement of Cash Flows

The Income Statement

- The income statement is **a summary** of the company's performance **over time** (usually a quarter (3 months) or a year)
- The income statement starts with a company's revenues, goes through their expenses and goes down to Net Income, the final line of the statement
 - Revenues: What you collect from customers for providing goods / services
 - Expenses: Costs of operations incurred to generate revenue (e.g. wages)

$$\text{Revenue} - \text{Expenses} = \text{Net Income}$$

Income Statement Example

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

The Balance Sheet

- The balance sheet is **a snapshot** of the company at **a point in time**
- The balance sheet has three parts:
 - Assets: Resources of a company (e.g. cash, inventory)
 - Liabilities: What you owe (e.g. debt)
 - Shareholders' Equity: Shareholders' claim on assets after debts owed are paid

Commit this equation to memory!!

$$\text{Assets} = \text{Liabilities} + \text{Shareholders' Equity}$$



This is called/referred to as “the Accounting Equation”

Balance Sheet Example

[Company Name]		© Corporate Finance Institute®. All rights reserved.				
Balance Sheet						
[USD \$ millions]						
	2014	2015	2016	2017	2018	
Assets						
Current assets:						
Cash	167,971	181,210	183,715	211,069	239,550	
Accounts Receivable	5,100	5,904	6,567	7,117	7,539	
Prepaid expenses	4,806	5,513	5,170	5,998	5,682	
Inventory	7,805	9,601	9,825	10,531	11,342	
Total current assets	185,682	202,228	205,277	234,715	264,112	
Property & Equipment	45,500	42,350	40,145	38,602	37,521	
Goodwill	3,580	3,460	3,910	3,870	3,850	
Total Assets	234,762	248,038	249,332	277,187	305,483	
Liabilities						
Current liabilities:						
Accounts Payable	3,902	4,800	4,912	5,265	5,671	
Accrued expenses	1,320	1,541	1,662	1,865	1,899	
Unearned revenue	1,540	1,560	1,853	1,952	1,724	
Total current liabilities	6,762	7,901	8,427	9,082	9,294	
Long-term debt	50,000	50,000	30,000	30,000	30,000	
Other long-term liabilities	5,526	5,872	5,565	6,051	5,909	
Total Liabilities	62,288	63,773	43,992	45,133	45,203	
Shareholder's Equity						
Equity Capital	170,000	170,000	170,000	170,000	170,000	
Retained Earnings	2,474	14,265	35,340	62,053	90,280	
Shareholder's Equity	172,474	184,265	205,340	232,053	260,280	
Total Liabilities & Shareholder's Equity	234,762	248,038	249,332	277,187	305,483	
Check	0.000	0.000	0.000	0.000	0.000	

The Statement of Cash Flows

- The cash flow statement is **a summary** on how cash is moving in-and-out of the firm **over time**
- “Cash is king”—at the end of the day, cash is what keeps a company from going bankrupt. The statement of cash flows tells us exactly how cash is moving.
- Cash can come from and go to 3 areas: Operations, Investing, and Financing
 - Operations: how cash moves around from normal operations (running the business day to day)
 - Investing: how cash moves to/from assets
 - Financing: how cash moves to/from liabilities

Beginning Cash + CF from Operations + CF from Investing + CF from Financing = Ending Cash

The Statement of Cash Flows: Cont.

Cash flow from Operations represents the amount of cash a company generates (or uses) from carrying out its operating activities over a period of time. These operating activities include generating revenue, paying expenses, and funding working capital.

Cash flow from Investing displays how much money has been used in (or generated from) making investments during a specific time period. Investing activities include purchases of long-term assets (such as property, plant, and equipment), acquisitions of other businesses, and investments in marketable securities (stocks and bonds).

Cash flow from Financing shows the net flows of cash that are used to fund the company. Financing activities include transactions involving debt, equity, and dividends.

Cash Flow Statement Example

Innovative Products, Inc.	
Statement of Cash Flows (Indirect Method)	
For Year Ending December 31, 2012	
Operating Activities	
Sales Receipts	\$50,00,000
Payments for Products	(\$25,00,000)
Payments for Operations	(\$20,00,000)
Interest Payments	(\$1,00,000)
Taxes	(\$2,27,500)
Extraordinary Items	\$2,00,000
Net Cash Flow from Operating Activities	\$3,72,500
Investing Activities	
Purchase of New Fixed Assets (Property/Machinery)	(\$21,00,000)
Interest Received	\$50,000
Net Cash Flow from Investing Activities	(\$20,50,000)
Financing Activities	
Short-term Debt	\$7,00,000
Long-term Debt	\$11,00,000
New Equity Issued	\$5,00,000
Net Cash Flow from Financing Activities	\$23,00,000
Net Increase (Decrease in Cash)	\$6,22,500
Cash at the Beginning of the Year	\$1,00,000
Cash at the End of the Year	\$7,22,500

Three Financial Statements: Summary

- The Income Statement shows a company's profitability over a period of time
- The Balance Sheet is a snapshot of a company's financial strength
- The Cash Flow Statement shows changes in cash over a period of time

Three Financial Statements: How They Connect

The three financial statements each show different details about a company's financial strength. Together the three statements give a comprehensive view of the company's operating activities. The statements are all linked and depend on each other. These are a few ways in which they are linked, the first being the most important.

- ★ Net income flows from the bottom line of the **income statement** to the top of the **cash flow statement** and into retained earnings under shareholder's equity on the **balance sheet**.
- Non-cash expenses from the **income statement** adjust net income on the **cash flow statement** to give cash flow from operations.
- Changes to the **balance sheet** appear as working capital changes on the **cash flow statement**.
- Cash and shareholder's equity items from the **balance sheet** act as "plugs" with cash flowing in from the final line on the **cash flow statement**.

If you have a Balance Sheet and Income Statement, you can create a Statement of Cash Flows.

Relationship Between Financial Statements

Opening Balance Sheet

Cash	5,000
Other assets	18,000
	23,000
Liabilities	11,500
Capital	4,000
Retained earnings	7,500
	23,000

Income Statement

Revenue	40,000
Expenses	37,264
Net income	2,736

Cash Flow Statement

Beginning cash	5,000
Net income	2,736
Depreciation	2,300
Changes in working capital	-1,122
Operating activity cash flow	3,914
Investing cash flow	-500
Financing cash flow	-1,060
Net cash flow	2,354
Ending cash	7,354

Statement of Retained Earnings

Beginning	7,500
Net income	2,736
Dividend	-300
Ending	9,936

Closing Balance Sheet

Cash	7,354
Other assets	18,570
	25,924
Liabilities	11,988
Capital	4,000
Retained earnings	9,936
	25,924

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3 Statements: How They Connect Alternative Version

- Start with the Income Statement and get net income
- Take net income to the top of the Statement of Cash Flows and reflect changes to operating, investing, and financing activities ending with the new cash balance
- Take the new cash balance + changes to assets/liabilities (net income flows into retained earnings in shareholders' equity) and update the Balance Sheet
- The most important part is that they are all connected and if you have a Balance Sheet and Income Statement, you can create a Statement of Cash Flows

**The key takeaway is that the 3 statements
are inextricable**

INCOME STATEMENT	20X1	20X2	20X3	20X4
Revenue	1,331	1,464	1,611	1,772
Cost of Goods Sold	799	878	966	1,063
Gross Profit	532	586	644	709
Operating Expenses (SG&A)	200	220	242	266
Operating Income (EBIT)	333	366	403	443
Interest Expense	43	38	33	28
Pretax Income	290	329	370	415
Income Tax Expense	102	115	130	145
Net Income	189	214	241	270

BALANCE SHEET	20X1	20X2	20X3	20X4
Cash	478	627	809	1,026
Accounts Receivable	109	120	132	146
Inventories	131	144	159	175
Total Current Assets	718	892	1,100	1,346
Property Plant & Equipment (PP&E)	840	837	827	808
TOTAL ASSETS	1,559	1,729	1,927	2,155
Accounts Payable	66	72	79	87
Current Portion on Long Term Debt	50	50	50	50
Total Current Liabilities	116	122	129	137
Long Term Debt	400	350	300	250
TOTAL LIABILITIES	516	472	429	387
Common Stock	100	100	100	100
Retained Earnings	943	1,157	1,397	1,667
TOTAL EQUITY	1,043	1,257	1,497	1,767
TOTAL LIABILITIES & EQUITY	1,559	1,729	1,927	2,155
Check	0.0	0.0	0.0	0.0

CASH FLOW STATEMENT	20X1	20X2	20X3	20X4
CASH FLOW FROM OPERATING ACTIVITIES				
Net Income		214	241	270
Add Back Non-Cash Items				
Depreciation		73	81	89
Amortization		0	0	0
Changes in Working Capital				
Accounts Receivable		(11)	(12)	(13)
Inventories		(13)	(14)	(16)
Accounts Payable		7	7	8
Net Cash Provided by Operating Activities		269	302	337
CASH FLOW FROM INVESTING ACTIVITIES				
Capital Expenditures - Purchase of PP&E		(70)	(70)	(70)
Net Cash Used in Investing Activities		(70)	(70)	(70)
CASH FLOW FROM FINANCING ACTIVITIES				
Revolving Credit Facility		0	0	0
Long Term Debt (Current Portion)		(50)	(50)	(50)
Net Cash Provided by (Used in) Fnce Activities		(50)	(50)	(50)
Net Cash Flow		149	182	217

Walk me through how Depreciation going up by \$10 would affect the statements

Income Statement: Operating Income would decline by \$10 and assuming a 40% tax rate, Net Income would go down by \$6.

Cash Flow Statement: The Net Income at the top goes down by \$6, but the \$10 Depreciation is a non-cash expense that gets added back, so overall Cash Flow from Operations goes up by \$4. There are no changes elsewhere, so the overall Net Change in Cash goes up by \$4.

Balance Sheet: Plants, Property & Equipment goes down by \$10 on the Assets side because of the Depreciation, and Cash is up by \$4 from the changes on the Cash Flow Statement.

\$10 Depreciation Continued

Overall, Assets is down by \$6. Since Net Income fell by \$6 as well, Shareholders' Equity on the Liabilities & Shareholders' Equity side is down by \$6 and both sides of the Balance Sheet balance.

With this type of question we always recommend going in the order:

1. Income Statement
2. Cash Flow Statement
3. Balance Sheet

Written Out...

IS	CF	BS
-10	-6	A L+E
+4	+10	+4
<u>-6</u>	<u>+4</u>	<u>-10</u> <u>-6</u>
		-6 -4 ✓

Handwritten diagram showing the relationship between IS, CF, and BS. Arrows indicate the flow of values: from IS (-6) to CF (-6), from CF (+10) to BS (+4), and from BS (-10) to BS (-6). A large curved arrow at the bottom points from the circled -6 in the IS column to the circled -6 in the BS column.

Additional: Statement of Retained Earnings

The statement of retained earnings is a financial statement that outlines the changes in retained earnings for a company over a specified period.

Retained earnings (RE) are the amount of net income left over for the business after it has paid out dividends to its shareholders.

Questions to Work On Based on This Information:

1. What are the three financial statements and what do they show?
2. What are some ways that the three financial statements connect?
3. Walk me through the line-items on the income statement.
4. Walk me through line-items on the Cash Flow Statement
5. What's an example of a current asset?
6. What's an example of a current liability?
7. What is the accounting equation?

General Reminders

Sophomores: The sprint is now! Applications are approaching, stay up to date on your email so you don't miss anything.

Apply as soon as you can for things, don't wait until you've networked more or prepped more, you'll never feel ready. Apply ASAP!!

Apply for everything, even if it's not your top choice! You can always use more interview practice, and never know how you can leverage an offer.

Keep your network updated. Let your top choice firm know that they are your top choice. Make sure your network (meaning anyone you've ever networked with) knows when you get into a program or get an offer, especially if it's from another firm.

Schedule mock interviews with the junior and senior leaders! This is the best way to prepare and hold yourself accountable.