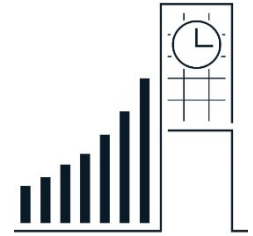


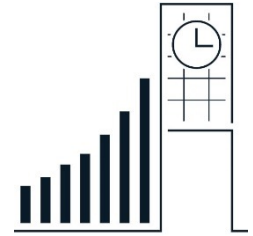
ACCOUNTING PART 1

SPRING 2024

AGENDA



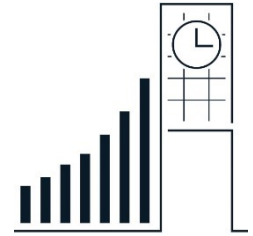
- ▶ Importance of accounting
- ▶ Financial statements
- ▶ Balance sheet
- ▶ Income statement
- ▶ Cash flow statement
- ▶ Concept check
- ▶ Example problem



KEY UNDERSTANDING

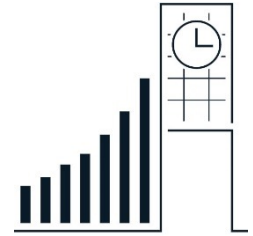
- ▶ Math is to Physics as Accounting is to Finance
 - Accounting – the language of all business
 - Finance – applied accounting
- ▶ Finance is a data driven field and accounting ensures the accuracy and structure of the underlying data
- ▶ Double entry accounting
 - When one account changes, it impacts another (e.g. when you buy a house: Cash ↓, House ↑)
- ▶ Goal of financial modeling (next workshop) – to replicate how changes in the business impact every accounting statement

FINANCIAL STATEMENTS



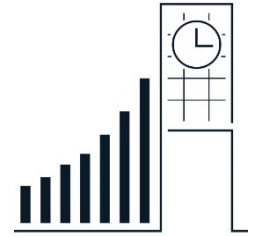
- ▶ Balance sheet
 - Snapshot of what a company owns and how they paid for it
 - Unveils liquidity, solvency, and leverage
- ▶ Income statement
 - Shows how much “profit” a company generates over time
 - Unveils how a company records revenues and demonstrates how profitable they are on paper
- ▶ Cash flow statement
 - Demonstrates how changes in accounts affect the company’s cash balance
 - Cash generation does not equal profitability, this statement reconciles the differences

BALANCE SHEET



- ▶ The Balance Sheet shows what a company owns and how it pays for it
- ▶ The three sections of the Balance Sheet:
 - Assets — what the company owns and uses to generate revenue
 - Ex. cash, inventory, land, property, plant and equipment
 - Liabilities — what the company owes
 - Ex. long term debt, accounts payable
 - Equity — owners' stake in the business
- ▶ Businesses use Liabilities and Equity to pay for the Assets that generate revenue

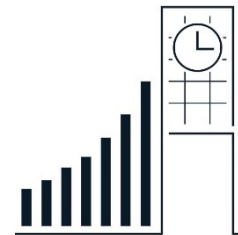
BALANCE SHEET (CONT'D)



- ▶ This statement balances using the following equation:
 - $\text{Assets} = \text{Liabilities} + \text{Equity}$
- ▶ **Capital structure** – combination of debt and equity used to fund a firm's assets, reveals leverage
- ▶ Accounts are ordered by liquidity
 - Current assets (inventory) vs. fixed assets (factories)
 - Current liabilities (accounts payable) vs. long term liabilities (long term debt)
- ▶ $\text{Net working capital} = \text{current assets}^1 - \text{current liabilities}^1$
 - “Operational working capital”

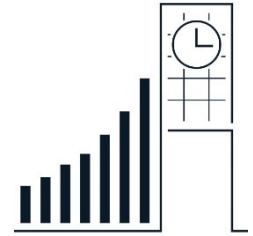
¹ *Excluding interest bearing current assets and current liabilities*

INCOME STATEMENT



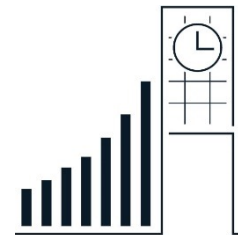
- ▶ **Revenue recognition principle** – revenue is recorded in the same period that it is earned
 - If you pay a lump sum for Fortune Magazine, Fortune will not recognize that whole amount as revenue today
- ▶ **Matching principle** – expenses are recorded in the same period as the revenue it is used to generate
 - If Fortune Magazine bought a year's worth of paper today, they will not recognize that whole amount as an expense today

INCOME STATEMENT (CONT'D)



- ▶ Depreciation and amortization
 - **Depreciation and amortization** – the reduction in the value of an asset with the passage of time
- ▶ Depreciation and amortization allow us to smooth out expenses on tangible and intangible assets
 - When Tesla builds a \$2bn factory, they don't list the whole \$2bn as an expense on their income statement
- ▶ Depreciation is a non-cash expense so we will see it again in our cash flow statement

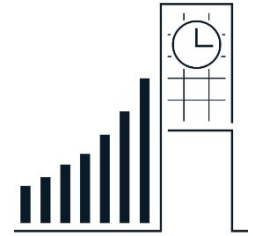
INCOME STATEMENT



Income statement (\$mm)

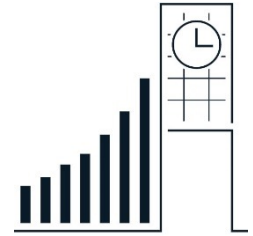
Revenue	\$500
Less: Cost of goods sold (COGS)	(250)
Gross margin	\$250
Less: Selling, general and administrative expenses (SG&A)	(100)
Operating income (EBIT)	\$150
Less: Interest expense	(50)
Taxable income	\$100
Less: Taxes	40
Net income	\$60

CASH FLOW STATEMENT



- ▶ Three sections
 - Cash flow from operating activities (ex. selling candy bars)
 - Cash flow from investing activities (ex. buying factories)
 - Cash flow from financing activities (ex. issuing debt)
- ▶ Goal is to determine exactly how much cash is generated by the business, not just from earnings
- ▶ Most important statement for a lender to a company
 - Profit does not equal cash generation
 - A company can still go bankrupt even if it has positive net income
 - A company can still generate cash even if it has negative net income

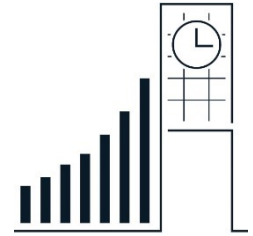
CASH FLOW STATEMENT



Cash flow statement build

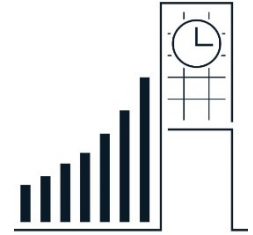
Net income	\$60
Plus: Non-cash expenses	30
Less: Increase in current assets	(20)
Plus: Increase in current liabilities	20
Cash flows from operating activities	\$90
Capital expenditures	(50)
Cash flows from investing activities	(50)
Cash flows from financing activities	30
Total change in cash	\$70

CONCEPT CHECK



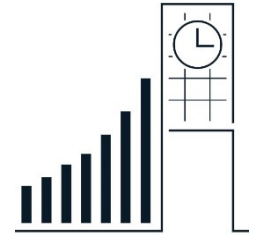
- ▶ What are some examples of how the balance sheet and income statement fit together?
- ▶ What are some examples of how the income statement and cash flow statement fit together (i.e shared line items)?
- ▶ Is a company that generated negative cash flow for 2017 considered bankrupt?
- ▶ Can a firm that has generated positive cash flow for the last ten years still go out of business?

EXAMPLE PROBLEM



- ▶ Firm XYZ has net income of \$100. On their income statement, they listed \$30 in D&A. On the balance sheet, current assets increased \$20 and current liabilities increased \$10. In addition, they raised \$50 by issuing debt and used \$70 to build a new factory. Did Firm XYZ generate positive cash flow from operations? Were they cash flow positive or negative for the year?

QUESTIONS?



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