



# Accounting

The Language of Business

TBC New Member Education 2020 – Week 1

# Agenda



- What is a Company?



- Balance Sheet



- Income Statement



- Cash Flow Statement



- Linking Financial Statements



- Interpreting Financial Statements



- Appendix: Vocab

What is a Company?

# What is a Company?

**A company takes in money...**

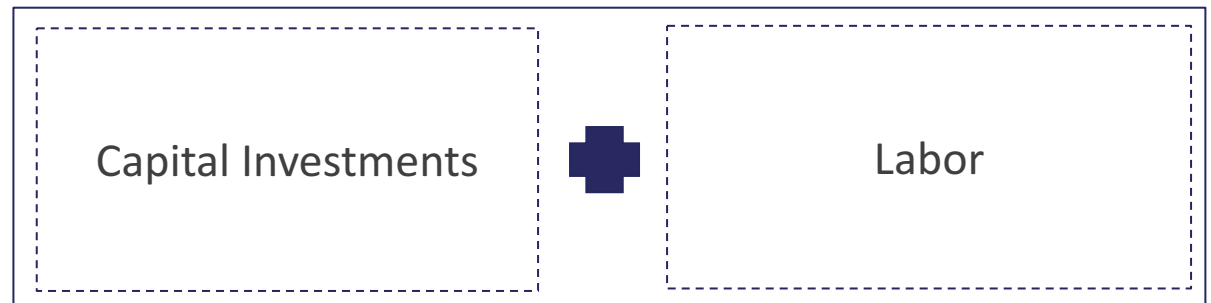


Issue stock  
for cash



Borrow  
money

**and uses that money  
to invest in assets...**



Sells goods or  
services for a profit

**which it uses to  
produce more money  
in the future.**



# Step 1: Financing

Companies need money to buy assets which they can then use to make more money. That money can come in two main forms:

## 1. Debt

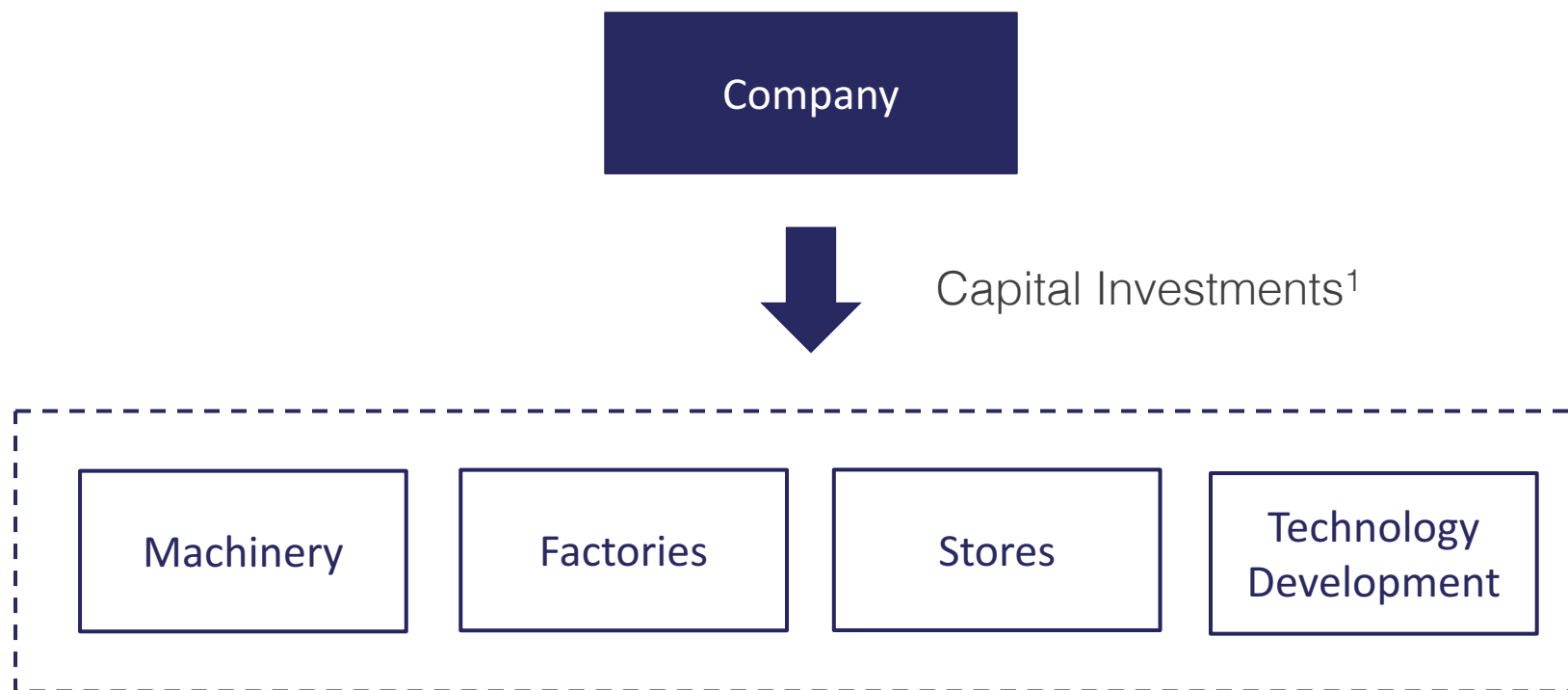
- A lender gives a company money; in exchange, the company agrees to pay the lender some fixed amount of money in the future
- The defining feature of debt is that it is a **fixed (or at least relatively fixed) payment (or payments) that the company must make**
- Lenders have no interest in the success of the business (beyond its ability to pay back lenders in the future)

## 2. Equity

- An investor purchases stock in a company, which gives her ownership over some fraction of the business
- The defining feature of equity is that it is a **residual claim on the company's assets**
  - Equity holders have a right to what's left over after the company pays off its debt and other liabilities
- Equity holders care deeply about the success of the business (because they own part of it)

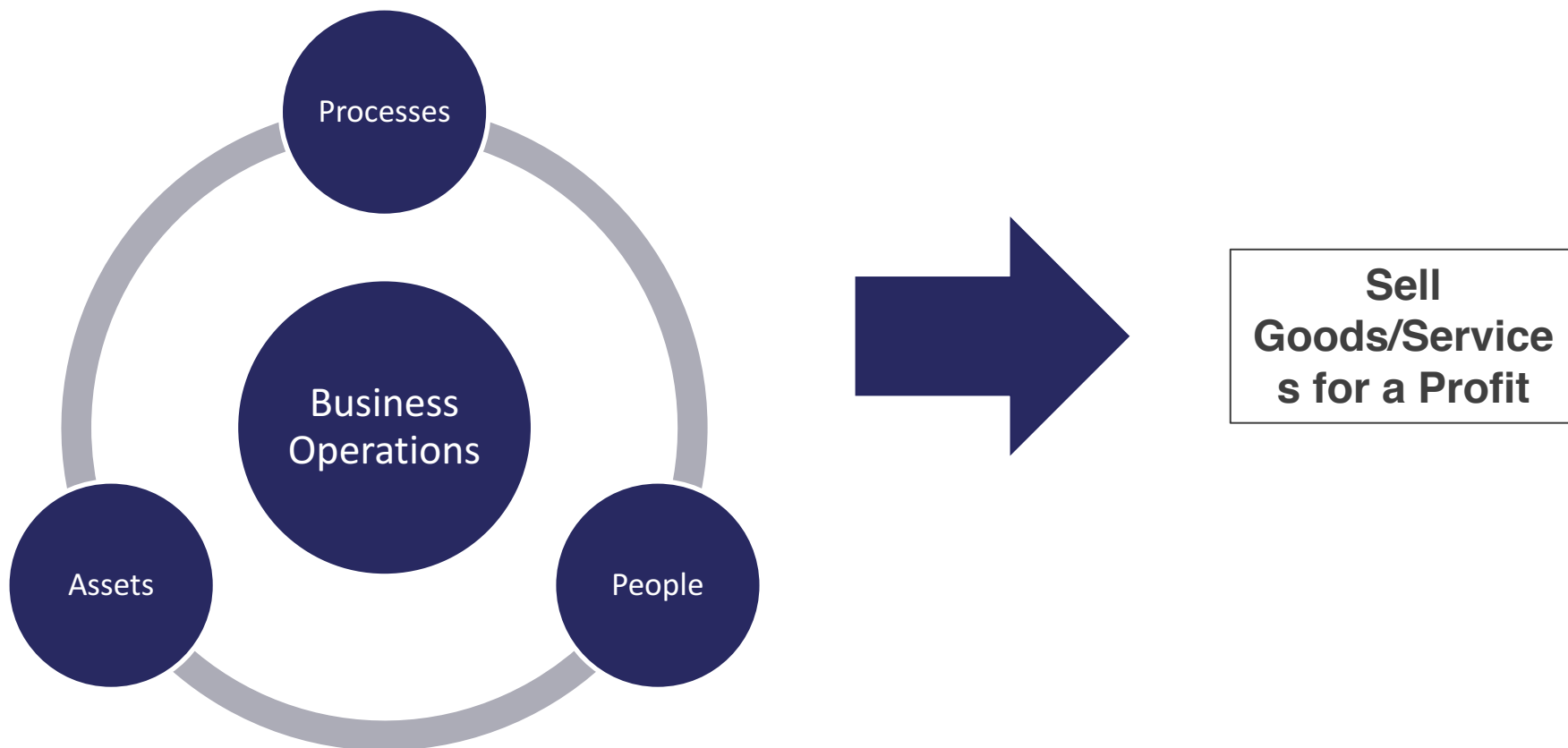
## Step 2: Investing in Assets

Companies invest the money they raise in assets in order to generate returns in the future



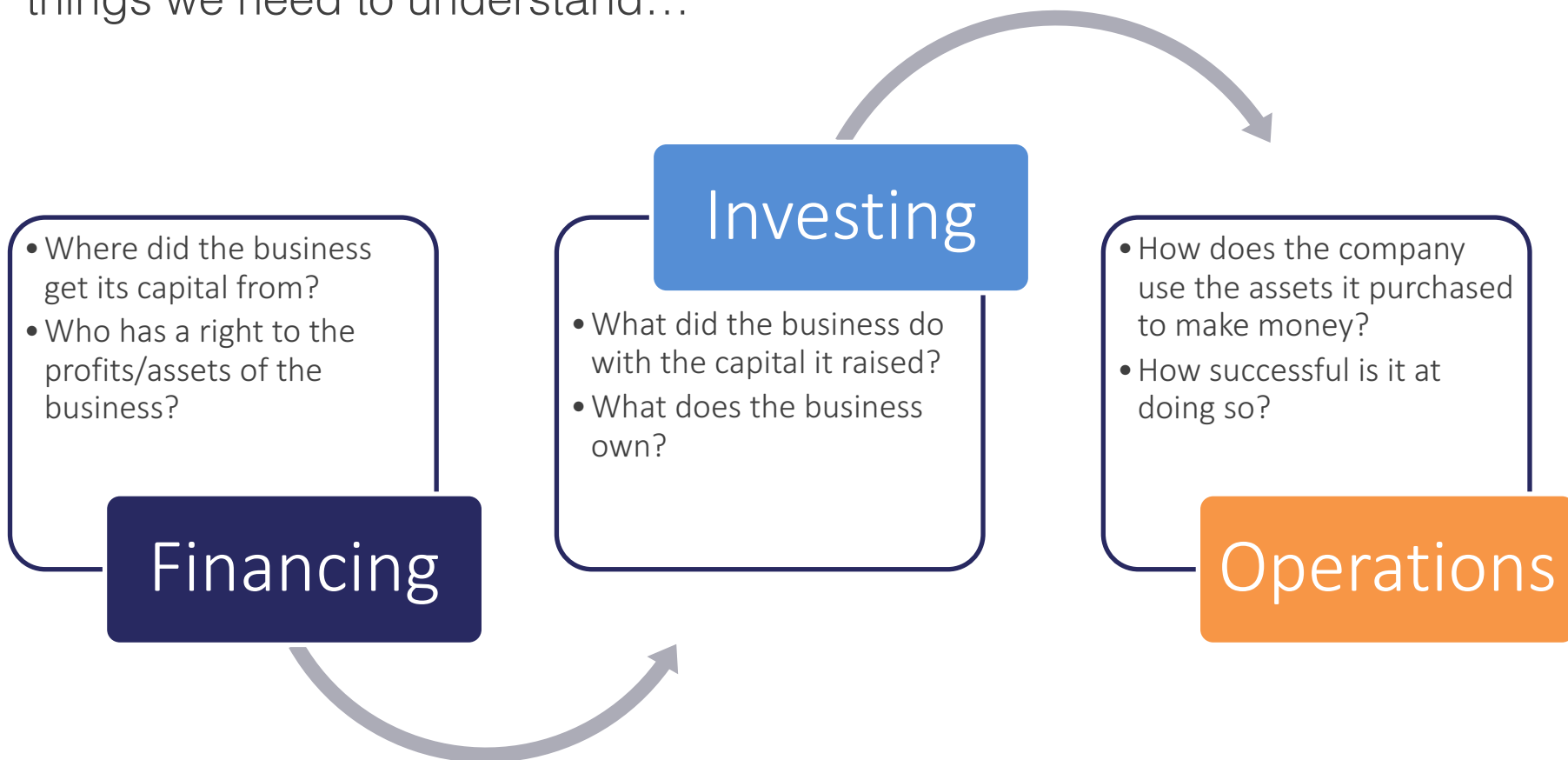
# Step 3: Operating the Business

A business' operations are the combination of processes, people, and assets which the company uses to make money



# Purpose of Accounting

In order to decide whether to invest in a business, there are three main things we need to understand...





# Three Main Financial Statements

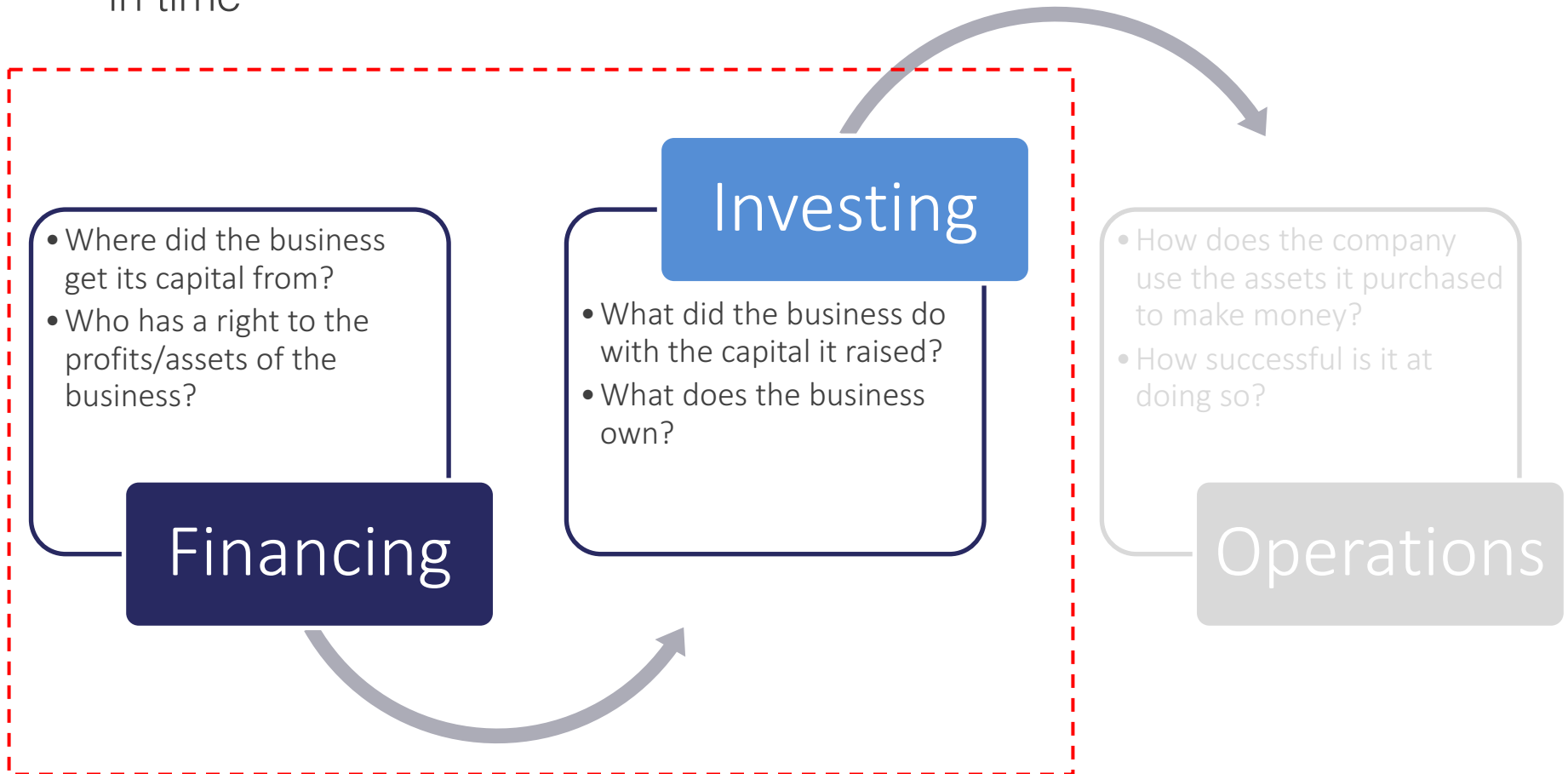
Accounting provides a (somewhat) standardized way of answering these questions. The most important thing to understand is the three main financial statements:

- 1. The Balance Sheet-** Provides a snapshot of a company's financial position at a single point in time
- 2. The Income Statement-** Describes the results of the company's operations over a given period of time, from the perspective of accounting profits
- 3. The Cash Flow Statement-** Describes the cash flows into and out of the company over a given period of time

# Balance Sheet

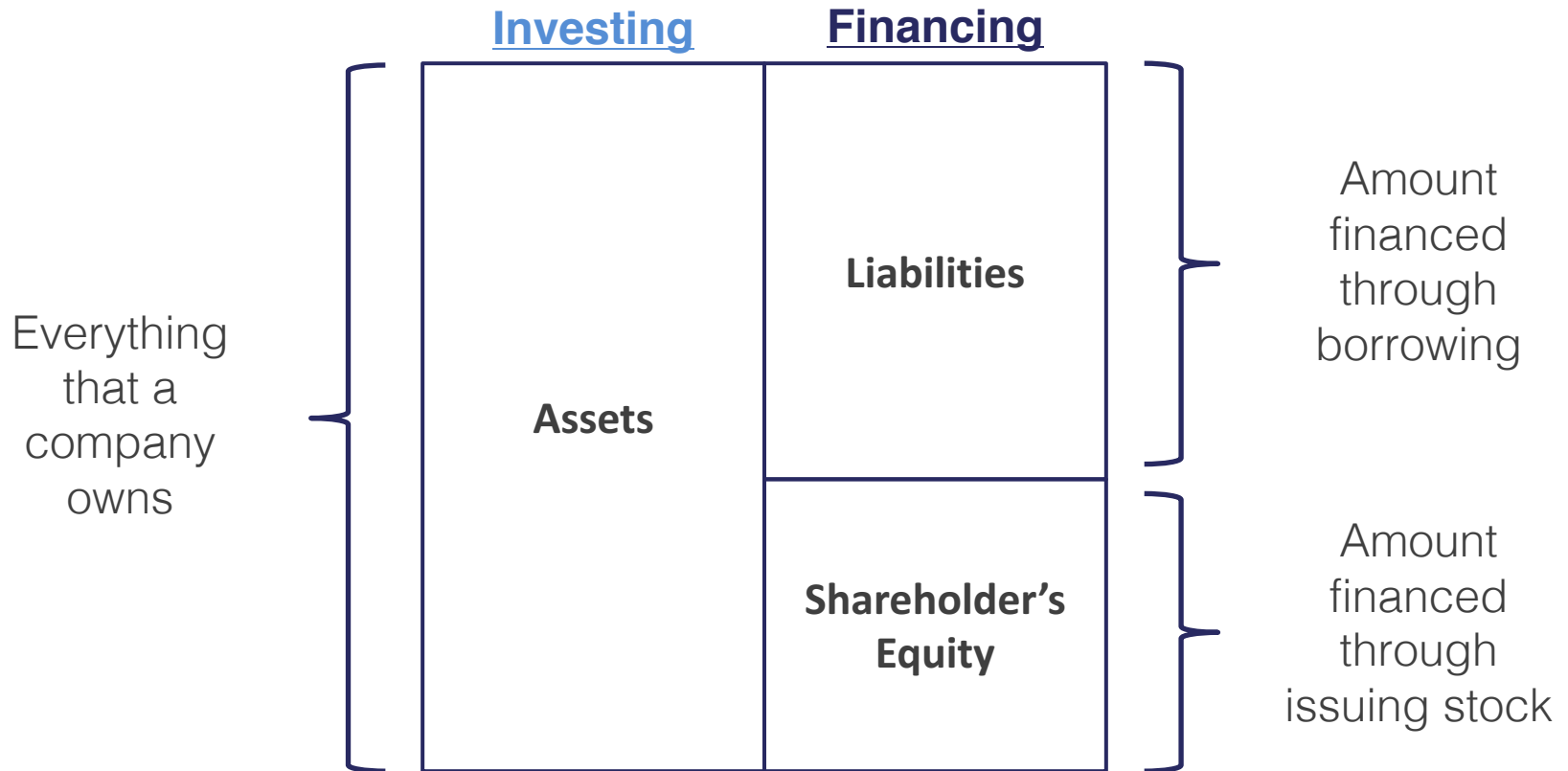
# Balance Sheet

- > Provides a snapshot of a company's financial position at a single point in time



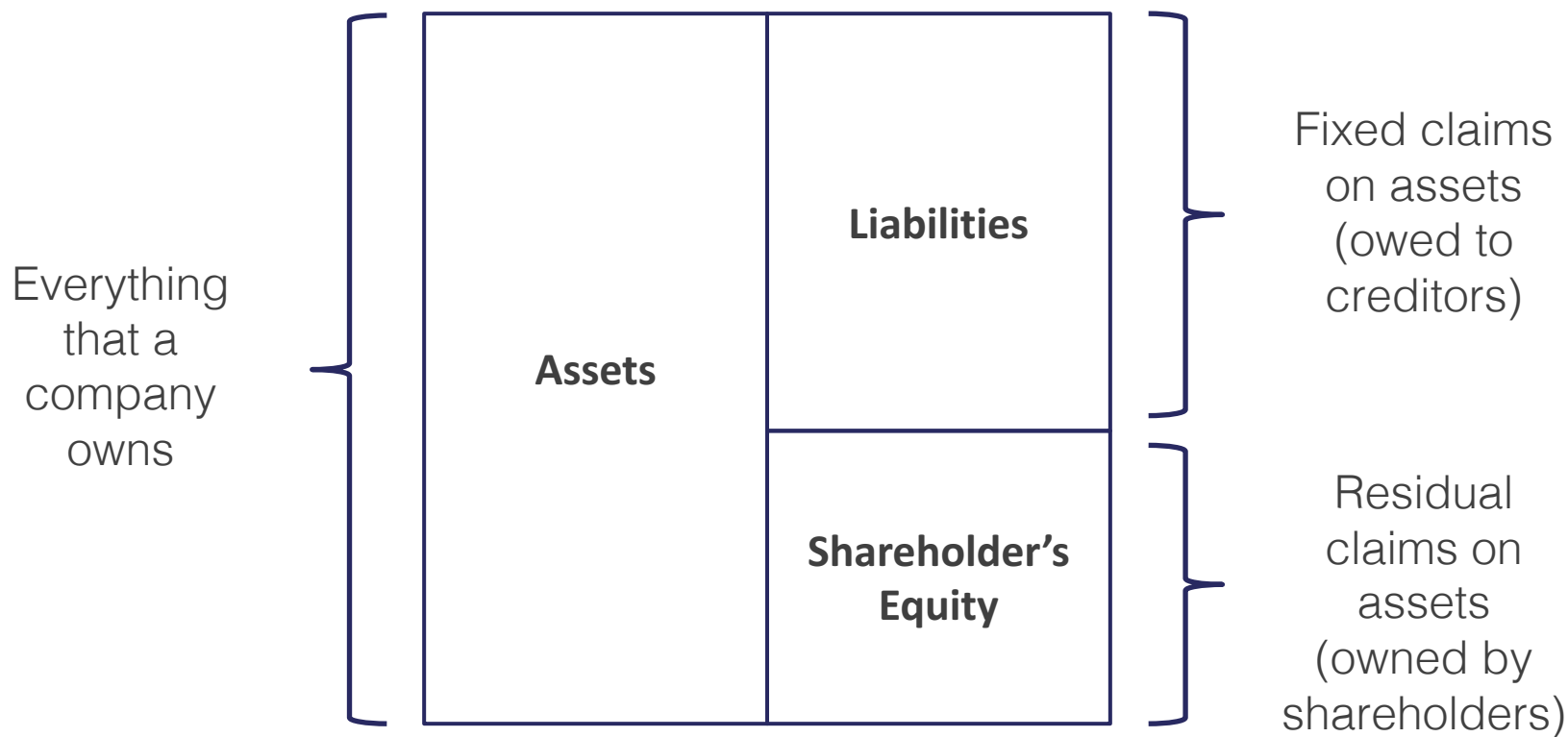
# Balance Sheet

- > Provides a snapshot of a company's financial position at a single point in time



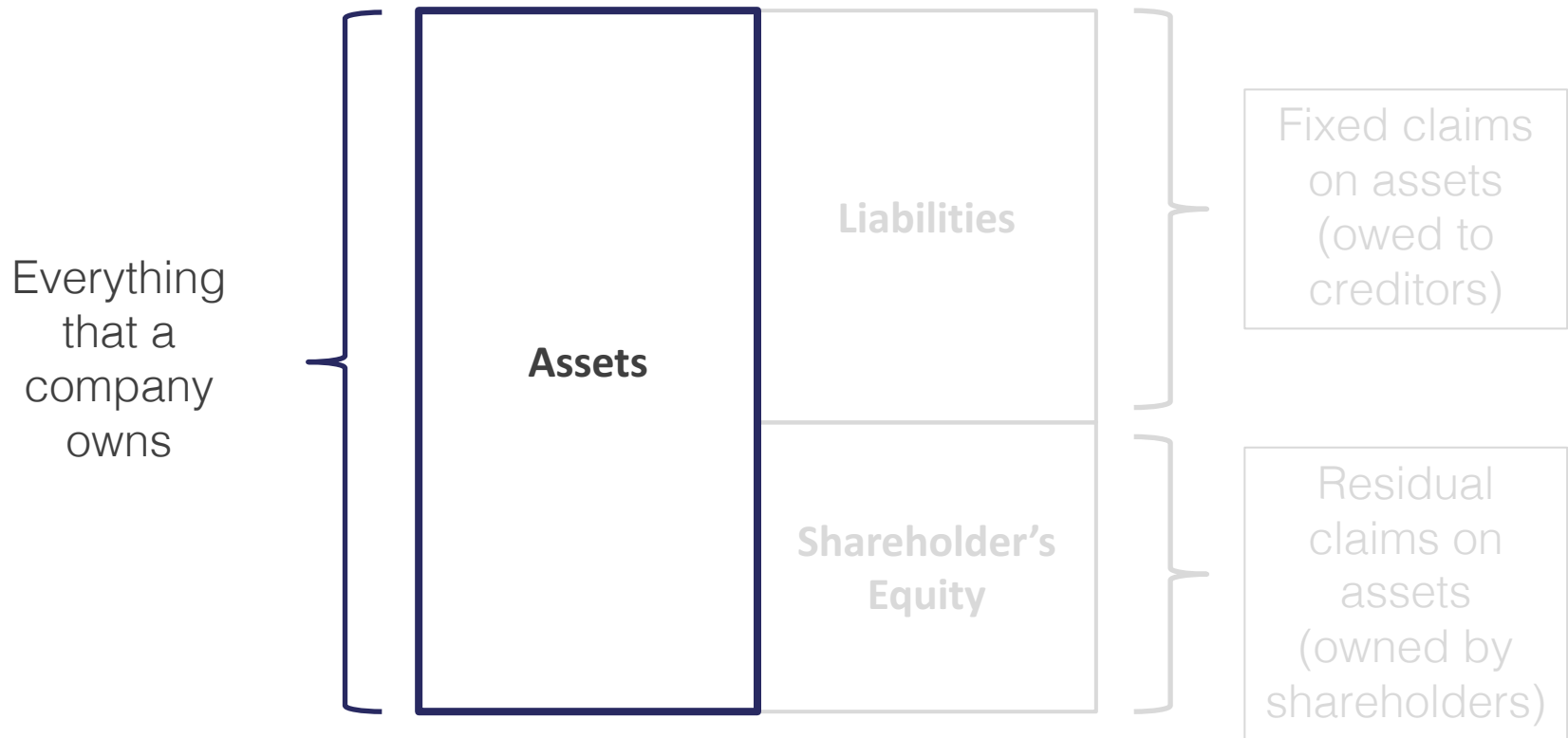
# Balance Sheet

- > We can also think about the company's sources of financing in terms of claims on the company's assets



# Balance Sheet: Assets

- > The assets section of the balance sheet shows us what the company owns



# Economic vs Accounting Assets

## Accounting Assets $\neq$ Economic Assets

An **Economic Asset** is anything that a company owns and expects to use to generate economic benefits (either now or in the future)

An **Accounting Asset** will appear on the balance sheet if and only if

1. It is owned by the firm
2. It was at some point bought by the firm
  - I.e. there was a transaction through which the firm acquired the asset
3. It is expected to provide future economic benefits to the firm

Accounting assets are a subset of economic assets

# Economic vs Accounting Assets

Economic assets can take a wide variety of forms, but only some are recognized on the balance sheet as accounting assets

## Accounting Assets

- > Cash
- > Inventory
- > Property, Plant, and Equipment (PP&E)
- > A patent/trademark purchased from another company
- > Customer relationships “acquired” as part of an acquisition of another company

## NOT Accounting Assets

- > Brand name
- > Technology developed in-house
- > A patent which arose as the result of research done in-house



# Classifying Assets

## Current Assets

- > Assets which are expected to be converted to cash within the next 12 months
- > Ex. cash, inventories, etc.

## Non-Current Assets

- > Assets which aren't expected to be converted to cash within the next 12 months
- > Ex. factories, equipment, land, etc.

## Tangible Assets

- > Assets which have a physical form
- > Ex. factories, equipment, land, inventories, cash, etc.

## Intangible Assets

- > Assets which lack a physical form
- > Ex. patents, copyrights, trademarks, etc.

## Operating Assets

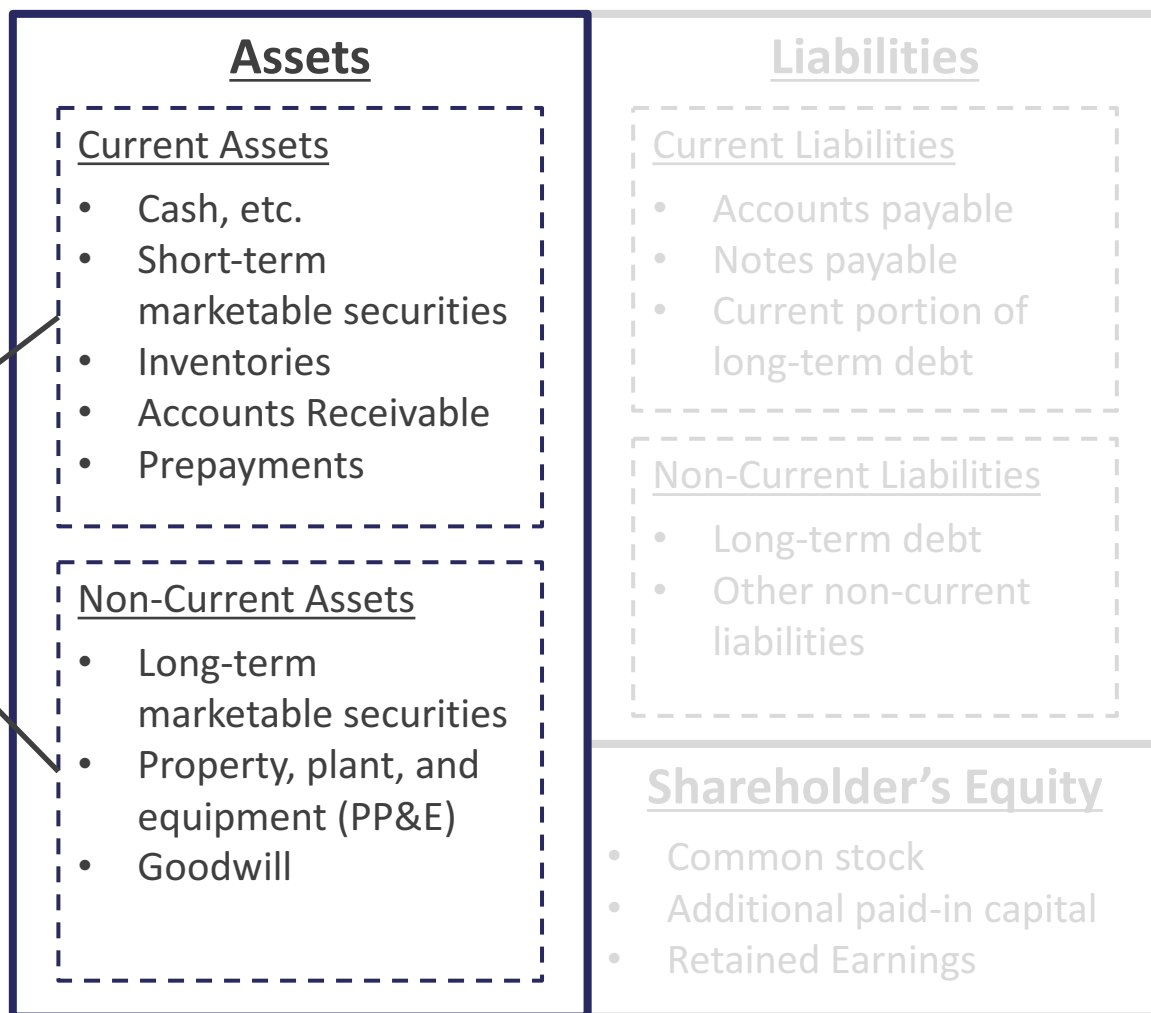
- > Assets which are actively used in the company's operations
- > Ex. factories, equipment, inventories, etc.

## Non-Operating Assets

- > Assets which aren't currently used in the company's operations
- > Ex. cash (usually), marketable securities, unused land being held for sale, etc.

# Archetypal Balance Sheet - Assets

The assets section of the balance sheet is generally split into separate sections for current and non-current assets



# Balance Sheet: Liabilities

- > The liabilities section of the balance sheet shows us what the company is expected to have to pay to third-parties in the future



# Balance Sheet: Liabilities

- > Liabilities are **obligations to third-parties** that the company is expected to pay in the future
- > Liabilities are **fixed claims** on the company's assets

## Some examples

- 1. Accounts Payable-** A company agrees to pay a supplier a certain amount of money but hasn't yet paid the supplier the cash
- 2. Bank Debt-** A company borrows a fixed amount of money from a bank which it agrees to pay back later
- 3. Bonds-** A company issues bonds to outside investors in exchange for cash. The bonds obligate the company to pay those investors fixed amounts of money in the future.

# Classifying Liabilities

## Current Liabilities

- > Liabilities which are due in less than 12 months
- > Ex. revolving credit facilities, debt whose principal must be repaid within the next year, accounts payable, etc.

## Non-Current Liabilities

- > Liabilities which are due in more than 12 months
- > Ex. long-term debt, long-term capital leases, long-term deferred tax liabilities, etc.

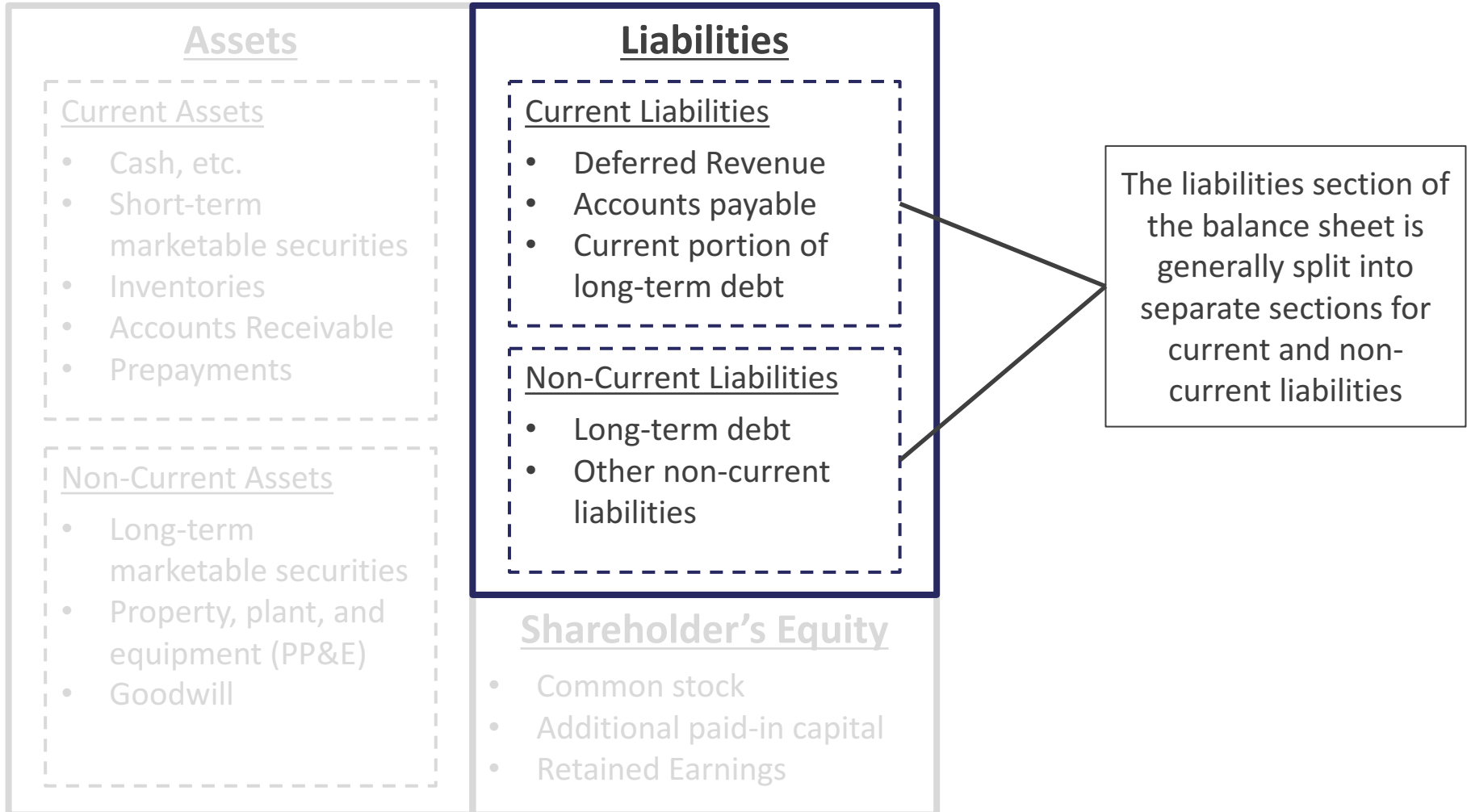
## Interest Bearing Liabilities ("Debt")

- > Money which the company is paying interest to borrow
- > Ex. bank loans, bonds sold to outside investors, capital leases, etc.

## Non-Interest Bearing Liabilities ("Working Capital Liabilities")

- > Money which the company is borrowing for free
  - Not paying interest, either explicitly or implicitly
- > Ex. accounts payable, deferred tax liabilities, etc.

# Archetypal Balance Sheet - Liabilities

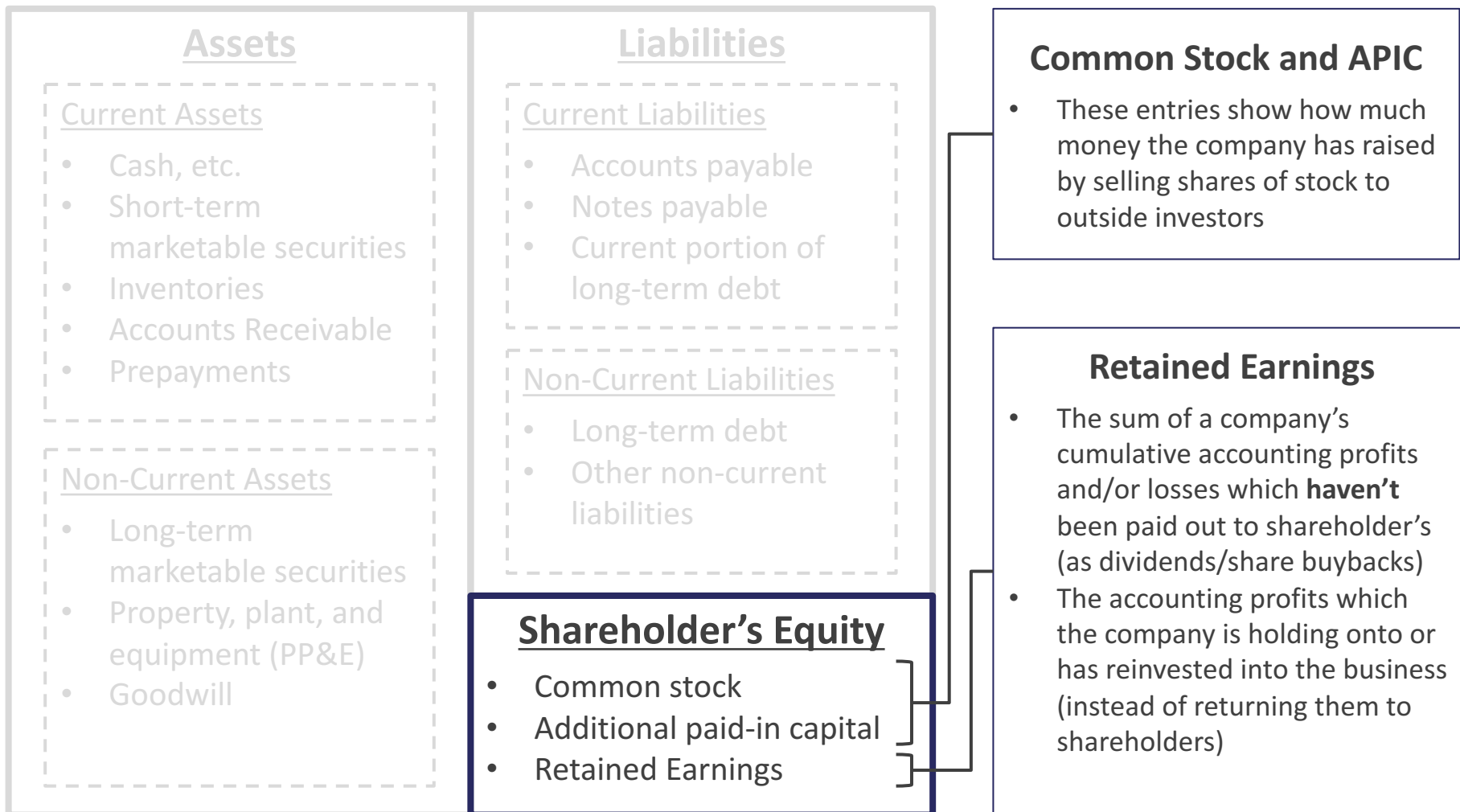


# Balance Sheet: Shareholder's Equity

- > The shareholder's equity section of the balance sheet shows what portion of the company's assets are left over for shareholders after netting out liabilities



# Archetypal Balance Sheet – Equity





# Book Value vs Market Value

What do people mean when they say a company is worth a certain amount of money?

## Apple becomes first US trillion dollar company

Shares rise 50,000% since flotation in 1980

**Robert Miller**

Apple's ascent to become America's first \$1 trillion public company is being seen as a vindication of the growth strategy pursued by Tim Cook, the chief executive, who succeeded the late Steve Jobs.

After flirting with the \$1 trillion milestone since Tuesday night, when it announced a record third quarter with a 32 per cent jump in profit to \$11.5 billion and a 17 per cent rise in revenue to \$53.3 billion, Apple shares closed last night up 2.9 per cent at \$207.39.

The stock has risen more than 21 per cent this year and an eye-watering 50,000 per cent since it became a public company in 1980. It did not reach the \$100 billion mark until May 2007, but five years later the technology giant reached a value of \$500 billion.

World Bank data shows there are only 16 countries with a gross domestic product, or GDP, equal to or greater than Apple's current market valuation. The US has a value of \$19.4 trillion, China is valued at \$12 trillion while Britain comes in at \$2.6 trillion.

Mr Jobs founded Apple in a California garage in 1976 with Steve Wozniak and Ronald Wayne, taking the company public in 1980. Mr Jobs was driven out of the business in the mid-1980s, despite the success of the early Apple Macintosh computer, only to return a decade later and rescue the company from near bankruptcy with its share price languishing below \$1 and a stock market value of less than \$2 billion.

The main focus for Apple, investors and Wall Street analysts is the iPhone, which accounts for nearly two thirds of the money the company makes. Apple

also makes Mac computers, iPads and the Apple Watch, develops software and operates Apple Pay, the mobile payment system, and Apple Music, the music streaming service.

In 1998 Mr Jobs persuaded Mr Cook to leave Compaq Computer at a time when Apple's survival remained in doubt. Mr Cook was in charge of the supply chain that fed consumers' appetite for Apple's devices. He kept the technology giant together when Mr Jobs was diagnosed with cancer and was away on extended leaves of absences. Mr Jobs handed over the reins to Mr Cook in August 2011, shortly before his death. At the time of Mr Cook's succession Apple was valued at \$300 billion.

Besides the long-serving staff who hold the shares, many other investors were last night counting their profit.

Elliot Levin enjoyed tinkering with computers at his home in Seattle when in 1997 his parents bought him Apple shares for his 15th birthday. He longed to buy a Mac for college and had requested the gift in what he viewed as a small gesture to help keep the company alive. "It almost felt like an act of solidarity," Mr Levin, now 36, said.

A slightly more high-profile investor is Warren Buffett, whose Berkshire Hathaway vehicle is now one of Apple's largest shareholders, with 240.3 million shares worth almost \$50 billion. Since raising his stake in March he is believed to have made at least \$8 billion.

The title of the world's first \$1 trillion company is generally claimed by PetroChina from 2007. However, the Chinese oil and gas group had a complicated corporate structure and most of the shares were held by the state.

# Book Value vs Market Value

Generally they're referring to the company's **Market Capitalization**.

## **Market Cap =**

- > The total value of the company's equity based on the current market price of the company's stock
  - “Market value of equity”
- > Number of shares outstanding x price per share

There is also a line on a company's balance sheet for “**Total Shareholder's Equity**”. What is this?

## **Book Value of Equity =**

- > The number needed to make the balance sheet balance, given the accounting values of a company's assets and liabilities
- > Accounting Assets – Accounting Liabilities

# Book Value vs Market Value

## **Book Value of Equity $\neq$ Market Value of Equity**

Why do they differ?

1. Not all economic assets appear on the balance sheet as accounting assets
2. Assets which do appear on the balance are (usually, not always) recorded at a value which is based on historical cost
  - Not necessarily an accurate reflection of their economic/market value
3. Investors will pay more for the expectation of profitable future growth- this expectation of growth doesn't appear anywhere on the balance sheet

# Book Value vs Market Value

## Book Value of Equity $\neq$ Market Value of Equity

Accounting Balance Sheet

<b>Accounting Value of Assets</b>	<b>Liabilities<sup>1</sup></b>
	<b>Book Value of Equity</b>

“Market Value” Balance Sheet

<b>Market Value (Economic Value) of Assets</b>	<b>Liabilities<sup>1</sup></b>
	<b>Market Value of Equity</b>

Difference between accounting value and market value of assets gives rise to gap between book value and market value of equity

<sup>1</sup> The market value of a company's liabilities is also distinct from the accounting value of those liabilities, but because these values are generally similar for healthy companies, we often ignore the difference as a simplification. Cases where the difference would be meaningful include distressed situations (e.g. Toys R Us) and financial fraud (e.g. Lehman Brothers)

# Example Balance Sheet

## Apple Inc.

### CONSOLIDATED BALANCE SHEETS

(In millions, except number of shares which are reflected in thousands and par value)

	September 30, 2017	September 24, 2016
<b>ASSETS:</b>		
<b>Current assets:</b>		
Cash and cash equivalents	\$ 20,289	\$ 20,484
Short-term marketable securities	53,892	46,671
Accounts receivable, less allowances of \$58 and \$53, respectively	17,874	15,754
Inventories	4,855	2,132
Vendor non-trade receivables	17,799	13,545
Other current assets	13,936	8,283
Total current assets	128,645	106,869
Long-term marketable securities	194,714	170,430
Property, plant and equipment, net	33,783	27,010
Goodwill	5,717	5,414
Acquired intangible assets, net	2,298	3,206
Other non-current assets	10,162	8,757
Total assets	\$ 375,319	\$ 321,686

# Example Balance Sheet (cont.)

## LIABILITIES AND SHAREHOLDERS' EQUITY:

### Current liabilities:

Accounts payable	\$ 49,049	\$ 37,294
Accrued expenses	25,744	22,027
Deferred revenue	7,548	8,080
Commercial paper	11,977	8,105
Current portion of long-term debt	6,496	3,500
<b>Total current liabilities</b>	<b>100,814</b>	<b>79,006</b>

Deferred revenue, non-current	2,836	2,930
Long-term debt	97,207	75,427
Other non-current liabilities	40,415	36,074
<b>Total liabilities</b>	<b>241,272</b>	<b>193,437</b>

### Commitments and contingencies

### Shareholders' equity:

Common stock and additional paid-in capital, \$0.00001 par value: 12,600,000 shares authorized; 5,126,201 and 5,336,166 shares issued and outstanding, respectively	35,867	31,251
Retained earnings	98,330	96,364
Accumulated other comprehensive income/(loss)	(150)	634
<b>Total shareholders' equity</b>	<b>134,047</b>	<b>128,249</b>
<b>Total liabilities and shareholders' equity</b>	<b>\$ 375,319</b>	<b>\$ 321,686</b>

# Balance Sheet - Conclusion

## Assets = Liabilities + Shareholder's Equity

Everything that a company owns is either...

1. Borrowed from someone else (or purchased using borrowed money)
2. Bought using shareholder's money

The balance sheet **must always balance:**

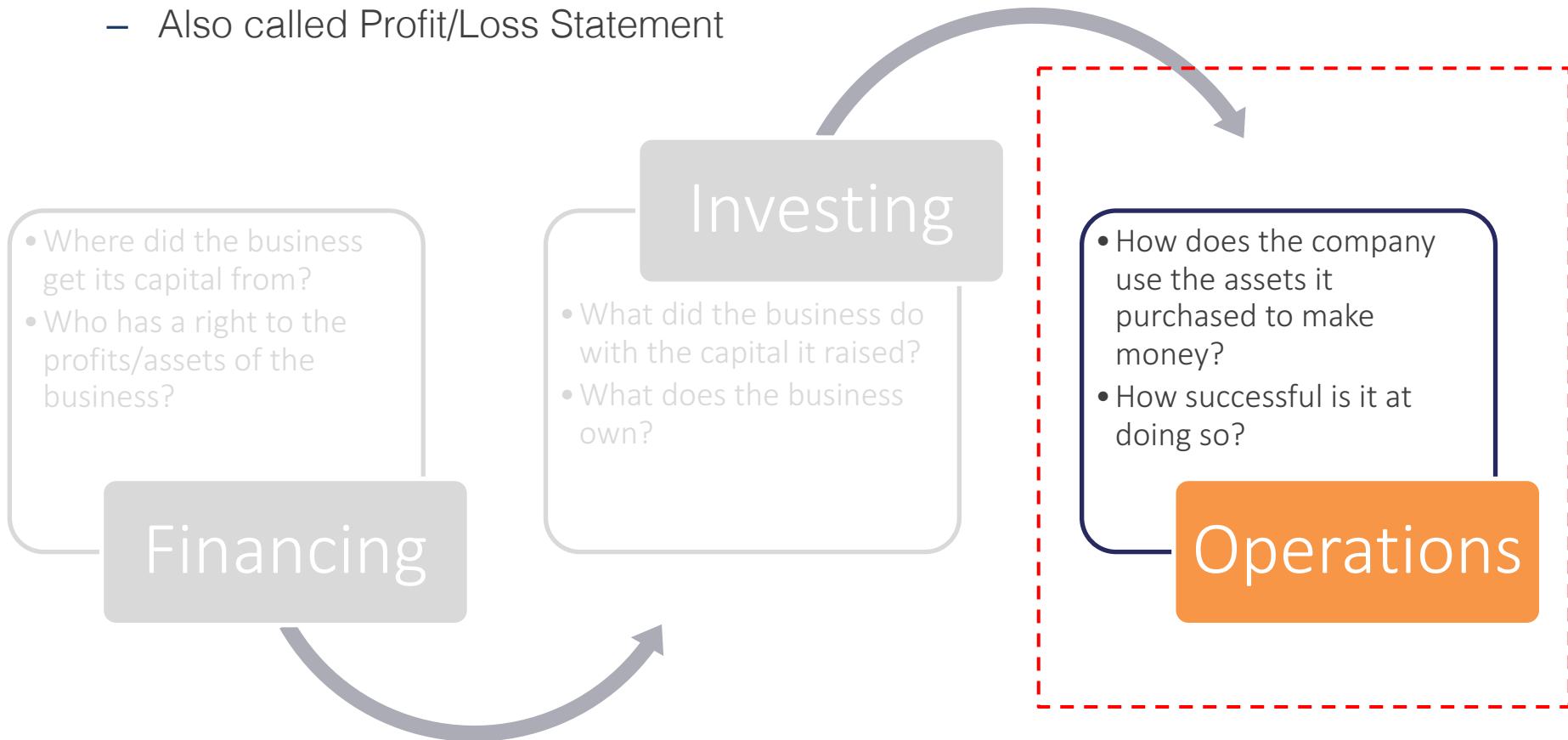
- > Because equity is the residual claim on a company's assets, it will always adjust in size to be equal to assets – liabilities
- > If you think a transaction should cause the balance sheet to no longer balance, you're not accounting for it properly

# Income Statement



# Income Statement

- > Describes the results of the company's operations over a given period of time, from the perspective of accounting profits
  - Also called Profit/Loss Statement



# Income Statement

We want to know whether a company is successful at using the assets it purchased to make more money.

> We want to know whether the company is “profitable”

What does it mean for a company to be profitable?

$$\text{Income (Profit)} = \text{Revenue} - \text{Expenses} - \text{Taxes}$$

# Revenues

## Revenue

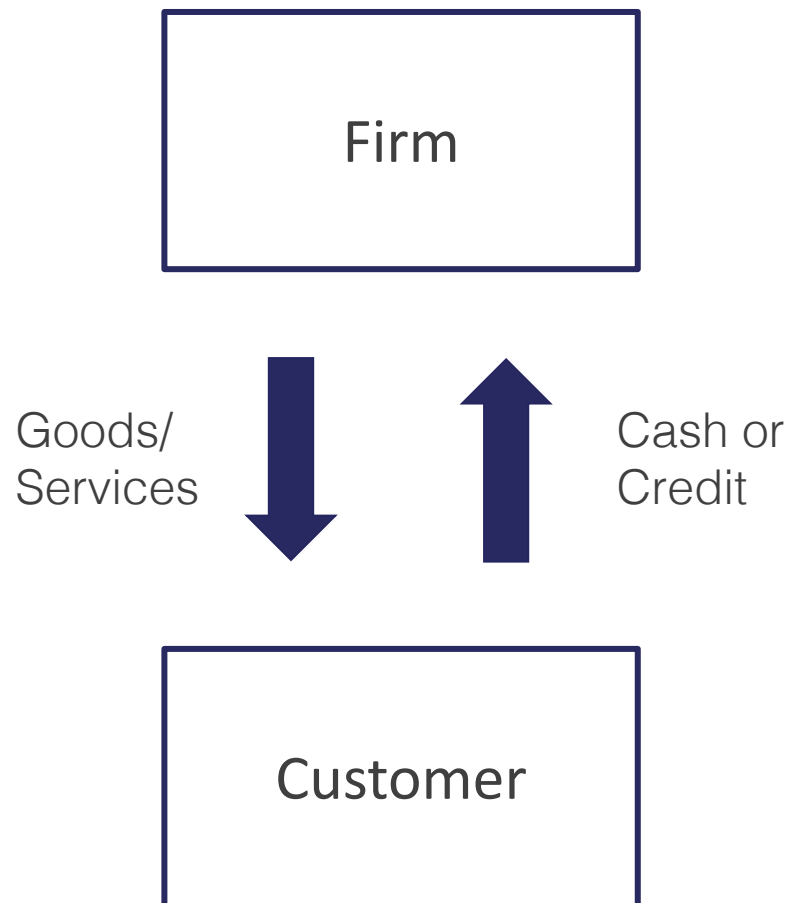
- > Total amount of sales made over a given period of time

## Revenue can be paid in two forms:

- > Cash
- > Credit

When a company sells a good/service but is paid in credit, they record that credit as an **accounts receivable** asset

When a company sells a good/service but hasn't yet delivered it, they record a **deferred revenue** liability



# Cost of Goods Sold (COGS)

## Cost of Goods Sold

> Cost of all the inputs used to produce goods

1. When a company purchases inventory, the company records an **inventory** asset on the balance sheet
2. When the company sells that inventory, the inventory is removed from the balance sheet and a **COGS expense** is recorded



# Selling, General & Administrative (SG&A)

## **Selling, General, and Administrative Expenses (SG&A)**

- > Expenses that are not directly related to the production of goods but are still important for the business to continue function
- > E.g. Managers' salaries, rent, electricity bill, etc.

Sometimes, companies will split up SG&A expenses into separate categories

- > E.g. Microsoft separates out sales & marketing expenses from general & administrative expenses because their reliance on software sales to other businesses makes sales and marketing a particularly important part of their cost structure

# Depreciation and Amortization (D&A)

## Depreciation and Amortization (D&A)

- > A company's fixed and intangible assets decline in value over time
- > **Depreciation** is the decline in value of a company's fixed (tangible) assets
  - E.g. A factory declines in value over time if money isn't spent repairing it
- > **Amortization** is the decline in value of a company's intangible assets
  - E.g. A patent a company acquired in an acquisition is invalidated in court. The company records an amortization charge to remove the patent from its balance sheet

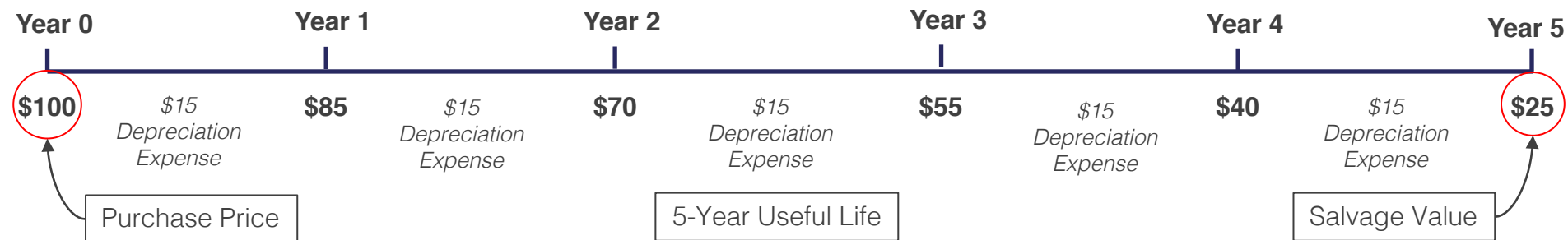
## D&A are **non-cash expenses**

- > They represent a reduction in an asset's value, not a cash outlay

D&A won't always appear as a unique line item on the income statement, but you will always be able to find it on the cash flow statement

# Depreciation and Amortization (D&A)

Accounting rules for the depreciation/amortization of assets vary, but a standard approach (particularly for tangible assets) is to depreciate on a straight line basis over a fixed period of time (the “useful life of the asset”)<sup>1</sup>



<sup>1</sup> Note that companies have discretion when choosing 1) the salvage value of the asset and 2) the time period over which to depreciate it. For some other assets, the company has discretion over whether to depreciate/amortize the asset at all (look up “impairment tests” for more info). This discretion can be used to manipulate earnings.

# Classifying Expenses

## Operating Expenses

- > Expenses the company incurs in the process of running its main or central operations
- > Most expenses are operating expenses
  - You should generally assume an expense is an operating expense unless you have good reason not to
- > Ex. COGS, SG&A, R&D, D&A, etc.

## Non-Operating Expenses<sup>1</sup>

- > Expenses incurred by the business which are outside of its main or central operations
- > Ex. Interest expense (for non-banks), the loss incurred when selling a discontinued factory for less than its carrying value, etc.

## Cash Expenses

- > Expenses for which the business experiences a cash outlay

## Non-Cash Expenses

- > Expenses which reflect a purported decline in the economic value of a company's assets (e.g. D&A) or are paid by the company in credit



# Income Taxes

## Statutory Tax Rate ≠ Effective Tax Rate

$$\text{Effective Tax Rate (ETR)} = \frac{\text{Provision for Income Taxes}}{\text{Earnings Before Taxes (EBT)}}$$

Why do they differ?

- > Interest payments are tax deductible<sup>1</sup>
- > Treatment of expenses for tax purposes isn't always the same as treatment of expenses for accounting purposes
  - E.g. tax laws generally allow for capital investments to be depreciated on an accelerated basis (as opposed to the straight-line generally used by companies when accounting for these assets)
- > Companies can receive tax deductions from various sources

# Archetypal Income Statement

	<b>Revenue</b>	
-	Cost of Goods Sold (COGS)	}
=	<b>Gross Income</b>	
-	Selling, General, and Administrative (SG&A)	} Operating Expenses
-	Depreciation and Amortization (D&A)	
-	Other Operating Expenses	
=	<b>Operating Income</b>	
-	Other income/expense	} Non-Operating Expenses
=	<b>Earnings Before Interest &amp; Taxes (EBIT)</b>	
-	Interest Expense	} Taxes
=	<b>Earnings Before Taxes (EBT)</b>	
-	Provision for Income Taxes	
=	<b>Net Income</b>	

# Example Income Statement

## Apple Inc.

### CONSOLIDATED STATEMENTS OF OPERATIONS

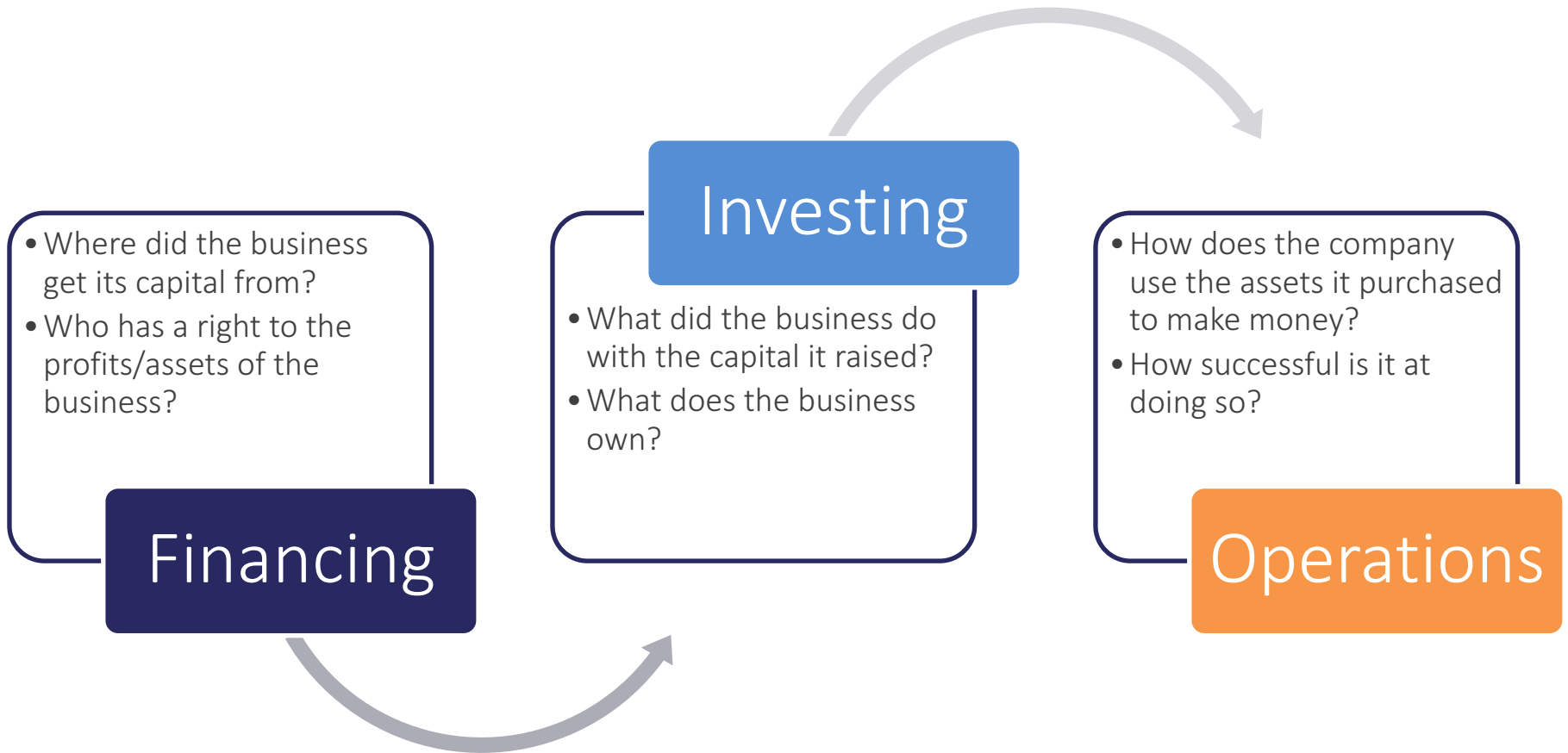
(In millions, except number of shares which are reflected in thousands and per share amounts)

	Years ended		
	September 30, 2017	September 24, 2016	September 26, 2015
Net sales	\$ 229,234	\$ 215,639	\$ 233,715
Cost of sales	141,048	131,376	140,089
Gross margin	88,186	84,263	93,626
Operating expenses:			
Research and development	11,581	10,045	8,067
Selling, general and administrative	15,261	14,194	14,329
Total operating expenses	26,842	24,239	22,396
Operating income	61,344	60,024	71,230
Other income/(expense), net	2,745	1,348	1,285
Income before provision for income taxes	64,089	61,372	72,515
Provision for income taxes	15,738	15,685	19,121
Net income	\$ 48,351	\$ 45,687	\$ 53,394
Earnings per share:			
Basic	\$ 9.27	\$ 8.35	\$ 9.28
Diluted	\$ 9.21	\$ 8.31	\$ 9.22
Shares used in computing earnings per share:			
Basic	5,217,242	5,470,820	5,753,421
Diluted	5,251,692	5,500,281	5,793,069
Cash dividends declared per share	\$ 2.40	\$ 2.18	\$ 1.98

# Cash Flow Statement

# Cash Flow Statement

Describes the cash flows into/out of the company over a period of time



# Cash Flow Statement

**Question:** If the income statement already tells us whether the company is profitable or not, why do we care about the cash flow statement?

**Answer:**

- > Profits are not always in the form of cash
  - E.g. A company can sell to customers on credit or record accounting profits on illiquid securities which they haven't yet sold
- > Companies need cash to run their daily operations
  - Suppliers and debt holders (usually) must be paid in cash

# Cash Flow Statement

“Cash is King” – Alex Spanos

## MoviePass was down last night because it ran out of money

*The end is nigh — again*

- Headline, The Verge (7/27/2018)

**Always pay attention to where a business is acquiring/using its cash  
You can't run a business without it**

# Cash Flow Statement: Breakdown

There are three sections of the cash flow statement

## **Cash from Operations (CFO)**

- > Net income + adjustments for non-cash items
- > How much cash did the company's operations generate
  - To be either paid out to equity holders or reinvested in the business
- > Investors tend to care most about CFO

## **Cash from Investing (CFI)**

- > Capital expenditures, investments, proceeds from sales of fixed assets, etc.

## **Cash from Financing (CFF)**

- > Debt financing (excluding interest payments), equity financing, dividends, share buybacks, etc.



# Cash Flow Statement: Breakdown

The three parts of the cash flow statement correspond to the three activities we care about:

## Cash From Financing

- Where did the business get its capital from?
- Who has a right to the profits/assets of the business?

Financing

## Cash From Investing

- What did the business do with the capital it raised?
- What does the business own?

Investing

## Cash From Operations

- How does the company use the assets it purchased to make money?
- How successful is it at doing so?

Operations

# Example Cash Flow Statement

## Apple Inc.

### CONSOLIDATED STATEMENTS OF CASH FLOWS (In millions)

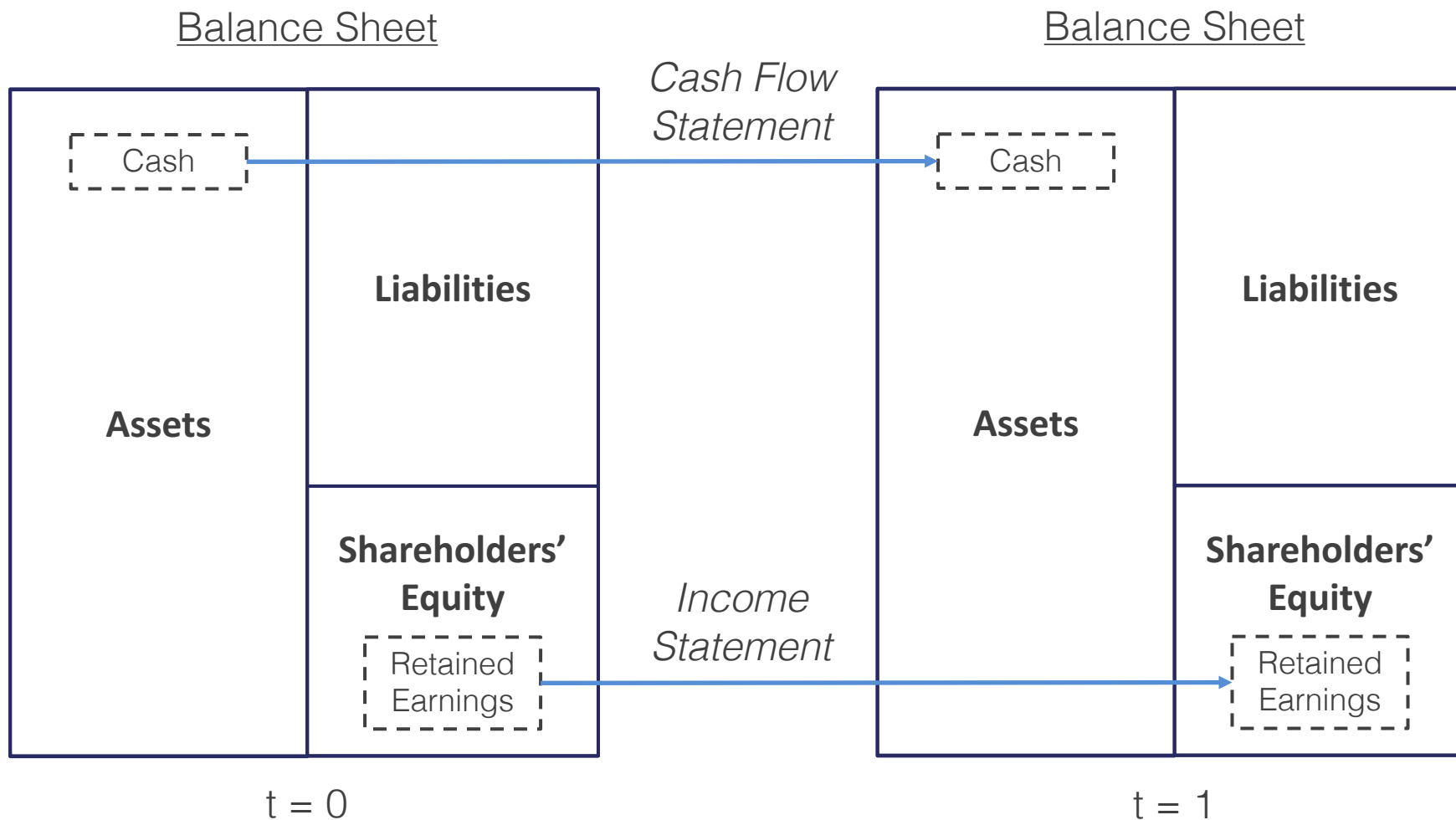
	Years ended		
	September 30, 2017	September 24, 2016	September 26, 2015
Cash and cash equivalents, beginning of the year	\$ 20,484	\$ 21,120	\$ 13,844
<b>Operating activities:</b>			
Net income	48,351	45,687	53,394
<b>Adjustments to reconcile net income to cash generated by operating activities:</b>			
Depreciation and amortization	10,157	10,505	11,257
Share-based compensation expense	4,840	4,210	3,586
Deferred income tax expense	5,966	4,938	1,382
Other	(166)	486	385
<b>Changes in operating assets and liabilities:</b>			
Accounts receivable, net	(2,093)	527	417
Inventories	(2,723)	217	(238)
Vendor non-trade receivables	(4,254)	(51)	(3,735)
Other current and non-current assets	(5,318)	1,055	(283)
Accounts payable	9,618	1,837	5,001
Deferred revenue	(626)	(1,554)	1,042
Other current and non-current liabilities	(154)	(2,033)	9,058
Cash generated by operating activities	63,598	65,824	81,266

# Example Cash Flow Statement (cont.)

Cash generated by operating activities	63,598	65,824	81,266
<b>Investing activities:</b>			
Purchases of marketable securities	(159,486)	(142,428)	(166,402)
Proceeds from maturities of marketable securities	31,775	21,258	14,538
Proceeds from sales of marketable securities	94,564	90,536	107,447
Payments made in connection with business acquisitions, net	(329)	(297)	(343)
Payments for acquisition of property, plant and equipment	(12,451)	(12,734)	(11,247)
Payments for acquisition of intangible assets	(344)	(814)	(241)
Payments for strategic investments, net	(395)	(1,388)	—
Other	220	(110)	(26)
Cash used in investing activities	(46,446)	(45,977)	(56,274)
<b>Financing activities:</b>			
Proceeds from issuance of common stock	555	495	543
Excess tax benefits from equity awards	627	407	749
Payments for taxes related to net share settlement of equity awards	(1,874)	(1,570)	(1,499)
Payments for dividends and dividend equivalents	(12,769)	(12,150)	(11,561)
Repurchases of common stock	(32,900)	(29,722)	(35,253)
Proceeds from issuance of term debt, net	28,662	24,954	27,114
Repayments of term debt	(3,500)	(2,500)	—
Change in commercial paper, net	3,852	(397)	2,191
Cash used in financing activities	(17,347)	(20,483)	(17,716)
Increase/(Decrease) in cash and cash equivalents	(195)	(636)	7,276
Cash and cash equivalents, end of the year	\$ 20,289	\$ 20,484	\$ 21,120
<b>Supplemental cash flow disclosure:</b>			
Cash paid for income taxes, net	\$ 11,591	\$ 10,444	\$ 13,252
Cash paid for interest	\$ 2,092	\$ 1,316	\$ 514

# Linking Financial Statements

# Linking the 3 Statements



# Interpreting Financial Statements

# Key Questions

What are some questions we might want to ask about a company's financial statements?

- > **Growth:** How is the company's revenue/income changing?
- > **Margins:** How profitable is the company?
- > **Financial Health:** How capable is the company of meeting its liabilities?
- > More later in the quarter...

# Types of “Income”

Gross Income

- > Income earned specifically on the sale on a product/service (ignoring all other costs associated with running the business)

Operating Income

- > Earnings generated by the firm’s continuing operations and available to all stakeholders (both debt + equity holders) in the firm, before taxes

Earnings Before Interest & Taxes  
(EBIT)

- > Earnings available to all stakeholders (both debt + equity holders) in the firm, before taxes
- > If the company’s only non-operating expenses are interest expenses, then EBIT and operating income are the same

Net Income

- > The total income earned by equity holders in a company, after accounting for all expenses and taxes
- > “Bottom line”

Earnings Before Interest, Taxes,  
Depreciation & Amortization  
(EBITDA)

- >  $EBITDA = EBIT + D\&A$
- > A pro-forma measure of earnings available to all stakeholders in the firm often used by investors/equity analysts
- > Ignores capex, changes in operating assets/liabilities, and one-time items

Very  
Similar



# Growth

We might care about growth in...

- > Revenue (“Top-Line Growth”)
- > Gross Profit
- > EBITDA
- > EBIT/Operating Income
- > Net Income (“Bottom-Line” Growth)

**Question:** Would you care more about growth in a company’s revenue or its earnings (e.g. EBIT or Net Income)?

# Margins

Margins are a measure of **profitability**  
How do the company's profits compare to its costs?

## Gross Margin

$$\frac{\text{Gross Profit}}{\text{Revenue}}$$

## Operating Margin

$$\frac{\text{Operating Income (EBIT)}}{\text{Revenue}}$$

## EBITDA Margin

$$\frac{\text{EBITDA}}{\text{Revenue}}$$

## Profit Margin

$$\frac{\text{Net Income}}{\text{Revenue}}$$

# Financial Health

Debt, unlike equity, has to be paid back

Equity holders have a residual claim on the company's assets after the holders of its liabilities are paid

- > If the company isn't able to pay its debts on time, **the equity holders will be left with nothing**

There are two types of financial health issues a company can run into:

- > **Liquidity Crisis:** A situation in which a company is unable to meet its short-term financial obligations (it runs out of cash)
  - Remember: Cash is King
- > **Solvency Crisis:** A situation in which a company is likely to be unable to meet its long term financial obligations
  - The economic value of a company's assets are worth less than its liabilities

# Liquidity Ratios (examples)

Liquidity ratios measure a company's ability to meet its short-term obligations

## Current Ratio

$$\frac{\text{Current Assets}}{\text{Current Liabilities}}$$

## Quick Ratio

$$\frac{(\text{Current Assets} - \text{Inventories})}{\text{Current Liabilities}}$$

There are lots of financial health ratios (some companies even choose to define their own). The right ratios to study depend on the company (and in particular, what type of problems you worry they might run into).

# Solvency Ratios (examples)

Solvency ratios measure 1) how levered a company is and 2) how able it will be to pay back its debts in the long-term

## Debt/Equity Ratio

$$\frac{\text{Total Liabilities}}{\text{Total Shareholder's Equity}}$$

## Net Debt/EBITDA Ratio

$$\frac{\text{Net Debt}}{\text{EBITDA}}$$

## Interest Coverage Ratio

$$\frac{\text{Operating Income}}{\text{Interest Expense}}$$

There are lots of financial health ratios (some companies even choose to define their own). The right ratios to study depend on the company (and in particular, what type of problems you worry they might run into).

# Appendix: Vocab