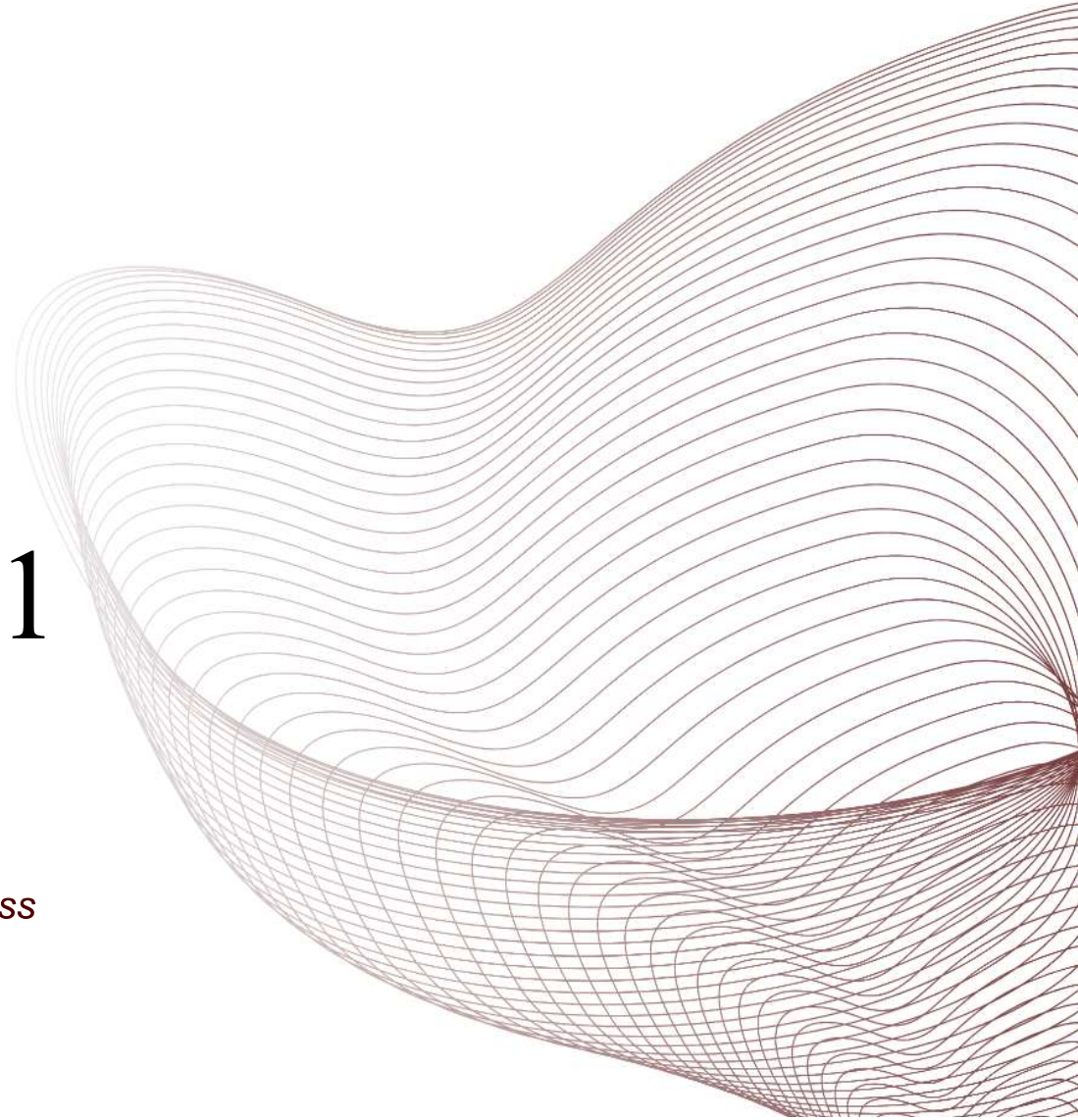


How Businesses Work & Accounting pt. 1

October 16, 2023

*Talk to your neighbor: What is the purpose of a business
and how do they work?*

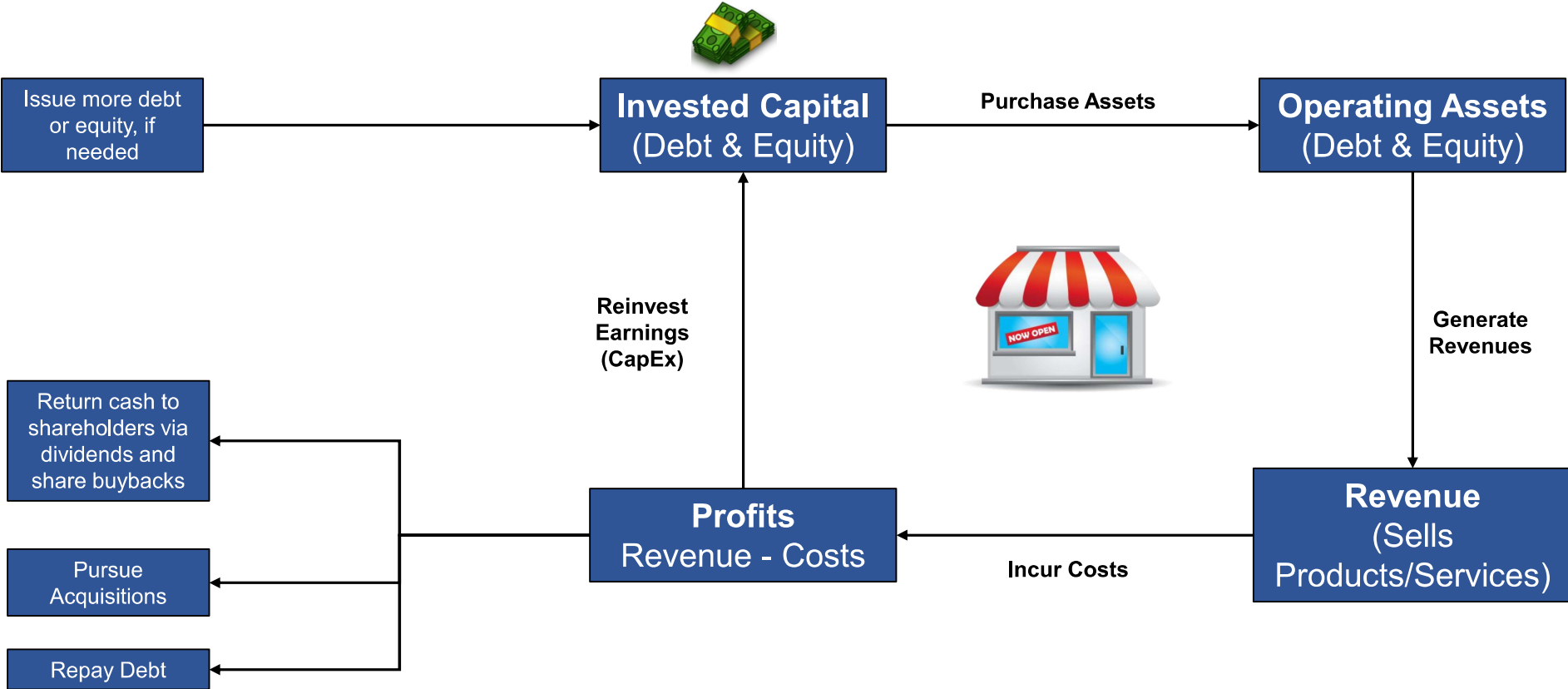


What is the purpose of a business?

To Maximize Shareholder Value

(by generating economic profits)

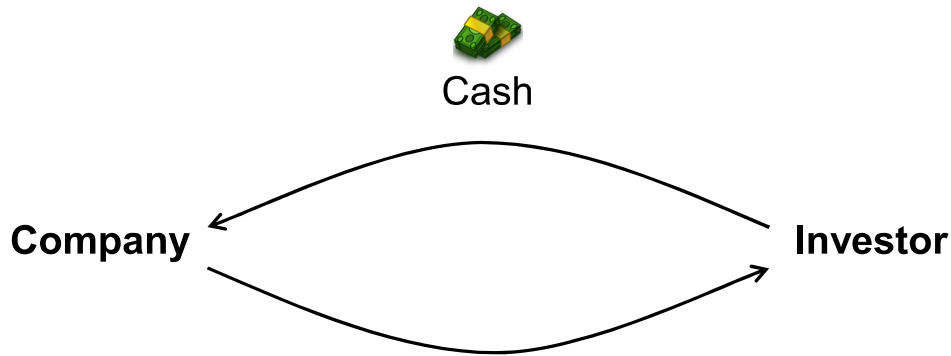
How does a business work?



How businesses work, but linear.



Financing: Companies raise capital



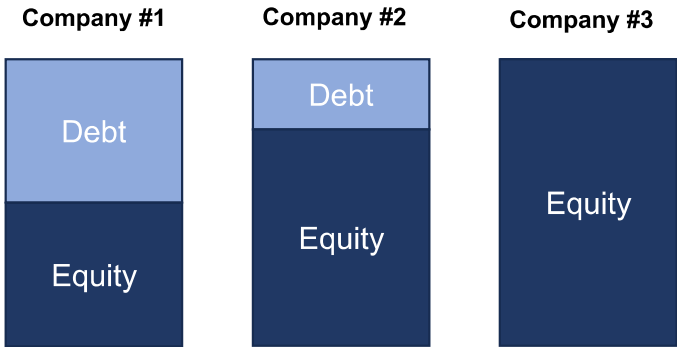
Debt:
Bond/Note/Loan
Receives Interest

Equity:
Stock (ownership)
Claim on earnings

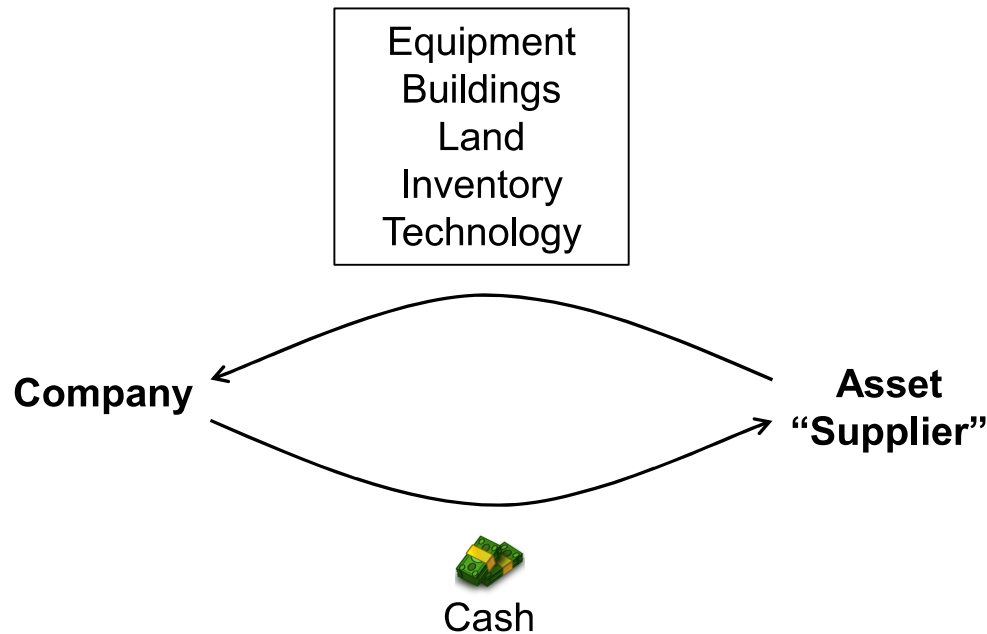
Raising Capital

1. Companies generally get help from investment bankers to raise capital.
2. Can raise equity (common/preferred) through Initial Public Offerings, Follow-On Offerings, and Private Equity / Venture Capital.
3. Can raise debt through bank loans, bond/note offerings, commercial paper, revolving credit, etc.
4. The combination of different types of debt/equity make up a company's capital structure.

Capital Structure Examples



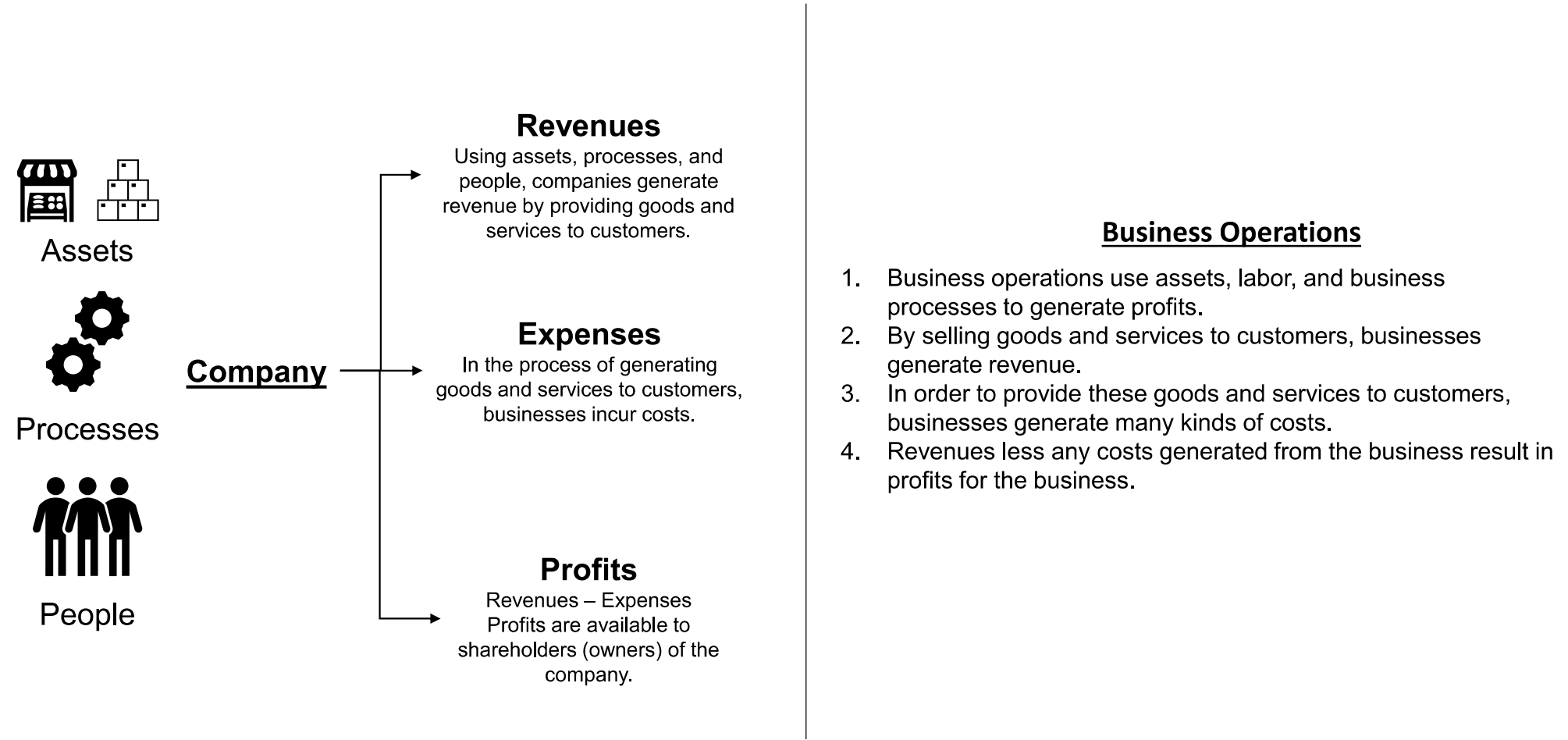
Investing: Companies purchase assets



Purchasing Assets

1. Companies invest in assets to provide goods/services which allow them to generate returns in the future.
2. Investing in assets is generally referred to as capital expenditures (CapEx), known as “organic growth”.
3. Companies can also purchase other companies (which is still just an asset). This is another type of investing activity that would be referred to as an “acquisition”, known as “inorganic growth”.
4. Can purchase stocks and bonds if they have excess cash, which is also the purchase of an asset. “Purchase of Marketable Securities”.

Operating: Generate revenues and expenses through operations



3 Financial Statements

Balance Sheet

**Assets = Liabilities +
Shareholders Equity**

Point in time snapshot of the capital raised by the business (Liabilities + Equity), and the assets that the business owns (Assets).

Income Statement

**Revenue – Expenses =
Profits**

Uses Accrual Accounting

Shows the operational performance of a business and whether a company is profitable over a defined period.

Cash Flow Statement

**Cash From Operations +
Cash From Investing +
Cash From Financing =
Net Change In Cash**

Uses Cash Accounting

Shows the cash that is flowing in and out of a business over a defined period.

Double Entry Accounting

In double entry accounting, each transaction is recorded in at least two accounts as a debit and a credit.

Debits recorded **MUST** be equal to credits recorded.

Debits record incoming money, whereas credits record outgoing money.

Debits increase asset values and decrease liability and equity values.

Credits increase liability and equity values and decrease asset values.

General Journal			
Date	Transaction	Debit	Credit
10/15/20	Rent expense cash <i>purchased rent on account</i>	700	700

Sales Journal			
Date	Transaction	Debit	Credit
10/22/20	Cash Sales <i>sold merchandise</i>	150	150



Cash v. Accrual Accounting

Cash Accounting

The cash flow statement uses cash accounting, which only recognizes transactions when **cash is exchanged**.

The only thing that matters is cash inflows and outflows.

Company A performs a service on credit in January and get's paid \$100 in cash for the service in March.

Cash accounting does not care that the service was performed in January, it only cares that they received \$100 of cash in March.

3/31	Debit - Cash: \$100
	Credit - Revenue: \$100

Accrual Accounting

The income statement uses accrual accounting which is based on the **matching principle**.

The purpose of the matching principle is to match revenues and expenses to the time when they are incurred. Accrual accounting provides predictive value to investors.

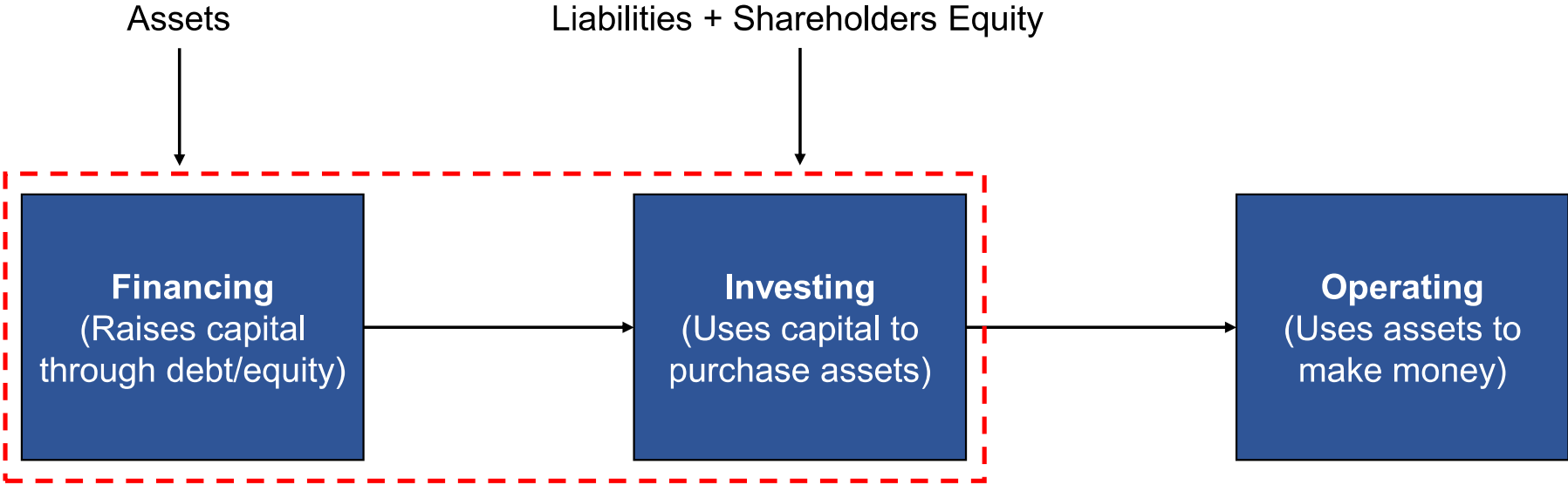
Company A performs a service on credit in January and get's paid \$100 in cash for the service in March.

Accrual accounting DOES care about when the service was completed. Revenue is recognized at the time of the performance obligation (the service).

1/31	Debit - Accounts Receivable: \$100
	Credit - Revenue: \$100

3/31	Debt – Cash: \$100
	Credit – Accounts Receivable: \$100

Balance Sheet



Balance Sheet

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

Investing

Assets

Assets are defined as a resource a company controls that they expect to give them a future benefit.

Shows what a company owns.

Assets include cash, inventory, equipment, building, lands, intangible assets, etc.

Liabilities

Liabilities show what a company owes or has borrowed.

Liabilities include loans, bonds, accounts payable, deferred revenues, accrued expenses, etc.

Shareholders Equity

Shows what shareholders would be entitled to if the assets of a company were liquidated and liabilities were paid off. (residual claim on earnings)

Equity includes common stock + additional paid in capital and retained earnings.

Financing

Balance Sheet

<p style="text-align: center;">Assets</p> <p><u>Current Assets (<1 Year)</u> Cash Short-Term Investments Inventory Receivables</p> <p><u>Non-Current Assets (>1 Year)</u> Long-Term Investments Property, Plant and Equipment Goodwill Other Intangible Assets</p>	<p style="text-align: center;">Liabilities</p> <p><u>Current Liabilities (<1 Year)</u> Accounts Payable Deferred Revenue Short Term Debt (and current portions)</p> <p><u>Non-Current Liabilities (>1 Year)</u> Long-Term Debt Lease Liabilities</p>
	<p style="text-align: center;">Shareholders Equity</p> <p>Common Stock Additional Paid In Capital Retained Earnings</p>

Balance Sheet Example (1/2)

Apple Inc.

CONDENSED CONSOLIDATED BALANCE SHEETS (Unaudited)

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

	July 1, 2023	September 24, 2022
ASSETS:		
Current assets:		
Cash and cash equivalents	\$ 28,408	\$ 23,646
Marketable securities	34,074	24,658
Accounts receivable, net	19,549	28,184
Inventories	7,351	4,946
Vendor non-trade receivables	19,637	32,748
Other current assets	13,640	21,223
Total current assets	122,659	135,405
Non-current assets:		
Marketable securities	104,061	120,805
Property, plant and equipment, net	43,550	42,117
Other non-current assets	64,768	54,428
Total non-current assets	212,379	217,350
Total assets	\$ 335,038	\$ 352,755

Balance Sheet Example (2/2)

LIABILITIES AND SHAREHOLDERS' EQUITY:			
Current liabilities:			
Accounts payable	\$	46,699	\$ 64,115
Other current liabilities		58,897	60,845
Deferred revenue		8,158	7,912
Commercial paper		3,993	9,982
Term debt		7,216	11,128
Total current liabilities		124,963	153,982
Non-current liabilities:			
Term debt		98,071	98,959
Other non-current liabilities		51,730	49,142
Total non-current liabilities		149,801	148,101
Total liabilities		274,764	302,083
Commitments and contingencies			
Shareholders' equity:			
Common stock and additional paid-in capital, \$0.00001 par value: 50,400,000 shares authorized; 15,647,868 and 15,943,425 shares issued and outstanding, respectively		70,667	64,849
Retained earnings/(Accumulated deficit)		1,408	(3,068)
Accumulated other comprehensive income/(loss)		(11,801)	(11,109)
Total shareholders' equity		60,274	50,672
Total liabilities and shareholders' equity	\$	335,038	\$ 352,755

Balance Sheet: Company AIC Raises \$100 of Capital

Assets	Liabilities + Equity	Financing
Cash: \$100	Debt: \$50 Equity: \$50	

Assuming a company has no prior history, they start by raising capital, exchanging debt + equity for cash. Cash will be the company's only asset, while debt (liabilities) and equity will make up the corresponding debt and equity.

Balance Sheet: Company AIC Purchases \$75 of Equipment

	Assets	Liabilities + Equity
Investing	Cash: \$25	Debt: \$50
	Property, Plant, Equipment (PPE): \$75	Equity: \$50

The Liabilities/Equity side of the balance sheet does not change when buying assets with cash. All we have done is trade \$50 of cash (an asset) with \$50 of equipment (another asset).

Balance Sheet: Company AIC Purchases \$25 of Inventory

	Assets	Liabilities + Equity
Investing	Inventory: \$25	Debt: \$50
	Property, Plant, Equipment (PPE): \$75	Equity: \$50

The Liabilities/Equity side of the balance sheet does not change when buying assets with cash. All we have done is trade \$25 of cash (an asset) with \$25 of inventory (another asset).

Income Statement



Income Statement

$$\text{Revenues} - \text{Expenses} = \text{Profits}$$

Revenue

Revenue is generated when a company provides goods or service to customers. The income statement does not care whether the sale was cash or on credit.

Cost of Goods Sold (COGS) – Expense

COGS are expenses that are directly associated with producing a product/service. Includes cost of materials, direct labor costs, manufacturing facility costs, etc.

Sales, General & Administrative (SG&A) – Expense

SG&A is the overhead expenses of doing business, not directly related to producing the product/service. Includes marketing expenses, corporate salaries, rent, information technology (software + IT infra, etc.), legal team, etc.

Depreciation & Amortization (D&A) – Expense

Part of accrual accounting which allocates the cost of investments over a period of the asset's useful life.

Interest Expense – Expense

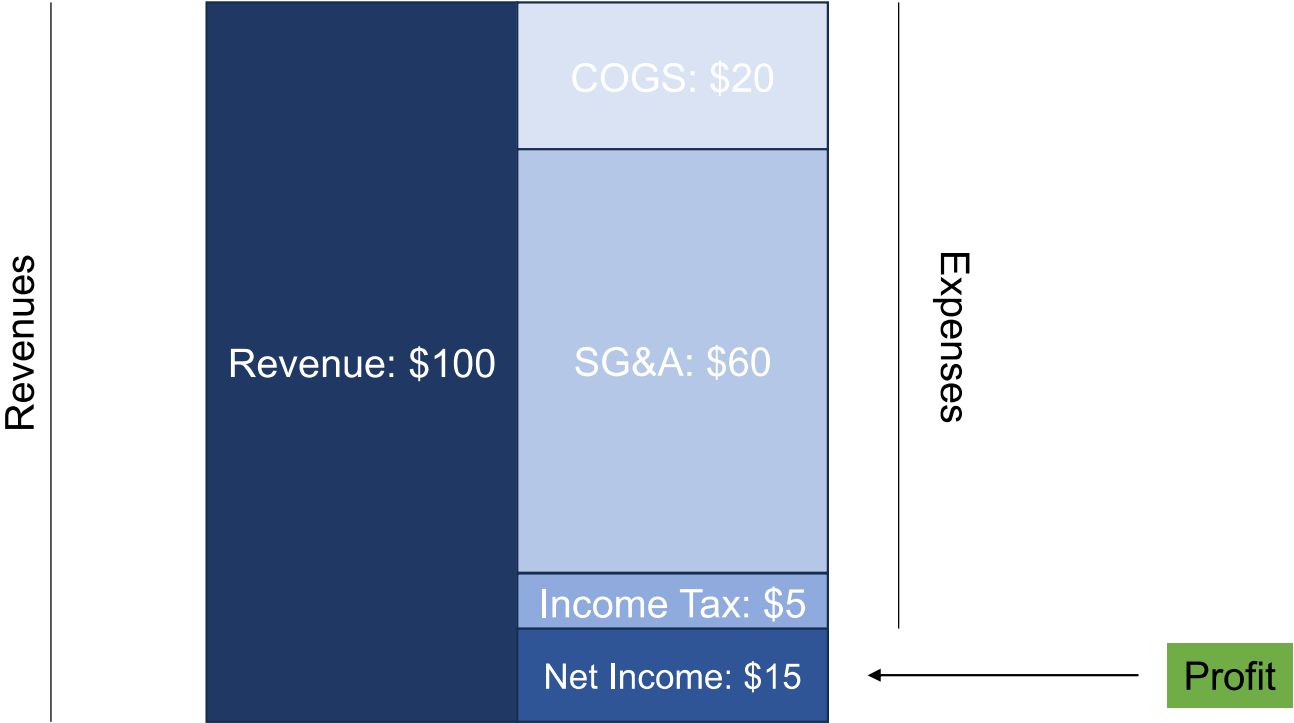
Expense related to contractual payments of interest on outstanding debt.

Income Tax Expense – Expense

Taxes on income. Is different than taxes that are actually paid, due to differences in financial and tax accounting.

Income Statement: Company AIC Operations

In 2022, a company provided \$100 worth of services to its customers. In the process, it incurred \$20 worth of expenses directly related to the services (COGS) and \$60 of overhead. The company has no debt, so incurred \$0 of interest expense, and had \$5 of income tax due to a 25% effective tax rate.



Income Statement Example

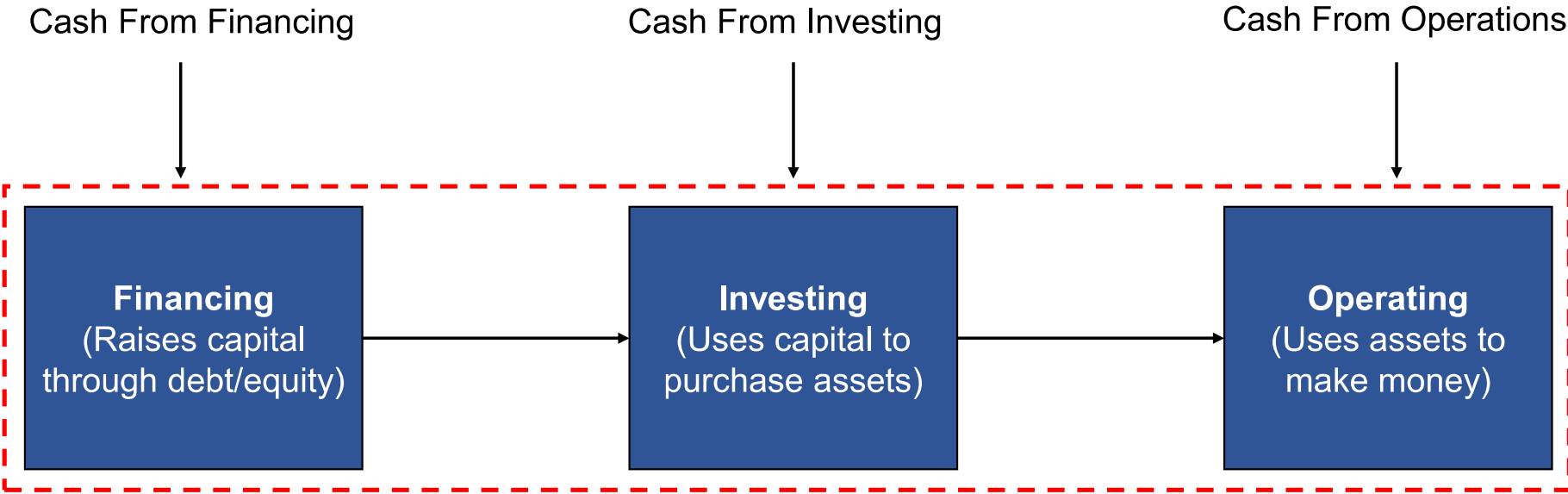
Apple Inc.

CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS (Unaudited)

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

	Three Months Ended		Nine Months Ended	
	July 1, 2023	June 25, 2022	July 1, 2023	June 25, 2022
Net sales:				
Products	\$ 60,584	\$ 63,355	\$ 230,901	\$ 245,241
Services	21,213	19,604	62,886	58,941
Total net sales	81,797	82,959	293,787	304,182
Cost of sales:				
Products	39,136	41,485	146,696	155,084
Services	6,248	5,589	18,370	16,411
Total cost of sales	45,384	47,074	165,066	171,495
Gross margin	36,413	35,885	128,721	132,687
Operating expenses:				
Research and development	7,442	6,797	22,608	19,490
Selling, general and administrative	5,973	6,012	18,781	18,654
Total operating expenses	13,415	12,809	41,389	38,144
Operating income	22,998	23,076	87,332	94,543
Other income/(expense), net	(265)	(10)	(594)	(97)
Income before provision for income taxes	22,733	23,066	86,738	94,446
Provision for income taxes	2,852	3,624	12,699	15,364
Net income	\$ 19,881	\$ 19,442	\$ 74,039	\$ 79,082
Earnings per share:				
Basic	\$ 1.27	\$ 1.20	\$ 4.69	\$ 4.86
Diluted	\$ 1.26	\$ 1.20	\$ 4.67	\$ 4.82
Shares used in computing earnings per share:				
Basic	15,697,614	16,162,945	15,792,497	16,277,824
Diluted	15,775,021	16,262,203	15,859,263	16,394,937

Cash Flow Statement



Cash Flow Statement

Cash From Operations + Cash From Investing + Cash From Financing = Net Change In Cash

Beginning Cash + Cash From Operations + Cash From Investing + Cash From Financing = Ending Cash

Cash From Operations

Net Income (From Income Statement) + Depreciation & Amortization – Net Change In Working Capital

This is basically adjusting the operations shown in the income statement from accrual to cash.

Cash From Investing

- Capital Expenditures – Acquisitions – Purchase of Marketable Securities + Proceeds from sale of equipment/securities/any asset
Related to the purchases and sales of assets.

Cash From Financing

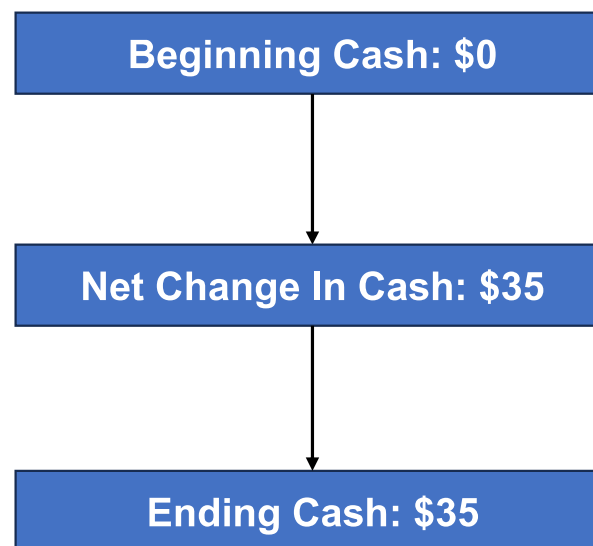
Proceeds From Debt Issuance + Proceeds From Equity Issuance – Debt Repayment – Dividend Payment – Repurchase of stock

Related to increasing and decreasing the amount of capital in the business. Also, capital being returned to shareholders (dividends and stock repurchases)

Cash Flow Statement: Company AIC Cash Inflows/Outflows

Using the information from the income statement and balance sheet, let's put the cash flow statement together.

Cash From Operations: \$10 Net Income: \$15 Depreciation & Amortization: \$0 Net Change In Working Capital: (\$5)
Cash From Investing: (\$75) Capital Expenditures: (\$75)
Cash From Financing: \$100 Debt Issuance: \$50 Equity Issuance: \$50
Net Change In Cash: \$35



Cash Flow Statement Example

Apple Inc.		
CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS (Unaudited)		
(In millions)		
	Nine Months Ended	
	July 1, 2023	June 25, 2022
Cash, cash equivalents and restricted cash, beginning balances	\$ 24,977	\$ 35,929
Operating activities:		
Net income	74,039	79,082
Adjustments to reconcile net income to cash generated by operating activities:		
Depreciation and amortization	8,866	8,239
Share-based compensation expense	8,208	6,760
Other	(1,651)	2,695
Changes in operating assets and liabilities:		
Accounts receivable, net	7,609	4,561
Inventories	(2,570)	1,049
Vendor non-trade receivables	13,111	4,789
Other current and non-current assets	(4,863)	(3,289)
Accounts payable	(16,790)	(6,108)
Other current and non-current liabilities	2,986	246
Cash generated by operating activities	<u>88,945</u>	<u>98,024</u>
Investing activities:		
Purchases of marketable securities	(20,956)	(70,178)
Proceeds from maturities of marketable securities	27,857	24,203
Proceeds from sales of marketable securities	3,959	33,609
Payments for acquisition of property, plant and equipment	(8,796)	(7,419)
Other	(753)	(1,352)
Cash generated by/(used in) investing activities	<u>1,311</u>	<u>(21,137)</u>
Financing activities:		
Payments for taxes related to net share settlement of equity awards	(5,119)	(5,915)
Payments for dividends and dividend equivalents	(11,267)	(11,138)
Repurchases of common stock	(56,547)	(64,974)
Proceeds from issuance of term debt, net	5,228	—
Repayments of term debt	(11,151)	(6,750)
Proceeds from/(Repayments of) commercial paper, net	(5,971)	4,970
Other	(508)	(148)
Cash used in financing activities	<u>(85,335)</u>	<u>(83,955)</u>
Increase/(Decrease) in cash, cash equivalents and restricted cash	4,921	(7,068)
Cash, cash equivalents and restricted cash, ending balances	<u>\$ 29,898</u>	<u>\$ 28,861</u>

Bringing The 3 Financial Statements Together

Income Statement

Revenue: \$100	COGS: \$20
	SG&A: \$60
	Income Tax: \$5
	Net Income: \$15

Cash Flow Statement

Cash From Operations: \$10 Net Income: \$15 Depreciation & Amortization: \$0 Net Change In Working Capital: (\$5)
Cash From Investing: (\$75) Capital Expenditures: (\$75)
Cash From Financing: \$100 Debt Issuance: \$50 Equity Issuance: \$50
Net Change In Cash: \$35

1. Net Income from the income statement gets “closed” to retained earnings within the equity section of the balance sheet.
2. Net change in cash from the cash flow statement is closed to the cash account on the asset side of the balance sheet.

Beg. Cash: \$0 Net Change In Cash: \$35 End. Cash: \$35	Debt: \$50
Beg. Inventory: \$25 COGS: (\$20) End. Inventory: \$5	
Property, Plant, Equipment (PPE): \$75	Beg. Equity: \$50 + \$15 Net Income End. Equity: \$65

2. 1.

Takeaways

- Businesses work by raising capital, using the capital to purchase (invest) in assets, and then operate those assets using labor and business processes to generate profits.
- This is a circular process that theoretically will take place into perpetuity for a business.
- Accounting is “the language of business” and helps us understand what is taking place within a business from a financial perspective.
- We can break this down into 3 separate parts: financing, investing, and operating.
- There are 3 main financial statements: balance sheet, income statement, and cash flow statement
 - Balance Sheet: Covers financing and investing, shows a point in time snapshot of what the business owns, and the capital raise to purchase those assets.
 - Income Statement: Covers operating, shows revenues and expenses using accrual accounting over a set period.
 - Cash Flow Statement: Covers financing, investing and operating, uses cash accounting, shows all of the inflows and outflows of cash in the business.
- All 3 of the financial statements connect:
 - Net Income is closed to the retained earnings account within the “Shareholders Equity” section of the balance sheet
 - Net Change In Cash is closed to the cash account