Business 101: Keeping Score & Funding Growth

¶ 5.1

The Three Pillars of Business



How do accountants record & report what a business owns, owes, earns, and spends?



What do the main financial ratios tell us?



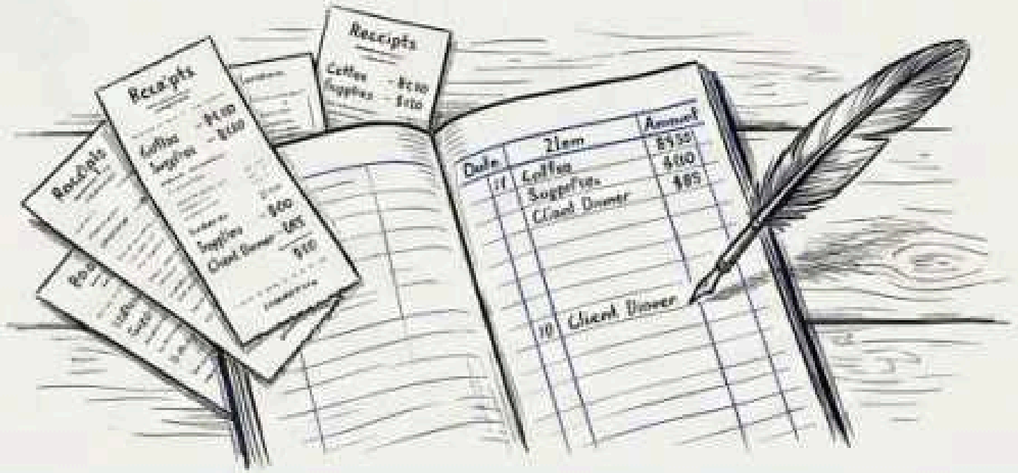
How do managers decide what to invest in, pay for it, and weigh risk?

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The Language of Business

¶ 5.2

Bookkeeping:
Records individual transactions.

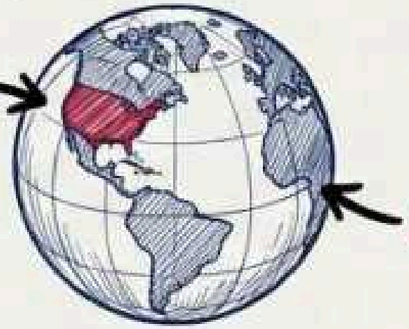


Accounting:
Classifies and summarizes transactions into standardized reports.

	Balance Sheet		Income Statement	

Firms follow agreed rules for comparability

US: GAAP



Global: IFRS



Independent auditors verify statements are fairly presented.

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The Foundation: The Accounting Equation

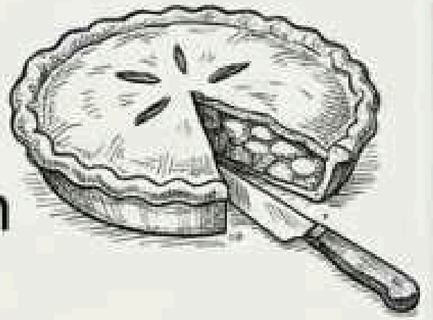
¶ 5.3

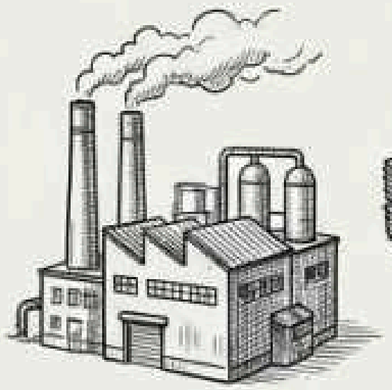
$$A = L + E$$

Assets:
What the firm owns (cash, inventory, equipment).

Liabilities:
What the firm owes.

Equity:
The owners' claim on what remains.

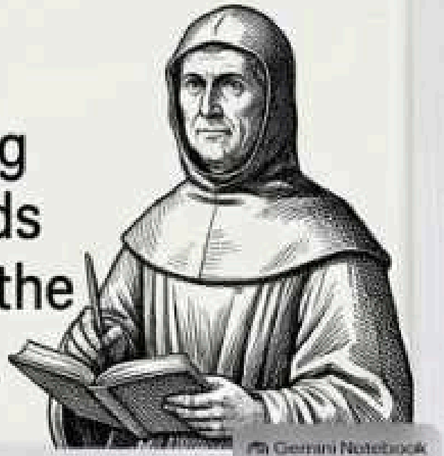








Double-entry bookkeeping (Luca Pacioli, 1494) records every transaction twice so the equation always balances.

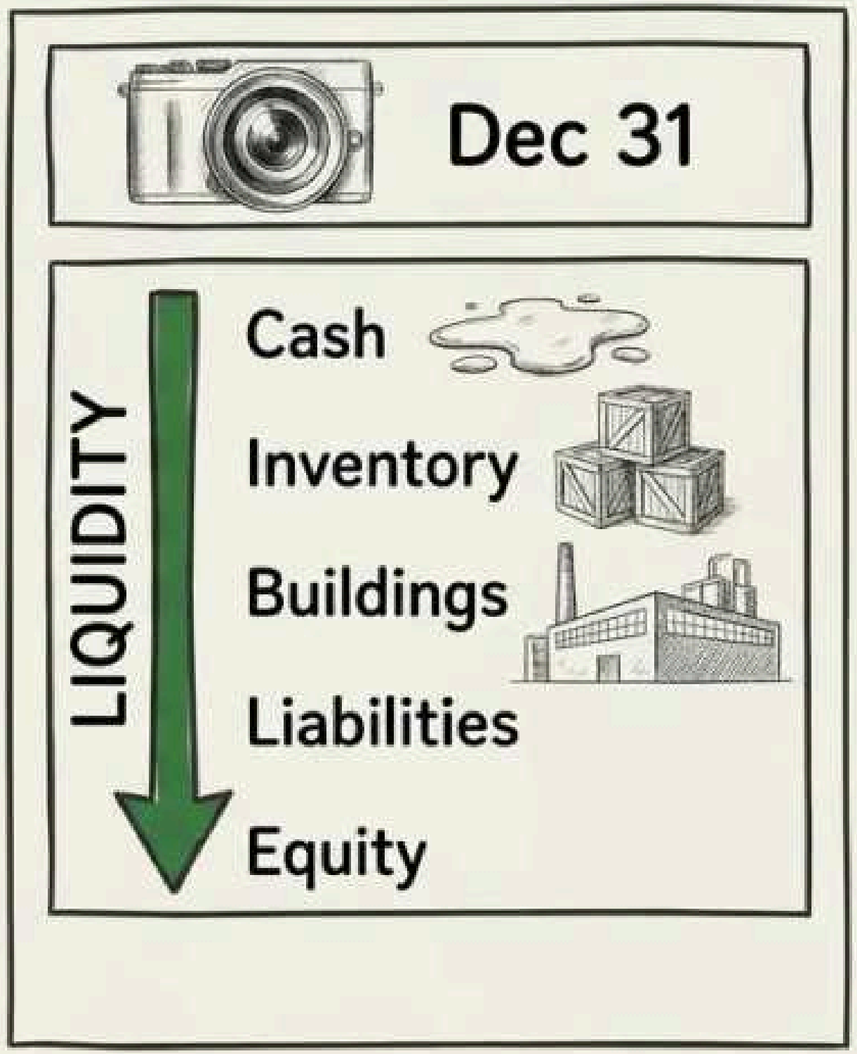


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The Balance Sheet: A Snapshot

¶ 5.4

Answers: What does the firm own and owe right now, and how is it financed?

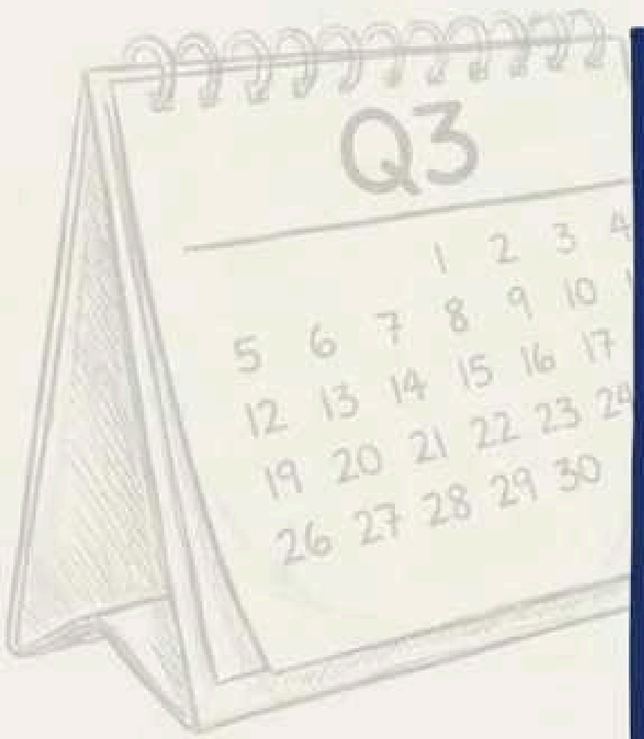


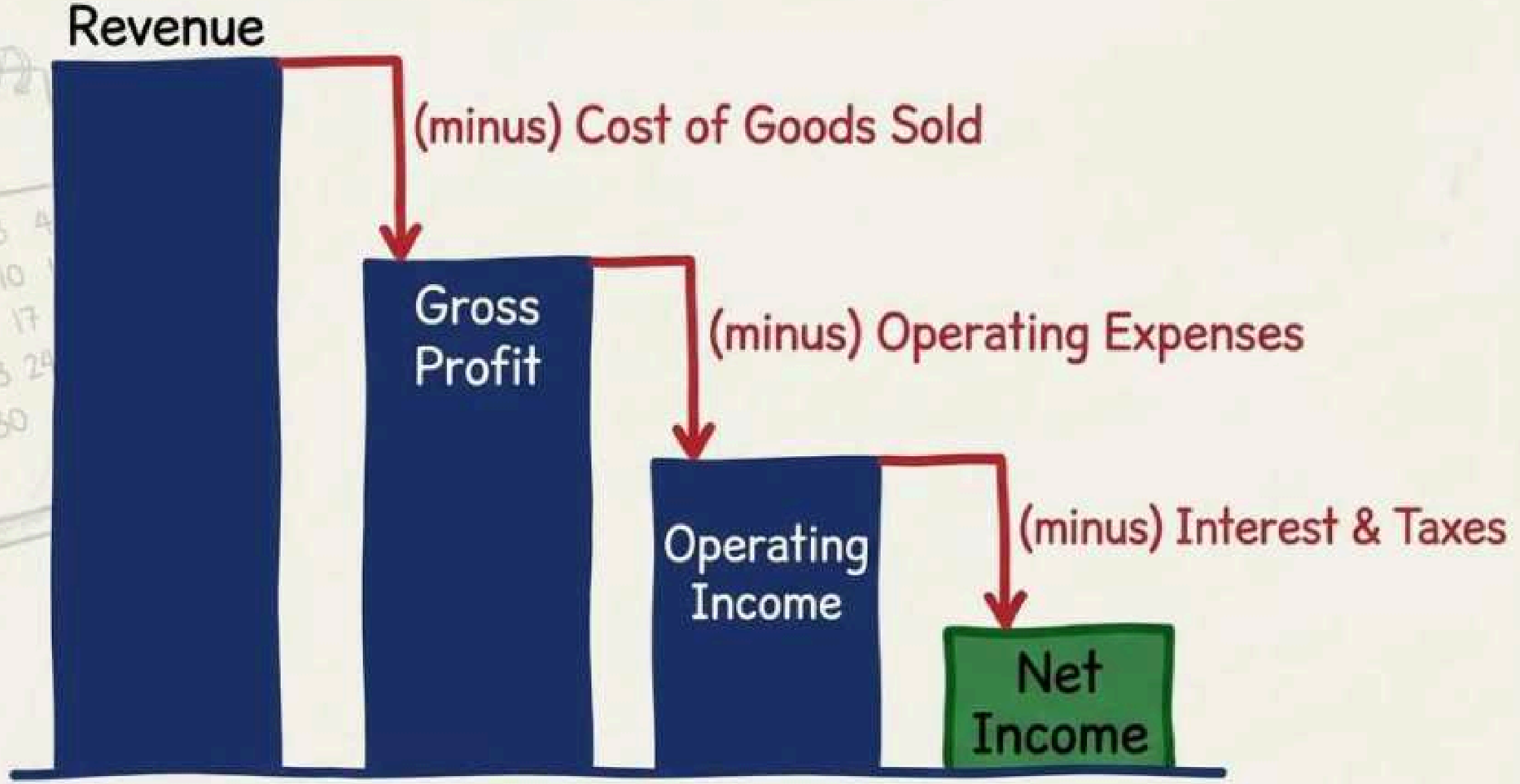
Note: Does not show whether the firm was profitable!

The Income Statement: The Period

¶ 5.5

Answers: Did the firm earn a profit over the period?





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Worked Example: The Small Shop

¶ 5.6



	Revenue:	$200,000
— (minus)	Cost of Goods Sold:	$120,000
(equals)	Gross Profit:	$80,000
— (minus)	Operating Expenses:	$50,000
(equals)	Operating Income:	$30,000
— (minus)	Interest & Taxes: ($5k each)	$10,000
(equals)	**Net Income:**	**$20,000**

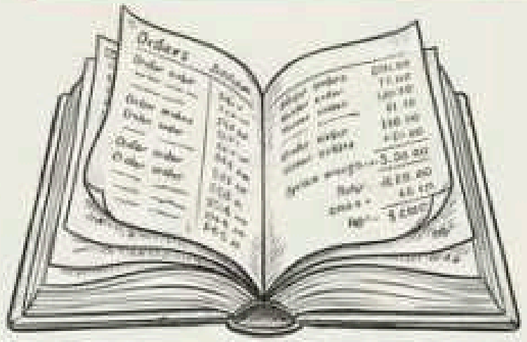
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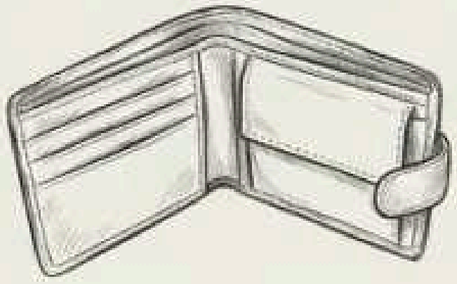
Statement of Cash Flows

¶ 5.7

⚠ PROFIT ≠ CASH

Profit





No Cash

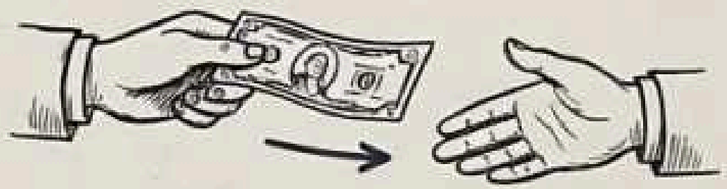


A firm can report a profit while customers owe it money, and run out of cash despite a full order book. Lenders watch cash flow closely.

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Why Profit and Cash Differ

¶ 5.8

	Accrual Accounting	Cash-Basis Accounting
When Recorded	Revenue earned & expenses incurred	Only actual cash payments.
Mechanism	Matches effort and reward in the same period. 	Follows the literal movement of money. 
Best For	Large firms.	Simple, very small businesses.

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Financial Ratios: Turning Statements into Comparisons

¶ 5.9

Liquidity



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

(Ability to pay soon-due bills)

Profitability



$$\text{Profit Margin} = \frac{\text{Net Income}}{\text{Revenue}}$$

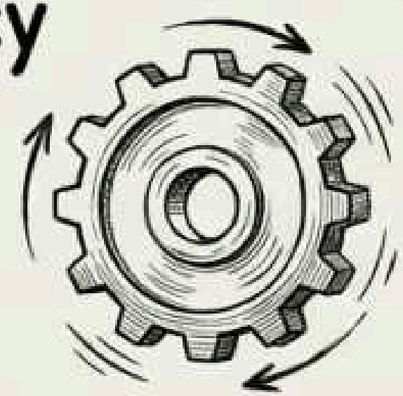
Leverage

Debt to Equity



Efficiency

Inventory Turnover



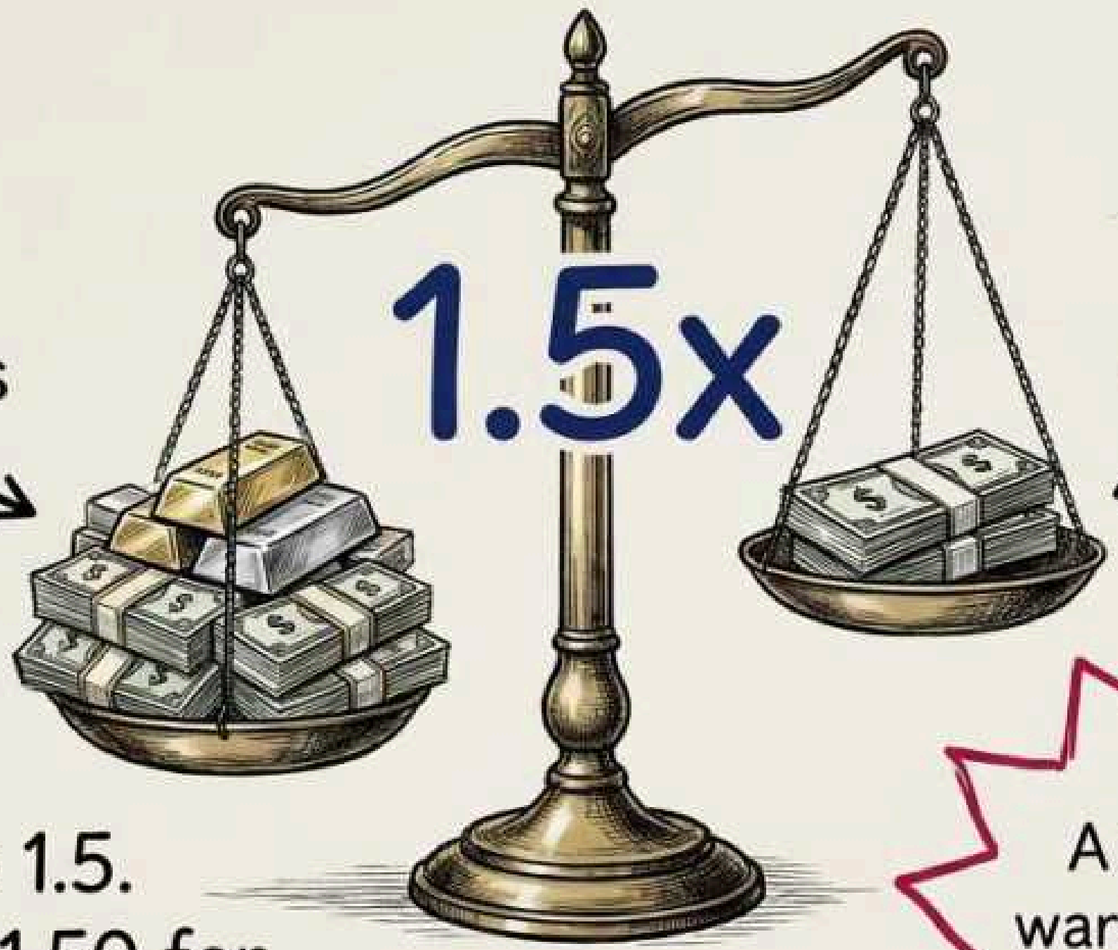
A ratio means little alone; compare it with the firm's past and with its industry.

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Ratio Worked Example: Liquidity

¶ 5.10

$150k
Current Assets



$100k
Current Liabilities

Current Ratio = 1.5.
The firm holds $1.50 for every $1.00 due soon.

< 1.0 Warning:
A ratio under one warns warns the firm may struggle to pay bills (though "normal" depends on the industry).

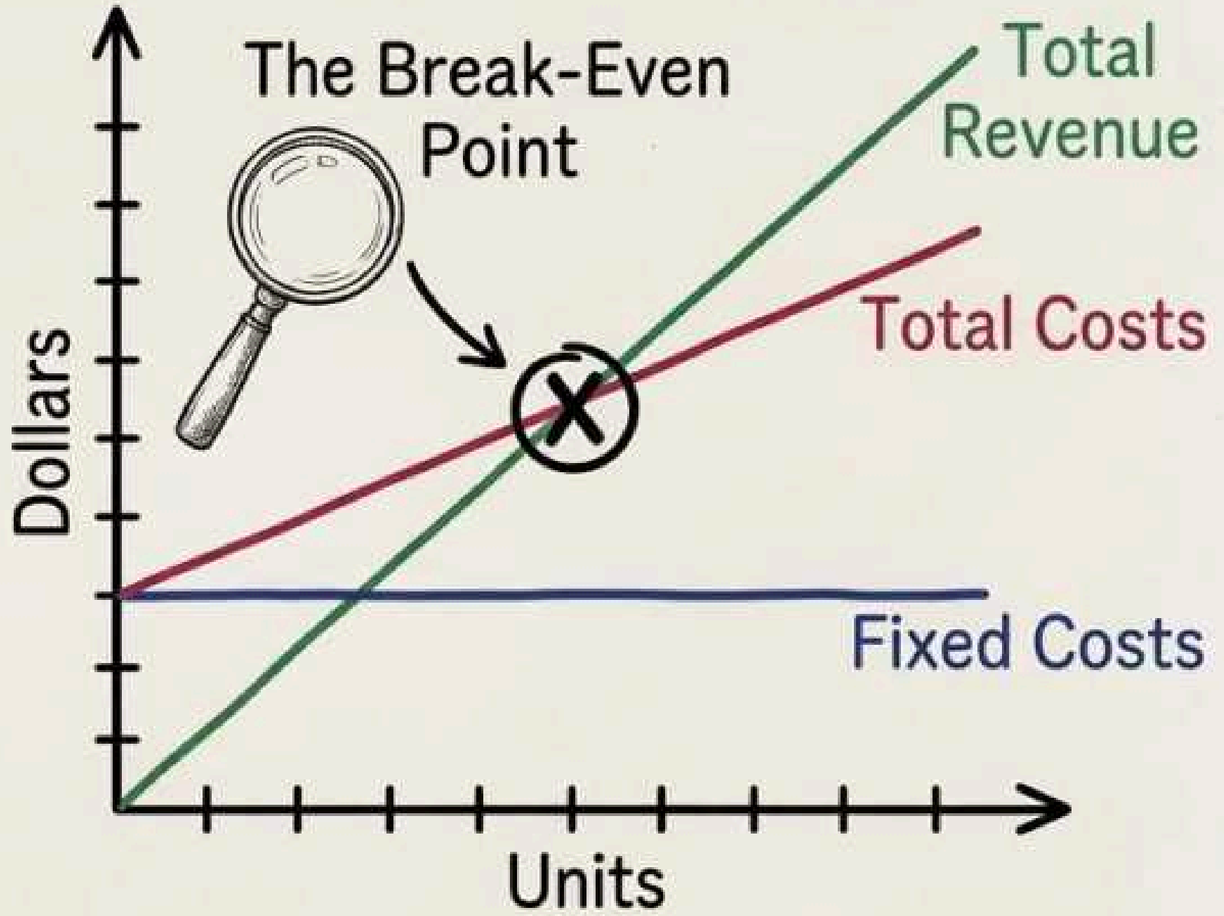
Budgeting & Break-Even Analysis

¶ 5.11

Fixed Costs (e.g., rent) don't change with output.

Variable Costs (e.g., materials) rise with each unit.

$$\text{Break-even Point} = \frac{\text{Fixed Costs}}{\text{Price - Variable Cost per Unit)}}$$



Below this point, the firm loses money; above it, each extra unit adds profit.

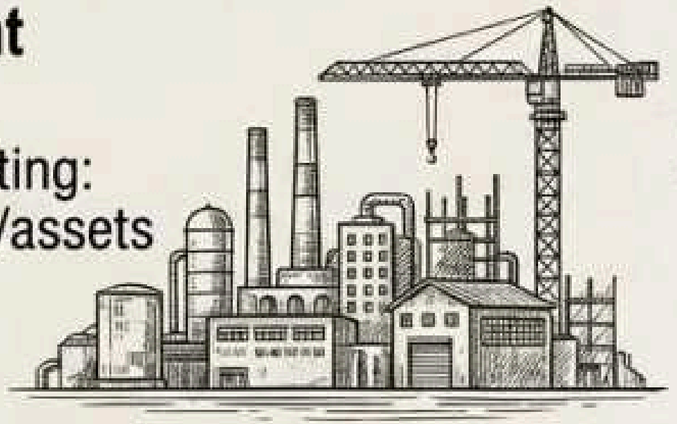
The Three Decisions of Finance

¶ 5.12

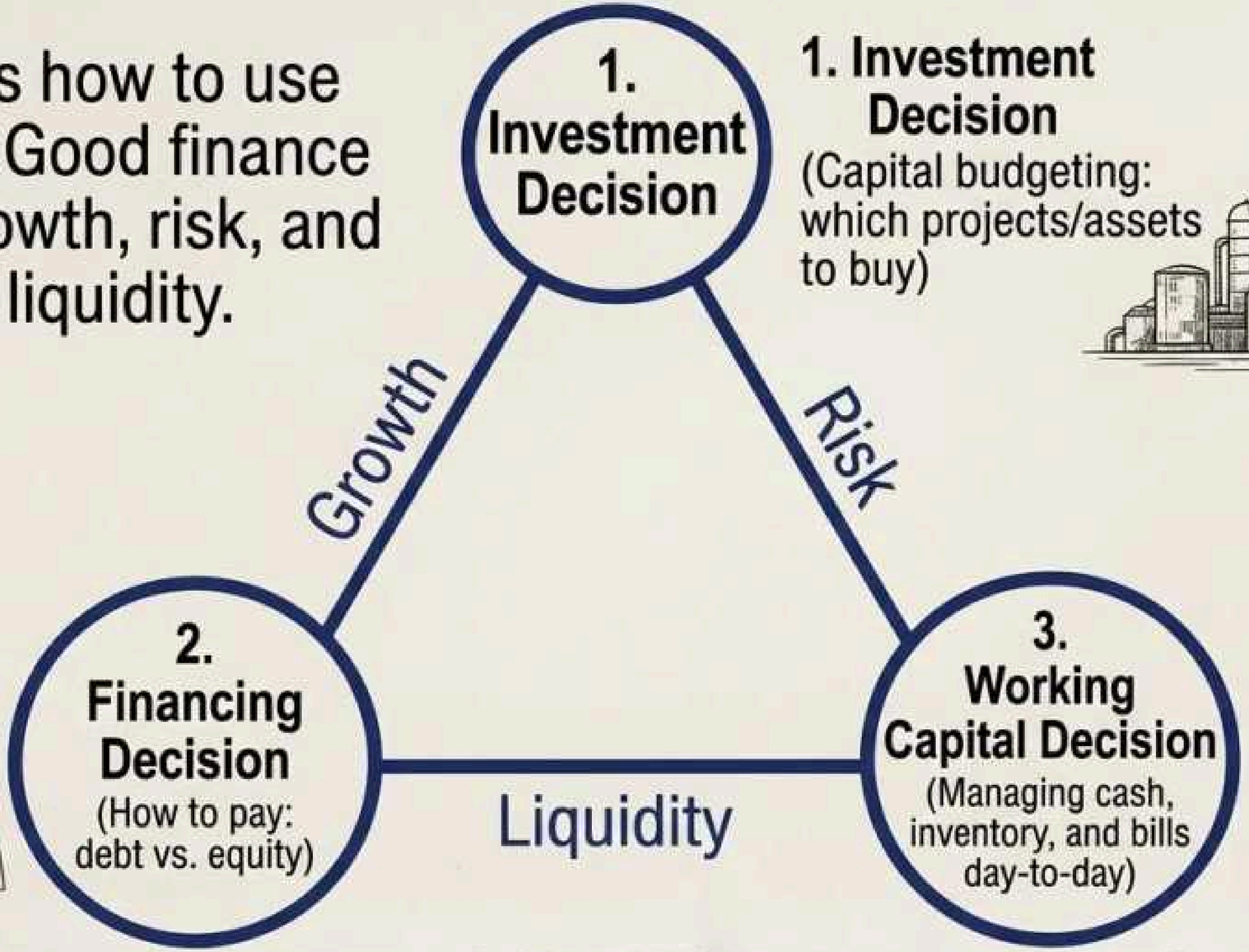
Finance asks how to use money well. Good finance balances growth, risk, and the need for liquidity.



1. **Investment Decision**
(Capital budgeting: which projects/assets to buy)





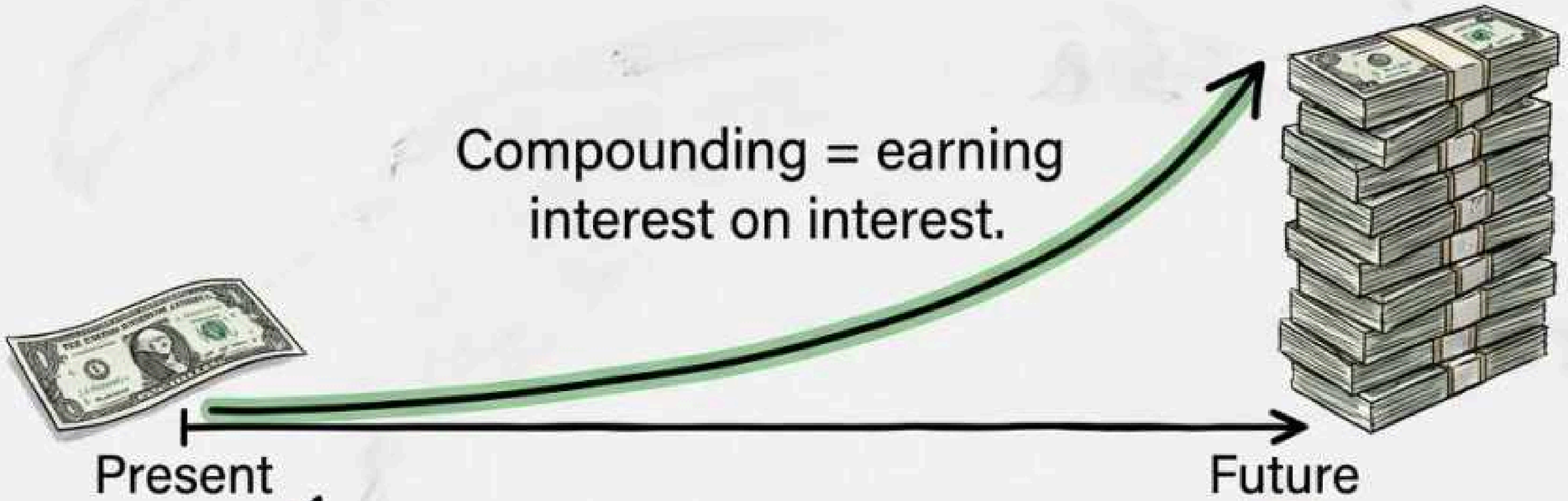


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The Foundation: Time Value of Money

¶ 5.13

A dollar today > a dollar next year (it can earn interest).



Present Value = discounting future cash back to today's terms to compare costs now with later benefits.

Rule of 72

$$\frac{72}{\text{Interest Rate}} \approx \text{Years to Double}$$

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Present Value: Worked Example

¶ 5.14

You will receive $100 in one year. Fair rate of return is 10%.

Today: $90.91



÷ 1.10

Year 1



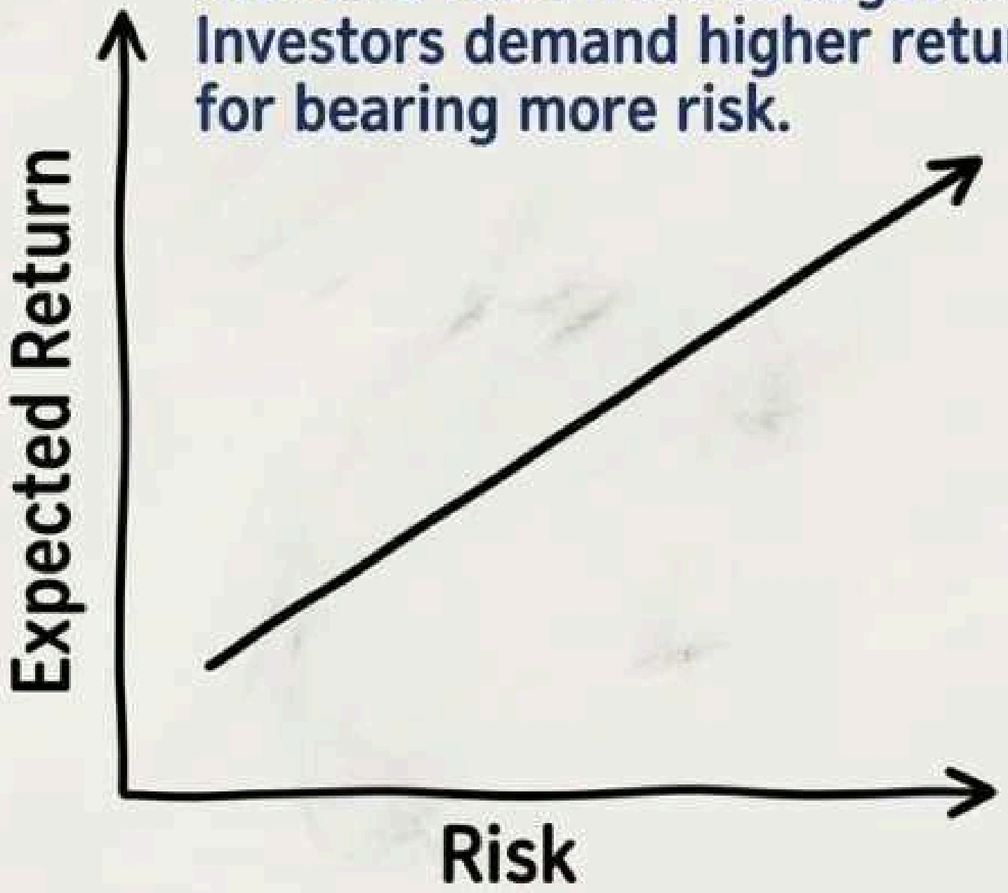
You need only ~$91 today, since $91 growing at 10% becomes $100.

A promise of future money is mathematically worth less than the same amount in hand today.

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Risk, Return, and Diversification

¶ 5.15





Diversification: Harry Markowitz (1952) proved that spreading money across assets that do not move together reduces risk without giving up all return.

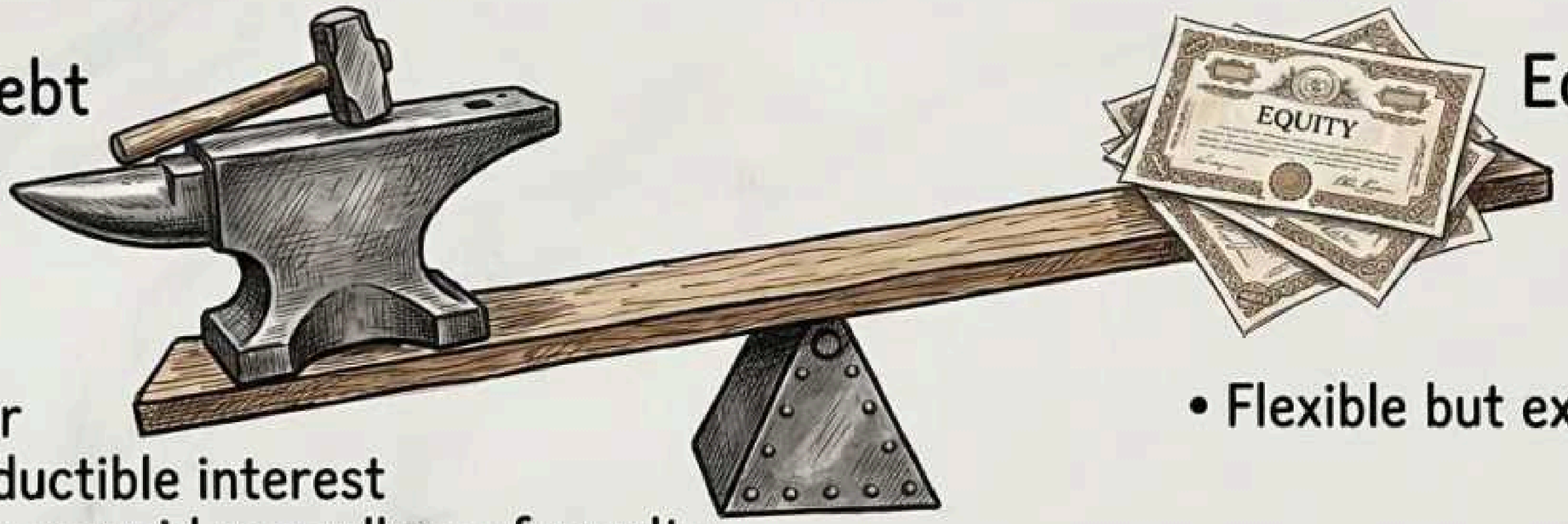
This logic applies to holding many stocks, and to a firm's portfolio of internal projects.

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Capital Structure & Leverage

¶ 5.16

Capital structure is the firm's chosen mix of debt and equity.



- Cheaper
- Tax-deductible interest
- MUST be repaid regardless of results

- Flexible but expensive

The Danger of Leverage: Using debt magnifies both gains and losses. Too much debt drives bankruptcy when sales fall.

The right mix depends entirely on how stable the firm's earnings are.

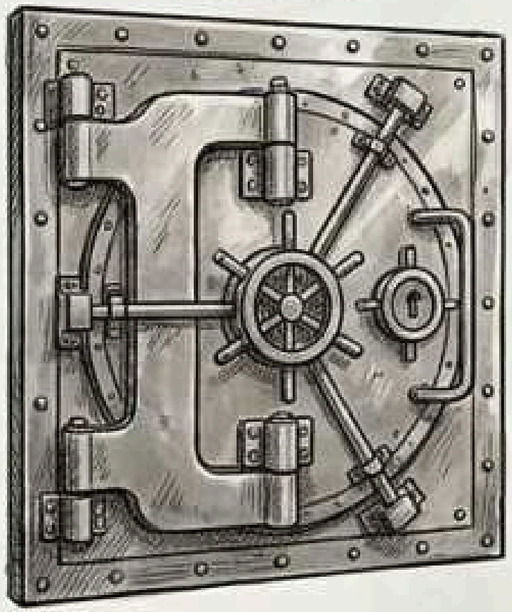
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Financial Markets: Connecting the Ecosystem

¶ 5.17

Markets connect savers with firms needing capital.

Savers



Bonds



Loan returning interest + principal

IPO



Firms



Stocks

Share of ownership





Stock Exchange

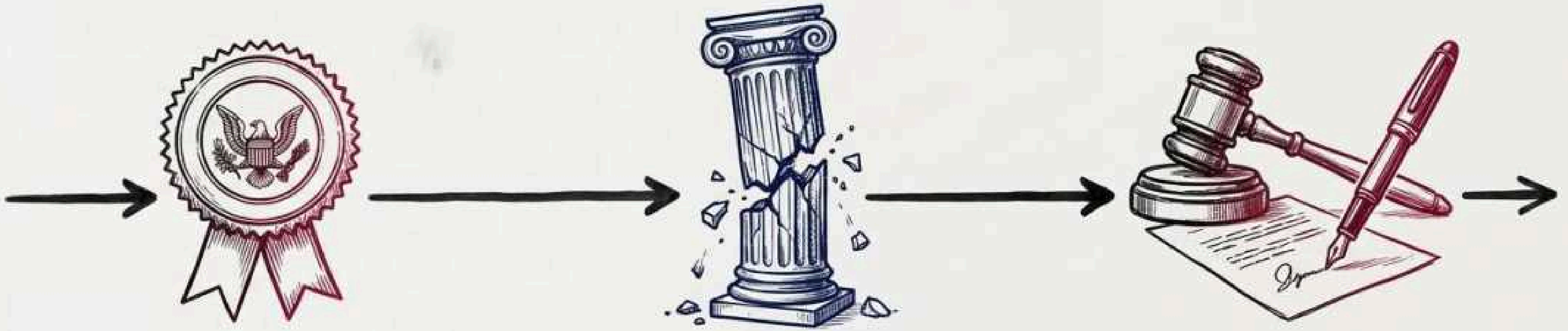
Exchanges let investors trade shares afterward, creating liquidity and making it easier to raise equity.

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Integrity, Disclosure, and the Law

¶ 5.18

Financial statements must be honest.



1934

The Securities and Exchange Commission (SEC) is created to oversee public company disclosure.

2001

The Catalyst: Enron collapse (hidden debts, inflated profits) destroys accounting firm Arthur Andersen.

2002

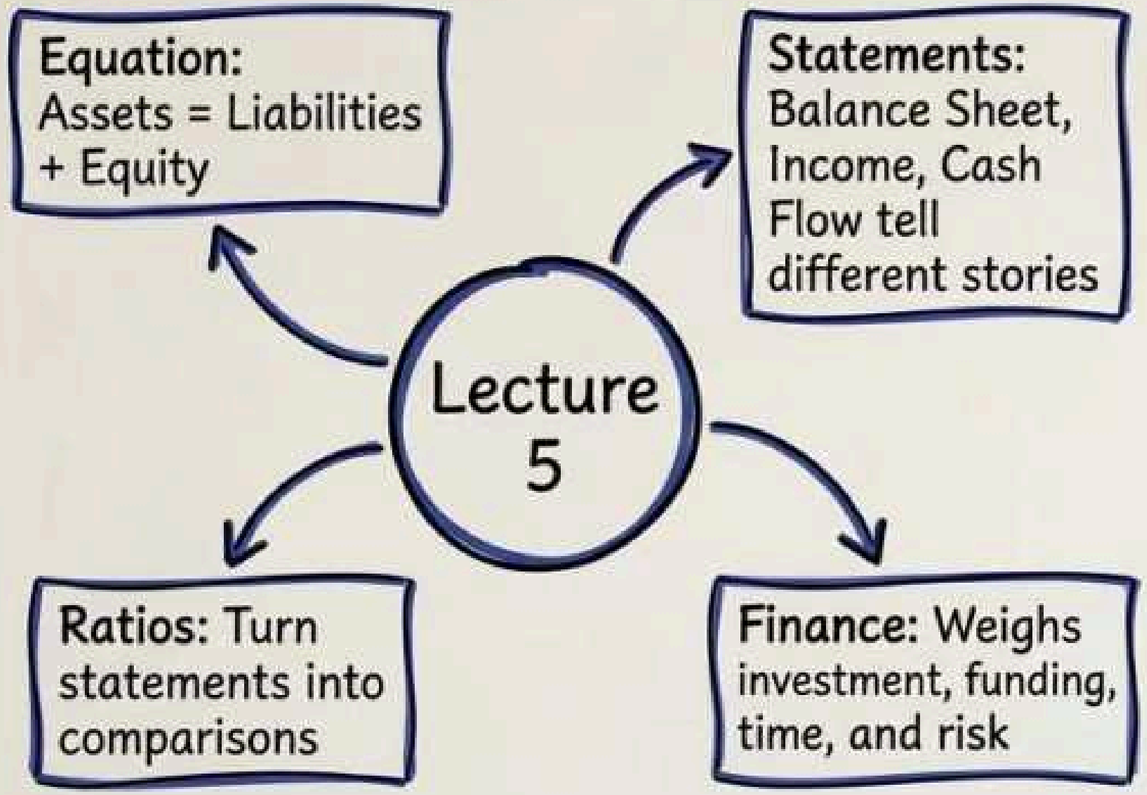
The Response: Congress passes the Sarbanes-Oxley Act (SOX), tightening audit rules and legally forcing executives to personally certify financial reports.

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Recap & Final Exercise

¶ 5.19

Recap



Exercise

Pop Quiz: Compute the break-even sales for a stall.

Scenario: Rent $1,000/mo, Price $10, Variable Cost $4.

Solve Break-Even:

$$BE = \frac{\$1,000}{(\$10 - \$4)} = 167 \text{ units}$$

→ Next: Lecture 6
(Business in Society)

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