CFA Institute®
Investment Foundations

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# Module 3: INPUTS AND TOOLS

## Chapter 7: Financial Statements

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Faculty Bio

| Module | Topic | Weight | LOS | Exam Qs | Hours to Study | Module Practice Qs | Chapter Practice Qs |
|---|---|---|---|---|---|---|---|
| **Module 1** | **Industry overview** | 5% | 7 | 6 | 5 | 28 | 28 |
| Chapter 1 | The Investment Industry: A Top-Down View | | | | | | |
| **Module 2** | **Ethics and regulation** | 10% | 14 | 12 | 10 | 91 | |
| Chapter 2 | Ethics and Investment Professionalism | | | | | | 49 |
| Chapter 3 | Regulation | | | | | | 42 |
| **Module 3** | **Inputs and tools** | 20% | 50 | 24 | 20 | 291 | |
| Chapter 4 | Microeconomics | | | | | | 53 |
| Chapter 5 | Macroeconomics | | | | | | 57 |
| Chapter 6 | Economics of International Trade | | | | | | 47 |
| Chapter 7 | Financial Statements | | | | | | 70 |
| Chapter 8 | Quantitative Concepts | | | | | | 64 |
| **Module 4** | **Investment instruments** | 20% | 29 | 24 | 20 | 213 | |
| Chapter 9 | Debt Securities | | | | | | 69 |
| Chapter 10 | Equity Securities | | | | | | 72 |
| Chapter 11 | Derivatives | | | | | | 42 |
| Chapter 12 | Alternative Investments | | | | | | 30 |
| **Module 5** | **Industry structure** | 20% | 27 | 24 | 20 | 96 | |
| Chapter 13 | Structure of the Investment Industry | | | | | | 28 |
| Chapter 14 | Investment Vehicles | | | | | | 29 |
| Chapter 15 | The Functioning of Financial Markets | | | | | | 39 |
| **Module 6** | **Serving client needs** | 5% | 12 | 6 | 5 | 76 | |
| Chapter 16 | Investors and Their Needs | | | | | | 35 |
| Chapter 17 | Investment Management | | | | | | 41 |
| **Module 7** | **Industry controls** | 20% | 24 | 24 | 20 | 154 | |
| Chapter 18 | Risk Management | | | | | | 51 |
| Chapter 19 | Performance Evaluation | | | | | | 53 |
| Chapter 20 | Investment Industry Documentation | | | | | | 50 |
| | **Total** | **100%** | **163** | **120** | **100** | **949** | **949** |

# AFTER COMPLETING THIS CHAPTER, YOU SHOULD BE ABLE TO DO THE FOLLOWING:

a) Describe the roles of standard setters, regulators, and auditors in financial reporting;
b) Describe information provided by the balance sheet;
c) Compare types of assets, liabilities, and equity;
d) Describe information provided by the income statement;
e) Distinguish between profit and net cash flow;
f) Describe information provided by the cash flow statement;
g) Identify and compare cash flow classifications of operating, investing, and financing activities;
h) Explain links between the income statement, balance sheet, and cash flow statement;
i) Explain the usefulness of ratio analysis for financial statements;
j) Identify and interpret ratios used to analyse a company's liquidity, profitability, financing, shareholder return, and shareholder value.

# ROLES OF STANDARD SETTERS, AUDITORS, AND REGULATORS IN FINANCIAL REPORTING

| **Standards for financial reporting** are typically set at the national or international level by private sector accounting standard-setting bodies. | |
|---|---|
| **International Financial Reporting Standards (IFRS)** Published by the International Accounting Standards Board (IASB) | **US Generally Accepted Accounting Principles (US GAAP**) |
| As of 2013, most countries require or allow companies to produce financial reports using IFRS. | In the United States, US-based publicly traded companies must report using US GAAP, but non-US-based companies may report using IFRS. |
| When standards allow some choice, the accounting method that a company chooses affects the earnings reported in the company’s financial statements. | |
| Regulators support financial reporting standards by recognising, adopting, and enforcing them and by implementing and enforcing rules that complement them. | |

LOS a: Describe the roles of standard setters, regulators, and auditors in financial reporting.

# ROLES OF STANDARD SETTERS, AUDITORS, AND REGULATORS IN FINANCIAL REPORTING

| **Auditors:** Before they can be published, the financial statements must first be reviewed by independent accountants called auditors | |
|---|---|
| **Unqualified or Clean Opinion** | **Adverse Opinion** |
| Means that the financial statements are prepared in accordance with the applicable accounting standards | Indicates that the financial statements do not comply with the accounting standards and, therefore, do not provide a fair representation of the company's performance. |
| Note that a clean audit report does not always imply a financially sound company, but it only verifies that the financial statements were created and presented correctly. It is not a judgement on the company's performance but on how well it accounted for its performance. | |

LOS a: Describe the roles of standard setters, regulators, and auditors in financial reporting.

# FINANCIAL STATEMENTS

Income Statement

Also called statement of profit or loss, profit and loss statement, or statement of operations

$A = L + E$

Balance Sheet

Financial Information

Cash Flow Statement

1. Operating
2. Investing
3. Financing

Also called statement of financial position or statement of financial condition

Notes to the Financial Statements

Other reports may be required.
UK = Director & Auditor
U.S. = 10-K with SEC

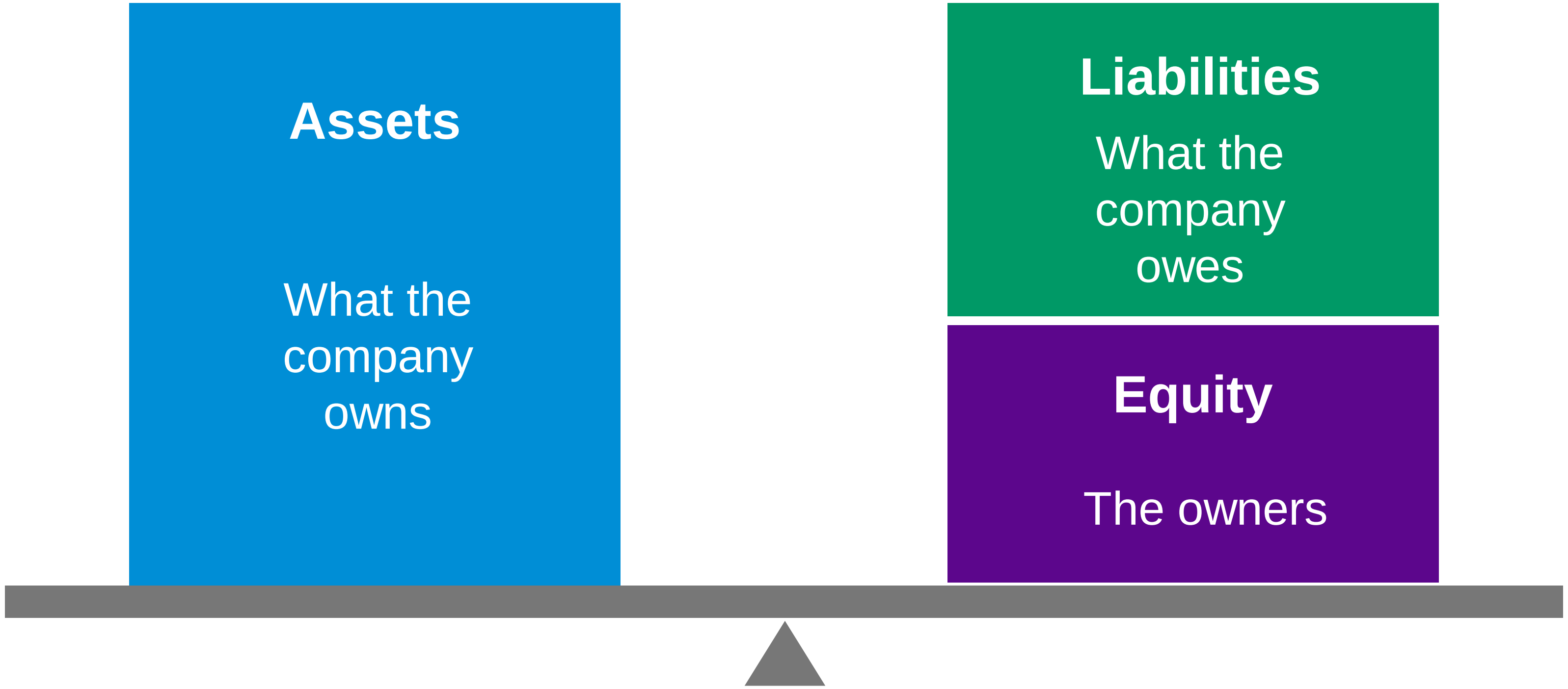
LOS b: Describe information provided by the balance sheet.

# THE BALANCE SHEET

A = L +E Total assets = Total liabilities + Total shareholders' equity

A – L= E Total assets - Total liabilities = + Total shareholders' equity

A – E = L Total assets - Total shareholders' equity = Total liabilities




Also called statement of financial position or statement of financial condition

It is at a point in time!

LOS b: Describe information provided by the balance sheet.

# THE BALANCE SHEET

**Assets**

What the company owns

−

**Liabilities**

What the company owes

=

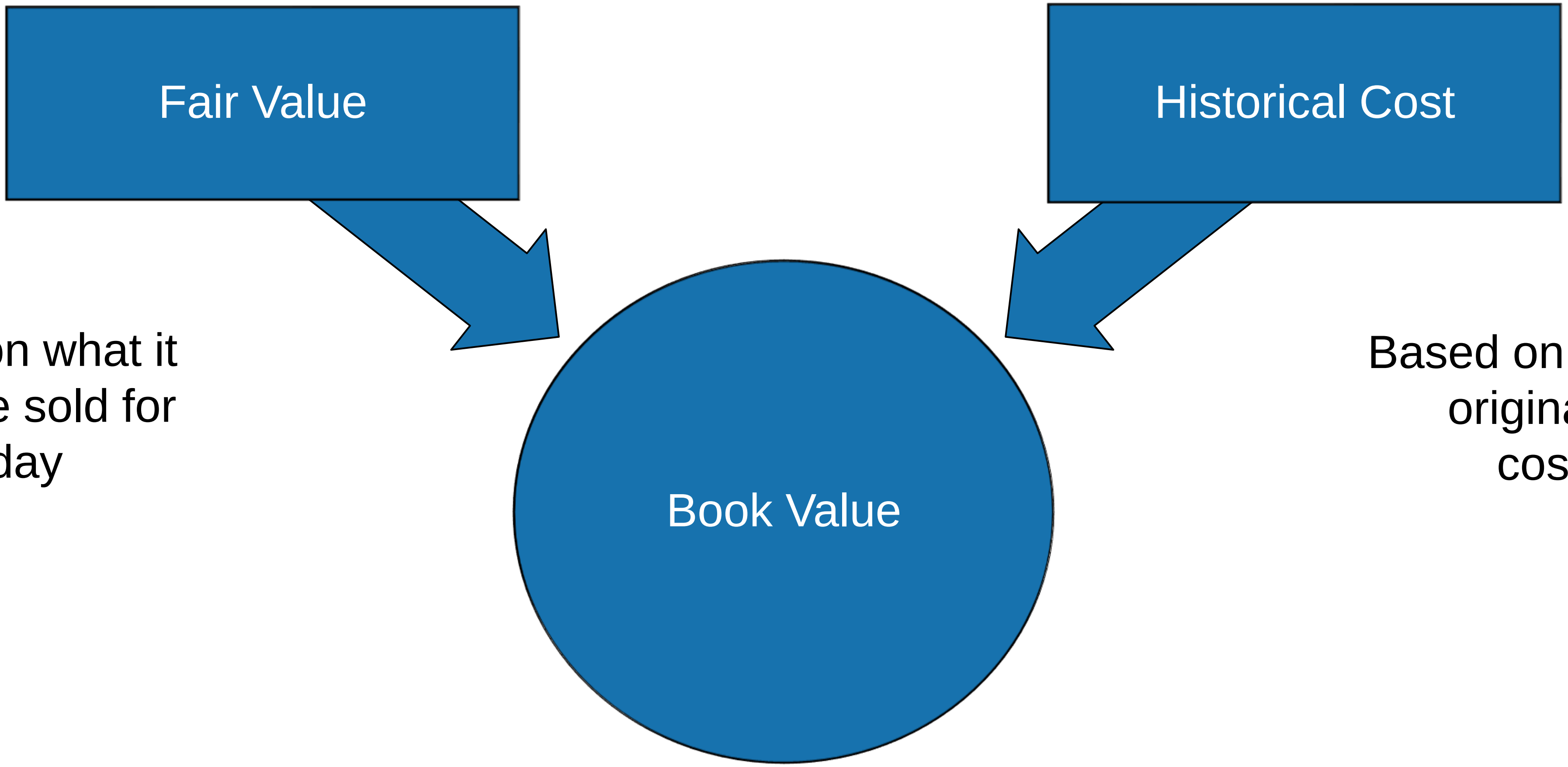
**Equity**

The owners

Equity reflects the **residual value** of the company's shares.
This value is generally not the same as the company's current market value, which is the value that the market believes the company is currently worth or how much investors are willing to pay to own the shares of the company.

LOS b: Describe information provided by the balance sheet.

# REPORTED VALUES ON THE BALANCE SHEET




Based on what it could be sold for today

Based on what it originally cost

LOS b: Describe information provided by the balance sheet.

# ABC COMPANY:
# STATEMENT OF FINANCIAL POSITION

**As of 31 December**
($ millions)

| **Assets** | 20X2 | | 20X1 | |
|---|---|---|---|---|
| Cash | $25 | | $16 | |
| Accounts receivable | 40 | | 35 | |
| Inventories | 95 | | 90 | |
| Other current assets | 5 | | 5 | |
| Total current assets | | $165 | | $146 |
| Gross property, plant, and equipment | $460 | | $370 | |
| Accumulated depreciation | (160) | | (120) | |
| Net property, plant, and equipment | $300 | | $250 | |
| Intangible assets | 100 | | 100 | |
| Total non-current assets | | $400 | | $350 |
| **Total assets** | | $565 | | $496 |

LOS b: Describe information provided by the balance sheet.

# ABC COMPANY: STATEMENT OF FINANCIAL POSITION (CONTINUED)

| **As of 31 December**<br>($ millions)<br>**Liabilities and Equity** | 20X2 | | 20X1 | |
|---|---|---|---|---|
| Accounts payable | $54 | | $50 | |
| Accrued liabilities | 36 | | 36 | |
| Current portion of long-term debt | 10 | | 10 | |
| Total current liabilities | | $100 | | $96 |
| | | | | |
| Long-term debt | 232 | | 200 | |
| Total non-current liabilities | | $232 | | $200 |
| Total liabilities | | $332 | | $296 |
| | | | | |
| Common stock | $85 | | $85 | |
| Retained earnings | 148 | | 115 | |
| Total owners' equity | | $233 | | $200 |
| **Total liabilities and equity** | | $565 | | $496 |

+$33

LOS b: Describe information provided by the balance sheet.

# CURRENT AND NON-CURRENT ASSETS

**Assets**

- **Current Assets**
  - Cash
  - Accounts Receivable
  - Inventories
- **Non-Current Assets**
  - Property, Plant, and Equipment
  - Intangible Assets (patents)
  - Goodwill
  - Financial Assets

Assets that are expected to be converted into cash, used up, or sold within the current operating period (usually one year)

Longer term in nature

LOS c: Compare types of assets, liabilities, and equity.

# NON-CURRENT ASSETS

When a company purchases a long-term (non-current) asset, the purchase amount is capitalised and reported as an asset on the balance sheet.

The company allocates the cost of that asset over the asset’s estimated useful life, a process called depreciation (or amortisation for intangible assets).

- The amount allocated each year is called the depreciation (or amortisation) expense, and it is reported on the income statement as an expense.
- Accumulated depreciation is the sum of the reported depreciation expenses for the particular asset.
- Net book value is calculated as the gross value of the asset minus accumulated depreciation (or amortisation).

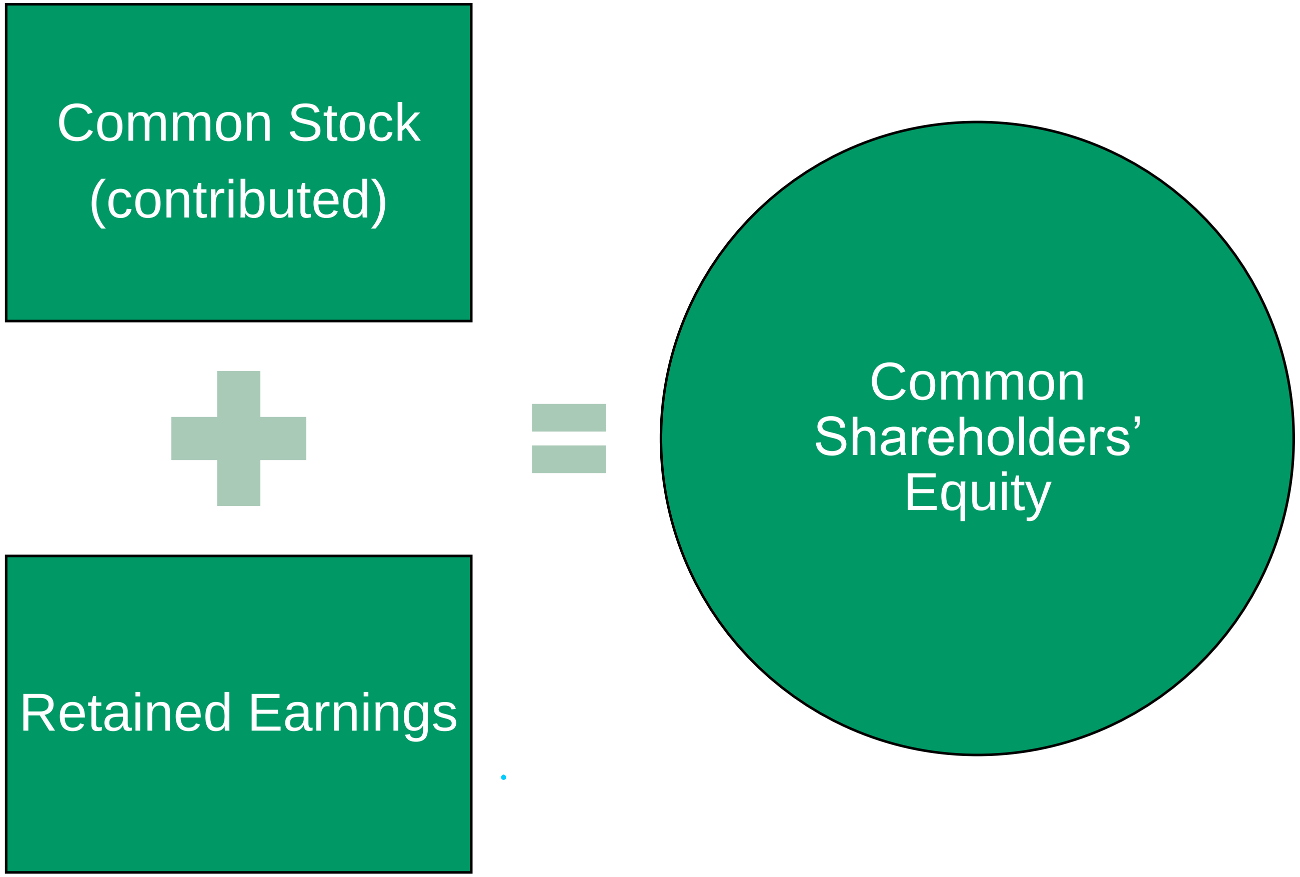
LOS c: Compare types of assets, liabilities, and equity.

# LIABILITIES: CURRENT AND LONG-TERM

- Current Liabilities (must be repaid in the next year)
  - Accounts Payable
  - Short-Term Borrowings
  - Accrued Liabilities
  - Current Portion of Long-Term Debt
- Long-Term Debt (repaid over periods greater than one year)
  - From Banks
  - Other Lenders

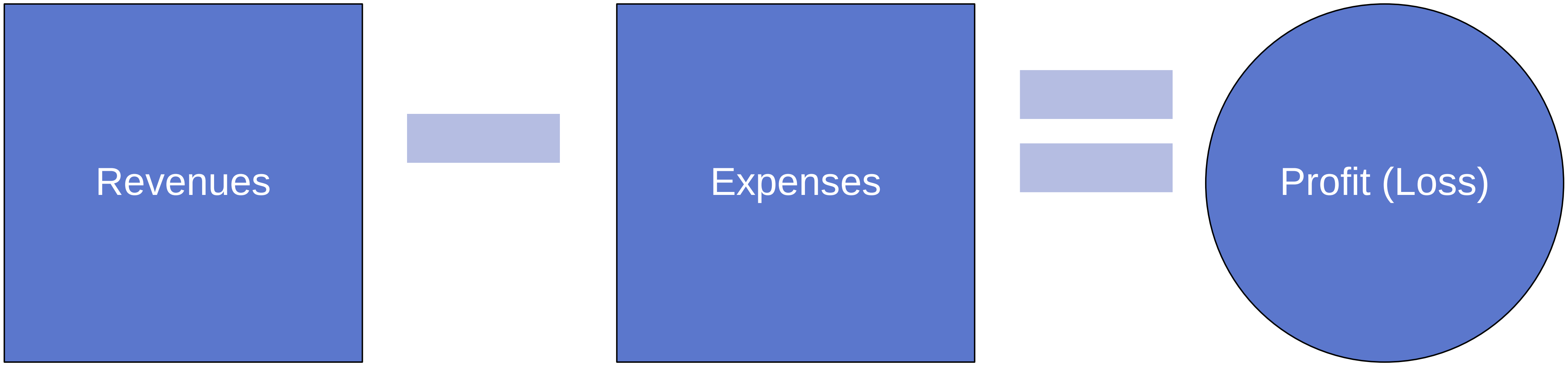
LOS c: Compare types of assets, liabilities, and equity.

# COMMON SHAREHOLDERS EQUITY




LOS c: Compare types of assets, liabilities, and equity.

# THE INCOME STATEMENT




The **Balance Sheet** was at a point in time. The **Income Statement** is for a period of time.

Sometimes called the statement of profit or loss, profit and loss statement, statement of operations, or P&L

LOS d: Describe information provided by the income statement.

# ABC COMPANY: INCOME STATEMENT

| **Year Ending 31 December 20x2**<br>($ millions) | | |
|---|---|---|
| Revenues | | $650 |
| Cost of sales | | (450) |
| Gross profit | | $200 |
| Other operating expenses | | |
| Selling expenses | $(30) | |
| General and administrative expenses | (20) | |
| Depreciation expense | (40) | |
| Total other operating expenses | | (90) |
| Operating income | | $110 |
| Interest expense | | (15) |
| Earnings before taxes | | $95 |
| Income taxes | | (19) |
| Net income | | $76 |
| | | |
| Additional information: | | |
| Dividends paid to shareholders | | $43 |

*Note*: Net Income minus dividends = Change in retained earnings = $76 – $43 = $33 (Change shown on the balance sheet)

LOS d: Describe information provided by the income statement.

# MEASURES OF PROFIT

**Revenues**

**– Cost of sales**

**= Gross profit**

– Other operating expenses

= Operating income or EBIT

– Interest expense

= Earnings before tax

– Tax expense

= Net income

The cost of producing or acquiring the goods or services that are sold by a company.

LOS d: Describe information provided by the income statement.

# MEASURES OF PROFIT

Revenues

– Cost of sales

**= Gross profit**

**– Other operating expenses**

**= Operating income or EBIT**

– Interest expense

= Earnings before tax

– Tax expense

= Net income

Marketing expenses, administrative expenses, depreciation expenses, etc.

LOS d: Describe information provided by the income statement.

# PRACTICE Q: MODERATE

**Q.** Which of the following is an example of an operating expense?

A. Dividends paid to shareholders

B. Interest payments made on a bank loan

C. Depreciation expenses for plant and equipment

Also:

Payment for inventory is a cash outflow for an operating activity

The purchase of a machine is a cash outflow related to investing activities

# PRACTICE Q: MODERATE

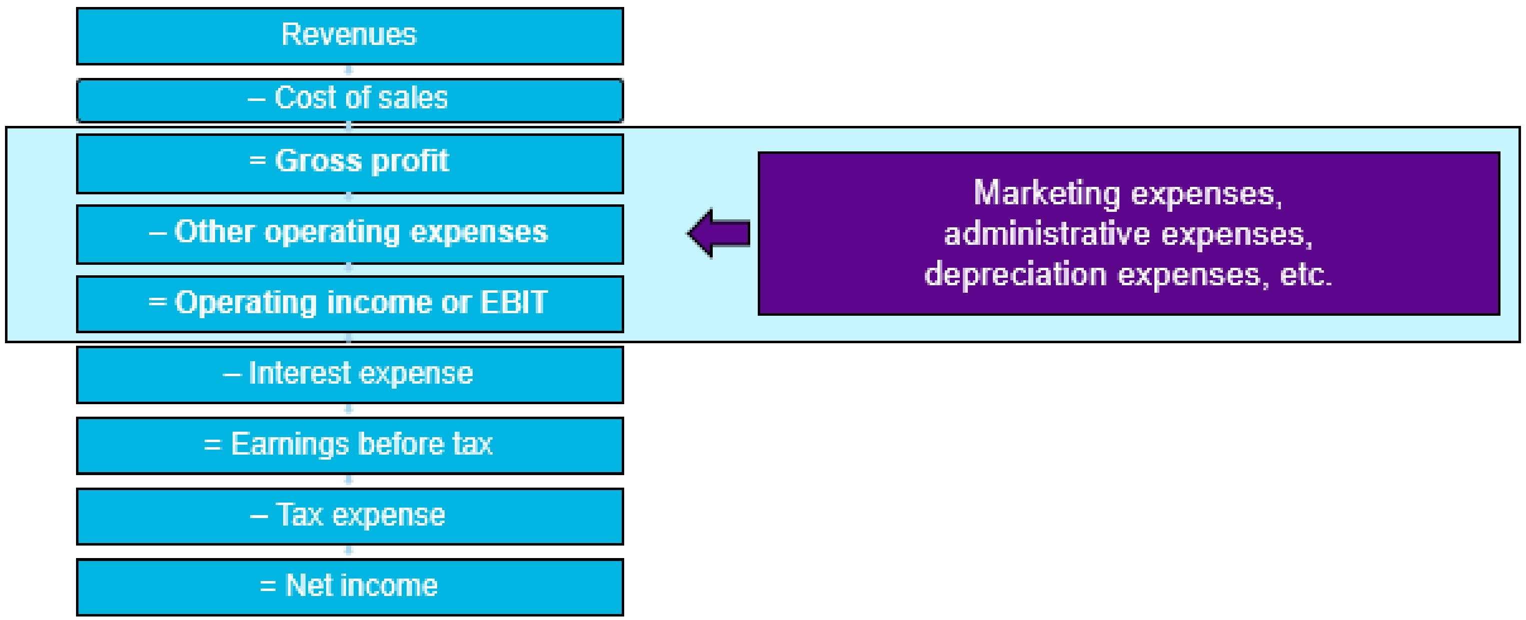
**Q.** Which of the following is an example of an operating expense?

A. Dividends paid to shareholders
B. Interest payments made on a bank loan
C. Depreciation expenses for plant and equipment

Dividend payments are not expenses and are not incurred in the operations of the company. Dividend payments are reported as a financing activity on the cash flow statement

Interest payments are reported on the income statement as a financing expense, not as an operating expense.

MEASURES OF PROFIT



# MEASURES OF PROFIT

Revenues

– Cost of sales

= Gross profit

– Other operating expenses

**= Operating income or EBIT**

**– Interest expense**

**= Earnings before tax**

**– Tax expense**

**= Net income**

Interest Expense

Income Taxes

LOS d: Describe information provided by the income statement.

# MEASURES OF PROFIT

Earnings before interest, taxes, depreciation, and amortisation
= EBITDA = EBIT + Depreciation and amortisation
(offers a closer approximation of operating cash flow than EBIT)

Earnings per Share = EPS = Net Income/Number of Shares

Dividends per Share = DPS = Dividends/Number of Shares

LOS d: Describe information provided by the income statement.

# PROFITS ≠ CASH FLOW

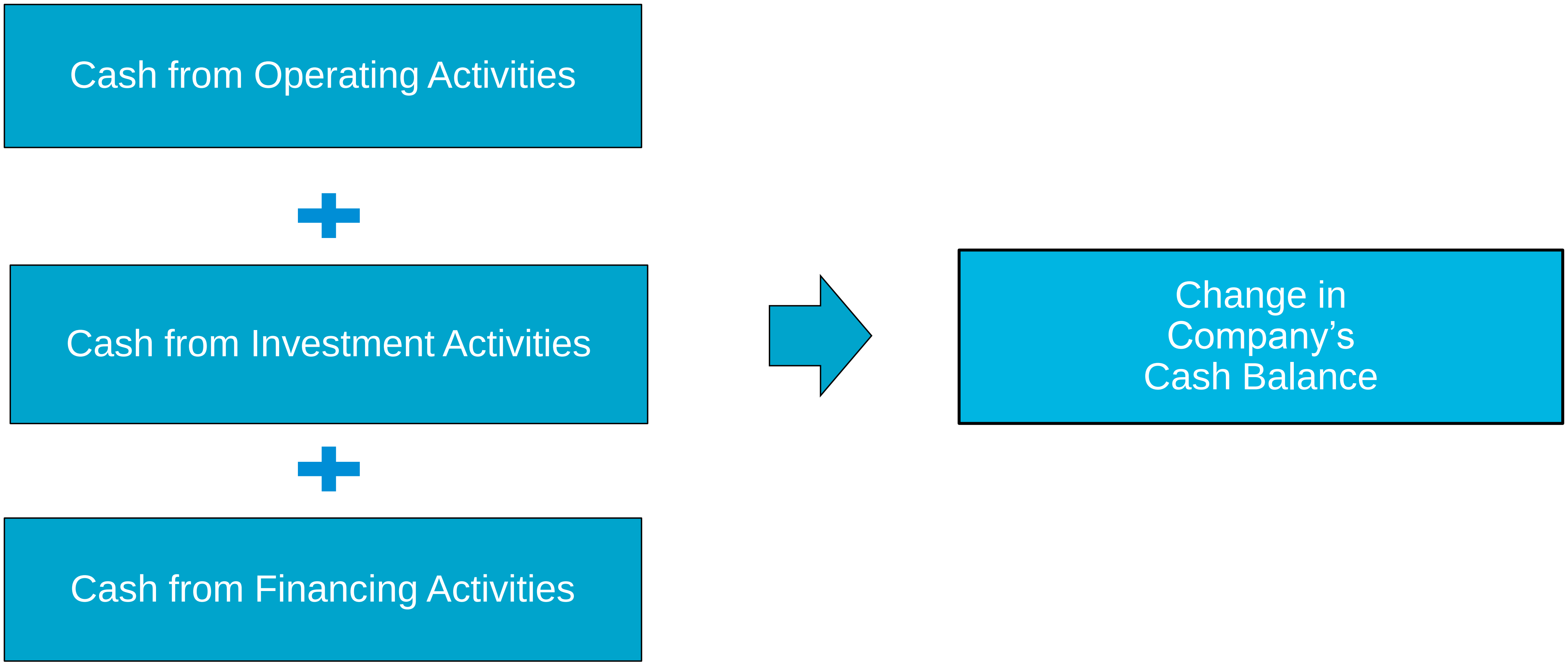
Profit (or Loss) = Revenues – Expenses

≠

Cash flow = Cash received – Cash paid

LOS e: Distinguish between profit and net cash flow.

# SOURCES AND USES OF CASH




LOS f: Describe information provided by the cash flow statement.

# ABC COMPANY: STATEMENT OF CASH FLOWS

| **Year Ending 31 December 20x2** | | |
|---|---|---|
| ($ millions) | | |
| **Operating activities** | | |
| Net income | $76 | |
| Plus depreciation expense | 40 | |
| Minus increase in accounts receivable | (5) | |
| Minus increase in inventories | (5) | |
| Plus increase in accounts payable | 4 | |
| Net cash flow from operating activities | | $110 |

LOS g: Identify and compare cash flow classifications of operating, investing, and financing activities.

# ABC COMPANY: STATEMENT OF CASH FLOWS

| | | |
|---|---|---|
| **Year Ending 31 December 20x2** | | |
| ($ millions) | | |
| **Net cash flow from operating activities[1]** | | $110 |
| **Investment activities** | | |
| Less investment in property, plant, and equipment | $(90) | |
| Net cash flow used in investing activities | | $(90) |
| | | |
| **Financing activities** | | |
| Cash inflows from borrowing (long-term debt) | $32 | |
| Cash inflows from new share issues | 0 | |
| Minus dividends paid to shareholders | (43) | |
| Net cash flow used in financing activities | | $(11) |
| Net increase (decrease) in cash | | $9 |
| Beginning cash | | 16 |
| Ending cash | | $25 |

[1]From previous slide

# PRACTICE Q: EXPERT

To understand the changes in a company's long-term assets over the year, an investor would review the company's:

A. cash flow statement.

B. statement of operations.

C. statement of financial position.

# PRACTICE Q: EXPERT

To understand the changes in a company's long-term assets over the year, an investor would review the company's:

A. cash flow statement.

B. statement of operations.

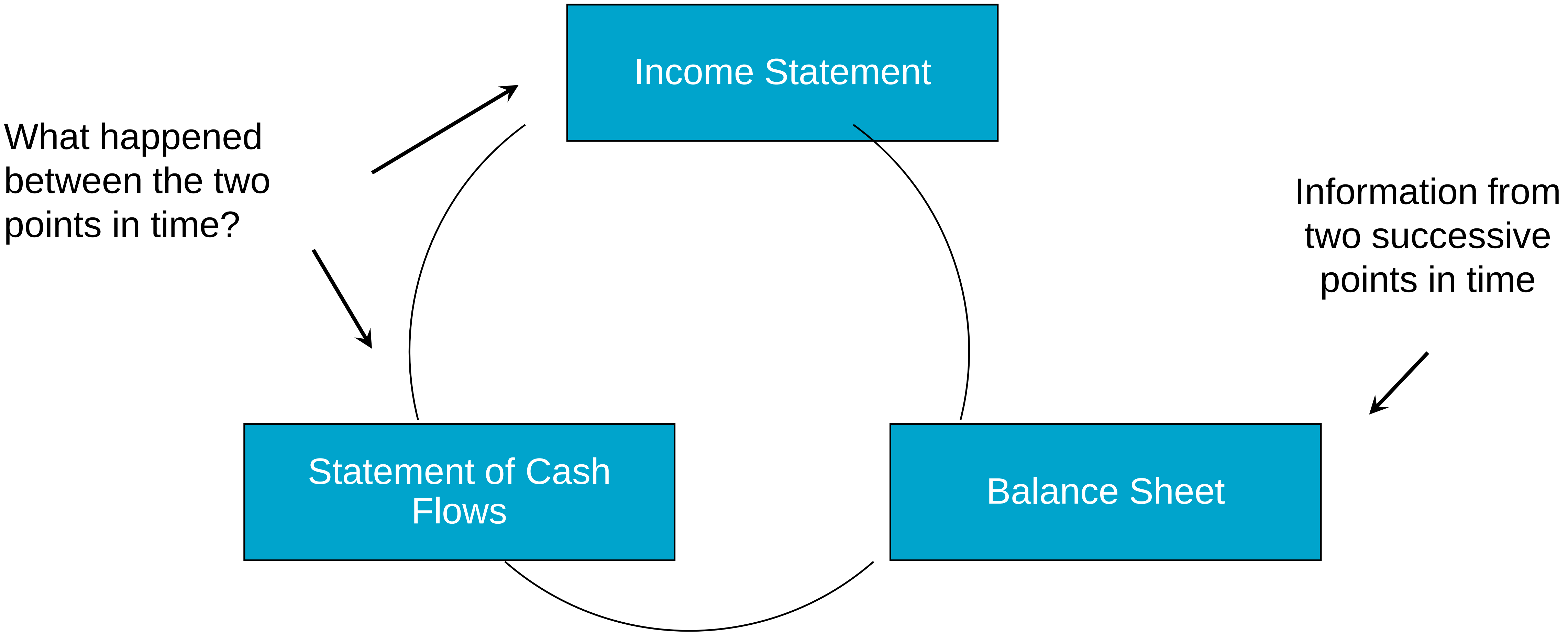
C. statement of financial position. (2 Years can do some analysis + notes to statements)

A is correct. Changes in a company's long-term assets are found in the investing section of the cash flow statement.

Although the statement of operations may show the depreciation it wouldn't show any information about purchases or dispositions during the year except for gains or losses on disposition.

The statement of financial position shows the information at only a single point in time

# LINKS BETWEEN FINANCIAL STATEMENTS




LOS h: Explain links between the income statement, balance sheet, and cash flow statement.

# ACCOUNTING EQUATIONS A = L + E

**Retained Earnings for non accountants:**

- The Income Statement is for a “period” say calendar year;
- The Income Statement gets reset to 0 at the beginning of the year;
- So it gets “closed out” at the end of the year;
- Retained Earnings is the link between the Balance Sheet and the Income Statement;
- Balance Sheet Accounts carry balances from year to year, the Balance Sheet is “as at a Certain Date”;
- Dividends are paid out of Retained Earnings.

LOS h: Explain links between the income statement, balance sheet, and cash flow statement.

# FINANCIAL RATIO ANALYSIS

LOS j: Identify and interpret ratios used to analyse a company's liquidity, profitability, financing, shareholder return, and shareholder value.

## Important Questions

| How liquid is the company? (Short-term ability to pay bills) | Is the company generating enough profit from its assets? | How is the company financing its assets? | Is the company providing sufficient return for its shareholders? |
|---|---|---|---|
| **RATIOS: LIQUIDITY** | **PROFITABILITY** | **FINANCIAL** | **SHAREHOLDER RETURN & VALUE** |

LOS i: Explain the usefulness of ratio analysis for financial statements.

# LIQUIDITY RATIOS

How liquid
is the company?

(Short-term ability to pay bills)

ABC's Current Ratio (20X2)

= Current assets / Current liabilities

= 165 / 100 = 1.65

Balance Sheet / Balance sheet

ABC's Quick Ratio (20X2)

Balance Sheet / Balance sheet

= (Current assets – Inventories) / Current liabilities

= (165 – 95) / 100 = 0.70

Liquidity ratios measure a company's ability to meet its short-term obligations. A current ratio of 2 is frequently used as a minimum desirable standard.

LOS j: Identify and interpret ratios used to analyse a company's liquidity, profitability, financing, shareholder return, and shareholder value.

# LIQUIDITY RATIOS

How liquid
is the company?

(Short-term ability to pay bills)

ABC's Current Ratio (20X2)

Balance Sheet / Balance sheet

= Current assets / Current liabilities

= 165 / 100 = 1.65

ABC's Quick Ratio (20X2)

Balance Sheet / Balance sheet

= (Current assets – Inventories) / Current liabilities

= (165 – 95) / 100 = 0.70

The quick ratio excludes inventories, which are the least liquid current asset. A quick ratio of 1 or higher is often viewed as desirable.

LOS j: Identify and interpret ratios used to analyse a company's liquidity, profitability, financing, shareholder return, and shareholder value.

# PROFITABILITY RATIOS: INCOME STATEMENT / INCOME STATEMENT

Is the company generating enough profit from its assets?

| |
|---|
| **Revenues** |
| **– Cost of sales** |
| **= Gross profit** |
| – Other operating expenses |
| = Operating income or EBIT |
| – Interest expense |
| = Earnings before tax |
| – Tax expense |
| = Net income |

Gross Profit Margin = Gross Profit / Revenue

Operating Profit Margin = Operating Income / Revenue

Net Profit Margin = Net Income / Revenue

LOS j: Identify and interpret ratios used to analyse a company's liquidity, profitability, financing, shareholder return, and shareholder value.

# PROFITABILITY RATIOS: INCOME STATEMENT / BALANCE SHEET

Is the company generating enough profit from its assets?

| |
|---|
| **Revenues** |
| **– Cost of sales** |
| **= Gross profit** |
| – Other operating expenses |
| = Operating income or EBIT |
| – Interest expense |
| = Earnings before tax |
| – Tax expense |
| = Net income |

Basic Earning Power = Operating Income / Total Assets

Return on Assets = Net Income / Total Assets

LOS j: Identify and interpret ratios used to analyse a company's liquidity, profitability, financing, shareholder return, and shareholder value.

Is the company generating enough profit from its assets?

# PROFITABILITY RATIOS

ABC's Net Profit Margin

= Net income / Revenues

= 76 / 650 = 0.1169 = 11.69%

ABC's Basic Earning Power

= Operating income / Total assets

= 110 / 565 = 0.1947 = 19.47%

ABC's Return On Assets (ROA)

= Net income / Total assets

= 76 / 565 = 0.1345 = 13.45%

## ABC COMPANY: INCOME STATEMENT

**Year Ending 31 December 20x2**

($ millions)

| | | |
|---|---|---|
| Revenues | | $650 |
| Cost of sales | | (450) |
| Gross profit | | $200 |
| Other operating expenses | | |
| Selling expenses | $(30) | |
| General and administrative expenses | (20) | |
| Depreciation expense | (40) | |
| Total other operating expenses | | (90) |
| Operating income | | $110 |
| Interest expense | | (15) |
| Earnings before taxes | | $95 |
| Income taxes | | (19) |
| Net income | | $76 |

ABC Company Statement of Financial Position

| As of 31 December | 20X2 | |
|---|---|---|
| ($ millions) | | |
| **Assets** | | |
| Cash | 25 | |
| Accounts receivable | 40 | |
| Inventories | 95 | |
| Other current assets | 5 | |
| Total current assets | | $165 |
| Gross property, plant, and equipment | 460 | |
| Accumulated depreciation | (160) | |
| Net property, plant, and equipment | $300 | |
| Intangible assets | 100 | |
| Total non-current assets | | $400 |
| **Total assets** | | **$565** |

LOS j: Identify and interpret ratios used to analyse a company's liquidity, profitability, financing,

# PRACTICE Q: EXPERT

The basic earning power ratio is calculated as:

A. Net income/Total assets.
B. Operating income/Revenues.
C. Operating income/Total assets.

# PRACTICE Q: EXPERT

The basic earning power ratio is calculated as:

A. Net income/Total assets.

B. Operating income/Revenues.

Is operating profit margin

C. Operating income/Total assets.

The basic earning power ratio is defined as Operating income/Total assets and measures the profit generated from operations with the assets used to generate that income

## PROFITABILITY RATIOS

ABC's Net Profit Margin
= Net income / Revenues
= 76 / 650 = 0.1169 = 11.69%

ABC's Return On Assets (ROA)
= Net income / Total assets
= 76 / 565 = 0.1345 = 13.45%

ABC's Basic Earning Power
= Operating income / Total assets
= 110 / 565 = 0.1947 = 19.47%

How Is the Company Financing Its Assets?

# FINANCIAL RATIOS

Balance Sheet / Balance sheet

ABC's Debt-to-Equity Ratio

= Debt / Equity

= (10 + 232) / 233

= 242 / 233 = 1.04

ABC's Equity Multiplier (Financial Leverage)

= Total assets / Equity

= 565 / 233  = 2.42

**Exhibit 1 ABC Company Statement of Financial Position**

| As of 31 December | 20X2 | |
|---|---|---|
| ($ millions) | | |
| **Assets** | | |
| Cash | 25 | |
| Accounts receivable | 40 | |
| Inventories | 95 | |
| Other current assets | 5 | |
| Total current assets | | $165 |
| Gross property, plant, and equipment | 460 | |
| Accumulated depreciation | (160) | |
| Net property, plant, and equipment | $300 | |
| Intangible assets | 100 | |
| Total non-current assets | | $400 |
| **Total assets** | | **$565** |
| **Liabilities and Equity** | | |
| Accounts payable | 54 | |
| Accrued liabilities | 36 | |
| Current portion of long-term debt | 10 | |
| Total current liabilities | | $100 |
| Long-term debt | 232 | |
| Total non-current liabilities | | $232 |
| Total liabilities | | $332 |
| Common stock | 85 | |
| Retained earnings | 148 | |
| Total owners' equity | | $233 |
| **Total liabilities and equity** | | **$565** |

LOS j: Identify and interpret ratios used to analyse a company's liquidity, profitability, financing, shareholder return, and shareholder value.

# PRACTICE Q: EXPERT

A company has an equity multiplier of 1.5 in an industry in which the average equity multiplier is 2.0. Compared with the industry, the company:

A. is less solvent.
B. uses a lower portion of equity financing to finance its assets.
C. uses a higher portion of equity financing to finance its assets.

# PRACTICE Q: EXPERT

A company has an equity multiplier of 1.5 in an industry in which the average equity multiplier is 2.0. Compared with the industry, the company:

A. is less solvent.
B. uses a lower portion of equity financing to finance its assets.
C. uses a higher portion of equity financing to finance its assets.

ABC's Equity Multiplier (Financial Leverage)
= Total assets / Equity

WORK IT OUT example

= 150 / 100 = 1.5
A = L + E
150 = 50 + 100
100/150 = 66.666%

200 / 100 = 2.0
A = L + E
200 = 100 + 100
100/200 = 50%

C is correct. The equity multiplier or financial leverage ratio equals total assets divided by equity. The lower the number, the more the assets are financed by equity.

Therefore, because the company's ratio of 1.5 is lower than the industry's ratio of 2.0, the company uses a higher portion of equity financing to finance its assets than the industry does.

# SHAREHOLDER RETURN RATIO: ROE FOR ABC COMPANY

$$\text{Return on equity} = \text{ROE} = \frac{\text{Net income}}{\text{Equity}}$$

$$\text{ROE} = \frac{76}{233} = 0.32618 = 32.62\%$$

## ABC COMPANY: INCOME STATEMENT

**Year Ending 31 December 20x2**
($ millions)

| | | |
|---|---|---|
| Revenues | | $650 |
| Cost of sales | | (450) |
| Gross profit | | $200 |
| Other operating expenses | | |
| Selling expenses | $(30) | |
| General and administrative expenses | (20) | |
| Depreciation expense | (40) | |
| Total other operating expenses | | (90) |
| Operating income | | $110 |
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|---|---|---|
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| Retained earnings | 148 | |
| Total owners' equity | | $233 |
| **Total liabilities and equity** | | **$565** |

LOS j: Identify and interpret ratios used to analyse a company's liquidity, profitability

# MARKET VALUE RATIOS: IS MANAGEMENT CREATING SHAREHOLDER VALUE?

Market price per share ÷ Earnings per share = Price-to-earnings ratio

Market price per share ÷ Equity book value per share = Price-to-book ratio

LOS j: Identify and interpret ratios used to analyse a company’s liquidity, profitability, financing, shareholder return, and shareholder value.

# SUMMARY OF RATIOS FOR ABC COMPANY

| Ratio | | ABC's 20X2 Value | 20X2 Industry Value | Comparison |
|---|---|---|---|---|
| Current ratio | $\frac{\text{Current assets}}{\text{Current liabilities}}$ | 1.65 | 1.92 | Lower |
| Quick ratio | $\frac{\text{Current assets} - \text{Inventories}}{\text{Current liabilities}}$ | 0.70 | 0.75 | Lower |
| Return on assets | $\frac{\text{Net income}}{\text{Total assets}}$ | 13.45% | 10.00% | Higher |
| Basic earning power | $\frac{\text{Operating income}}{\text{Total assets}}$ | 19.47% | 15.00% | Higher |
| Return on equity | $\frac{\text{Net income}}{\text{Equity}}$ | 32.62% | 27.30% | Higher |
| Net profit margin | $\frac{\text{Net income}}{\text{Revenues}}$ | 11.69% | 5.56% | Higher |
| Operating profit margin | $\frac{\text{Operating income}}{\text{Revenues}}$ | 16.92% | 8.33% | Higher |
| Asset turnover | $\frac{\text{Revenues}}{\text{Total assets}}$ | 1.15 | 1.80 | Lower |
| Financial leverage | $\frac{\text{Total assets}}{\text{Equity}}$ | 2.42 | 2.73 | Lower |

Liquidity is lower, returns are higher, turnover is lower, and leverage is lower.

LOS j: Identify and interpret ratios used to analyse a company's liquidity, profitability, financing, shareholder return, and shareholder value.

# PRACTICE Q: EXPERT

Which of the following ratios would be used by an analyst to assess the value being created for shareholders by the company?

A. Net profit margin
B. Current ratio
C. Price/earnings ratio

# PRACTICE Q: EXPERT

$$\frac{\text{Current assets}}{\text{Current liabilities}}$$

$$\frac{\text{Current assets} - \text{Inventories}}{\text{Current liabilities}}$$

$$\frac{\text{Net income}}{\text{Total assets}}$$

$$\frac{\text{Operating income}}{\text{Total assets}}$$

$$\frac{\text{Net income}}{\text{Equity}}$$

$$\frac{\text{Net income}}{\text{Revenues}}$$

$$\frac{\text{Operating income}}{\text{Revenues}}$$

$$\frac{\text{Revenues}}{\text{Total assets}}$$

$$\frac{\text{Total assets}}{\text{Equity}}$$

Which of the following ratios would be used by an analyst to assess the value being created for shareholders by the company?

A. Net profit margin

B. Current ratio

C. Price/earnings ratio

The net profit margin measures the return left over for shareholders but alone does not measure the value creation of those earnings.

The current ratio measures liquidity and would not be used to determine the value created for shareholders.

C is correct. To assess the value being created for shareholders, the analyst would use the price/earnings ratio (P/E). The P/E = Market price per share ÷ Earnings per share and tells the analyst what the market is willing to pay for each $1 of earnings. If two companies are in the same industry and one has a higher P/E, it may indicate that the company with the higher ratio has stronger growth potential and, therefore, that investors are willing to pay more for its earnings

Price/earnings ratio
Price/book value ratio

LOS j: Identify and interpret ratios used to analyse a company's liquidity, profitability, financing, shareholder return, and shareholder value.

# DUPONT ANALYSIS: THE DECOMPOSITION OF ROE

Return on equity can be decomposed in three components:

1. net profit margin,
2. asset turnover, and
3. financial leverage.

$$\text{ROE} = \frac{\text{Net income}}{\text{Equity}}$$

$$\text{Return on equity} = \text{ROE} = \frac{\text{Net income}}{\text{Equity}}$$

$$\text{ROE} = \frac{76}{233} = 0.32618 = 32.62\%$$

$$\frac{\text{Net income}}{\text{Total assets}} \times \frac{\text{Total assets}}{\text{Equity}}$$

ROA

Leverage

ABC's Return On Assets (ROA)
= Net income / Total assets
= 76 / 565 = 0.1345 = 13.45%

$$\times \quad \frac{565}{233} = 2.42489$$

13.45% x 2.42489
= 32.62%

# DUPONT ANALYSIS: THE DECOMPOSITION OF ROE

$$ROA = \frac{\text{Net income}}{\text{Total assets}}$$

ABC's Return On Assets (ROA)
= Net income / Total assets
= 76 / 565 = 0.1345 = 13.45%

$$ROA = \frac{\text{Net income}}{\text{Revenue}} \times \frac{\text{Revenue}}{\text{Total assets}}$$

Net profit margin     Asset turnover

$$= \frac{76}{650} \times \frac{650}{565} = 0.1169 \times 1.15 = 0.1345 = 13.45\%$$

# DUPONT ANALYSIS: THE DECOMPOSITION OF ROE

$$ROE = \frac{\text{Net income}}{\text{Equity}}$$

Return on equity can be decomposed in three components:
1. net profit margin,
2. asset turnover, and
3. financial leverage.

$$\text{Return on equity} = ROE = \frac{\text{Net income}}{\text{Equity}}$$

$$ROE = \frac{76}{233} = 0.32618 = 32.62\%$$

ROA

$$\frac{\text{Net income}}{\text{Revenue}} \times \frac{\text{Revenue}}{\text{Total assets}} \times \frac{\text{Total assets}}{\text{Equity}}$$

Net profit margin | Asset turnover | Leverage

$$= \text{Net profit margin} \times \text{Asset turnover} \times \text{Financial leverage}$$

$$= \frac{76}{650} \times \frac{650}{565} \times \frac{565}{233} = 0.1169 \times 1.15 \times 2.42$$

$$= 0.3253 = 32.53\%$$

LOS j: Identify and interpret ratios used to analyse a company's liquidity, profitability, financing, shareholder return, and shareholder value.