

Learning Module 11: Financial Analysis Techniques

Q.500 An analyst gathered the following information for a small company reporting under IFRS:

Revenue	\$600,000
Cost of sales	(\$120,000)
Average inventory	\$40,000
Average Trade Receivables	\$60,000

Assuming that the number of days in a year is to be assumed as 360, the days of sales outstanding (DSO) is *closest to*:

- A. 3.
- B. 10
- C. 36.

The correct answer is **C**.

DSO is given by:

$$\text{Days of Sales Outstanding} = \frac{\text{Number of days in a period}}{\text{Receivable Turnover}}$$

Where,

$$\begin{aligned}\text{Receivables Turnover} &= \frac{\text{Revenue}}{\text{Average receivables}} \\ &= \frac{600,000}{60,000} = 10 \\ &= \text{DSO} = \frac{360}{10} = 36 \text{ days}\end{aligned}$$

A is incorrect. It represents the inventory turnover ratio.

B is incorrect. It represents the receivable turnover ratio.

CFA Level I, Volume 2, Topic 5 - Financial Statements Analysis, Learning Module 11: Financial Analysis Techniques, LOS 11b: calculate and interpret activity, liquidity, solvency, and profitability ratios.

Q.501 Which of the following is *least likely* a possible root cause for a reduction in the inventory turnover ratio?

- A. Change in fashion.
- B. Obsolescence of technology.
- C. Increase in the number of distributors

The correct answer is **C**.

An increase in the number of distributors is least likely to be a direct cause of a reduction in the inventory turnover ratio. The inventory turnover ratio is a measure of how quickly a company sells its inventory within a given period. It is calculated by dividing the cost of goods sold by the average inventory. An increase in the number of distributors typically aims to expand the market reach and improve the sales volume, which, in theory, should lead to a higher or maintained inventory turnover ratio if the additional distribution channels are effective.

A is incorrect. A change in fashion can significantly impact the inventory turnover ratio, especially in industries sensitive to trends, such as apparel and accessories. When products fall out of fashion, their demand decreases, leading to slower sales and an accumulation of inventory. This situation directly contributes to a reduction in the inventory turnover ratio, as the company takes longer to sell its inventory, indicating inefficiency in managing inventory levels relative to sales.

B is incorrect. The obsolescence of technology is another factor that can lead to a reduction in the inventory turnover ratio. In industries where technological advancements are rapid, such as electronics, products can quickly become outdated. As newer, more advanced products enter the market, the older inventory's demand diminishes, leading to slower sales and an increase in unsold stock. This accumulation of obsolete products directly decreases the inventory turnover ratio, reflecting a mismatch between inventory levels and market demand.

CFA Level I, Volume 2, Topic 5 - Financial Statements Analysis, Learning Module 11: Financial Analysis Techniques, LOS 11b: calculate and interpret activity, liquidity, solvency, and profitability ratios.

Q.502 For a hypothetical company, the working capital turnover and fixed asset turnover ratios are 4 and 6, respectively. Moreover, the revenue for the company is estimated at \$120,000. The average working capital for the company is *closest to*:

A. \$20,000

B. \$30,000

C. \$45,000

The correct answer is **B**.

The working capital turnover is defined as:

$$\text{Working capital turnover} = \frac{\text{Revenue}}{\text{Average working capital}}$$

In this case, we have,

$$4 = \frac{120,000}{\text{Average Working capital}}$$
$$\Rightarrow \text{Average working capital} = \frac{120,000}{4} = \$30,000$$

A is incorrect. It represents the average net fixed assets, calculated using the fixed asset turnover ratio.

C is incorrect. It represents the sum of the average working capital and the average net fixed assets.

Q.504 Which of the following is the *most accurate* description of the defensive interval ratio?

- A. The defensive interval ratio measures the duration for which the daily cash requirements can be met from the current liabilities.
- B. The defensive interval ratio measures the duration for which the daily cash requirements of a period can be met from the existing liquid assets.
- C. The defensive interval ratio measures the duration for which the daily cash requirements of a period can be met from the expected liquid assets at the end of the period.

The correct answer is **B**.

The defensive interval ratio is a financial metric that measures the number of days a company can continue to operate using only its existing liquid assets without needing to secure additional financing or convert long-term assets into cash. This ratio is crucial for assessing a company's short-term financial resilience, particularly in times of financial uncertainty or when access to external funding may be restricted. It provides insight into the company's ability to meet its immediate cash needs through readily available resources.

A and C are incorrect. The defensive interval ratio considers the 'existing' liquid assets and not the current liabilities and 'expected' liquid assets at the end of the period.

CFA Level I, Volume 2, Topic 5 - Financial Statements Analysis, Learning Module 11: Financial Analysis Techniques, LOS 11b: calculate and interpret activity, liquidity, solvency, and profitability ratios.

Q.506 Calculate the leverage from the following data.

Return on equity	5.4%
Net profit margin	3.5%
Total asset turnover	1.1

A. 1.19

B. 1.40

C. 1.54

The correct answer is **B**.

$$\begin{aligned}\text{ROE} &= \text{Net profit margin} \times \text{Total asset turnover} \times \text{Leverage} \\ \text{Leverage} &= \frac{\text{Return on equity}}{(\text{Net profit margin} \times \text{Total asset turnover})} \\ &= \frac{5.4\%}{(3.5\% \times 1.1)} \\ &= 1.40\end{aligned}$$

A is incorrect. It sums return on equity, net profit margin, and total asset turnover.

C is incorrect. It represents the ratio of return to equity to net profit margin.

CFA Level I, Volume 2, Topic 5 - Financial Statements Analysis, Learning Module 11: Financial Analysis Techniques, LOS 11d: demonstrate the application of DuPont analysis of return on equity and calculate and interpret effects of changes in its components.

Q.507 Revenue per employee is an acceptable ratio for analysis in which of the following industries?

- A. The service industry.
- B. The banking industry.
- C. The manufacturing industry.

The correct answer is **A**.

Revenue per employee is a particularly relevant metric for analysis in the service industry. This is because, in service-oriented businesses, the primary assets are the employees themselves, whose skills and services generate the company's revenue. Unlike industries that rely heavily on physical assets or capital expenditures, such as manufacturing or utilities, the service industry's performance and efficiency are closely tied to the productivity and effectiveness of its workforce.

B is incorrect. Suggesting that the banking industry is the most appropriate for analyzing revenue per employee overlooks the fact that banks' revenue generation is significantly influenced by their financial leverage, investment strategies, and interest rate spreads, rather than solely by employee productivity.

C is incorrect. The manufacturing industry, characterized by its heavy reliance on physical assets, machinery, and production facilities, does not prioritize revenue per employee as a primary metric for analysis. In manufacturing, the efficiency and productivity of the production process, capital expenditure, and asset utilization rates are more relevant indicators of financial performance.

CFA Level I, Volume 2, Topic 5 - Financial Statements Analysis, Learning Module 11: Financial Analysis Techniques, LOS 11e: describe the uses of industry-specific ratios used in financial analysis.

Q.1029 Return on capital will *most likely* be higher in which of the following cases?

- A. If the firm has 50% of the market share and another firm has the other 50%.
- B. If the firm has a 10% market share and all other firms have less than 5% of the market share.
- C. Return on capital is not affected by market shares.

The correct answer is **B**.

Return on capital (ROC) is a measure of how effectively a company uses its capital to generate profits. It is a crucial metric for investors and analysts as it provides insight into a company's efficiency in turning capital into profits. A higher ROC indicates a more efficient use of capital. In the context of market share, the relationship between ROC and market share can be nuanced. However, a firm that dominates its market or has a significant competitive advantage often enjoys higher returns on capital due to economies of scale, stronger bargaining power, and potentially higher pricing power.

A is incorrect. Having a 50% market share while another firm holds the other 50% suggests a duopoly situation. While a 50% market share is substantial, the presence of another equally strong competitor could lead to competitive pressures that might erode margins and, consequently, returns on capital. In such scenarios, both firms might engage in price wars or increased marketing expenses to gain an edge over the other, potentially reducing the efficiency with which capital is turned into profits.

C is incorrect. While it's true that return on capital is primarily determined by how efficiently a company uses its capital to generate profits, market share can have an indirect impact on this efficiency. A significant market share, especially when compared to competitors, can provide a company with competitive advantages that enhance its ability to generate higher returns on capital. These advantages include, but are not limited to, economies of scale, stronger bargaining power, and enhanced pricing power. Therefore, stating that return on capital is not affected by market shares overlooks the potential indirect effects that market dominance can have on a company's operational efficiency and profitability.

CFA Level I, Volume 2, Topic 5 - Financial Statements Analysis, Learning Module 11: Financial Analysis Techniques, LOS 11b: calculate and interpret activity, liquidity, solvency, and profitability ratios.

Q.2097 Which of the following is *least likely* a limitation of ratios?

- A. Ratios evaluate changes in firms and industries over time.
- B. Ratios are only useful when compared to other firms or to the company's historical performance.
- C. The comparison of ratios with other firms is difficult due to accounting standards differences.

The correct answer is **A**.

Option A is not a limitation but a benefit of the ratio analysis.

B and C are incorrect. They are limitations of ratios.

Q.2099 Which of the following statements is *least likely* true regarding the common-size analysis of financial statements?

- A. A horizontal common-size income statement calculates all line items as a percentage of the base year's total assets.
- B. A vertical common-size balance sheet presents each balance sheet item by the same period's total assets total assets.
- C. A vertical common-size income statement presents each income statement item as a percentage of revenue or by total assets.

The correct answer is **A**.

In a horizontal common-size income statement, each line item is expressed as a percentage of the corresponding figure in the base year, not as a percentage of the base year's total assets. The comparison is typically year-over-year for each specific line item (like revenue, expenses, etc.), not relative to the total assets.

B is incorrect. In a vertical common-size balance sheet, each line item is expressed as a percentage of total assets for the same period. This method allows for an analysis of the structure of the balance sheet by showing the proportion of each item relative to the total assets.

C is incorrect. A vertical common-size income statement does indeed express each item as a percentage of revenue (total sales) or by total assets.

CFA Level I, Volume 2, Topic 5 - Financial Statements Analysis, Learning Module 11: Financial Analysis Techniques, LOS 11b
LOS a: describe tools and techniques used in financial analysis, including their uses and limitations.

Q.2100 Which of the following is *least likely* use of the graphical analysis of financial data?

- A. Analyze the trend in data.
- B. Compare data across firms and time.
- C. Identify the relationship between two variables.

The correct answer is **C**.

While graphical analysis can provide some insights into the relationship between two variables, it is not primarily used for identifying and quantifying these relationships. Statistical methods like correlation and regression analysis are more suitable for this purpose.

A is incorrect. Trend analysis is a fundamental aspect of graphical analysis in finance, essential for visualizing how financial parameters have changed over time and providing insights into the company's historical performance.

B is incorrect. Comparing financial data across firms and over different time periods is a key application of graphical analysis in finance, essential for benchmarking and understanding a firm's position relative to its peers or its own historical performance."

CFA Level I, Volume 2, Topic 5 - Financial Statements Analysis, Learning Module 11: Financial Analysis Techniques, LOS 11bLOS a: describe tools and techniques used in financial analysis, including their uses and limitations.

Q.2101 An analyst analyzing a firm's ability to meet its long-term debt obligation is *most likely* to use which of the following financial ratio?

- A. Debt-to-assets ratio.
- B. Defensive interval ratio.
- C. Working capital turnover ratio.

The correct answer is **A**.

The debt-to-assets ratio is a crucial financial metric for analyzing a firm's ability to meet its long-term debt obligations. This ratio measures the proportion of a company's assets that are financed through debt, providing insights into the firm's solvency. A lower debt-to-assets ratio indicates a healthier balance sheet, as it suggests that a larger portion of the company's assets are financed through equity rather than debt. Conversely, a higher ratio may signal potential solvency issues, as it implies a greater reliance on debt financing.

B is incorrect. The defensive interval ratio measures a company's liquidity by estimating the number of days the firm can operate using its current liquid assets without needing additional financing. While this ratio provides valuable insights into the company's short-term financial health, it does not directly address the firm's ability to meet long-term debt obligations.

C is incorrect. The working capital turnover ratio assesses the efficiency with which a firm utilizes its working capital to generate sales. It is calculated by dividing the firm's annual sales by its average working capital. Although this ratio offers insights into the operational efficiency and short-term financial health of a company, it does not directly evaluate the firm's capacity to meet long-term debt obligations.

CFA Level I, Volume 2, Topic 5 - Financial Statements Analysis, Learning Module 11: Financial Analysis Techniques, LOS 11b *LOS b: calculate and interpret activity, liquidity, solvency, and profitability ratios.*

Q.2102 Galactic Hyper is a chain of hypermarkets that sells most of its products for cash, which is why its days of sales outstanding are as low as 22 days. Assuming that the firm's average receivables are \$234,000, and the cost of goods sold (COGS) for the one year is \$1,245,000, the annual sales of Galactic are *closest to*:

A. \$1,410,400.

B. \$3,882,000.

C. \$4,880,200.

The correct answer is **B**.

Since

$$\text{Days sales outstanding} = \frac{365}{\text{Receivables Turnover}} = \frac{365}{\frac{(\text{Annual sales})}{(\text{Average accounts receivable})}}$$

We can rearrange the formula as:

$$\text{Annual sales} = \left[\left(\frac{365}{\text{Days sales outstanding}} \right) \times \text{Average accounts receivable} \right] = \frac{365}{22} \times \$234,000 = \$3,882,000$$

CFA Level I, Volume 3, Topic 5 - Financial Statements Analysis, Learning Module 11: Financial Analysis Techniques, LOS 11b: calculate and interpret activity, liquidity, solvency, and profitability ratios.

Q.2103 If the Cost of goods sold (COGS) decreases, what is the *most likely* effect on days of inventory on hand?

- A. Days of inventory on hand ratio will decrease.
- B. Days of inventory on hand ratio will increase.
- C. Days of inventory on hand ratio will remain unchanged.

The correct answer is **B**.

Recall that:

$$\text{Days of Inventory on hand ratio} = \left(\frac{365}{\text{Inventory turnover}} \right)$$

OR

$$\text{DOH} = \frac{365}{\frac{\text{COGS}}{\text{Average Inventory}}}$$

If the numerator of the inventory turnover (i.e. COGS) decreases, it will increase the Days of Inventory on hand ratio.

A and C are incorrect. They contradict option B.

CFA Level I, Volume 3, Topic 5 - Financial Statements Analysis, Learning Module 11: Financial Analysis Techniques, LOS 11b: calculate and interpret activity, liquidity, solvency, and profitability ratios.

Q.2104 The working capital turnover ratio of a hypothetical firm is 12.5. Which of the following is the *most likely* impact on the ratio if the firm utilized its cash to purchase inventory?

- A. The working capital turnover ratio will increase.
- B. The working capital turnover ratio will decrease.
- C. The working capital turnover ratio will remain unchanged.

The correct answer is **C**.

Recall that,

$$\text{Working capital turnover ratio} = \frac{\text{Revenue}}{\text{Average working capital}}$$

Since cash and inventory are both current assets, a decrease in cash and an increase in inventory will offset the working capital. Therefore, the working capital turnover ratio will remain unchanged.

A and B are incorrect. They contradict option C.

CFA Level I, Volume 3, Topic 5 - Financial Statements Analysis, Learning Module 11: Financial Analysis Techniques, LOS 11b: calculate and interpret activity, liquidity, solvency, and profitability ratios.

Q.2105 A firm's number of days of payables is 69 days compared to an industry average of 45 days. Which of the following is the *most appropriate* interpretation of this discrepancy?

- A. The firm might be taking too long to pay its payables.
- B. The firm's customers might be taking too long to pay the firm.
- C. The firm's payable turnover ratio is greater than the industry's payable turnover ratio.

The correct answer is **A**.

The number of days of payables is a financial metric that measures the average time (in days) a firm takes to pay its suppliers. A firm's number of days of payables of 69 days, when compared to an industry average of 45 days, suggests that the firm is taking significantly longer than its industry peers to settle its obligations to suppliers. This discrepancy can have several implications, including potential cash flow management strategies, negotiating terms that are more favorable with suppliers, or possible financial distress that is causing delays in payment.

B is incorrect. The number of days of payables calculates the payables of the firm, not its customers.

C is incorrect. A more significant number of days of payables indicates that the firm's payable turnover ratio is lower than that of the industry.

CFA Level I, Volume 3, Topic 5 - Financial Statements Analysis, Learning Module 11: Financial Analysis Techniques, LOS 11b: calculate and interpret activity, liquidity, solvency, and profitability ratios.

Q.2107 Firm A and Firm B are two firms located in the same geographical location and serving the same geographical markets. Assuming that Firm A's Asset Turnover ratio is 1.2 while the Asset Turnover ratio of Firm B is 2.5, which of the following is an appropriate interpretation of the ratios?

- A. Firm A is more capital-intensive than Firm B.
- B. Firm A uses its assets more efficiently as compared to firm B.
- C. Firm B has a greater portion of its capital invested in assets than Firm A.

The correct answer is **A**.

The Asset Turnover ratio is a financial metric that measures the efficiency of a company's use of its assets in generating sales revenue. It is calculated by dividing sales revenue by total assets. A higher Asset Turnover ratio indicates that a company is using its assets more efficiently to generate sales. In the context of Firm A and Firm B, the Asset Turnover ratios are 1.2 and 2.5, respectively. This means that for every dollar of assets, Firm A generates \$1.2 in sales, while Firm B generates \$2.5 in sales.

B is incorrect. Efficiency in using assets to generate revenue is directly proportional to the Asset Turnover ratio. Since Firm B has a higher Asset Turnover ratio (2.5) compared to Firm A (1.2), it indicates that Firm B is more efficient in using its assets to generate sales.

C is incorrect. However, the Asset Turnover ratio indicates the efficiency of using assets to generate sales, not the proportion of capital invested in assets. A higher Asset Turnover ratio, as seen with Firm B, signifies greater efficiency in generating sales from its assets, not necessarily a higher investment in assets. In fact, a lower Asset Turnover ratio, as seen with Firm A, often implies a higher investment in assets relative to sales, which is characteristic of capital-intensive companies.

CFA Level I, Volume 3, Topic 5 - Financial Statements Analysis, Learning Module 11: Financial Analysis Techniques, LOS 11b: calculate and interpret activity, liquidity, solvency, and profitability ratios.

Q.2109 Layout Works is a printing press, which takes an average of 25 days to pay its payables, and it takes an average of 10 days for its customers to pay Layout. Given that the average cash conversion cycle of the printing industry is 110 days, the firm's estimated days of inventory on hand is *closest to*:

- A. 75 days.
- B. 95 days.
- C. 125 days.

The correct answer is **C**.

$$\begin{aligned}\text{Cash Conversion Cycle} &= \text{Days of sales outstanding} + \text{Days of inventory on hand} \\ &\quad - \text{Number of days of payables} \\ 110 &= 10 + \text{Days on inventory in hand} - 25 \\ \Rightarrow \text{Days of inventory in hand} &= 110 - 10 + 25 = 125\end{aligned}$$

A is incorrect. It subtracts the number of days of payables. So that:

$$\text{Days of inventory in hand} = 110 - 10 - 25 = 75$$

B is incorrect. It subtracts the number of days of payables and adds days of sales outstanding so that;

$$\text{Days of inventory in hand} = 110 + 10 - 25 = 95$$

CFA Level I, Volume 3, Topic 5 - Financial Statements Analysis, Learning Module 11: Financial Analysis Techniques, LOS 11b: calculate and interpret activity, liquidity, solvency, and profitability ratios.

Q.2110 Which of the following ratios can an analyst *most likely* use to measure the number of days of average cash expenses a firm can pay with its liquid assets?

- A. Cash ratio.
- B. Defensive interval ratio.
- C. Working capital turnover ratio.

The correct answer is **B**.

The defensive interval ratio is a liquidity ratio that measures the number of days a firm can cover its average daily cash expenses using its most liquid assets. This ratio is particularly useful for assessing a company's short-term financial resilience. It is calculated by dividing the sum of a company's cash, marketable securities, and receivables by its average daily expenditures. This provides a clear picture of how many days the company can operate without needing to secure additional financing or convert other assets into cash. The formula for the defensive interval ratio is as follows:

$$\text{Defensive interval ratio} = \frac{(\text{Cash} + \text{Marketable securities} + \text{Receivables})}{\text{Daily Cash Expenditures}}$$

This ratio is crucial for financial analysts and investors as it provides insight into the company's liquidity position and its ability to withstand short-term financial difficulties.

A is incorrect. The cash ratio, while a measure of liquidity, does not specifically address the company's ability to cover its daily cash expenses over a period. It is calculated by dividing a company's cash and cash equivalents by its current liabilities. This ratio provides a snapshot of the company's ability to pay off its short-term liabilities with its most liquid assets but does not consider the operational aspect of covering daily expenses.

C is incorrect. The working capital turnover ratio is an activity ratio that measures how efficiently a company uses its working capital to generate sales. It is calculated by dividing the company's net annual sales by its average working capital. While this ratio provides insights into the company's operational efficiency and how effectively it is using its working capital to drive revenue, it does not offer information on the company's ability to meet its daily cash expenses with its liquid assets. The working capital turnover ratio is more focused on the revenue-generating aspects of the company's operations rather than its liquidity or ability to cover short-term expenses.

CFA Level I, Volume 3, Topic 5 - Financial Statements Analysis, Learning Module 11: Financial Analysis Techniques, LOS 11b: calculate and interpret activity, liquidity, solvency, and profitability ratios.

Q.2111 Turks & Co. is a glass-manufacturing firm whose income statement is being analyzed by an analyst at a local credit rating firm. Some relevant accounts for the year 2016 have been

given in the following table:

Income Statement

Sales	15,000
COGS	6,500
Gross Profit	8,500
Depreciation	800
SG&A	550
Lease Payments	350
EBIT	6,800
Interest Payment	250
EBT	6,550
Taxes	1,965
EAT	4,585

Using the given data, the fixed charge coverage ratio of the firm is *closest to*:

- A. 11.92
- B. 20.42
- C. 28.60

The correct answer is **A**.

The fixed charge coverage ratio is a solvency ratio that measures the firm's ability to meet its interests and leases obligations. (Note: It is a good measure for a firm that leases its assets i.e. shipping and airline companies.)

$$\text{Fixed charge coverage ratio} = \frac{(\text{EBIT} + \text{Fixed charges before tax})}{(\text{Interest payments} + \text{Fixed charges before tax})}$$

In this case, the fixed charges before tax are lease payments.

$$\text{Fixed charge coverage ratio} = \frac{(6,800 + 350)}{(350 + 250)} = 11.92$$

B is incorrect. Considers the fixed charges before tax in the numerator and not in the denominator so that:

$$\text{Fixed charge coverage ratio} = \frac{(6,800 + 350)}{(350)} = 20.42$$

C is incorrect. It does not consider interest payments.

CFA Level I, Volume 3, Topic 5 - Financial Statements Analysis, Learning Module 11: Financial Analysis Techniques, LOS 11b: calculate and interpret activity, liquidity, solvency, and profitability ratios.

Q.2113 Turks & Co. is a glass-manufacturing firm whose income statement is being analyzed by a CFA member at a local credit rating firm. Using the data given in the following table, calculate the operating profit margin.

Income Statement

Sales	15,000
COGS	6,500
Gross Profit	8,500
Depreciation	800
SG&A	550
Lease Payments	350
EBIT	6,800
Interest Payment	250
EBT	6,550
Taxes	1,965
EAT	4,585

A. 43.67%

B. 45.33%

C. 56.67%

The correct answer is **B**.

$$\begin{aligned}\text{Operating profit margin} &= \frac{\text{Operating Profit}}{\text{Revenue}} = \frac{\text{EBIT}}{\text{Revenue}} \\ &= \frac{6,800}{15,000} \\ &= 45.33\%\end{aligned}$$

A is incorrect. Uses EBT instead of EBIT.

C is incorrect. It represents the gross profit margin.

CFA Level I, Volume 3, Topic 5 - Financial Statements Analysis, Learning Module 11: Financial Analysis Techniques, LOS 11b: calculate and interpret activity, liquidity, solvency, and profitability ratios.

Q.2115 Company X, Y & Z are market leaders in the air cargo industry. Some ratios of the three companies are given in the following table:

	Company X	Company Y	Company Z
Return on Assets	55%	34%	17%
Profit Margin	35.00%	28.00%	11.30%
Quick Ratio	0.7	2.8	1.1
Financial Leverage	3.7	5.7	11.37

Assuming all three firms are identical in terms of size and revenue, the company that uses the greatest portion of debt in its capital structure is *closest to*:

- A. Company X.
- B. Company Y.
- C. Company Z.

The correct answer is **C**.

The financial leverage ratio is a critical metric for understanding a company's reliance on debt in its capital structure. It essentially measures the extent to which a company is financing its operations through debt as opposed to equity. A higher financial leverage ratio indicates a greater use of debt in the company's capital structure. In the context of Company X, Y, and Z, the financial leverage ratios provided are 3.7, 5.7, and 11.37, respectively. Given these figures, it is clear that Company Z has the highest financial leverage ratio at 11.37. This indicates that Company Z uses the greatest portion of debt in its capital structure compared to Companies X and Y. The use of debt financing can have several implications for a company, including potential for higher returns on equity due to the leverage effect but also increased risk due to the obligation to service the debt regardless of business performance.

A is incorrect. Company X has a financial leverage ratio of 3.7, which is the lowest among the three companies. This indicates that Company X uses the least amount of debt in its capital structure relative to its equity. A lower financial leverage ratio suggests a more conservative financing approach, with less reliance on debt and potentially lower financial risk. However, it also means that Company X may not be taking full advantage of the leverage effect to amplify returns on equity.

B is incorrect. Company Y, with a financial leverage ratio of 5.7, falls in the middle of the range among the three companies. While it uses more debt in its capital structure than Company X, it still does not use as much debt as Company Z. The financial leverage ratio of 5.7 indicates a moderate level of debt usage, which suggests a balance between the potential benefits of leverage and the risks associated with increased debt. This level of financial leverage reflects a strategic choice by Company Y to employ a certain degree of debt financing while managing its risk exposure.

CFA Level I, Volume 3, Topic 5 - Financial Statements Analysis, Learning Module 11: Financial Analysis Techniques, LOS 11b: calculate and interpret activity, liquidity, solvency, and profitability ratios.

Q.2117 Which of the following transactions will *most likely* increase the financial leverage ratio by the largest amount?

- A. Purchase of Land through debt financing.
- B. Purchase of Plants by issuing new equity.
- C. Purchase of Inventory using cash equivalents.

The correct answer is **A**.

The purchase of assets through debt financing will increase assets and debt. Thus, it will also increase the numerator of the financial leverage ratio ($\frac{\text{Avg. Total Assets}}{\text{Avg. Total Equity}}$).

B is incorrect. The purchase of assets with equity will increase assets and equity by the same amount, decreasing the financial leverage ratio.

C is incorrect The purchase of assets with cash equivalents will have a small effect on the leverage ratio as cash and asset will offset each other.

CFA Level I, Volume 3, Topic 5 - Financial Statements Analysis, Learning Module 11: Financial Analysis Techniques, LOS 11b: calculate and interpret activity, liquidity, solvency, and profitability ratios.

Q.2118 A highly leveraged company has sales of \$1.5 million, a gross profit margin of 40%, and an average inventory of \$250,000 for the year 2015. The firm's inventory turnover ratio for the year 2015 is *closest to*:

A. 2.4

B. 3.6

C. 6.0

The correct answer is **B**.

$$\begin{aligned}\text{Inventory turnover} &= \frac{\text{Cost of goods sold (COGS)}}{\text{Average inventory}} \\ \text{Gross profit margin} &= \frac{(\text{Sales} - \text{COGS})}{\text{Sales}} \\ \text{COGS} &= \text{Sales} - (\text{Profit margin} \times \text{Sales}) \\ &= \$1.5 \text{ million} - (40\% \times \$1.5 \text{ million}) \\ &= \$0.9 \text{ million} \\ &= \$900,000 \\ \text{Inventory turnover} &= \frac{\$900,000}{\$250,000} = 3.6\end{aligned}$$

A is incorrect. It uses the value of the profit margin.

$$\text{Inventory turnover} = \frac{(40\% \times \$1.5 \text{ million})}{\$250,000} = 2.4$$

C is incorrect. It uses sales instead of COGS.

$$\text{Inventory turnover} = \frac{\$1,500,000}{\$250,000} = 6$$

CFA Level I, Volume 3, Topic 5 - Financial Statements Analysis, Learning Module 11: Financial Analysis Techniques, LOS 11b: calculate and interpret activity, liquidity, solvency, and profitability ratios.

Q.2119 If a company's debt-to-equity ratio is 2.5, which of the following transactions will *least likely* increase the debt-to-equity ratio?

- A. The issuance of bonds to reacquire shares.
- B. The payment of dividends to common shareholders.
- C. The purchase of assets with 50% debt and 50% equity.

The correct answer is **C**.

Since the Debt-to-equity ratio is 2.5, an even increase in numerator and denominator will decrease the debt/equity ratio. For example, $\frac{2.5}{1} = 2.5$ could then be $\frac{(2.5+0.2)}{(1+0.2)} = 2.25$.

A and B are incorrect. They will decrease equity and, therefore, increase the debt-to-equity ratio.

CFA Level I, Volume 3, Topic 5 - Financial Statements Analysis, Learning Module 11: Financial Analysis Techniques, LOS 11b: calculate and interpret activity, liquidity, solvency, and profitability ratios.

Q.2120 If a firm's current ratio increased from 1.1 to 1.7 due to an increase in inventory, what is the *most likely* impact on the asset turnover ratio?

- A. The asset turnover ratio will increase.
- B. The asset turnover ratio will decrease.
- C. The asset turnover ratio will remain unchanged.

The correct answer is **B**.

An increase in the current ratio indicates an increase in current assets and total assets. Since the value of total assets will increase, the asset turnover ratio (Revenue/Avg. total assets) will decrease. Revenue will be unaffected by the increase in the current ratio.

A and C are incorrect. They contradict option B.

CFA Level I, Volume 3, Topic 5 - Financial Statements Analysis, Learning Module 11: Financial Analysis Techniques, LOS 11b: calculate and interpret activity, liquidity, solvency, and profitability ratios.

Q.2121 What is the *most likely* impact on a firm's return on equity ratio if the corporate tax rate increases from 25% to 27%?

- A. The Return on equity ratio will increase.
- B. The Return on equity ratio will decrease.
- C. The Return on equity ratio will remain unchanged.

The correct answer is **B**.

The increase in the corporate tax rate from 25% to 27% will most likely lead to a decrease in the firm's return on equity (ROE) ratio. The ROE ratio is a measure of financial performance calculated by dividing net income by shareholders' equity. Essentially, it indicates how efficiently a company is at generating profits from every unit of shareholders' equity. The formula for calculating ROE is given by:

$$\text{ROE} = \frac{\text{Net Income}}{\text{Average Shareholders' Equity}}$$

When the corporate tax rate increases, the amount of tax a company owes on its profits also increases. This results in a decrease in the company's net income, assuming all other factors remain constant. Since net income is the numerator in the ROE formula, a decrease in net income due to higher taxes will lead to a decrease in the ROE ratio.

A and C are incorrect. They contradict option B.

CFA Level I, Volume 3, Topic 5 - Financial Statements Analysis, Learning Module 11: Financial Analysis Techniques, LOS 11b: calculate and interpret activity, liquidity, solvency, and profitability ratios.

Q.2122 An analyst analyzes the last three years' balance sheets of Cosmo Inc. given in the following table.

Balance Sheet

	2017	2016	2015
Acc. Rec.	300	210	150
Inventory	500	540	450
Total Current Assets	800	750	600
Land	1,800	1,450	1,200
Total Assets	2,600	2,200	1,800
Acc. Payables	400	330	500
Long-term Debt	1,300	770	400
Common Equity	900	1,100	900
Total Liab. & Equity	2,600	2,200	1,800

The value of short-term liabilities for the most recent year if an analyst converts the balance sheet into a vertical common-size balance sheet is *closest to*:

- A. 10.54%
- B. 15.38%
- C. 50%

The correct answer is **B**.

In a vertical common-size balance sheet, each line item is expressed as a percentage of total assets, allowing for easier comparison across different periods or companies by standardizing the figures. For Cosmo Inc., the short-term liabilities consist solely of Accounts Payable. To find the percentage of short-term liabilities relative to total assets for the most recent year, we calculate the ratio of Accounts Payable to Total Assets for 2017:

$$\frac{\text{Accounts Payable}}{\text{Total Assets}} = \frac{400}{2,600} = 15.38\%$$

This calculation shows that Accounts Payable, which represents the company's short-term liabilities, constitutes 15.38% of the total assets in 2017.

CFA Level I, Volume 3, Topic 5 - Financial Statements Analysis, Learning Module 11: Financial Analysis Techniques, LOS 11b: calculate and interpret activity, liquidity, solvency, and profitability ratios.

Q.2124 An analyst is trying to analyze the trend in the capital structure of Cosmo Inc.

Balance Sheet

	2017	2016	2015
Acc. Rec.	300	210	150
Inventory	500	540	450
Total Current Assets	800	750	600
Land	1,800	1,450	1,200
Total Assets	2,600	2,200	1,800
Acc. Payables	400	330	500
Long-term Debt	1,300	770	400
Common Equity	900	1,100	900
Total Liab. & Equity	2,600	2,200	1,800

If Cosmo Inc. had no short-term debt, the trend using the debt-to-equity ratio is *most likely*:

- A. Cosmo Inc. has a decreasing trend in its use of debt financing.
- B. Cosmo Inc. has an increasing trend in its use of debt financing.
- C. Cosmo Inc. has an increasing trend in its use of equity financing.

The correct answer is **B**.

$$\begin{aligned}\text{Debt-to-equity ratio of year 2017} &= \frac{1,300}{900} = 1.44 \\ \text{Debt-to-equity ratio of year 2016} &= \frac{770}{1,100} = 0.7 \\ \text{Debt-to-equity ratio of year 2015} &= \frac{400}{900} = 0.44\end{aligned}$$

Hence, Cosmo is increasingly using Debt financing to repurchase Equity. Please note that that debt in the D/E ratio represents the total debt on Cosmo's balance sheet (this would include both long-term and short-term interest-bearing liabilities).

A and C are incorrect. They contradict option A, given the computation above.

CFA Level I, Volume 3, Topic 5 - Financial Statements Analysis, Learning Module 11: Financial Analysis Techniques, LOS 11b: calculate and interpret activity, liquidity, solvency, and profitability ratios.

Q.2125 Which of the following is the *most appropriate* equation for calculating the return on equity ratio?

- A. Return on Equity = Net Profit Margin × Asset Turnover × Financial Leverage.
- B. Return on Equity = Net Profit Margin × Equity Turnover × Financial Leverage.
- C. Return on Equity = Gross Profit Margin × Return on Assets × Financial Leverage.

The correct answer is **A**.

The Return on equity ratio (Net income / Avg. Total equity) can also be calculated using the DuPont approach:

Return on equity ratio = Net Profit Margin × Asset Turnover × Financial Leverage
OR

$$\left[\left(\frac{\text{Net Income}}{\text{Sales}} \right) \left(\frac{\text{Sales}}{\text{Avg. Total Assets}} \right) \left(\frac{\text{Avg. Total Assets}}{\text{Avg. Total Equity}} \right) \right]$$

B is incorrect. It has included equity turnover.

C is incorrect. It includes the Gross Profit margin and returns on assets.

CFA Level I, Volume 3, Topic 5 - Financial Statements Analysis, Learning Module 11: Financial Analysis Techniques, LOS 11d: demonstrate the application of DuPont analysis of return on equity and calculate and interpret effects of changes in its components

Q.2126 A research analyst at Shark Investment Management is conducting a DuPont analysis for a firm whose financial data for the year 2016 is provided in the following table:

Financial Data

Revenue	1,450,000
COGS	550,000
Gross Profit	900,000
SG&A	160,000
Wages Exp.	140,000
EBITDA	600,000
Dep. Exp.	220,000
Operating Profit	380,000
Interest Payment	170,000
EBT	210,000
Taxes	63,000
EBT	210,000
Taxes	63,000
Net Income	147,000
Total Assets	3,400,000
Total Debt	1,500,000

Considering that the data provided is accurate, the firm's tax burden is *closest to*:

- A. 0.25
- B. 0.30
- C. 0.70

The correct answer is **C**.

$$\begin{aligned}
 \text{Tax Burden} &= \frac{\text{Net Income}}{\text{EBT}} \\
 &= \frac{\$147,000}{\$210,000} \\
 &= 0.7
 \end{aligned}$$

A is incorrect. It uses EBITDA in the denominator instead of EBT.

B is incorrect. Uses operating profit in the denominator instead of EBIT.

CFA Level I, Volume 3, Topic 5 - Financial Statements Analysis, Learning Module 11: Financial Analysis Techniques, LOS 11b: calculate and interpret activity, liquidity, solvency, and profitability ratios.

Q.2128 A research analyst at Shark Investment Management is conducting a DuPont analysis for a firm whose financial data is provided in the following table:

Financial Data

Revenue	1,450,000
COGS	550,000
Gross Profit	900,000
SG&A	160,000
Wages Exp.	140,000
EBITDA	600,000
Dep. Exp.	220,000
Operating Profit	380,000
Interest Payment	170,000
EBT	210,000
Taxes	63,000
EBT	210,000
Taxes	63,000
Net Income	147,000
Total Assets	3,400,000
Total Debt	1,500,000

Considering that the data provided is accurate, the firm's return on equity using the extended DuPont ratio is *closest to*:

- A. 7.7%
- B. 10%
- C. 43%

The correct answer is **A**.

The extended DuPont approach has 5 components: Tax burden (N.I./ EBT), Interest Burden (EBT/EBIT), EBIT Margin (EBIT/Revenue), Asset Turnover (Revenue/ Avg. Total Assets) & Financial Leverage (Avg. Total Assets/Avg. Total Equity).

Return on Equity = 0.077 or 7.7% (Using the following table)

Tax Burden	0.70
Interest Burden	0.55
EBIT Margin	0.26
Asset Turnover	0.43
Financial Leverage	1.79
Return on Equity	0.077

B is incorrect. It excludes asset turnover and financial leverage.

C is incorrect. It represents the asset turnover ratio.

CFA Level I, Volume 3, Topic 5 - Financial Statements Analysis, Learning Module 11: Financial Analysis Techniques, LOS 11d: demonstrate the application of DuPont analysis of return on equity and calculate and interpret effects of changes in its components.

Q.2129 Armen Inc. and Bristol Corp. are market leaders in the construction industry. Some financial information regarding the two firms is given in the following table:

	Armen Inc.	Bristol Corp.
Revenue	6,000,000	8,000,000
Gross Profit	3,400,000	5,500,000
EBIT	2,100,000	2,700,000
Net Income	1,500,000	1,800,000
Total Debt	6,400,000	7,200,000
Dividend per Share	1	2
Share Price	25	22
Number of Shares Outstanding	500,000	600,000

Assuming that each firm's market capitalization is approximately equal to the firm's total equity, Armen Inc.'s return on equity ratio is *closest to*:

- A. 12%.
- B. 25%.
- C. 56%.

The correct answer is **A**.

To calculate the return on equity ratio, it is important to determine the value of total equity. In this case:

$$\begin{aligned}
 \text{Total equity} &= \text{Share price} \times \text{No. of Shares outstanding} \\
 &= \$25 \times 500,000 \\
 &= \$12.5 \text{ million} \\
 \text{Return on equity} &= \frac{\text{Net income}}{\text{Total equity}} \\
 &= \frac{\$1.5 \text{ million}}{\$12.5 \text{ million}} \\
 &= 0.12
 \end{aligned}$$

B is incorrect. It represents the net profit margin.

C is incorrect. It represents the gross profit margin.

CFA Level I, Volume 3, Topic 5 - Financial Statements Analysis, Learning Module 11: Financial Analysis Techniques, LOS 11b: calculate and interpret activity, liquidity, solvency, and profitability ratios.

Q.2135 Which of the following analysis methods examines the variability in financial outcome based on a change in one specific variable?

- A. Scenario analysis.
- B. Sensitivity analysis.
- C. Simulation analysis.

The correct answer is **B**.

Sensitivity analysis is a tool used to predict the outcome of a decision given a certain range of variables. By changing one specific variable while keeping others constant, analysts can determine how changes in that variable affect the outcome. This method is particularly useful in financial modeling to assess risk and understand the impact of different variables on a project's or investment's financial viability. Sensitivity analysis provides a clear picture of which variables are most influential on the outcome, allowing decision-makers to focus on managing those key variables.

A is incorrect. Scenario analysis differs from sensitivity analysis in that it considers the impact of changing multiple variables at once to assess the outcomes under different scenarios. It is a more comprehensive approach that looks at the possible outcomes of a decision under a set of assumptions, reflecting different future conditions.

C is incorrect. Simulation analysis is a technique that uses probability distributions to model and analyze the behavior of a system or process. Unlike sensitivity analysis, which examines the effect of changing one variable at a time, simulation analysis allows for the simultaneous variation of many variables to understand their overall impact on the outcome.

CFA Level I, Volume 3, Topic 5 - Financial Statements Analysis, Learning Module 11: Financial Analysis Techniques, LOS 11f: describe how ratio analysis and other techniques can be used to model and forecast earnings

Q.2136 A company earned a net income of \$500,000 with sales of \$2,500,000 for the year 2016. If the asset turnover ratio of the firm is 0.4, and the financial leverage is 1.3, then the return on equity of the firm is *closest to*:

- A. 8.0%
- B. 10.4%
- C. 20.0%

The correct answer is **B**.

This method provides a more detailed understanding of the factors contributing to a firm's ROE. In this case, the company's net income, sales, and asset turnover ratio are given, along with its financial leverage. The calculation proceeds as follows:

The profit margin is calculated by dividing the net income by sales, which gives us:

$$\text{Profit margin} = \frac{\$500,000}{\$2,500,000} = 20\%$$

Given the asset turnover ratio of 0.4 and financial leverage of 1.3, we can calculate the ROE using the DuPont formula:

$$\text{ROE} = (\text{Profit Margin}) \times (\text{Asset Turnover}) \times (\text{Financial Leverage}) = 0.20 \times 0.4 \times 1.3 = 10.4\%$$

A is incorrect. It excludes financial leverage in calculating the return on equity.

C is incorrect. It represents the profit margin.

CFA Level I, Volume 3, Topic 5 - Financial Statements Analysis, Learning Module 11: Financial Analysis Techniques, LOS 11d: demonstrate the application of DuPont analysis of return on equity and calculate and interpret effects of changes in its components

Q.2394 An analyst at a German research firm analyzes the reports of a home appliances firm, Arab Appliances, for his emerging markets income fund. Some of the information from his analysis is given in the following table and notes:

Note	Income Statement	2015	2016
1	Revenue	\$3,000,000	\$3,000,000
2	COGS	\$1,900,000	\$2,500,000
	Gross Profit	\$1,100,000	\$500,000
3	Research Cost	-	\$120,000
	Depreciation Exp.	\$90,000	\$90,000
	EBIT	\$1,010,000	\$290,000
4	Interest	\$150,000	-
	Net Income	\$860,000	\$290,000

Note 1 - Arab Oven consistently sold 20,000 units of Smart Oven at the price of \$150, in 2015 and 2016, because the country has hypothetically zero inflation which means there was no increase or decrease in input prices.

Note 2 - Arab Oven's supplier is a private company that is owned by the management of the Arab Oven. Arab only uses the FIFO inventory method.

Note 3 - Arab Oven is continuously engaged in the research for innovations in smart appliances. The firm capitalized on the research cost in 2015 but decided to expense it in 2016. This capitalization increased the depreciation cost which was \$80,000 originally.

Note 4 - The firm expensed the interest cost in 2015 but resolved to capitalize the interest on the funds used for the construction of new technology. The capitalization of interest increased the depreciation for the year which was \$80,000 originally.

After analyzing the information given in the table and notes, which of the following is the most accurate statement regarding the change in the asset turnover ratio of Arab Oven?

- A. The asset turnover ratio is lower in 2015.
- B. The asset turnover ratio is lower in 2016.
- C. The asset turnover ratio is the same in 2015 and in 2016.

The correct answer is **B**.

The asset turnover ratio, which is calculated as $\frac{\text{Revenue}}{\text{Avg. Total Assets}}$, is a measure of how efficiently a company uses its assets to generate sales. A lower asset turnover ratio in 2016 for Arab Oven can be attributed to the unchanged revenue amidst an increase in total assets. The reasons for the increase in total assets in 2016, despite constant revenue, are multifaceted:

Firstly, the cost of goods sold (COGS) in 2016 increased significantly from \$1,900,000 to \$2,500,000. This increase in COGS, despite stable sales volume and price, suggests that the ending inventory valuation would be higher due to the higher per-unit cost, thereby increasing the total assets.

Secondly, the firm's decision to capitalize the interest cost in 2016, as opposed to expensing it in

2015, resulted in an increase in the asset base. The capitalization of \$150,000 in interest costs directly increases the total assets, contrasting with the previous year where such costs were expensed and thus did not contribute to the asset base.

Furthermore, the research costs, which were capitalized in 2015, adding to the asset base, were expensed in 2016. However, the impact of this change is offset by the higher increase in assets due to the capitalization of interest costs and the higher COGS leading to a higher inventory valuation.

CFA Level I, Volume 3, Topic 5 - Financial Statements Analysis, Learning Module 11: Financial Analysis Techniques, LOS 11b: calculate and interpret activity, liquidity, solvency, and profitability ratios.

Q.3796 Consider the following information for a company:

- Net income - \$ 5,000
- Income tax expense - \$ 1,130
- Interest Expense and Payments - \$ 1,050
- Lease Payments - \$ 700

The fixed coverage ratio for the company is *closest to*:

- A. 2.9
- B. 4.1
- C. 4.5

The correct answer is **C**.

$$\begin{aligned}\text{Fixed charge coverage ratio} &= \frac{\text{EBIT} + \text{Lease Payments}}{\text{Interest payments} + \text{Lease Payments}} \\ &= \frac{(\$5,000 + \$1,130 + \$1,050) + \$700}{\$1,050 + \$700} \\ &= \frac{\$7880}{\$1,750} = 4.5\end{aligned}$$

A is incorrect. It has used net income instead of EBIT to calculate the fixed coverage ratio.

B is incorrect. Lease payments have not been added to the EBIT in the numerator.

CFA Level I, Volume 3, Topic 5 - Financial Statements Analysis, Learning Module 11: Financial Analysis Techniques, LOS 11b: calculate and interpret activity, liquidity, solvency, and profitability ratios.

Q.4933 An analyst is examining the common-size balance sheets of two companies to evaluate their financial structure. Which of the following is *most likely* to distort the analysis? Differences in:

- A. fiscal year-end dates.
- B. industry classification.
- C. asset valuation methods.

The correct answer is **C**.

Differences in asset valuation methods can significantly distort the analysis because they directly affect the reported values of assets, impacting the balance sheet composition and ratios derived from these values. For example, one company might use historical cost, while another uses fair value, leading to inconsistencies in asset valuations and comparability.

A is incorrect. Differences in fiscal year-end dates can affect comparability to some extent, but they do not distort the intrinsic valuation methods of assets and liabilities as directly as differences in asset valuation methods do.

B is incorrect. Differences in industry classification might affect the types of assets and liabilities reported, but they do not inherently distort the common-size analysis, which focuses on the relative proportions of financial statement items.

CFA Level I, Volume 3, Topic 5 - Financial Statements Analysis, Learning Module 11: Financial Analysis Techniques, LOS 11a: describe tools and techniques used in financial analysis, including their uses and limitations.

Q.4934 Which of the following aspects of ratio analysis is *least likely* to distort meaningful comparisons across companies and over time?

- A. Interpretation of the ratios.
- B. Differences in accounting policies.
- C. Ratios are indicators, not the answers.

The correct answer is **C**.

Ratios being indicators, not the answers, is a fundamental aspect of ratio analysis that provides insights into what happened but not necessarily why it happened. This characteristic of ratios helps analysts identify potential areas of concern or strength without inherently distorting comparisons. It means that while ratios can highlight areas for further investigation, they do not by themselves explain the underlying reasons.

A is incorrect. Interpretation is key in ratio analysis because it involves understanding the context and the reasons behind the ratios. Misinterpretation can lead to incorrect conclusions, thus affecting meaningful comparisons.

B is incorrect. Differences in accounting policies across companies and over time can distort ratios because companies may use different methods for accounting for inventory, depreciation, or other financial elements. These differences can lead to misleading comparisons unless adjustments are made.

CFA Level I, Volume 3, Topic 5 - Financial Statements Analysis, Learning Module 11: Financial Analysis Techniques, LOS 11a: describe tools and techniques used in financial analysis, including their uses and limitations.

Q.4935 You have been provided with the following financial ratios for Company ABC for the periods ending December 31, 2021, and December 31, 2020:

Ratios	December 31, 2021	December 31, 2020
Return on equity	8.25%	6.45%
Return on assets	4.35%	3.98%
Current ratio	1.85	1.65
Inventory turnover	4.3	3.7
Net profit margin	4.75%	3.90%
Debt-to-assets	48.25%	55.00%

Which of the following best describes the trend in Company ABC's financial performance from 2020 to 2021?

- A. Improved profitability and liquidity, and stronger solvency
- B. Declined profitability, improved liquidity, and weaker solvency
- C. Improved profitability, weaker liquidity, and stronger solvency

The correct answer is **A**.

Improved profitability is indicated by the increase in return on equity (ROE) from 6.45% to 8.25%, return on assets (ROA) from 3.98% to 4.35%, and net profit margin from 3.90% to 4.75%.

The current ratio increased from 1.65 to 1.85, indicating better liquidity. Lastly, the debt-to-assets ratio decreased from 55.00% to 48.25%, indicating a reduction in financial leverage, hence stronger solvency.

CFA Level I, Volume 3, Topic 5 - Financial Statements Analysis, Learning Module 11: Financial Analysis Techniques, LOS 11b: calculate and interpret activity, liquidity, solvency, and profitability ratios.

Q.4936 An analyst is evaluating the liquidity of a company using the following ratios over the past three years:

Ratio	2023	2022	2021
Current Ratio	1.8	2.0	2.5
Quick Ratio	1.2	1.4	1.6
Days of Inventory Held (DOH)	60	55	50
Days Sales Outstanding (DSO)	45	42	40

Which of the following best explains the observed change in the company's liquidity ratios from 2021 to 2023? The company has:

- A. reduced its short-term liabilities.
- B. significantly increased its inventory levels.
- C. improved its cash collection from customers.

The correct answer is **B**.

The decrease in both the current ratio and the quick ratio, alongside an increase in DOH, suggests that the company is holding more inventory. This increase in inventory affects the current ratio but not the quick ratio, which explains the observed pattern.

A is incorrect. A reduction in short-term liabilities would improve both the current ratio and the quick ratio, but both ratios have decreased.

C is incorrect. Improved cash collection would increase the quick ratio and likely the current ratio as well, but this is not observed.

CFA Level I, Volume 3, Topic 5 - Financial Statements Analysis, Learning Module 11: Financial Analysis Techniques, LOS 11c: describe relationships among ratios and evaluate a company using ratio analysis

Q.4937 An analyst is examining the financial health of a bank using industry-specific ratios. Which of the following ratios would *most effectively* provide insights into the bank's ability to comply with regulatory requirements and maintain liquidity?

- A. Return on Equity (ROE)
- B. Capital Adequacy Ratio
- C. Average Revenue Per User (ARPU)

The correct answer is **B**.

The Capital Adequacy Ratio is used in the banking industry to measure a bank's capital in relation to its risk-weighted assets. This ratio provides insights into a bank's ability to comply with regulatory requirements and maintain sufficient liquidity to absorb potential losses.

A is incorrect. Return on Equity (ROE) measures a company's profitability relative to equity but does not specifically address regulatory compliance or liquidity.

C is incorrect. Average Revenue Per User (ARPU) is used in relationship or subscription-based industries to measure revenue efficiency per user but is not relevant to banking liquidity and regulatory compliance.

CFA Level I, Volume 3, Topic 5 - Financial Statements Analysis, Learning Module 11: Financial Analysis Techniques, LOS 11e: describe the uses of industry-specific ratios used in financial analysis.
