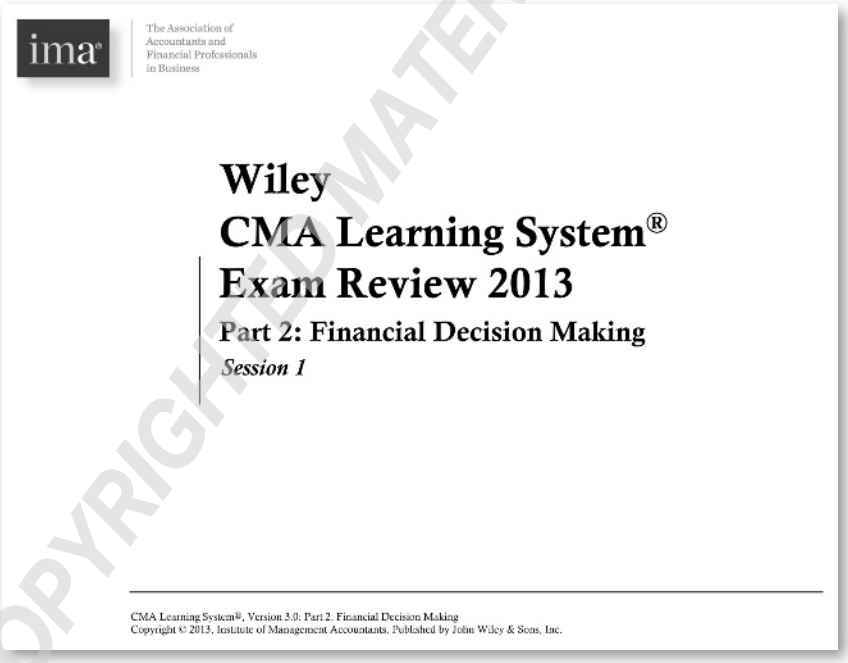
Session 1 (3 hours)

Course Introduction

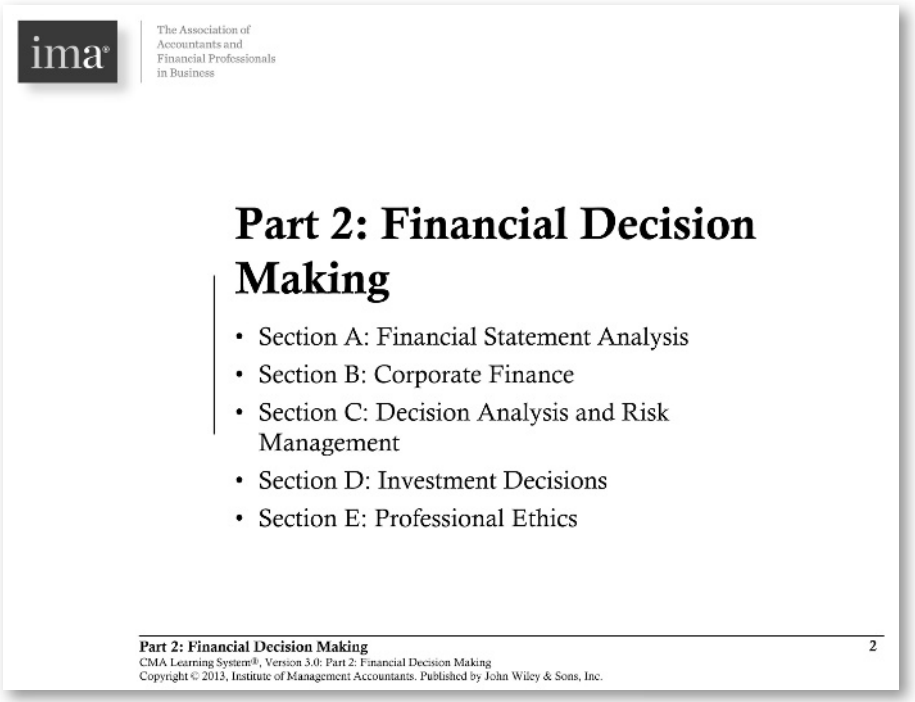


Open file: CMALS2_session1_ver2003.pps (or CMALS2_session1_ver2007.ppsx)

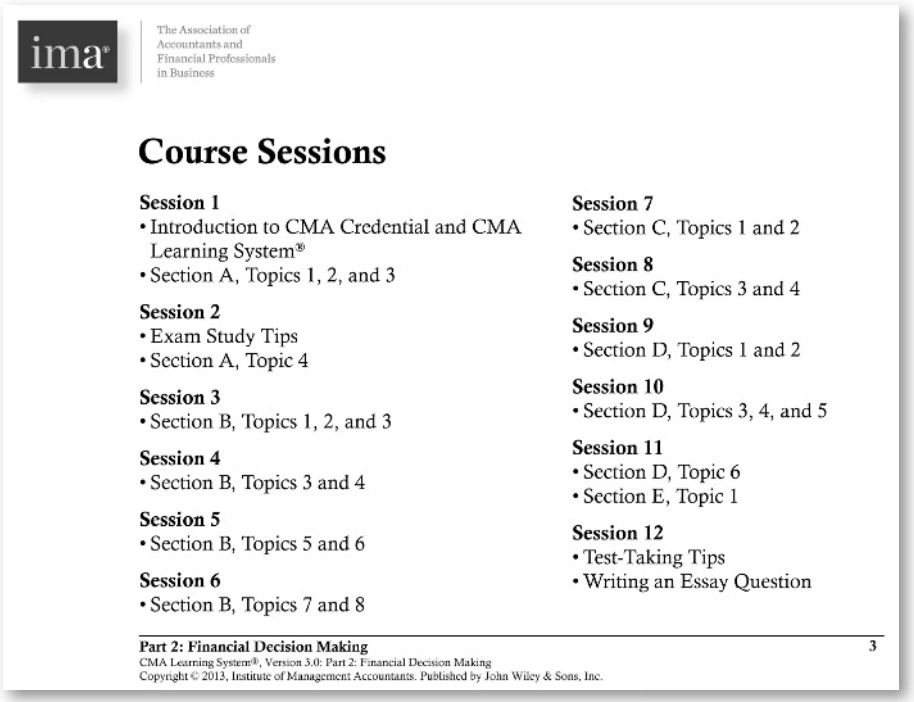
Introduce yourself and welcome participants to the instructor-led course for IMA's *CMA Learning System, Part 2: Financial Decision Making.*

Explain that while the primary focus of the course is to prepare participants for the CMA Part 2 certification exam, it is also an excellent professional development tool for helping participants advance their careers in accounting, finance, or business management.

Tell participants who are preparing for the CMA Part 2 exam that the course and the materials follow the CMA body of knowledge provided by the Institute of Certified Management Accountants (ICMA) and that the course follows the general order of the CMALS Part 2 self-study book.



Explain that Part 2: Financial Decision Making, consists of five sections.



ima®

The Association of Accountants and Financial Professionals in Business

Course Sessions

Session 1
- Introduction to CMA Credential and CMA Learning System®
- Section A, Topics 1, 2, and 3

Session 2
- Exam Study Tips
- Section A, Topic 4

Session 3
- Section B, Topics 1, 2, and 3

Session 4
- Section B, Topics 3 and 4

Session 5
- Section B, Topics 5 and 6

Session 6
- Section B, Topics 7 and 8

Session 7
- Section C, Topics 1 and 2

Session 8
- Section C, Topics 3 and 4

Session 9
- Section D, Topics 1 and 2

Session 10
- Section D, Topics 3, 4, and 5

Session 11
- Section D, Topic 6
- Section E, Topic 1

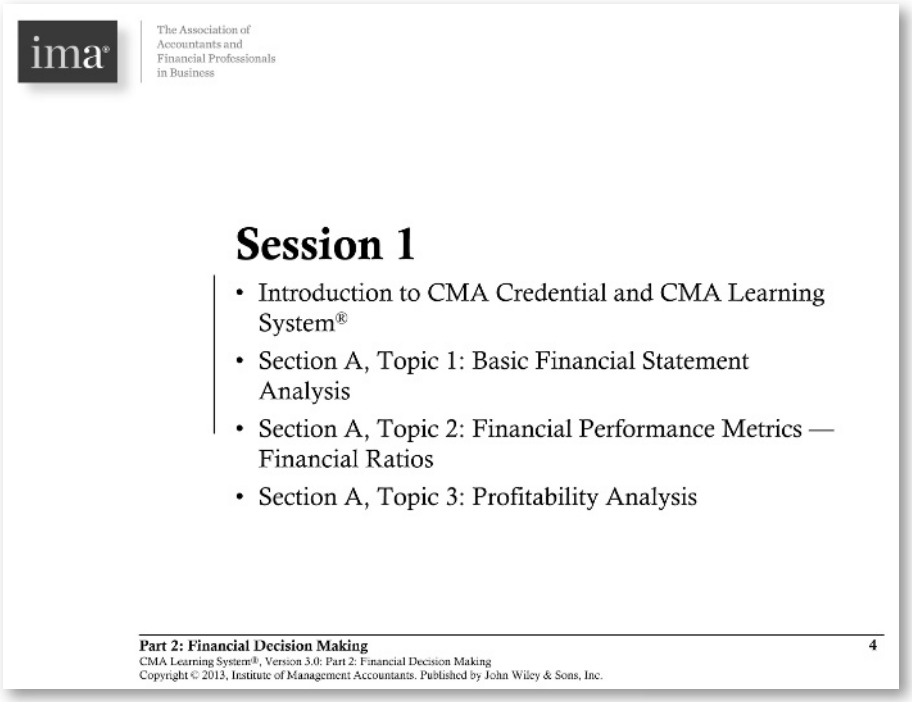
Session 12
- Test-Taking Tips
- Writing an Essay Question

Part 2: Financial Decision Making 3

CMA Learning System®, Version 3.0: Part 2: Financial Decision Making

Distribute and review the course syllabus with the session dates and durations for the specific course you are teaching. (Customize the template syllabus that is on your instructor CD.)

Session 1 Overview

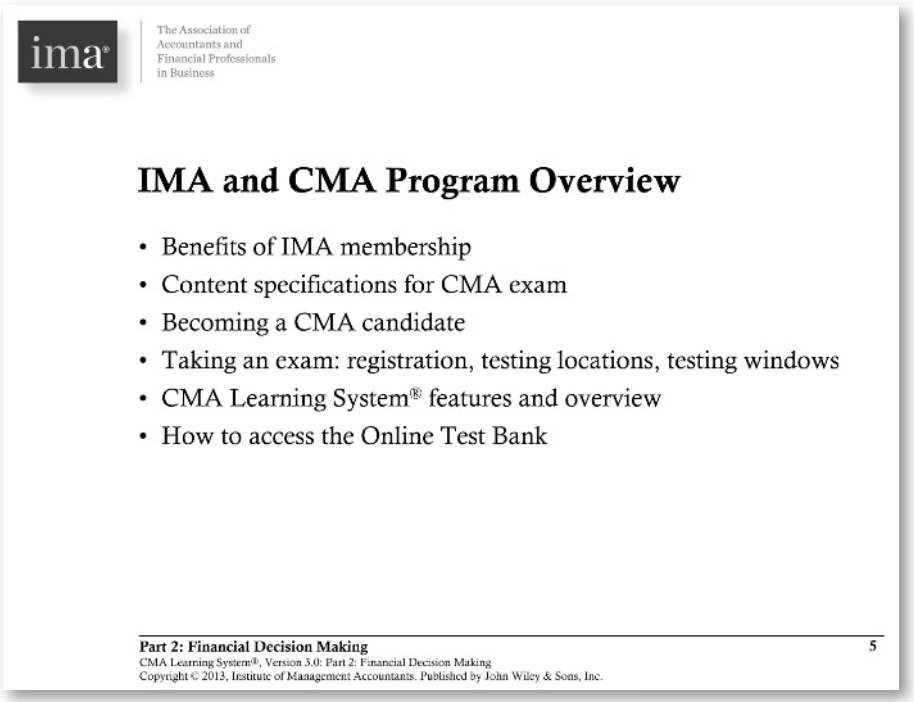


Explain that Session 1 introduces the CMA Learning System and how to use its components, explain some key points about the CMA exam, and discuss the advantages of IMA membership.

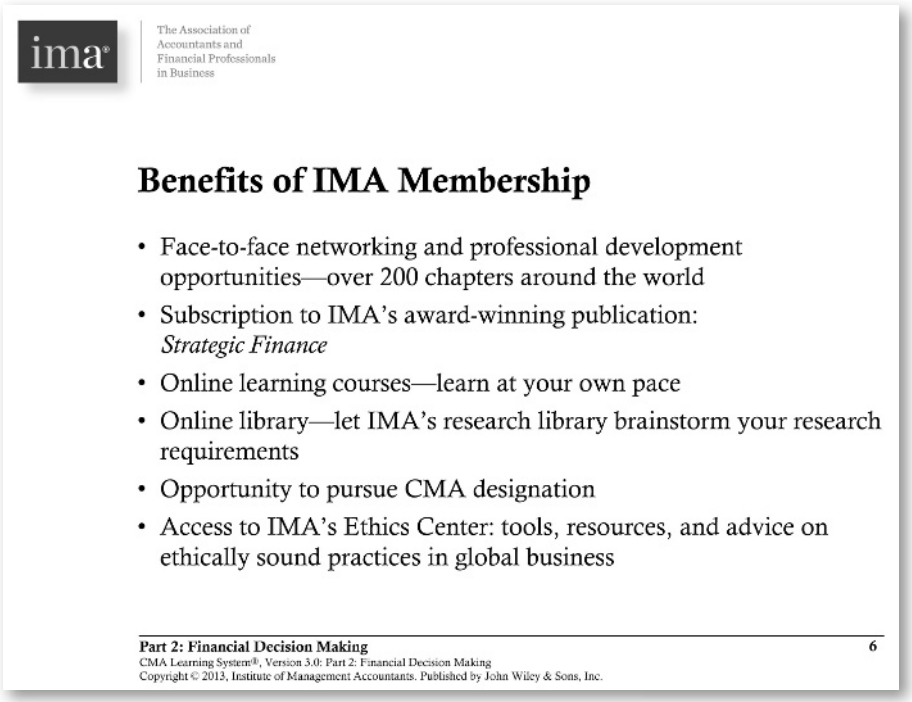
It also begins the course content with Section A, Topic 1: Basic Financial Statement Analysis, and continues with Topic 2: Financial Performance Metrics—Finanical Ratios, and Topic 3: Profitability Analysis.

As part of the class, participants also will work on some of the practice questions in the Part 2 self-study book.

Let's begin with an overview of the IMA and CMA program.



Begin by talking a bit about the IMA, the benefits of registering early as a CMA candidate and the CMA Learning System® and how participants should use the tools and features of the system.



Explain to participants that there are six key benefits of joining IMA. When they register as a CMA candidate, they automatically become IMA members; however, even if they are taking this course as continuing education and do not think they will work toward their CMA certification, the benefits of joining IMA are still valuable.

IMA's chapter network is significant both within the United States and around the globe. Chapters are filled with people who are passionate about the accounting and finance profession. The chapters offer a way to connect with these people, their knowledge, insight, and experience, and the job connections they can offer.

Strategic Finance magazine is produced by IMA and is filled each month with timely articles written by those most influential in the profession. It is a must for staying on top of what is happening today and the hot topics emerging for those in the accounting and finance field.

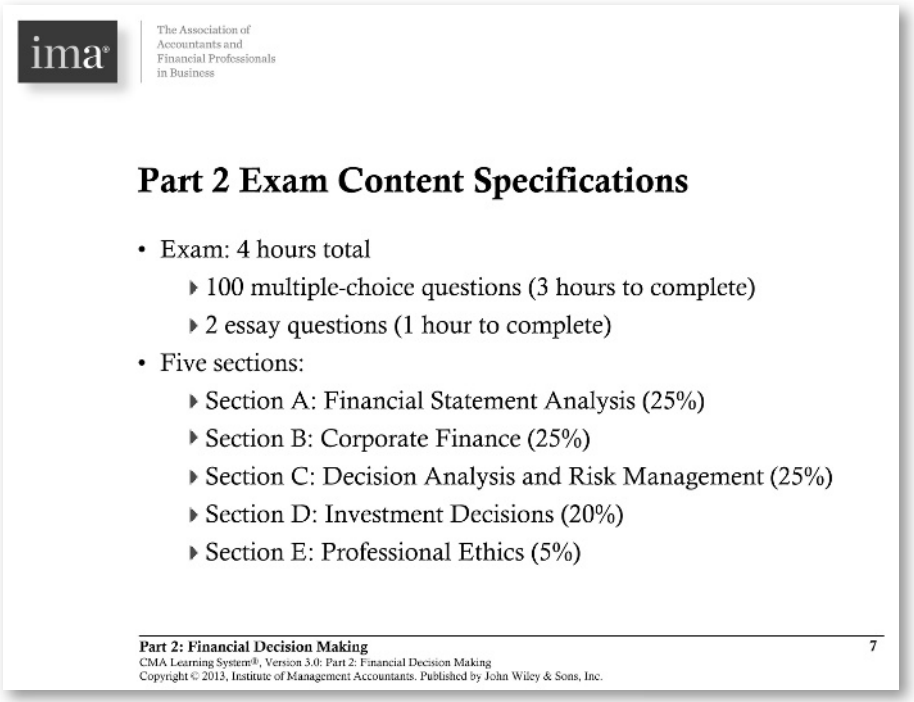
IMA's Professional Development team offers a wide range of online learning programs including a very popular free webinar series.

IMA constantly is investing in new ways to bring relevant content and connections to its members.

IMA also offers a host of research papers and statements of management accounting. And its online librarian is available to help members locate specific research information—an amazing free service.

Obviously, the CMA program itself is a huge benefit—the IMA is filled with many resources and experts who manage the CMA body of knowledge and support the CMA candidates.

Last, IMA has a top-notch ethics resource center, including an advisor. Members can use the center to get support when dealing with professional ethical situations.

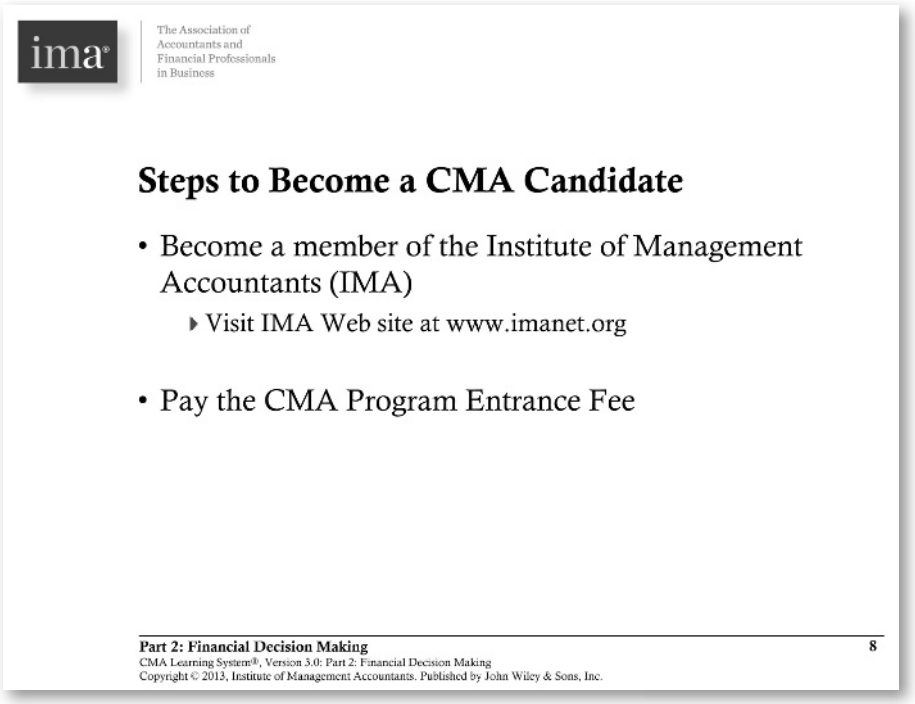


Explain the content specifications for the Part 2 CMA exam.

Ask participants to open their self-study books and look for the Learning Outcome Statements (LOS) at the back of the book. The LOS describe all the knowledge and skills that make up the CMA body of knowledge, broken down by part, section, and topic.

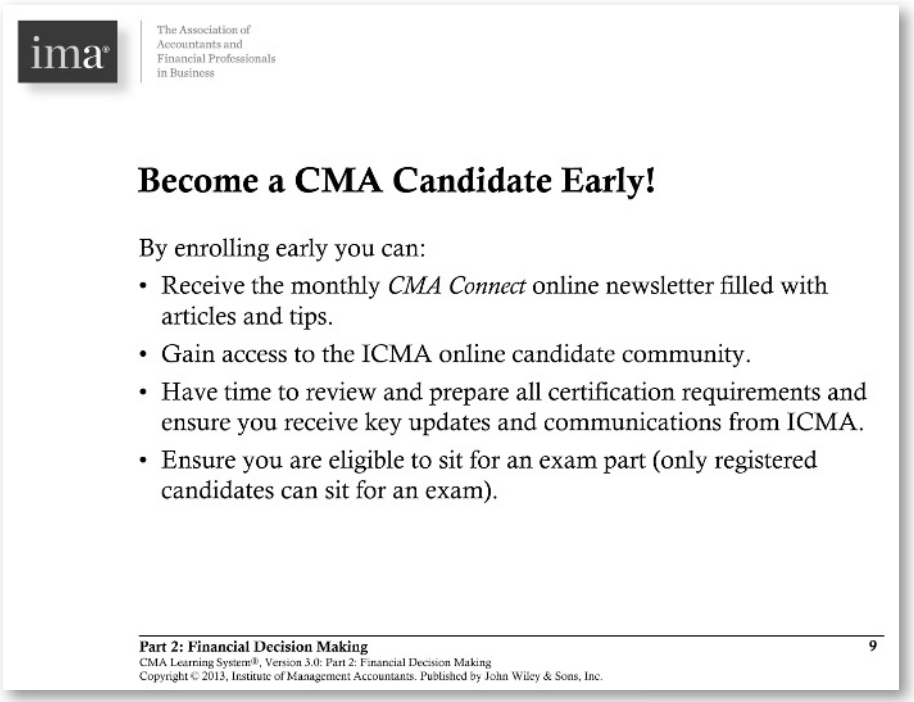
The CMALS® supports and is aligned with the LOS.

Tell participants that the LOS should not be used as proxies for the actual certification exam questions; they should be used as guides for studying and learning the content of the CMALS®.



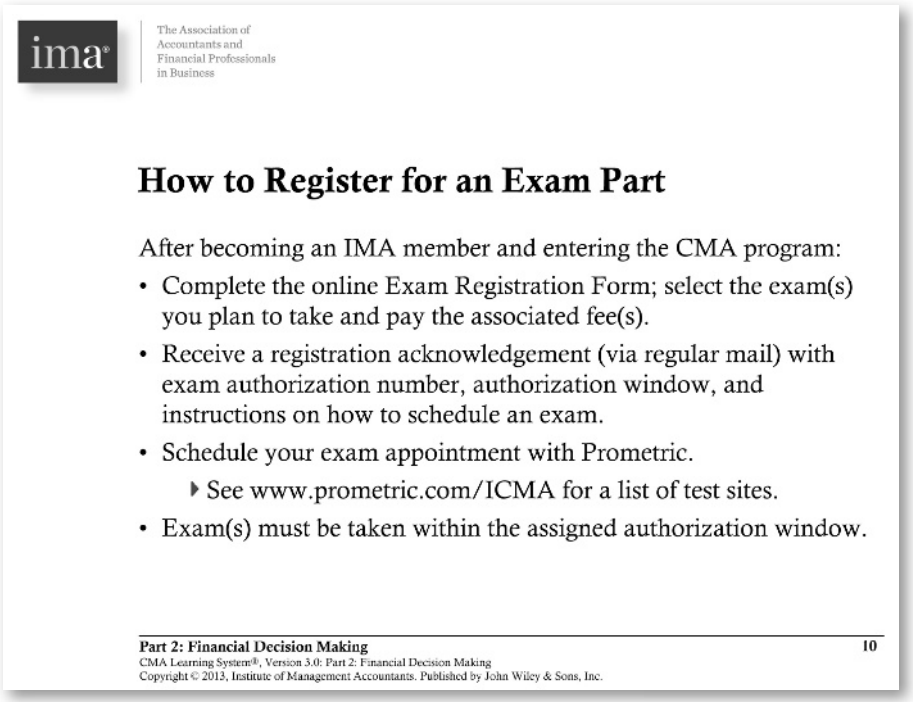
Explain: Registering as a CMA candidate is easy—follow these two steps:

1. Become an IMA member.
2. Pay the CMA Program Entrance fee.



Explain the key benefits of registering as a CMA candidate early in the exam preparation process.

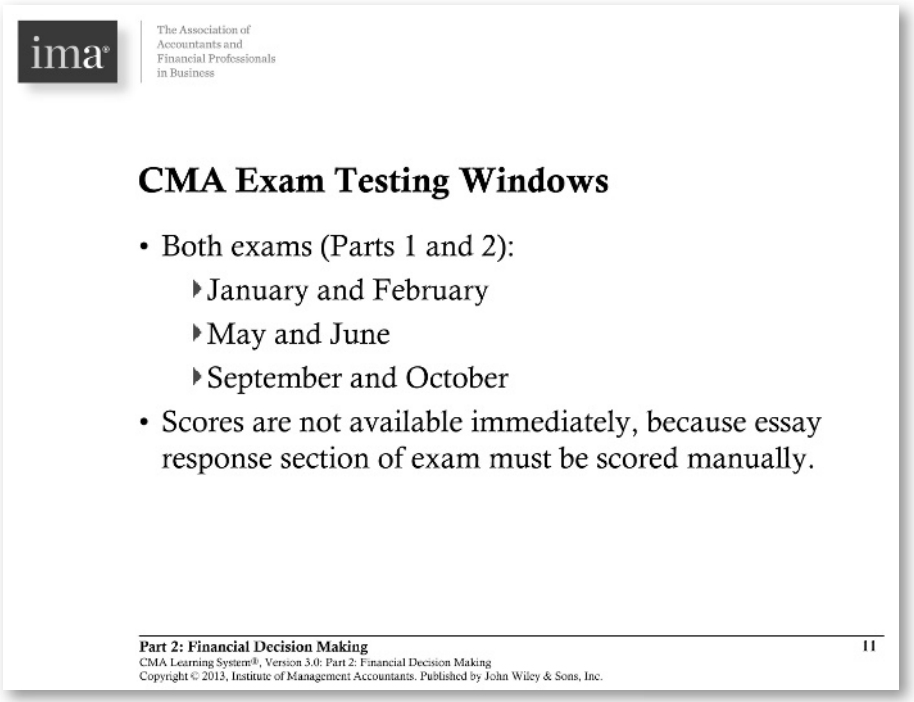
- Reinforce that becoming recognized as part of the CMA candidate community provides a support system to ensure a candidate's success.



Tell participants that you will discuss study tips and techniques during Session 2.

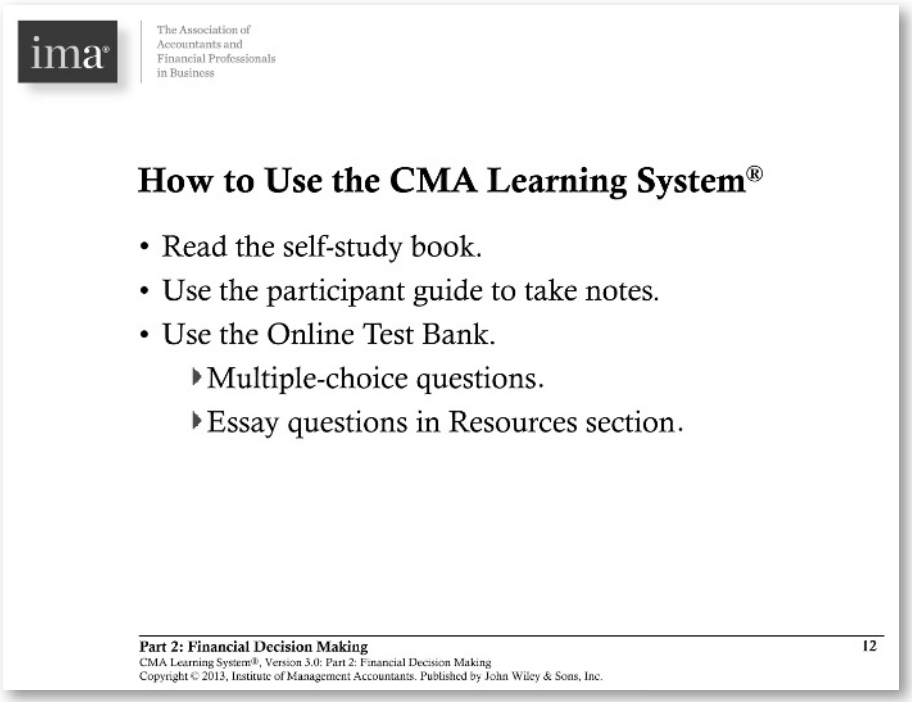
Note that one action that is key to their success is setting a clear goal as to when they will sit for the exam.

Registering for an exam provides a target. Sitting for the exam soon after they complete the course and their individual studies allows them to have the content fresh in their mind and be more confident in their knowledge of it.



Inform participants that ICMA offers the Part 1 and 2 exams during specific windows each year.

It is important that they set a goal—as soon as their studies are complete, they should complete the exam in the next testing window.



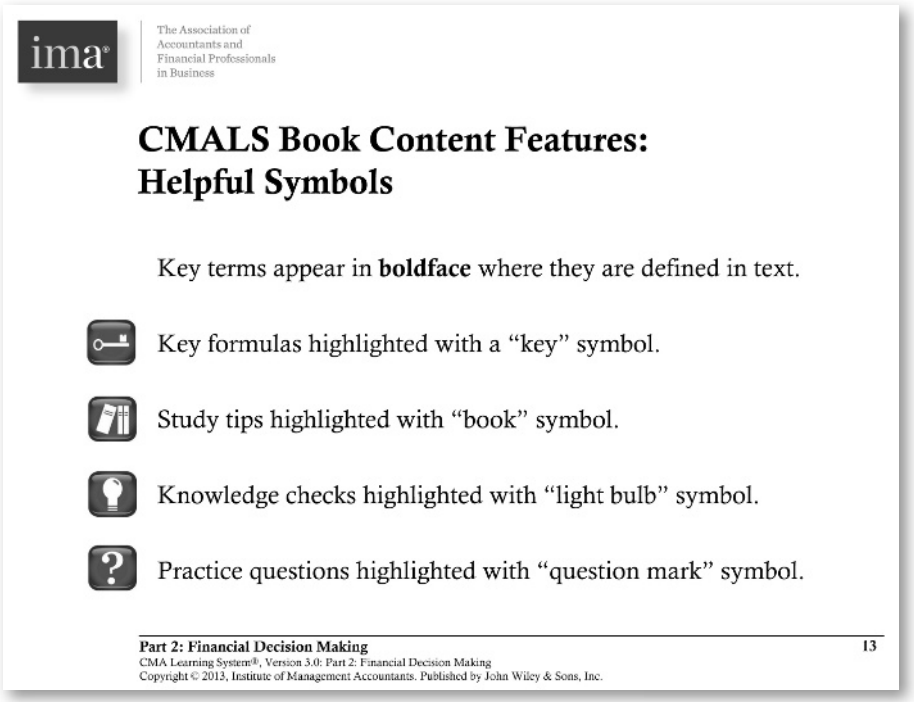
Explain the components of the CMA Learning System® and how participants can use them to ensure their studies are successful.

In the self-study book, review "How to Use the CMA Learning System®." Explain that the book is broken down by section and topic. Ask participants to turn to the end of Topic 1, and point out the knowledge checks. Explain that these are not exam questions; rather, they are short questions they can use to check that they understood the content covered in each topic.

Ask them to turn to the end of Section A, and point out the practice questions. Explain that these questions are samples of exam questions, which will not only reinforce their learning but also give them more experience with the style of the exam. Explain that the print book contains a selection of practice questions. As part of the CMALS®, they also receive access to the Online Test Bank with more than 600 multiple-choice practice questions. More details on this online portion of the system is provided shortly.

Another important part of the system is the "Essay Exam Support Materials" section at the end of the self-study book that shows how essay questions are graded, provides tips for writing an essay answer, and includes some 20 sample essay questions that participants can practice. Explain that this course reviews this material in the last session.

Finally, ask participants to turn to the "Suggested Study Process Map" in the self-study book "How to Use the CMALS®" section. Tell them that their participant guide contains images of all the slides you will present and that they can take additional notes in their participant guide as you discuss topics in class. However, you strongly recommend that they follow the study process presented in the self-study book—they should come to class having read the content you are going to cover. The classes are meant to supplement the self-study book, not take the place of reading and using it.



Explain that the CMALS books use a number of features to draw attention to certain types of content:

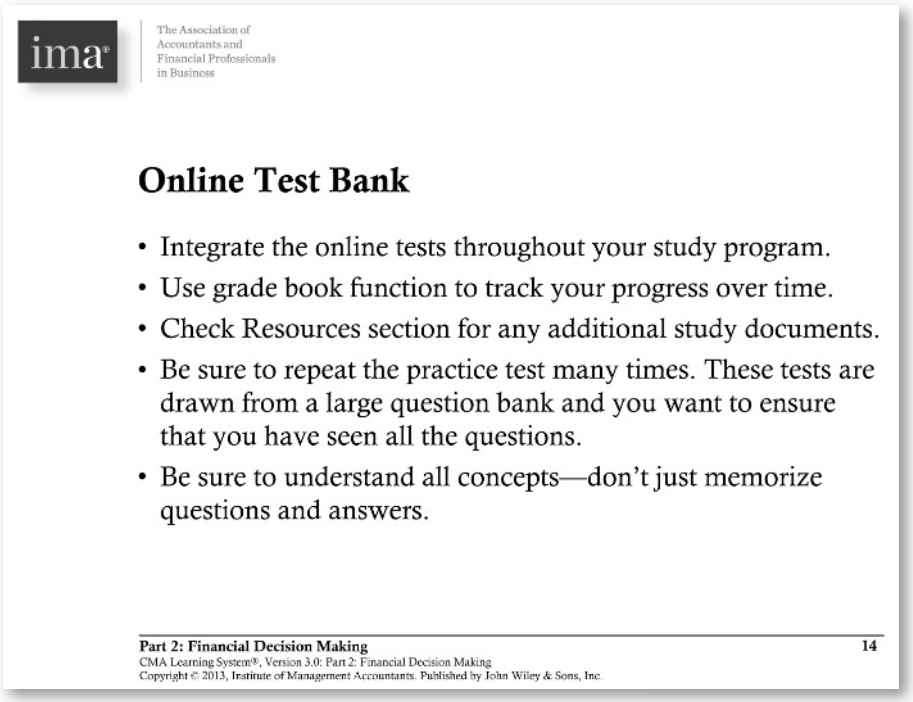
Key terms are bolded where they appear in the text with their definition, to allow users to scan through quickly and study theme.

Key formulas are indicated with a "key" symbol. Be sure you understand these formulas and practice applying them.

Study tips offer ideas and strategies for studying and preparing for the exam and are indicated with a "book" symbol.

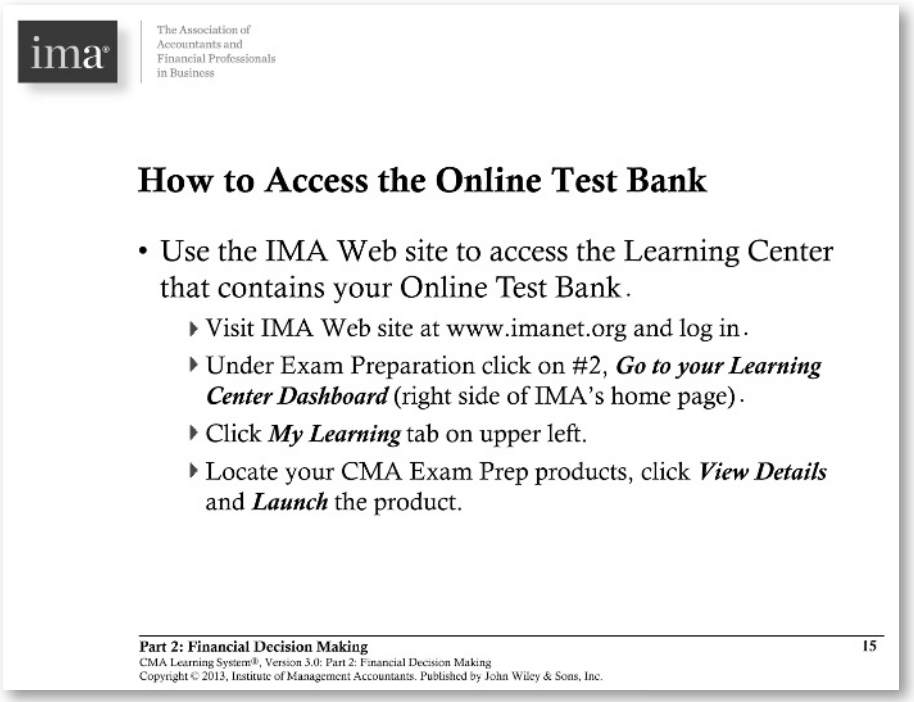
Knowledge checks are indicated with a "light bulb" symbol—note that the answers are provided after all the questions. These appear at the end of each topic.

Practice questions are indicated with a "question mark" symbol. These are presented at the end of each section.



Explain the importance of using the Online Test Bank during the course.

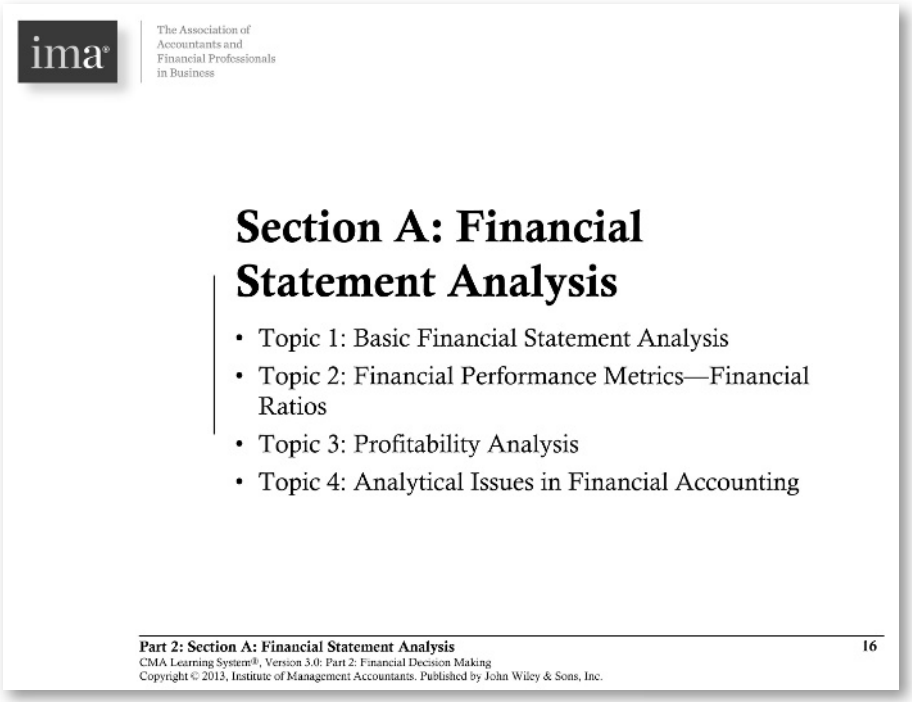
The section-specific tests provide questions related to the section content. Students should read and learn a section and then practice the online questions related to the section. Doing this also helps indicate whether students should study the section content further before moving to the next section.



Point out that students can access the Learning Center from the IMA Web site.

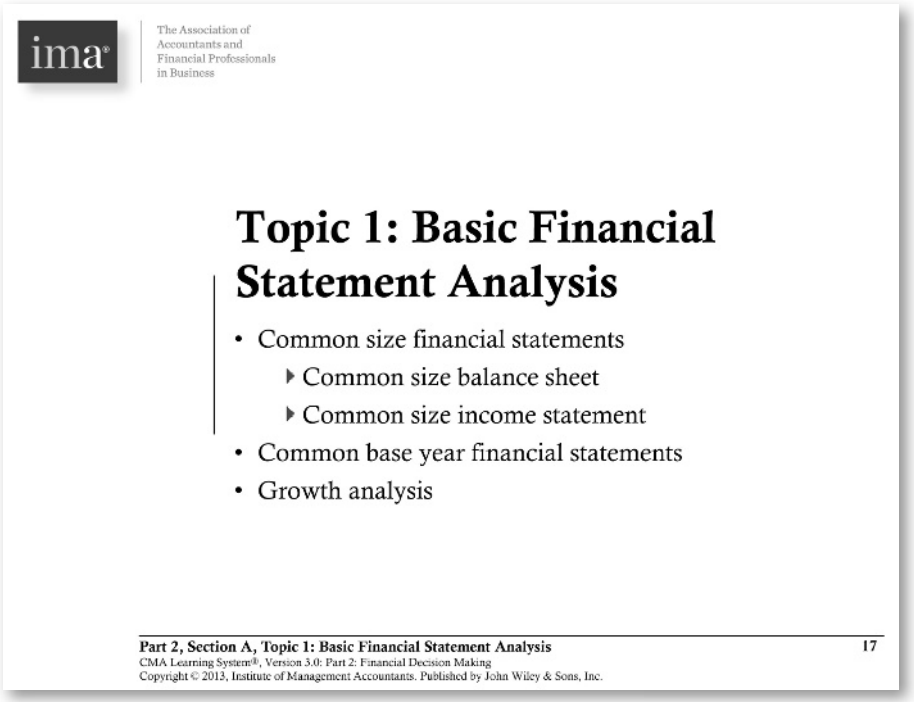
Mention that the Welcome Letter that arrives with the CMALS® Self-Study is the information sheet containing the instructions for accessing IMA's Learning Center

Section A: Financial Statement Analysis

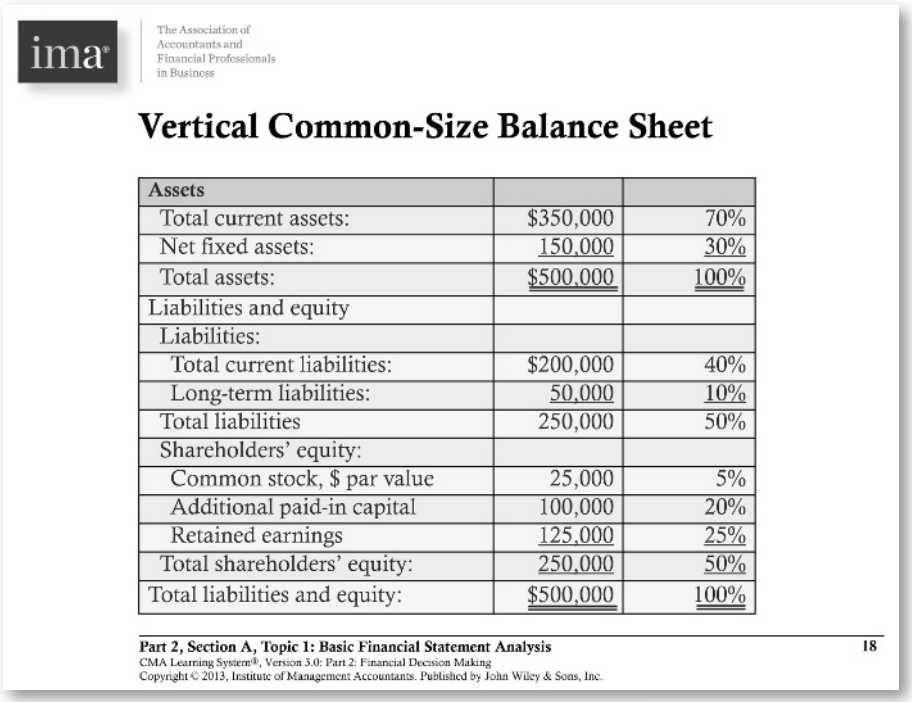


Explain that Section A covers financial statement analysis. It starts out with fundamental financial statement analysis and then focuses on two critical elements: liquidity and profitability. Financial ratios are calculated using the formulas that are tested on the CMA exam. The section concludes with coverage of some contemporary accounting issues, such as International Financial Reporting Standard (IFRS) and generally accepted accounting principles (GAAP) convergence and fair value accounting.

Section A, Topic 1: Basic Financial Statement Analysis



Explain that Topic 1 outlines some basic financial statement analysis concepts. We'll be looking at how common-size statements can be used to perform analysis and gain an understanding of how to analyze a company's growth over time.



The Association of Accountants and Financial Professionals in Business

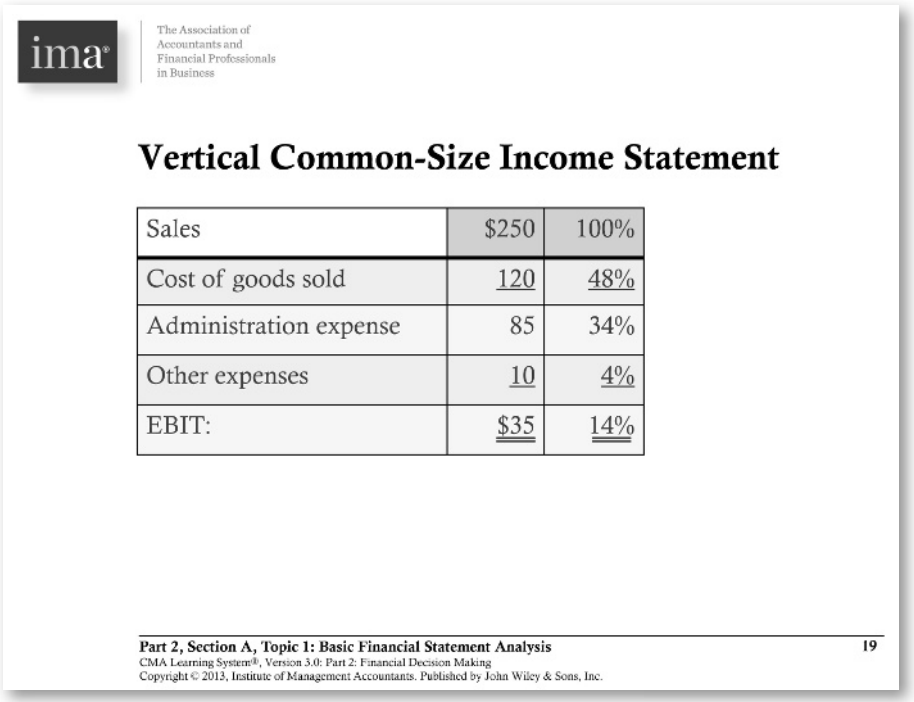
Vertical Common-Size Balance Sheet

Assets		
Total current assets:	$350,000	70%
Net fixed assets:	150,000	30%
Total assets:	$500,000	100%
Liabilities and equity		
Liabilities:		
Total current liabilities:	$200,000	40%
Long-term liabilities:	50,000	10%
Total liabilities	250,000	50%
Shareholders' equity:		
Common stock, $ par value	25,000	5%
Additional paid-in capital	100,000	20%
Retained earnings	125,000	25%
Total shareholders' equity:	250,000	50%
Total liabilities and equity:	$500,000	100%

Explain that this is a vertical common-size balance sheet.

In vertical common-size statements, a base amount (generally total assets on the balance sheet and net sales on the income statement) is valued at 100%, and the elements within that statement are expressed as a percentage of the total (total assets or net sales).

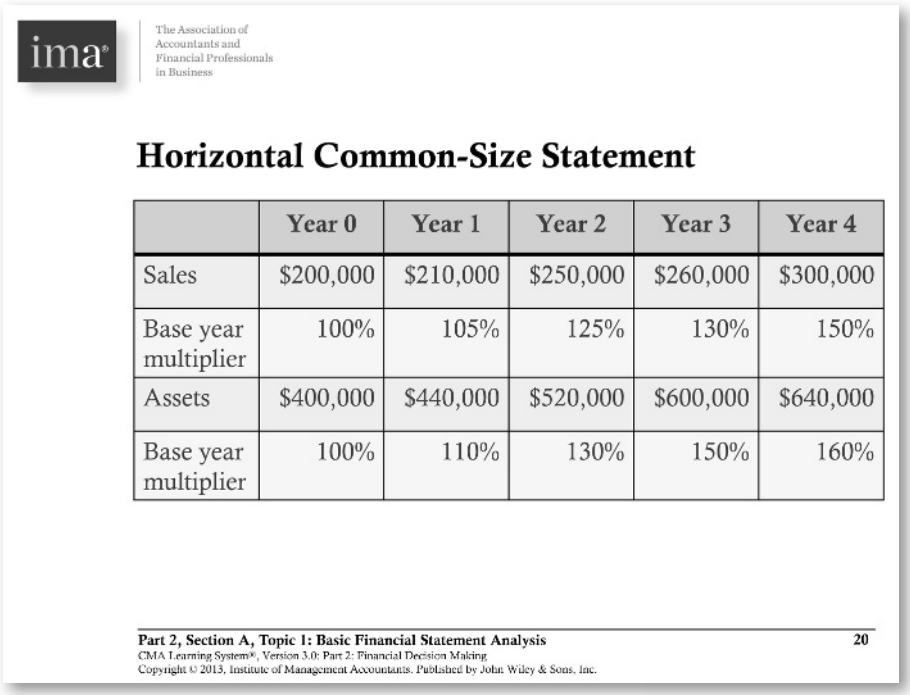
A vertical common-size balance sheet is used to understand the relationship between total assets and other items included on the balance sheet of a company.



Explain that this is a vertical common-size income statement. Note that all elements in the income statement are divided by total sales, which is the base amount.

This is a simplified income statement. Typically, there are many other categories of expenses.

A vertical common-size income statement is used to understand the relationship between sales and other items included on the income statement of a company.



The Association of Accountants and Financial Professionals in Business

Horizontal Common-Size Statement

	Year 0	Year 1	Year 2	Year 3	Year 4
Sales	$200,000	$210,000	$250,000	$260,000	$300,000
Base year multiplier	100%	105%	125%	130%	150%
Assets	$400,000	$440,000	$520,000	$600,000	$640,000
Base year multiplier	100%	110%	130%	150%	160%

Part 2, Section A, Topic 1: Basic Financial Statement Analysis 20
CMA Learning System®, Version 3.0: Part 2: Financial Decision Making

Explain that a horizontal common-size statement, also called a variation analysis or trend analysis, compares key financial statement values/relationships for the same company over a period of years. Such an analysis sets the base year at a value of 100% and shows subsequent years in relation to increases or decreases over the base year.

Ask participants to refer to the table shown and determine which item is growing faster: assets or sales?

Answer: Assets are growing faster than sales.

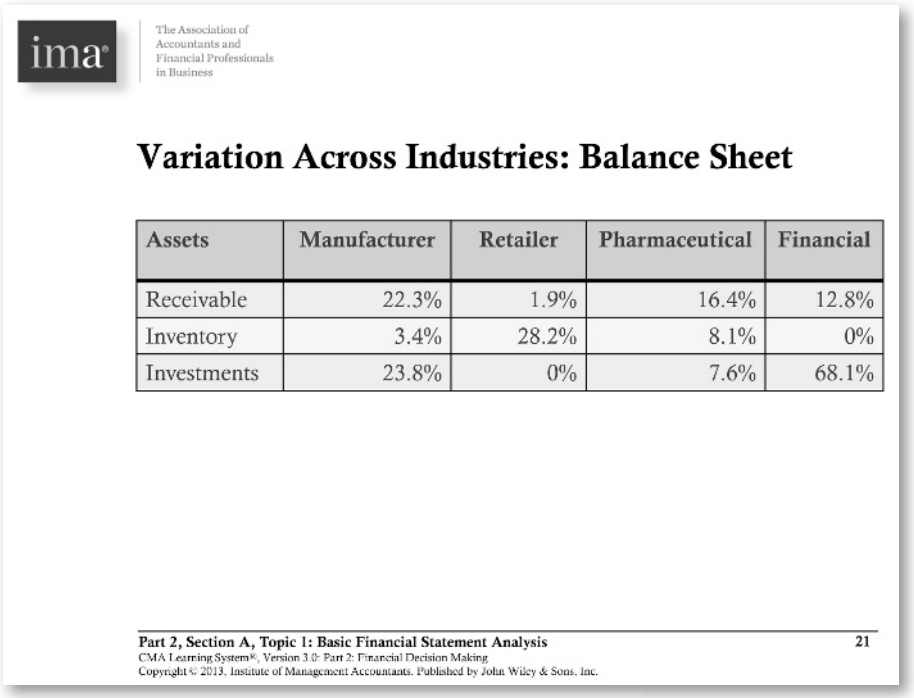
Horizontal/trend analysis is used to help analysts examine relationships of key financial numbers to detect strengths and weaknesses. In this example, managers need to better control asset purchases and use.

This analysis can reveal trends that help shed light on the direction, speed, and volume of change. Further analysis also can examine trends in related areas, such as a disparity between an increase in sales and a proportionately greater increase in receivables.

Analysts must use caution in interpreting results using horizontal common-size statements. Because items are expressed as percentages, analysts must keep in mind the size of the basis for comparison. For example, a 400% increase in net income might sound remarkable until analysts learn that last year's income was $100.

Explain that common-size statements are useful when comparing businesses of different sizes because the financial statements of a variety of companies can be recast into the uniform common-size format regardless of the size of individual elements. Analysts must use judgment to resolve the issue of actual comparability between individual companies in situations in which common-size statements do not reflect the relative sizes of the individual companies.

Comparing common-size statements of companies within an industry or with common-size composite statistics of that industry can bring to light variations in account structure or distribution that require analysts to explore and explain the reasons for differences.



ima The Association of Accountants and Financial Professionals in Business

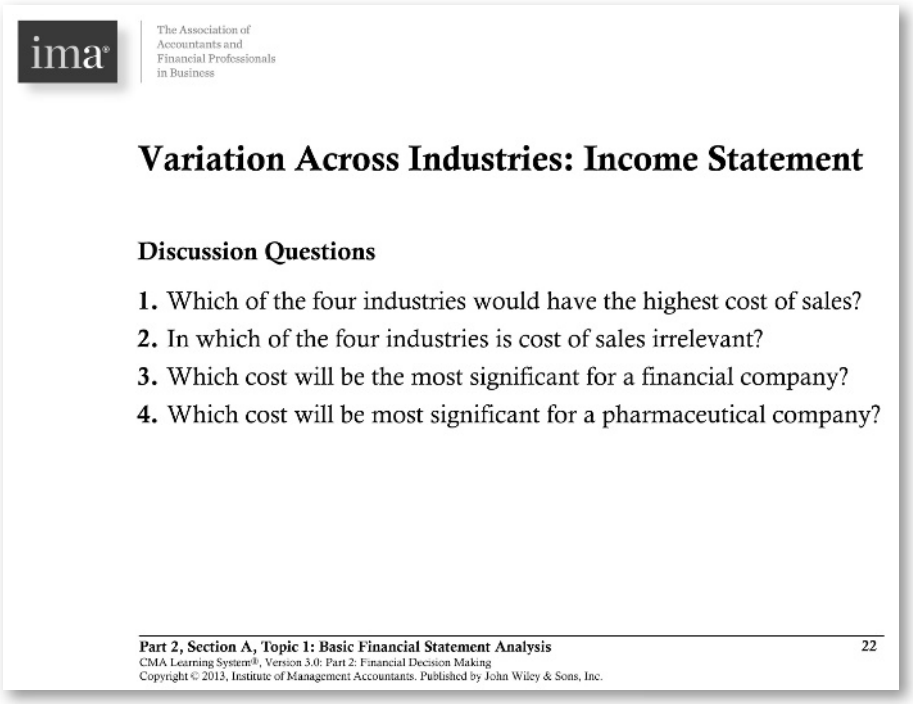
Variation Across Industries: Balance Sheet

Assets	Manufacturer	Retailer	Pharmaceutical	Financial
Receivable	22.3%	1.9%	16.4%	12.8%
Inventory	3.4%	28.2%	8.1%	0%
Investments	23.8%	0%	7.6%	68.1%

Explain that common-size statement analysis can be done to compare the financial statements of companies operating in different industries.

Discuss the variations in detail and relate it to the nature of the industry. Give examples of commonly known companies to encourage discussion. Some examples would be companies that are major employers or have major presence in the area with which participants are familiar. As a default, use Dell, Wal-Mart, Pfizer, and Morgan Stanley.

Discuss why a retailer would have low receivables (cash business) and high inventory (merchandise on shelf) and a bank would have no inventory and high investments.



Remind participants that the four industries listed on the previous slide were: manufacturer, retailer, pharmaceutical, and financial.

Discuss each of the four questions listed on this slide.

- The *retailer* would have the highest cost of sales as its margins are the lowest.

Click to display question 2.

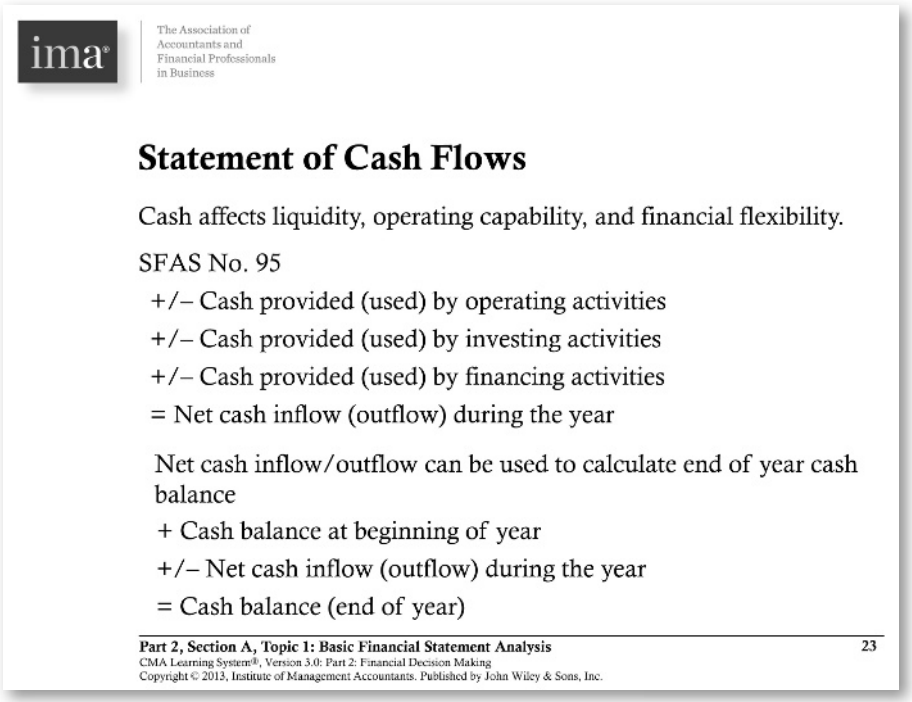
- Cost of sales is irrelevant for the *financial industry*. Banks and brokerage firms do not specifically sell any products.

Click to display question 3.

- *Interest costs* will be most significant for a financial company.

Click to display question 4.

- *Research and development (R&D) costs* will be most significant for a pharmaceutical company.



ima The Association of Accountants and Financial Professionals in Business

Statement of Cash Flows

Cash affects liquidity, operating capability, and financial flexibility.

SFAS No. 95

+/– Cash provided (used) by operating activities
+/– Cash provided (used) by investing activities
+/– Cash provided (used) by financing activities
= Net cash inflow (outflow) during the year

Net cash inflow/outflow can be used to calculate end of year cash balance

+ Cash balance at beginning of year
+/– Net cash inflow (outflow) during the year
= Cash balance (end of year)

Part 2, Section A, Topic 1: Basic Financial Statement Analysis 23
CMA Learning System®, Version 3.0: Part 2: Financial Decision Making

Discuss the importance of cash to keep a business running.

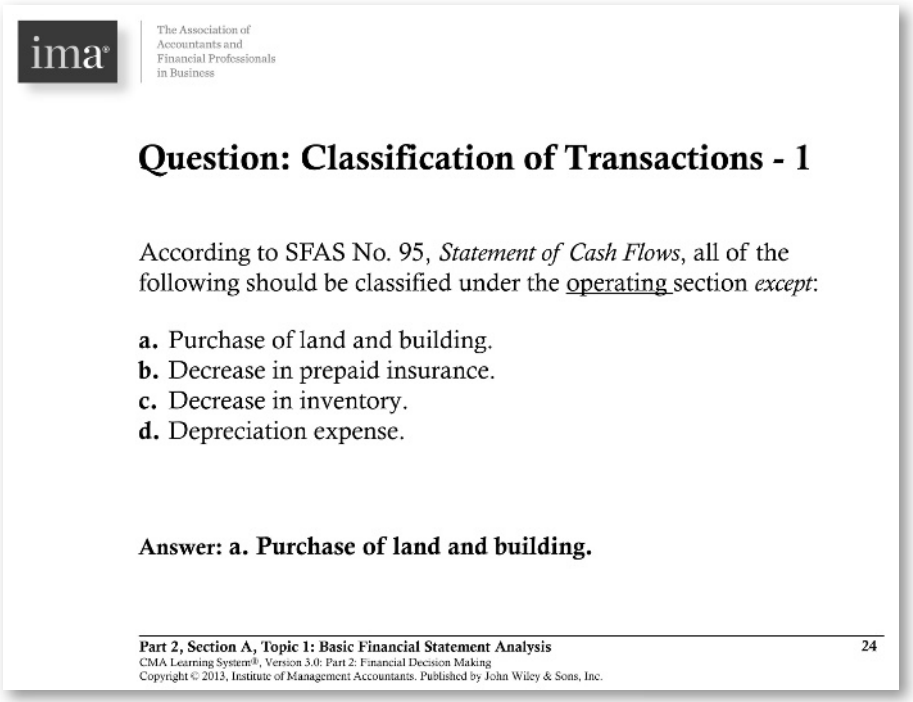
Explain that a profitable business could go bankrupt without proper cash management. A business must be able to pay debts as they come due.

This is why a cash flow statement is so important.

Briefly ***discuss*** what items are included in operating activities, investing activities, and financing activities. Give one example for each.

Statements of Financial Accounting Standards (SFAS) No. 95, *Cash Flow Information and Securities Evaluation,* outlines the items included three sections of the Statement of Cash Flows as follows:

- *Operating activities.* This category includes cash flows related to the normal course of business. Examples: Sales revenue and cash paid to employees, suppliers, and so on.
- *Investing activities.* This category includes cash flows from changes in long-term asset accounts. Examples: The purchase or sale of property, plant, and equipment (PP&E); the purchase or sale of equity or debt investments in another entity.
- *Financing Activities.* This category includes cash flows from changes in long-term liability or equity accounts. Examples: The sale of the entity's equity securities or issuance of debt such as bonds or notes; payments to stockholders for dividends.

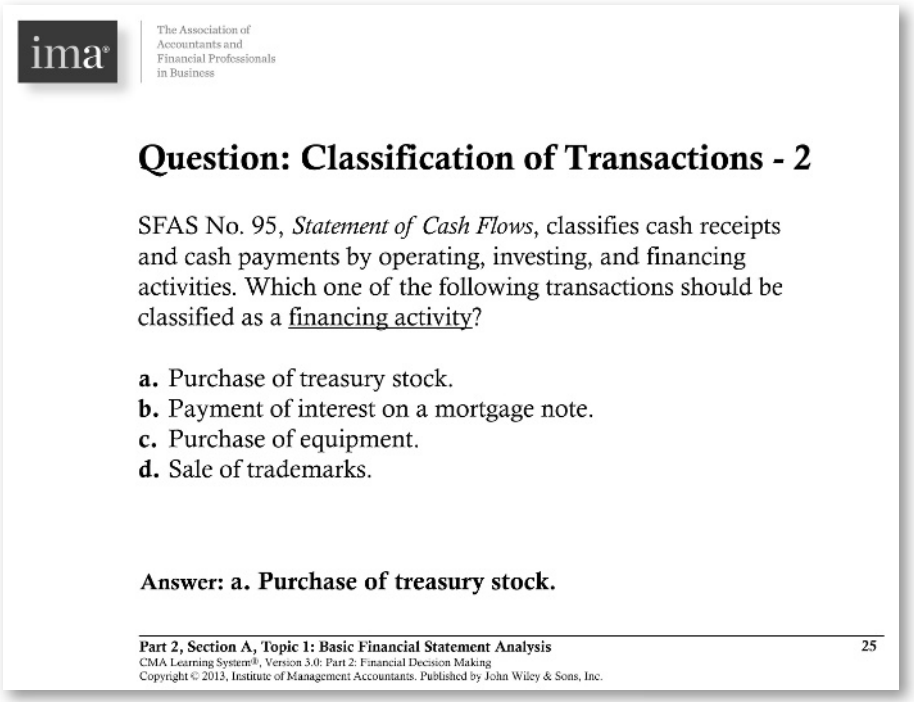


Ask participants to answer the question.

Click to reveal the answer.

Answer: a. Purchase of land and building.

The purchase of land or building would be part of the investing activities section of the statement of cash flows.



ima The Association of Accountants and Financial Professionals in Business

Question: Classification of Transactions - 2

SFAS No. 95, *Statement of Cash Flows*, classifies cash receipts and cash payments by operating, investing, and financing activities. Which one of the following transactions should be classified as a financing activity?

a. Purchase of treasury stock.
b. Payment of interest on a mortgage note.
c. Purchase of equipment.
d. Sale of trademarks.

Answer: a. Purchase of treasury stock.

Part 2, Section A, Topic 1: Basic Financial Statement Analysis 25
CMA Learning System®, Version 3.0: Part 2: Financial Decision Making

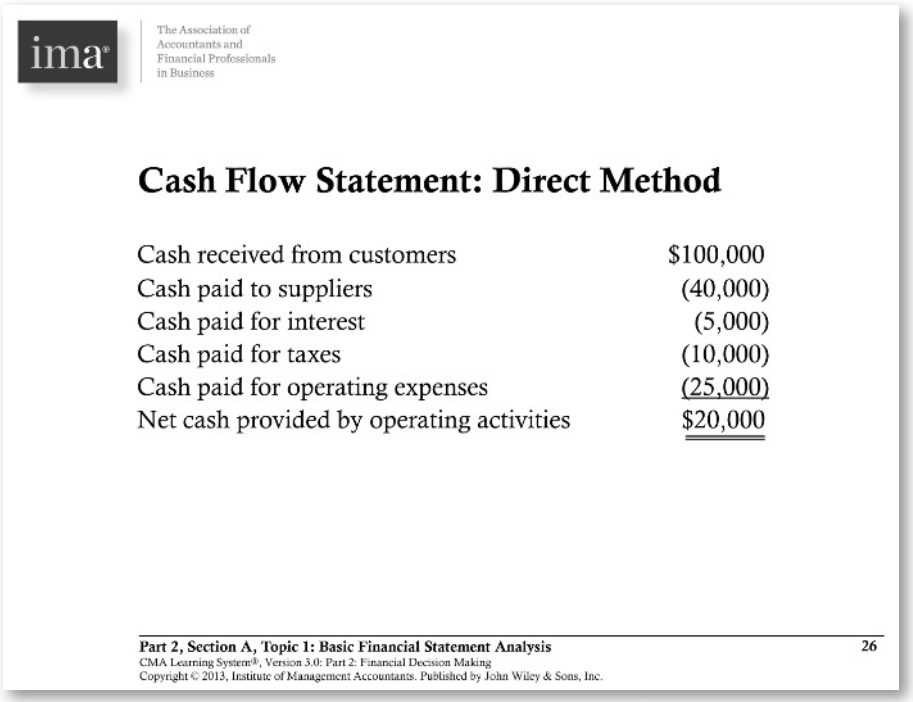
Ask participants to answer the question.

Click to reveal the answer.

Answer: a. Purchase of treasury stock.

The purchase of treasury stock would be classified as financing activity. Recall that the financing activity section includes cash outflows that are made to reacquire stock in the entity.

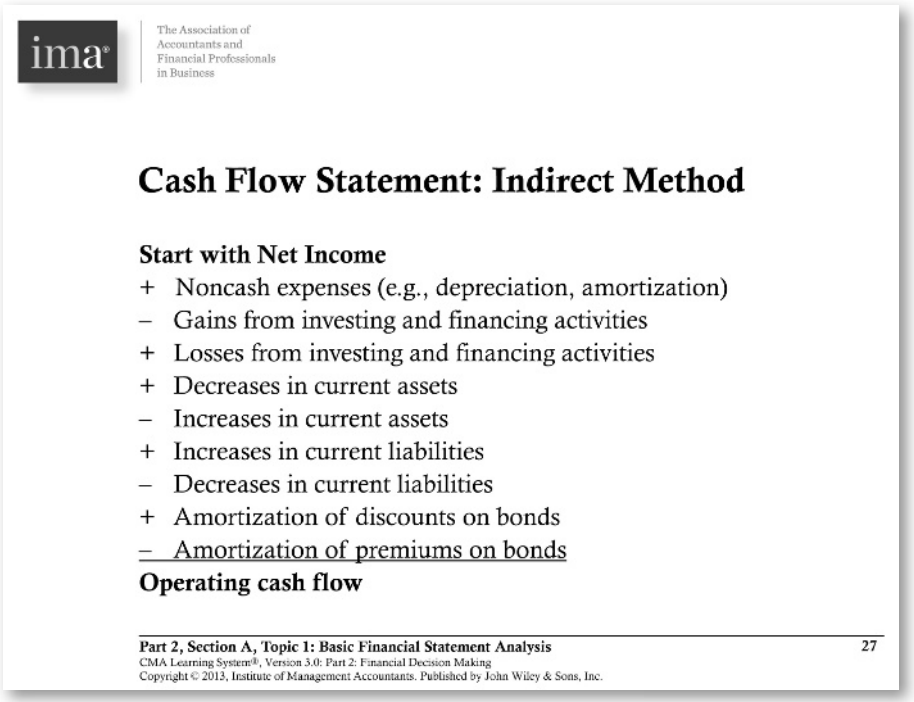
Remind participants that investing activities involve the purchase or sale of fixed assets and investments in *another company's* securities while *financing activities* involve the issuance and redemption of a *company's own* equity and debt securities.



Explain that there are two methods used to create a statement of cash flows: the direct method and the indirect method.

Point out that the format for the direct method statement of cash flows is similar to that used for an income statement. Also, this particular example includes operating activities only; it does not extend to investing and financing activities.

Cash flow from operations (CFFO) is equivalent to the operating income found on the income statement but is presented in terms of cash generated or used in the normal course of business.



ima
The Association of Accountants and Financial Professionals in Business

Cash Flow Statement: Indirect Method

Start with Net Income
+ Noncash expenses (e.g., depreciation, amortization)
– Gains from investing and financing activities
+ Losses from investing and financing activities
+ Decreases in current assets
– Increases in current assets
+ Increases in current liabilities
– Decreases in current liabilities
+ Amortization of discounts on bonds
– Amortization of premiums on bonds
Operating cash flow

Part 2, Section A, Topic 1: Basic Financial Statement Analysis 27
CMA Learning System®, Version 3.0: Part 2: Financial Decision Making

Explain that this is an example of how the indirect method is used to create the statement of cash flows. The indirect method, also called the reconciliation method, is the most popular method of converting net income to net cash flow from operating activities.

The indirect method starts with net income and then makes adjustments to it by adding back noncash expenses and paper losses and subtracting noncash revenues and paper gains that have no effect on current-period operating cash flows. Additional adjustments are made for changes in current asset and liability accounts related to operations by adding or subtracting amounts as shown in the slide.

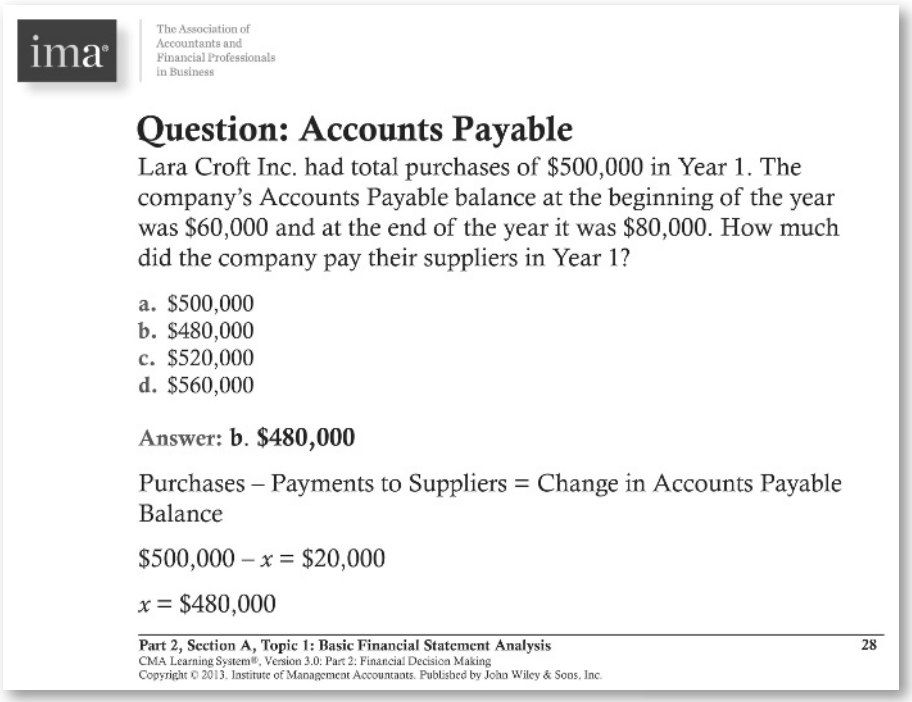
Explain each line item in detail.

Ask: Why are noncash expenses added back?

Answer: Because they don't represent a cash flow.

Ask: Why are gains from investing and financing activities subtracted?

Answer: Because they are not operating cash flows.



Ask participants to answer the question, then ***click*** to reveal the answer.

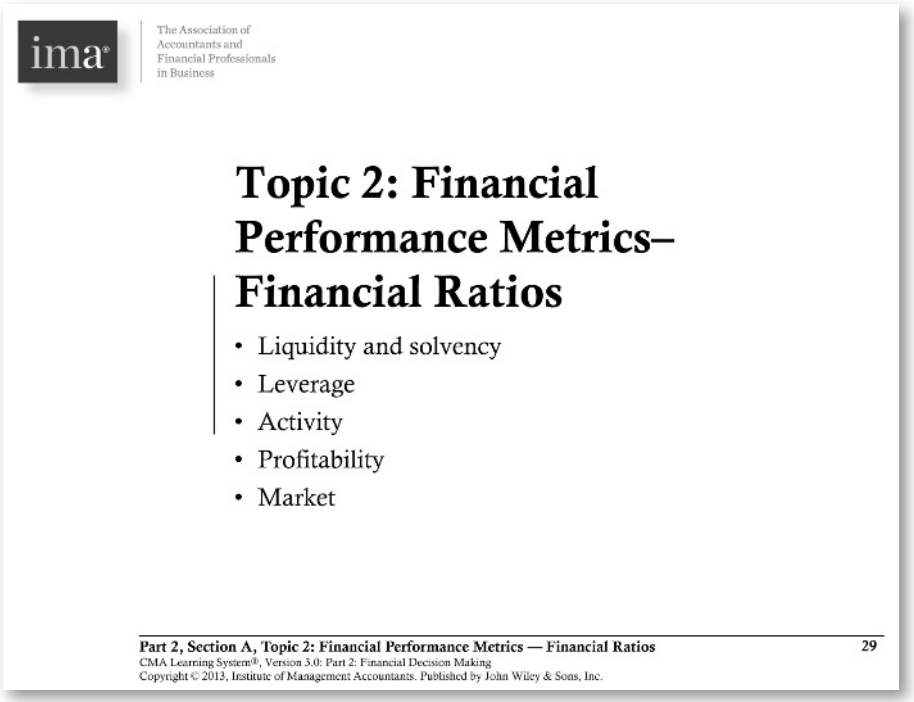
Click to show answer: b. $480,000

Click again to show calculation.

The accounts payable (A/P) balance increased by $20,000, implying that the payments were less than purchases by $20,000.

Conclude the discussion of this topic by asking participants if they have any questions on Topic 1: Basic Financial Statement Analysis.

Section A, Topic 2: Financial Performance Metrics—Financial Ratios



Explain that Topic 2 of this section covers financial ratios, which are grouped into the categories listed on the slide.

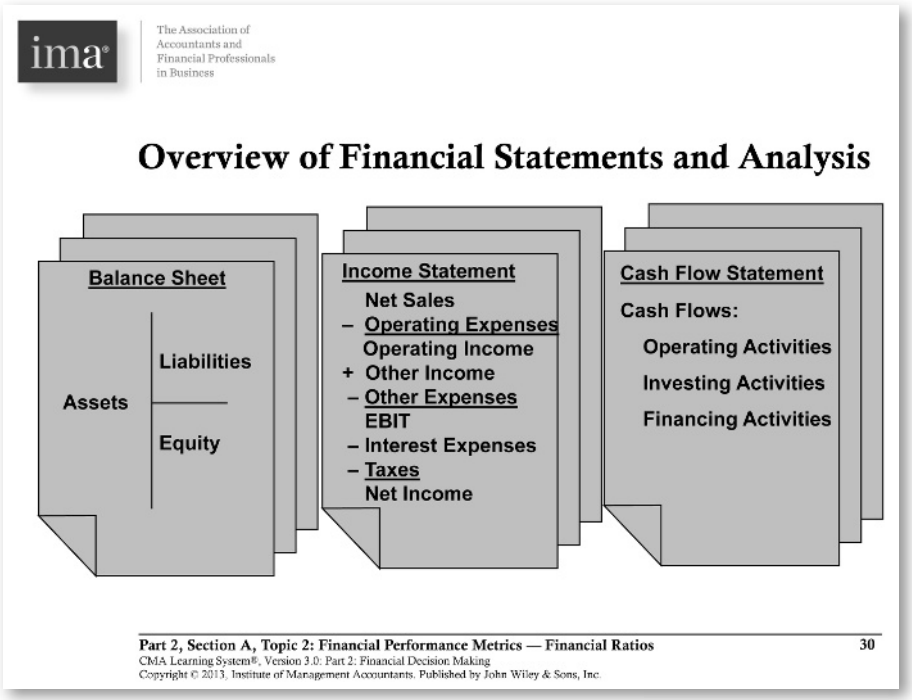
Ask participants to refer to the financial statements for ABC Company in their participant guide. These statements are used to calculate ratios throughout this section.

ABC Company Balance Sheet and Income Statement

ABC Company Balance Sheet		
	December 31, Y2	**December 31, Y1**
ASSETS		
Current assets:		
Cash	$3,000	$3,628
Cash equivalents	88,100	9,000
Short-term investments	193,230	12,000
Trade receivables, net of $30K allowance	485,000	529,949
Other receivables	12,325	18,941
Note receivable—related party		80,532
Inventory	212,515	252,567
Prepaid insurance	7,500	7,500
Total current assets	**1,001,670**	**914,117**
Fixed assets:		
Property and equipment	209,330	209,330
Less accumulated depreciation	(87,260)	(75,332)
Net fixed assets	**122,070**	**133,998**
TOTAL ASSETS	**$1,123,740**	**$1,048,115**
LIABILITIES AND EQUITY		
Current liabilities:		
Accounts payable	$148,000	$154,021
Accrued expenses	2,025	2,500
Notes payable	22,325	$21,300
Current portion of long-term debt	36,000	36,000
Line of credit	123,000	145,000
Total current liabilities	**331,350**	**358,821**
Long-term debt:	114,686	117,343
Total current and long-term liabilities	**446,036**	**476,164**
Shareholders' equity:		
Common stock, $1 par value	100,000	100,000
Additional paid-in capital	50,000	50,000
Retained earnings	527,704	421,951
Total shareholders' equity	**677,704**	**571,951**
TOTAL LIABILITIES AND SHAREHOLDERS' EQUITY	**$1,123,740**	**$1,048,115**

Note: *Y1 and Y2 dividends per share $1 paid $.25 per quarter; 100,000 shares of common stock outstanding.*

ABC Income Statement		
		YTD Actual
	December 31, Y2	**December 31, Y1**
INCOME		
SALES, NET	$2,013,225	$1,986,456
Less:		
Cost of goods sold	1,201,000	1,187,652
GROSS PROFIT	**812,225**	**798,804**
Operating expenses:		
Operating expenses, combined	562,705	556,732
Total operating expenses	**562,705**	**556,732**
Operating income (loss)	**249,520**	**242,072**
Other income (expense):		
Interest expense	(16,383)	(16,453)
Other income (expense)	(4,884)	(2,600)
Income taxes	(22,500)	(22,300)
Total other income (expense):	**(43,767)**	**(41,353)**
NET INCOME (LOSS)	**$205,753**	**$200,719**



Review the characteristics of financial statements.
Explain:

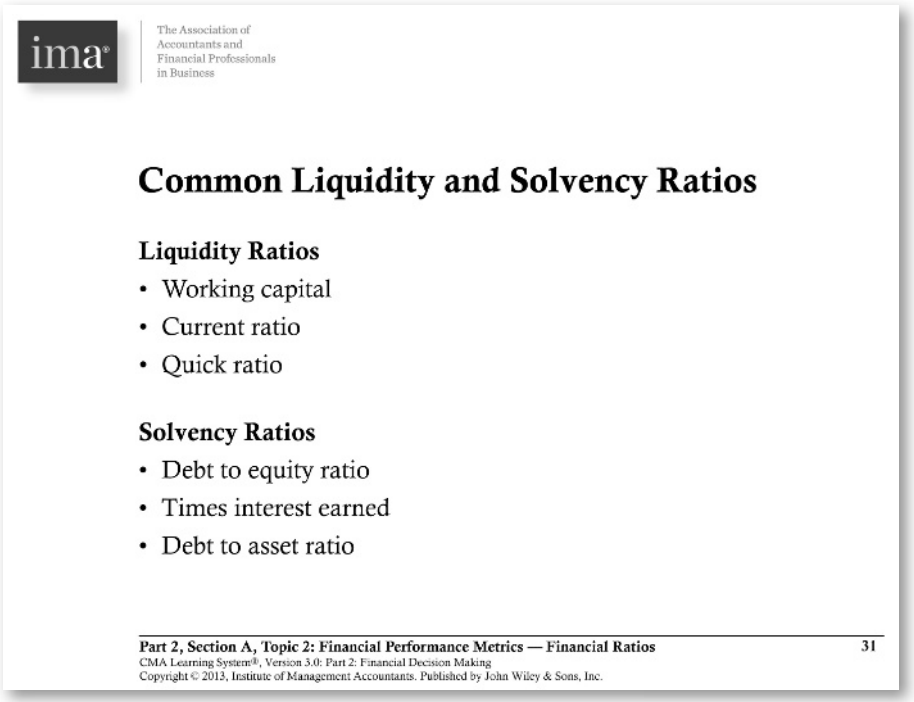
- The **balance sheet** is a snapshot of the company's financial condition at a specific moment, calculated "as of" rather than "year to date."
- It is called a balance sheet because the three major categories balance. The balance sheet equation is:

Assets − Liabilities = Equity

or

Assets = Liabilities − Equity

- The income statement shows the revenues and expenses of the company over a period of time, whether it is a month, a quarter, or a year.
- The Financial Accounting Standards Board's SFAS No. 95 says that a statement of cash flows reports on a company's "cash inflows, cash outflows, and net change in cash from its operating, financing, and investing activities during an accounting period, in a manner that reconciles the beginning and ending cash balances."

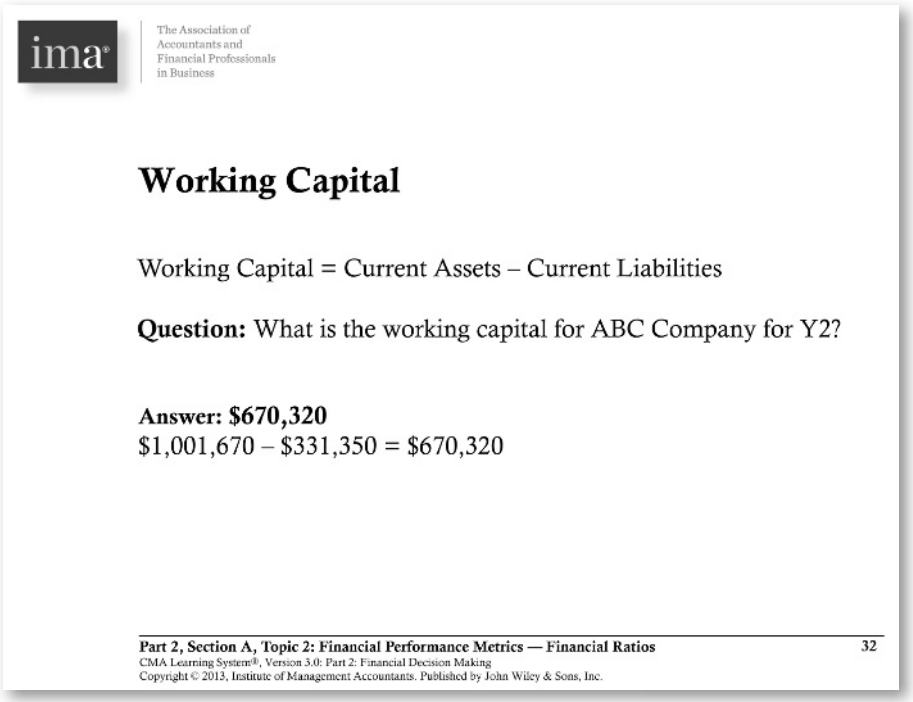


Explain that liquidity ratios measure a firm's ability to convert current assets into cash and to pay current liabilities. Liquidity is measured by examining a firm's current assets and current liabilities. Because management of current assets affects liquidity, we will look at several closely related ratios and will discuss how they affect liquidity.

Explain that liquidity is measured by comparing current assets and current liabilities in different ways.

- *Current assets* are defined as cash or other highly liquid investments, such as inventory and accounts receivable that can be converted to cash within a year.
- *Current liabilities* are obligations that will be paid within a year, such as accounts payable and notes and interest payable.
- *Solvency* is the ability of a company to pay its creditors when the amounts become due, or it is the debt-paying ability of the company, in the long term.

Several ratios can be calculated to analyze a company's solvency.

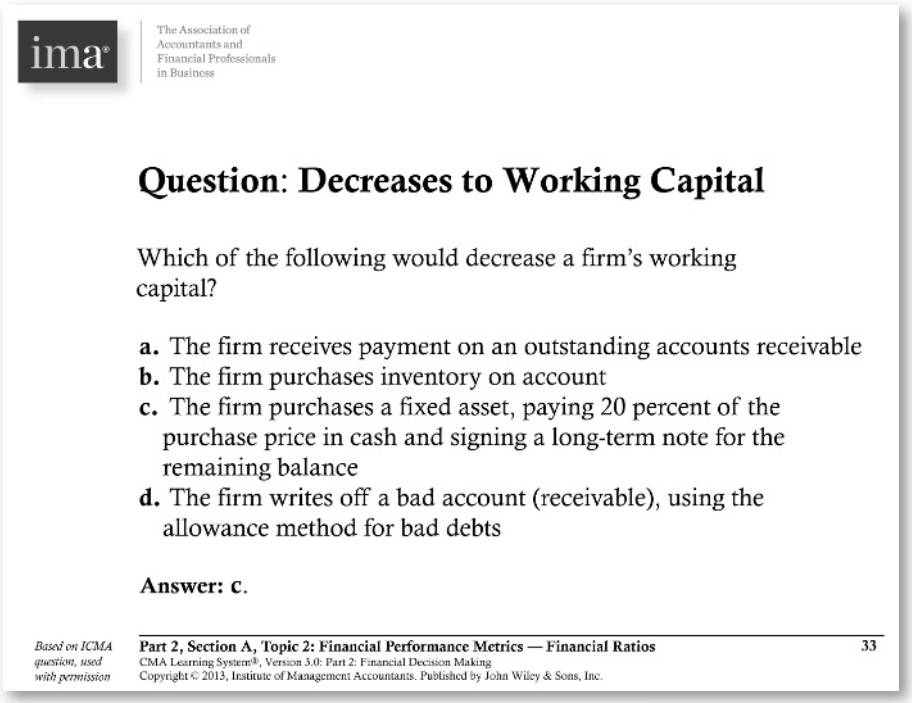


Review the formula for working capital.

Allow participants time to calculate working capital from the ABC Company balance sheet.

Click to reveal the answer.

Click again to show calculation.



ima® The Association of Accountants and Financial Professionals in Business

Question: Decreases to Working Capital

Which of the following would decrease a firm's working capital?

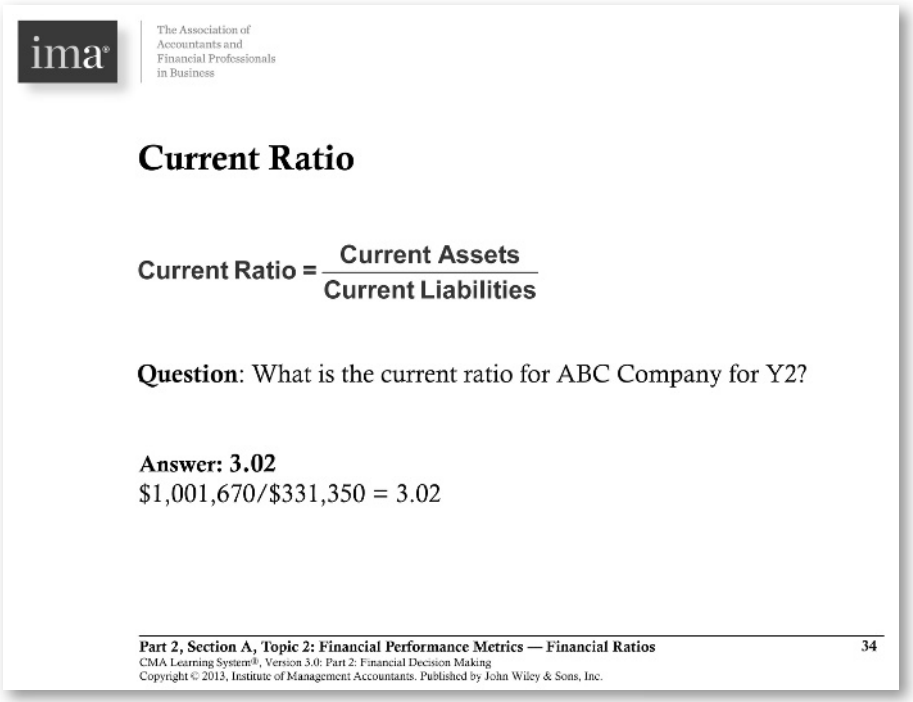
a. The firm receives payment on an outstanding accounts receivable
b. The firm purchases inventory on account
c. The firm purchases a fixed asset, paying 20 percent of the purchase price in cash and signing a long-term note for the remaining balance
d. The firm writes off a bad account (receivable), using the allowance method for bad debts

Answer: c.

Based on ICMA question, used with permission

Part 2, Section A, Topic 2: Financial Performance Metrics — Financial Ratios 33
CMA Learning System®, Version 3.0: Part 2: Financial Decision Making

Ask participants to answer the question.
Click to reveal the answer.
Explain the right and wrong answers.

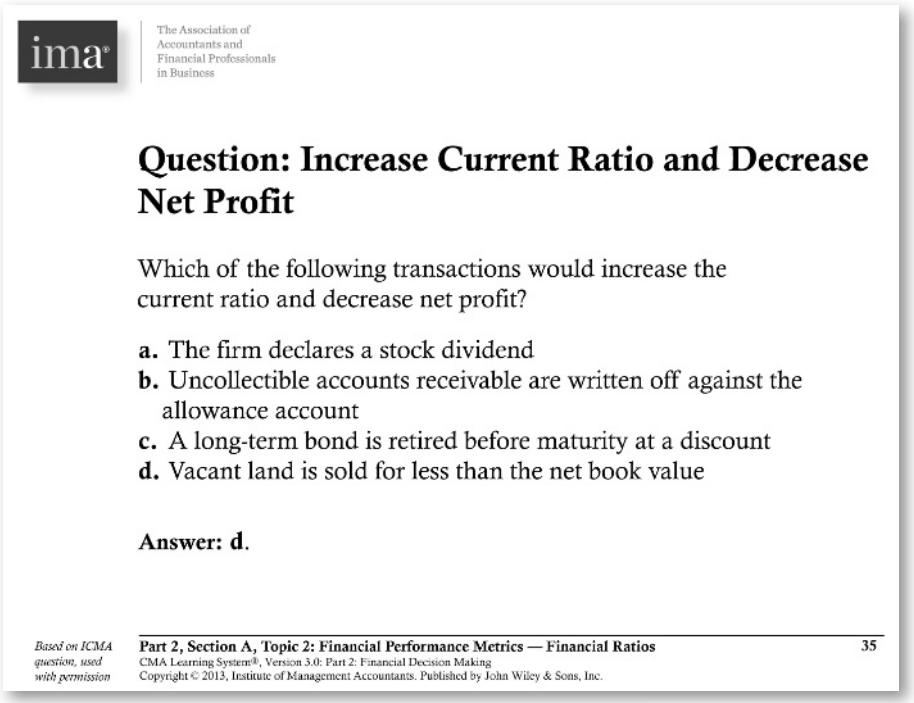


Review the formula for the current ratio.

Explain that the current ratio is an indication of how many times the entity has current liabilities covered with current assets. The higher the ratio, the better able the company is to meet current obligations.

Allow participants time to calculate the current ratio from the ABC balance sheet, then ***click*** to reveal the answer.

Discuss why relatively low and relatively high current ratios could be problematic.



ima
The Association of Accountants and Financial Professionals in Business

Question: Increase Current Ratio and Decrease Net Profit

Which of the following transactions would increase the current ratio and decrease net profit?

a. The firm declares a stock dividend
b. Uncollectible accounts receivable are written off against the allowance account
c. A long-term bond is retired before maturity at a discount
d. Vacant land is sold for less than the net book value

Answer: d.

Based on ICMA question, used with permission

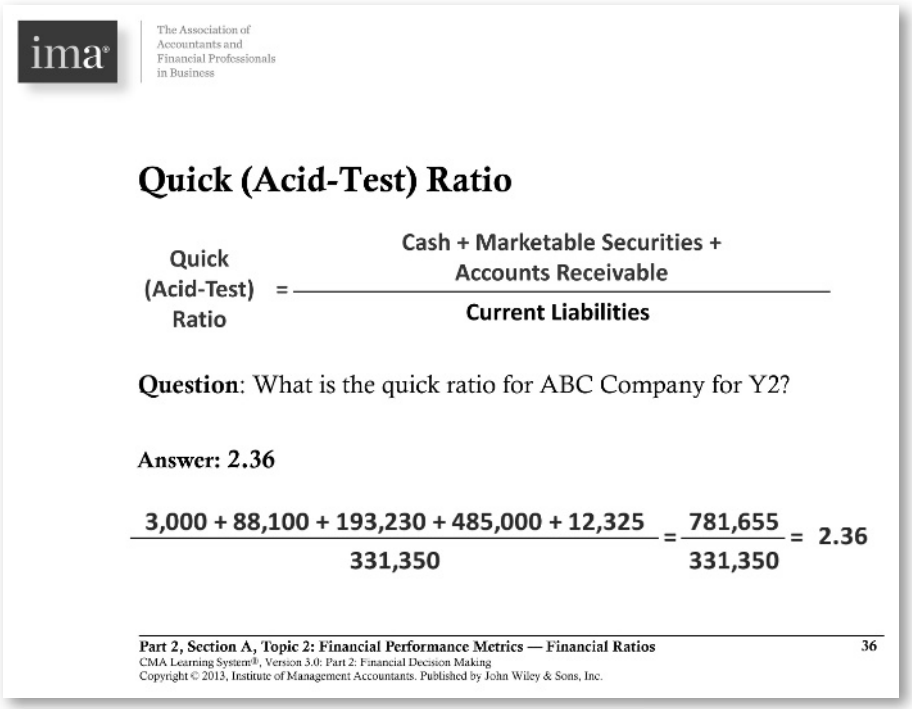
Part 2, Section A, Topic 2: Financial Performance Metrics — Financial Ratios 35
CMA Learning System®, Version 3.0: Part 2: Financial Decision Making

Ask participants to answer the question and to explain their answers.

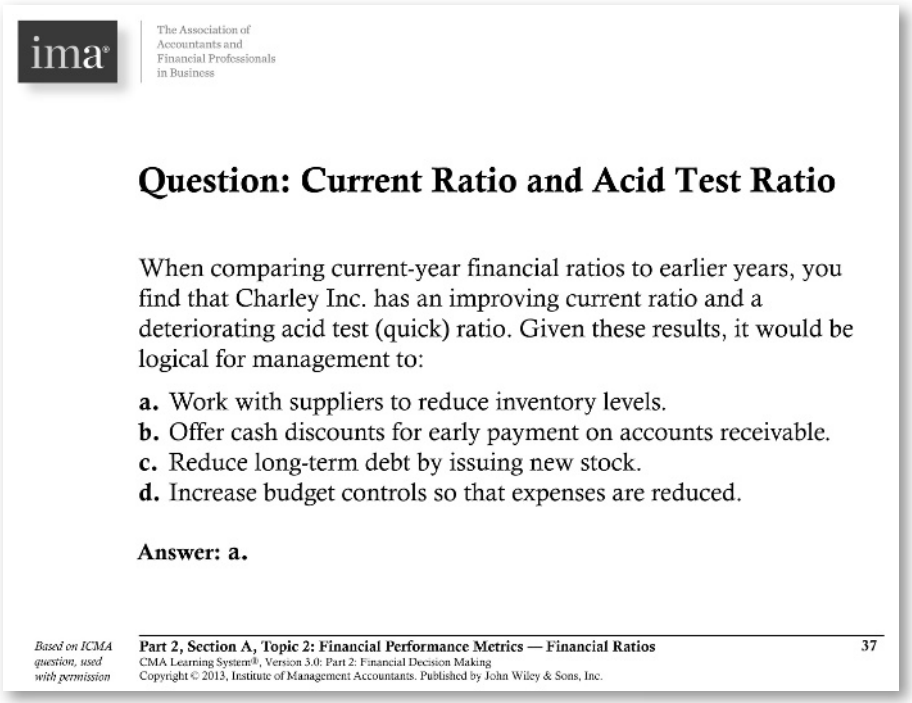
Ask if other participants agree or disagree.

Click to reveal the answer and explain the correct and incorrect answers.

Explain that next you cover the acid-test ratio, cash ratio, and the cash to current liabilities ratio. Each of these ratios takes a more stringent measurement of current assets available to pay current obligations.



Explain the formula for the quick, or acid test, ratio.
Remind participants that the ratio used is a function of the information given.
Allow participants a moment to calculate the quick ratio for ABC Company.
Click to reveal the answer.



ima
The Association of Accountants and Financial Professionals in Business

Question: Current Ratio and Acid Test Ratio

When comparing current-year financial ratios to earlier years, you find that Charley Inc. has an improving current ratio and a deteriorating acid test (quick) ratio. Given these results, it would be logical for management to:

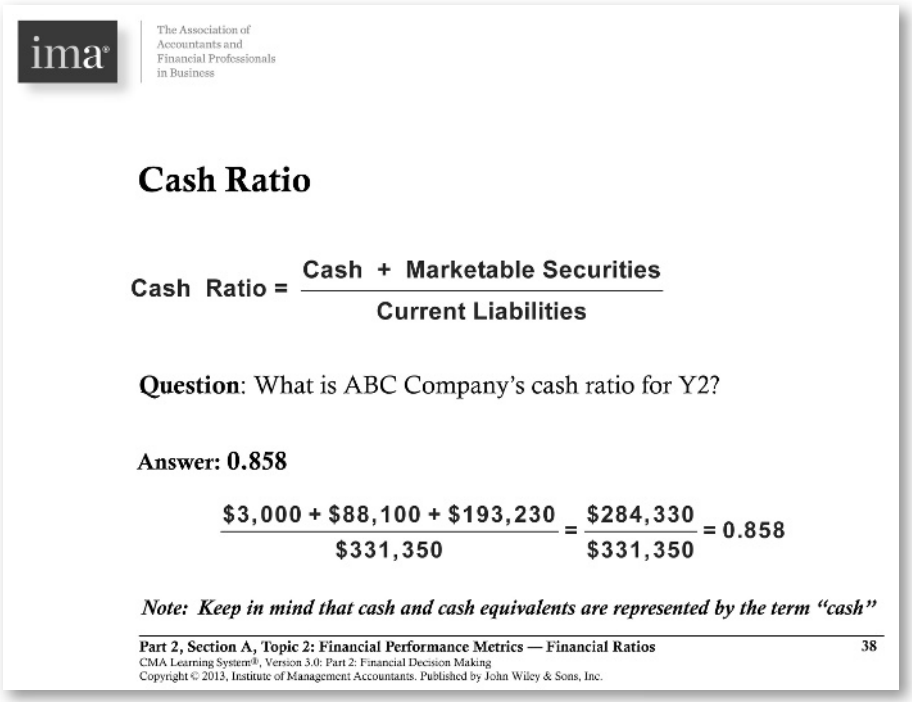
a. Work with suppliers to reduce inventory levels.
b. Offer cash discounts for early payment on accounts receivable.
c. Reduce long-term debt by issuing new stock.
d. Increase budget controls so that expenses are reduced.

Answer: a.

Based on ICMA question, used with permission

Part 2, Section A, Topic 2: Financial Performance Metrics — Financial Ratios 37
CMA Learning System®, Version 3.0: Part 2: Financial Decision Making

Ask participants to answer the question and then explain their answers.
Ask if other participants agree or disagree.
Click to reveal the answer.



Review the cash ratio. Marketable securities are highly liquid short-term investments that generally can become cash in a very short time (several minutes).

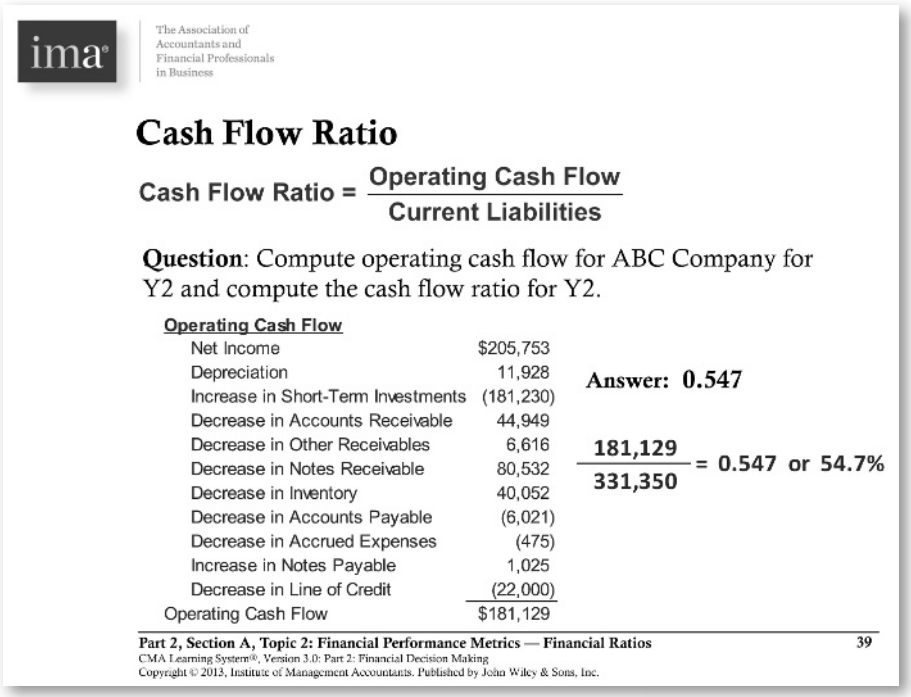
Explain that a firm generally is not expected to have enough marketable securities to cover current liabilities. Although this limits the usefulness of the cash ratio, the ratio is helpful for companies that have slow inventory turnover or slow collection of receivables.

A cash ratio that is too high may indicate that a company is not using its cash to generate additional income. A cash ratio that is too low, however, could indicate a problem with meeting current liabilities.

Allow participants a moment to calculate ABC Company's cash ratio for Y2.

Then ***click*** to reveal the answer.

Click again to review calculation.



ima The Association of Accountants and Financial Professionals in Business

Cash Flow Ratio

$$\text{Cash Flow Ratio} = \frac{\text{Operating Cash Flow}}{\text{Current Liabilities}}$$

Question: Compute operating cash flow for ABC Company for Y2 and compute the cash flow ratio for Y2.

Operating Cash Flow	
Net Income	$205,753
Depreciation	11,928
Increase in Short-Term Investments	(181,230)
Decrease in Accounts Receivable	44,949
Decrease in Other Receivables	6,616
Decrease in Notes Receivable	80,532
Decrease in Inventory	40,052
Decrease in Accounts Payable	(6,021)
Decrease in Accrued Expenses	(475)
Increase in Notes Payable	1,025
Decrease in Line of Credit	(22,000)
Operating Cash Flow	$181,129

Answer: 0.547

$$\frac{181{,}129}{331{,}350} = 0.547 \text{ or } 54.7\%$$

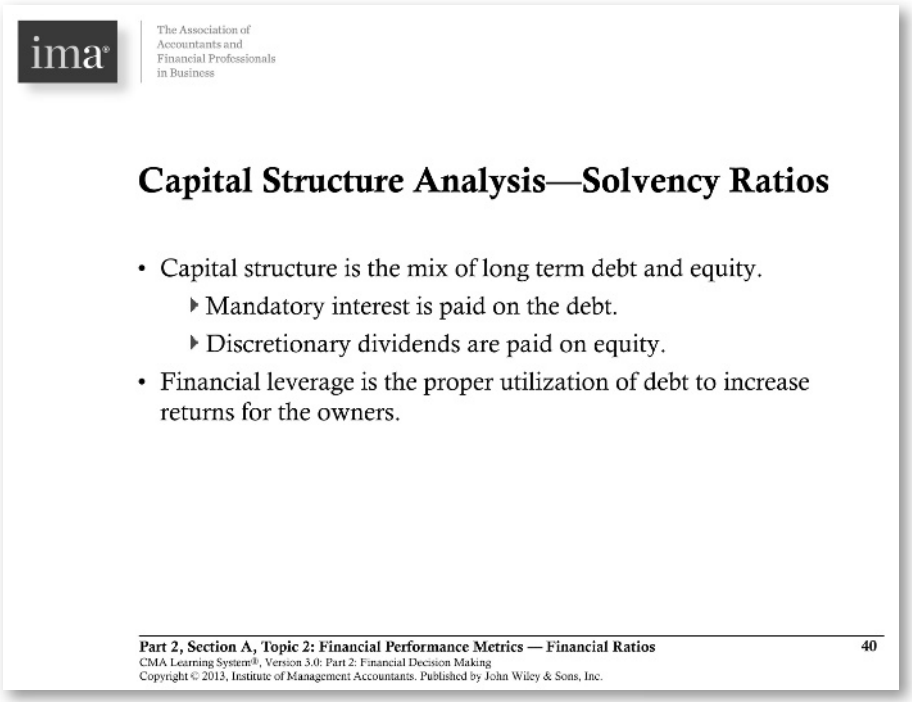
Explain that the cash flow ratio measures a firm's ability to meet its debt obligations with cash generated in the normal course of business. Calculating cash flow requires a balance sheet (to obtain current liabilities) and a cash flow statement (to obtain operating cash flow).

Explain that higher ratios of operating cash flow to debt indicate a higher likelihood that the firm will be able to meet its long-term debt obligations with cash generated from day-to-day business activities.

Allow participants a moment to calculate ABC Company's cash flow ratio.

Click to reveal the answer.

Click again to review calculation.



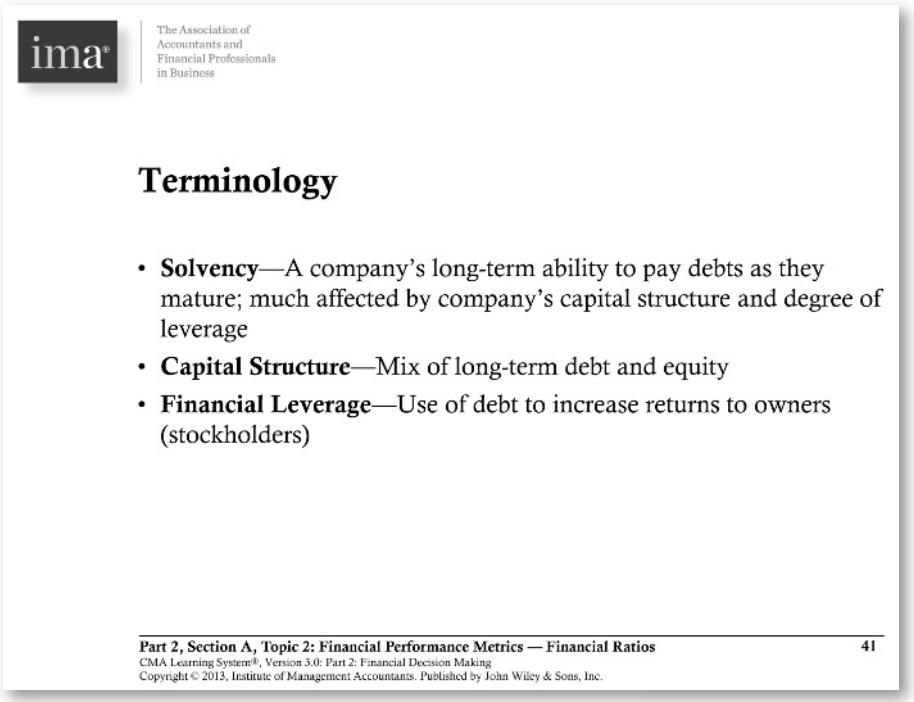
Explain the meaning of capital structure to participants.

Stress the point that interest on debt is *mandatory* while paying dividends on equity is *discretionary*. When a company earns a higher return than the interest rate, it can increase the returns to the owners by utilizing debt effectively. However, when the company earns less than the interest rate, use of debt reduces the return to the owner. Also, it increases the risk of bankruptcy.

The various stakeholders in a corporation take different views of capital structure:

- Lenders want low debt ratios (less debt, more equity).
- Stockholders and managers want optimal debt levels, with as much use of debt as the company can manage effectively. Optimal ratios vary by industry.

Explain that equity shareholders value the use of debt to fund the firm's projects because the firm has to pay out only interest and scheduled principal payments; any other returns on the project belong to the equity shareholders. More important, the interest paid is tax deductible to the business, which reduces the cash outlay for debt by the amount of the tax savings. Dividends, however, are paid to shareholders after taxes have been paid on company earnings. Whether it means to do so or not, the U.S. government, which is a stakeholder in all U.S. corporations, favors debt over equity by having different tax treatment of the two options.

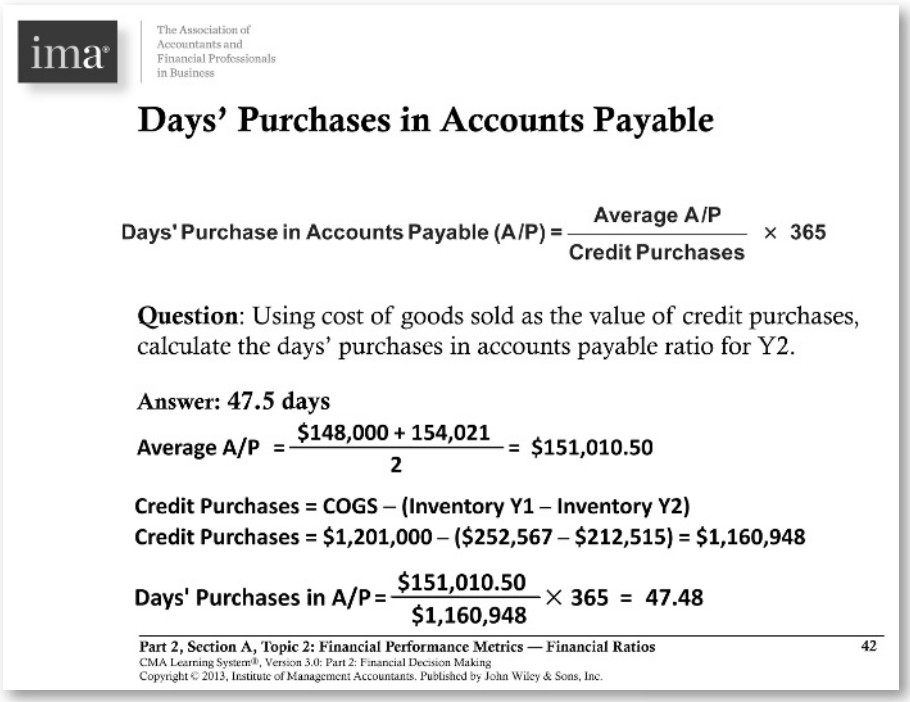


Discuss the terms and definitions on the slide.

Explain that a company's solvency is greatly affected by its capital structure and its degree of financial leverage. Compare solvency with liquidity, pointing out that liquidity is the firm's ability to pay short-term obligations whereas solvency is the firm's ability to meet its long-term debt obligations.

Explain that:

- **Capital structure** affects both the risk and the returns of the firm and is directly related to financial leverage.
- **Financial leverage** is the use of debt (fixed cost funds) to increase returns to owners (stockholders). Debt that is too low may result in the company's not being able to take full advantage of a source of low-cost capital. Debt that is too high may affect the company's ability to weather difficult economic times and continue to pay its obligations as debt or interest payments come due. There is no standard guideline or optimal leverage number; this varies by industry and firm.



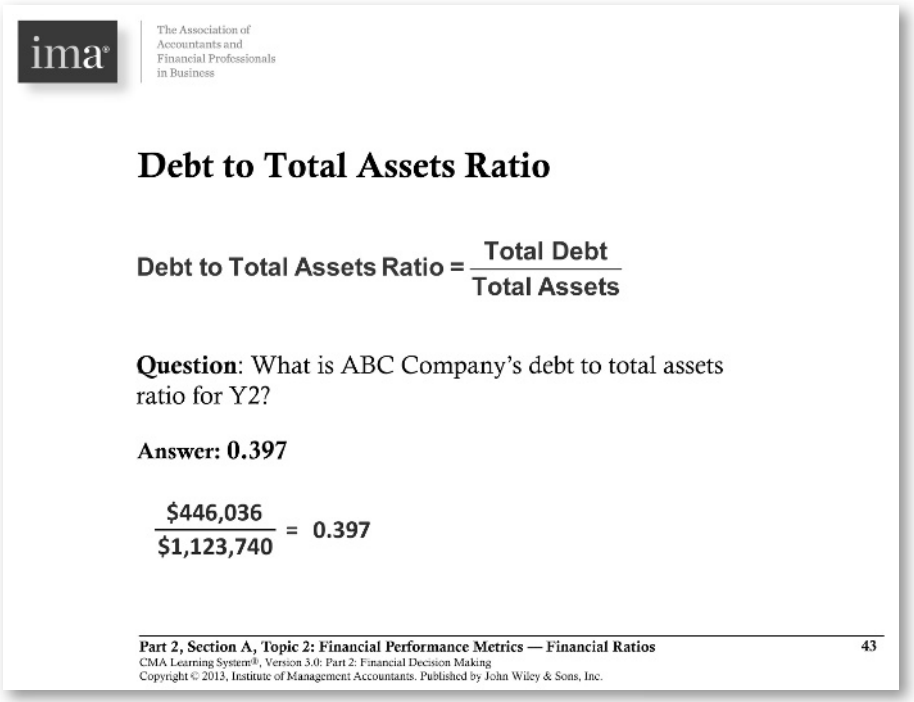
Review the days' purchases in accounts payable formula. Current liabilities to suppliers who depend on and value the firm's business are less urgent than taxes or other debts. Postponement and renegotiation of vendor liabilities do occur. Judgment regarding current liabilities should be in light of the degree of urgency of payment.

Explain that measurement of days' purchases in accounts payable indicates the degree to which accounts payable are current or overdue. It is difficult for an outside analyst to determine credit purchases. For the formula on the slide, the analyst can use cost of goods sold instead of credit purchases for a close approximation. Using cost of goods sold does not account for changes in inventory balances or cash purchases. If this formula results in a number that is larger than the firm's credit terms, that would indicate that accounts payable obligations are past due.

Allow participants a moment to calculate the answer to the question using cost of goods sold, then ***click*** to reveal the answer.

Click again to review calculation.

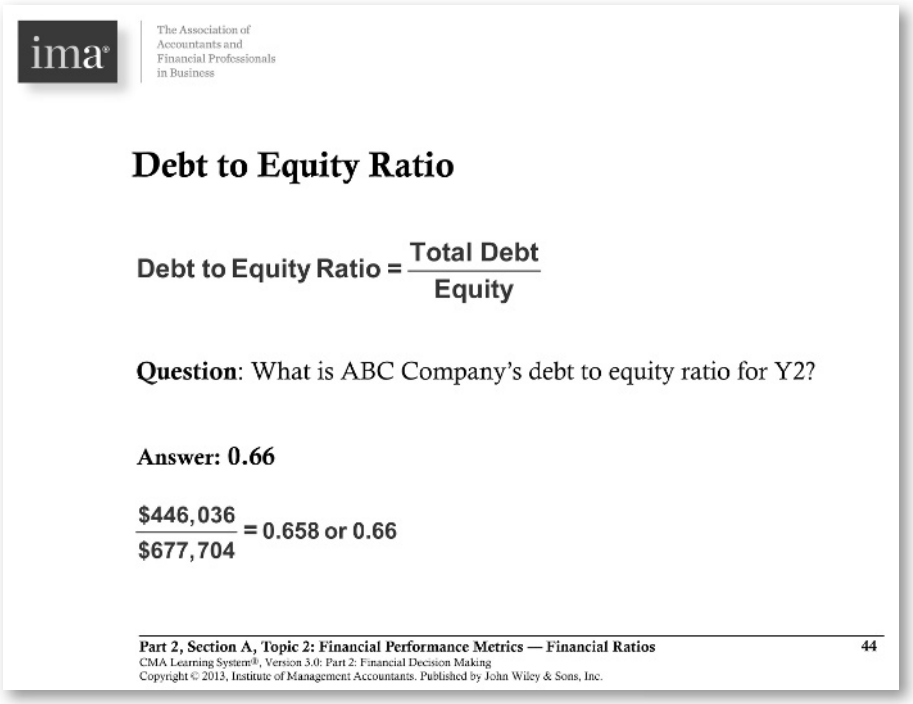
Explain that the answer is calculated using average accounts payable: ($148,000 + $154,021) / 2 = $151,010.50. Note that this average assumes that purchasing patterns occur evenly throughout the year. Sometimes this equation is calculated using ending accounts payable, but the CMA exam uses the average accounts payable amount, as shown on the slide.



Explain that the debt to total assets ratio measures the proportion of assets financed through debt. This ratio shows the percentage of assets financed by creditors and indicates how well creditors are protected in case the company becomes insolvent.

A lower debt to total assets ratio indicates a better position for creditors, because the company has enough assets to cover long-term debt obligations. A higher ratio, which indicates that creditors are not well protected, may make it more difficult and expensive for the company to issue additional debt securities.

Allow participants time to calculate the answer to the question, then ***click*** to reveal the slide. ***Click*** again to review calculation.



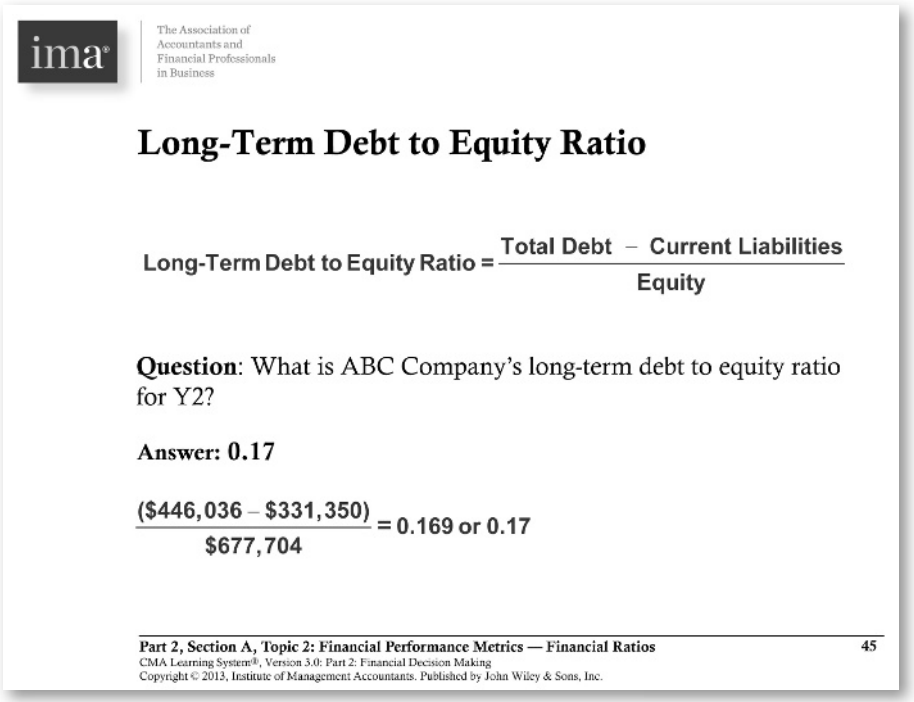
Explain that the debt to equity ratio also measures the firm's ability to pay long-term debt and how well long-term creditors are protected.

The lower the ratio, the stronger the company's solvency. An unusually low debt to equity ratio also can be troublesome. The ratio can be compared with previous years' records for the same company as well as with competitors' and industry averages.

Allow participants time to calculate the answer to the question.

Click to reveal the answer.

Click again to review calculation.



ima The Association of Accountants and Financial Professionals in Business

Long-Term Debt to Equity Ratio

$$\text{Long-Term Debt to Equity Ratio} = \frac{\text{Total Debt} - \text{Current Liabilities}}{\text{Equity}}$$

Question: What is ABC Company's long-term debt to equity ratio for Y2?

Answer: 0.17

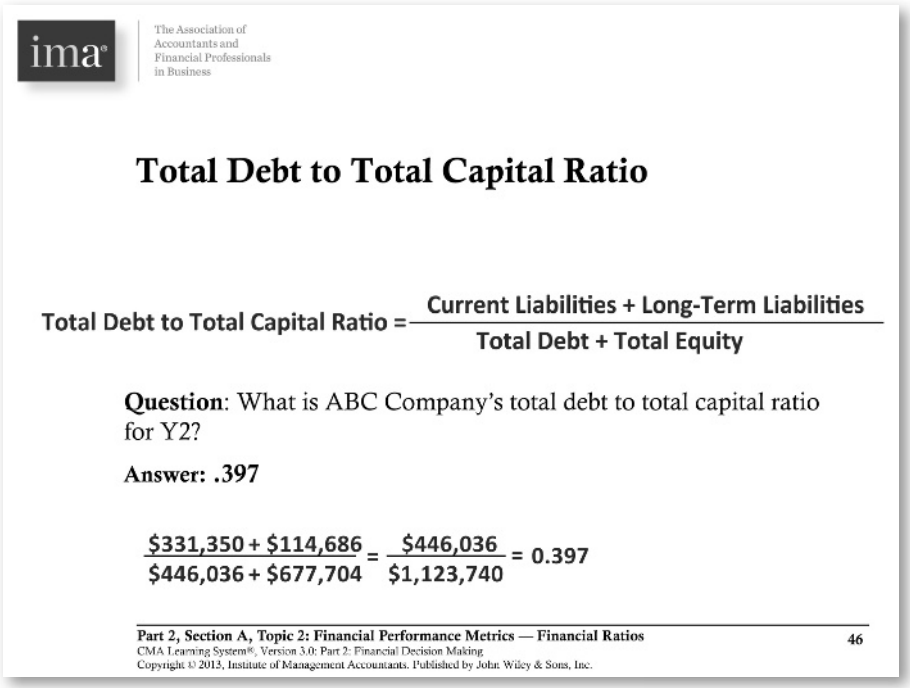
$$\frac{(\$446,036 - \$331,350)}{\$677,704} = 0.169 \text{ or } 0.17$$

Explain that the long-term debt to equity ratio compares long-term debt (which is calculated by taking total debt less current liabilities) with shareholders' equity. A company with a low long-term debt to equity ratio probably has the capacity to raise debt capital if it is needed. Fixed expenses tend to be lower for a low long-term debt to equity company because there are few or no interest payments, but the return on capital probably will be lower. Debt creates financial leverage, which can magnify returns.

Allow participants time to calculate the answer to the question.

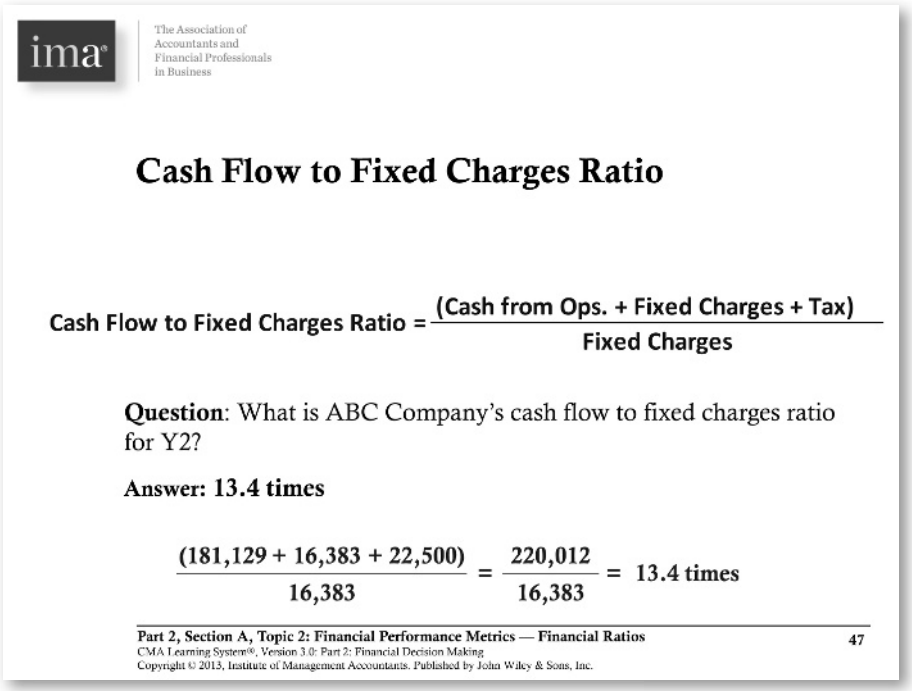
Click to reveal the answer.

Click again to review calculation.



Explain that this ratio shows the comparison of the total debt of an organization compared to the amount of contributed capital to the company, which includes debt and equity.

Click to show the answer.



ima The Association of Accountants and Financial Professionals in Business

Cash Flow to Fixed Charges Ratio

$$\text{Cash Flow to Fixed Charges Ratio} = \frac{\text{(Cash from Ops. + Fixed Charges + Tax)}}{\text{Fixed Charges}}$$

Question: What is ABC Company's cash flow to fixed charges ratio for Y2?

Answer: 13.4 times

$$\frac{(181{,}129 + 16{,}383 + 22{,}500)}{16{,}383} = \frac{220{,}012}{16{,}383} = 13.4 \text{ times}$$

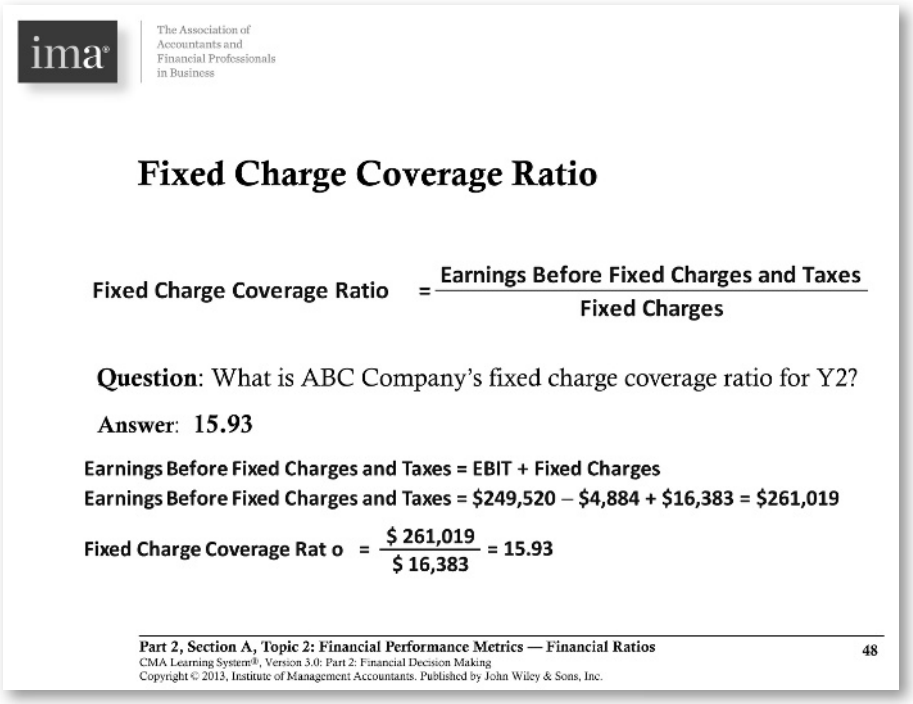
Part 2, Section A, Topic 2: Financial Performance Metrics — Financial Ratios 47
CMA Learning System®, Version 3.0: Part 2: Financial Decision Making

Explain that this ratio compares the cash generated from operations and fixed charges and taxes to the fixed charges of the company. Fixed charges are those charges that occur on a month-to-month basis and support the operations of the business. This ratio maps to the *CMA Exam Ratio Definitions*.

NOTE:

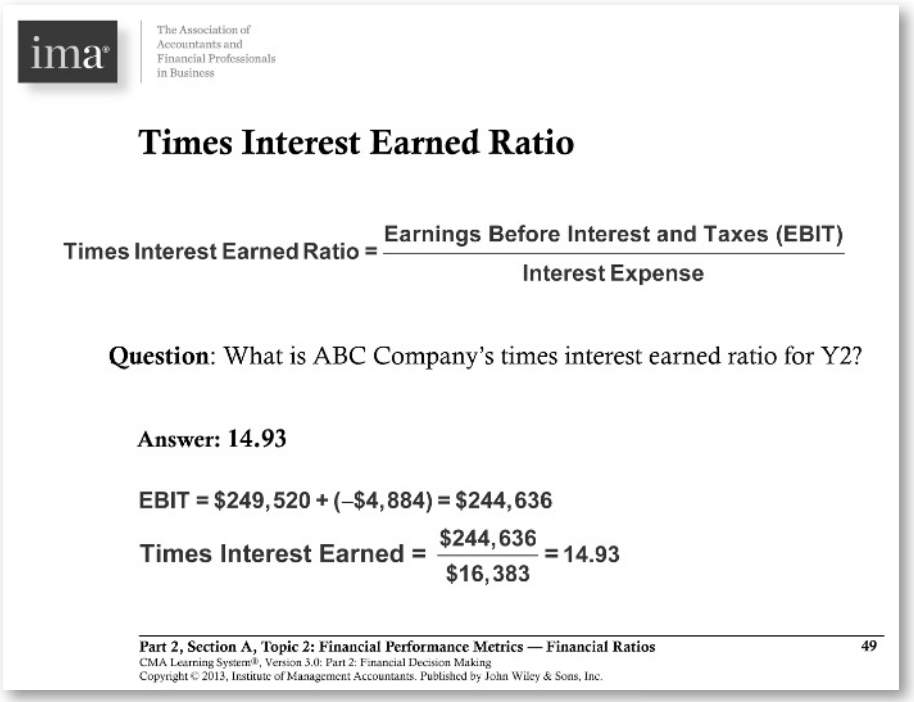
Cash from Operations After Taxes
= Net Income = Depreciation and Amortization − Taxes

Click to show the answer.



Explain that this ratio compares the earnings before fixed charges and taxes to the fixed charges of the company. Fixed charges are those charges that occur on a month-to-month basis and support the operations of the business.

Earnings before fixed charges and taxes are equal to earnings before interest and taxes plus fixed charges.



ima The Association of Accountants and Financial Professionals in Business

Times Interest Earned Ratio

$$\text{Times Interest Earned Ratio} = \frac{\text{Earnings Before Interest and Taxes (EBIT)}}{\text{Interest Expense}}$$

Question: What is ABC Company's times interest earned ratio for Y2?

Answer: 14.93

EBIT = $249,520 + (–$4,884) = $244,636

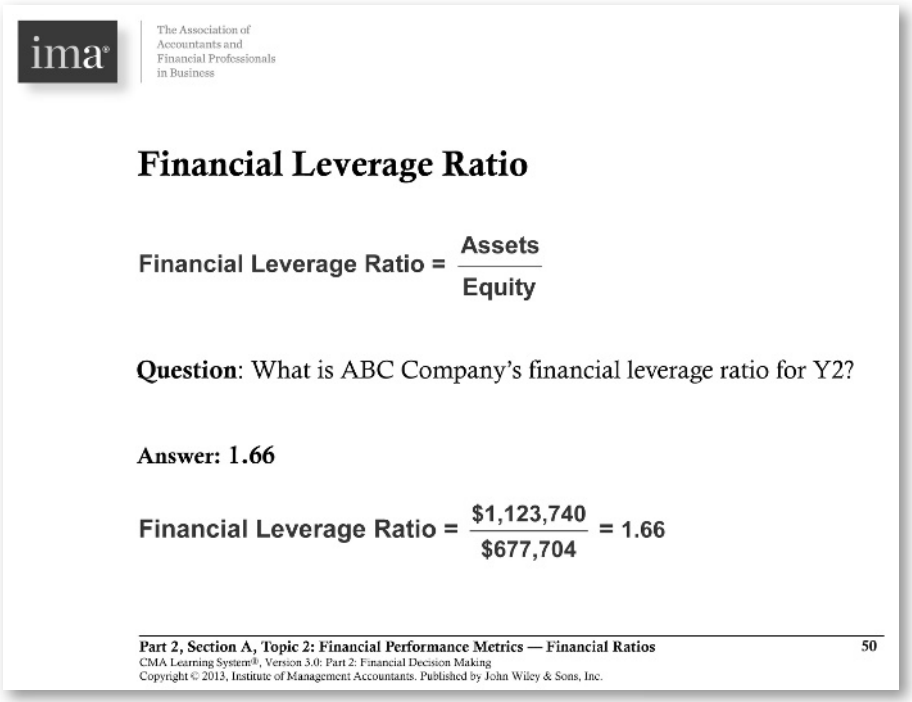
$$\text{Times Interest Earned} = \frac{\$244,636}{\$16,383} = 14.93$$

Explain that the times interest earned ratio (also called interest coverage) measures a firm's ability to manage long-term debt by indicating how many times the annual interest obligation is earned. If the ratio is sufficient, the firm should be able to meet its interest obligation. And, with a healthy times interest earned ratio, the firm should be able to expand its debt, thereby increasing leverage.

Allow participants time to calculate the answer to the question, then ***click*** to reveal the answer.

Click again to review calculation.

Explain that earnings before interest and taxes (EBIT) is calculated here as operating income (loss) plus other income (expenses): $249,520 + (− $4,884) = $244,636.

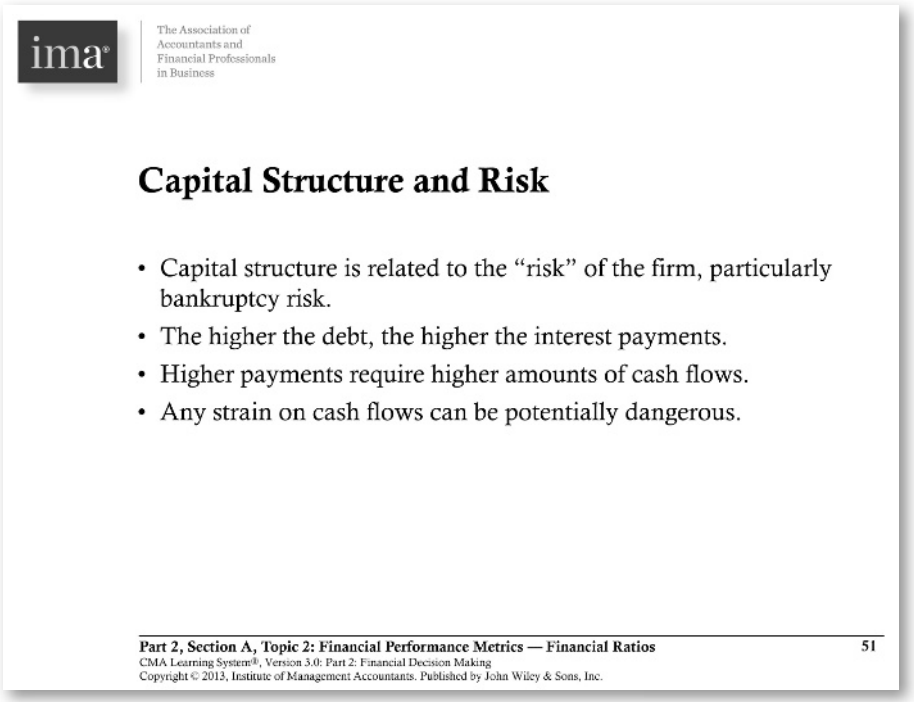


Explain that solvency is a company's ability to pay debts as they mature. The two methods for analyzing leverage are shown next.

1. *Operating leverage* is the existence of fixed operating costs.
2. *Financial leverage* is the use of debt to increase returns on investment.

Point out that the focus here is on financial leverage.
Allow participants time to calculate the answer to the question.
Click to reveal the answer.
Click again to review calculation.
Explain that the financial leverage ratio shown on the slide is the one that is used on the CMA exam. This ratio measures the relative relationship between assets and equity. A higher ratio implies that the assets of the company are financed primarily through debt. A financial leverage ratio of 2.0 reflects that the liabilities of the company are equal to the equity. A ratio of greater than 2.0 implies that liabilities are larger than equity, and a ratio of less than 2.0 implies higher equity than the liabilities of the company.

Financial leverage has a magnifying effect on earnings. When the earnings are positive, a marginal percentage change in revenue translates to a greater percentage change on earnings per share or on return on equity measures. Correspondingly, however, as debt represents fixed costs, leverage also has a magnifying effect on losses.



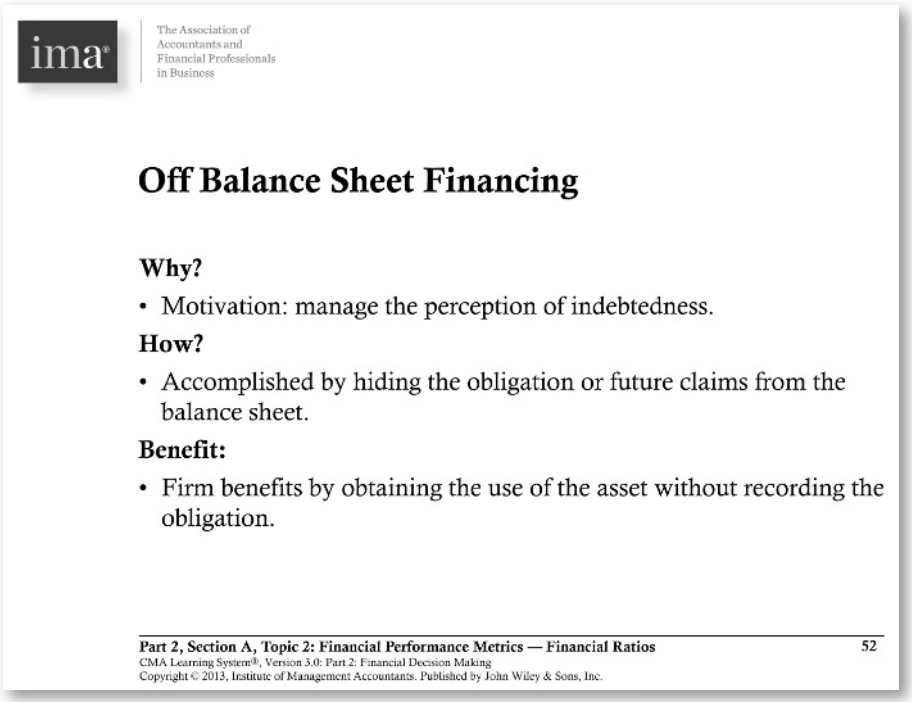
Discuss the link between debt and interest payments.

Click to reveal each of the four bullet points.

Discuss the fact that many business activities have certain levels of uncertainty. There can be fluctuations in cash flows in the short term as expectations or projections are not met.

Explain that interest payment obligations are easier to meet when there is a lower amount of debt. As debt payment obligations increase, there also is an increase in the probability that payments will not be met.

Stress the point that interest costs are *fixed costs*.



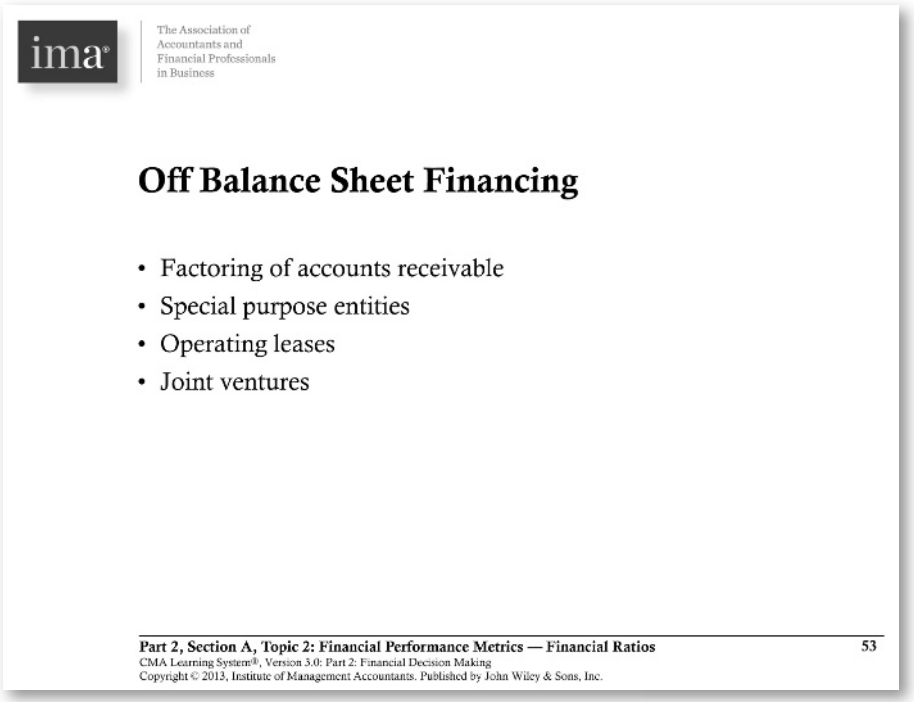
Explain the points listed on the slide.

Ask participants: Why do firms want to report less debt? What effect will less debt have on financial ratios? Why do managers want to hide debt?

Answers: Reporting less debt on the balance sheet will improve the appearance of the balance sheet to external stakeholders, such as lenders and stockholders.

Having less debt on the balance sheet will improve the debt to equity ratio as well as any other financial ratio that includes debt in its formula.

Having less debt will improve stakeholders' perception of a company and also will make the company appear to be less risky from a financial perspective.



Explain that four common techniques employed to achieve off-balance sheet financing are listed:

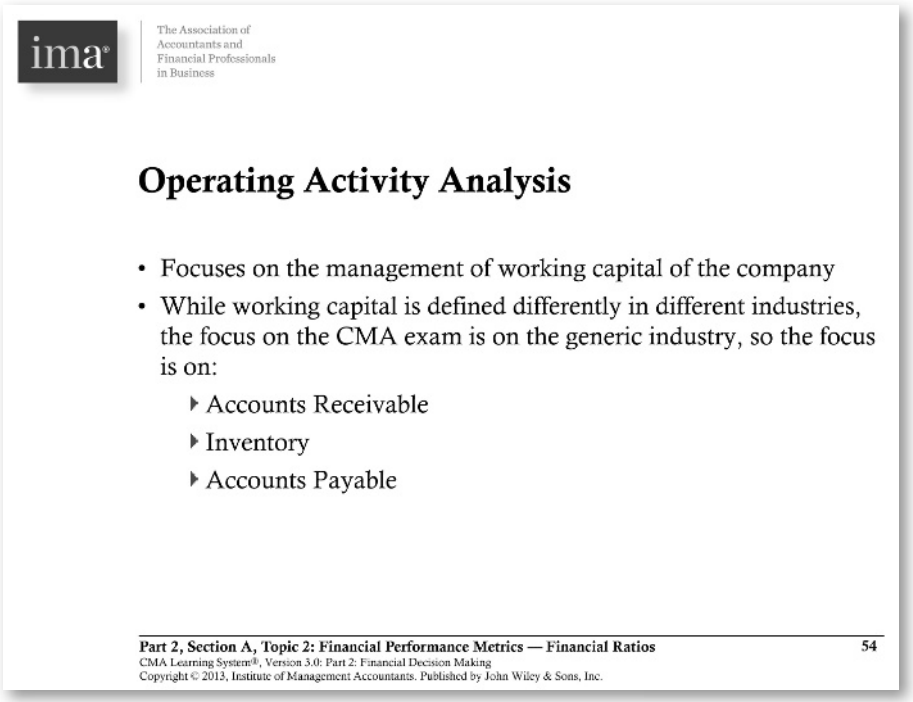
1. **Factoring of accounts receivables.** In an attempt to raise cash, a company will borrow using accounts receivable as collateral. This is done to avoid recording a payable or a liability.
2. **Special-purpose entities.** (Think Enron.) Firms create special-purpose entities (SPEs) for a special, sometimes undisclosed business purpose. For example, SPEs may be created to facilitate leasing activities, loan securitizations, research and development activities, or trading in financial derivatives.
3. **Leases.** Firms usually use a lease as a means of getting use of an asset without having to show it on the balance sheet as an asset and a corresponding liability.
4. **Joint ventures.** Sometimes a corporation is a partner in a venture, allowing it to be active in management, involved in decision making, but not report the venture on the financial statement of the corporation.

Discuss each of the methods.

Ask participants: What is the asset, and how does the company use it?

Discuss what the corresponding liability would have been and how that is being hidden due to special contractual arrangements.

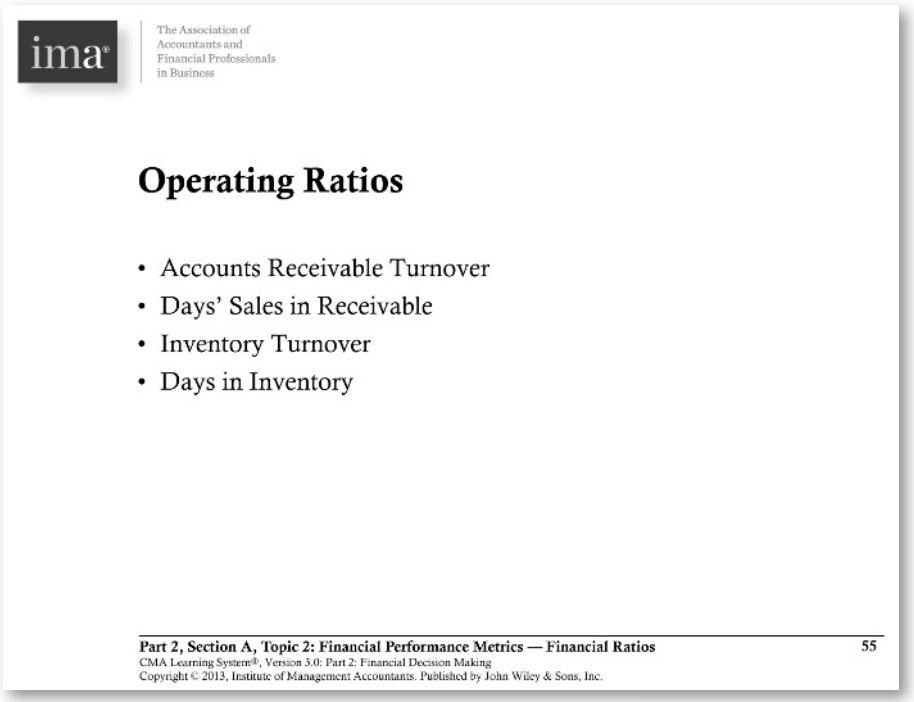
Discuss what the effect on the balance sheet would have been if accounting methods required recording of the corresponding liability.



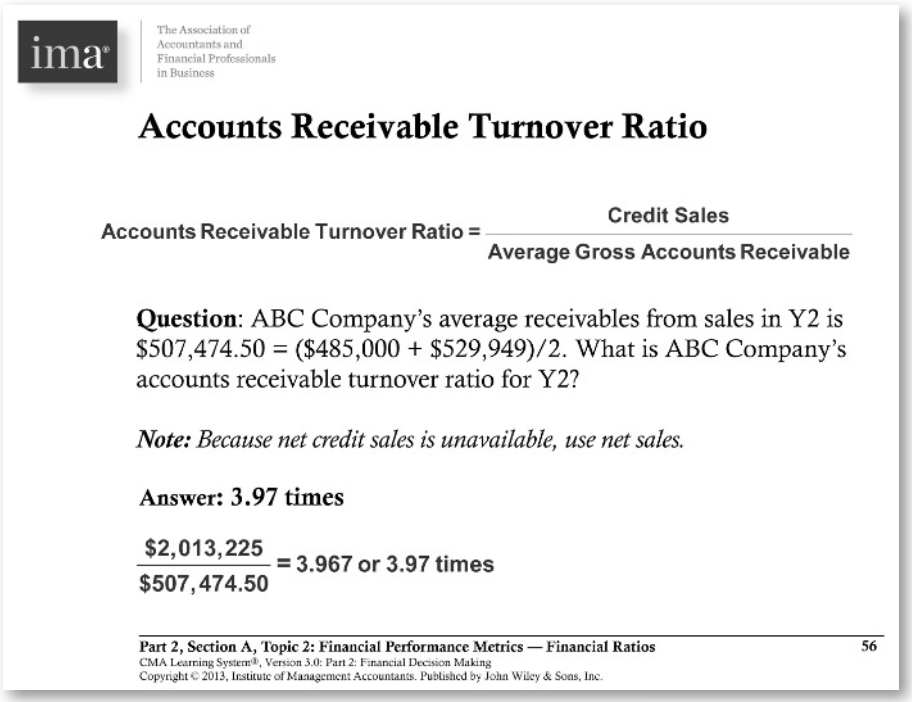
Explain that operating activity analysis is done over a period of an operating cycle—the time elapsed between when goods are acquired and when cash is received from the sale of the goods.

The term *generic industry* means retailing or manufacturing.

Discuss the fact that working capital would be different in other industries, such as airlines or financial services (no inventory and no accounts receivable). Note that for these other industries, the ratios in the next slides may not be relevant.



Explain that these ratios are covered in the next few slides.



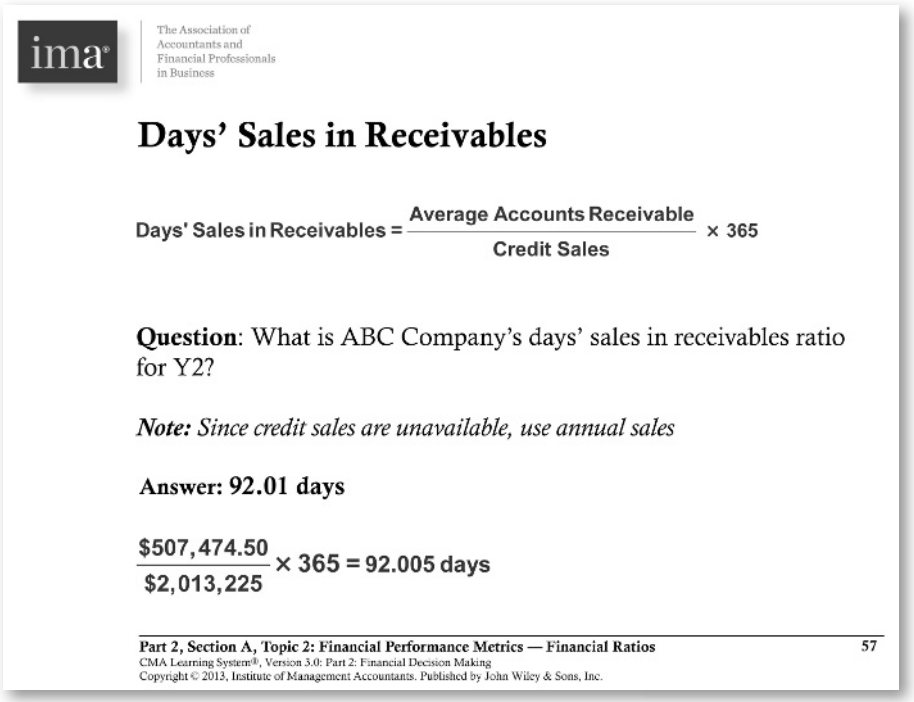
Review the formula for the accounts receivable turnover ratio.

Explain that this ratio measures the number of times that receivables from net credit sales are collected during an accounting period. Because net credit sales are often unavailable to an outside analyst, the calculation can use net sales as the numerator.

Explain that an analyst must be careful to compare accounts receivable turnover ratios between companies with similar seasonal sales and fiscal years.

Allow participants time to calculate the answer to the question, then ***click*** to reveal the answer.

Click again to review calculation.



ima The Association of Accountants and Financial Professionals in Business

Days' Sales in Receivables

$$\text{Days' Sales in Receivables} = \frac{\text{Average Accounts Receivable}}{\text{Credit Sales}} \times 365$$

Question: What is ABC Company's days' sales in receivables ratio for Y2?

Note: *Since credit sales are unavailable, use annual sales*

Answer: 92.01 days

$$\frac{\$507,474.50}{\$2,013,225} \times 365 = 92.005 \text{ days}$$

Part 2, Section A, Topic 2: Financial Performance Metrics — Financial Ratios 57
CMA Learning System®, Version 3.0: Part 2: Financial Decision Making

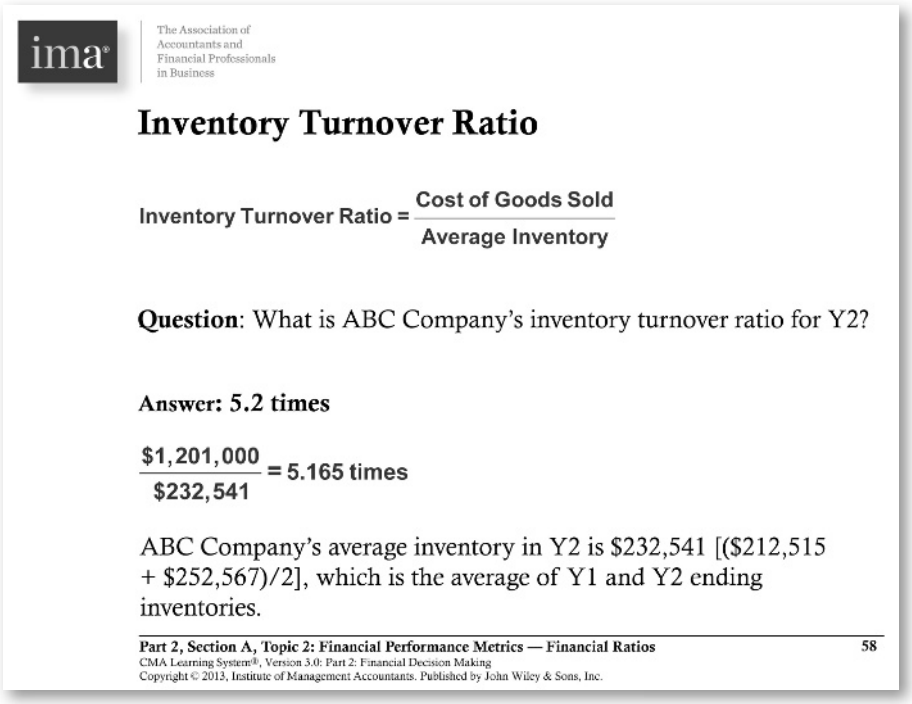
Review the days' sales in receivables ratio, also known as the average collection period.

Explain that measuring accounts receivable turnover in days measures the liquidity of receivables. An internal analyst compares days' sales in receivables with the company's credit terms as an indication of how efficiently the company manages its receivables. If a company's credit term is 30 days, days' sales in receivables should not be substantially over 30 days.

Discuss: Ratio analysis is not an exact science, and people may use different methods, so sometimes days' sales in receivables is calculated using average accounts receivable, as shown. Other times it is calculated using ending values. The formula shown is the one that is used on the CMA exam. Because credit sales are often unavailable to an outside analyst, the calculation in the slide uses (net) sales.

Allow participants time to calculate the answer to the question, then ***click*** to reveal the answer.

Click again to review calculation.



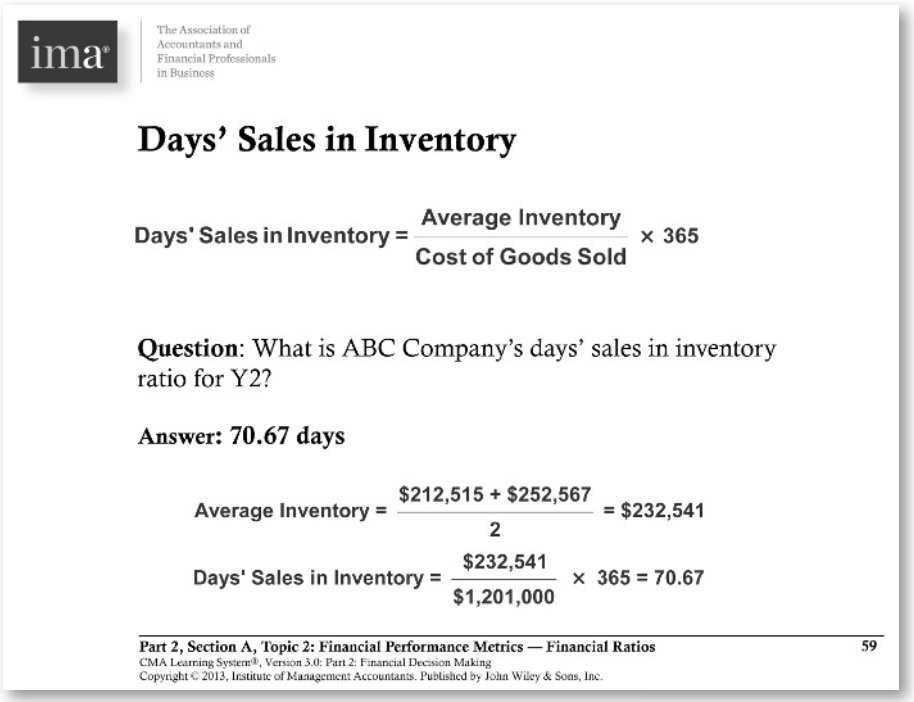
Explain that the inventory turnover ratio measures the average number of times that the inventory was sold during the accounting period. Inventory is one of the most significant assets in determining liquidity. The inventory account often represents more than half of a company's total current assets.

Explain that a retailer's inventory is often the merchandise available for sale. In a manufacturing environment, inventory is divided among raw materials, work in process, and finished goods.

Explain that cost of goods sold is from the income statement.

Allow participants time to calculate the answer to the question, then ***click*** to reveal the answer.

Click again to review calculation.



ima The Association of Accountants and Financial Professionals in Business

Days' Sales in Inventory

$$\text{Days' Sales in Inventory} = \frac{\text{Average Inventory}}{\text{Cost of Goods Sold}} \times 365$$

Question: What is ABC Company's days' sales in inventory ratio for Y2?

Answer: 70.67 days

$$\text{Average Inventory} = \frac{\$212{,}515 + \$252{,}567}{2} = \$232{,}541$$

$$\text{Days' Sales in Inventory} = \frac{\$232{,}541}{\$1{,}201{,}000} \times 365 = 70.67$$

Part 2, Section A, Topic 2: Financial Performance Metrics — Financial Ratios 59
CMA Learning System®, Version 3.0: Part 2: Financial Decision Making

Review the days' sales in inventory ratio. If sales are fairly constant, a lower number of days or a greater number of times of turnover of inventory indicates better inventory control. Successful companies are able to keep their inventory low with high turnovers while still meeting customer orders on a timely basis.

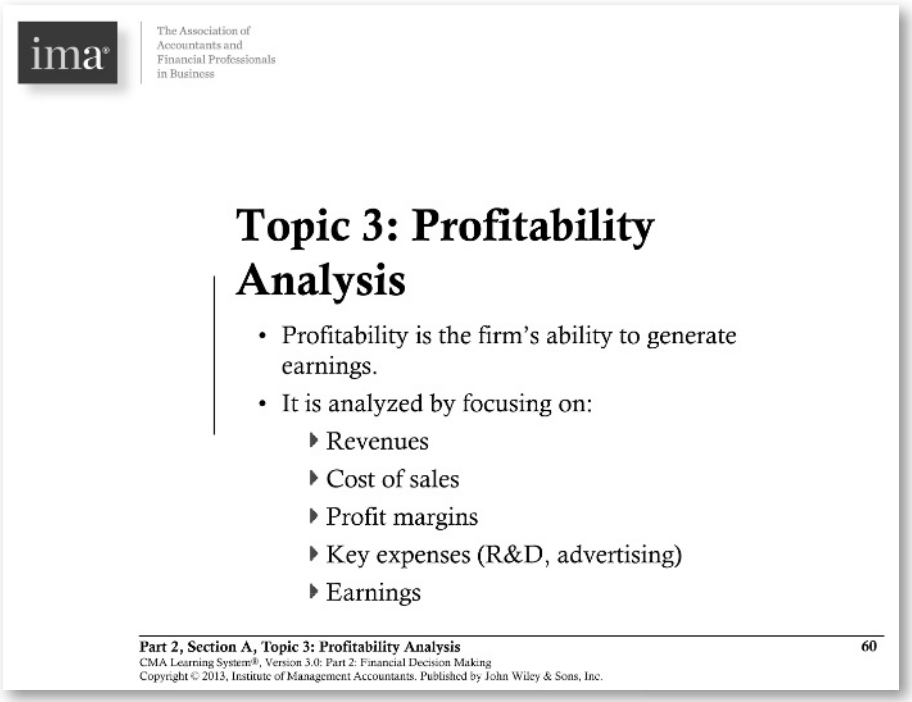
Explain that cost of goods sold is from the income statement.

Allow participants time to calculate the answer to the question, then ***click*** to reveal the answer.

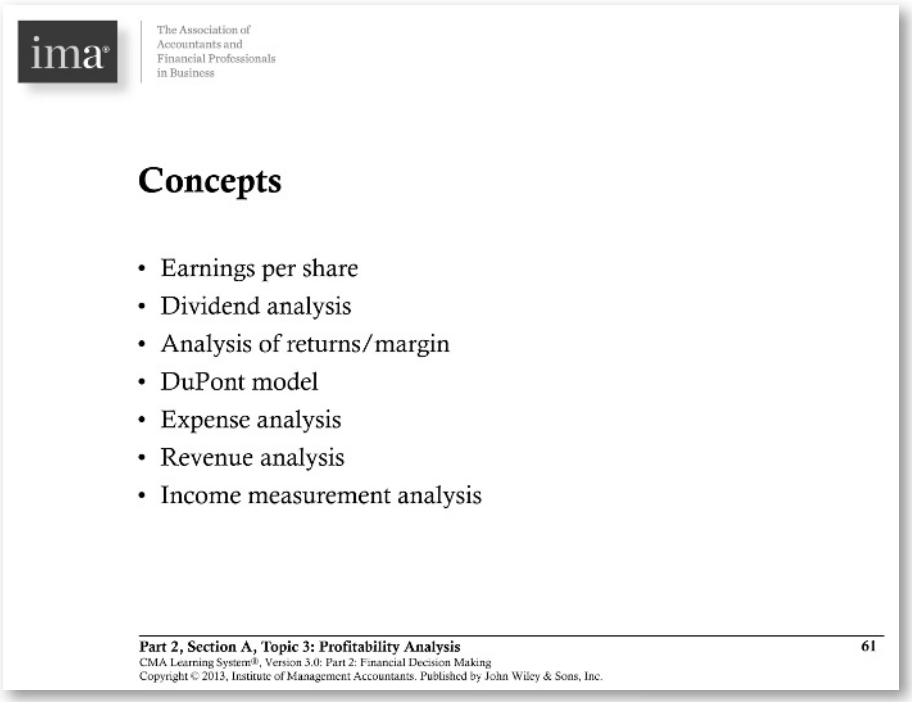
Click again to review calculation.

Conclude the discussion of this topic by asking participants if they have any questions on Topic 2: Financial Performance Metrics—Financial Ratios.

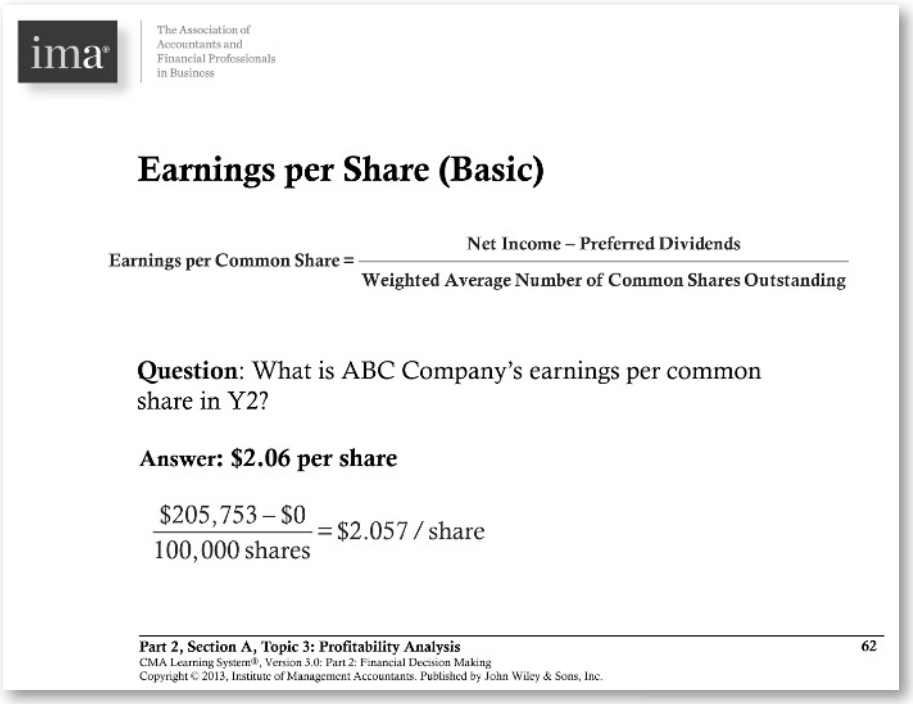
Section A, Topic 3: Profitability Analysis



Explain that profitability is a firm's ability to generate earnings over a period of time with a given set of resources. This topic discusses how profitability is analyzed by examining the elements of revenues, the cost of sales and operating and other expenses.



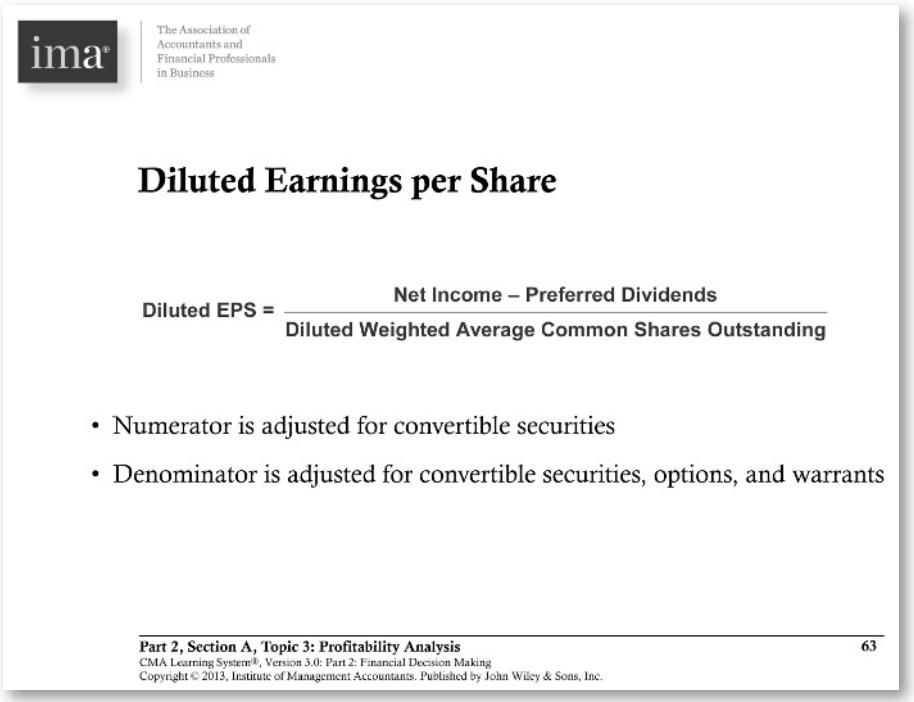
Introduce the key concepts that are covered in this topic.



Explain that the earnings per share (EPS) calculation examines the investor's earnings on one share of stock. EPS is an important measure that investors use to determine whether to purchase or sell a security. The basic formula to compute EPS is shown here.

Ask participants to calculate basic EPS, then ***click*** to reveal the answer.

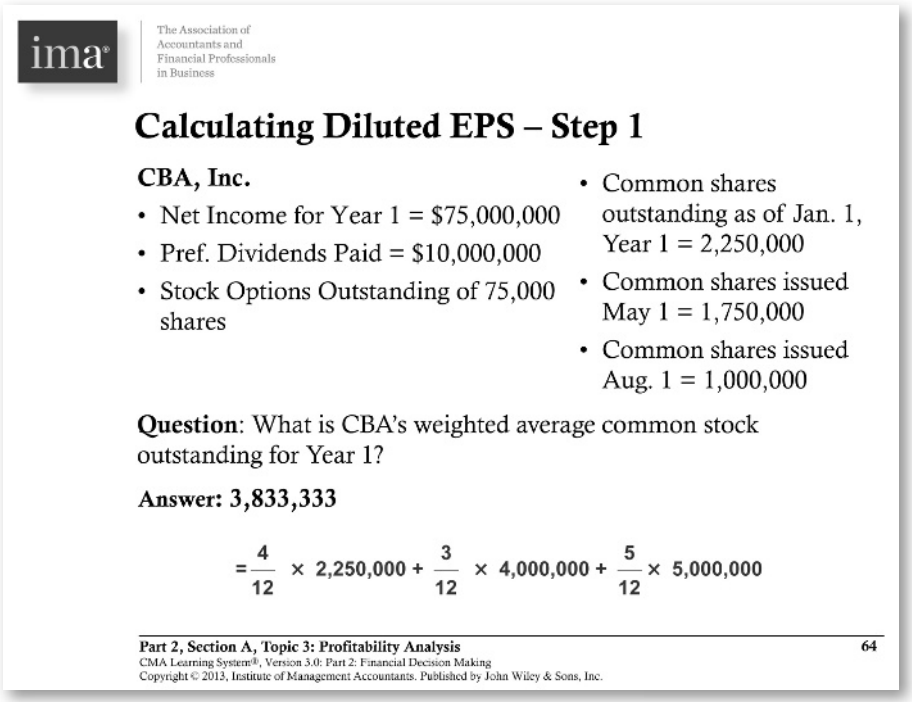
Click again to review calculation.



Review the equation for calculating diluted earnings per share.

Explain that the diluted EPS adjusts common shares by adding shares that can be issued for convertible securities and option. Diluted EPS is a company's EPS calculated using fully diluted shares outstanding. Fully diluted shares include the impact of stock option grants and convertible bonds. Diluted EPS indicates a worst-case scenario, in which all stakeholders who could have received stock without purchasing it directly for the full market value would do so.

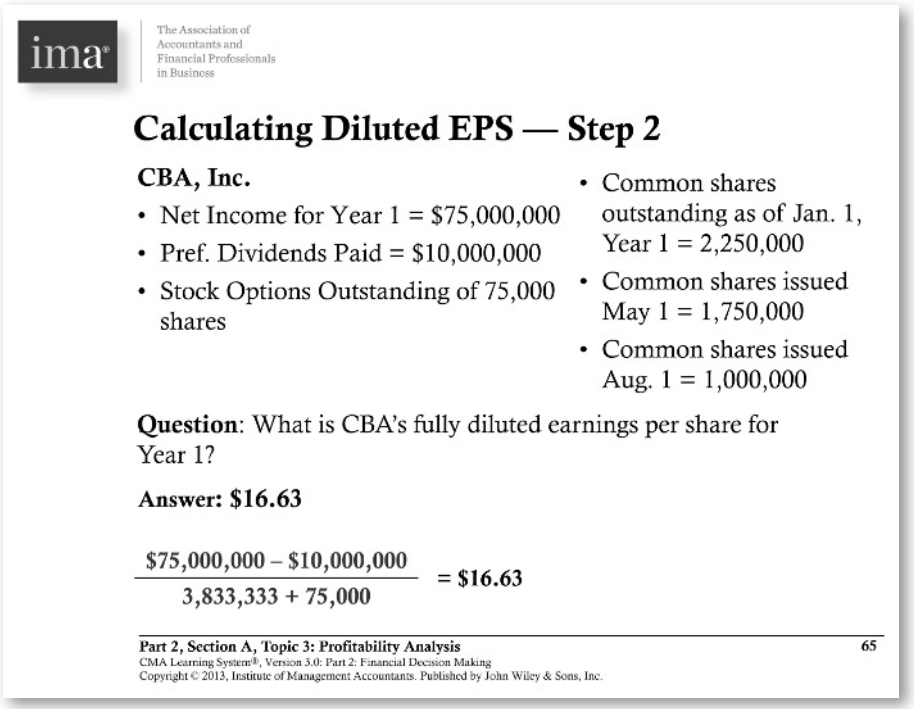
Review the explanation for using a weighted average of common stock—that the weighting reflects the number of months each block of shares was outstanding during the year.



Review the explanation for using a weighted average of common stock—that the weighting reflects the number of months each block of shares was outstanding during the year.

Click to show answer.

Click again to review calculation.

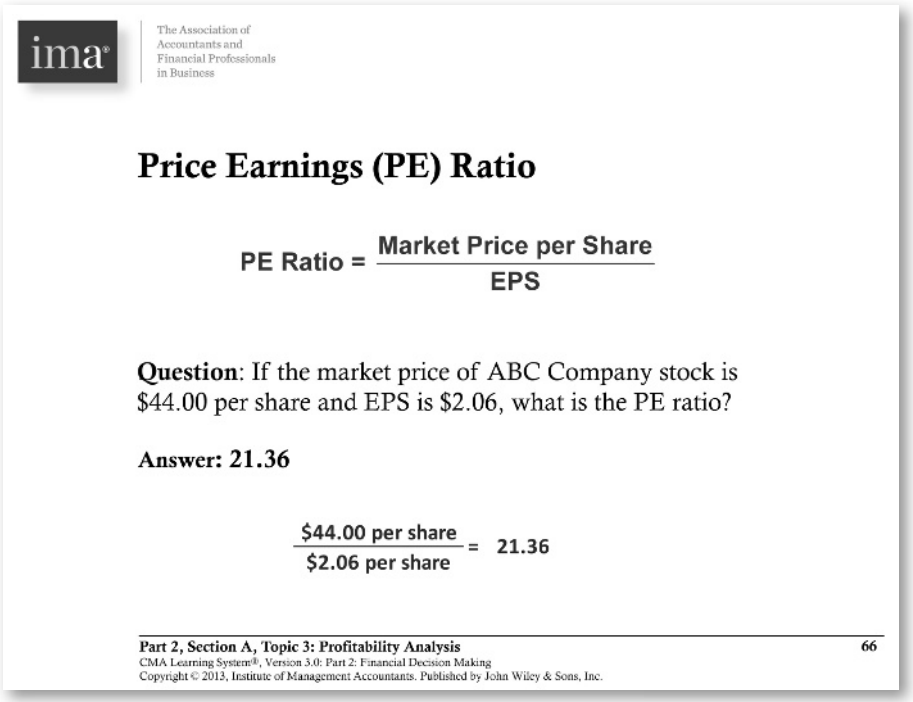


Give participants time to calculate the diluted earnings per share, using the information on CBA, Inc. on the slide plus the diluted EPS equation and the weighted average common shares number calculated in the previous question.

Ask participants to answer the question and explain their calculations.

Click to reveal the answer.

Click again to review calculation.



Review the calculation for price/earnings ratio.

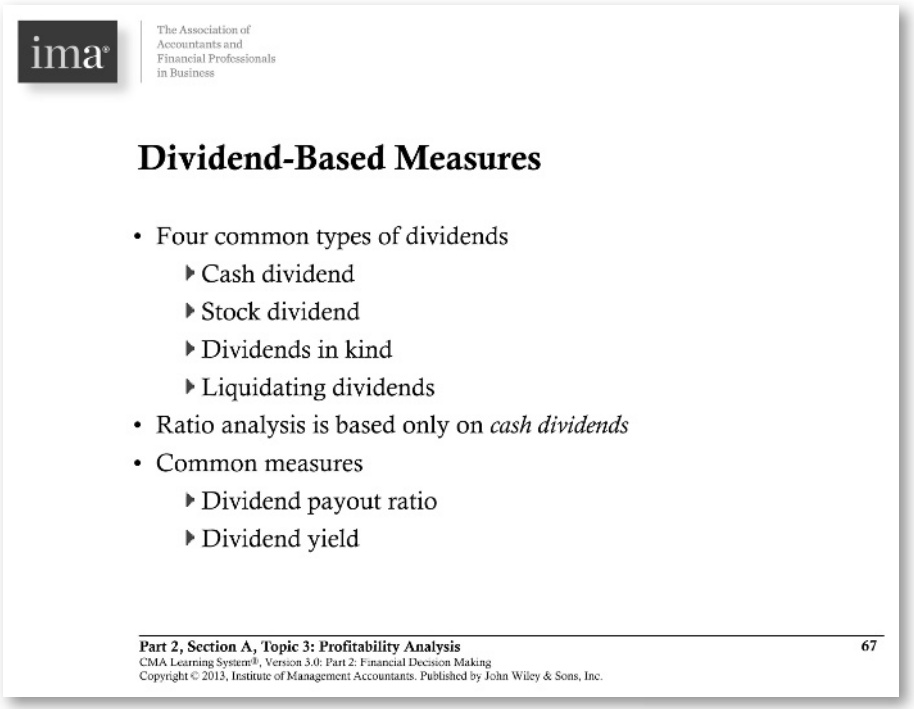
Allow participants to calculate the answer based on the numbers provided.

Click to review the answer.

Click again to review calculation.

Explain that earnings per share was previously computed as $2.06 per share.

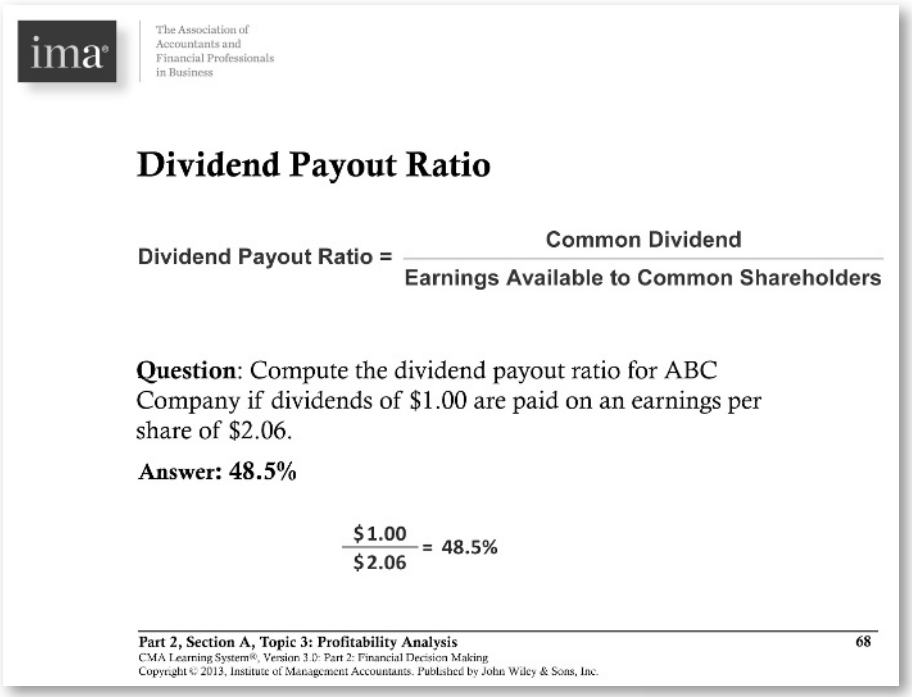
Therefore, if the current price is $44 per share, and the EPS is $2.06, the P/E ratio is 21.36, which means that the stock is trading at 21.36 times earnings.



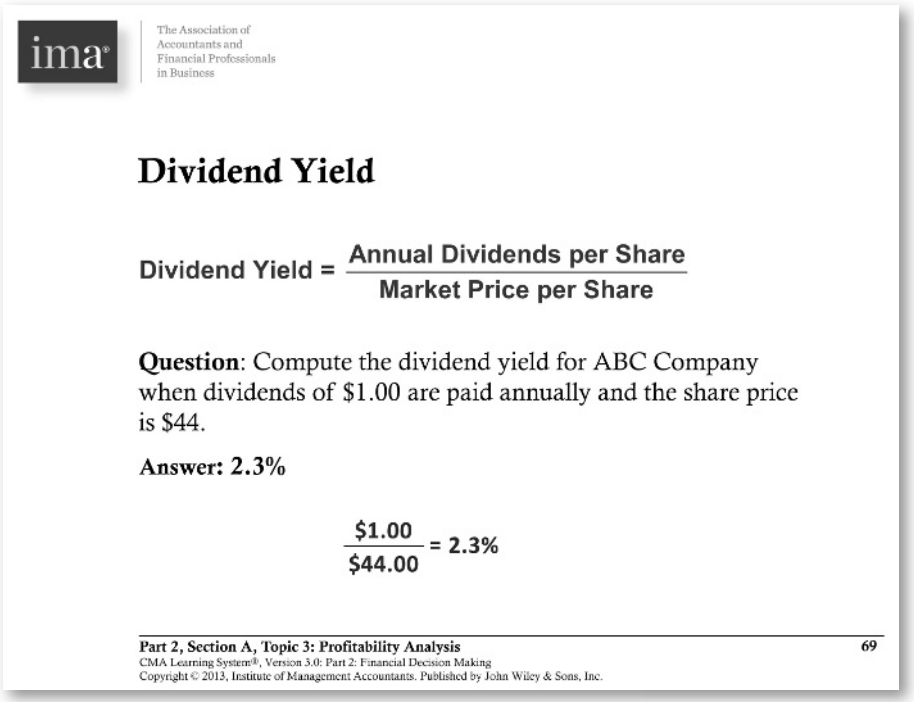
Explain what dividends are, and stress that they are given at the discretion of management. Dividends are discretionary and are not mandatory (unlike interest payments).

Introduce the two common measures used to evaluate dividends: the dividend payout ratio and the dividend yield.

- The **dividend payout** ratio is useful because it compares common stock dividends to earnings available to common shareholders, so that shareholders can evaluate the relationship between these two amounts.
- The **dividend yield** compares annual dividends to the market price per share of the stock. It is a measure of the cash return realized by the investor, against the current market value of the stock, by the payout of the dividend. This ratio is helpful to investors seeking income from their securities investments.



Review the formula for the dividend payout ratio.
Allow participants time to calculate the answer based on the numbers provided.
Click to review the answer.
Click again to review calculation.



ima The Association of Accountants and Financial Professionals in Business

Dividend Yield

$$\text{Dividend Yield} = \frac{\text{Annual Dividends per Share}}{\text{Market Price per Share}}$$

Question: Compute the dividend yield for ABC Company when dividends of $1.00 are paid annually and the share price is $44.

Answer: 2.3%

$$\frac{\$1.00}{\$44.00} = 2.3\%$$

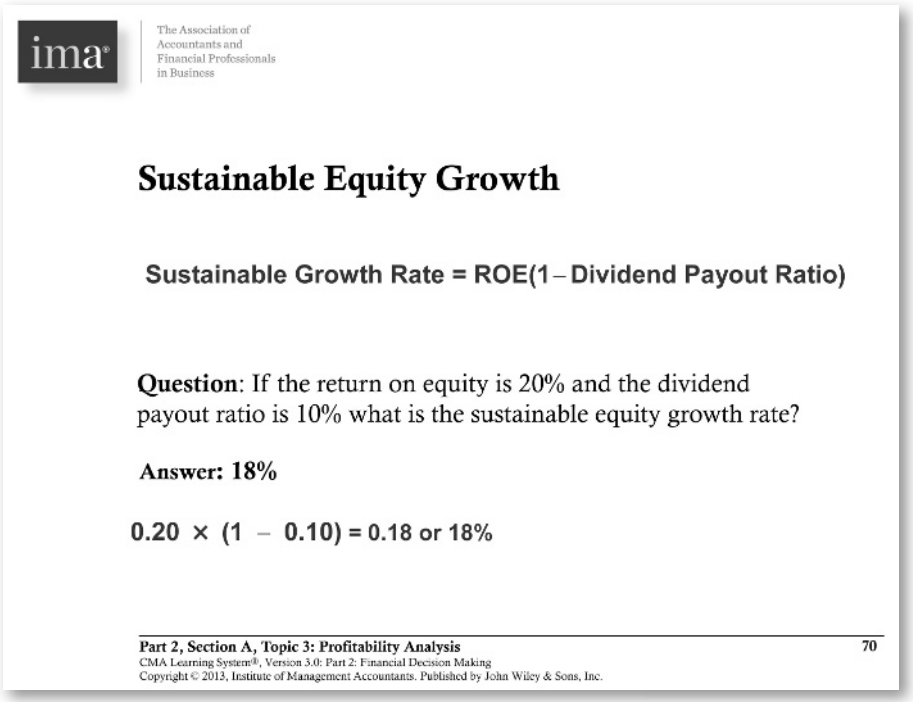
Part 2, Section A, Topic 3: Profitability Analysis 69
CMA Learning System®, Version 3.0: Part 2: Financial Decision Making

Explain that unlike the dividend payout ratio, dividend yield is a market-based measure because it uses the market price as an input to the computation.

Allow time for the participants to compute the answer.

Click to review the answer.

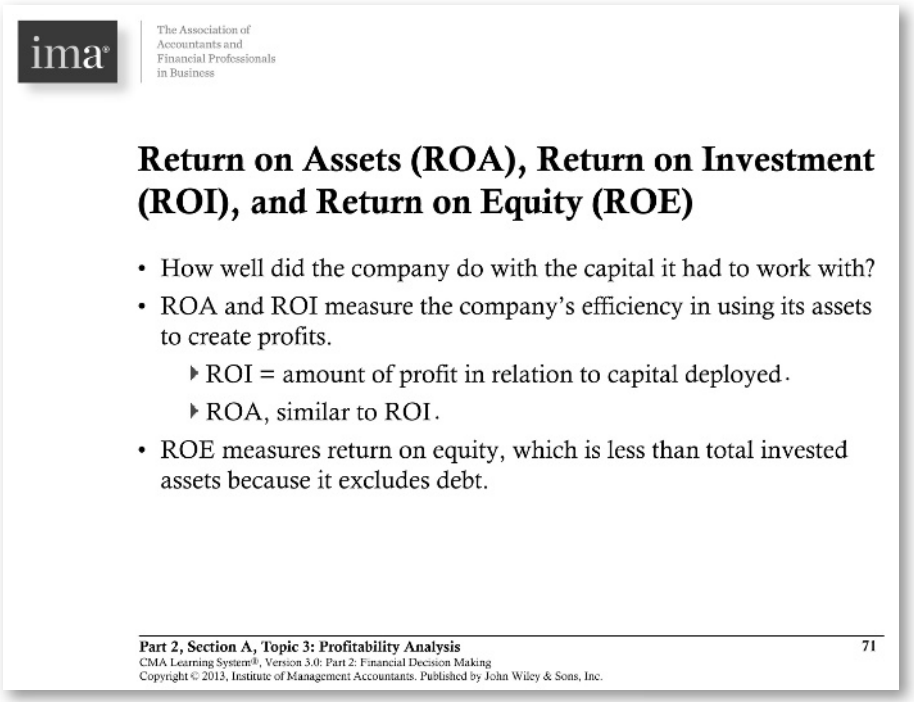
Click again to review calculation.



Explain that the return on equity measure is introduced later. Participants just should use the ROE number provided to compute the growth rate in this example.

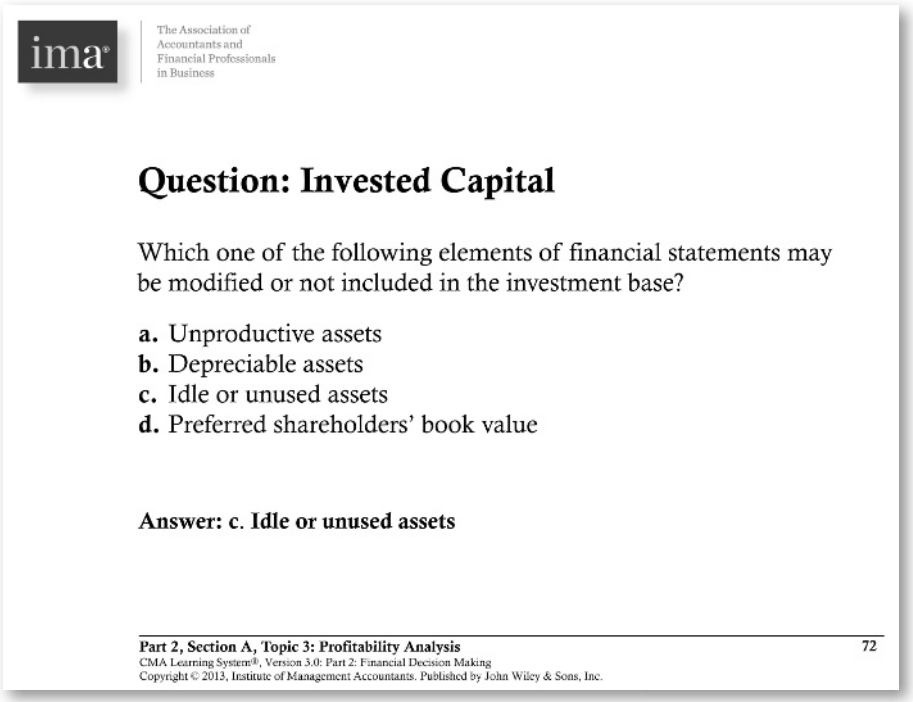
Ask participants to calculate the answer to the question, then ***click*** to reveal the answer. ***Click*** again to review calculation.

Explain why this measure is important. Why wouldn't a company pay out all of its earnings as dividends? ***Ask*** participants to consider the issue before answering the question.



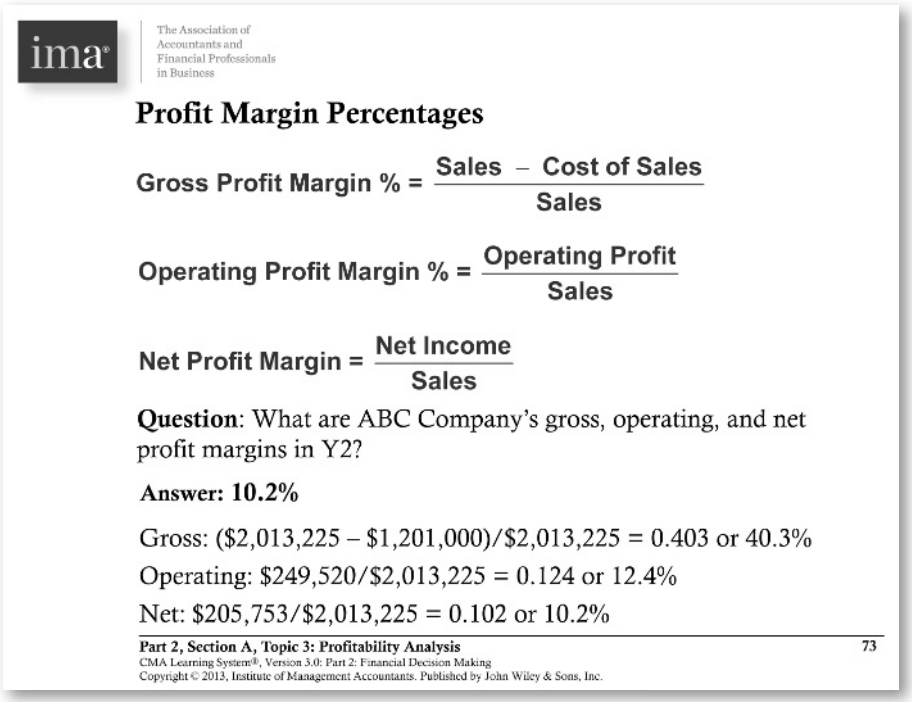
Explain that these three measures show how well a company performed with the capital that it had to work with.

Note that although return on investments (ROI) and return on assets (ROA) are similar, return on equity (ROE) measures returns only against equity invested, excluding debt from consideration.



Ask participants to answer the question, then ***click*** to display the answer: "Idle or unused assets," is not included in the investment base.
Explain that:

- The basic components of return on invested capital are profits and assets.
- There are differing views on how the elements of assets and profits should be defined. Invested capital for ROA or return on invested capital can be defined as all assets, modified investment bases, or shareholders' equity only.
- Some analysts believe that some components of assets can skew the results and use the modified investment basis to calculate ROI or ROA.



ima The Association of Accountants and Financial Professionals in Business

Profit Margin Percentages

$$\text{Gross Profit Margin \%} = \frac{\text{Sales} - \text{Cost of Sales}}{\text{Sales}}$$

$$\text{Operating Profit Margin \%} = \frac{\text{Operating Profit}}{\text{Sales}}$$

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

Question: What are ABC Company's gross, operating, and net profit margins in Y2?

Answer: 10.2%

Gross: ($2,013,225 – $1,201,000)/$2,013,225 = 0.403 or 40.3%

Operating: $249,520/$2,013,225 = 0.124 or 12.4%

Net: $205,753/$2,013,225 = 0.102 or 10.2%

Part 2, Section A, Topic 3: Profitability Analysis 73

CMA Learning System®, Version 3.0: Part 2: Financial Decision Making

Review the three profit margin ratios.

Ask participants to identify the importance of these three ratios and how they relate to one another.

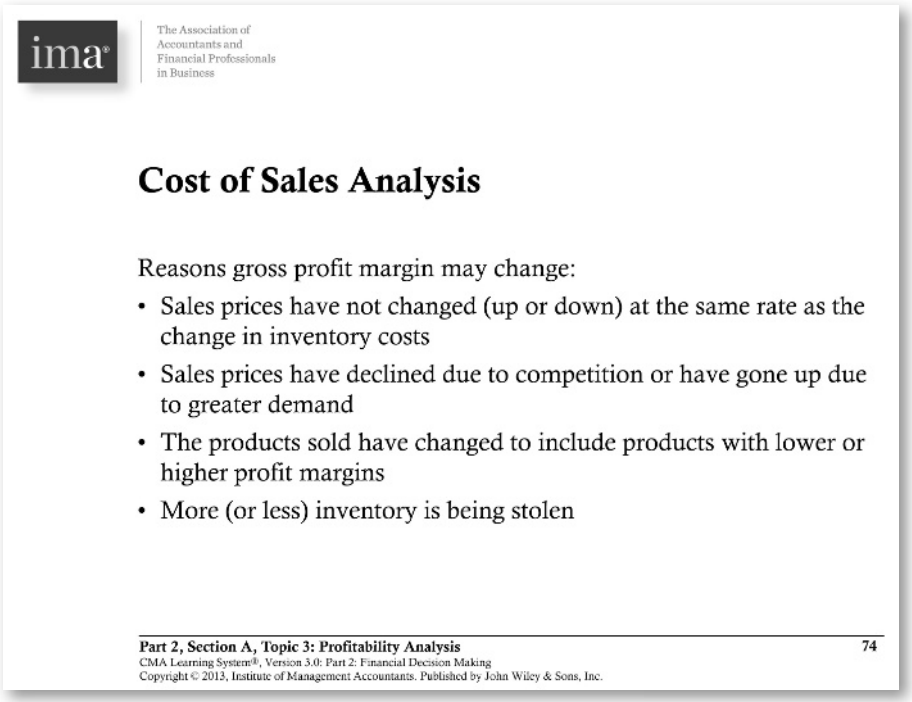
Explain that gross profit is equal to sales less cost of goods sold.

- **Gross margin** derives its meaning by comparison to past performance of the company as well as industry averages. A declining gross profit ratio is troublesome. A firm with such a pattern should consider ways either to increase revenues (increase prices) or decrease cost of goods sold (cheaper product costs).

  Explain some implications of either action.
- The **operating profit margin** is earnings before interest and taxes (also known as EBIT)—the gross margin minus operating expenses. Investors will be concerned if the operating margin declines in relation to the gross margin, because that would reflect a rise in operating expenses, perhaps due to rising costs of supplies or energy or to growing inefficiencies. Operating margins should be interpreted in relation to margins within the industry.
- **Net profits** include all the expenses in gross and operating profits and also include interest and taxes, which are two other costs that can reduce (or eliminate) gross profits. If the net profit margin diverges progressively from gross and operating margins, the company may need to rethink its tax or borrowing strategies. Like the other ratios, this one should be interpreted in relation to ratios of similar businesses.

Allow participants time to calculate the answer to the question, then ***click*** to reveal the answer.

Click again to review calculation.

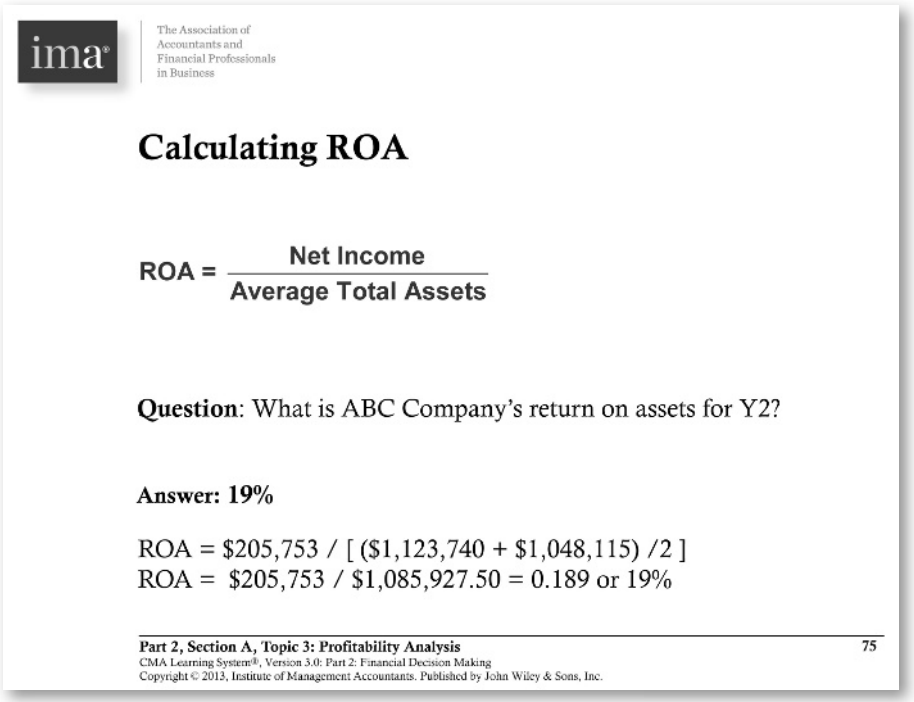


Review the examples of reasons for changes in the gross profit margin. ***Explain*** that analysts must look for reasons that explain changes.

Expense Analysis

The self-study text includes content on expense analysis.

Tell participants that although this content is not covered during class, they are expected to know it and should study it on their own.


ima
The Association of Accountants and Financial Professionals in Business

Calculating ROA

$$\text{ROA} = \frac{\text{Net Income}}{\text{Average Total Assets}}$$

Question: What is ABC Company's return on assets for Y2?

Answer: 19%

ROA = $205,753 / [($1,123,740 + $1,048,115) /2]
ROA = $205,753 / $1,085,927.50 = 0.189 or 19%

Part 2, Section A, Topic 3: Profitability Analysis 75
CMA Learning System®, Version 3.0: Part 2: Financial Decision Making

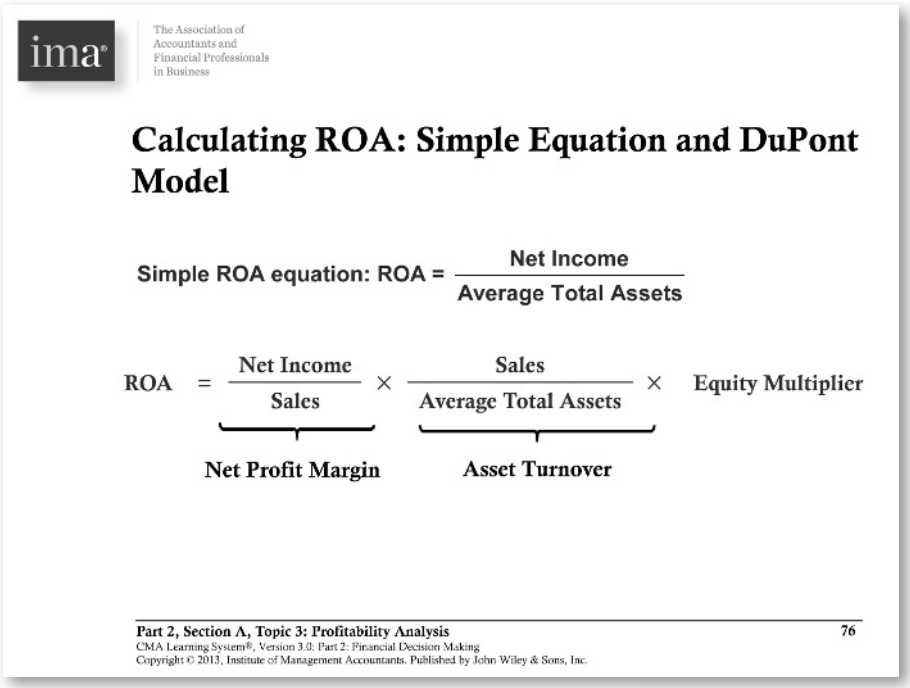
Explain that calculation of ROA in its simplest form compares net income before taxes to the value of all assets.

Allow participants time to calculate the answer to the question.

Click to reveal the answer.

Click again to review calculation.

Explain that "average" total assets is calculated by adding the beginning of period balance to the end of period balance and dividing by two.

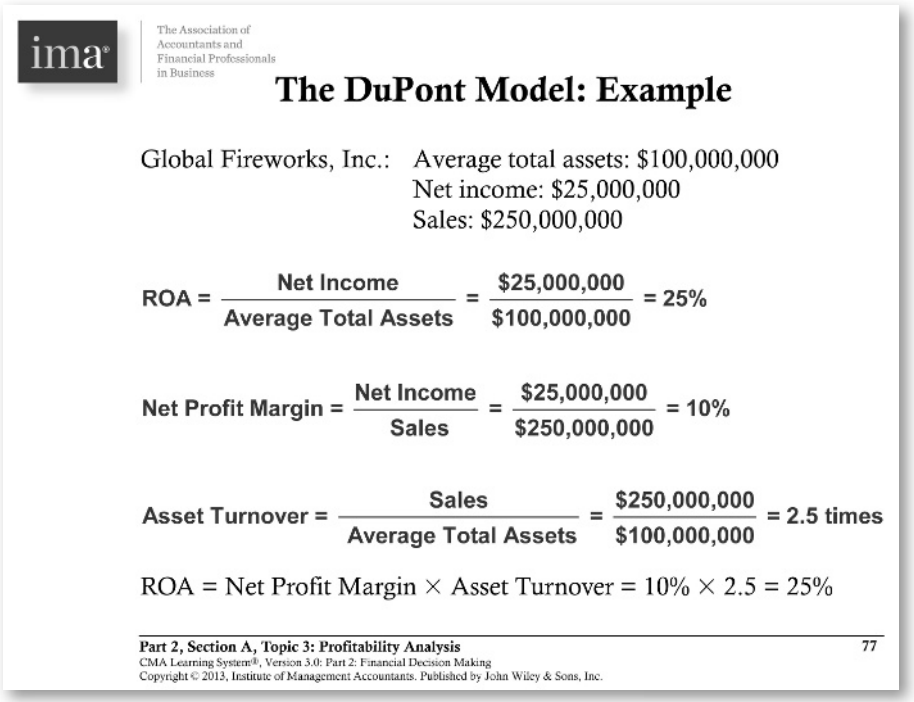


Indicate that the simple ROA equation here is the same as that shown on the previous slide.

Click to show how the DuPont model expands on the simple ROA equation by multiplying ROA by Sales / Sales. Sales is factored into both the numerator and the denominator.

Click to show how the ROA equation can be expanded into two components: Net Income / Sales (which is also how net profit margin is calculated) and Sales / Average Total Assets (which is how asset turnover is calculated). This example illustrates how ROA is a function of a company's performance related to net profit margin and asset turnover.

Explain that the DuPont model breaks down the simple formula for ROA and calculates ROA by multiplying the profit margin by asset turnover. Those two components are implied in the simple ROA calculation at the top of the slide, but they are not separately visible.



ima The Association of Accountants and Financial Professionals in Business

The DuPont Model: Example

Global Fireworks, Inc.: Average total assets: $100,000,000
Net income: $25,000,000
Sales: $250,000,000

$$\text{ROA} = \frac{\text{Net Income}}{\text{Average Total Assets}} = \frac{\$25,000,000}{\$100,000,000} = 25\%$$

$$\text{Net Profit Margin} = \frac{\text{Net Income}}{\text{Sales}} = \frac{\$25,000,000}{\$250,000,000} = 10\%$$

$$\text{Asset Turnover} = \frac{\text{Sales}}{\text{Average Total Assets}} = \frac{\$250,000,000}{\$100,000,000} = 2.5 \text{ times}$$

ROA = Net Profit Margin × Asset Turnover = 10% × 2.5 = 25%

Part 2, Section A, Topic 3: Profitability Analysis 77
CMA Learning System®, Version 3.0: Part 2: Financial Decision Making

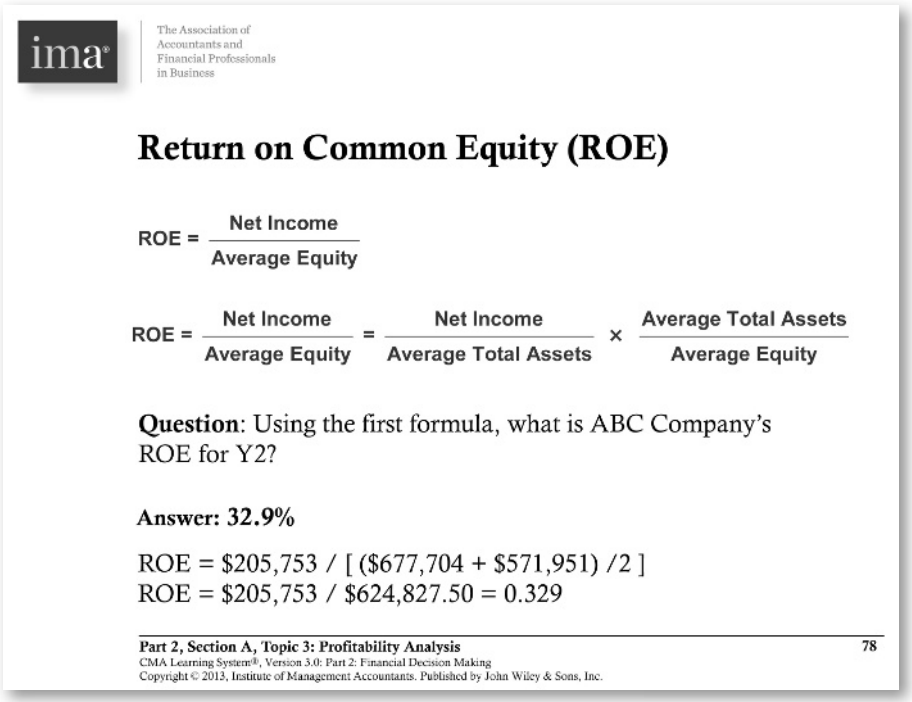
Explain that this example illustrates how ROA can be calculated either by using the simple ROA formula (net income divided by total assets) or by using the DuPont method. Either calculation yields the same result: ROA of 25% in this case.

Click to display the first calculation of ROA, using the simple ROA formula.

Click to show how the net profit margin and asset turnover can be calculated separately with the given information. ROA can be computed using the DuPont Model by multiplying net profit margin by the asset turnover. The example shows that a net profit margin of 10% combined with an asset turnover of 2.5 times results in an ROA of 25%.

Discuss the advantages of the DuPont approach:

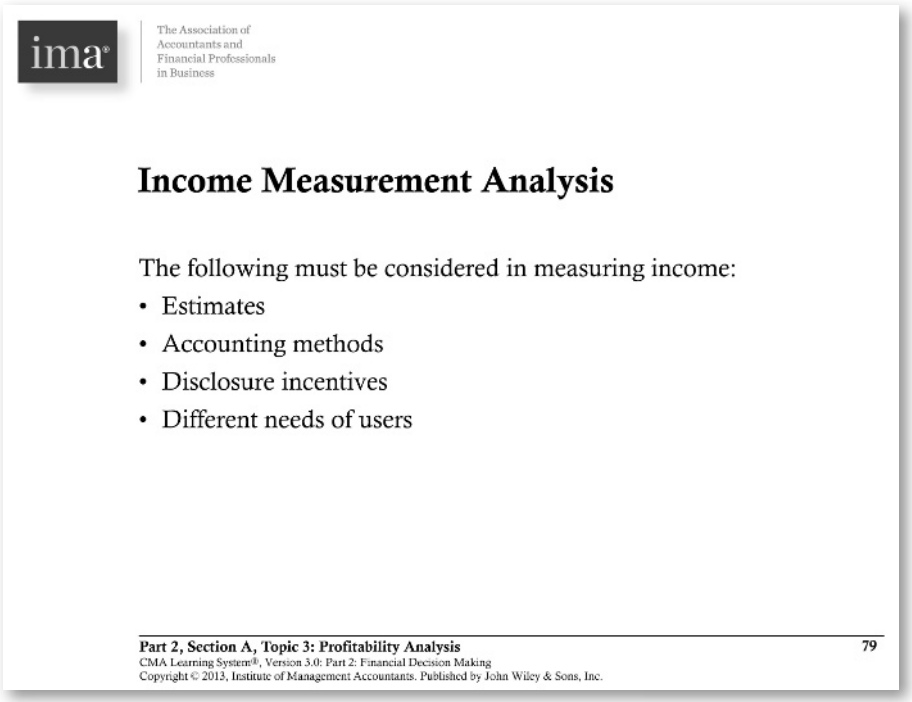
- Breaking the ROA formula into the two components of profit margin and asset turnover allows analysts to further examine causes for increases or decreases in ROA.
- The net income to sales ratio measures the company's operating performance and profitability. The asset-turnover ratio measures the efficiency of the use of assets. Both profitability and asset utilization determine the return realized on a company's assets.
- A higher ROA value indicates a more efficient use of assets to generate profits. A higher ROA (compared to the previous year) would result from increased net income, a lower asset value, or both.



Review the formulas for return on equity (ROE).
Explain that:

- ROE is the measurement of the return made on the common shareholders' equity. ROE should be greater than the cost of equity capital in a profitable firm.
- The second calculation is an alternative calculation of ROE identical to the DuPont ROE.

Allow participants time to calculate the answer to the question, then ***click*** to reveal the answer. ***Click*** again to review calculation.



ima
The Association of Accountants and Financial Professionals in Business

Income Measurement Analysis

The following must be considered in measuring income:

- Estimates
- Accounting methods
- Disclosure incentives
- Different needs of users

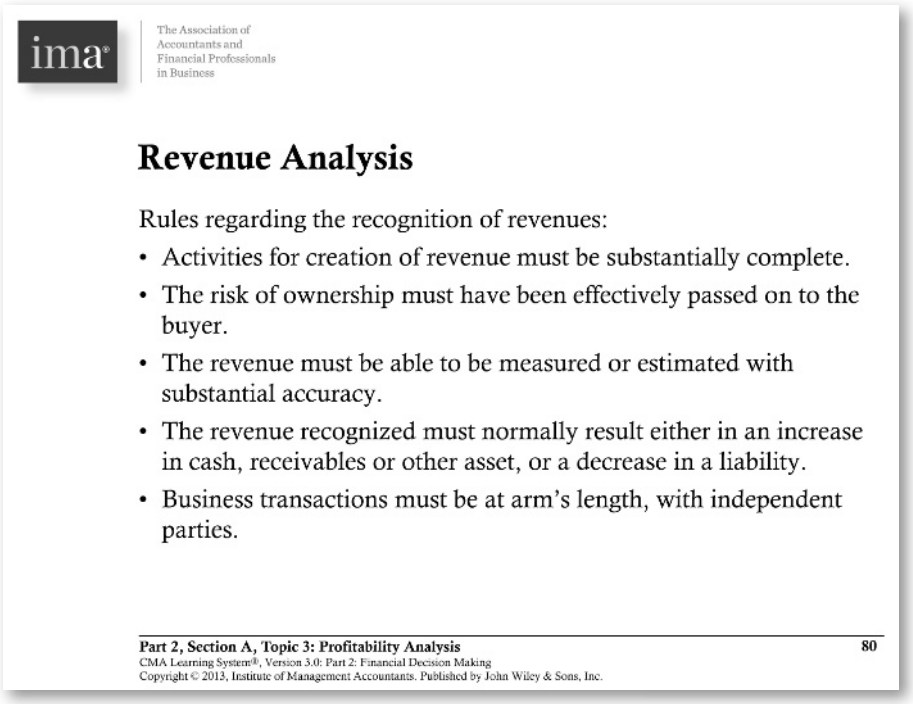
Part 2, Section A, Topic 3: Profitability Analysis 79
CMA Learning System®, Version 3.0: Part 2: Financial Decision Making

Review the considerations for income measurement analysis:

- **Estimates.** The determination of income depends on estimates regarding future events and their outcomes.
- **Accounting methods.** Analysts must understand and assess the implications that the use of one accounting principle as opposed to another has on the business's measurement of income and how it compares to other businesses.
- **Disclosure incentives.** The degree of informative disclosure about the results of operations and the asset base of segments of a business can vary widely.
- **Different needs of users.** Users of the financial statement analysis approach the analysis with different needs. The investing public is interested in analysis of the financial position of the business and its ability to earn future profits. Investors use an analysis of past trends and the current position to project the future prospects of the business.

Revenue Analysis

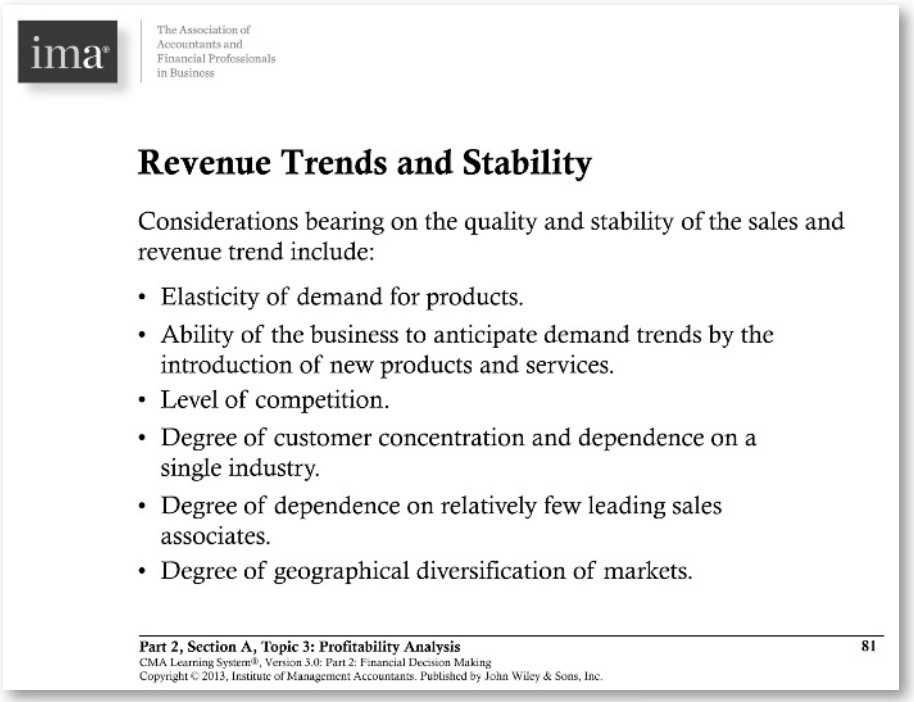
Explain that revenue is earned by a company for the sale of its products or services. Accountants must be careful to recognize revenues in a way that fairly represents the appropriate information in the financial statements.



Tell participants to read the slide and ask questions about the rules on the slide. ***Discuss*** the amount of discretion in assessing and recognizing revenue. ***Emphasize*** that there is leeway available in the use of the terms *substantial* and *reliable*.

Explain that the rules are subject to interpretation and exceptions, such as the recognition of revenues from installment sales.

Similarly, stress the arm's-length transaction with the special-purpose entities discussed earlier.



ima The Association of Accountants and Financial Professionals in Business

Revenue Trends and Stability

Considerations bearing on the quality and stability of the sales and revenue trend include:

- Elasticity of demand for products.
- Ability of the business to anticipate demand trends by the introduction of new products and services.
- Level of competition.
- Degree of customer concentration and dependence on a single industry.
- Degree of dependence on relatively few leading sales associates.
- Degree of geographical diversification of markets.

Part 2, Section A, Topic 3: Profitability Analysis 81
CMA Learning System®, Version 3.0: Part 2: Financial Decision Making

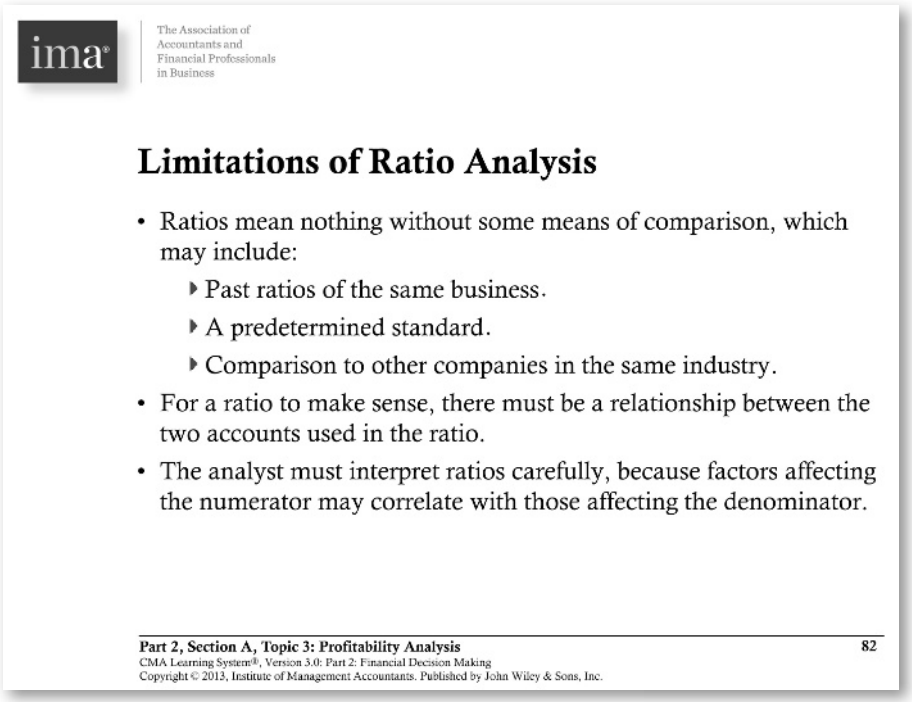
Review the considerations bearing on the quality and stability of the sales and revenue trend.

Explain that analysts, investors, and creditors also need to determine whether revenue represents the stable trend of a growing business or a nonrecurring item. Also ***discuss*** the next topic.

Cost of Sales Analysis

Explain that:

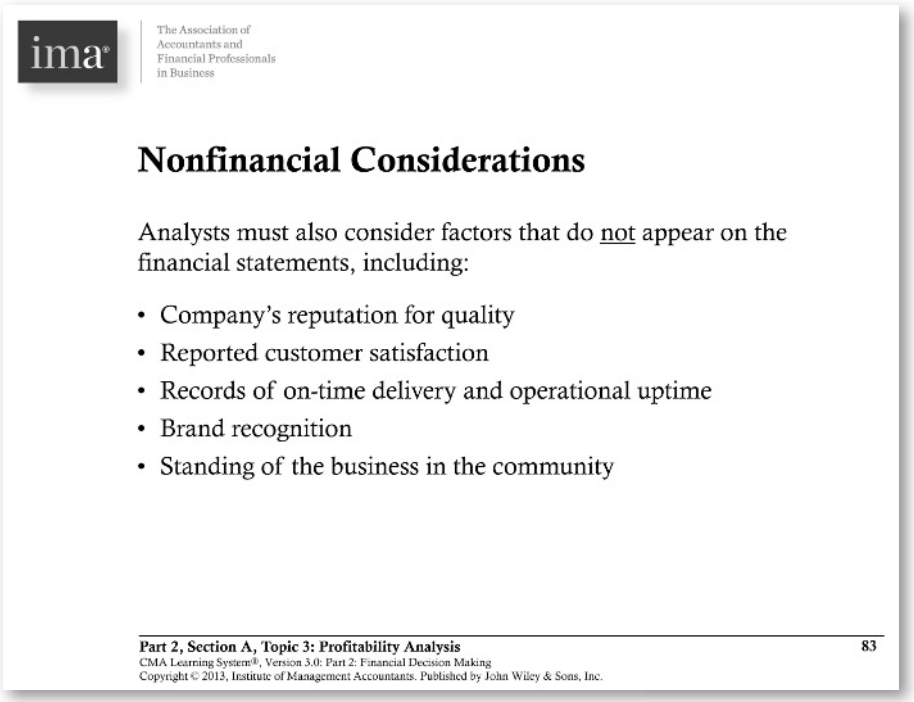
- The cost of goods sold represents a large expense for merchandising and manufacturing firms.
- *Gross profit* is the difference between net sales revenue and the cost of goods sold.
- *Gross profit margin* is a measurement of gross profit as a percentage of net sales revenues.
- Cost of sales analysis is key to analysis of a business's profitability.



Review the limitations of ratio analysis. In addition to understanding internal factors that affect ratios, analysts need to understand the status of external conditions, such as business conditions and industry position.

Other limitations of ratio analysis are listed next.

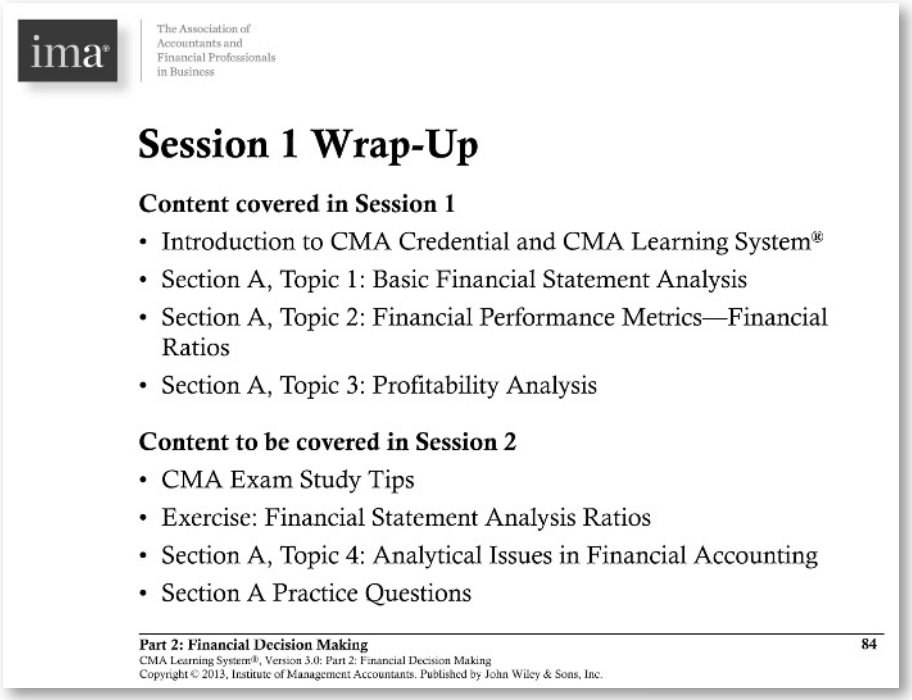
- Use of different accounting methods (depreciation, inventory valuation method, etc.) make comparability difficult.
- Seasonal fluctuations should be considered.
- Analyzing conglomerates is difficult because of lack of comparability (across firms).
- Window-dressing potential also can be a challenge. Internal accountants may be motivated to increase net income and to use decisions at their discretion (such as depreciation, etc.) to impact the results of their firm's statements.



Discuss the nonfinancial considerations that a financial analyst must consider when analyzing a company.

Conclude the discussion of this topic by asking participants if they have any questions on Topic 3: Profitability Analysis.

Session 1 Wrap-Up



Ask participants if they have questions on Session 1.

Remind participants that Session 2 introduces Topic 4, Analytical Issues in Financial Accounting, and discusses the Practice Questions for Section A.

The session begins with a discussion of study tips and ways to prepare for taking the CMA exam.

Remind participants that they should bring their self-study text to class. It will be needed for Session 3.