

ANNOUNCEMENT: The *Strategic Finance* Self-Study Quiz is a program in which financial professionals can earn CPE credits for passing a test based on what they have learned about various topics from reading certain magazine articles. Two cutting-edge topics are presented each month that will provide the basis for a useful educational experience for finance and management accounting professionals and help them enhance their skills. Topics focus on Management, Accounting, Auditing, Consulting Services, Ethics, Taxation, and much more. Most of the authors of these topics are certified financial professionals.

The Quiz program is designed around learning objectives, review questions and feedback, and a final test. Review questions and feedback are included to ensure cohesive learning. One hour of CPE credit is awarded per month. IMA is in the process of securing NASBA approval to reflect the 2004 NASBA regulation changes. CPAs who wish to use the quizzes for CPE credit must contact their local State Board of Accountancy. Your State Board of Accountancy is the final authority on whether this course satisfies its rules regarding CPE, so please check with it regarding the Quiz program. Some states assign formal sponsorship numbers, and IMA's state numbers are:

Illinois: 158-000574, New York: 000349,
Texas: 00028



The quizzes qualify for continuing education credit for CMAs and CFMs in all states.

How to Participate

1. Complete the quiz form located below.
2. To obtain maximum benefit from the quiz, we recommend that you work on the review questions first and study the feedback to your response. You will not earn CPE from passing the review questions.
3. Circle your answer for each quiz question on the final test.
4. Cut out the completed final test and order form, or copy both pages and mail or fax them to IMA with complete payment information.
5. You must be an active IMA member to participate in this program.
6. If you successfully answer 70% or more of the final test questions, you will be awarded 1 CPE credit. Partial CPE credit will not be given. A letter confirming the CPE credit will be mailed to you.

IMPORTANT NOTICE TO QUIZ PARTICIPANTS

IMA has changed its quiz offering to comply with IMA and NASBA CPE guidelines. Quiz bundles are no longer being offered, and quizzes from the June 2004 issue and previous issues of *Strategic Finance* no longer qualify for CPE. Quizzes from the July 2004 through December 2004 issues do qualify for IMA CPE. For information regarding these changes see the FAQ section on the IMA home page, www.imanet.org, or e-mail us at sfquiz@imanet.org.

STRATEGIC FINANCE SELF-STUDY QUIZ ORDER FORM

IMA Member No. _____

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Current *Strategic Finance* Quiz Participant: Yes No

New *Strategic Finance* Quiz Participant (Check the following):

Monthly – \$19.00 **Completed quiz with payment must be postmarked by December 31, 2004.**

Payment Method: Payments must be in U.S. dollars **Total: \$ _____**

Check – Make payable to: Institute of Management Accountants, Inc.

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NOTE:
Must be an active IMA member to participate.

If you are a **NEW** participant, fax to (201) 474-1632; if you are an **EXISTING** participant, fax to (201) 474-1605.



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Trading Solutions for Lowering Air Pollution (p. 40)

Field of Study: MANAGEMENT — Level: Basic

LEARNING OBJECTIVES

1. Identify what emissions trading is and how it occurs.
2. Explain the development of emissions trading and the impact on accounting and strategic planning.
3. Define the process for and impact of emissions trading.
4. List considerations for strategic planning and accounting.

REVIEW QUESTIONS

1. ET is a rapidly developing field. The initials "ET" represent:
 - a. Extra Terrestrials, as in those transported in UFOs.
 - b. European Trade, measured by volume of outflow of goods and services to the European Union.
 - c. Equal Time, regulated by the Federal Elections Commission to ensure presidential candidates get equal exposure in the media during campaigns.
 - d. Emissions Trading, involving sale of permits to emit specified quantities of pollutants.
2. Active markets for trading carbon rights have been:
 - a. Active since the 1960s.
 - b. Projected to have at least a \$9 billion annual volume.
 - c. The only markets available.
 - d. Prohibited by the Kyoto protocols.
3. Sulfur dioxide emissions have been:
 - a. Banned from trading since 1972.
 - b. Actively traded since 1972.
 - c. Traded at higher than expected prices.
 - d. Traded at lower than expected prices.
4. Title IV of the 1990 Clean Air Act:
 - a. Required emissions trading on the NYSE.
 - b. Established a trading approach for sulfur dioxide emissions.
 - c. Has failed to achieve its objectives in trading sulfur dioxide emissions.
 - d. Prohibited public trading of emission rights.
5. Title IV of the 1990 Clean Air Act:
 - a. Has resulted in a savings of \$1 billion for utilities.
 - b. Projects an estimated \$50 billion in benefits from cleaner air by 2010.
 - c. Has resulted in reduction of aggregate compliance costs by up to \$13 billion over the past 20 years.
 - d. All of the above.

Safety Inventory Analysis: Why and How (p. 26)

Field of Study: ACCOUNTING — Level: Advanced

LEARNING OBJECTIVES

1. Describe the primary roles of safety inventory.
2. Describe three demand-centric techniques traditionally used for determining desired safety inventory levels.
3. Describe shortcomings and common misunderstanding of the traditional methods.
4. Describe a new inventory-centric approach based on computing desired safety inventory levels.

REVIEW QUESTIONS

1. The main role of safety inventory is to:
 - a. Provide a buffer against variation in demand.
 - b. Enable the company to realize operational efficiencies and economies of scale.
 - c. Buffer against inventory uncertainty.
 - d. Protect against price fluctuations.
2. The most common techniques for determining safety inventory focus primarily on:
 - a. Understanding demand uncertainty.
 - b. Understanding demand variability.
 - c. Minimizing total costs.
 - d. Minimizing inventory holding costs.
3. Analyzing inventory uncertainty for determining safety inventory levels:
 - a. Is equivalent to using demand uncertainty to determine safety inventory levels.
 - b. Is the basis of many common safety inventory analysis tools.
 - c. Is worse than using demand uncertainty to determine safety inventory levels.
 - d. Is the ideal approach to determine safety inventory levels.
4. Which of the following is likely to have the greatest impact on safety inventory requirements by reducing uncertainty?
 - a. Sharing forecasts with suppliers.
 - b. Sharing forecasts with customers.
 - c. Using promotions to reduce seasonality.
 - d. Centralizing inventory in fewer locations.
5. Safety inventory techniques based on analyzing forecast error:
 - a. Should focus on all forecast errors.
 - b. Should focus only on errors arising from cases where forecast demand exceeded actual demand.
 - c. Should focus only on errors arising from cases where actual demand exceeded forecast demand.
 - d. Should focus on the magnitude of all forecast errors.

Trading Solutions for Lowering Air Pollution (p. 40)**Field of Study: MANAGEMENT — Level: Basic**

1. a. Incorrect. In this article, the initials “ET” represent “Emissions Trading.”
b. Incorrect. In this article, the initials “ET” represent “Emissions Trading.”
c. Incorrect. In this article, the initials “ET” represent “Emissions Trading.”
d. Correct. In this article, the initials “ET” represent “Emissions Trading.”
2. a. Incorrect. Active trading in carbon rights wasn’t available in the 1960s.
b. Correct. The *Financial Times* is reported to estimate the value of a new global commodity market in carbon trading at \$9 billion annually, while other studies have estimated \$18 billion to \$36 billion annually.
c. Incorrect. There are reported to be markets available for a variety of pollutants, including sulfur dioxide, nitrogen oxide, particulate matter, volatile organic compounds, and wastewater.
d. Incorrect. The Kyoto protocols do not prohibit active markets in the trade of carbon emission rights.
3. a. Incorrect. Sulfur dioxide emissions haven’t been banned from trading.
b. Incorrect. Sulfur dioxide emissions have been traded on the Chicago Board of Trade since 1990.
c. Incorrect. Sulfur dioxide emissions have traded at lower, not higher, than expected levels.
d. Correct. Sulfur dioxide emissions have traded at lower than expected levels.
4. a. Incorrect. The Act did not require trading on a specific exchange.
b. Correct. The Act Amendments established a trading approach for sulfur dioxide emissions.
c. Incorrect. By achieving greater than expected reductions at much less than expected costs, the Act achieved its objective.
d. Incorrect. Rather than prohibiting public trading of emission rights, the Act enabled such trading.
5. a. Incorrect. In addition to saving utilities \$1 billion, it has brought estimated benefits of \$50 billion (by the year 2010) and reduced aggregate compliance costs by as much as \$13 billion (over the past 20 years).
b. Incorrect. In addition to bringing estimated benefits of \$50 billion (by the year 2010), it has saved utilities \$1 billion and reduced aggregate compliance costs by as much as \$13 billion (over the past 20 years).
c. Incorrect. As well as reducing aggregate compliance costs over the past 20 years, it has saved utilities \$1 billion and brought estimated benefits of \$50 billion by 2010.
d. Correct. Observers estimate the savings for utilities at \$1 billion annually, the EPA estimates that compensating benefits of cleaner air may reach \$50 billion by

2010, and Cantor Fitzgerald notes economists’ estimates that over the last 20 years compliance costs have been reduced by up to \$13 billion over traditional command and control costs.

Safety Inventory Analysis: Why and How (p. 26)**Field of Study: ACCOUNTING — Level: Advanced**

1. a. Incorrect. Demand variation doesn’t imply inventory (or even demand) uncertainty directly.
b. Incorrect. That is the role of cycle inventory.
c. Correct. The role of safety inventory is to make sure adequate inventory is available even though actual inventory level will differ from planned levels.
d. Incorrect. Safety inventory focuses on availability, not cost.
2. a. Correct. The most common techniques focus on understanding demand uncertainty since it is a significant contributor to inventory uncertainty.
b. Incorrect. Early techniques focused on demand variability, but the trend has been to focus more on demand uncertainty.
c. Incorrect. Safety inventory focuses on availability, not cost.
d. Incorrect. Safety inventory focuses on availability, not cost.
3. a. Incorrect. Demand uncertainty is one component of inventory uncertainty. Supply uncertainty is another.
b. Incorrect. Most safety inventory analyses focus on demand uncertainty.
c. Incorrect. Inventory uncertainty addresses the true role of safety inventory—more so than demand uncertainty.
d. Correct. It is the ideal approach because it addresses the true role of safety inventory.
4. a. Incorrect. This will likely improve supplier performance and may have a low to moderate effect on safety inventory requirements.
b. Correct. Collaborating with customers on their demand forecasts is one of the best ways to reduce demand uncertainty.
c. Incorrect. This would reduce demand variability—without a direct impact on uncertainty.
d. Incorrect. This would likely have a significant effect on required safety inventory requirements but it doesn’t reduce uncertainty.
5. a. Incorrect. They should focus only on errors that could have negatively impacted the desired service level.
b. Incorrect. There isn’t a negative impact on desired service levels when forecast demand exceeds actual demand.
c. Correct. These are the only errors that negatively impact service levels.
d. Incorrect. They should focus only on errors that could have negatively impacted the desired service level.

Please circle your answer for each question

Trading Solutions for Lowering Air Pollution (p. 40)

Field of Study: MANAGEMENT — Level: Basic

1. California's RECLAIM program:
 - a. Began in 1964.
 - b. Only includes any firm emitting four or more tons of sulfur dioxide per year.
 - c. Has a goal of reducing nitrogen oxides and sulfur oxides emissions by 75% and 61%, respectively.
 - d. Increased compliance costs by \$60 million annually.
2. Common to all the different emissions trading programs are:
 - a. Issues of initial allocation of tradable permits and capping the number of permits issued, with the cap being reduced in subsequent years.
 - b. Avoiding the prohibition against open auction of permits and protecting profits of established polluting industries.
 - c. Methods to increase emissions without regard to permit acquisition due to lack of requirements to monitor emissions.
 - d. The cost of emission rights, which is fixed in order to ensure all emissions are reduced uniformly.
3. Conditions under which tradable permits are likely to work well do not include:
 - a. A wide range of costs to firms in abating pollution.
 - b. The extent to which pollutants mix in the environment.
 - c. A great deal of uncertainty about marginal costs and marginal benefits of abatement.
 - d. Conditions where transaction costs are high, as in the sulfur dioxide program.
4. Strategic opportunities created by emissions trading markets include:
 - a. Using emissions trading to reduce risks of lower operating costs.
 - b. Increased use of specialized services to verify regulatory compliance and to value intangible assets.
 - c. Need for insurance against nondelivery of purchased emission rights.
 - d. Both b and c.
5. For firms acquiring permits, accounting issues related to emissions trading market functions do not include:
 - a. Classification of emissions permits.
 - b. Valuation and carrying amounts for permits.
 - c. Counterparty risk.
 - d. Exchange market pricing.

Safety Inventory Analysis: Why and How (p. 26)

Field of Study: ACCOUNTING — Level: Advanced

1. Assume the target is to achieve a service level of 95% demand fill rate on a monthly basis and that supply is certain. Using the forecast-error technique will likely:
 - a. Underestimate the safety inventory requirement since it is trying to cover 95% of the error.
 - b. Overestimate the safety inventory requirement since it is trying to cover 95% of the error.
 - c. Accurately estimate the safety inventory requirement.
 - d. Overestimate the safety inventory requirement since the forecast-error technique addresses a 100% coverage rate service-level measure.
2. Demand-variation technique would likely perform well in:
 - a. Consistent demand year-over-year that is subject to seasonal variations.
 - b. Demand that grows on a consistent basis year-over-year and is not subject to seasonal variations.
 - c. Demand that is stable year-over-year and is not subject to seasonal variations.
 - d. Demand that declines on a consistent basis year-over-year and is not subject to seasonal variations.
3. The demand coverage approach is preferred because:
 - a. It uses advanced statistical techniques.
 - b. It explicitly accounts for the interdependence between supply and demand uncertainty.
 - c. It's motivated by analyzing planned vs. actual inventory levels.
 - d. It focuses on achieving 100% demand coverage.
 - e. It's easier to apply.
4. Which of the following service-level measures would result in the lowest safety inventory requirement? (Assume a 95% target, measured monthly, for each.)
 - a. Line fill rate.
 - b. Order fill rate.
 - c. Demand fill rate.
 - d. 100% coverage rate.
5. If future supply and demand are known with certainty:
 - a. Safety inventory requirements would be zero.
 - b. Safety inventory requirements would be small to allow for bulk purchasing.
 - c. Safety inventory requirements would be small to allow for manufacturing economies.
 - d. Safety inventory would be required to cover the variability of supply and demand.

I have read the articles in *Strategic Finance* upon which the questions are based and have personally prepared the answers without the assistance of any other person.

Signature _____

Date _____

Print Name _____

Member Number _____