

Question 1

L2QM-PQ1201-1511

LOS: LOS-6311

Lesson Reference: Lesson 1: Simulations

Difficulty: medium

Consider the following statements:

Statement 1: The larger the number of probabilistic input variables, the greater the number of simulations required.

Statement 2: The wider the range of potential outcomes for the input variable, the greater the number of simulations required.

Which of the following is *most* likely?

- ☐ Only Statement 1 is incorrect.
- ☐ Only Statement 2 is incorrect.
- ☒ Both statements are correct.

Rationale

This Answer is Correct

Both statements are correct. Generally speaking:

- The larger the number of probabilistic input variables, the greater the number of simulations required.
- The wider the variety of distributions used in an analysis, the greater the number of simulations required.
- The wider the range of potential outcomes for the input variable, the greater the number of simulations required.

Question 2

L2QM-PQ1205-1511

LOS: LOS-6316

LOS: LOS-6317

Lesson Reference: Lesson 2: An Overall Assessment of Probabilistic Risk Assessment Approaches

Difficulty: medium

Consider the following statements:

Statement 1: If the standard deviation is used to measure risk, the risk-free rate should be used as the discount rate in the simulation.

Statement 2: In scenario analysis and simulations, the sum of the probabilities of outcomes considered equals one.

Which of the following is *most* likely?

- ☒ Only Statement 1 is correct.
- ☐ Only Statement 2 is correct.
- ☐ Both statements are incorrect.

Rationale

This Answer is Correct

When we use the standard deviation of the output variable (obtained from the results of a simulation) as a measure of risk and use this measure to make decisions, we should run the simulation using the risk-free rate as the discount rate, and then evaluate risk-return tradeoffs of various investment opportunities.

In scenario analysis, we generally consider what we believe to be the most likely scenarios and ignore all other scenarios. Therefore, the sum of the probabilities of the scenarios considered can be less than one. The sum of the probabilities of outcomes in decision trees and simulations equals one as all possible outcomes are considered.

Question 3

L2QM-PQ1202-1511

LOS: LOS-6317

Lesson Reference: Lesson 2: An Overall Assessment of Probabilistic Risk Assessment Approaches

Difficulty: medium

Which of the following probabilistic approaches is *most* likely used to evaluate the impact of continuous risk?

- ☐ Scenario analysis.
- ☐ Decision trees.
- ☒ Simulations.

Rationale

✓ This Answer is Correct

Scenario analysis and decision trees are used to evaluate the impact of **discrete** risk. Simulations are used to evaluate the impact of **continuous** risk.

Question 4

L2QM-PQ1203-1511

LOS: LOS-6311

Lesson Reference: Lesson 1: Simulations

Difficulty: medium

Which of the following is typically the *most* difficult step in running a simulation?

- ☐ Determining the probabilistic variables.
- ☒ Defining probability distributions for probabilistic variables.
- ☐ Checking for correlation across variables.

Rationale

This Answer is Correct

Defining probability distributions for probabilistic variables is the most important and most difficult step in any simulation exercise.