



Portfolio Management



Introduction to Risk Management



Exam Focus

- Risk management framework
- Risk governance
- Risk tolerance
- Risk budgeting
- Financial and nonfinancial risks
- Risk measures

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Risk Management Process

- Identify organization's risk tolerance
- Identify and measure organization's risk
- Modify and monitor these risks

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Risk Management: Example

Which of the following is *not* a goal of risk management?

- A. Measuring risk exposures.
- B. Minimizing exposure to risk.
- C. Defining the level of risk appetite.

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Risk Management: Example

Which element of a risk management framework sets the overall context for risk management in an organization?

- A. Governance.
- B. Risk infrastructure.
- C. Policies and processes.

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Risk Management Framework

- Establishing processes and policies for risk governance
- Determining the organization's risk tolerance
- Identifying and measuring existing risks
- Managing and mitigating risks to achieve the optimal bundle of risks
- Monitoring risk exposures over time
- Communicating across the organization
- Performing strategic risk analysis

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Risk Governance: Example

Which of the following approaches is *most* consistent with an enterprise view of risk governance?

- A. Separate strategic planning processes for each part of the enterprise.
- B. Considering an organization's risk tolerance when developing its asset allocation.
- C. Trying to achieve the highest possible risk-adjusted return on a company's pension fund's assets.

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Risk Governance: Example

Who would be the *least* appropriate for controlling the risk management function in a large organization?

- A. Chief risk officer.
- B. Chief financial officer.
- C. Risk management committee.

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Financial Risks

Credit risk

Liquidity risk

Market risk

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Nonfinancial Risks



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Financial and Nonfinancial Risk: Example

Which of the following *best* describes an example of interactions among risks?

- A. A stock in Russia declines at the same time as a stock in Japan declines.
- B. Political events cause a decline in economic conditions and an increase in credit spreads.
- C. A market decline makes a derivative counterparty less creditworthy while causing it to owe more money on that derivative contract.

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Financial Risk: Example

Which of the following *best* describes a financial risk?

- A. The risk of an increase in interest rates.
- B. The risk that regulations will make a transaction illegal.
- C. The risk of an individual trading without limits or controls.

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Measuring Risk Exposures

- Standard deviation
- Beta
- Duration
- Derivative risks
- Value at risk (VaR)
- Conditional VaR (CVaR)

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Measuring and Modifying Risk: Example

Which of the following concepts directly measures the risk of derivatives?

- A. Probability.
- B. Delta and gamma.
- C. Beta and standard deviation.

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Risk Assessment Methods

- Stress testing
- Scenario analysis

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Measuring and Modifying Risk: Example

Which of the following are methods commonly used to supplement VaR to measure the risk of extreme events?

- A. Standard deviation.
- B. Loss given default.
- C. Scenario analysis and stress testing.

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Risk Modification

- Retain optimal mix of risks for organization
 - Prevent or avoid
 - Accept
 - Transfer
 - Shift

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Solutions

Risk Management: Example

Which of the following is *not* a goal of risk management?

- A. Measuring risk exposures.
- ☒ B. Minimizing exposure to risk.
- C. Defining the level of risk appetite.

The definition of risk management includes both defining the level of risk desired and measuring the level of risk taken. Risk management means taking risks actively and in the best, most value-added way possible and is not about minimizing risks.

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Risk Management: Example

Which element of a risk management framework sets the overall context for risk management in an organization?

- ☒ A. Governance.
- ☐ B. Risk infrastructure.
- ☐ C. Policies and processes.

Governance is the element of the risk management framework that is the top-level foundation for risk management. Although policies, procedures, and infrastructure are necessary to implement a risk management framework, it is governance that provides the overall context for an organization's risk management.

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Risk Governance: Example

Which of the following approaches is *most* consistent with an enterprise view of risk governance?

- ☐ A. Separate strategic planning processes for each part of the enterprise.
- ☒ B. Considering an organization's risk tolerance when developing its asset allocation.
- ☐ C. Trying to achieve the highest possible risk-adjusted return on a company's pension fund's assets.

The enterprise view is characterized by a focus on the organization as a whole—its goals, value, and risk tolerance. It is not about strategies or risks at the individual business line level.

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Risk Governance: Example

Who would be the *least* appropriate for controlling the risk management function in a large organization?

- A. Chief risk officer.
- ☒ B. Chief financial officer.
- C. Risk management committee.

A chief risk officer or a risk management committee is an individual or group that specializes in risk management. A chief financial officer may have considerable knowledge of risk management, may supervise a CRO, and would likely have some involvement in a risk management committee, but a CFO has broader responsibilities and cannot provide the specialization and attention to risk management that is necessary in a large organization.

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Financial and Nonfinancial Risk: Example

Which of the following *best* describes an example of interactions among risks?

- A. A stock in Russia declines at the same time as a stock in Japan declines.
- B. Political events cause a decline in economic conditions and an increase in credit spreads.
- ☒ C. A market decline makes a derivative counterparty less creditworthy while causing it to owe more money on that derivative contract.

Though most risks are likely to be interconnected in some way, in some cases, the risks an organization is exposed to will interact in such a way that a loss (or gain) in one exposure will lead directly to a loss in a different exposure as well, such as with many counterparty contracts. Conditions in A and B are much more directly linked in that market participants fully expect what follows—for example, in B, an outbreak of war in one region of the world could cause widespread uncertainty; a flight to quality, such as to government-backed securities; and a widening in spreads for credit-risky securities. In C, in contrast, the reduction in creditworthiness following the market decline may be expected, but owing more money on an already existing contract as a result comes from the interaction of risks.

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Financial Risk: Example

Which of the following *best* describes a financial risk?

- ☒ A. The risk of an increase in interest rates.
- ☐ B. The risk that regulations will make a transaction illegal.
- ☐ C. The risk of an individual trading without limits or controls.

This risk arises from the financial markets.

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Measuring and Modifying Risk: Example

Which of the following concepts directly measures the risk of derivatives?

- ☐ A. Probability.
- ☒ B. Delta and gamma.
- ☐ C. Beta and standard deviation.

Delta and gamma are measures of the movement in an option price, given a movement in the underlying. The other answers can reflect some elements of derivatives risk, but they are not direct measures of the risk.

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Measuring and Modifying Risk: Example

Which of the following are methods commonly used to supplement VaR to measure the risk of extreme events?

- A. Standard deviation.
- B. Loss given default.
- ☒ C. Scenario analysis and stress testing.

Scenario analysis and stress testing both examine the performance of a portfolio subject to extreme events. The other two answers are metrics used in portfolio analysis, but they are not typically associated with extreme events.

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