

MOCK EXAM 1 - QUESTIONS

Question 1

An investor purchases \$1 million of Canadian bonds and is concerned about the bonds defaulting. The investor wishes to transfer this default risk to a third party, so he enters a fixed credit default swap (CDS) spread agreement with First Bank. Assume that the recovery rate is zero, and that there is no accrued interest in the event that Canada defaults. Which of the following statements about the CDS between the investor and First Bank is correct?

- A)** A paper loss occurs for the investor if the correlation risk between First Bank and Canada increases because the value of the CDS spread will increase.
- B)** The fixed CDS spread is valued based on the default probability of the reference asset and the joint default correlation of First Bank and Canada.
- C)** The investor has wrong-way risk if there is negative correlation risk between First Bank and Canada.
- D)** Increasing correlation risk decreases the probability that the worst-case scenario occurs.

Question 2

A financial advisor is educating his client about rating migrations. The client wishes to put money only into investment-grade bonds. Which of the following statements can the advisor make, using S&P's one-year rating migration matrix as a source?

- A)** Bonds that initially rate investment grade will remain investment grade until they mature.
- B)** Investment-grade bonds will generally provide a higher yield to investors than non-investment-grade bonds.
- C)** If the initial rating is investment grade, there is about a 50% chance that its rating after one year will stay the same.
- D)** Investment-grade bonds are more likely than non-investment-grade bonds to maintain their initial rating after one year.

Question 3

Rigland Bank, Ltd., calculated a business indicator (BI) of €900 million in FY20X5. The chief financial officer (CFO) of the bank, using pro forma financials, forecasts a BI of €1.1 billion in FY20X6. He then examines the various BI buckets in the table below for the purposes of calculating the standardized approach for operational risk.

Bucket	BI Range	BI Component
1	€0 billion–€1 billion	$0.12 \times \text{BI}$
2	€1 billion–€30 billion	$0.15 \times \text{BI}$
3	€30 billion– $+\infty$	$0.18 \times \text{BI}$

Using this information, the change in Rigland's BI component from FY20X5 to FY20X6 will be closest to:

- A) €27 million.
- B) €18 million.
- C) €35 million.
- D) €200 million.

Question 4

An investment committee is evaluating two private credit vehicles for a long-term allocation. Vehicle A is a traditional private credit fund (PCF) with a strict 8-year lock-up period. Vehicle B is a business development company (BDC) that is publicly listed and marketed to retail investors with open-end features allowing for earlier redemptions. The committee's risk officer warns that while Vehicle B offers accessibility, its changing investor base introduces a structural vulnerability traditionally associated with commercial banks. If the retail investor base in Vehicle B continues to expand, what specific risk is this vehicle most likely to encounter?

- A) Credit risk.
- B) Solvency risk.
- C) Concentration risk.
- D) Asset-liability mismatch.

Question 5

It is March 1, and the 10-year on-the-run (OTR) Treasury bond is trading at a special rate of 0.80%. The general collateral (GC) rate is 0.95%. A trader is considering lending the bond at the special rate and using the cash to lend out at the higher GC rate. The trader expects the bond to trade at GC rates after July 31 (i.e., in 153 days from today). Given this information, the value of lending \$100 of cash is closest to:

- A) \$0.0638.
- B) \$0.1500.
- C) \$0.3400.
- D) \$0.6375.

Question 6

The VaR percentages (i.e., risk percentages) at the 95% confidence level for bonds with maturities ranging from one year to five years are as follows:

Maturity	VaR %
1	0.4696
2	0.9868
3	1.4841
4	1.9714
5	2.4261

A bond portfolio consists of a \$100 million bond maturing in two years and a \$100 million bond maturing in four years. The duration of the bond portfolio is 2.8 years. What is the VaR of this bond portfolio using the duration VaR mapping method?

- A) \$1.484 million.
- B) \$1.974 million.
- C) \$2.769 million.
- D) \$2.968 million.

Question 7

A credit analyst is reviewing a firm that recently defaulted. The analyst classifies the firm's situation as having "average leverage combined with weak business operations." In this category of distress, the business model is often flawed, leading to significant declines in revenues and margins. Based on the typical outcomes for this specific distress classification, which of the following recovery profiles should the analyst anticipate?

- A) Revenue recovery occurs within 3 years.
- B) Cash flows stabilize at 10% below the default point.
- C) Cash flows drop more than 50% below the default point.
- D) Default is strictly triggered by a cyclical economic downturn.

Question 8

A firm has determined that the risk-adjusted return on capital (RAROC) for a particular project is 14%. To evaluate whether the firm should accept the project, an analyst determines that the firm's beta is 1.3, the expected market return is 13%, and the risk-free interest rate is 5.5%. If the analyst uses the adjusted RAROC (ARAROC) methodology to make an accept/reject decision, should the project be accepted?

- A) No, because the computed ARAROC is approximately 1% less than the risk-free rate.
- B) No, because the RAROC is 1.25% less than the return predicted by the capital asset pricing model (CAPM).
- C) Yes, because the computed ARAROC is approximately 1% more than the risk-free rate.
- D) Yes, because the ARAROC is approximately 4% more than the return predicted by the CAPM.

Question 9

Following the recommendations of the Basel Committee on Banking Supervision (BCBS), a large bank reports the cost of contingent liquidity risk. Suppose the bank supplies a line of credit of \$30 million that currently has a balance of \$10 million outstanding. The bank determines that there is a 75% probability the customer will use the \$20 million remaining line of credit. The bank's cost of funding for the liquidity cushion is 12 bps. The bank charges contingent commitments based on the probability of a drawdown. What is the charge for liquidity on this line of credit?

- A) \$12,000.
- B) \$15,500.
- C) \$18,000.
- D) \$23,400.

Question 10

A risk manager decomposes the return on a bond into components to estimate the expected return for a risk-averse investor. Which of the following return components primarily reflects the compensation for risk associated with future interest rate volatility?

- A) The expected return is computed based on the risk-free rate.
- B) The forward rate that compensates for maturity-related risks.
- C) The risk premium demanded for bearing interest rate uncertainty.
- D) The convexity adjustment for the nonlinear price-yield relationship.

Question 11

Which of the following statements best describes the "region of stability" in the context of monetary and fiscal policy interactions?

- A) A range where fiscal deficits do not lead to inflationary pressures, maintaining economic equilibrium.
- B) A set of conditions where monetary and fiscal policies reinforce each other without creating macroeconomic distortions.
- C) A policy stance where central banks and governments coordinate to ensure financial markets operate with minimal volatility.
- D) A scenario where inflation and interest rates remain within a predetermined band, preventing excessive exchange rate fluctuations.

Question 12

An event-driven fund manager is analyzing a recently announced stock-for-stock merger. The manager believes the deal has a high probability of closing and intends to capture the arbitrage spread while hedging market exposure. Which of the following statements accurately describes the appropriate trade structure and the associated risk profile for this merger arbitrage strategy?

- A)** Buy the target company's stock and short the acquiring company's stock; the risk profile is symmetric because market risk is eliminated.
- B)** Buy the target company's stock and short the acquiring company's stock; the potential losses from a failed deal could far exceed the potential gains.
- C)** Buy the acquiring company's stock and short the target company's stock; the maximum loss is limited to the transaction costs and dividends paid.
- D)** Buy the acquiring company's stock and short the target company's stock; the risk is minimal because the downside is limited to the acquisition premium.

Question 13

A risk manager is examining the use of various tools to assess the probability and severity of operational risk at a financial institution. In a potential implementation of one of the tools, the manager wants to initially minimize costs and, therefore, does not want to perform any direct analysis of inherent risk. Which of the following tools is most appropriate for the manager to use?

- A)** Risk and control assessment (RCA).
- B)** Risk and control self-assessment (RCSA).
- C)** Residual risk self-assessment (RRSA).
- D)** Risk and control self-assessment (RCSA) matrix.

Question 14

A risk manager is concerned that his value at risk (VaR) model is complicated by intraday changes as well as profit-and-loss factors. Which of the following backtesting techniques is most likely to mitigate these issues? Backtest the VaR model using:

- A)** shorter time periods, such as one year as opposed to five years.
- B)** daily holding period returns.
- C)** a higher confidence level, such as 99%.
- D)** a lower confidence level, such as 95%.

Question 15

An analyst has the following information pertaining to Portfolio X:

Risk-free rate = 2%.

Actual portfolio return = 10%.

Relevant benchmark return = 8%.

Portfolio standard deviation = 5%.

Observed tracking error = 3%.

Which of the following statements regarding Portfolio X is correct?

- A) The information ratio is 0.67.
- B) The information ratio is 1.60.
- C) The Sharpe ratio is 0.40.
- D) The Sharpe ratio is 2.67.

Question 16

A corporate bond with a face value of \$1,000 has a remaining maturity of four years. The current value of the bond is calculated to be \$875. Assuming an approximate hazard rate of 3% and a recovery rate (RR) equal to 75%, what is the credit spread for this bond?

- A) 66 bps.
- B) 75 bps.
- C) 225 bps.
- D) 263 bps.

Question 17

Regarding term structure models, there are two lognormal models of importance: lognormal with deterministic drift and lognormal with mean reversion. Which of the following statements regarding the lognormal model with drift is correct?

- A) The short-term rate follows a normal distribution.
- B) The exponential of the short-term rate follows a normal distribution.
- C) The natural log of the short-term rate follows a normal distribution.
- D) The natural log of the short-term rate follows a bivariate normal distribution.