Lesson 4.3 Quiz: Institutional Risk Management

Module 4: The Risk Problem

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Digital Finance — BSc Course (v2026.05)

Q1: Three Pillars of Basel

Which of the following is **not** one of the three pillars of the Basel framework?

A. Deposit insurance schemes
B. Minimum capital requirements
C. Supervisory review process
D. Market discipline (disclosure)

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Q2: Purpose of Risk Weights

What is the primary purpose of **risk weights** in the Basel framework?

- (A) To calculate the bank's profit margin on each asset
- (B) To determine the interest rate a bank charges on loans
- (C) To convert gross exposures into risk-adjusted equivalents for capital calculation
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Q3: CET1 Capital

Which of the following **best describes** Common Equity Tier 1 (CET1) capital?

- (A) Subordinated debt with a maturity greater than 5 years
- (B) Contingent convertible bonds (CoCos) that convert to equity in a crisis
- (C) All forms of regulatory capital combined (Tier 1 + Tier 2)
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Q4: Expected vs. Unexpected Loss

In a bank's credit portfolio, **expected losses** are covered by which mechanism?

A. The capital conservation buffer
B. Government bailout funds
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Q5: LCR Purpose

The **Liquidity Coverage Ratio (LCR)** is designed to ensure that a bank can:

A. Avoid all credit losses for one quarter
B. Survive a 30-day severe liquidity stress scenario
C. Maintain a leverage ratio above 3%
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Q6: Operational Risk Definition

Under Basel, which of the following is classified as **operational risk**?

- (A) A borrower defaults on a corporate loan
- (B) The bank's bond portfolio loses value due to rising interest rates
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Q7: RWA Calculation – Basic

A bank holds $50M in government bonds (0% risk weight) and $200M in corporate loans (100% risk weight). What is the bank's total RWA?

- A $50M
- B $250M
- C $125M
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Q8: CAR Calculation

A bank has CET1 capital of $9M, AT1 of $2M, Tier 2 of $3M, and total RWA of $140M. What is the Capital Adequacy Ratio?

- A. 7.86%
- B. 10.00%
- C. 6.43%
- D. 14.00%

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Q9: Capital Required for a Mortgage Portfolio

A bank originates \$500M in residential mortgages (risk weight: 35%). Under the 8% minimum CAR, how much **total regulatory capital** must the bank hold against this portfolio?

- A \$175.0M
- B \$17.5M
- C \$14.0M
- D \$40.0M

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Q10: Expected Loss Calculation

A loan has a Probability of Default (PD) of 3%, Loss Given Default (LGD) of 45%, and Exposure at Default (EAD) of \$2M. What is the Expected Loss?

- (A) \$90,000
- (B) \$60,000
- (C) \$13,500
- (D) \$27,000

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Q11: LCR Calculation

A bank holds \$60M in Level 1 HQLA and \$20M in Level 2A assets (15% haircut). Its 30-day net cash outflows are \$70M. What is the LCR?

- A 110.0%
- B 100.0%
- C 114.3%
- D 85.7%

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Q12: Impact of Asset Mix on RWA

Bank A holds $1B entirely in government bonds (0% RW). Bank B holds $1B entirely in corporate loans (100% RW). Both have $80M in capital. Which statement is correct?

- **A** Bank B has a higher CAR than Bank A
- **B** Neither bank meets the minimum CAR
- **C** Bank A has a higher CAR than Bank B
- **D** Both banks have the same CAR because their total assets are equal

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Q13: Stress Test Interpretation

A bank's CET1 ratio drops from 12% to 5.5% under a supervisory stress test. The minimum CET1 requirement (including buffers) is 7%. What should the bank do?

A. Immediately liquidate all trading positions
B. Raise additional capital, reduce risk, or restrict dividends
C. Nothing — the bank still exceeds the 4.5% absolute minimum
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Q14: Reverse Stress Test Logic

A bank conducts a **reverse stress test** and finds that a 25% decline in commercial real estate values combined with a 4% GDP contraction would cause insolvency. What is the primary value of this exercise?

- (A) It identifies the bank's **specific vulnerabilities** and concentration risks
- (B) It proves the bank will never fail because the scenario is unlikely
- (C) It demonstrates the bank's profitability under normal conditions
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Q15: Operational Risk Measurement Challenge

Why is operational risk considered **harder to model** than credit or market risk?

- (A) Operational events are too frequent to track
- (B) Operational risk only affects small banks
- (C) Operational losses are always smaller than credit losses
- (D) Operational events are rare, heterogeneous, and lack reliable statistical distributions

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Q16: LCR vs. NSFR Complementarity

A bank has an LCR of 130% but an NSFR of only 85%. What does this combination suggest?

- **A** The bank is perfectly safe from all liquidity risks
- **B** The bank can survive a 30-day stress but has a structural funding mismatch
- **C** The bank cannot survive even a mild stress scenario
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Q17: Output Floor Impact

Under Basel III.1, the **output floor** requires that internal-model RWA cannot be less than 72.5% of the standardized approach RWA. Which bank is **most affected**?

- A small bank using only the standardized approach
- A large bank whose internal models produce RWA 60% below the standardized approach
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Q18: Risk Appetite Trade-offs

A bank's board considers raising the risk appetite to increase return on equity. The CRO warns this will reduce capital buffers. Which framework best structures this decision?

- (A) Ignore the CRO — the board has final authority
- (B) Compare only the expected return of the riskier strategy vs. the current one
- (C) Use the risk appetite framework: quantify the impact on KRIs, CET1 ratio, and stress test outcomes before deciding
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Q19: Capital Planning Under Stress

After a severe stress test, Bank X has a projected trough CET1 ratio of 4.8% (minimum: 4.5%, with buffer: 7.0%). Bank Y has a trough of 7.2%. Which evaluation is most accurate?

A. Bank X fails and Bank Y passes, because only Bank Y exceeds the combined requirement

B. Neither bank passes because both are below 8%

C. The stress test results are irrelevant because they are hypothetical

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Q20: Holistic Risk Management Evaluation

A bank has strong capital ratios (CET1 = 13%), high LCR (140%), adequate NSFR (110%), but its operational risk KRIs show rising IT incidents, a major cybersecurity breach last quarter, and high staff turnover in the risk function. How should an analyst assess this bank?

- **A** Concerning — strong ratios mask deteriorating operational risk controls that could lead to catastrophic losses
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