2020 FRM Part II

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操作风险及弹性

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3. Operational Risk and Resiliency

3.1. Key Point: Principles for the Sound Management of Operational Risk

3.1.1. 重要知识点

3.1.1.1. Operational Risk Management

- The risk of loss resulting from inadequate or failed internal processes, people and systems or from external events. The definition includes legal risk but excludes strategic and reputation risk.
- Basel II classifies loss events into seven categories: Internal Fraud; External Fraud; Employment Practices and Workplace Safety; Clients, Products, and Business Practices; Damage to Physical Assets; Business Disruption and System Failures; Execution, Delivery, and Process Management
- Three Lines of Defense: Business Line Management; Functionally Independent Corporate Operational Risk Function (CORF); Independent Review and Challenge of the bank's operational risk management controls, processes and systems.
- Role of Board of Directors: establish, approve and periodically review the operational risk management framework
- Role of Senior Management: develop a clear, effective and robust governance structure with well defined, transparent and consistent lines of responsibility; consistently implementing and maintaining throughout the organization policies, processes and systems for managing operational risk in all of the bank's material products, activities, processes and systems consistent with the risk appetite and tolerance.

3.1.2. 基础题

Q-1. Which of the following is an example of an operational risk loss by Firm A?

A. After a surprise announcement by the central bank that interest rates would increase, bond prices fall, and Firm A incurs a significant loss on its bond portfolio.

B. The data capture system of Firm A fails to capture the correct market rates causing

derivative trades to be done at incorrect prices, leading to significant losses.

C. As a result of an increase in commodity prices, the share price of a company that Firm A invested in falls significantly causing major investment losses.

D. A counterparty of Firm A fails to settle their debt to Firm A, and in doing this, they are in breach of a legal agreement to pay for services rendered.

Q-2. Suppose a broker-dealer has a loss that occurs from a failure in properly processing and settling a transaction. According to Basel II operational risk categories, this type of event loss would be categorized as:

A. Business Disruption and System Failures.

B. Clients, Products, and Business Practices.

C. Execution, Delivery, and Process Management.

D. Employment Practices and Workplace Safety

Q-3. A large investment bank has just acquired a smaller regional competitor and is extending its best practices in the field of operational risk to the newly acquired company. As part of this process, management of the new subsidiary is reviewing which responsibilities should be assumed by the board of directors and which should be assumed by senior management. For which of the following should the board of directors be responsible?

A. Implementing operational risk management systems across the organization

B. Develop a clear, effective and robust governance structure

C. Assigning responsibilities to, and reporting relationships between, the bank's risk managers

D. Periodically reviewing and approving the operational risk management framework

Q-4. The CEO of a large bank has reported that the bank's framework for managing operational risk are consistent with Basel II and Basel III model for operation risk governance. Which of the following actions and principles of the bank is correct?

A. The bank considers identification and management of risk as the second line of defense.

B. The bank considers independent review and audit of the risk processes and systems as the third line of defense.

C. The bank includes damaged reputation due to a failed merger in its measurement of operational risk.

D. The bank excludes destruction by fire or other external catastrophes from its measurement of operational risk.

3.2. Key Point: Enterprise Risk Management

3.2.1. 重要知识点

3.2.1.1. In developing an ERM system, management should follow the following framework:

- Determine the firm's acceptable level of risk.
- Based on the firm's target debt rating, estimate the capital (i.e., buffer) required to support the current level of risk in the firm's operations.
- Determine the ideal mix of capital and risk that will achieve the appropriate debt rating.
- Give individual managers the information and the incentive they need to make decisions appropriate to maintain the risk/capital trade-off.

3.2.1.2. Firm-wide VaR

- Firms that use value at risk (VaR) to assess potential loss amounts will have multiple VaR measures to manage.
- Market risk, credit risk, and operational risk will each produce its own VaR measures.
- Due to diversification effects, firm-wide VaR will be less than the sum of the VaRs from each risk category.

3.2.1.3. Three Benefits To ERM

- Organizational Effectiveness
- Risk Reporting

- Business Performance

3.2.1.4. A CRO Is Responsible For

- Providing the overall leadership for enterprise risk management.
- Establishing an integrated risk management framework for all aspects of risks.
- Developing risk management policies, including the quantification of the fi rm's risk appetite through specific risk limits.
- Implementing a set of risk indicators and reports, including losses and incidents, key risk exposures, and early warning indicators.
- Allocating economic capital to business activities.
- Communicating the company's risk profile to key stakeholders.
- Developing the analytical, systems, and data management capabilities to support the risk management program.

3.2.2. 基础题

Q-5. In its efforts to enhance its enterprise risk management function. Countryside Bank introduced a new decision-making process based on economic capital that involves assessing sources of risk across different business units and organizational levels. Which of the following statements regarding the correlations between these risks is correct?

A. Correlations between the risks in the asset and liability sides of the balance sheet can be changed by management decisions.

B. Generally, correlations between broad risk types such as credit, market, and operational risk are well understood and are easy to estimate at the individual firm level.

C. Correlations between business units are only relevant in deciding total firm-wide economic capital levels and are not relevant for decisions at the individual business unit or project level.

D. The introduction of correlations into firm-wide risk evaluation will result in a total VaR that, in general, is greater than or equal to the sum of individual business unit VaRs.

Q-6. While building the bank's enterprise risk management system, a risk analyst takes an inventory of firm risks and categorizes these risks as market, credit, or operational. Which of the following observations of the bank's data should be considered unexpected if compared to similar industry data?

A. The operational risk loss distribution has a large number of small losses and therefore, a relatively low mode.

B. The operational risk loss distribution is symmetric and fat-tailed.

C. The credit risk distribution is asymmetric and fat-tailed.

D. The market risk distribution is similar to the distribution of the return on a portfolio of securities.

Q-7. Which of the following statements regarding the responsibilities of the chief risk officer (CRO) is least accurate?

A. The CRO should provide the vision for the organization's risk management.

B. In addition to providing overall leadership for risk, the CRO should communicate the organization's risk profile to stakeholders.

C. Although the CRO is responsible for top-level risk management, he is not responsible for the analytical or systems capabilities for risk management.

D. The CRO may have a solid line reporting to the CEO or a dotted line reporting to the CEO and the board.

Q-8. A board of directors is evaluating the implementation of a new ERM program at an asset management company. Which statement below is consistent across the various current definitions of an ERM program and most appropriate to be included in the company's ERM definition and goals?

A. The ERM program should reduce costs by transferring or insuring most of the company's major risk exposures.

B. The major goal of the new ERM program should be to reduce earnings volatility.

C. The ERM program should be managed separately from the operational side of the company.

D. The ERM program should provide an integrated strategy to manage risk across the company as a whole.

An effective ERM program should be integrated at several levels, across the company as a whole and integrated with the operational side of the company.

Q-9. The board of directors of a growing asset management company has recommended that the firm establish an ERM framework. Which of the following represents a key benefit that the firm will likely attain after establishing an ERM framework?

A. Allowing the company to determine and make use of a higher risk appetite

B. Finding the optimal reporting methodology for each risk function

C. Improving the top-down communication and coordination in the company

D. Taking advantage of the new opportunities that create value on a standalone basis

3.3. Key Point: Implementing Robust Risk Appetite Frameworks to Strengthen Financial Institutions

3.3.1. 重要知识点

3.3.1.1. Risk Appetite and Risk Culture

- A crucial challenge is building a strong link and an effective interaction between culture and the RAF.
- Firms that had made the most progress in establishing a risk appetite framework report that there is a close and indissoluble link between risk appetite and culture.
- The link with culture is therefore potentially self-reinforcing

3.3.1.2. Establishment of an effective link between the risk appetite framework and the strategy and business planning processes.

- There needs to be an iterative relationship between setting risk appetite and planning at both the group and the business unit levels.
- The final stage in the iterative process may involve changing either aspects of the business plans or of the overall risk appetite

3.3.2. 基础题

Q-10. You are a member of the senior management team at a bank where you have spent a significant amount of time assisting with the development of a risk appetite framework (RAF). With regard to the RAF, which of the following recommendations would you most likely be willing to make?

I. In communicating the RAF to the bank's employees, information on the bank's risk capacity versus current amount of risk undertaken should be provided.

II. An effective RAF should focus primarily on setting appropriate risk limits within the bank and its respective business units.

A. I only.

B. II only.

C. Both I and II.

D. Neither I nor II

Q-11. Which of the following statements regarding the structured process involved with risk appetite frameworks (RAF) and strategic and business planning is most accurate?

A. The process concludes with making any needed changes to the business unit plans.

B. The process aims to transform as many of the qualitative objectives into measurable objectives as possible.

C. The process begins with either a divisional risk appetite statement or the communication of a risk posture from each of the divisions within the firm.

D. The process will differ depending on whether the firm's planning process is top down from the board/senior management or bottom up from the business unit managers.

3.4. Key Point: Banking Conduct and Culture & Risk Culture

3.4.1. 重要知识点

3.4.1.1. What is Culture ?

- Culture is defined as the mechanism that delivers the values and behaviors that shape conduct and contributes to creating trust in banks and a positive reputation for banks among key stakeholders, both internal and external.
- Culture, on the other hand, is intangible and ubiquitous; as such, it requires deep understanding of the strategy, operating model, and values of the organization.

3.4.1.2. What is conduct?

- While cultural norms and beliefs cannot easily be measured, the conduct and behaviors that the cultural norms encourage or discourage can be.

3.4.1.3. performance management and incentives

- Recent years have seen cases of conflicted remuneration models that incentivize overly aggressive sales behaviors that resulted in harmful outcomes for customers.

3.4.2. 基础题

Q-12. Which of the followings about how a bank can structure performance incentives and make staff development decisions to encourage a strong corporate culture is wrong?

A. To encourage a strong corporate culture, the banks can structure their performance incentives and compensation measures so that it falls in line with cultural expectations rather than focusing on profitability or high performance alone.

B. Banks need to not only act on but publicize acts of misconduct when needed. Where necessary they should even be ready to forego revenue opportunities in order to maintain a strong culture.

C. Banks may use various scenarios or role-play based or industrial theater approaches

and use a blend of live and web-based mechanisms to provide content that interprets the culture into daily practical behavior.

D. As training can have a powerful effect on staff and sometimes can deepen employee awareness of regulations. So the mass training for all the staff is necessary. All in all, the training should be comprehensive and guide everyone to realize everything.

Q-13. Which of following recommended by the Group of Thirty (2015 and 2018 recommendations) for improving the conduct and culture of banks is wrong?

A. Banks should look at culture and look to achieve consistent behavior and conduct aligned with firm values, as key to strategic success.

B. Asset owners and third-party fund managers should tell boards directly that they consider effective governance and accountability to be a priority cultural matter for the firm and investors.

C. Banks should remove the link between quantitative sales targets and compensation for sales staff to minimize the pressure that can lead to misconduct and help staff prioritize meeting customer/client needs

D. Banks should ensure that the third line of defense is robust, operational dependent, suitably staffed, and has a clear mandate to examine adherence to standards.

Q-14. A major challenge for banks is dealing with inappropriate behavior y employees who are overachievers based on traditional performance-driven measures. Which of the following compensation plans best describes recommended methods to mitigate this risk?

A. Compensation should not be strictly based on sales data and overachievers should not be terminated but appropriately reprimanded

B. Compensation linked to sales volume is appropriate for front-line staff but not upper management

C. Compensation should focus on employee behavior related to customer satisfaction and ethical behavior consistent with firm values

D. Because compensation linked to firm profitability is a way to reduce agency costs, upper management should always have compensation plans based on quantifiable measures of performance

Q-15. For risk culture to be effective, there should be a proper tradeoff between risk-taking and control. Too much strict regulation and actions taken to completely eliminate risk is unrealistic. At the same time, the fear of making mistakes by company personnel only leads to inaction. So, an effective or sound risk culture should balance between risk-taking and maintaining an appropriate level of control. Which of the following is not a Characteristic of a strong risk culture ?

A. A strong risk culture encompasses an ongoing, dynamic, and formal as well as informal process. It keeps evolving over time with shifts in external and internal factors that affect the behaviors and decisions of the personnel of an organization.

B. Sound risk culture is an integral part of a business and is not linked to supervision alone.

C. Establishing a healthy risk culture is a system that deals with just the enhancement of technical skills rather than a collective process

D. In a healthy risk culture, the concept of complying with compliance is replaced by compliance to conduct.

Q-16. Which of the following statements regarding corporate and/or risk culture is correct？

A. Risk culture is consistent with corporate culture

B. Legal and regulatory factors have a greater impact on corporate culture than risk culture

C. Corporate culture explains why an organization reacts a certain way to a current

business situation

D. Organizations operating in countries with reliable information sources tend to have less aggressive risk cultures

Q-17. On the assumption that culture is directly applicable to business situations, which of the following statements regarding the relationship between risk culture and business performance is least accurate?

A. Culture has a fixed impact on business performance

B. Culture has a variable impact on business performance in the long term

C. Culture has a variable impact on business performance in the short

D. Culture that is outdated will result in static business performance

3.5. Key Point: Operational Risk Data

3.5.1. 重要知识点

3.5.1.1. Key Dimensions of Data Quality

- Accuracy
- Completeness
- Consistency
- Reasonableness
- Currency
- Uniqueness

3.5.1.2. Data Quality Scorecard

- Simple metrics based on measuring against defined dimensions of data quality can be referred to as “base-level” metrics, and they quantify specific observance of acceptable levels of defined data quality rules.
- Complex metric representing a rolled-up score computed as a function (such as a sum) of applying specific weights to a collection of existing metrics, both

base-level and complex. Complex data quality metrics can be accumulated for reporting in a scorecard in one of three different view: by issue, by business process, or by business impact (Data Quality Issues View; Business Process View; Business Impact View).

3.5.1.3. Data Requirement

- Internal Data: Selection of Threshold
- External Data: Bias
- Scenario Analysis: Bias (Presentation; Availability; Anchoring; Huddle; Gaming; Confidence; Inexpert; Context)
- Business Environment Internal Control Factors: RCSA; KRIs

3.5.2. 基础题

Q-18. Which of the following data issues is likely to increase risk for an organization?

I. Data transformations.

II. Duplicate records.

III. Data normalization.

IV. Nonstandard formats.

A. I and II

B. only III

C. I, II and IV

D. II and IV

Q-19. Data consistency is important to ensure that there are no clear conflicts in data values between data sets. Which of the following types of data consistency refers to consistency between one set of data values and another set of data values in different records?

A. Record level

B. Temporal level

C. Cross-record level

D. Cross-temporal level

Q-20. Each of the following is a key issue related to external datasets in modeling operational losses except:

A. The lack of any vendors with centralized database necessitates the manual collection of peer data.

B. The relevance question of whether past loss events at other institutions seem likely or even plausible for the user bank going forward.

C. The quantity question: there may not be enough data points in the external dataset that can supplement the internal loss data.

D. The under-reporting problem that not all loss events reach the public domain.

Q-21. Scenario analysis is often used by financial institutions in determining the amount and frequency of losses. Because historical data is often limited for all possible losses, the opinions of experts are often obtained from workshops. These expert opinions are often subject to biases. Which of the following biases refers to the problem that can arise in this group setting where an expert may not be willing to share a conflicting opinion?

A. Huddle bias.

B. Context bias.

C. Availability bias.

D. Anchoring bias.

3.6. Key Point: Supervisory Guidance on Model Risk Management

3.6.1. 重要知识点

3.6.1.1. Types of Model Risk – Model Error

- Assume the distribution of the underlying asset is stationary (volatility).
- Underestimate the number of risk factors
- Perfect capital market assumption.
- Liquidity or rather the absence of liquidity
- Models be misapplied to a given situation.

3.6.1.2. Types of Model Risk – Implementing a Model Wrongly

- Inaccurate data
- Inappropriate length of sampling period
- Problems with liquidity and the bid/ask spread

3.6.2. 基础题

Q-22. You are the head of the Independent Risk Oversight (IRO) unit of XYZ bank, Your first task is to review the following existing polices relating to model implementation.

I. The remuneration of the staff of the IRO unit is dependent on how frequently the traders of XYZ bank use models vetted by the IRO.

II. Model specifications assume that markets are perfectly liquid.

Which of the existing policies are sources of model risk?

A. Statement I only

B. Statement II only

C. Both statements are correct

D. Both statements are incorrect

Q-23. The role of senior managers in managing model risk includes all of the following except：

A. Becoming expert modelers.

B. Establishing an organizational framework that implements sound risk management procedures.

C. Questioning model features.

D. Understanding the fundamentals of model risk.

Q-24. Which of the following scenarios is the best example of a model error?

A. Assuming a non-normal distribution of returns.

B. Assuming perfectly liquid markets.

C. Assuming variable distribution of asset price.

D. Assuming imperfect capital markets.

3.7. Key Point: Validating Rating Models

3.7.1. 重要知识点

3.7.1.1. Qualitative and Quantitative Processes

- Qualitative validation ensures proper application of quantitative methods and proper usage of ratings. Quantitative validation comprises validation procedures of ratings in which statistical indicators are calculated and interpreted on the basis of an empirical dataset.

3.7.1.2. Qualitative Validation – Rating Systems Design

- Obtaining PD
- Completeness
- Objectivity
- Acceptance
- Consistency

3.7.1.3. Qualitative Validation – Data Quality

- Completeness of data
- Volume of available data
- Representativeness of samples
- Consistency and integrity of data sources
- Adequacy of procedures used to ensure data quality

3.7.1.4. Quantitative Validation

- Sample representativeness
- Discriminatory power
- Dynamic properties
- Calibration

3.7.2. 基础题

Q-25. Which of the following areas of quantitative validation would focus on rating systems stability?

A. Sample representativeness.

B. Dynamic properties.

C. Discriminatory power.

D. Obtaining PD

3.8. Key Point: Assessing the Quality of Risk Measures

3.8.1. 重要知识点

3.8.1.1. Model risk and variability can arise through the implementation of VaR models.

3.8.1.2. Case Study – The 2005 Credit Correlation Episode: The critical flaw was that the correlation assumption was static.

3.8.1.3. Case Study – Subprime Default Models: The models assumed positive future house price appreciation rates. Low (geographical) correlation assumption.

3.8.2. 基础题

Q-26. The risk management group estimates the 1-day 99% VaR on a long-only, large-cap equity portfolio using a variety of approaches. A daily risk report shows the following information:

1-day 99% VaR Estimates (by approach):

- Delta-normal VaR: 321,890
- Monte Carlo Simulation VaR: 353,851
- Historical Simulation VaR: 375,534

Which of the following is the most likely explanation for the variation in VaR estimates?

A. Data problems

B. Differences in model assumptions

C. Endogenous model risk

D. Programming errors

Q-27. A profitable derivatives trading desk at a bank decides that its existing VaR model, which has been used broadly across the firm for several years, is too conservative. The existing VaR model uses a historical simulation over a three-year look-back period, weighting each day equally. A quantitative analyst in the group quickly develops a new VaR model, which uses the delta normal approach. The new model uses volatilities and correlations estimated over the past four years using the RiskMetrics EWMA method.

For testing purposes, the new model is used in parallel with the existing model for four weeks to estimate the 1-day 95% VaR. After four weeks, the new VaR model has no exceedances despite consistently estimating VaR to be considerably lower than the existing model's estimates. The analyst argues that the lack of exceedances shows that the new model is unbiased and pressures the bank's model evaluation team to agree.

Following an overnight examination of the new model by one junior analyst instead of the customary evaluation that takes several weeks and involves a senior member of the team, the model evaluation team agrees to accept the new model for use by the desk.

Which of the following statements about the risk management implications of this replacement is correct?

A. Delta-normal VaR is more appropriate than historical simulation VaR for assets with non-linear payoffs.

B. Changing the look-back period and weighting scheme from three years, equally weighted, to four years, exponentially weighted, will understate the risk in the portfolio.

C. The desk increased its exposure to model risk due to the potential for incorrect calibration and programming errors related to the new model.

D. A 95% VaR model that generates no exceedances in four weeks is necessarily conservative.

Q-28. Consider the following four statements about value at risk (VaR):

I. If there were standardization of both the confidence interval and the time horizon, VaR estimates would be highly consistent across users.

II. There is not much uniformity of practice as to confidence interval and time horizon; as a result, intuition on what constitutes a large or small VaR is underdeveloped.

III. There are a number of computational and modeling decisions that can greatly influence VaR results, such as the length of time series used for historical simulation or to estimate moments; and the technique used for estimating moments.

IV. There are a number of computational and modeling decisions that can greatly influence VaR results, such as mapping techniques and the choice of risk factors.

Which of the above statements is/are true?

A. None are true.

B. I and II are true.

C. II, III, and IV are true.

D. All are true.

Q-29. Which of the following two model errors in the RMBS valuation and risk models are considered to have contributed the most to a significant underestimation of systematic risk in subprime RMBS returns during 2008-2009?

A. The assumption of future house price appreciation and the assumption of high correlations among regional housing markets.

B. The assumption of future house price declines and the assumption of high correlations among regional housing markets.

C. The assumption of future house price appreciation and the assumption of low correlations among regional housing markets.

D. The assumption of future house price declines and the assumption of low correlations among regional housing markets.

Q-30. About the long-equity tranche, short-mezzanine credit trade in 2005, Malz writes "A widespread trade among hedge funds, as well as proprietary trading desks of banks and brokerages, was to sell protection on the equity tranche and buy protection on the junior mezzanine tranche of the CDX.NA.IG. The trade was thus long credit and credit-spread risk through the equity tranche and short credit and credit-spread risk through the mezzanine. It was executed using several CDX.NA.IG series, particularly the IG3 introduced in September 2004 and the IG4 introduced in March 2005.

The trade was designed to be default-risk-neutral at initiation; by sizing the two legs of the trade so that their credit spread sensitivities were equal. The motivation of the trade was not to profit from a view on credit or credit spreads, though it was primarily

oriented toward market risk. Rather, it was intended to achieve a positively convex payoff profile. The portfolio of two positions would then benefit from credit spread volatility. In addition, the portfolio had positive carry; that is, it earned a positive net spread. Such trades are highly prized by traders, for whom they are akin to delta-hedged long option portfolios in which the trader receives rather than paying away time value. "

But, of course, many of these traders suffered large losses. According to Malz, which of the following was the critical error in the trade?

A. The model ignored correlation altogether

B. The model failed to adequately capture and anticipate individual defaults

C. The model assumed a static implied correlation: deltas were partial derivatives that did not account for changing correlation, which drastically altered the hedge ratio

D. The recovery amount was at risk; in the event of a default on one or more of the names in the index, the recovery amount was not fixed but a random variable

3.9. Key Point: Risk-Adjusted Performance Measurement

3.9.1. 重要知识点

3.9.1.1. The RAROC measure is essential to successful integrated risk management. Its main function is to relate the return on capital to the riskiness of firm investments. The RAROC is the risk-adjusted return divided by risk-adjusted capital (e.g., economic capital).

3.9.1.2. RAROC=(revenues−EL+ return on economic capital ± transfer price)/economic capital

3.9.1.3. The hurdle rate is computed as follows:

$$h_{AT} = \frac{(CE \times R_{CE}) + (PE \times R_{PE})}{CE + PE}$$

- If RAROC > hurdle rate, there is value creation from the project and it should be accepted.
- If RAROC < hurdle rate, there is value destruction from the project and it should

be rejected.

- An adjusted RAROC (ARAROC) measure was developed to better align the risk of the business with the risk of the firm's equity.

3.9.1.4. Adjusted RAROC = RAROC - $\beta_E(R_M - R_F)$

- If adjusted RAROC > R_F, then accept the project
- If adjusted RAROC < R_F, then reject the project

3.9.2. 基础题

Q-31. A risk manager is considering a HKD 400 million loan that will be fully funded by deposits paying an average annual interest rate of 1.0%. The risk manager has estimated the following regarding the loan:

Expected annual revenue:	HKD 16 million
Expected loss:	HKD 1.0 million
Unexpected loss:	HKD 48.0 million
Economic capital required:	HKD 47.0 million
Annual operating expenses:	HKD 2.0 million

Assuming the economic capital can be invested so that it earns 2% per year, the risk manager correctly calculates the risk-adjusted return on capital (RAROC) to be 21.1%. Assuming nothing else changes, which of the following would increase the RAROC estimate the most?

A. Annual operating expenses decrease by 50%.

B. Expected annual revenue increases by 20%.

C. The economic capital can be invested so that it earns 4% per year.

D. The loan is fully funded by deposits paying an average annual interest rate of 0.5%.

Q-32. Which of the following statements regarding the risk-adjusted return on capital (RAROC) methodology is correct?

A. In the context of performance measurement, RAROC uses accounting profits.

B. In the numerator of the RAROC equation, expected loss is added to the return.

C. If a business unit's cost of equity is greater than its RAROC, then the business unit is not

adding value to shareholders.

D. RAROC is useful for determining incentive compensation but it lacks the flexibility to consider deferred or contingent compensation.

Q-33. Assume a bank's $2.0 billion corporate loan portfolio offers a return of 6% per annum. The expected loss on the portfolio is estimated to be 1.5% per annum; i.e., $30 million. The portfolio is funded by $2 billion in retail deposits with a transfer-priced interest rate charge of 2%. The bank has a direct operating cost of $16 million per annum and an effective tax rate of 25%. Risk analysis of unexpected losses associated with the portfolio tell us we need to set aside economic capital of $200 million against the portfolio; i.e., 10% of the loan amount. The bank's economic capital must invested in risk-free securities and, unfortunately in the regime of ultra low interest rates, the risk-free rate on government securities is only 1%. Although the loan portfolio's risk-adjusted return on capital (RAROC) is positive and seemingly high, the bank wants to adjust the traditional RAROC calculation to obtain a RAROC measures that take into account the systemic riskiness of the expected returns. If the risk-free rate is 1%, and the expected rate of return on the market portfolio is 8% such that the equity risk premium is 7%, and the beta of the firm's equity is 1.6, which of the following is the correct adjusted RAROC and is the project advisable?

A. RAROC is 6.25% but no, the project is bad because ARAROC is below the risk-free rate.

B. RAROC is 8% but no, the project is bad because ARAROC is below the risk-free rate.

C. RAROC is 9.8% and yes, the project is good because ARAROC is above the risk-free rate.

D. RAROC is 13.5% and yes, the project is good because ARAROC is above the risk-free rate.

3.10. Key Point: Stress testing in Banks

3.10.1. 重要知识点

3.10.1.1. Problem of coherence when designing scenarios: problems are inherently multi-factored, making it more difficult to design a coherent stress test. It is not sufficient to specify one potential problem because the others do not remain fixed.

3.10.2. 基础题

Q-34. Piper Hook, a bank examiner, is trying to make sense of stress tests done by one of the banks she examines. The stress tests are multi-factored and complex. The bank is using multiple extreme scenarios to test capital adequacy, making it difficult for Hook to interpret the results. One of the key stress test design challenges that Hook must deal with in her examination of stress tests is:

A. Multiplicity

B. Efficiency

C. Coherence

D. Efficacy

Q-35. Nordlandia is a country with a developed economy maintaining its own currency, the Nordlandian crown (NLC), and whose most important export is domestically produced oil and natural gas. In a recent stress test of Nordlandia's banking system, several scenarios were considered. Which of the following is most consistent with being part of a coherent scenario?

A. An increase in domestic inflation and appreciation of the NLC.

B. A significant increase in crude oil prices and a decrease in the Nordlandian housing price index.

C. A drop in crude oil prices and appreciation of the NLC.

D. A sustained decrease in natural gas prices and a decrease in the Nordlandian stock index.

3.11. Key Point: Guidance on Managing Outsourcing Risk

3.11.1. 重要知识点

3.11.1.1. Risks Arising through Outsourcing Activities

- Compliance risks
- Concentration risks
- Reputational risks
- Country risks
- Operational risks
- Legal risks

3.11.1.2. Core Elements of Effective Programs

- Risk assessments
- Due diligence and selection of service providers
- Contract provisions and considerations
- Incentive compensation review
- Oversight and monitoring of service providers
- Business continuity and contingency plans

3.11.2. 基础题

Q-36. ABC Bank operates in the US and has a service contract in place with XYZ (Service), which operates in France. Service manages a significant amount of confidential customer data for Bank, and recently a computer glitch at Service resulted in the accidental public disclosure of confidential customer data. As a result of the data breach, which of the following risks is Bank least likely to face?

A. Legal risk.

B. Compliance risk.

C. Operational risk.

D. Country risk.

Q-37. The senior management team of a small regional bank has established a committee to review procedures and implement best practices related to entering into significant

contracts with third-party vendors. The committee is reviewing one proposed relationship with a third-party vendor who would have a significant responsibility for marketing the bank's financial products to potential customers. In establishing policies to reduce the operational risk associated with this potential vendor contract, which of the following recommendations would be most appropriate?

A. The bank should review all third-party audit reports of a vendor that are publicly available.

B. The bank should ensure that a vendor's sales representatives are compensated mainly with commissions from the sale of the bank's products.

C. The bank should prevent a third-party vendor from having access to any of its critical processes.

D. The bank should be responsible for developing a vendor's contingency planning process in order to mitigate risk exposure to the vendor.

3.12. Key Point: Sound Management of Risk Related to Money Laundering and Financing of Terrorism

3.12.1. 重要知识点

3.13.1.1. Assessment, Understanding, Management and Mitigation of Risks

- Assessment and Understanding of Risks
- Proper Governance Arrangements
- Three Lines of Defence
- Adequate Transaction Monitoring System

3.13.1.2. Three Lines of Defence

- The first line of defence: all banks should implement ongoing employee training programmes so that bank staff are adequately trained to implement the bank's AML/CFT policies and procedures.
- The second line of defence: the chief officer in charge of AML/CFT should have the responsibility for ongoing monitoring of the fulfillment of all AML/CFT duties

by the bank.

- The third line of defence: internal audit plays an important role in independently evaluating the risk management and controls.

3.13.2. 基础题

Q-38. A regional bank is formalizing its policies and procedures to help identify and analyze the risk of potential money laundering transactions. Of special interest is accounting for customers' backgrounds when determining customer acceptance policies. According to Basel Committee guidelines, which of the following correctly describes a best practice that the bank should use in identifying, verifying and profiling customers to help mitigate money laundering risk?

A. The bank does not need to apply due diligence on a customer if the bank receives funds from that customer's account at another bank that is subject to the same customer due diligence standards.

B. The bank should apply the same due diligence measures to all customers regardless of their jurisdiction and the nature of their relationship with the bank to prevent discrimination.

C. The bank should apply its due diligence process not just to potential customers but also to beneficial owners of the proposed customer accounts and persons acting on their behalf.

D. The bank should not open an account for or conduct business with a customer who wants to remain anonymous to the bank except for confidential "numbered accounts" that function as anonymous.

3.13. Key Point: Regulation of the OTC Derivatives Market

3.13.1. 重要知识点

3.14.1.1：three major changes affecting OTC derivatives

- A requirement that all standardized OTC derivatives be cleared through CCPs.

- A requirement that standardized OTC derivatives be traded on electronic platforms.
- A requirement that all trades in the OTC market be reported to a central trade repository.

3.14.1.2 Impact on changes

- **Liquidity**
  - Most of the collateral required will have to be in the form of cash or government securities, so the collateral posted at any given time will be a drain on liquidity.
- **Rehypothecation**
  - Rehypothecation will be restricted, which allows initial margin to be rehypothecated once, but only if certain conditions are satisfied. Variation margin can be rehypothecated
- **The Convergence of OTC and Exchange-Traded Markets**
  - Similarity in platforms and clearing process.
  - exchanges are increasingly offering less standard product

3.13.2. 基础题

Q-39. Bilateral clearing in the over-the-counter(OTC)market is most likely to entail：

A. an exchange acting as a guarantor for the completion of a trade

B. quotes being electronically posted

C. two parties clearing transactions with each other

D. a third party collecting margin from the two parties to the trade

3.14. Key Point: Capital Regulation Before the Global Financial Crisis

3.14.1. 重要知识点

2.14.1.1. Evolution of Basel Accord

- The Basel Capital Accord (Basel I), concluded on July 15, 1988, set capital charges against credit risk based on a set of relatively simple rules.
- Capital adequacy requirements against market risk were added to Basel I in

1996.

- In June 2004, Basel II created more risk-sensitive capital requirements and added a charge against operational risks.
- During the credit crisis, it was recognized that some changes were necessary to the calculation of capital for market risk in the Basel II framework. These changes are referred to as "Basel 2.5.
- The credit crisis that started in 2007 revealed serious weaknesses in the regulatory framework. This led to a new round of revisions, which are informally called Basel III.

2.14.1.2. Pillar 1: Minimum Capital Requirements

- **Capital Ratio:**

$$\frac{\text{Total Capital}}{\text{Credit Risk} + \text{Market Risk} + \text{Operational Risk}} = \text{Bank}' \text{s Capital Ratio} \geq 8\%$$

$$\frac{\text{Total Capital}}{\text{RWA}_{\text{Credit}} + (\text{MRC}_{\text{Market}} \times 12.5) + (\text{ORC}_{\text{Operational}} \times 12.5)} \geq 8\%$$

- **Capital Requirements:**

  Basel III increases the minimum capital ratio for core tier 1 capital from 2% to 4.5%. Tier 1 capital is increased from 4% to 6%. Total capital is still kept at a minimum of 8%.

- **Common Equity Tier 1 Capital:**
  - Common shares issued by the bank.
  - Stock surplus (paid-in capital)
  - Retained earnings.
  - Minority interests.
  - Accumulated and other comprehensive income and other disclosed reserves.
  - Regulatory adjustments applied to the calculation of Common Equity Tier 1 capital.

2.14.1.3. Pillar 2: Supervisory Review Process

2.14.1.4. Pillar 3: Market Discipline

3.14.2.1. The standardized approach for Credit Risk incorporates risk weights based on

external credit rating assessments. The amount of capital that a bank must hold is specific to the risk of credit-risky assets, the type of institution the claim is written on, and the maturity of those assets.

3.14.2.2. **The internal ratings-based** (IRB) approaches (foundation and advanced) **for Credit Risk** use a bank's own internal estimates of creditworthiness to determine the risk weightings in the capital calculation.

- **Foundation approach:** bank estimates probability of default (PD).
- **Advanced approach:** bank estimates not only PD, but also loss given default (LGD), exposure at default (EAD), and effective maturity (M).

3.14.3.1. **Standardized method for Market Risk**:

Determines capital charges associated with various market risk exposures (equity risk, interest rate risk, foreign exchange risk, commodity risk, and option risk). The market risk capital charge for each market risk is computed as 8% of its market-risky assets.

3.14.3.2. **Internal models approach** (IMA) **for Market Risk**:

Allows a bank to use its own risk management systems to determine its market risk capital charge. The market risk charge is the higher of (1) the previous day's VaR or (2) the average VaR over the last 60 business days adjusted by a multiplicative factor (subject to a floor of 3).

3.14.3.3. $\mathrm{MRC}_t^{\mathrm{IMA}} =$

$\mathrm{Max}\left(\mathrm{k}\frac{1}{60}\sum_{i=1}^{60}\mathrm{VAR}_{t-i}, \mathrm{VAR}_{t-1}\right) + \mathrm{Max}\left(\mathrm{k_s}\frac{1}{60}\sum_{i=1}^{60}\mathrm{SVAR}_{t-i}, \mathrm{SVAR}_{t-1}\right) + \mathrm{SRC}_t + \mathrm{IRC}_t$

- SVaR is the Stress VaR.
- SRC is the specific risk charge, which is a buffer against idiosyncratic factors, including basis risk and event risk.
- IRC is an incremental risk charge that covers: (1) default risk, (2) credit migration risk for debt instruments. IRC is calibrated to a 99.9% confidence level over one year.

3.14.3.4. An exception occurs if the day's change in value exceeded the VaR estimate of the previous day. When backtesting VaR, the number of exceptions is determined for a 250-day testing period. Based on the number of exceptions, the bank's exposure is

categorized into one of three zones and VaR is scaled up by the appropriate multiplier.

- Green zone: 0-4 exceptions, increase in exposure multiplier is 0.
- Yellow zone: 5-9 exceptions, exposure multiplier increases between 0.4 and 0.85.
- Red zone: Greater than or equal to 10 exceptions, multiplier increases by 1.

3.14.4.1. Basic Indicator Approach（BIA）for Operational Risk: measures the capital charge on a firm-wide basis. Banks will hold capital for operational risk equal to a fixed percentage of the bank's average annual gross income over the prior three years. The Basel Committee has proposed a fixed percentage equal to 15%.

$$\mathrm{BIA} = 0.15 \times \left[\frac{\sum_{i=1}^{n} \mathrm{GI}_i}{n}\right]$$

3.14.4.2. Standardized Approach（SA）for Operational Risk: allows banks to divide activities along standardized business lines. Within each business line, gross income will be multiplied by a fixed beta factor. The capital charge for operational risk is the sum of each business line's charges. The beta factors for the eight business lines are as follows:

- Trading and sales: 18%
- Corporate finance: 18%
- Payment, settlement: 18%
- Commercial banking: 15%
- Agency services: 15%
- Retail banking: 12%
- Retail brokerage: 12%
- Asset management: 12%

$$\mathrm{K_{SA}} = \left\{\sum_{\text{years } 1-3} \max\left[\sum (\mathrm{GI}_{1-8} \times \mathrm{B}_{1-8}), 0\right]\right\}/3$$

3.14.4.3. Advanced Measurement Approach (AMA) for Operational Risk: If a bank can meet

more rigorous supervisory standards, it may use the AMA for operational risk capital calculations. The capital charge for AMA is calculated as the bank's operational value at risk (Op VaR) with a one-year horizon and a 99.9% confidence level. Having insurance can reduce this capital charge by as much as 20%.

- Frequency Distributions: LDA models most often use the Poisson distribution, the negative binomial distribution, or the binomial distribution.
- Severity Distributions: The severity of each event follows a parametric distribution, such as a lognormal, Weibull, Gamma, Exponential distribution.

3.14.5.1. SCR and MCR of Solvency II.

- If its capital falls below the SCR level, an insurance company should, at minimum, deliver to the supervisor a plan to restore capital to above the SCR level. The supervisor might require the insurance company to take particular measures to correct the situation.
- The MCR is regarded as an absolute minimum level of capital. If capital drops below the MCR level, supervisors may prevent the insurance company from taking new business. It might force the insurance company into liquidation, transferring its policies to another company. The MCR will typically be between 25% and 45% of the SCR.
- Two ways to calculate the SCR: the standardized approach and the internal models approach.

3.14.2. 基础题

Q-40. A newly established risk division of a regional financial institution is setting up a Monte Carlo simulation methodology to estimate the firm's aggregate loss distribution. Which of the following loss frequency and loss severity distribution pairs is the most appropriate to use?

A. Binomial distribution for frequency, and Poisson distribution for severity.

B. Lognormal distribution for frequency, and Weibull distribution for severity.

C. Negative Binomial distribution for frequency, and Pareto distribution for severity.

D. Transformed Beta distribution for frequency, and Normal distribution for severity.

Q-41. Assume a bank determines credit risk-weighted assets (credit RWA) of $10 million, a market risk charge (MRC) of $300,000 and an operational risk charge (ORC) of $500,000. To meet Basel III requirements, the bank has determined it holds $2.0 million in eligible total (Tier 1 plus Tier 2) regulatory capital. What is the bank's total capital ratio?

A. 5.0 %

B. 6.25%

C. 8.0%

D. 10.0%

Q-42. Your bank is implementing the advanced Internal Rating Based Approach of Basel II for credit risk, and the Advanced Measurement Approach for operational risk. The bank uses the Internal Model Approach for market risk. The Chief Risk Officer (CRO) wants to estimate the bank's total risk by adding up the regulatory capital for market risk, credit risk, and operational risk. The CRO asks you to identify the problems with using this approach to estimate the bank's total risk. Which of the following statements about this approach is incorrect?

A. It assumes market, credit, and operational risks have zero correlation.

B. It uses a 10-day horizon for market risk.

C. It ignores strategic risks.

D. It ignores the interest risk associated with the bank's loans.

Q-43. In regard to Basel II minimum capital requirements, which of the following is false?

A. Banks can reduce their capital charge, subject to a limit, if they can demonstrate diversification benefit due to imperfect correlation between the major risk buckets:

credit, operational and market risk.

B. Pillar Two explicitly encourages national authorities (supervisors) to supplement Pillar One with additional capital requirements at their discretion if they deem appropriate

C. Under the advanced/internal approaches, all three risk categories (credit, market, and operational risk) employ value at risk (VaR) concepts

D. Basel II had no explicit charge for liquidity risk

Q-44. Each of the following is a required disclosure element (i.e., must be disclosed by the bank) of the Third Pillar (Pillar 3) except for:

A. The bank's capital structure including a break-down of Tier 1 capital, deductions, and total eligible capital

B. Details of the bank's compensation (renumeration) program including performance metrics, risk metrics, and variable pay plan elements

C. The bank must disclose securitization special purpose entities (SPEs) even if the bank is only a sponsor (i.e.,only "manages or advises" on the placement of securities)

D. The bank's long-term strategy and a mapping of new product development initiatives to planned target markets and customers

Q-45. Pillar 1 of the Basel II framework allows banks to use various approaches to calculate the capital requirements for credit risk, operational risk, and market risk. Which of the following Basel II approaches allows a bank to use its own estimates of recovery rates?

A. The standardized measurement approach for operational risk

B. The advanced internal ratings-based approach for credit risk

C. The foundation internal ratings-based approach for credit risk

D. The fundamental review of the trading book (FRTB) approach for securitized products

Q-46. John Smith is a bank supervisor responsible for the oversight of Everbright Group, a large banking conglomerate. Everbright Group now determines its credit risk profile according to the foundation IRB approach and assesses operational risk according to the standardized approach as described in the Basel II Capital Accord. Which of the following are specific issues that should be addressed as Dart of Smith's supervisory review process of Everbright Group?

I. Review the bank's internal control systems.

II. Check compliance with transparency requirements as described in Pillar 3 of Basel II Accord.

III. Make sure that the bank estimates for LGD and EAD for its corporate loans are in compliance with supervisory estimates.

IV. Evaluate the impact of interest rate risk by assessing the impact of a 200 basis Point interest rate shock to the bank's capital position.

A. I and III only

B. II and IV only

C. I, II, and IV only

D. I, II, III, and IV

Q-47. A bank uses the basic indicator approach (BIA) to determine their capital charge for operational risk under Basel II (or Basel III). The bank's annual gross income (GI) over the previous three years was +$130 million (T-3), -$60 million loss (T-2), and +$230 million (T-1). What is the bank's operational risk capital charge?

A. $15.0 million

B. $18.0 million

C. $27.0 million

D. $34.5 million

Q-48. A bank uses the standardized approach (SA) to determine their capital charge for operational risk under Basel II (or Basel III). The bank has three (3) business lines and each business line contributes one-third toward the total gross income. For a given total gross income, which business mix will produce the largest capital charge?

A. Corporate finance; trading and sales; payment and settlement

B. Retail banking; retail brokerage; and asset management

C. Commercial banking; agency services; asset management

D. Retail banking; Commercial banking; and Payment and settlement

Q-49. Each of the following is true about the Basic Indictor Approach (BIA) to operational risk under Basel III except which is false?

A. Operational risk is the risk of loss resulting from inadequate or failed internal processes, people and systems or from external events

B. The definition of operational risk includes strategic and reputational risk, but excludes legal risk

C. Bank's using the Basic Indicator Approach (BIA) must hold capital for operational risk equal to the average over the previous three years of a fixed percentage (denoted alpha) of positive annual gross income

D. Under the Basic Indicator Approach (BIA), Gross Income is defined as net interest income plus net non-interest income

Q-50. Each of the following is true about the Standardized Approach (SA) to operational risk under Basel III except which is false?

A. Wheres the Basic Indicator Approach (BIA) use Gross Income for the whole institution as a proxy for the scale of business operations, the standardized approach (SA) calculates the capital charge for each business line by multiplying its gross income by a factor (denoted beta) assigned to that business line

B. The beta factor in the Standardized Approach (SA) serves as a proxy for the industrywide relationship between the operational risk loss experience for a given business line and the aggregate level of gross income for that business line

C. Under the standardized approach (SA), business units that fail to provision expected operational losses must calibrate their risk charge based on the unexpected loss at 99.99% confidence level (i.e.,rather than 99.9%) over a one-year horizon

D. A national supervisor can allow a bank to use the Alternative Standardized Approach (ASA) which replaces gross income with loans and advances for retail and commercial banking business lines

Q-51. Each of the following is true about Advanced Measurement Approach (AMA) to operational risk under Basel III except which is false?

A. Under the AMA, a bank must develop specific policies and have documented criteria for mapping gross income for current business lines and activities into the AMA framework.

B. Under the AMA,a bank can use its own internal model(s) but the quantitative standards include a charge for unexpected losses at 99.9% confidence over one-year horizon.

C. The most popular distribution selection for modeling frequency is the Poisson distribution，the most common and least complex approach to modeling severity is to use a lognormal distribution.

D. To qualify for the AMA,the bank must : use internal loss data,external loss data, scenario analysis; and take into account key business environment and internal control factors.

Q-52. Pillar 1 of the Basel II framework allows banks to use various approaches to calculate the capital requirements for credit risk, operational risk, and market risk. Which of the following Basel II approaches allows a bank to explicitly recognize diversification

benefits?

A. The basic indicator approach for operational risk

B. The standardized approach for market risk

C. The internal models approach for market risk

D. The standardized approach for operational risk

Q-53. A bank uses VaR and stressed VaR market risk framework in line with the Basel requirements. The bank's internal models for market risk have generated the following risk measures (in USD million) for the current trading book positions:

Confidence Level	Lateset Available 10-day VaR	Latest Available 10-day Stressed VaR	Average 10-day VaR of Previous 60 Days	Average 10-day Stressed VaR of Previous 60 Days
95.0%	238	484	252	546
99.0%	451	995	413	1,106
99.9%	578	1,281	528	1,372

Assuming the supervisory authority has set the multiplication factors for both the VaR and stressed VaR values to 3, what is the correct capital requirement for general market risk for the bank under Basel II.5?

A. USD 1,248 million

B. USD 1,533 million

C. USD 4,557 million

D. USD 4,799 million

Q-54. The Basel II accord requires a supervisory backtesting framework with all of the following components except:

A. Seven zones with different plus factors.

B. Find out the number of exceptions.

C. Extends over a 1-year period (i.e., 250 trading days).

D. A multiplier that is subject to a floor of three.

3.15. Key Point: Regulations After the Global Financial Crisis

3.15.1. 重要知识点:

3.15.1.1. **Capital Conservation Buffer** will be required to provide an extra cushion against loss in times of stress. The buffer will be an additional 2.5% Common Equity Tier 1 capital requirement.

3.15.1.2. Banks will be subject to a **countercyclical buffer** if regulatory authorities deem it necessary. The buffer is intended to protect the banking sector by ensuring that capital requirements take into account macro-environment factors. Procyclical amplification refers to the vicious cycle that ensues when a downturn leads to losses in the financial sector, which spreads to the real economy and then back to the financial sector. Countercyclical buffers are intended to dampen the effect of procyclical amplification and will only be implemented if credit growth is excessive or some other system-wide risk is evident.

3.15.1.3. The committee has introduced a non-risk based **leverage ratio** that will act as a supplementary measure to risk-based capital standards. The goals of the leverage ratio are to constrain the build-up of leverage in the banking sector and to provide a simple "back-stop" measure of leverage that supplements and reinforces risk-based capital standards. The leverage ratio of 3% (Tier 1 capital to on- and off-balance sheet items and exposures) is targeted to take effect January 1, 2018.

3.15.1.4. Goal: ensure banks have adequate, high-quality liquid assets to survive short-term stress scenario.

$$\text{LCR} = \frac{\text{high} - \text{quality liquid assets}}{\text{total net cash outflows over the next 30 calendar days}} \geq 100\%$$

3.15.1.5. Goal: protect banks over a longer time horizon than LCR.

$$\text{NSFR} = \frac{\text{Amount of Stable Funding}}{\text{Required Amount of Stable Funding}} \geq 100\%$$

3.13.2.1. Contingent Convertible Bonds (CoCos)

- Contingent convertibles, also known as CoCo bonds, CoCos or contingent convertible notes, are slightly different to regular convertible bonds because bonds converting to equity are "contingent" on a pre-specified event, such as falling down of bank's Tier 1 capital below a certain percentage vis-à-vis its risk-weighted assets.
- As the event occurs, CoCos automatically get converted into equity. Typically, these conditions are satisfied when the company/bank is experiencing financial difficulties.
- Regulators globally are keen on banks having more equity and are particularly encouraging banks to issue CoCos (but in limited quantities) because CoCos avoid the need for a bailout and hence the conversion of CoCos is sometimes referred as "bail-in".

3.15.2. 基础题

Q-55. Each of the following was both (i) a deficiency or omission of Basel II but is, at the same time, (ii) explicitly addressed by new requirement in Basel III except for

A. Basel II did not formally include liquidity risk, but Basel III explicitly covers liquidity risk

B. Basel II could arguably create a procyclical effect, but Basel III explicitly adds a buffer to address this

C. Basel II did not require external credit ratings, but Basel III seeks to increase the reliance on external ratings

D. Basel II allowed many banks to show strong risk-based regulatory capital ratios despite high on- and off-balance sheet leverage; Basel III adds a simple leverage ratio to act as a backstop to the risk-based capital ratio

Q-56. With respect to Basel II, Basel III immediately (i.e., effective in 2011 regardless of phase-in arrangements) changes or adds each of the following except for:

A. Eliminated Tier 3 capital

B. Restricted the definition of Tier 1 capital

C. Increased the (Pillar One) Minimum Total Capital (Tier 1 + Tier 2) requirement

D. Adds a capital conservation buffer (CCB) where none existed in Basel II

Q-57. In updating the Basel II regulatory framework, the Committee asserted that Basel III introduced "a number of fundamental reforms to the international regulatory framework." Each of the following was a brand new introduction by Basel III (with respect to Basel II) except which was not?

A. Liquidity ratios were newly introduced in Basel III

B. A leverage ratio was newly introduced in Basel III

C. The incremental risk charge (IRC) was newly introduced in Basel III

D. A credit value adjustment (CVA) charge was newly introduced in Basel III

Q-58. Which statement is true regarding Common Equity Tier 1 capital?

A. Common Equity Tier 1 capital to risk-weighted assets must be 6% beginning January 1, 2015.

B. Preferred stock will make up the bulk of Common Equity Tier 1 capital because shareholders cannot force the bank into bankruptcy.

C. Common Equity Tier 1 capital has the least-stringent requirements for what constitutes capital.

D. To qualify as common shares that may be used for Common Equity Tier 1 capital, investors of the shares must have a residual claim to the assets.

Q-59. Thrift Bank carries risk-weighted assets (RWA) of $40.0 billion. In regard to its eligible regulatory capital, the bank holds:

- $2.8 billion of Common Equity Tier 1 Capital ("Core Tier 1")

- $0.2 billion of Additional Tier 1 Capital
- $1.4 billion of Tier 2 Capital ("Gone concern")

Does Thrift Bank meet the Basel III capital requirements?

A. No, because Tier 1 Capital is not at least 8.5%

B. No, because Total Capital is not at least 10.5%

C. Yes, because Tier 1 is at least 4.0%

D. Yes, because Tier 2 is at least 2.5%

Q-60. In the latest guidelines for computing capital for incremental risk in the trading book, the incremental risk charge (IRC) addresses a number of perceived shortcomings in the 99 %/10-day VaR framework. Which of the following statements about the IRC are correct?

I. For all IRC-covered positions, the IRC model must measure losses due to default and migration over a one-year horizon at a 99% confidence level.

II. A bank can incorporate into its IRC model any securitization positions that hedge underlying credit instruments held in the trading account.

III. The IRC requires banks to calculate a one-year 99.9% VaR for losses from credit-sensitive products in the trading book taking both credit rating changes and defaults into account.

A. I and II

B. III

C. I, II, and III

D. II and III

Q-61. Which of the following characteristics outlined describe the measurement of stressed value at risk?

A. The stressed VaR is calculated with one year time horizon.

B. Historical bank data from the same portfolio is used in measuring SVaR.

C. The stressed confidence interval is a 95% one-tailed test.

D. The multiplication factor used in calculating SVaR is the same as that for VaR.

Q-62. Which of the following is true about the standardized measurement method for the calculation of market risk under Basel III?

A. Tier 3 capital is eligible to support market risks calculated by the standardized approah in Basel III

B. The capital charge is an arithmetic sum of charges across categories, including interest rate risk,equity position risk,foreign exchange fisk,commodities risk,and options risk

C. Banks have the flexibility to use IMA or SA method to calculate market risk capital.

D. The standardized measurement method for the calculation of market risk under Basel Accord takes the benefits of diversification into account.

Q-63. Under Basel III, each of the following is true about the internal models approach (IMA) to market risk except which is false?

A. Value at risk (VaR) must be computed on a daily basis with a one-tailed confidence level of 99.0% and a minimum holding period of ten (10) days

B. In 2008, the Basel Committee recognized that most of the losses in the credit market trumoil of 2007 and 2008 were from changes in credit ratings, widening of credit spreads, and loss of liquidity, but as a result of defaults excluded.

C. Regulators proposed an incremental default risk charge (IDRC) in 2005 that would be calculated with a 99.9% confidence level and a one-year time horizon for instruments in the trading book that were sensitive to default risk.

D. The comprehensive risk measure (CRM) is designed to take account of risks in asset-backed securities.

Q-64. The following formula defines the capital requirement (c) under the internal models approach to the calculation of market risk under Basel III:

$$C = \max \{VaR_{t-1}, m_c \times VaR_{avg}\} + \max \{sVaR_{t-1}, m_s \times sVaR_{avg}\}$$

About this calculation , each of the following is true EXCEPT which is false?

A. The first term is the higher of (i) the previous day's VaR and (ii) an average of the daily VaR measures on each of the preceding sixty business days, multiplied by a multiplication factor

B. The second term is the higher of (i) the latest available stressed VaR and (ii) an average of the stressed VaR numbers over the preceding sixty business days, multiplied by a multiplication factor

C. The multiplication factors m(c) and m(s) will be set by individual supervisory authorities but subject to an absolute minimum of three (3)

D. The bank can choose to conduct an ex-post backtest on the stressed VaR only; if the test is successful, both multiplicative factors can be reducted to one

Q-65. The capital conservation buffer:

A. Will provide an extra 2.5% Common Equity Tier 1 capital buffer in times of stress.

B. Will be used exclusively to protect banks from the losses garnered from OTC derivatives trading.

C. Is required only for banks with inadequate liquidity coverage and net stable funding source ratios.

D. Is covered in the increased Common Equity Tier 1 capital to risk-weighted assets ratio that will increase to 4.5% from the current 2% over the next few years.

Q-66. Which is true about the capital conservation buffer?

A. When a bank's capital levels fall within this range,the bank can continue to conduct

(operate) business.

B. When a bank's capital levels fall within this range, the bank is constrained (restricted) with respect to dividends, share buybacks,and discretionary bonus payments to staff.

C. When a bank's capital levels fall within this range, the bank is "severely restricted" with respect to conducting business (operations).

D. The bank can elect to draw down the buffer in normal times if competitive demands warrant, including the need to maintain market share.

Q-67. Capital conservation buffers have been established by the Basel Committee as part of measures designed to ensure that banks have enough capital to handle stress situations. Assuming no regulatory add-ons have been imposed, which of the following is correct?

A. If the bank has 8% Common Equity Tier 1(CET1) capital with no Additional Tier 1 or Tier 2 capital. It would have zero conservation buffer and therefore be subject to a 100% constraint on capital distributions.

B. If the bank has 8% CET1 with no Additional Tier1 or Tier 2 capital, it would satisfy the zero conservation buffer and therefore not be subjected to a constraint on capital distributions.

C. If the bank has 7% CET1 with no Additional Tier1 or Tier 2 capital; it would have a 2.5% conservation buffer and therefore not be subjected to a constraint on capital distributions.

D. If the bank has 9.5% CET1 with no Additional Tier 1 or Tier 2 capital, it would have a 2.5% conservation buffer and therefore not be subjected to a constraint on capital distributions.

Q-68. Among these two buffers, which does Basel 3 implement to reduce procyclicality and "promote the conservation of capital and the build-up of adequate buffers above the

minimum that can be drawn down in periods of stress?"

I. Basel 3 will phase-in a capital conservation buffer of 2.5% (of RWA) comprised of common equity Tier 1

II. Basel 3 will phase-in a countercyclical buffer of between 0% and 2.5% (of RWA) to be determined by supervisors (national authorities)

A. Neither I nor II.

B. Only I but not II.

C. Only II but not I.

D. Both I and II.

Q-69. Which is true about the countercyclical conservation buffer?

A. The countercyclical buffer is primarily a micro-prudential measure

B. The countercyclical buffer can only be zero (0%) during the phase-in period,as eventually it achieves a constant of 2.5% regardless of environment

C. Its primary goal is to avoid destabilizing losses subsequent to a period of excess credit growth

D. A bank will be required to maintain this buffer if the bank falls under a jurisdiction identified and designated by the Basel Committee

Q-70. Which of the following statements is false regarding the leverage ratio? The leverage ratio:

A. Acts as a supplementary measure to risk-based capital standards.

B. Is defined as Tier 1 capital to on-and-off-balance sheet items and exposures.

C. Allows banks to lend approximately 33 times their capital.

D. Is risk-based.

Q-71. The CFO at a bank is preparing a report to the board of directors on its compliance with Basel requirements. The bank's average capital and total exposure for the most recent quarter is as follows:

REGULATORY CAPITAL	USD MILLION
Total Common Equity TIer 1 Capital	108
Additional TIer 1 Capital	28
Prior to regulatory adjustments	34
Regulatory adjustments	6
Total TIer 1 Capital	136
TIer 2 Capital	36
Prior to regulatory adjustments	45
Regulatory adjustments	9
Total Capital	172
Total Average Exposure	3678

Using the Basel III framework, which of the following is the best estimate of the bank's current leverage ratio?

A. 2.94%

B. 3.70%

C. 4.68%

D. 5.08%

Q-72. Each of the following is a characteristic of a high-quality liquid asset except for:

1.3. A. Active and sizeable market with evidence of market breadth (price impact per unit of liquidity) and market depth (units of the asset that can be traded for a given price impact)

B. High market concentration among a limited set group of buyers and sellers

C. Low correlation with risky assets; i.e.,not subject to wrong-way risk

D. Asset class has shown historical tendency to be a “flight to quality” destination

Q-73. The liquidity requirement designed to improve bank resiliency to liquidity shocks over a one-year horizon is called the:

A. Liquidity coverage ratio.

B. Net stable funding ratio.

C. Contractual maturity mismatch ratio.

D. Available unencumbered assets ratio.

Q-74. According to the Basel Committee, “During the early liquidity phase of the financial crisis, many banks--despite adequate capital levels—still experienced difficulties because they did not manage their liquidity in a prudent manner. The crisis again drove home the importance of liquidity to the proper functioning of financial markets and the banking sector. Prior to the crisis, asset markets were buoyant and funding was readily available at low cost. The rapid reversal in market conditions illustrated how quickly liquidity can evaporate and that illiquidity can last for an extended period of time…the Committee has further strengthened its liquidity framework by developing two minimum standards for funding liquidity.” Consider the following statements:

I. The two mentioned standards - which aim to strengthen the liquidity framework - are the liquidity coverage ratio (LCR) and the net stable funding ratio (NSFR)

II. The LCR tries to ensure short-term liquidity resilience (one month) while the NSFR promotes longer-term liquidity resilience (one year)

III. The LCR anticipates an acute stress scenario by defining total net cash outflows under a stress scenario, while the NSFR does not explicitly simulate a stress scenario

Which of the above is (are) true?

A. None are true

B. I only

C. II only

D. All are true

Q-75. Which of the following statements is correct regarding capital requirements for insurance companies?

A. Basel II includes the regulation of banks and insurance companies in the three pillars.

B. The minimum capital requirement is likely to be higher than the solvency capital requirement for insurance companies.

C. The repercussion for violating the solvency capital requirement is likely liquidation and the transfer of company insurance policies to another firm.

D. The internal models approach to calculating the solvency captial requirement is similar to internal ratings based approach under Basel II in that the firm must calculate a VaR with a one-year time horizon.

Q-76. Which of the following statements is correct regarding the mechanics and motivations of contingent convertible bonds (CoCos)?

I. During normal financial periods, CoCos are debt and do not drag down return on equity.

II. During periods of financial stress, CoCos convert to equity, providing a cushion against loss, which helps prevent insolvency.

A. I only.

B. II only.

C. Both I and II.

D. Neither I nor II.

QUESTION 78 THROUGH 79 REFER TO THE FOLLOWING INFORMATION

The CRO of Bank LGX, a non-dividend-paying US-based bank is preparing a report to the board of directors on the bank's capital adequacy and planning. Bank LGX is subject to both the Basel framework and the US banking rules governing global systemically important banks (G-SIBs). The bank claims that it was in compliance with all the capital requirements in January 2016 as all Basel III phase-ins have already occurred. The CRO is conducting the analysis for January 2017 using selected and most recent annual performance data, which are shown in the table below:

Item	Value
Common equity Tier 1(CET1) capital	1,515
Preferred stock(noncumulative)	100
Tier 2 capital	827
Risk-weight assets	26,395
Total assets	42,828
Total exposure	47,460

The CRO also reports the minimum regulatory capital requirements under the revised capital framework as presented in the table below. The capital ratios also include the capital conservation buffer of 2.5% (phased-in at an annual increment of 0.75%, starting January 2016) and a G-SIB surcharge of 3.0% (phased-in at an annual increment of 0.625%, starting January 2016) of risk-weighted assets to be reached by January 2019

	January 2016 Minimum Ratio	January 2017 Minimum Ratio	January 2018 Minimum Ratio	January 2019 Minimum Ratio
Capital conservation buffer	0.625%	1.25%	1.875%	2.5%
G-SIB surcharge	0.75%	1.5%	2.25%	3.0%
CET 1 ratio	4.5%	5.25%	6.5%	10.0%
Tier 1 capital ratio	6.0%	6.75%	8.0%	11.5%
Total capital ratio	8.0%	8.75%	11.5%	13.5%

Leverage ratio	4.0%	4.0%	4.0%	4.0%

Q-77. Given the regulatory benchmarks and the bank's performance, which of the capital requirements does Bank LGX satisfy as of January 2017?

A. CET1 capital ratio only

B. Leverage ratio only

C. Tier 1 capital ratio and Leverage ratio only

D. Total capital ratio and CET1 capital ratio only

Q-78. In viewing the results of this capital analysis report and other considerations for Bank LGX's capital planning, which of the following conclusions is correct?

A. The capital conservation buffer can be met by an increase in Tier 2 capital.

B. If the exposure on derivative asset positions decreases, holding other factors constant, total capital ratio would decrease.

C. The increase in the credit valuation adjustment (CVA) due to the bank's asset counterparty positions would tend to raise the bank's risk-weighted assets.

D. If the bank raises additional CET 1 capital and invests the same amount in gold, Bank LGX's net stable funding ratio (NSFR) will not change.

QUESTION 80 THROUGH 83 REFER TO THE FOLLOWING INFORMATION

ABC Bank operates in a G-20 country that has mandated full compliance with the Basel III Accord. ABC Bank's current assets and capital are provided in the table below. The values in the grey cells can be derived from the data provided.

Regulatory Capital	**USD Millions**
Total Common Equity Tier 1 Capital	**74**
Prior to regulatory adjustments	83
Regulatory adjustments	9
Additional Tier 1 Capital	**13**

Prior to regulatory adjustments	16
Regulatory adjustments	3
Tier 1 Capital	**87**
Tier 2 Capital	**36**
Prior to regulatory adjustments	45
Regulatory adjustments	9
Tier 3 Capital	**8**
Total Capital	

Risk-Weighted Assets	**USD Millions**
Total Risk-Weighted Assets for Credit Risk	**889**
RWA for Credit Risk – Basel III IRB Approach	809
CVA Capital Charge	80
Total Capital Charge for Market Risk	**26**
Total Capital Charge for operational Risk	**20**
Other Pillar 1 Capital Requirements	0
Total Risk-Weighted Assets	

Capital Ratios	
Common Equity Tier 1 Capital Ratio	
Tier 1 Capital Ratio	
Total Capital Ratio	
Total Exposure for the Calculation of the Leverage Ratio	**2,519**
Leverage Ratio	

Q-79. An increase in which of the following would increase ABC Bank's Common Equity Tier 1 capital under the Basel III framework?

A. Defined benefit pension fund liabilities.

B. Investment in its own common shares.

C. Unrealized loss on available for sale items.

D. Goodwill and other intangibles.

Q-80. With respect to the Basel III accord, what is ABC Bank's current ratio of total regulatory capital to risk-weighted assets?

A. 5.94%

B. 8.40%

C. 8.95%

D. 13.16%

Q-81. With respect to the Basel III minimum capital requirements, without considering any buffers,which of the following statements about ABC Bank's current capital and assets is correct?

A. ABC Bank currently satisfies the minimum requirement for both the Common Equity Tier 1 capital ratio and the Tier 1 capital ratio.

B. ABC Bank currently satisfies the minimum requirement for Common Equity Tier 1 capital ratio, but not the Tier 1 capital ratio.

C. ABC Bank currently satisfies the minimum requirement for Tier 1 capital ratio, but not the Common Equity Tier 1 capital ratio.

D. ABC Bank currently does not satisfy the minimum requirement for either the Common Equity Tier 1 capital ratio or the Tier 1 capital ratio.

Q-82. With respect to the Basel III accord, what is ABC Bank's current leverage ratio and does it satisfy the minimum requirement?

A. 2.94%; yes, this satisfies the minimum required leverage ratio.

B. 2.94%; no, this does not satisfy the minimum required leverage ratio.

C. 3.45%; yes, this satisfies the minimum required leverage ratio.

D. 3.45%; no, this does not satisfy the minimum required leverage ratio.

3.16. Key Point: Basel III Reforms and finalization

3.16.1. 重要知识点

3.16.1.1. Basel III Reforms

- The revisions seek to restore credibility in the calculation of risk-weighted assets and improve the comparability of banks' capital ratios by:
- Enhance the standardised approaches for credit risk, credit valuation adjustment (CVA) risk and operational risk.
- Constrain the use of the internal model approaches.
- Introduce a leverage ratio buffer to further limit the leverage of global systemically important banks (G-SIBs).
- Place a more robust risk-sensitive floor.

3.16.1.2. SMA Capital Requirement

- The SMA combines the Business Indicator (BI) Component and Internal Loss Component.
- BI is a financial statement proxy of operational risk exposure. To compute the BI for year t, bank must determine the 3 year average of the BI, as the sum of the 3 year average of its components.
- $\mathrm{BI} = \mathrm{ILDC}_{\mathrm{Avg}} + \mathrm{SC}_{\mathrm{Avg}} + \mathrm{FC}_{\mathrm{Avg}}$
- Banks are divided into three buckets according to the size of their BI.

Bucket	BI Range in Euro(bn)	BI Marginal Coefficients
1	≤1	12%
2	1 < BI≤30	15%
3	> 30	18%

- Internal Loss Component: The Loss Component (LC) = 15 * average annual operational risk losses incurred over the previous 10 years.
- $\mathrm{ILM} = \mathrm{Ln}[\exp(1) - 1 + (\frac{\mathrm{LC}}{\mathrm{BIC}})^{0.8}]$
- The SA OP Risk Capital Requirement：

  $\mathrm{ORC} = \mathrm{BIC} \times \mathrm{ILM}$
- ORC: minimum operational risk capital

3.16.2. 基础题

Q-83. An operational risk manager is asked to report a bank's operational risk capital under the Standardized Measurement Approach (SMA) proposed by the Basel Committee in March 2016. The treasury department produces the following data for the bank, calculated according to the SMA guidelines:

- Business Indicator (BI): EUR 1,200 million
- Internal Loss Multiplier: 1

In addition, the manager uses the Business Indicator buckets in the Business Component presented in the table below:

Bucket	BI Range	BI Component
1	⩽ 1billion	12%×BI
2	1 billion< BI ≤ 30billion	EUR120million+15%(BI-EUR1billion)
3	> 30billion	EUR4.47billion+18%(BI-EUR30billion)

What is the correct operational risk capital that the bank should report under the SMA?

A. EUR 120 million

B. EUR 150 million

C. EUR 158 million

D. EUR 180 million

Q-84. The Basel III reforms restricted the use of internal model approaches for all of the following risk categories except:

A. credit risk.

B. systemic risk.

C. operational risk.

D. credit valuation risk.

Q-85. The Basel III reforms introduced a leverage buffer ratio for all:

A. global banks.

B. unregulated global banks.

C. global systemically important banks.

D. banks regulated by the U.S. Federal Reserve and the European Banking Authority.

Q-86. The new operational risk capital requirements under the Basel III reforms are determined by measures of the bank's:

A. leverage and income.

B. income and historical operational risk losses.

C. income and expected operational risk losses.

D. leverage and expected operational risk losses.

3.14. Key Point: Cyber Resilient and Operational Resilient

3.14.1. 重要知识点

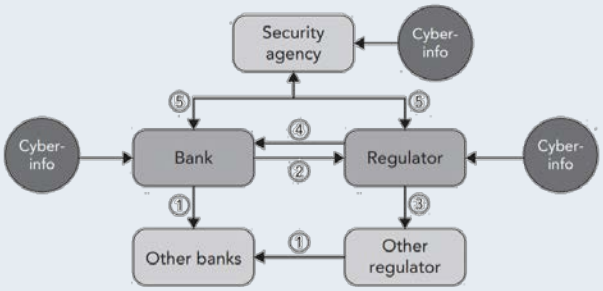
3.14.1.1. Cyber Resilience

- The aim of cyber resilience is to maintain a system's capability to deliver the intended outcome at all times, including times of crisis when regular delivery has failed.

3.14.1.2. Incident Response

- Rapid Adaptation to Changing Conditions
  - Cyber Risk Awareness in Staff
  - Gaming and Exercises
  - Gaming and Exercises
  - Business Continuity Planning and Staff Engagement

3.14.1.3. Interlinkage of different types of cyber-security information-sharing practices



3.14.1.4. Operational Resilience, BC and DR

- Traditional business continuity (BC) and disaster recovery (DR).
  - BC and DR have historically been heavily focused on physical events, were designed and tested in organizational silos, and are, by most organizations, primarily viewed as a compliance exercise.
  - BC and DR are limited by organizational boundaries, and are, by most organizations, primarily viewed as a "check the box" exercise rather than true risk management.
- Operational resilience focuses on the adaptability to emerging threats. It requires a mindset shift in the organization away from resilience as a compliance exercise to resilience as a key organizational capability that is everyone‘s responsibility to maintain and continuously improve.

3.14.2. 基础题

Q-87. Which of the statements about incident response and crisis management is wrong ?

A. The aim of cyber resilience is to maintain a system’s capability to deliver the intended outcome at all times, including crisis when regular delivery has failed.

B. To balance risk with opportunity, a corporate risk-based strategy needs to be put in

place that manages the vulnerabilities, threats, risks and impacts.

C. Successful training can be achieved only with full staff engagement. If the training is perceived as dull, tedious and boring, the results are likely to be disappointing, Unless the training is technically expert.

D. Gamification usually means awarding points to employees who do the right thing, with various forms of recognition, including badges, prizes, and a leader board listing point totals.

Q-88. Which of the statements regarding on resilient security solution is wrong ?

A. A resilient strategy for coping with a cyber attack should minimize the instrusion dwell time, which is the time from initial system compromise to the time the malware ceases to be effective.

B. Anomaly detection algorithms use state-of-the art artificial intelligence methods, incorporating sophisticated Bayesian techniques of statistical inference. These probabilistic tools for searching for discrepancies have been refined using ideas developed for big data analysis.

C. Conducting a pen test to prove that a missing patch is a security issue typically raises the cost of testing, and runs the expensive risk of potential system downtime.

D. Junior security personnel may work obsessively to reduce vulnerability where they find it and the effectiveness of risk reduction should be considered prior to the cost on risk management.

Q-89. Which of the practice on cyber-risk management, testing and incident response and recovery is wrong ?

A. A clear understanding of business services and supporting assets (and their criticality and sensitivity) can be used to design testing and assurance of end-to-end business services. This is typically completed as part of business impact analysis, recovery and resolution planning, reviewing dependency of critical services on external third parties,

and scoping for assessments.

B. Evaluation of service continuity plans focuses on reviewing alignment with institutions' risk management frameworks, the business continuity management strategies chosen, IT disaster recovery arrangements and data centre strategies.

C. Supervisors review and challenge regulated institutions' approach to testing controls and the remediation of issues identified. This can include reviewing survey responses, threat and vulnerability assessments, risk assessments, audit reports and control testing reports

D. Supervisory authorities should neglect entities' own management information because this differs across entities and is not yet mature.

Q-90. Most Basel Committee jurisdictions have put in place cyber-security information-sharing mechanisms, be they mandatory or voluntary, to facilitate sharing of cyber-security information among banks, regulators and security agencies. Which of the statement on information-sharing frameworks is wrong?

A. Because there is no common standard for automated information-sharing, regulators in most jurisdictions are directly involved in bank-to-bank information sharing and do play a role in facilitating the establishment of voluntary sharing mechanisms for cyber-vulnerability, threat and incident information, and in some cases indicators of compromise.

B. The sharing of cyber-security information from a bank to its regulator(s)/supervisor(s) is generally limited to cyber-incidents based on regulatory reporting requirements.

C. Regulators share information with fellow regulators, be they domestic or cross-border, as appropriate according to established mandatory or voluntary information-sharing arrangements.

D. Information-sharing from regulators to banks occurs through established channels, based on the information the regulator receives both from banks and other sources. Various jurisdictions have established clear guidance in the form of standards and practices to enable cyber-security information-sharing by regulators to banks.

Q-91. Which of the following statement is wrong about an operational resilience approach?

I. Whereas traditional approaches focus solely on recovery, operational resilience has a broader scope and needs to be integrated into the risk-mitigation fabric of the organization.

II. Priorities between firms and FMIs(Financial Market Infrastructures) and the supervisory authorities may not always be aligned. It is possible that the supervisory authorities may believe that a disruption to a business service would harm their objectives, while a firm or FMI might consider the disrupt ion to be a manageable risk.

III. Resilience is applicable to all institutions, even if the objectives for each institution might differ. For example, Financial Market Infrastructure's (FMI) resilience objectives will likely focus on avoiding systemic disruptions, while smaller institutions' objectives will likely focus on maintaining shareholder value.

A. I and II

B. I and III

C. II and III

D. All of them

Q-92. The ability of financial firms and systems to recover from an operational disruption and continue operations is a key concern for maintaining the financial stability of the economy. Under which of the following scenarios are supervisory authorities more concerned about the occurrence of systemic risk related to the failure of financial firms or financial market infrastructures (FMIs)?

A. a dynamic environment and more reliance on outsourcing to third parties

B. a dynamic environment and numerous stakeholders across international borders

C. a static environment and more reliance on outsourcing to third parties.

D. a static environment and numerous stakeholders across international borders

Q-93. Impact tolerances are least likely to provide a

A. framework for firms and FMIs to prioritize business services and allocate investments and resources

B. clear framework for testing operational resilience

C. focal point for communication and reporting with supervisory authorities

D. standardized benchmark for all firms regardless of firm size or geographical location

Solutions

Q-1. Solution: B

In (B), systems failure or incorrect systems caused the problem. The losses are directly due to an operational risk exposure, (A) and (C), an increase in interest rates and the fall in the value of an investment, are both examples of market risk exposure, (D), failure to repay debt, is an example of credit risk exposure.

Q-2. Solution: C

Q-3. Solution: D

Q-4. Solution: B

Sound operational risk governance, according to Basel, relies on three lines of defense: (i) first lines of defense – business line management, which is responsible for identifying and managing the risks inherent in the products, activities, processes and systems for which it is accountable: (ii) second line of defense – an independent corporate operational risk management function, generally complementing the business lines' operational risk management activities; (iii) third line of defense – an independent review – review and audit of the bank's operational risk management controls, processes and systems.

Basel II and Basel III define operational risk (inclusive of technological risk) as the risk of direct or indirect loss resulting from inadequate or failed internal processes, people and systems or from external events. Although a number of financial institutions add reputation risk and strategic risk (e.g., due to a failed merger) as part of a broadened definition of operational risk, they are not within the scope of definition by Basel II/III.

Q-5. Solution: A

Management has the ability to influence the correlations between these risks by changing the asset/Liability mix, so management decision-making is indeed quite relevant.

Q-6. Solution: B

Statements (A), (C), and (D) are consistent with industry data. However, with operational risk, there tends to be large numbers of small losses and a small number of large losses, so the distribution is asymmetric (and fat-tailed)

Q-7. Solution: C

While it is accurate that the CRO is responsible for top-level risk management, he is also responsible for the analytical or systems capabilities for risk management.

Q-8. Solution: D

Q-9. Solution: C

Implementation of ERM requires integration. Appointing a CRO and establishing a centralized, integrated risk management team can better address the interdependencies among individual risks faced by the company and thus increase efficiency.

A is incorrect because ERM does not necessarily allow the company to determine and make use of a higher risk appetite.

B is incorrect because ERM suggests the opposite of a fragmented approach in risk management.

D is incorrect because ERM improves business performance by taking a portfolio view of all risks rather than on a standalone basis.

Q-10. Solution: A

In terms of communicating the RAF with the bank's employees, additional information on the firm's risk capacity versus current amount of risk undertaken should be provided to assist employees with understanding the RAF.

An effective RAF must go beyond the mere setting of risk limits. The best practice would be to educate the employees who must comply with those limits. Those employees should understand the background and reasons for the limits together with their impact on the firm's revenue/ profits, client service, and total risk.

Q-11. Solution: B

The process may involve providing additional financial information such as liquidity, leverage, and capital objectives; the idea is to try to "transform" as many of the qualitative objectives into measurable objectives as possible. Such guidance is intended for the business unit managers to determine their strategic and capital plans that are more aligned with the firm overall.

Choice A is not correct because the final step of the process involves not only changes made to the business unit plans but also possibly changes to the firm's overall risk appetite. If the overall risk appetite is changed, there must be justification to do so and it must be done in a transparent

manner. Choice C is not correct because the structured process begins with either a complete risk appetite statement from the board or some fundamental risk parameters for the individual business units to consider. Choice D is not correct because the same general steps of the process apply regardless of whether the firm's planning process is top down or bottom up.

Q-12. Solution: D

Too much training can have a numbing effect on staff and sometimes can have the opposite effect than that is intended. So the right training for the right staff at the right time is necessary. That is, the training should be targeted specifically and not force everyone to do everything.

Q-13. Solution: D

The third line of defense should be robust and operational independent.

Q-14. Solution: C

Recent scandals criticizing banks for overly aggressive sales tactics have led numerous financial institutions to remove sales-driven incentives for front-line employees and replace these measures with alternative measures such as customer satisfaction. Improper compensation incentives can lead to misconduct. Terminations for breaches of conduct may provide teachable moments for redefining culture when dealing with inappropriate behaviors by employees who are overachievers based on traditional performance-driven measures.

Q-15. Solution: C

Establishing a healthy risk culture is a collective process rather than a system that deals with just the enhancement of technical skills.

Q-16. Solution: C

Corporate culture results from common values, fundamental assumptions, beliefs, behaviors, and past business decisions. Within an organization, the participants integrate those factors so that they may become internalized core values. In short, the corporate culture may explain how or why an organization reacts a certain way to a current business situation.

Q-17. Solution: C

Assuming culture is directly applicable to business situations, then culture can have a major impact on business performance. There are two schools of thought:(1) it could have a fixed impact, or(2) it could have a variable impact over a longer term. The effects of culture take a

significant amount of time to affect business performance therefore it is least likely to impact business performance in the short term. Risk culture that is outdated will likely result in static or declining business performance.

Q-18. Solution: C

Data normalization is a process to better organize data in order to minimize redundancy and dependency, so it is least likely to increase risk. All of the other data issues are likely to increase risk, especially complex data transformations.

Q-19. Solution: C

Record level consistency is consistency between one set of data values and another set within the same record. Cross-record level consistency is consistency between one set of data values and another set in different records

Q-20. Solution: A

Q-21. Solution: A

Huddle bias suggests that groups of individuals tend to avoid conflicts that can result from different viewpoints or opinions. Availability bias is related to the expert's experience in dealing with a specific event or loss risk. Anchoring bias occurs when an expert limits the range of a loss estimate based on personal knowledge. Context bias occurs when questions are framed in a way that influences the responses of those being questioned.

Q-22. Solution: B

I. Incorrect. Even though this is a risk that can increase exposure to model risk, the policy itself is regarding compensation and not the model itself.

II. Correct. This assumption can lead to major error where market liquidity is limited.

Q-23. Solution: A

Senior managers need not be expert modelers, but they do need to understand the fundamentals of model risk so that they can ask the right questions and implement sound risk management procedures.

Q-24. Solution: B

Six common model errors include: (1) assuming constant volatility, (2) assuming a normal distribution of returns, (3) underestimating the number of risk factors, (4) assuming perfect

capital markets, (5) assuming adequate liquidity, and (6) misapplying a model.

Q-25. Solution: B

Dynamic properties include rating systems stability and attributes of migration matrices. Calibration looks at the relative ability to estimate probability of default (PD). Discriminatory power is the relative ability of a rating model to accurately differentiate between defaulting and non-defaulting entities for a given forecast period. Sample representativeness is demonstrated when a sample from a population is taken and its characteristics match those of the total population.

Q-26. Solution: B

VaR measures will vary according to the approach (delta-normal, historical simulation, Monte Carlo simulation). The variation in these values does not suggest bigger problems with data or programming/implementation nor is there any reason to suspect endogenous model risk. (e.g., traders gaming the system to lower risk values)

Q-27. Solution: C

Given the quick implementation of the new VaR model and the insufficient amount of testing that was done, the desk has increased its exposure to model risk due to the increased potential for incorrect calibration and programming errors.

Q-28. Solution: C

The risk manager has a great deal of discretion in actually computing a VaR. The VaR techniques can be mixed and matched in different ways. Within each mode of computation, there are major variants, for example, the so-called “hybrid” approach of using historical simulation with exponentially weighted return observations. This freedom is a mixed blessing. On the one hand, the risk manager has the flexibility to adapt the way he is calculating VaR to the needs of the firm, its investors, or the nature of the portfolio.

On the other hand, it leads to two problems with the use of VaR in practice:

1. There is not much uniformity of practice as to confidence interval and time horizon; as a result, intuition on what constitutes a large or small VaR is underdeveloped.

2. Different ways of measuring VaR would lead to different results, even if there were standardization of confidence interval and time horizon. There are a number of computational

and modeling decisions that can greatly influence VaR results, such as:

- Length of time series used for historical simulation or to estimate moments
- Technique for estimating moments
- Mapping techniques and the choice of risk factors, for example, maturity bucketing
- Decay factor if applying EWMA
- In Monte Carlo simulation, randomization technique and the number of simulations

Q-29. Solution: C

The two model errors considered to have contributed the most to a significant underestimation of systematic risk were (1) the assumption of future house price appreciation, and (2) the assumption of low correlations among regional housing markets.

Q-30. Solution: C

In any event, the correlation assumption was static. This was the critical flaw, rather than using the 'wrong' copula function, or even the 'wrong' value of the correlation. The deltas used to set the proportions of the trade were partial derivatives that did not account for changing correlation. Changing correlation drastically altered the hedge ratio between the equity and mezzanine tranches, which more or less doubled to nearly 4 by July 2005. In other words, traders needed to sell protection on nearly twice the notional value of the mezzanine tranche in order to maintain spread neutrality in the portfolio.... The model did not ignore correlation, but the trade thesis focused on anticipated gains from convexity. The flaw in the model could have been readily corrected if it had been recognized. The trade was put on at a time when copula models and the concept of implied correlation generally had only recently been introduced into discussions among traders, who had not yet become sensitized to the potential losses from changes in correlation. Stress testing correlation would have revealed the risk. The trade could also have been hedged against correlation risk by employing an overlay hedge: that is, by going long single-name protection in high default-probability names. In this sense, the 'arbitrage' could not be captured via a two-leg trade, but required more components."

Q-31. Solution: B

	Initial	Operating Expenses ↓	Revenue ↑	Return on EC ↑	Interest Expense ↓

Expected Revenue	16.00	16.00	19.2	16.00	16.00
Return on EC	0.94	0.94	0.94	1.88	0.94
Interest Expenses	4.00	4.00	4.00	4.00	2
Operating Expenses	2.00	1	2.00	2.00	2.00
Expected Loss	1.00	1.00	1.00	1.00	1.00
EC	47.00	47.00	47.00	47.00	47.00
RAROC	21.15%	23.28%	27.96%	23.15%	25.40%

Q-32. Solution: C

The cost of equity represents the minimum rate of return on equity required by shareholders. Therefore, if RAROC is below the cost of equity, then there is no value being added.

Q-33. Solution: D

Expected revenue = $2.0 billion loan portfolio × 6.0% = $120.0 million

Expected losses = $2.0 billion loan portfolio × 1.5% = $30.0 million

Interest expense = $2.0 billion borrowed funds × 2.0% = $40.0 million

Operating cost = $16.0 million (given as an assumption)

Economic capital = $200.0 million = 10.0% × $2.0 billion (given as an assumption)

Return on economic capital (EC) = $2.0 million = $200.0 EC × 1.0%

Tax rate = 0.25 (given as assumption)

Such that RAROC = [($120.0 - 30.0 - 40.0 - 16.0 + 2.0) × (1.0 - 0.25 tax rate)] / 200.0 = 13.50%

Adjusted RAROC = RAROC - $\beta(e) \times [R_{(m)} - R_f]$ = 13.50% - 1.60 × [8.0% - 1.0%] = 2.30% and 2.30% is greater than the risk-free rate.

Q-34. Solution: C

Q-35. Solution: D

A scenario is coherent when a change in one factor influences other factors in a logical manner. In this case, choice d is a coherent scenario since the Nordlandian economy depends heavily on exports of oil and natural gas, so therefore a sustained decrease in natural gas prices should lead to a decrease in stock prices as the domestic economy weakens. In stress testing banks, it is often challenging to develop scenarios where all factors behave coherently.

Q-36. Solution: D

Country risk refers to using a service provider based in a foreign country and subjecting the financial institution to potential economic and political risks in that country. Clearly, it is not a relevant risk arising from the breach of confidential customer data. Compliance risk is a possibility given the apparent lack of security controls of the service provider that resulted in the data breach. Operational risk is clearly a relevant risk to the financial institution here given the data breach caused by the service provider. Legal risk is clearly a relevant risk given that the customers affected by the data breach may sue the financial institution as a result of the breach.

Q-37. Solution: A

A is correct. Internal Controls: “For significant service provider relationships, financial institutions should assess the adequacy of the provider's control environment. Assessments should include reviewing available audits or reports such as the American Institute of Certified Public Accountants' Service Organization Control 2 report.”

B is incorrect. The bank should review the vendor's incentive compensation structure and ensure that the structure does not encourage vendor sales representatives to direct customers towards higher margin products without regard for the risk incurred. Compensating sales reps mostly with commissions would not be an appropriate structure.

C is incorrect. Outsourcing critical processes is not ruled out as a guideline, for example: A community banking organization may have critical business activities being outsourced, but the number may be few and to highly reputable service providers "(Larger) financial institutions may use hundreds or thousands of service providers for numerous business activities that have material risk..."

D is incorrect. The bank should monitor the vendor's contingency planning process and "assess the adequacy and effectiveness of a service provider's disaster recovery and business continuity plan and its alignment with its own plan".

Q-38. Solution: C

C is correct. Due diligence should be applied not only to customers but also to persons acting on their behalf and beneficial owners.

A is not correct. Banks should still conduct their own due diligence on the customer in this case, as the previous account manager may have already closed the account because of

concerns of illicit activity.

B is not correct. Due diligence should specifically be increased for customers with higher risk profiles.

D is not correct. Banks should not open an account under any circumstances if the client insists on remaining anonymous. Confidential “numbered accounts” do not function as anonymous accounts and should be subject to the same customer due diligence standards as other accounts.

Q-39. Solution: C

Bilateral clearing in an OTC market involves two parties clearing the transactions with each other at mutually agreed-upon terms.

Q-40. Solution: C

Poisson and Negative Binomial distributions are appropriate for loss frequency while Pareto, lognormal, Generalized Gamma, Transformed Beta, or Weibull distributions (fat-tailed) are generally used for loss severity

Q-41. Solution: D

RWA = $10,000,000 + $300,000 × 12.5 + $500,000 × 12.5 = $20,000,000 ;

Total capital ratio =$2 million / $20 million = 10.0%

Q-42. Solution: A

It is the perfect correlation.

Q-43. Solution: A

False: The capital charges are added (CRC + MRC + ORC); Basel II gives no recognition for potential diversification benefits at this level of analysis.

In regard to (b), (c) and (d), each are true. In regard to (b), please note the “mutually reinforcing” aspect of the framework; and that Pillar One implies only minimum capital requirements.

Q-44. Solution: D

The bank’s long-term strategy and a mapping of new product development initiatives to planned target markets and customers.

The Third Pillar does not ask the bank to reveal such strategic insights (the nearest ti this is likely indirect by way of renumeration-related disclosures)

Q-45. Solution: B

B is correct. Under the advanced internal ratings-based (Advanced IRB) approach banks supply their own estimates of probability of default (PD), loss given default (LGD) and exposure at default (EAD). Since LGD is dependent on recovery rates, this also implies that the recovery rates are modelled. On the other hand, under the foundation ratings based approach, they supply only PD, while LGD and EAD are set by the Basel Committee. So, C is incorrect.

A is incorrect. The standardized measurement approach for operational risk has eliminated the use of internal models for modelling operational risk.

D is incorrect. Basel II.5 introduced a Comprehensive Risk Measure for credit sensitive instruments dependent on credit correlation. Banks could use their internal models to calculate the CRM, with supervisory approval, and these models included the estimation of recovery rates. However, the FRTB withdrew the use of the CRM for securitized products due to there being too much volatility between different banks' models in modeling securitizations. Banks are now required to use the standardized approach for these products.

Q-46. Solution: C

The supervisor's duties as Dart of the supervisory review process include:

Check compliance with Pillars I and III of Basel II Accord. Which would include credit risk mitigation and transparency requirements. Review internal control systems. Access internal capital management methods employed by the bank. So I and II are correct. Note that the foundation IRB approach. The bank provides its estimates for PD but uses supervisory estimates for LGD and EAD for corporate loans. So III is incorrect. Also, the impact of interest rate risk on the bank's capital position must be accessed by determining the impact of a 200 basis Point shock or its equivalent. So IV is also correct. Therefore, the correct Solution for this question is choice C.

Q-47. Solution: C

The loss year is excluded, so the charge is AVERAGE (130,230) × 15% alpha = $27 million

Q-48. Solution: A

Trading and sales: 18%

Corporate finance: 18%

Payment, settlement: 18%

Commercial banking: 15%

Agency services: 15%

Retail banking: 12%

Retail brokerage: 12%

Asset management: 12%

Q-49. Solution: B

As stated, the TRUE statement is: “This definition [of operational risk] includes legal risk, but excludes strategic and reputational risk.”

In regard to (A), (C) and (D) each in true .

In regard to (C),please note that under BIA, “Fingers for any year in which annual gross income is negative or zero should be excluded from both the numerator and denominator when calculating the average.”

Q-50. Solution: C

Both non- advanced approaches, including the standardized approach, multiply factors (alpha or beta) by gross income.Instead, the advanced measurement approaches (AMA) instead obtain a risk charge by internally estimating the unexpected loss (UL) at 99.9% confidence over one year; i.e., an OpRisk VaR approach.

Q-51. Solution: A

The standardized approach maps gross Income for business lines;the AMA allows banks to estimate unexpected operational losses with their own,presumably more accurate, internal models conditional on supervisor approval and meeting the associated quantitative and qualitative criteria.

Q-52. Solution: C

The internal models approach allows banks to use risk measures derived from their own internal risk management models, subject to a set of qualitative conditions and quantitative standards. In terms of risk aggregation within market risk using the internal models approach, banks are explicitly allowed to recognize empirical correlations across broad market risk categories, and, thus, diversification benefits. The standardized approach for market risk, on the other hand, assigns capital separately to each of debt securities, equity securities, foreign exchange risk,

commodity risk, and options without consideration for correlations between different types of instruments. Thus, C is correct and B is incorrect.

Also, A and D are incorrect because operational risk cannot be diversified.

Q-53. Solution: C

The revised market risk capital requirement (at 99.0% level) is:

Market Risk Capital = $\max(VaR_{t-1}, m_c \times VaR_{60\text{-day Avg}}) + \max(sVaR_{t-1}, m_s \times sVaR_{60\text{-day Avg}})$

= max(451, 3×413) + max(995, 3×1,106)

= USD 1,239 million + USD 3,318

= USD 4,557 million

Q-54. Solution: A

The backtesting framework only includes three zones: green, yellow, and red. The plus factor determined from these zones is added to the multiplier floor of three.

Q-55. Solution: C

This is extremely false: Basel II relies heavily on external credit ratings and the Committee has a focus to REDUCE reliance on external ratings. For example, for claims on banks, the rules are somewhat complicated. National supervisors can choose to base capital requirements on the rating of the country in which the bank is incorporated. The risk weight assigned to the bank will be 20% if the country of incorporation has a rating between AAA and A A-, 50% if it is between A+ and A-

100% if it is between BBB+ and B-, 150% if it is below B-, and 100% if it is unrated.

In regard to (A), Basel III will add the Liquidity Coverage Ratio (LCR) and the Net Stable Funding Ratio (NSFR).In regard to (B), Basel III will phase-in the countercyclical buffer requirement. In regard to (D), this is TRUE. The new leverage ratio (Tier 1/Total Exposure) will begin in2013 as an additional measure.

Q-56. Solution: C

Minimum total Tier 1 + Tier 2 capital REMAINS at 8.0% through January 2019. Additional capital requirements are achieved by other means; e.g., Minimum Tier 1 phases up to 6.0%, capital conservation buffer (CCB), minimum common equity capital ratio. In regard to (A), (B), and (D), these are TRUE about Basel III.

Q-57. Solution: C

Basel 2.5 updated the incremental risk charge. (IRC)

In regard to (A), (B) and (D), each is true.

The primary, new elements in Basel III include: liquidity ratios (LCG and NSFR), the leverage ratio, CVA and wrong-way (counterparty) risk.

Q-58. Solution: D

Common Equity Tier 1 capital to risk-weighted assets must be 4.5% beginning January 1, 2015. Common stock plus retained earnings, not preferred stock, must make up the bulk of Common Equity Tier 1 capital. The requirements for Common Equity Tier 1 capital are the most-stringent, not the least-stringent. Investors of the common shares must have a residual claim to the assets.

Q-59. Solution: A

No, because Tier 1 Capital is not at least 8.5%

Basel III requires Core Tier 1 (Common Equity) of 7.0%, Tier 1 of 8.5%, and Tobal Capital of 10.5%: Core Tier 1 (Common Equity) ratio of at least 7.0% = 4.5% + 2.5% Conservation Buffer. Thrift Bank holds exactly sufficient Common Equity: 2.8/40.0 =7.0%.

Tier 1 (Common Equity + Additional Tier 1) ratio of at least 8.5% = 6.0% Tier 1 + 2.5% Conservation buffer.Thrift Bank only holds Tier 1:3.0/40.0 = 7.5%

Total Capital ratio of 10.5% = 8.0% total capital + 2.5% Conversation Buffer. Thrift Bank holds Total Capital:4.4/40.0 = 11.0%

Q-60. Solution: B

Confidence level is 99.9%. Securitizations are subject to the banking book capital requirements.

Q-61. Solution: B

The stressed value at risk should be calculated on a weekly basis. This measure is calculated by combining current portfolio performance data based on the 10-day, 99% confidence interval with firm's historical data from a significantly financially stressed period of the same portfolio.

Q-62. Solution: B

The capital charge is an arithmetic sum of charges across categories including interest rate risk, equity position risk, foreign exchange risk.commodities risk, and options risk.This is why a key

criticism of the standardized approach is that it overcharges by ignoring the benefits of any diversification.

In regard to (A), this is false: Basel III abolished Tier 3 capital

In regard to (C), this is false: The more sophisticated banks with well-established risk management functions were allowed to use an "internal model-based approach" for setting market risk capital. Because it better reflected the benefits of diversification and led to lower capital requirements, the resultant capital must be at least 50% of the capital given by the standardized approach.

In regard to (D), this is false: The method ignores the benefits of any diversification.

Q-63. Solution: B

In 2008, the Basel Committee recognized that most of the losses in the credit market trumoil of 2007 and 2008 were from changes in credit ratings, widening of credit spreads, and loss of liquidity, rather than solely as a result of defaults. In regard to (A), (C) and (D), each is true. CRM is designed to take account of instruments such as asset-backed securities (ABSs) and collateralized debt obligations (CDOs), which are sensitive to the correlation between the default risks of different assets.

Q-64. Solution: D

The ex-post backtest applies only to the VaR, not the stressed VaR. Further, the backtest increases (via a "plus") the m(c) factor by a factor of zero to 1.0; it does not reduce the minimum of 3.0.Essentially, a yellow-zone backtest resultcan imply a minimum factor, m(c), of at least four (4.0=3.0+1.0), or more if the supervisor requires.

To review, the capital requirement (c) is given by the following formula:

$$C = \max \{VaR_{t-1}, m_c \times VaR_{avg}\} + \max \{sVaR_{t-1}, m_s \times sVaR_{avg}\}$$

i.e.,the sum of:

The higher of (1) its previous day's value-at-risk number,VaR(t-1); and (2)an average of the daily value-at-risk measures on each of the preceding sixty business days,VaR(avg), multiplied by a muitiplication factor, m(c),plus

The higher of (1) its latest avaliable stressed-value-at-risk sVaR(t-1); and (2)an average of the stressed value-at-risk over the preceding sixty business days,sVaR(avg), multiplied by a

muitiplication factor, m(s)

In regard to (A), (B) and (C), each is true.

Q-65. Solution: A

The capital conservation buffer is intended to provide an extra cushion against loss in times of stress. It is 2.5% Common Equity Tier 1 capital to risk-weighted assets, which in effect increases the total Common Equity Tier 1 capital ratio to 7%.

Q-66. Solution: B

When a bank's capital levels fall within this range, the bank is constrained (restricted) with respect to dividends, share buybacks, and discretionary bonus payments to staff

In regard to (A), (C) and (D), each are false.

Q-67. Solution: A

Core tier 1	4.5% +2.5%=7%
Tier 1	6%+2.5%=8.5%
Total	8%+2.5%=10.5%

Q-68. Solution: D

Both I and II.

Q-69. Solution: C

Its primary goal is to avoid destabilizing losses sybsequent to a period of excess credit growth

Losses incurred in the banking sector can be extremely large when a downturn is preceded by a period of excess credit growth.These losses can destabilize the banking sector and spark a vicious circle, whereby problems in the finacial system can contribute to a downturn in the real economy that then feeds back on to the banking sector. These interactions highlight the particular importance of the banking sector building up additional capital defenses in periods where the risks of system-wide stress are growing markedly."

In regard to (A), this buffer is quintessentially MACRO-prudential; e.g., The countercyclical buffer aims to ensure that banking sector capital requirements take account of the macro-financial environment in which banks operate."

In regard to (B), this is false as the countercylical buffer is only meant to apply during excess credit regimes. "This requirement will be released when system-wide risk crystallizes or

dissipates."

In regard to (D),the requirement for this buffer (from 0 to 2.5%) is delegated to the respective national authorities, not Basel.

Each Basel Committee member jurisdiction will identify an authority with the responsibility to make decisions on the size of the countercyclical capital buffer.If the relevant national authority judges a period of excess credit growth to be leading to the buildup of system-wide risk,they will consider,together with any other macroprudential tools at their disposal, putting in place a countercyclical buffer requirement. This will vary between zero and 2.5% of risk weighted assets, depending on their judgment as to the extent of the build-up of system-wide risk."

Q-70. Solution: D

The leverage ratio is simple and non-risk based and meant to act as a "backstop" measure of leverage.

Q-71. Solution: B

For Basel III purposes,the leverage ratio is Tier 1 Capital/Total Exposure = 136/3,678 = 3.70%

Q-72. Solution: B

NOT HIGH, but rather:Low market concentration among a limited set group of buyers and selleers

"Characteristics of high-quality liquid assets

(a) Fundamental characteristics

Low credit and market risk: assets that are less risky tend to have higher liquidity. High credit standing of the issuer and a low degree of subordination increases an asset's liquidity. Low duration, low volatility, low inflation risk and denomination in a convertible currency with low foreign exchange risk all enhance an asset's liquidity.

Ease and certainty of valuation: an asset's liquidity increases if market participants are more likely to agree on its valuation. The pricing formula of high-quality liquid asset must be easy to calculate and not depend on strong assumptions. The inputs into the pricing formula must also be publicly available.In practice, this should rule out the inclusion of most structured or exotic products.

Low correlation with risky assets: the stock of high-quality liquid assets should not be subject to wrong-way (highly correlated) risk. For example, assets issued by financial institutions are more likely to be illiquid in times of liquidity stress in the banking sector.

Listed on a developed and recognized exchange market: being listed increases an asset's transparency.

(b) Market-related characteristics

Active and sizable market: the asset should have active outright sale or repurchase agreement (repo) markets at all times (which means having a large number of market participants and a high trading volume). There should be historical evidence of market breadth (price impact per unit of liquidity) and market depth (units of the asset that can be traded for a given price impact).

Presence of committed market makers: quotes will most likely be available for buying and /or selling a high-quality liquid asset.

Low market concentration: a diverse grope of buyders and sellers in an asset's market increases the reliability of its liquidity.s

Flight to quality: historically, the matket has shown tendencies to move into these types of assets in a systemic crisis."

Q-73. Solution: B

The net stable funding ratio is intended to promote medium-and long-term funding of the bank's activities. It is defined as the available amount of stable funding divided by the required amount of stable funding, and it must be greater than 100%.

Q-74. Solution: D

All are true

"These standards have been developed to achieve two separate but complementary objectives. The first objectives is to promote short-term resilience of a bank's lipuidity risk profile by ensuring that it has sufficient high quality liquid resources to survive an acute stress scenario lasting for one month. The Committee developed the Liquidity Coverage Ratio (LCR) to achieve this objective. The second objective is to promote resilience over a longer time horizon by creating additional incentives for a bank to fund its activities with more stable sources of one year and has been developed to provide a sustainable maturity structure of assets and liabilities."

Q-75. Solution: D

Solvency II, not Basel II, establishes capital requirements for insurance companies. The minimum capital requirement (MCR) is just that, a true floor and is thus likely to be lower than the solvency

capital requirement (SCR). The repercussion for violating the MCR is likely the prohibition of taking new business and possible liquidation. The repercussion for violating the SCR is the requirement of a plan to remedy the situation and bring the capital back to the required level. The internal models approach is similar to the internal ratings based approach under Basel II in that the insurance company must calculate a one-year VaR with a 99.5% confidence level (versus 99.9% confidence for banks under Basel II).

Q-76. Solution: C

Contingent convertible bonds (CoCos), unlike traditional convertible bonds, convert to equity when the company or bank is experiencing financial strains. During normal financial periods, the bonds are debt and thus do not drag down return on equity (ROE).

Q-77. Solution: D

The bank's CET1 capital ratio = (CET 1 capital)/(risk-weighted assets)= (1,515/26,395) = 5.74%. This ratio meets and exceeds the 5.25% minimum CET1 capital requirement;

The bank's leverage ratio = (Tier 1 capital)/(Exposure) = (1,515 + 100)/(47,460) = 3.40%. This ratio does not meet the 4.0% minimum leverage ratio requirement;

The bank's Tier 1 capital ratio = (Tier 1 capital)/(risk-weighted assets)= (1,515 + 100)/26,395) = 6.12%. This ratio does not meet the 6.75% minimum Tier 1 capital requirement;

The bank's Total capital ratio = (Total capital)/(risk-weighted assets)= (1,515 + 100 + 827)/26,395) = 9.25%. This ratio meets and exceeds the 8.75% minimum Total capital requirement.

Q-78. Solution: C

C is correct. Increasing CVA charge increases the amount of risk-weighted assets.

A is incorrect. According to Basel, the conservation buffer can only be met by additional CET 1 capital.

B is incorrect. Derivative exposure (as well as other off-balance sheet items) are part of the total exposure. As exposure declines, Total capital ratio increases (assuming no change in Total capital).

D is incorrect. The NSFR = (amount of stable funding)/(required amount of stable funding). CET 1 capital, which goes to the numerator, has a weight of 100%. Gold, which goes to the denominator, has a weight of 50%. Thus, the increase to the numerator and denominator will not be exactly the same, so the NSFR changes.

Q-79. Solution: B

Tier 1: Predominant form must be common shares and retained earnings

- Common shares issued by the bank that meet the criteria for classification as common shares for regulatory purposes;
- Stock surplus (share premium) resulting from the issue of instruments included Common
- Equity Tier 1;
- Retained earnings;
- Accumulated other comprehensive income and other disclosed reserves;
- Minority interest
- Regulatory adjustments applied in the calculation of Common Equity Tier 1.

Q-80. Solution: B

Regulatory Capital = 87 + 36 = 123

Risk-weighted assets = (26 + 20)/8% + 889 = 575 + 889 = 1,464

The ratio of total regulatory capital to risk-weighted assets = 123/1464 = 8.40%

Q-81. Solution: B

Basel III capital requirement:

- Common Equity Tier 1 must be at least 4.5% of risk-weighted assets at all times.
- Tier 1 Capital must be at least 6.0% of risk-weighted assets at all times.
- Total Capital (Tier 1 Capital plus Tier 2 Capital) must be at least 8.0% of risk-weighted assets at all times.

Common Equity Tier 1 capital charge = 74/1,464 = 5.05%

Tier 1 Capital = 87/1,464 = 5.94%

Q-82. Solution: C

Leverage ratio = Capital / Total Exposure

Capital is Tier 1 capital

Leverage = 87/2,519 = 3.45%

The Committee will test a minimum Tier 1 leverage ratio of 3% during the parallel run period from 1 January 2013 to 1 January 2017.

Q-83. Solution: B

B is correct. Under the revised Standardized Measurement Approach, operational risk capital is equal to the Business Indicator Component multiplied by the Internal Loss Multiplier.

The Business Indicator Component is determined by the Business Indicator (BI), which is made up of almost the same P&L items that are found in the composition of Gross Income (GI). The main difference relates to how the items are combined. The BI uses positive values of its components, thereby avoiding counterintuitive negative contributions from some of the bank's businesses to the capital charge (e.g. negative P&L on the trading book), which is possible under the GI. In addition, the BI includes income statement items related to activities that produce operational risk that are omitted (e.g. P&L on the banking book) or netted (e.g. fee expenses, other operating expenses) in the GI.

In this case, the BI is already given as EUR 1,200 million.

Therefore, with a BI of EUR 1,200 million falling into the BI range of Bucket 2, and given that the Internal Loss Multiplier is equal to 1, the calculation of the operational risk capital for the bank in Bucket 2 is calculated as follows:

SMA operational risk capital (Bucket 2) = BIC×1 = EUR 120 million + 0.15(BI – EUR 1 billion) = EUR 120 million + 0.15(EUR 1,200 million – EUR 1,000 million) = EUR 150 million.

Q-84. Solution: B

The use of internal model approaches are restricted for credit risk, operational risk, and credit valuation risk.

Q-85. Solution: C

The Basel II I reforms revise the leverage ratio framework by adding a leverage ratio buffer for G-SIBs that must be met with Tier 1 capital.

Q-86. Solution: B

Operational risk capital requirements are determined by measures of the bank's income and historical operational risk losses, both of which are assumed to be positively correlated to future operational risk.

Q-87. Solution: C

Successful training can be achieved only with full staff engagement. If the training is perceived as dull, tedious and boring, the results are likely to be disappointing, No matter how technically

expert the training is.

Q-88. Solution: D

Whereas risk reduction is essential, cost-conscious senior management and their accountants are particularly interested in the risk-return trade-off. The actual level of risk reduction achieved may in fact be lower than is optimistically perceived.

Q-89. Solution: D

Supervisory authorities also rely on entities' own management information, although this differs across entities and is not yet mature.

Q-90. Solution: A

Although there is no common standard for automated information-sharing, regulators in most jurisdictions are not directly involved in bank-to-bank information sharing but do play a role in facilitating the establishment of voluntary sharing mechanisms for cyber-vulnerability, threat and incident information, and in some cases indicators of compromise.

Q-91. Solution: D

Q-92. Solution: A

Changing dynamic business environments combined with more reliance on third parties who provide outsourced technological services increases the potential for systemic risk associated with

firms and FMIs.

Q-93. Solution: D

Impact tolerances provide a framework for firms and FMIs in prioritizing business services and appropriately allocating investments and resources, a clear framework for testing operational resilience and a focal point for communication and reporting with supervisory authorities. Individual firms and FMIs are expected to define their own impact tolerances and no standard or benchmark currently exists.