## SCHOOL OF SCIENCE SHORT COURSES FINANCIAL RISK MANAGEMENT







# BANK SUPERVISION AND CAPITAL ADEQUACY

The School of Science presents these unique courses for professionals and employees in the financial industry, in search of new expertise to enhance their skills in financial risk management.

### **COURSE OBJECTIVES**

The course provides participants with a comprehensive overview of Basel Accords from Basel I-III. The course will further present an overview of the Basel III capital and liquidity regulations for banks. This is an interactive course, where real-life examples, case studies and exercises are used to illustrate key learning points and to enable participants to apply the concepts delivered throughout the course, including scenario relating to the COVID-19 pandemic.

### LEARNING OUTCOMES:

On completion of this short course, participants should be able to:

- 1. Define and apply logarithms
- 2. Describe and compute compounded returns and continuously compounded returns
- 3. Use geometric series
- 4. Explain and use probability and statistical concepts in finance problems.
- 5. Use various probability distributions
- 6. Apply regression models.
- 7. Understand major issues relating to the implementation of the Basel framework in the banking industry.
- 8. Learn how minimum regulatory capital requirements have evolved, and understand the various capital types, including Common Equity Tier 1 (CET1), Additional Tier 1 (AT1), and Tier 2, as well as Basel III's regulatory buffers.
- 9. Understand the different methodologies used for regulatory capital and liquidity requirements in banks.
- 10. Understand how liquidity and funding risk are captured by the Liquidity Coverage Ratio (LCR) and Net Stable Funding Ratio (NSFR).
- 11. Review the implications of COVID-19 on bank capital adequacy.

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## Short Course Content & Unit Descriptions

#### Facilitators:

Dr. S Nuugulu
Mr. V Kandaswamy

#### UNIT 1: Quantitative Methods (28 hours)

Logarithms, Probabilities: Discrete Random Variables, Continuous Random Variables, conditional Probability. Basic Statistics: Averages -Expectations -Variance and Standard Deviation -Standardized Variables-Covariance -Correlation-Application: Portfolio Variance and Hedging -Moments - Best Linear Unbiased Estimator (BLUE) Problems. Distributions: Uniform Distribution -Bernoulli Distribution -Binomial Distribution -Poisson Distribution -Normal Distribution -Lognormal Distribution -Central Limit Theorem-Application: Chi-Squared Distribution -Student's t Distribution -F-Distribution. Confidence Intervals -Hypothesis Testing- Chebyshev's Inequality-Application: Linear Regression (One Regressor) -Linear Regression (Multivariate) -Application: Factor Analysis.

#### UNIT 2: Bank Supervision and Adequacy within the Basel Framework (28 hours)

Regulatory background -The Basel Committee for Banking Supervision (BCBS) -The three Basel Accords, Development of minimum capital adequacy -The capital adequacy ratio-The capital components-Risk-weighted assets: credit risk, market -risk and operational risk -Case study: Overview of Pillar 3 disclosure in a large bank The three pillars-Minimum capital, supervisory review and market discipline, Finalization of Basel III overview -Summary of Finalization of Basel III ('Basel IV') -Timeline for implementation ,Economic vs regulatory capital -Economic capital -Common Equity Tier 1 (CET1) -Additional Tier 1 (AT1)-Tier 2 capital ,Capital buffers and Pillar 2 -Capital conservation, countercyclical and G-SIB buffers -Pillar 2 add-on -Minimum capital requirements ,Leverage ratio -Leverage ratio rationale -Basel III leverage ratio -Case study: Capital in a large bank

#### Learning Resources

Recommended textbooks:

- Basel III and Beyond by Francesco Cannata & Mario Quagliariello, (2011)
- The Basel Capital Accords in Developing Countries: Challenges for Development Finance by Ricardo Gottschalk (2009)
- Basel Committee on Banking Supervision (2013): Basel Committee on Banking Supervision (BCBS) Charter.

#### Additional Readings:

- The Basel Committee on Banking Supervision: A history of the early years 1974-1997 by Goodhart, C (2011): Cambridge University Press.
- Central bank cooperation at the Bank for International Settlements 1930-1973 by Toniolo, G (2005), Cambridge University Press.

### Application Deadline: February or July | Mode of Delivery: Online Online Application: www.unam.edu.na/shortcourses

