

# FUNDAMENTALS OF BANK FINANCIAL STATEMENT ANALYSIS

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## Language

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Italian

## Content

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The course is intended to give students the skills necessary to understand, analyze and interpret a bank financial statement, and to utilize accounting and other data from financial statement information to analyze risk, evaluate capital adequacy and calculate the main bank performance and evaluation measures. The course will explore several of the most critical elements linked to accounting systems through a comparison of different accounting standards, in particular IAS/IFRS vs. US GAAP. In addition, a review of some analysis models from a forecast perspective is provided, with the aim of providing the rationale on the basis of which to model the risk, income, equity and value dynamics of a bank.

## Textbooks

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- Teaching materials by the teacher: "Part I - Fundamentals of Bank Financial Statement Analysis".
- Teaching materials by the teacher: "Part II - Fundamentals of Bank Financial Statement Analysis".
- Rutigliano M. (a cura di), "Il Bilancio della Banca e degli Altri Intermediari Finanziari", Egea, Milano, 2020. [Ch.: 1, 2, 3, 4, 5, 6, 7 (pp. 225-299), 9 (349-440), 10, 11].
- Montesi G., Papiro G., Ugolini L. and Ammendola G., "Credit Risk Forecasting Modelling and Projections Under IFRS 9", Journal of Risk Management in Financial Institutions Vol. 12, 2019.
- Dicanio A. and Montesi G., "Banks in Time of Covid-19: Loss Absorption Capacity, Lending and Market Valuation", Bancaria, 2, 2021.
- Kieran D., Westwood B and Segoviano B. M., "Stress Testing of Banks: An Introduction" Bank of England Quarterly Bulletin 2016 Q3.

## Readings and tools

- Massari M., Gianfrate G. and Zanetti L. "The Valuation of Financial Companies: Tools and Techniques to Measure the Value of Banks, Insurance Companies and Other Financial Institutions" Wiley, 2014.
- Schmieder C., Puhr C. And Hasan M., "Next- Generation Applied. Solvency Stress Testing" in "A Guide to IMF Stress Testing: Methods and Models" IMF 2014.
- Haldane A. G. and Madouros V., "The Dog and the Frisbee." Speech at a Symposium of the Federal Reserve Bank of Kansas City, August 2012 , Wyoming.
- BIS Glossary (<https://www.bis.org/statistics/glossary.htm>).

## Objectives

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1. To acquire specialized knowledge necessary for the interpretation and analysis of bank financial statements.
2. To understand bank risks in financial information.
3. To gain a prospective, integrated view of bank risks.
4. Bank capital planning.
5. Bank valuation and analysis of performance from a historical and prospective point of view.
6. To analyze bank financial statements through the data provider Bloomberg.

## Prerequisites

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Good understanding of basic bank operations and regulation. Knowledge of financial mathematics and fundamentals of finance theory.

## Teaching method

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Lectures.

## Other information

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Attendance at lectures is strongly advised.

## Assessment methods

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Oral final examination.

## Full Course Program

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### PART I: FINANCIAL STATEMENT ANALYSIS: RELATIONSHIPS BETWEEN ACCOUNTING & PRUDENTIAL REGULATION

1. Typical evaluation and reporting bank financial statement profiles
2. Financial instruments
  - 2.1. Classification and valuation criteria (ACIT, FVTPL, FVTOCI)
  - 2.2. Fair value policy (mark to market, mark to model)
  - 2.3. Fair value hierarchy (L1, L2, L3)
  - 2.4. Issues linked to the application of fair value accounting
3. IFRS 9: the valuation of financial instruments
  - 3.1. Classification and measurement
  - 3.2. New financial reporting scheme (Bankit Circular 262 – 8th update 17 November 2022)
  - 3.3. Fair value and own risk
  - 3.4. IFRS vs. US GAAP
4. Debt Instruments
  - 4.1. Impairment and valuation models: Incurred Loss vs. Expected Loss
  - 4.2. Analytical and collective valuation
  - 4.3. IFRS 9: the new impairment model
  - 4.4. Impairment of financial instruments: FASB vs. IFRS 9
  - 4.5. Adjustments due to IFRS 9 transitional arrangements
  - 4.6. Calendar Provisioning: Addendum to the ECB Guidelines on NPLs & EU Regulation 2019/630
  - 4.7. ECB Expectations on IFRS 9 Provisioning of “Novel Risks”
    - 4.7.1. In-Model Adjustment
    - 4.7.2. Post-Model Adjustment o Overlay
5. Leasing
  - 5.1. Finance leases vs. operating leases
  - 5.2. Accounting and reporting
  - 5.3. New accounting rules (IFRS vs. US-GAAP)
6. Non performing exposures
  - 6.1. Classification and analysis
  - 6.2. Credit quality transition matrix
  - 6.3. Credit quality (Cost of risk, NPL’s Cover ratio, Texas ratio, ...)
7. Derecognition & securitization processes
  - 7.1. Operations linked to derecognition (ABS, CDO, Repos...)
  - 7.2. Traditional securitisations vs. synthetic securitisations
  - 7.3. Derecognition: accounting logic (full derecognition <--> no derecognition)
  - 7.4. NPL Securitization: analysis and valuation models
8. Derivative instruments
  - 8.1. Risks associated with derivatives
    - 8.1.1. Derivative position: gross market value vs. gross credit Exposure
    - 8.1.2. Counterparty risk vs. lending risk
    - 8.1.3. Bilateral clearing vs. central clearing
    - 8.1.4. Externalities in financial network
  - 8.2. Criteria for valuation and financial statement representation
    - 8.2.1. Trading derivatives, incorporated derivatives, Hedging accounting (Fair Value Hedge, Cash Flow Hedge...)
    - 8.2.2. xVA terms: Credit Valuation Adjustment (CVA), Debt Valuation Adjustment (DVA)...
    - 8.2.3. Derivatives netting (IFRS vs. US GAAP)
9. IFRS 17: The new accounting standard for insurance contracts.
  - 9.1. Brief summary IFRS 4
  - 9.2. IFRS 17: Objectives, scope & new features
  - 9.3. New models for accounting: BBA, PPA and VFA

- 9.4. New metrics: CSM and RA
- 9.5. New accounting representation of BS, P&L and OCI
- 10. Capital Instruments & Equity Investments
  - 10.1. Concept of control and methods of consolidation
  - 10.2. Investments: definitions classification and valuation criteria
- 11. Intangible assets and goodwill
  - 11.1. Criteria for identifying and valuating intangible assets
  - 11.2. Impairment test on goodwill
- 12. Pension & Other Postretirement Benefit
  - 12.1. Defined-contribution pension plans
  - 12.2. Defined-benefit pension plans
  - 12.3. Financial statement reporting of pension & post-employment benefits
  - 12.4. The risks of accounting adjustments related to pension valuation
- 13. Stock-based Compensation expense
  - 13.1. Employee stock options
  - 13.2. Accounting rules: IAS/IFRS vs. US-GAAP
  - 13.3. Management options and value
- 14. Deferred tax
  - 14.1. Origin of deferred tax
  - 14.2. Criteria for accounting
- 15. Information in footnote disclosures and Pillar 3 disclosure
  - 15.1. The Pillar 3 disclosures
  - 15.2. The regulatory environment
  - 15.3. Structure and recipients of Pillar 3 disclosure
  - 15.4. The EBA mapping tool and the link to the signaling world
  - 15.5. Focus on ESG disclosure
  - 15.6. Upcoming regulatory developments
- 16. Federal Reserve – Reporting Form FR Y-9

## PART II: BANK FINANCIAL ANALYSIS: PERFORMANCE, RISK & VALUE

- 1. Equity book value vs. regulated capital
- 2. The determinants of bank capital structure
- 3. Bank Financial Analysis: Key Analysis Metrics
- 4. ESG (Environmental, Social & Governance) Factors: Implications for Banks
- 5. Climate Risk
  - 5.1. Definitions & Scenarios
  - 5.2. Introduction to Climate Risk Modeling
  - 5.3. The Expectations of Supervisors on Climate Risk
  - 5.4. Transition Risk & Physical Risk
  - 5.5. The implications of climate risks for the financial system
- 6. Profitability threshold, risk threshold and conditions of capital adequacy
- 7. Capital planning process
  - 7.1. Forward-looking view
  - 7.2. Enterprise-wide scenario analysis
  - 7.3. Multi-period forecasting models
    - 16.1.1. Logics of accounting-regulatory-based models
    - 16.1.2. Modeling of main risk factors (credit risk, sovereign risk, liquidity risk...)
  - 7.4. The Enterprise-Wide Risk Assessment Processes of the Banks
  - 7.5. Business Model Analysis
  - 7.6. Bank stress-testing
- 8. Bank valuation
  - 8.1. Cash flow analysis for bank
  - 8.2. Cash flow to equity model
  - 8.3. Excess return valuation
  - 8.4. Multiples valuation
  - 8.5. Own funds requirements and shareholder value
  - 8.6. The value map analysis
  - 8.7. Bank valuation in M&A