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UNIVERSITAT POLITÈCNICA
DE CATALUNYA
BARCELONATECH

TEACHING GUIDE GLOBAL FINANCIAL MARKETS AND TECHNOLOGY TRENDS 2025-26

GENERAL DATA

Name:	Global Financial Markets and Technology Trends
Code:	
Course:	2025-26
Titration:	Master's Degree in Financial Innovation and Fintech
Number of credits (ECTS):	5
Location in the curriculum:	1st Course, 1st Semester
Department:	
Head of department:	
Date of last revision:	March 2025
Teaching staff:	Prof. Daniel Benito

1. OVERVIEW

The subject "Global Financial Markets and Technological Trends" provides a comprehensive analysis of international financial markets in the current context of digital transformation. The course explores the structure, operation and evolution of the different financial markets (fixed income, currencies and equities), analysing the economic, technological and regulatory factors that influence their behaviour. The changes that technology is producing in payment systems and bank disintermediation are studied in depth, as well as the evolution from traditional banking to neobanks and decentralized lending systems.

The subject addresses the risks arising from technological innovation and the strategies for their mitigation, incorporating the values of sustainability in the development of new financial digitalisation projects. This subject complements the knowledge acquired in "Finance and the Financial System" and "Analysis of the Economic and Technological Environment", with a practical approach aimed at understanding contemporary global markets.

2. OBJECTIVES

- Understand the structure, functioning and interrelationship of global financial markets, differentiating between developed and emerging markets.
- Recognize the changes that technology is producing in payment systems and bank disintermediation.

- Identify the different types of technological risks in the financial system and design strategies for their mitigation and control.
- Analyse in depth the fixed income markets, their valuation and the factors that affect their behaviour.
- Study the foreign exchange market, its operation and importance as the axis of international finance.
- Examine the functioning of equity markets and associated investment strategies.
- Assess the impact of disruptive technologies on the evolution of the traditional banking system, from neobanks to decentralized lending systems.
- To know the international regulatory frameworks and their adaptation to new technological realities.
- Integrate sustainability values in the evaluation and development of banking digitalization projects.

3. LEARNING OUTCOMES

At the end of the course, the student will be able to:

K8.1: Recognize the changes that technology is producing in payment systems and bank disintermediation.

K8.2: Identify the different types of risks derived from technology for their mitigation and control.

S1.1: Communicate effectively orally, in writing and graphically with other people about learning, thinking and decision-making, and participate in debates, making use of interpersonal skills, such as active listening and empathy, which favour teamwork.

S2.1: Develop the capacity to contribute to innovation in new or existing business institutions and organizations, through participation in creative projects and have the ability to apply skills and knowledge on technology-based business sales, organization and development.

S3.1: Understand advanced digital technologies, so that they can be applied with a critical perspective, in diverse contexts, in academic, professional, social or personal situations.

S.9.1. Differentiate the different types of cryptoassets and digital assets, the platforms and the associated risks.

S11.1. Differentiate the changes that technology is producing in the traditional banking system, from payment systems and neo-banks to decentralized lending systems.

S11.2: Analyse the impact of technology on the level of risk in order to design strategies for its mitigation and control.

C1.1: Integrate the values of sustainability, understanding the complexity of systems, in order to undertake or promote actions that restore and maintain the health of ecosystems and improve justice, generating diverse visions for sustainable futures.

C2.1: Identify and analyse problems that require autonomous, informed and reasoned decision-making, in order to act with social responsibility, in accordance with ethical values and principles.

C3.1: Develop the capacity to assess gender and gender inequalities and to design solutions.

C9.1: Apply new technologies and application of banking digitalisation to new development projects.

C9.2: Apply success stories in technology and financial disintermediation to new business outlets.

We can highlight:

- Analyze the structure and interconnection of the different global financial markets.
- Recognize and evaluate the changes that technology is producing in payment systems and bank disintermediation.
- Identify the different types of risks derived from technology for their mitigation and control.
- Differentiate the changes that technology is bringing about in the traditional banking system, from payment systems and neobanks to decentralized lending systems.
- Evaluate fixed income instruments and bond portfolio management strategies.
- Understand how the foreign exchange (Forex) market works and its importance to the global economy.
- Analyse equity markets and their key indicators at an international level.
- Assess the impact of disruptive technologies on the transformation of financial markets.
- Analyze the impact that technology has on the level of risk to design strategies for its mitigation and control.
- Integrate the values of sustainability into financial analysis, understanding the complexity of systems to generate sustainable visions of the future.
- Apply new technologies and banking digitalisation to new development projects.
- Interpret international regulatory frameworks and their evolution in the face of technological changes.
- Identify opportunities and risks in emerging trends in global financial markets.

4. CONTENTS

TOPIC 1. Introduction to Global Financial Markets and Macro Picture applicable to financial markets

Specific learning outcomes:

- Identify the main components and players of global financial markets.
- Distinguish the differential characteristics between developed and emerging markets.
- To analyse the dynamics of interconnection between the different international markets.

Contents

- 1.1. Concept, structure and function of financial markets in the global economy: business cycles in financial markets.
- 1.2. Main players: central banks, financial institutions, institutional and retail investors.
- 1.3. Typology of financial markets: primary and secondary; organized and OTC.
- 1.4. Operational and structural differences between developed and emerging markets. Interrelations between markets and mechanisms of global transmission.
- 1.5. Impact on the financial markets of the economic cycle.
- 1.6. Overview of key global indicators and benchmarks.

TOPIC 2. International Fixed Income Market

Specific learning outcomes:

- Analyse the different types of fixed income instruments and their characteristics.
- Understand the factors that determine the price and yield of bonds.
- Evaluate investment and risk management strategies in fixed income portfolios.

Contents

- 2.1. Structure and functioning of the global fixed income market.
- 2.2. Types of instruments: sovereign, corporate, high yield and emerging market debt.
- 2.3. Bond valuation: price, yield to maturity, duration and convexity.
- 2.4. Interest rate curve and explanatory theories of its shape.
- 2.5. Analysis of fixed income risks.
- 2.6. Investment strategies and construction of fixed income portfolios.
- 2.7. Green and sustainable bonds: characteristics and market trends.

TOPIC 3. Foreign Exchange Market

Specific learning outcomes:

- Understand the structure, operation and participants of the foreign exchange market.
- Analyze the factors that influence exchange rates and their impact on the economy.
- Evaluate instruments and strategies for the management of foreign exchange risk.

Contents

- 3.1. Structure, volume and characteristics of the Forex market.
- 3.2. Main participants: central banks, financial institutions, companies and speculators.
- 3.3. Price formation: spot exchange rates, forward exchange rates and determination mechanisms.
- 3.4. Forward exchange rate calculations.
- 3.5. Overview of currency derivatives products: futures, options and swaps.
- 3.6. Hedging and investment strategies in the foreign exchange market.

TOPIC 4. Global Equity Market

Specific learning outcomes:

- To analyse the structure and functioning of international stock markets.
- Understand the methods of stock valuation and market analysis.
- Evaluate equity investment strategies at a global level.

Contents

- 4.1. Structure and operation of international stock exchanges.
- 4.2. Main global stock market indices: methodology, composition and representativeness.
- 4.3. Investment strategies: value, growth, factor investing, blended and passive strategies.
- 4.4. Stock valuation methods: fundamental and technical analysis.
- 4.5. Fundamental analysis: main indicators.
- 4.6. ETFs and index funds: typology, advantages and considerations.
- 4.7. Emerging markets: specific characteristics, opportunities and risks.
- 4.8. International equity portfolio management and diversification.

TOPIC 5. Transformative Technologies in Financial Markets

Specific learning outcomes:

- Recognize the changes that technology is producing in payment systems and bank disintermediation.
- Identify the different types of risks derived from technology for their mitigation and control.
- Differentiate the changes that technology is producing in the traditional banking system.
- Evaluate the impact of algorithmic trading and automation on market dynamics.

Contents

- 5.1. Technological evolution in financial markets: from exchanges to electronic platforms.
- 5.2. Transformation of payment systems: digitalization, instant payments and digital wallets.
- 5.3. Banking disintermediation: technological causes and new business models: Neobanks and challenger banks: characteristics, service models and competitive advantages.
- 5.4. Decentralized lending systems: P2P lending, crowdlending and DeFi platforms.
- 5.5. Trading automation: algorithms, high-frequency trading and their impact on the market microstructure.
- 5.6. Big Data and artificial intelligence: transformation in financial analysis and decision-making.
- 5.7. Blockchain and DLT (Distributed Ledger Technology): fundamentals and applications in finance.

TOPIC 6. Financial Innovation, Risks and Sustainability

Specific learning outcomes:

- Analyze the impact that technology has on the level of risk to design strategies for its mitigation and control.
- Integrate sustainability values into financial and technological analysis.
- Apply new technologies and banking digitalisation to new development projects.

Contents

- 6.1. Typology of technological risks in the financial system: operational, cyber, strategic and systemic.
- 6.2. Strategies for mitigating and controlling risks derived from technological innovation. Regulatory Technology (RegTech) and Supervisory Technology (SupTech) as management tools.
- 6.3. Sustainable finance: integration of ESG criteria in markets and financial institutions. Sustainable financial instruments: green, social and sustainability-linked bonds. Application of banking digitalization in sustainable financial development projects.
- 6.4. Tokenization of traditional financial assets and new market models. Financial inclusion through technology: global opportunities and challenges.

TOPIC 7. Regulation and Governance of Global Financial Markets

Specific learning outcomes:

- Evaluate the changes that technology is bringing about in the traditional banking system.
- Identify the main regulatory frameworks that affect international financial markets.
- Understand the role of supranational institutions in global financial governance.

Contents

- 7.1. Objectives and evolution of international financial regulation.
- 7.2. Key institutions in global financial governance: BIS, IMF, FSB and IOSCO.
- 7.3. Regulatory frameworks for the digital transformation of the banking system. Open Banking and APIs: regulations and impact on banking business models.
- 7.4. Capital markets regulation: MiFID II/MiFIR, Dodd-Frank and equivalent regulations.
- 7.5. Regulatory challenges of digital assets and new technologies: sustainable finance, cryptoassets and decentralized finance. Regulatory sandboxes and supervised innovation approaches in fintech.

5. METHODOLOGY

The methodology is based on participatory lectures complemented by the reading in advance of the different topics of the material previously published on the virtual campus. With the practices in class and the work at home, it is expected to reaffirm the concepts and procedures that have been presented in class.

The subject combines theoretical sessions with analysis of practical cases/current activities.

6. EVALUATION

In accordance with the Bologna Plan, the model rewards the constant and continuous effort of students.

60% of the grade is obtained from the continuous evaluation of the directed activities and the remaining 40% from the final face-to-face exam. The final exam has two sittings.

Distribution of continuous assessment (60%):

- Group project to create an investment portfolio: 45%
- Class participation: 15%

Final exam (40%):

The exam will evaluate all units with the following approximate weighting:

- Topic 1: 15%
- Topic 2: 20%
- Item 3: 20%
- Item 4: 20%
- Topic 5: 15%
- Topic 6 and 7: 10%

7. BIBLIOGRAPHY

Basic:

- Bodie, Z., Kane, A. y Marcus, A. J. (2022). *Investments*. McGraw-Hill.
- Fabozzi, F. J. (2021). *Bond Markets, Analysis, and Strategies*. MIT Press.
- Howells, P., and Bain, K., (2008), *The Economics of Money, Banking and Finance: a European Text*, Financial Times/ Prentice Hall.
- King, M. R. (2023). *The Forex Market: Structure, Instruments, and Strategy*. Oxford University Press.
- Mishkin, F. S. y Eakins, S. G. (2023). *Financial Markets and Institutions*. Pearson.
- Pilbeam, K., (2018), *Finance and financial markets*, Palgrave.
- Ritter, L.S., Silber, W.L., Udell, G.F., (2009), *Principles of Money, Banking & Financial Markets*, Pearson.

Complementary:

- BIS (actualización anual). Triennial Central Bank Survey of Foreign Exchange and OTC Derivatives Markets.
- Chambers, D. y Dimson, E. (2021). Financial Market History: Reflections on the Past for Investors Today. CFA Institute Research Foundation.
- Hanna, D. y Parameswaran, S. (2022). FinTech: The Technology Driving Disruption in the Financial Services Industry. CRC Press.
- Hull, J. C. (2022). Risk Management and Financial Institutions. Wiley.
- Narayanan, A. et al. (2016). Bitcoin and Cryptocurrency Technologies. Princeton University Press.

Digital Resources:

- Bank for International Settlements (www.bis.org)
- Bloomberg Terminal (institutional access)
- ECB Statistical Data Warehouse (sdw.ecb.europa.eu)
- FRED Economic Data (fred.stlouisfed.org)
- International Monetary Fund (www.imf.org)
- The Financial Times (www.ft.com)
- World Economic Forum - Financial and Monetary Systems (www.weforum.org)

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