



***The Financial Markets
Foundation Course (FMFC)
Certificate***

Programme Syllabus



THE BUSINESS SCHOOL
FOR FINANCIAL MARKETS

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I. Introduction

The Financial Markets Foundation Course (FMFC) is a first level qualification intended for anyone entering into a career in the financial markets. It does not assume any prior study or work experience other than a general knowledge of mathematics such as basic algebra and statistics. For those without that quantitative background, pre-course reading with a further bibliography is provided to allow candidates to acquire that knowledge directly.

The program is intended to provide 'breadth of knowledge' to make it relevant to people pursuing careers in the front office, middle office and operations areas. Although not a formal pre-requisite for any other ICMA course it would provide useful background study for those taking the following ICMA intermediate courses, in particular:

1. The International Fixed Income and Derivatives (IFID) Certificate Programme.
2. The Operations Certificate Programme (OCP)
3. The FINRA Capital Market Certificate in Regulation and Compliance (CMRC)
4. The Primary Market Certificate (PMC)

The Certificate places an even emphasis on introducing and explaining the key concepts of each subject area and then developing practical knowledge and skills of each area. This reflects the fact that it is both introductory, requiring the introduction and explanation of key concepts but also intended for market practitioners requiring applied thinking.

The academic content of the FMFC certificate has been created by the ICMA Centre, University of Reading and then reviewed and modified by market practitioners in front, middle and operations areas of the banks. Thus, it contains academic integrity while also being applied and practical.

II. Accreditation

The FMFC is jointly certified by the International Capital Market Association (ICMA) and the University of Reading as a Level I course¹ providing competence in the understanding of financial participants, markets and products.

III. Assessment

The FMFC certificate is a two and one half day taught course with pre-course reading. It is delivered in ten sessions with two additional 60 minute review sessions at the end of days one and two. On the afternoon of the third day candidates sit the exam, which is comprised of 50 multiple choice questions.

Candidates that successfully pass the FMFC uniform exam are granted a Certificate jointly by ICMA and the University of Reading. To be successful, candidates must correctly answer no fewer than 30 of the fifty questions (or 60%). Candidates who correctly answer no less than 45 questions are awarded the designation of "Distinction" with their pass.

All candidates will receive a Texas Instruments BAII Plus calculator for use in the course and exam. No other calculators are permitted for the exam. Candidates are expected to learn how to use the calculator themselves, no training will be provided in the course.

Candidates who are not successful in passing the exam on the first attempt may have two further re-sit opportunities, which must be taken within two years of the start of their initial registration.

IV. Background Reading

Although a first level finance course, one is required to have a basic knowledge of quantitative methods; finance is, after all, a quantitative application of more general economic principles. To this end, the programme provides Background Reading² on the following three topics:

1. Key mathematical operations.
2. Time-value-of-money calculations.
3. Introduction to statistics.

Each candidate is to assess their own knowledge level and determine whether to study the Background Reading in advance of the Programme.

¹ A Level I course assumes no prior study or work experience in the financial markets.

² Background Reading is material that the candidate is required to know for the purpose of study, although such material will not be directly examined.

V. Structure of the FMFC syllabus

The syllabus covers two broad areas with a final review and exam:

I. Overview of Financial Markets and Participants: Explore the nature of savings and flow of funds in an economy and the major participants and their motivations.

II. The Main Financial Securities: the focus here is on the understanding the principle asset classes and basic valuation models.

III. Exam review and Exam: here we will review the content in light of current events. The exam will follow in the afternoon of the final day.

I. Overview of Financial Markets and Participants:

1. Financial intermediation:
 - a. Consumption, savings and investment
 - b. Issuers, investors and intermediaries
 - c. Capital raising and investment theory
2. Real assets, commodities and foreign exchange
 - a. Real assets
 - b. Commodities
 - c. Foreign exchange
3. Securities and markets:
 - a. Exchanges
 - b. OTC markets
 - c. Introduction to financial securities
4. The structure of a financial institution:
 - a. The front office
 - b. The middle office
 - c. Operations area

II. The Main Financial Securities

5. Money market:
 - a. Bank deposits and CDs
 - b. Discount securities
 - c. Repurchase agreements (repo)
6. Bond markets:
 - a. Straight bonds and valuation models
 - b. Inflation-linked bonds
 - c. Asset-backed securities
7. Credit markets:
 - a. Credit risk and spreads
 - b. The bond indenture
 - c. Rating agencies



8. Equity markets:
 - a. Common shares and valuation models
 - b. Preferred stock
 - c. Convertible bonds
9. Financial derivatives:
 - a. Forwards and futures
 - b. Options

III. Exam Review

10. The review will relate the content to current events to help put the material in context to what is happening at the time.

VI. Outline of the seminar

The below is the timing of the topic sessions and the exam on the final day:

Day 1:

- i. Introduction and welcome (08:45 – 09:00)

I. Overview of Financial Markets and Participants:

1. Financial intermediation (09:00 – 11:00)
2. Real assets, commodities and foreign exchange (11:15 – 12:45)
3. Securities and markets (13:45 – 14:45)
4. The structure of a financial institution (15:00 – 16:30)
 - Q&A (16:45 – 17:30)

Day 2:

II. The Main Financial Securities

5. Money market (09:00 – 10:30)
6. Bond markets (10:45 – 12:15)
7. Credit markets (13:15 – 14:15)
8. Equity markets (14:30 – 16:30)
 - Q&A (16:45 – 17:30)

Day 3:

9. Financial derivatives (09:00 – 11:00)

III. Review and Exam

10. Review (11:15 – 12:15)
 - Examination (14:00 – 16:00)

VII. Learning Objectives (LOs)

Below are listed the specific learning objectives (LOs) for each of the topics covered in the FMFC syllabus. The purpose of the LOs is to:

- Give candidates a clear 'road map' of the knowledge that they may be required to demonstrate in the Certificate exam (every LO is examinable)
- Ensure consistency between the body of knowledge, the teaching materials and the exam questions
- Assist candidates in planning their studies for the Certificate exam and for any tutor involved in preparing candidates for the FMFC exam

Candidates who understand each LO and can perform each task associated with each LO should be confident of being able to pass the exam.

I. Overview of Financial Markets and Participants

1. Financial intermediation:

- a. Consumption, savings and investment
 - Describe the economic trade-off between consumption and savings and discuss the factors that affect this trade-off
 - Discuss the impact that inflation has on the value of savings and investments
 - Define and discuss the terms "time-value-of-money" and "expected value"
 - Define and discuss the term "risk" and explain the trade-off between risk and expected return
 - Explain the concept of "risk transference"
- b. Issuers, investors and intermediaries
 - List and describe who are the principle entities that issue securities to raise capital in the market
 - List and describe who are the principle entities that have capital to invest
 - Describe the principle activities of the four major types of financial market intermediaries: commercial banks, investment banks, fund managers and insurance companies
- c. Capital raising
 - Describe and discuss the various methods that individuals use to raise money for their personal use
 - Describe and discuss the various methods that governments use to raise capital in the financial markets
 - Describe and discuss the various methods that corporations use to raise capital in the financial markets



- d. Investment theory
 - List and describe the various methods that individuals have to save and invest for their future
 - Explain the difference between individual and pooled investments
 - Define the concept of “correlation” and explain how diversification may provide superior risk-adjusted returns

2. Real assets, commodities and foreign exchange:

- a. Real assets, investment versus consumption
 - Describe the key differences between an investment asset and a consumption asset
- b. Commodities
 - Describe the key types of commodities in the market and which ones are most actively traded by investors
 - Describe the physical supply chain of each major type of commodity and who the principle users are
 - List and discuss what drives the price of commodities
- c. Foreign exchange
 - Define a “spot” foreign exchange rate and discuss what information it provides
 - List and describe the major currencies traded and how each is commonly quoted
 - Describe how foreign exchange is traded and who are the key participants in the market
 - Illustrate how a “spot” exchange rate can be converted into a “forward” exchange rate by use of forward points
 - List and discuss the factors that drive changes in spot and forward exchange rates

3. Market structure:

- a. Exchanges
 - Describe the key characteristics of an organised exchange, its ownership structure and what the principle purpose of the exchange is
 - List and describe the assets that are most commonly traded on an exchange
 - Discuss the role of a ‘Clearing House’ (CH) with respect to credit and counterparty risk and describe the historical relationship between a CH and an exchange

- b. Over-the-counter (OTC)
 - Describe the principle way of buying and selling in OTC markets
 - List and describe the assets that are most commonly traded “OTC”
 - Describe how credit and counterparty risk can be managed in OTC markets
- c. Introduction to financial securities
 - Define at its most basic level what a financial security is and how it differs from real or tangible assets
 - Define the key characteristics of “debt” and “equity” and contrast them with each other
 - Compare and contrast an “underlying security” with that of a “derivative security”

4. The Structure of a Financial Institution

- a. What the Front Office does
 - Define what the “front office” is
 - List and describe the type of activities undertaken in the front office and what (functional) positions carry out these activities
 - b. What the Middle Office does
 - Define what the “middle office” is
 - List and describe the type of activities undertaken in the middle office and what (functional) positions carry out these activities
 - c. What the Operations Department does
 - i. Trade notification and matching
 - Describe and explain the operational process that occurs when a security has been traded
 - List and describe the life cycle of a trade from pre-trade to settlement
 - Understand and explain the various phases of the clearing and settlement process
 - ii. Settlement and Custody
 - Describe how assets are held safely and securely
 - Explain how holders can benefit through the servicing of debt (income collection – coupons)
 - Explain how holders can benefit by the sharing of company profits (income collection – dividends)
 - Understand and describe how various events (corporate actions) can impact on the holding of an asset
- Be able to define and discuss the key terms used in operations
 - Explain the main types of risk that operations are exposed to



II. The Main Financial Securities

5. Money markets:

- a. Cash deposits
 - Describe the characteristics of a wholesale bank deposit
 - Define “London Inter-Bank Offered Rate” (LIBOR) and the purpose it serves in the deposit market
 - Define “Euro Inter-Bank Offered Rate” (EURIBOR) and the purpose it serves in the deposit market
 - b. Certificates of Deposits (CDs)
 - Describe the basic characteristics of a Certificate of Deposit (CD)
 - Define how prices and yields are quoted for a CD
 - Calculate both the redemption value and settlement amount on a CD, given its yield
 - c. Discount securities
 - Describe the basic characteristics of a discount security
 - List and describe the various discount securities traded in the market
 - Calculate the settlement amounts due on a discount security, given their traded price or yield
 - d. Repurchase agreements (repo)
 - Describe the basic characteristics of a repo and identify who is the buyer and who is the seller
 - Discuss how repos can be used to both earn additional cash from securities lending and, also, fund long and short positions in securities trading
- List the various day count conventions applicable to money market securities in the major international markets
 - Describe a simple method of converting between money market yields and effective annual yields and explain its limitations
 - Describe the credit ratings on money market instruments provided by the major ratings agencies

6. Bond markets:

a. Straight bonds

- a. Describe the basic characteristics of a “straight bond” and the concept of “promised cash flows”
- b. List the various day count conventions applicable to bonds in the major international markets
- c. Using a financial calculator, compute and interpret the dirty price, accrued interest, clean price and yield-to-maturity (YTM)
- d. Define the concept of the yield curve
- e. Describe the basic characteristics of both a “floating rate note”, an “indexed linked bond” and an “asset-backed security”

7. Credit markets:

b. Credit risk

- Define and interpret the concept of the “promise to pay”, the “ability to pay” and the “willingness to pay”
- List and describe the key information in a Bond Indenture
- Define and explain the concepts of “probability of default” and “recovery given default” and discuss the interconnection between the two terms
- Describe how a credit spread may be derived given a bond’s default rate and recovery rate
- Distinguish between a bond credit rating and a corporate credit rating
- List and discuss the bond credit ratings as provided by the major rating agencies and, also, the difference between “investment grade” and “non-investment grade”

8. Equity markets:

a. Common shares

- Describe the basic characteristics of a common share and the concept of “discretionary dividend payments”
- Explain the Dividend Discount Model (DDM) for valuing shares
- Calculate share values using the DDM for both zero and positive growth rates (single growth rate models only)
- Explain the concept of the “industry life cycle” and how it relates to the growth rate of a common share
- Define what a preference share is
- List and describe the key information in an Equity Prospectus

b. Indexes

- Describe five principle uses of security market indexes
- Define and provide examples of both a Price Weighted Index and a Value Weighted Index



9. Financial derivatives:

a. Forwards and futures

- Explain the inter-relationship between a spot price, a future value and the rate-of-return that reconciles these two values and how this model can be used to calculate forward rate agreements (FRAs)
- Define the key characteristics of the most common FRAs in the market
- Describe the key applications for FRAs in asset and liability management
- Explain how the basic valuation model can be used in FX and equity forward price calculations
- Compare and contrast a forward rate agreement with an interest rate future and the benefits of each instrument

b. Options

- Describe what a call option is, explain how to calculate its intrinsic value and map its payoff function
- Describe what a put option is, explain how to calculate its intrinsic value and map its payoff function
- Explain the concept of “time value” and how this changes an option’s value from its intrinsic value
- Explain the difference between an option and a warrant
- Define and interpret: historic volatility and implied volatility

III. Exam Review

10. Review

- a. The review will be supplemented with several topical news articles to help put the material in context with current events.