

DO NOT REMOVE THE QUESTION PAPER FROM THE EXAMINATION HALL

## UNIVERSITY OF LONDON

CENTRE FOR FINANCIAL AND MANAGEMENT STUDIES

*MSc Examination*

*Postgraduate Diploma Examination*

for External Students

91DFMC321A

FMM321A

FINANCE (BANKING)

FINANCE (ECONOMIC POLICY)

FINANCE (FINANCIAL SECTOR MANAGEMENT)

FINANCE (QUANTITATIVE FINANCE)

FINANCE AND FINANCIAL LAW

### Corporate Finance

#### *Specimen Examination*

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*This is a specimen examination paper designed to show you the type of examination you will have at the end of this module. The number of questions and the structure of the examination will be the same, but the wording and requirements of the questions will be different.*

The examination must be completed in **THREE** hours.

Answer **THREE** questions, *at least ONE* question from **Section A** and at least **ONE** question from **Section B**. The third question may be selected from *either* section.

The examiners give equal weight to each question and you are advised to distribute your time approximately equally between the three questions. The examiners wish to see evidence of your ability to use technical models and of your ability to critically discuss their mechanisms and application.

Candidates may use their own electronic calculators in this examination provided they cannot store text; the make and type of calculator **MUST BE STATED CLEARLY** on the front of the answer book.

**PLEASE TURN OVER**

Answer **THREE** questions, at least **ONE** question from each section

## Section A

Answer at least **ONE** question from this section.

1. a) You have been asked to consider investing in shares of two firms, Transcorp Plc and Hydrapol Plc. Transcorp Plc have an expected return of 15 per cent with a standard deviation of 31 per cent. Hydrapol Plc shares are expected to produce a return of 17 per cent with a standard deviation of 45 per cent.
  - i) You have decided to create a portfolio comprising of the two shares. Calculate the expected rate of return and standard deviation of a portfolio composed of 30 per cent of Transcorp's shares and 70 per cent of Hydrapol's shares, if the correlation coefficient between the share returns is 0.55. *(30% of the marks)*
  - ii) Assume that the risk free rate is 3 percent, the market portfolio has an expected return of 10 per cent with a standard deviation of 25 percent, and the capital asset pricing model (CAPM) holds. Using the CAPM, calculate the expected return of Transcorp shares if the covariance between Transcorp and the market portfolio is 0.0775 (or 7.75 if the unit/scale of calculation is in percentage). *(20% of the marks)*
- b) Critically discuss whether the arbitrage pricing model is superior to the CAPM. *(50% of the marks)*

**PLEASE TURN OVER**

2. Qisda is a drinks manufacturing firm that wishes to set up a small fresh juice retail business. The new enterprise is expected to have a net cash inflow of £88,000 in its first year. The cash flows are then projected to grow at a rate of 6% per year thereafter in perpetuity. The project will be all equity financed, and the capital required to fund the business is £960,000.
- a) If the appropriate return expected by shareholders is 12% should Qisda undertake the project? Show how you arrived at this decision. *(30% of the marks)*
- b) Analysts are sceptical about what they consider to be an optimistic growth rate and have instead suggested that the management team consider the minimum growth rate (i.e. hurdle rate) required for the project to be acceptable. What is this rate? *(10% of the marks)*
- c) Compare and contrast sensitivity analysis and scenario analysis. *(20% of the marks)*
- d) Demonstrate how sensitivity analysis and scenario analysis can help Qisda to examine their juice project. *(40% of the marks)*
3. a) EasyCat Air has a current period cash flow of £5.5 million and pays no dividends. The present value of the company's future cash flows is £110 million. The company is entirely financed with equity and has 1 million shares outstanding. We can assume for simplicity that the dividend tax rate is zero.
- i) What is the share price of the EasyCat Air's equity? *(10% of the marks)*

**PLEASE TURN OVER**

ii) Suppose the board of directors of EasyCat announces its plan to pay out 60 per cent of its current cash flow as cash dividends to its shareholders. Demonstrate how you could achieve a zero payout policy on your own, if you own 1,000 shares of EasyCat Air's equity. (*Hint*: consider how many additional shares you could buy with your dividend income.)

*(30% of the marks)*

b) It is often the case in many countries that investors prefer (i) dividend paying stocks to non-dividend paying stocks, and (ii) share-buyback stocks to non-share-buyback stocks. How are we to interpret these observations if dividend policy is considered to be irrelevant?

*(60% of the marks)*

4. a) Briefly explain why we should care about capital structure in the context of financial management.

*(10% of the marks)*

b) In a world where the Modigliani and Miller theory of capital structure (their original version in 1958) holds, does moderate borrowing increase the required return on a firm's equity? Does it necessarily follow that increases in debt increase the riskiness of the firm? Explain.

*(30% of the marks)*

c) How do corporate taxes affect the Modigliani–Miller theory of capital structure (e.g. their 1963 version of the model)? Illustrate your answer with a practical or numerical example.

*(30% of the marks)*

d) Discuss the challenges involved when determining optimal capital structure.

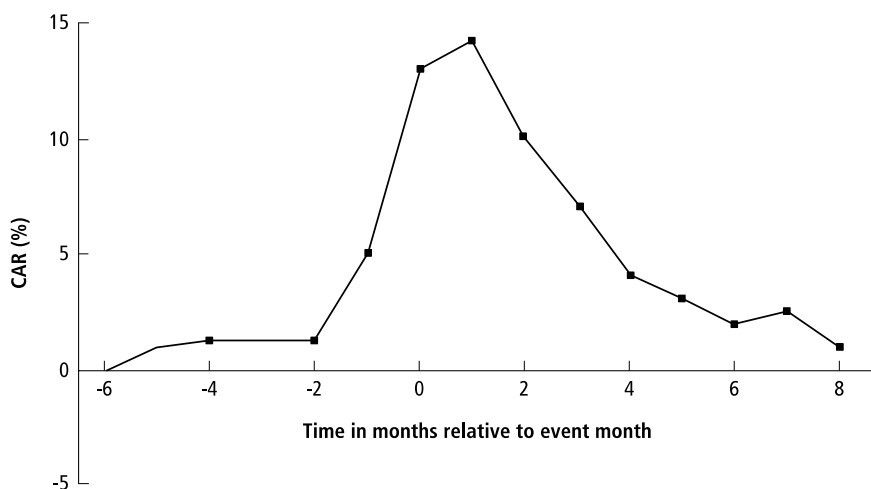
*(30% of the marks)*

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## Section B

Answer at least **ONE** question from this section.

5. The figure below details the cumulative abnormal returns (CAR) for 415 silver mining companies announcing discoveries of new deposits between 1970 and 2010. Month 0 in the diagram is the announcement month. The dispersion of CARs around the event day raises some question about market efficiency.



- a) If we are to assume that no other information is received and the equities are not subject to any market level moves, can we say that the diagram is consistent with market efficiency? Discuss your answer with reference to the Efficient Market Hypothesis.

*(60% of the marks)*

- b) Critically discuss whether you believe that theories put forward from the psychological perspective are enough to challenge more orthodox ideas about asset pricing. Illustrate your answers with examples from academic research and real world events.

*(40% of the marks)*

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6. “The information asymmetry argument derived from signaling theory is the most commonly used theoretical framework.” (Taken from Tsang, E.W. and Blevins, D.P., 2015, ‘A critique of the information asymmetry argument in the management and entrepreneurship underpricing literature’. *Strategic Organization*, 13(3), pp. 247-258)

Assess to what extent the asymmetry argument accounts for a wide range of financial decisions for a firm.

7. “The directors of such [joint-stock] companies, however, being the managers rather of other people’s money than of their own, it cannot well be expected, that they should watch over it with the same anxious vigilance with which the partners in a private copartnery frequently watch over their own. Like the stewards of a rich man, they are apt to consider attention to small matters as not for their master’s honour, and very easily give themselves a dispensation from having it. Negligence and profusion, therefore, must always prevail, more or less, in the management of the affairs of such a company.” (Adam Smith, 1776)

- a) Does the separation between ownership and control compromise the shareholder’s interests? Illustrate why you agree/disagree with the sentiments expressed by Smith. *(30% of the marks)*
- b) Describe the mechanisms available to shareholders to protect their assets against reckless managerial behaviour. *(30% of the marks)*
- c) In firms the relationship between shareholders and bondholders is not always an easy one. Describe how in a leveraged firm shareholders can take advantage of bondholders, and detail the mechanisms that are in place to prevent them from doing so. *(40% of the marks)*

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8. Office International Plc and Office Regional Plc are office supply retailers listed in the London Stock Exchange. Their recent financial reports show that Office International has 1,650 stores worldwide and 38,000 employees whilst Office Regional has 880 stores in Europe and 29,000 employees.

Office International is considering the acquisition of Office Regional via an all-share offer to exchange one of its shares for two of Office Regional's shares.

Additional information relating to each company is given below:

	Office International before merger	Office Regional before merger	Office International after merger (expected)
Earnings	£2 million	£2 million	£4 million
Number of shares	10 million	10 million	15 million
Earnings per share	20 pence	20 pence	26.67 pence
Price to earnings ratio	10	5	10
Share price	£2.00	£1.00	£2.67

- a) Explain possible motives for Office International's acquisition of its rival Office Regional, and evaluate whether or not the acquisition is likely to be considered favourably by the shareholders of both Office International and Office Regional. Your answer must address the flows regarding the post-merger estimation summarised in the fourth column of the table.

*(70% of the marks)*

- b) Assume that Office International announces the deal to merge with its rival Office Regional. Discuss what anti-takeover tactics Office Regional could pursue.

*(30% of the marks)*

**[END OF EXAMINATION]**