Monetary and Financial Economics
Instituto Superior de Economia e Gestão

Exam – 29 June 2015 - **Duration: 2h 00m**

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1. **The exam has three groups. The points for each question are mentioned alongside.**

2. **The answers to the questions of each group have to be made in different sheets.**

3. **Only non-graphical calculators are allowed. It is not allowed the use of mobile phones or computers. Improper use will lead to cancellation of the exam.**

4. **It is not possible to use any reading material. During the exam no clarifications can be made.**

I

1.

a) Define “leverage” and present a ratio that allows measuring the leverage of a given investment. [1.50]

b) Distinguish between Primary Market and Secondary Market. [1.00]

2. Consider the following information for two financial assets:

Asset A		Asset B	
Probability	Return (%)	Probability	Return (%)
0.4	10	0.4	14
0.4	9	0.4	6
0.2	8	0.2	8

a) Compute the expected rates of return and standard deviation of each asset, as well as the respective correlation coefficient. [1.50]

b) Determine graphically the opportunity investment formed by the two assets. [1.50]

c)) Consider an average portfolio with an expected return of 30% and risk (standard deviation) of 25%, and a risk-free asset with a return of 5%. Determine the Capital Market Line and present it graphically. [1.00]

II

3.

a) Compute the interest rate of a zero coupon bond, held during one year, with a face value of 2100 EUR that is traded at 2000 EUR. [0.50]

b) In a given country there is a decrease in the volatility of bond prices and, at the same time, the prices in the real estate market also continue to decrease. Explain and analyse graphically the effects of these developments on the demand and supply of bonds and mention what will be the final effect on bond prices and on the equilibrium interest rate. [1.50]

c) In the context of the Gordon model, and the risk related to stocks, identify the principal factors that influence stock prices. [1.50]

4.

a) Comment the following statement: “In a put option, a speculator wants to sell the underlying asset in the future to get protection against a possible change in the price of the underlying asset”. [1.50]

b) Explain what will happen to the demand of EUR against USD id there is an increase in the productivity of the euro area and, at the same time, there is an increase in euro area residents’ preference for USA goods. [1.50]

III

5. The ECB provides liquidity to the market in the amount of 200 billion EUR, with a reversible operation via an auction, and receives the following proposals from the counterparts**:**

Interest rate %	Bank A	Bank B	Bank C
1.10	20		10
1.09	20		10
1.08	20		10
1.07	35	30	30
1.06	25	30	20
1.05	30	20	20
1.04	10	10	10

EUR Billions.

a) What is the marginal rate of the auction? [1.00]

b) Determine the amount of funds attributed to each bank. [2.00]

c) Compare this Monetary Policy instrument with other instruments typically used to implement Monetary Policy measures. [1.00]

6.

a) Show that the monetary multiplier is identical either one uses the currency ratio in relation to money supply or in relation to total deposits. [1.50]

b) Explain what are the main determinants of money demand for Friedman and in which way they affect money demand. [1.50]