Universität Innsbruck	**Institut für Banken und Finanzen**

Fachprüfung

Financial Management 05/2012

Dr. Florian Hauser **24.05.2012**

N° 1	N° 2	N° 3	N° 4	N° 5	N° 6		Total	Note
6	6	6	6	6	10		max. 40	PS:

Name:	Studienkennzahl:	Matrikel:

Die Bearbeitung kann in Deutsch oder in Englisch erfolgen!

1) Fischer Black once wrote of financial theories that "*in the end, a theory is accepted not because it is confirmed by conventional empirical tests, but because researchers persuade one another that the theory is correct and relevant*". Explain

a) why it is so hard to build concise theories on future stock price development.

b) why it is so hard to test existing theories (like the CAPM).

2) In a Modigliani-Miller world without taxes, the unlevered firm A has a market capitalization of 80000€ in t_0 and 1000 shares outstanding. It generates 10% return on equity and has a dividend payout ratio of 25% (assume the latter two figures to be constant over time).

a) Calculate EPS and the fair market price of one share in t_0
b) Calculate the growth rate of dividends and the expected dividend in 4 years (t_4)
c) What is the shareholder value of a second firm (same ROI, same risk class) with a capital structure of L=1

3) The table shows you aggregate demand and supply in a call auction.

a) Determine the volume-maximizing price
b) Assume that an insider joins the auction before the market is cleared. He is aware that the intrinsic value of the stock is 37, and he will try to sell 15 shares (at a limit of 38). What is the resulting market price? Explain which traders on the market are better off due to the presence of the insider.

Situation without insider		
Price	**Aggregate demand**	**Aggregate supply**
34	**58**	**4**
35	**50**	**9**
36	**48**	**11**
37	**45**	**16**
38	**42**	**22**
39	**40**	**25**
40	**37**	**30**
41	**35**	**35**
42	**28**	**37**
43	**14**	**42**
44	**7**	**45**
45	**5**	**50**

4) The market is in equilibrium. The risk-free rate is 1/4 of the market return. Stock A has an expected return of 11.25%, an unsystematic risk of 20% and a covariance with the market of 0.06. Stock B has a beta of 1.20; a systematic risk of 18% and its total risk is 28%.

a) Calculate the market risk.

b) Calculate the expected return of B.

c) Calculate the unsystematic risk of stock B.

d) Calculate beta of a portfolio consisting of 25% stock A, and 75% stock B.

e) What is the composition of an efficient portfolio that has a risk of 20% ?

5) Explain why, in the context of Fisher's separation theorem, capital markets benefit society. What Problems may arise in the absence of functioning capital markets?

6) Multiple Choice. (Be cautious: if your answer is wrong you get a negative point!)

	True	False
If you hold stocks of a firm, and the firm repurchases own stocks on the market, your voting power in the firm's shareholder meeting will increase.	O	O
The higher your precision in estimating the true value of a security, the higher your expected return from trading will be.	O	O
In non-efficient markets, security analysis does always increase your expected return.	O	O
CAPM and APT are contradicting theories.	O	O
Due to adverse selection problems, firms may be tempted to realize highly speculative projects that even involve the risk of bankruptcy.	O	O
According to the pecking-order hypothesis, external debt is the preferred source of fresh capital.	O	O
Facebook priced its initial public offering at $38 a share.	O	O
In a two-asset-world without short selling ($\sigma_A = 0.1;\ \sigma_B = 0.15; \rho_{AB} = 1$), the minimum variance portfolio has a risk of 10%.	O	O
In a two-asset-world with short selling ($\sigma_A = 0.1;\ \sigma_B = 0.15; \rho_{AB} = 1$), the minimum variance portfolio has no risk.	O	O
In a two-asset-world without short selling ($\sigma_A = 0.1;\ \sigma_B = 0.15; \rho_{AB} = -1$), the 50:50 portfolio has no risk.	O	O