

Gesamtprüfung Financial Management

09/2019

Q1	Q2	Q3	Q4	Q5	Q6	Sum	Grade
6	6	6	6	6	10	max. 40	PS:

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Name Matrikel Studienkennzahl

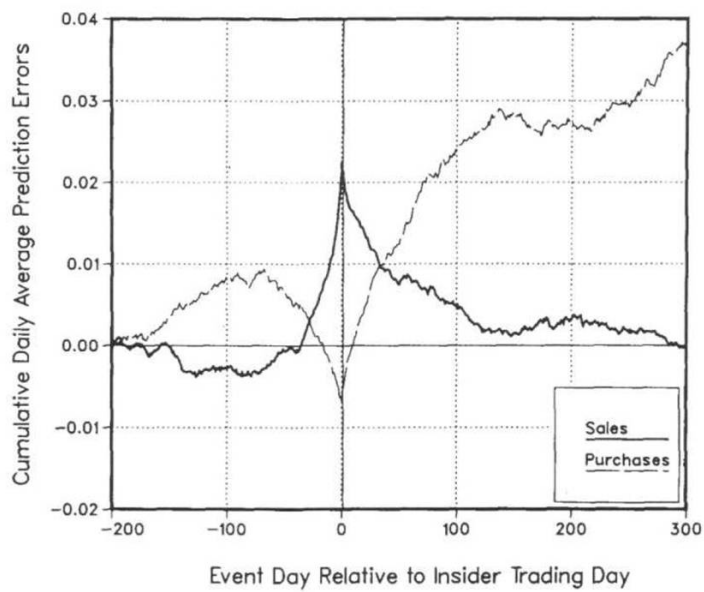
You can answer in English and German language!

Question 1: Modigliani-Miller

Assume a Modigliani-Miller world without taxes. There are two investment opportunities: Firm UnLever and firm Lever are identical, beside of their differing capital structure. Both firms have an EBIT of 100,000 Euro. All earnings will be payed as dividends. Firm UnLever has only equity and has 8,000 shares outstanding. Firm Lever has 5,000 shares outstanding and 500,000 Euro debt. The interest rate for borrowing / lending is 5%. Investors apply the same required return on equity of 10% for both firms.

- a) Calculate the shareholder value for both firms.
- b) Modigliani / Miller argue that such a situation cannot persist. Explain their argument and demonstrate how an investor can realize arbitrage in the given example.

Question 2: EMH



The figure above shows stock price reactions (vertical axis) around insider trades (that happened at time $t=0$ on the horizontal axis). (Jaffe, 1974)

- Explain the meaning of those findings in context of the efficient-markets-hypothesis.
- Explain why one can observe systematic stock price movements prior to the event.

Question 3: Schredelseker-Model

Consider a market for a security with the true value being the sum of ten Laplace-coins. There are ten risk-neutral fundamental traders t_n ; every trader t_n sees the first n coins. Every trader wants to trade one unit (long or short). The sequence of the coins is 1100001111.

Trader t_n	0	1	2	3	4	5	6	7	8	9
n (n° of coins seen)	0	1	2	3	4	5	6	7	8	9
a) $E(V)$										

- a) Calculate the predictions of all traders $E(V)$ in the above table.
- b) Calculate the volume-maximizing market price.
- c) Calculate returns for buyers and sellers.
- d) Which trader will profit the most in this specific situation when the first two coins become public knowledge?

Question 4: Portfolio Theory

You are facing two investment possibilities: An equity-fund A with an expected return of 10% and a variance of 0.0036. And the risk-free rate of return which is 4%.

- a) What is the risk and return of a portfolio with 60% invested in the equity-fund A and the rest in the risk-free rate?
- b) What is the composition of a portfolio with an expected return of 5%? What is its risk?
- c) You have 500 Euro and decide to gamble: Beside of the 500 Euro you have, you take a bank credit of 1000 Euro, and invest the whole 1500 Euro in equity-fund A. What is the risk of that portfolio?

Question 5: CAPM

In CAPM equilibrium, all available investment opportunities must be located on the security market line (SML). Assuming that such an equilibrium would exist on real-world markets, how would you characterize a good investment strategy in such a situation? Justify your answer.

Question 6: Multiple Choice

Correct answers will bring 1 point; incorrect answers count -1 point. If a question is not answered, no points are assigned. Even with wrong answers, the total points for the multiple choice questions cannot be below 0. Comments will be ignored.

How to tick / untick multiple choice questions:



tick a box



untick a box



tick a box again

Netflix (NFLX)	
Previous Close	380.55 USD
Market Cap	164.465B USD
Beta	1.39
EPS	2.80 USD
Price/Book	28.84

Table 1 to the left shows the recent overview for Netflix (NFLX) stocks copied from Yahoo finance recently. Only the first 5 questions in the following MC part refer to this table!

	true	false
According to Table 1, the shareholder value of Netflix is less than 100,000,000,000 USD.	<input type="checkbox"/>	<input type="checkbox"/>
According to Table 1, the PE ratio of Netflix is higher than 100, which could indicate that investors are very optimistic about future growth of earnings.	<input type="checkbox"/>	<input type="checkbox"/>
According to Table 1, the systematic risk of netflix is above average.	<input type="checkbox"/>	<input type="checkbox"/>
According to Table 1, the Book Value Per Share of Netflix is more than 15 USD.	<input type="checkbox"/>	<input type="checkbox"/>
According to Table 1, the ROE (based on book value equity) of Netflix is higher than 20%.	<input type="checkbox"/>	<input type="checkbox"/>
In CAPM, the slope of the security market line is the equity premium.	<input type="checkbox"/>	<input type="checkbox"/>
The information paradox of Grossman / Stiglitz shows that a CAPM equilibrium is not stable.	<input type="checkbox"/>	<input type="checkbox"/>
Retained earnings have been the major source of funding for US-American firms in recent years. That stands in contrast to the pecking-order hypothesis.	<input type="checkbox"/>	<input type="checkbox"/>
According to the Two-Funds-Theorem, the efficient frontier is a straight line.	<input type="checkbox"/>	<input type="checkbox"/>
In empirical studies on market efficiency, researchers usually try to prove that markets reflect all available information.	<input type="checkbox"/>	<input type="checkbox"/>

