



厦门大学《Financial Economics/Asset Pricing》课程试卷

王亚南经济研究院\_\_年级

金融学（数理）和经济学（数理）辅修班

主考教师：Mengyun Lin 试卷类型：（A 卷）

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**Instructions**

1. This exam includes two parts with a total score of 100 points;
2. You have **120 minutes** to answer all questions;
3. You are allowed to use a simple calculator;
4. Please write down all your answers in **English** on the **ANSWER SHEET**, including the multiple-choice questions.

**Part I: Multiple Choice Questions (2 points for each question, 20 points in total)**

**Please note that there is only one correct answer for each question.**

1. In the DDM model, if  $D_1$  and  $k$  are held constant, what will happen to the price of a stock if the constant growth rate gets higher?
  - (a) the price of the stock will be higher
  - (b) the price of the stock will hold constant
  - (c) the price of the stock will be lower
  - (d) it cannot be determined from the information given
2. Stock splits and stock dividends \_\_\_\_\_ the number of shares of stock outstanding.
  - (a) decrease
  - (b) do not alter
  - (c) increase
  - (d) a or b
3. When choosing among investment alternatives with the same expected rate of return, a risk-averse individual chooses the one with the \_\_\_\_\_ risk.
  - (a) surest
  - (b) most uncertain
  - (c) lowest
  - (d) highest
4. The risk arising from holding different kinds of financial assets such as equities or fixed-income securities denominated in one or more currencies is an example of \_\_\_\_\_.
  - (a) unemployment risk
  - (b) liability risk
  - (c) financial-asset risk
  - (d) consumer-durable asset risk
5. Which of the following is most likely to need a lot of life insurance?
  - (a) a single person with no dependents
  - (b) a divorced person with no dependents
  - (c) a double-income couple with no kids
  - (d) married person with children
6. In order for diversification to reduce your risk exposure, the risks must be \_\_\_\_\_.
  - (a) less than perfectly correlated with each other

- (b) more than perfectly correlated with each other
- (c) uncorrelated
- (d) none of the above

7. In the risk-return trade-off line, the risk premium depends on \_\_\_\_\_

- (a) the risk premium of the risky asset
- (b) the proportion of the portfolio invested in the risky asset
- (c) the risk premium of the riskless asset
- (d) both a and b

8. The \_\_\_\_\_ is the length of time between decisions to revise portfolios, whereas the \_\_\_\_\_ is the total length of time for which one plans.

- (a) trading horizon; decision horizon
- (b) planning horizon; decision horizon
- (c) decision horizon; trading horizon
- (d) decision horizon; planning horizon

9. Suppose the standard deviation of the market portfolio is 0.15 and the average degree of risk aversion is 1.5. If the expected return on the market portfolio is 0.15 per year, what is the slope of the Capital Market Line?

- (a) 0.034
- (b) 0.180
- (c) 0.225
- (d) 0.516

10. Suppose there are three assets: BB stock, REM stock, and a risk-free asset. The total market values of each at current prices are \$40 million of BB stock, \$80 million of REM stock, and \$10 million of the risk-free asset. The composition of the market portfolio is \_\_\_\_\_.

- (a) 61.5% BB stock; 7.7% REM stock; 30.8% risk-free asset
- (b) 33.33% BB stock; 66.67% REM stock; 0 risk-free asset
- (c) 30.8% BB stock; 61.5% REM stock; 7.7% risk-free asset
- (d) 30.8% BB stock; 66.67% REM stock; 7.7% risk-free asset

**Part II: Short answer Questions (80 points in total)**

**Please show your steps. No points for answers without explanation or calculation.**

1. (15 points) In order to evaluate the stock of EasyStreet Corporation, an analyst uses the constant growth discounted dividend model. Expected earnings of \$16 per share are assumed, as are an earnings retention rate of 60% and an expected rate of return on future investments of 17% per year. If the market capitalization rate is 14% per year, what is the implied net present value of future investments?
2. (10 points) An investor has \$75,000 to allocate between a risky asset and a riskless asset. The equation for expected return is determined by  $E(r) = 0.06 + 0.1w$ , and  $w$  represents for the share of investment in the risky asset. If the investor requires a portfolio composition with an expected rate of return of 0.12, how much should be invested in each asset?
3. (15 points) A mutual fund advertises a money market fund whose current rate is 0.06, and is deemed “safe.” In addition, the mutual fund also offers an equity fund that is considered very aggressive in terms of growth. Historical expected returns are 0.30 with a standard deviation of 0.25.
  - (a) Derive the risk-reward trade-off line. (7 points)
  - (b) For each unit of extra risk that an investor bears, how much extra expected return will result? (3 points)
  - (c) What allocation should be placed in the money market fund if an investor desires an expected return of 18%? (5 points)
4. (10 points) Consider a portfolio exhibiting an expected return of 20% in an economy in which the riskless interest rate is 6%, the expected return of the market portfolio is 12%, and the standard deviation of the return to the market portfolio is 0.25. Assuming this portfolio is efficient, determine:
  - (a) its beta (5 points)
  - (b) the standard deviation of its return (5 points)
5. (15 points) Lenny's Leftorium (LL) is a store that has no long-term debt in its capital structure. However, LL is currently considering an expansion project that will yield the following net cash flows:

Year	NCF
0	−\$1.2 million
1	\$700,000
2	\$810,000
3	\$860,000

4	\$920,000
5	\$940,000

If the current risk-free rate is 4.5% and the current market risk premium is 7.2% and the beta of the expansion project is 15% more volatile than the market as a whole, should LL undertake the expansion project?

6. (15 points) Consider a person's life cycle - that is, at various ages say, mid-twenties, late thirties to early forties, mid-fifties, and late sixties and beyond. What risks is a person likely to face in each of these age groups and how should they form and manage their financial portfolio at these various stages of life?