

國立中央大學101學年度碩士班考試入學試題卷

所別：財務金融學系碩士班 甲組(一般生) 科目：財務管理 共 二 頁 第 一 頁

本科考試禁用計算器

*請在試卷答案卷(卡)內作答

- Exchange Traded Funds have gained the market share of investments over the past 20 years. (a) What is Exchange Traded Fund? What are the features that Exchange Traded Funds have? (b) Please illustrate an anomaly in stock market that is directly or potentially related to the Exchange Traded Funds? (10 points)
- The three-factor model proposed by Fama and French (1993, 1996) is widely used to evaluate the performance of portfolios. In order to examine the performance of a portfolio, you run a time-series regression of a three factor model that be stated as:

$$R_{i,t} - RF_t = \alpha + \beta_{RMRF} RMRF_t + \beta_{SMB} SMB_t + \beta_{HML} HML_t + \varepsilon_{i,t} \quad (1)$$

where $R_{i,t}$ is the monthly return on portfolio i at month t , RF_t is the risk free rate, $RMRF_t$ is the monthly excess return on the Taiwan-listed value-weighted market portfolio, SMB_t is the monthly return on factor-mimicking size portfolio, and HML_t is the return on factor-mimicking book-to-market equity portfolio. The β_{RMRF} , β_{SMB} , and β_{HML} are factor loadings of $RMRF$, SMB , and HML , respectively. The following table reports the estimated result in the sample period from January 1998 to December 2010.

	α	β_{RMRF}	β_{SMB}	β_{HML}	Adj. R-Sq
Portfolio P1	0.919	0.949	0.153	0.104	0.913
(t-statistic)	(3.02)	(30.37)	(5.46)	(2.93)	

- Please provide a description on portfolio P1 (e.g., Big or small firms? Value stocks or growth stocks? And why). (b) Does portfolio P1 outperform or underperform to benchmark? Why? If exists, how much is the outperformance or underperformance? (14 points)
- In recent years, stock repurchases become more and more important in Taiwan stock markets. Please discuss the advantage (and disadvantage) of the stock repurchase versus cash dividend. (14 points)
 - Steve receives the perpetuity (an annuity to infinity) of \$100, payable once every two years. The first payment occurs at date 2 (two years from today). The annual interest rate is 6 percent. What is the present value of this perpetuity? (12 points)
 - What does asymmetric information have to do with corporate finance? (15 points)

注意：背面有試題

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6. Suppose there are two identical firms except that one is unlevered with value V^U and the other with value V^L is levered with permanent debt D . Assume that they are in an otherwise perfect market except that the corporate tax rate is t_c , please derive Modigliani and Miller Proposition II. (10 points)
7. Following the previous question, assume that the CAPM holds in this market. Please derive the relationship between the beta of the *unlevered* firm, β_U , the beta of the levered equity, β_E , and the beta of the debt of the levered firm, β_D . (15 points)
8. Following the previous question, please derive the relationship between β_U and β_D without using β_E . (10 points)

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