國立清華大學 101 學年度碩士班考試入學試題

系所班組別：計量財務金融學系甲組(財務金融組)

考試科目（代碼）：財務管理 4404

 *請在【答案卷、卡】作答

一、單選題(30%)

1. The TSMC Company has EBIT of $50,000 and market value debt of $100,000 outstanding with a 9% coupon rate. The cost of equity for an all equity firm would be 14%. TSMC has a 35% corporate tax rate. Investors face a 20% tax rate on debt receipts and a 15% rate on equity. Determine the value of TSMC.

A. $120,000 B. $162,948 C. $258,537 D. $263,080 E. $332,143

2. Suppose that firms with unexpectedly high earnings earn abnormally high returns for several months after the announcement. This would be evidence of:

A. efficient markets in the weak form.

B. inefficient markets in the weak form.

C. efficient markets in the semistrong form.

D. inefficient markets in the semistrong form.

E. inefficient markets in the strong form.

3. The Capital Market Line is the pricing relationship between:

A. efficient portfolios and beta.

B. the risk-free asset and standard deviation of the portfolio return.

C. the optimal portfolio and the standard deviation of portfolio return.

D. beta and the standard deviation of portfolio return.

E. None of the above.

4. The optimal capital structure of a firm _____ the marketed claims (ex: debt) and _____ the nonmarketed claims (ex: tax) against the cash flows of the firm.

A. minimizes; minimizes B. minimizes; maximizes

C. maximizes; minimizes D. maximizes; maximizes E. equates; equates

5. When graphing firm value against debt levels, the debt level that maximizes the value of the firm is the level where:

A. the increase in the present value of distress costs from an additional dollar of debt is greater than the increase in the present value of the debt tax shield.

B. the increase in the present value of distress costs from an additional dollar of debt is equal to the increase in the present value of the debt tax shield.

C. the increase in the present value of distress costs from an additional dollar of debt is less than the increase of the present value of the debt tax shield.

D. distress costs as well as debt tax shields are zero.

E. distress costs as well as debt tax shields are maximized.

6. MM Proposition I with taxes is based on the concept that:

A. the optimal capital structure is the one that is totally financed with equity.

B. the capital structure of the firm does not matter because investors can use homemade leverage.

C. the firm is better off with debt based on the weighted average cost of capital.

D. the value of the firm increases as total debt increases because of the interest tax shield.

E. the cost of equity increases as the debt-equity ratio of a firm increases.

7. If you ignore taxes and transaction costs, a stock repurchase will:

I. reduce the total assets of a firm. II. increase the earnings per share.

III. reduce the PE ratio more than an equivalent stock dividend.

IV. reduce the total equity of a firm.

A. I and III only B. II and IV only C. I, II, and IV only D. I, III, and IV only

E. I, II, III, and IV

8. Homemade dividends are described by Modigliani and Miller to be the:

A. dividend one pays oneself to avoid risky stocks.

B. re-arrangement of the firm's dividend stream as management needs.

C. re-arrangement of the firm's dividend stream by investors buying or selling their holdings in the stock.

D. present value of all dividends to be paid.

E. None of the above.

9. The Fama-French three factor model includes the following factors:

A. beta, expected return on the market, risk free rate of interest, a size factor, and a value factor.

B. the market risk premium, a volume factor, and a size factor.

C. beta, expected return on the market, risk free rate of interest, a volume factor, and a value factor.

D. the yield on corporate bonds, a size factor, and a market factor.

E. None of the above.

10. Wine and Roses, Inc. offers a 7% coupon bond with semiannual payments and a yield to maturity of 7.73%. The bonds mature in 9 years. What is the market price of a $1,000 face value bond?

A. $953.28 B. $963.88 C. $1,108.16 D. $1,401.26 E. $1,401.86

二、問答題

1. (20%) 歐債、美債風暴持續延燒，國庫券或政府債券不再是教科書所謂的無風險資產(risk-free asset)。這樣會如何改變你進行評價(valuation)? 你會如何衡量這類風險?

2. (20%) Please show that the price elasticity to interest rate factor of a bond is equal to its duration. The price elasticity to interest rate factor of a bond is defined as

$$D = -\frac{\Delta P}{\Delta i}\frac{i}{P}$$

where P is bond price and i is equal to its yield rate plus one.

3. (30%) 你知道幾種計算選擇權價格(Option prices)的方法？請說明其背後假設與使用時機。