實踐大學 101 學年度研究所碩士班入學招生考試試題

所　別：財務金融學系碩士班(財務金融組)　　60 分鐘

科　目：財務管理　　共 2 頁第 1 頁

→ 備註：請在答案卷上作答，於本試題紙上作答者一律不予計分。

可使用 27 鍵以下的基本型電子計算機

1. Please describe the causes, evolution and the possible solutions of European Sovereign Debt crisis in about 300 words. (20 points)

2. Suppose that risk-free interest rate (R_f)=9%, market return (R_M)=14%, the beta (β_{TSMC}) of TSMC=1.3, (20 points)
   a. What is the required rate of return (R_{TSMC}) on Stock TSMC?
   b. Now suppose the R_f (1) increases to 10% or (2) decreases to 8%. The slope of the security market line remains constant. How would this affect R_M and R_{TSMC}?
   c. Now assume R_f remains at 9%, but R_M (1) increases to 17% or (2) falls to 11%. The slope of the security market line does not remain constant. How would these changes affect R_{TSMC}?

3. The HTC company's EPS was $ 65.0 in 2011 and $ 47.7 in 2007. The company pays out 40% of its earnings as dividends and the stock sells for $360. (15 points)
   a. Calculate the past annual growth rate in earnings.
   b. Calculate the next expected dividend per share (D_{2012}). Assume that the past growth rate will continue.
   c. What is the cost of equity for the HTC?

4. Project ESCO-1 has a cost of $ 90,000,000 and is expected to produce benefits (cash flows) of $ 30millions per year for 5 years. Project ESCO-2 costs $250M (million) and is expected to produce cash flows of $ 75M pre year for 5 years. Calculate the two projects' net present values (NPV) and profit index, assuming a cost of capital of 10%. Which projects would be selected, assuming they are mutually exclusive? (15 points)

5. EU is considering a change in its capital structure. EU currently has $20 billion in debt carrying a rate of 8%, and its equity price is $40 per unit with 1 billion shares outstanding. EU's book value of equity is also to $40 per shares. EU is a zero growth firm and pays out all of its earnings as dividends. It's EBIT is $8.33 billion, and EU faces a 40% federal-plus-state tax rate. The market risk premium is 4%,

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and the risk free rate is 6%. EU is considering increasing its debt level to a total of either $30 billion, $40 billion, or $50 billion and repurchasing shares with the extra money that it borrows. EU will have to retire the old debt in order to issue new debt, and the rate on the new debt will be 9.5% if the debt is $40 billion. (20 points)

a. What is EU's current cost of equity and its beta?
b. What is EU's unlevered beta and unlevered cost of equity? Use market value Debt/Equity when unlevering.
c. What is EU's new beta and cost of equity if it has $40 billion in debt?
d. What is EU's total value of the firm if it has $40 billion in debt?

6. The price of a European call that expires in six months and has a strike price of $30 is $2. The underlying stock price is $29, and a dividend of $0.50 is expected in two months and again in five months. The term structure is flat, with all risk-free interest rates being 10%. What is the price of a European put option that expires in six months and has a strike price of $30? ($e^{-rt} \sim \dfrac{1}{(1+rt)}$, if rt is small.) (10 points)