淡江大學九十一學年度碩士班招生考試試題

系別：財務金融學系　　　　科目：財務管理

104-1

准帶項目請打「○」否則打「×」	
計算機	字典
O	X

本試題共 2 頁

共有 10 題，每題皆為 10 分，滿分為 100。

1. A stock is currently selling for 60. The price of the stock at the end of the year is expected either to increase by 25% or to decrease by 20%. The riskless interest rate is 5%. Calculate the price of a European put on the stock with exercise price 55. Use the binomial option-pricing model and draw the graph.
2. Assume the corporate tax rate is 34%. A firm has perpetual expected EBIT of \$100. The firm has no debt in its capital structure. Its cost of equity is 10%. What would be the value of the firm if it issued \$400 in perpetual debt?
3. A firm has a \$10 million portfolio with a beta of 1.2. The S&P is currently 900 and one futures contract is on \$250 times the index. How can the company use futures contracts on the S&P 500 to completely hedge its risk over the next six months? What position should it take to reduce the beta of the portfolio to 0.3?
4. The 1-year riskless interest rate is 5.65%. A stock sells for $\$24\frac{1}{4}$. A three-month \$25 call sells for \$1. For what price should a three-month \$25 put sell?
5. Acer's operating income is \$500,000, the company's interest expense is \$200,000, and its tax rate is 40%. What is the company's degree of financial leverage? If the company were able to double its operating income, what would be the percentage increase in net income?
6. 如果債券的價格為：$P=\sum CF_t(1+R)^{-t}$，R 為折現率。

   證明：$\frac{\partial P}{P}=-D(\frac{\partial R}{1+R})$，D 為存續期間。
7. We have two risky assets: A and B. The expected return of asset A is 12% and for asset B is 8%. The standard deviation of return for asset A is 8% and for asset B is 6%. The correlation coefficient of return between asset A and B is 0. If there also exists a riskless asset with a return of 7%, what is the composition of the tangency portfolio (i.e., the optimal risky portfolio)?
8. You are evaluating a company's common stock based on the following information and assumptions:

   The stock paid a \$3.00 annual dividend a few years ago. The exact dividend will be received in one year. Annual dividends are expected to remain constant for three years, ending with the dividend paid at t=3. After that, dividends are expected to GROW by 8% per year throughout the foreseeable future. If your

◀注意背面尚有試題▶

准帶項目請打「○」否則打「×」	
計算機	字典

opportunity cost is 18% for investments of this risk level, what is the maximum price that you be willing to pay for a share of this stock?

9. Calculate the duration of a 2-year, $1,000 bond that pays an annual coupon of 10% and trades at a yield of 10%.

10. 根據全球著名的金融評鑑機構「李伯公司」(Lipper Analytical Services Inc.) 的統計，近年來美國境內投資於美國股市的開放型基金中，絕大多數的投資報酬率均低於 S&P500 指數。因此讓投資專家幫我們做投資的決策或投資在共同基金是不明智的決定，因爲投資專家儘管領了高薪，而且動用可觀的資源從事基本面分析、技術面分析等各方面的研究，但不論是短期或是長期而言，大多數的投資專家替投資人創造的附加價值卻是負的。
你（妳）同意上述的說法嗎？什麼情況下同意或反對？說明你（妳）的看法。