

國立臺灣科技大學
九十學年度碩士班招生考試試題

系所組別：企業管理系丙組
科目：財務管理

- 1、假設股票 A 與 B 之報酬均是常態分配之隨機變數，股票 A 之期望報酬率與報酬率之標準差分別為 30% 與 20%，而股票 B 之期望報酬率與報酬率之標準差分別為 15% 與 10%。現在有一投資人想將 100 萬之資金投資於此二種股票上，這位投資人想知道若他將資金以不同之組合投資於此二股票時，其投資組合之報酬與風險會如何變化，請問：(1)、風險之意義為何，有那些可能之定義？你如何定義風險？(2)、你可否以圖形之方式提供分析，若股票 A 與股票 B 之相關係數分別為 1.0、0.0、及 -1.0 時，對投資組合風險之分散有何影響？(3)、怎樣的投資組合是較有效率的？
(17 分)
- 2、某高科技公司 500 億之總資產中，主要資產為金額達 400 億之固定設備投資，該公司之資金來源之中負債佔 70%，該公司之稅後淨利佔銷貨收入約 10%，其總資產週轉率約 1.5 倍。該公司之財務經理指出，Modigliani 及 Miller 曾主張財務結構不會影響公司之價值，但舉債卻可增加股東報酬。
請問：(1)、Modigliani 及 Miller 之主張立論何在？你是否同意？你的理由為何？(2)、舉債可提高股東報酬之說法是否正確？在此公司之情況，舉債與不舉債對股東報酬之影響為何？對公司價值之影響又為何？(3)、你認為該公司應考慮那些因素來決定其資本結構？營運槓桿與財務槓桿之間有何關聯？
(17 分)
- 3、某公司之業務主要係由日本進口重要零件，經加工後外銷到美國。其每年之銷貨收入大約 100 億元新台幣，銷貨成本主要為從日本進口重要零件，約佔 70 億元新台幣，其他管銷費用及稅金約 20 億元，稅後淨利約 10 億元新台幣。然而每當日元或美元兌換台幣之比率變化時，該公司之淨利也受到很大影響。請問：(1)、該公司應如何衡量匯率變化所帶來之風險？你可否建構一個簡單的模型來衡量該公司之匯率風險？(2)、美元與日元兌換台幣之匯率走勢相同與否，對該公司之匯率風險有何影響？(3)、有那些方法可降低或消除此一匯率風險？使用這些方法之代價為何？
(16 分)



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4. (20%) You are analyzing a capital budgeting project that is expected to have a PV of cash inflows of \$250 million and will cost \$200 million (in present value dollars) initially. A simulation of the project cash flows yields a variance in present value of cash inflows of 0.04. You have to pay \$12.5 million a year to retain the project rights for the next five years. The five-year Treasury bond rate is 8%.
- What is the value of the project, based on traditional NPV?
 - What is the value of the project as an option?
 - Why are the two values different? What factors determine the magnitude of this difference?
5. (20%) KKK company reported earning per share of \$3.2 and paid dividends per share of \$1.7 in the previous year. The firm also reported depreciation of \$315 million in that year and capital expenditures of \$475 million. There were 160 million shares outstanding, trading at \$51 per share. This ratio of capital expenditures to depreciation is expected to be maintained in the long term. The working capital needs are negligible. KKK had debt outstanding of \$1.6 billion and intends to maintain its current financing mix (of debt and equity) to finance future investment needs. The firm is in a steady state, and earnings are expected to grow 7% a year. The stock had a beta of 1.05. The market risk-premium is 5.5% and the Treasury bond rate is 6.25%.
- Estimate the value per share, using the Dividend discount method.
 - Estimate the value per share, using the Free Cash Flow discount method.
 - How would you explain the difference between the two models, and which one would you use as your benchmark for comparison to the market price?
6. (10%) Please explain the meaning of Operating Leverage and Financial Leverage. How to measure the degree of Operating Leverage and Financial Leverage?

TABLE FOR $N(X)$ WHEN $X \geq 0$

| x | 0.00 | 0.01 | 0.02 | 0.03 | 0.04 | 0.05 | 0.06 | 0.07 | 0.08 | 0.09 |
|-----|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0.0 | 0.5000 | 0.5040 | 0.5080 | 0.5120 | 0.5160 | 0.5199 | 0.5239 | 0.5279 | 0.5319 | 0.5359 |
| 0.1 | 0.5398 | 0.5438 | 0.5478 | 0.5517 | 0.5557 | 0.5596 | 0.5636 | 0.5675 | 0.5714 | 0.5753 |
| 0.2 | 0.5793 | 0.5832 | 0.5871 | 0.5910 | 0.5948 | 0.5987 | 0.6026 | 0.6064 | 0.6103 | 0.6141 |
| 0.3 | 0.6179 | 0.6217 | 0.6255 | 0.6293 | 0.6331 | 0.6368 | 0.6406 | 0.6443 | 0.6480 | 0.6517 |
| 0.4 | 0.6554 | 0.6591 | 0.6628 | 0.6664 | 0.6700 | 0.6736 | 0.6772 | 0.6808 | 0.6844 | 0.6879 |
| 0.5 | 0.6915 | 0.6950 | 0.6985 | 0.7019 | 0.7054 | 0.7088 | 0.7123 | 0.7157 | 0.7190 | 0.7224 |
| 0.6 | 0.7257 | 0.7291 | 0.7324 | 0.7357 | 0.7389 | 0.7422 | 0.7454 | 0.7486 | 0.7517 | 0.7549 |
| 0.7 | 0.7580 | 0.7611 | 0.7642 | 0.7673 | 0.7704 | 0.7734 | 0.7764 | 0.7794 | 0.7823 | 0.7852 |
| 0.8 | 0.7881 | 0.7910 | 0.7939 | 0.7967 | 0.7995 | 0.8023 | 0.8051 | 0.8078 | 0.8106 | 0.8133 |
| 0.9 | 0.8159 | 0.8186 | 0.8212 | 0.8238 | 0.8264 | 0.8289 | 0.8315 | 0.8340 | 0.8365 | 0.8389 |
| 1.0 | 0.8413 | 0.8438 | 0.8461 | 0.8485 | 0.8508 | 0.8531 | 0.8554 | 0.8577 | 0.8599 | 0.8621 |
| 1.1 | 0.8643 | 0.8665 | 0.8686 | 0.8708 | 0.8729 | 0.8749 | 0.8770 | 0.8790 | 0.8810 | 0.8830 |
| 1.2 | 0.8849 | 0.8869 | 0.8888 | 0.8907 | 0.8925 | 0.8944 | 0.8962 | 0.8980 | 0.8997 | 0.9015 |
| 1.3 | 0.9032 | 0.9049 | 0.9066 | 0.9082 | 0.9099 | 0.9115 | 0.9131 | 0.9147 | 0.9162 | 0.9177 |
| 1.4 | 0.9192 | 0.9207 | 0.9222 | 0.9236 | 0.9251 | 0.9265 | 0.9279 | 0.9292 | 0.9306 | 0.9319 |



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