

國立中央大學104學年度碩士班考試入學試題

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

*請在答案卷(卡)內作答

1. You are a secretary for a large public firm's CEO. Your boss and you are currently sitting in the congress hearing about your company's recent practice. The hearing is not going well. Your boss is still hung over from last night's party and obviously not in his mind. The congresswoman scolds him harshly for your firm's high debt capital structure. She said "Firms like yours use high debt mainly to create tax shield. However, the high leverage is irresponsibly putting the firm in potential danger of financial distress. The firm is not only subject to the direct and indirect cost of financial distress, but also has chance to deviate from the optimal investment decisions. For example, lots of distressed firms suffer from the **underinvestment problem** or **risk shifting problem**." Although you sort of enjoy watching your boss being hammered, you also read from his face that he needs your help. "Here it comes again," you say to yourself, and start to write a note for him to get out of the situation. (兩小題共 14 分)

Note: Just like the last time you helped him on the homework from his EMBA class, you need to use short and clear argument to demonstrate the intuition behind the idea.

- a) Explain the basic idea of the underinvestment problem and risk shifting problem. (此小題 7 分)
- b) With reference to the trade-off view of capital structure (this is the only story about capital structure your boss can possibly understand), describe the basic idea of two benefits of debt other than tax shield. (此小題 7 分)

2. 『平均而言，公司首次公開上市的抑價(IPO underpricing)比現金增資(SEO)的抑價幅度要大』、『Google 選擇改良式競價(modified auction)而非詢價圈購(bookbuilding)來進行 IPO』、『一個想在中國做投資的外國創業投資者(Venture Capitalist)應該多聘用土生土長當地訓練出來的人』。請用一個概念來解釋上面提到的這些現象及說法，解釋時請一併簡要解釋標粗體字的專有名詞。(此題 10 分)

3. 試申論：『國際油價重挫對台灣金融業之影響』(此題 10 分)

注意：背面有試題

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4. 考慮下列幾項投資計畫，每個計畫同為三年期而且除預算限制外並不互斥，一個計畫只能挑選一次。 (兩小題共 16 分)

Project	Initial investment (億新台幣)	Profitability Index	IRR (%)
A	15	1.33	15
B	22	1.30	17
C	20	1.4	13
D	8	1.25	14
E	10	0.90	?

假設公司的資金成本是 10%，並且可以適用上述所有投資計畫上。請回答下面的問題。

- a) 假設計畫 E 需要期初(第零期)投資 10 億而未來現金流為： $CF_1 = \$0$, $CF_2 = \$0$, $CF_3 = 12$ 億。試計算計畫 E 的 IRR (列出算式，解到最後 $(1+IRR)^x = y$ 即可，無需開多次方根。)。假設只考慮計畫 E 為一個獨立計畫，利用 Profitability Index 跟 IRR 來評估是否要接受此一投資案 E？你的決策會因為你使用 Profitability Index 或 IRR 而有所不同嗎？為什麼？(此小題 8 分)
- b) 假設公司年度投資預算總上限是新台幣 46 億，你被要求在上述投資案中找出一個在預算之內最佳的投資組合。使用 IRR 做排序，哪個計畫組合是最好的？使用 Profitability Index 做排序，哪個計畫組合是最好的？為什麼你使用不同的方法會有不同的結論？(此小題 8 分)
5. 試說明金融機構如何善盡社會責任，以及如何促進經濟體系的永續發展。(此題 10 分)
6. 試說明如何透過董事會及其他機制的設計，加強公司治理。(此題 10 分)
7. 試列舉說明利率的期限結構理論。(此題 10 分)
8. Please prove that, other things equal, a bond's duration is higher when (a) its coupon rate is lower, and (b) its yield to maturity is lower. (此題 12 分)
9. Please prove that other things equal, the longer of the time to maturity, the more valuable an American option. (此題 8 分)

注意：背面有試題