

系所別： 財務金融學系甲、丙組 科目： 財務管理

一、選擇題【每小題 2 分，共 10 分】

- 假如銀行對外舉借期限兩年、年利率 9% 之債務，以支應期限一年、年報酬率 10% 之放款，一年之後新承做的放款利率降低至 8%，請問此銀行目前面對何種風險的挑戰？
 - (1) 流動性風險
 - (2) 再融資風險
 - (3) 再投資風險
 - (4) 資本風險
 - (5) 信用風險
- 請由下列簡易方法，挑選其中之一，顯示此企業的信用地位已明顯滑落。
 - (1) 該企業最近發行的債務憑證，適用較低的息票利率。
 - (2) 該公司流通在外的股價長期看跌。
 - (3) 信用評等機構對該企業之某些債務，發佈降等消息。
 - (4) 股市觀測站發佈，該企業的主要股東或內部人轉讓部分持股。
- 請根據下列敘述，挑選不適合的風險管理概念：
 - (1) 風險管理之目的並不是消除風險，而是管理風險。
 - (2) 在企業所訂定的風險管理規範下，不應過度限制從業人員承擔風險的機會。
 - (3) 各式各樣風險的營業單位，應與監督此風險的管理人員有所區別，並分別隸屬於不同的單位。
 - (4) 企業面對風險管理的態度，主宰該行風險管理的深度。
 - (5) 企業可能同時面臨信用風險與市場風險均高的情況，所以將此兩種風險相加，不會有高估實際風險之虞。
- 近年來，國內外銀行積極開辦「商業本票循環融資業務（簡稱 NIF）」，請問下列何種敘述是不合理的：
 - (1) 此商品每次的發行期間不得超過 180 天。
 - (2) 因循環發行之故，此商品具有中長期循環融資的效益。
 - (3) NIF 借款在財務報表的認列，屬於短期負債。
 - (4) 此商品可避免流動比率低、影響信用評等的顧慮。
- 商場上，企業面對的違約行為涵蓋哪些層面？
 - (1) 尚未履行付款義務的違約
 - (2) 交易對手未遵守契約規定的違約
 - (3) 資產價值低於債務的經濟違約
 - (4) 以上皆是

二、計算題【合計 40 分】

1、【每小題 5 分】

- (1) An investor holds the stock of First National Bank of Inseco and expects to receive a dividend of \$12 per share at the end of the year. Stock analysts have recently predicted that the bank's dividends will grow at approximately 8 percent a year indefinitely into the future. If this is true, and if the appropriate risk-adjusted cost of capital (discount rate) for the bank is 15 percent, what should be the current price per share of Inseco's stock?
- (2) Depositors and Merchants Bank has a ratio of equity capital to total assets of 7.5 percent. In contrast, Newton National Bank reports an equity-capital-to-asset ratio of 6 percent. What is the value of the equity multiplier for each of these banks? Suppose that both banks have an ROA of 0.85 percent.

2、【本題 10 分】U.S. Treasury bills are available for purchase this week at the following prices (based upon \$100 par value) and with the indicated maturities:

- a. \$97.25, 182 days.
- b. \$96.50, 270 days.
- c. \$98.75, 91 days.

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Calculate the bank discount rate (DR) on each bill if it is held to maturity. What is the equivalent yield to maturity (sometimes called the bond-equivalent or coupon-equivalent yield) on each of these Treasury bills?

3、【每小題 5 分】

- (1) A government bond currently carries a yield to maturity of 12 percent and a market price of \$940. If the bond promises to pay \$100 in interest annually for five years, can you calculate its current duration?
- (2) Dewey National Bank holds \$15 million in government bonds having a duration of six years. If interest rates suddenly rise from 6 percent to 7 percent, what percentage change should occur in the bonds' market price?

4、【每小題 5 分】

- (1) A bank plans to borrow \$55 million in the money market at a current interest rate of 8.5 percent. However, the borrowing rate will float with market conditions. To protect itself, the bank has purchased an interest rate cap of 10 percent to cover this borrowing. If money market interest rates on these funds sources suddenly rise to 11.5 percent as the borrowing begins, how much interest in total will the bank owe and how much of an interest rebate will it receive, assuming the borrowing is for only one month?
- (2) Langley Bank and Trust has just received an offer to merge from Courthouse County National Bank. Langley's stock is currently selling for \$40 per share. The shareholders of Courthouse County Bank agree to pay Langley's stockholders a bonus of \$10 per share. What is the merger premium in this case? If courthouse County's shares are now trading for \$65 per share, what is the exchange ratio between the equity share of the two banks? Suppose that Langley has 10,000 shares and Courthouse County has 30,000 shares outstanding. How many shares in the merged firm will Langley's shareholders wind up with after the merger? How many total shares will the merged banking company have outstanding?

三、簡答題

1. 【本題 10 分】 Suppose a parcel of land near where you live is on sale for NT\$1,000,000. If the parcel is not sold today, it will be taken off the market. The parcel would be an ideal location for a residential home. Unfortunately, the local authorities have so far refused to allow any construction on it. But, you have just learned that they will reverse their decision in the coming year. If you purchase the parcel of land now, you expect to be able to sell it for NT\$1,100,000 next year when a building permit will be available. Suppose you that have exactly NT\$1,000,000 on your bank account, which is available at your disposal. Other than the information provided above, list three most important attributes of the investment, which you need to know for making a sound decision of whether or not to purchase the parcel of land.
2. 【每小題 10 分，共 20 分】 Suppose Easter Manufacturing Company (EMC) can use two different types of machines to manufacture the designer desk lamp during the five years the project is expected to last. One is a multipurpose standard machine and the other is a single-purpose, untested digitally-driven apparatus, which was developed by EMC's R&D department specifically for the project. Assume that the machine used does not significantly affect the project's NPV. Although engineers at EMC are confident the newer machine will prove to be reliable, the project manager believes that there is a possibility the newer machine will not be able to meet the stringent volume and quality requirements of mass production and may have to be scrapped and replaced with the standard machine. If the standard machine is selected, it can easily be replaced with the newer one, after the new machine has successfully passed extra reliability tests, with minimal disruption and adjustment to the manufacturing process. However, the reverse is not true because replacing the new machine with the standard one would require a

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complete revamping of the production line. In other words, although management will have the option to switch machines while the project is running, this option has more value if the standard machine is chosen.

Suppose EMC's designer desk lamp is a flop and does not sell. Although the decision to go ahead with the project implicitly assumed that it will last five years, EMC's management will always have the option to abandon the project at an earlier date. Assume that within a year after the project's launch, EMC knows more about the fate of the designer desk lamps. Assume that the project can be abandoned at the end of the first year and that the net proceeds from its liquidation will be \$1,600,000. Depending on whether the lamp is a success or a failure, the expected cash flows of the remaining years (from the second to the fifth year) will change as shown in Exhibit A.

Exhibit A
Expected cash flows, Year 2 through 5, and
Their Present Values for Success and Failure of
the EMC Designer Desk Lamp

	Year 2	Year 3	Year 4	Year 5	Present Value Cost of Capital = 9%
Expected cash flows according to the initial estimation	\$822,000	\$692,000	\$554,000	\$466,000	
Expected cash flows if the project is successful	\$890,000	\$783,000	\$612,000	\$520,000	\$2,316,507
Expected cash flows if the project is a failure	\$662,000	\$480,000	\$420,000	\$340,000	\$1,576,527

- (1) Assume that there is a 30% chance that the project will fail and a 70% chance that it will succeed. What is the expected value of the project in one year's time?
 - (2) Assume that the initial cash outlay (\$2,360,000) and the first year's expected cash flow (\$832,000) have not changed. Does the accounting for the option to abandon the project after one year affect the investment decision? Explain why.
3. 【每小題 10 分，共 20 分】 Exhibit B summarizes the key elements of a firm's financial management system and shows their managerial implications within a single framework, that is, a business's financial strategy matrix. A firm may have on or several divisions or businesses.

The vertical axis measures the ability of a particular business to create value. This ability is indicated by the sign and magnitude of a business's return spread, its expected return on invested capital (ROIC) less its weighted average cost of capital (WACC). When the return spread is positive (the upper half of the matrix), there is value creation. When the return spread is negative (the lower half of the matrix), there is value destruction.

The horizontal axis measures the capacity of a business to finance its growth in sales. This capacity is measured by the difference between the sales growth rate and the self-sustainable growth rate. The self-sustainable growth rate is the maximum rate of growth in sales a business can achieve without changing its financing policy (same debt-to-equity ratio, same dividend payout ratio, and no new issue of equity or share repurchase) or modifying its operating policy (same operating profit margin and same capital turnover). A business will experience a cash shortage if the difference between the sales growth rate and the self-sustainable growth rate is positive (the right half of the matrix). In this case,

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sales are growing faster than the capacity of the firm to finance the assets required to support that growth, producing a cash deficit. The firm will generate a cash surplus if the difference is negative (the left half of the matrix). In this case, sales are growing at a slower than the capacity of the firm to finance its growth, producing excess cash.

A firm with a single business will fall into one of these four quadrants. A firm with many different businesses will have to allocate them to their respective quadrant. After this diagnostic stage is completed, management will have to decide what to do with each business according to its position in the financial strategy matrix.

- (1) If a business is located in Quadrant I, what options does the management have to maximize the firm's value?
- (2) If a business is located in Quadrant IV, what options does the management have to maximize the firm's value?

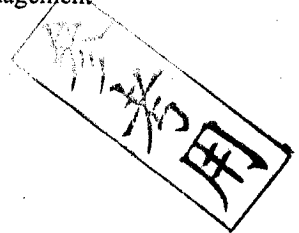


Exhibit B
Financial Strategy Matrix

