

國立中正大學

113 學年度碩士班招生考試

試題

[第 1 節]

科目名稱	財務管理
系所組別	財務金融學系

—作答注意事項—

※作答前請先核對「試題」、「試卷」與「准考證」之系所組別、科目名稱是否相符。

1. 預備鈴響時即可入場，但至考試開始鈴響前，不得翻閱試題，並不得書寫、畫記、作答。
2. 考試開始鈴響時，即可開始作答；考試結束鈴響畢，應即停止作答。
3. 入場後於考試開始 40 分鐘內不得離場。
4. 全部答題均須在試卷（答案卷）作答區內完成。
5. 試卷作答限用藍色或黑色筆（含鉛筆）書寫。
6. 試題須隨試卷繳還。

國立中正大學 113 學年度碩士班招生考試試題

科目名稱：財務管理
系所組別：財務金融學系

本科目共 7 頁 第 1 頁

Part A. Multiple Choices (75 points; 2.5 points for each question; please select the best answer)

- Individuals who continually monitor the financial markets seeking mispriced securities
 - are never able to find a security that is temporarily mispriced.
 - earn excess profits over the long term.
 - make the markets increasingly more efficient.
 - None of the options are correct.
- Jones purchased 500 shares of stock for \$62.25 per share and sold the shares for \$64.30 each. He also received \$725 in dividends. If the inflation rate was 3.8%, what was the exact real rate of return on this investment?
 - 1.76%
 - 4.20%
 - 5.62%
 - 1.82%
- For evaluating capital projects, which of the following statements is accurate?
 - The pure play method is most frequently used for projects involving the growth of a company's current operations.
 - Firms should accept low-risk projects before funding high-risk projects.
 - Making subjective adjustments to a company's WACC when determining project discount rates unfairly punishes low-risk divisions within the company.
 - A project that is unacceptable today might be acceptable tomorrow due to a change in market returns.
- You would like to combine a risky stock with a beta of 1.52 and default-free Treasury bills in such a way that the risk level of the portfolio will be equivalent to the risk level of the overall market. What percentage of the portfolio should you invest in the risky stock?
 - 63.32%
 - 65.79%
 - 67.57%
 - 56.8%
- Buenos Café has 150,000 shares of stock outstanding, sales of \$1.92 million, net income of \$125,900, a price-earnings ratio of 20.7, and a book value per share of \$7.96. What is the market-to-book ratio?
 - 2.60
 - 1.84
 - 1.61
 - 2.18

國立中正大學 113 學年度碩士班招生考試試題

科目名稱：財務管理
系所組別：財務金融學系

本科目共 7 頁 第 2 頁

6. Suppose you observe a spot exchange rate of \$1.1743/SFr. The one-year forward rate for the Swiss franc is \$1.2166/SFr. If the one-year interest rate is 1.75% in Switzerland, according to the interest rate parity (IRP), what is the one-year interest rate in the U.S.?
- A. 1.83%
 - B. 2.08%
 - C. 5.41%
 - D. 5.64%
7. Which of the following should be included in the cash flow projections for a new product?
- (I) Money already spent on research and development of the new product;
 - (II) Capital expenditures for equipment to produce the new product
 - (III) Increase in working capital needed to finance sales of the new product
 - (IV) Interest expense on the loan used to finance the new product launch
- A. II and III only
 - B. II and IV only
 - C. I, II, and III only
 - D. II, III, and IV only
8. Spectrum Corp. is considering Project X, which incurs an initial cost of \$50 million and offers an annual after-tax cash flow of \$7.5 million in perpetuity. The project is in an industry that has greater market risk than Spectrum's typical projects. Spectrum's firm-wide weighted average cost of capital, based on its typical projects, is 15%. Should Spectrum Corp. accept Project X?
- A. Yes, because the NPV of the project is positive.
 - B. Yes, because a zero-NPV project is marginally acceptable.
 - C. No, because a zero-NPV project is a waste of resources.
 - D. No, because the NPV of the project is negative.
9. Which of the following actions would necessarily result in a higher debt-equity ratio, all else equal?
- A. The firm uses its excess cash to repurchase some of its shares.
 - B. The value of the firm's equity increases because of a lower cost of equity capital.
 - C. Warrant owners exercise their warrants.
 - D. Convertible bondholders convert their bonds to shares of common stock
10. "Survivorship Bias" in finance refers to the fact that
- A. it is more likely that a company will remain in existence if it has sufficient funds to support it through economic downturns.
 - B. Mutual funds that perform poorly disappear; hence the average returns tend to be upward-biased because they are based on the funds that remain.
 - C. those analysts who manage to become highly visible are more likely to survive and thrive in the

industry.

- D. due to the high-stress nature of the investment industry, few investment managers last more than 10 to 15 years.
11. An investment has an initial cash outflow of \$220,000 for fixed assets that will be depreciated straight-line to zero over the 4-year life of the project. The sales price is \$19.85 per unit, annual fixed costs are \$237,000, the variable costs per unit are \$8.67, and the tax rate is 20%. At what annual sales quantity will the investment break even on an accounting basis? (Round up to the nearest whole unit.)
- A. 31,025 units
B. 29,889 units
C. 24,598 units
D. 26,129 units
12. The potential decision to abandon a project has value as an option because:
- A. abandonment can occur at one specific point in the future.
B. the project may be worth more if its commencement is delayed.
C. future demand may exceed expectations.
D. costs can be limited before bankrupting the firm.
13. A tactic designed to make unfriendly takeover attempts financially unappealing, if not impossible, is called:
- A. a white knight.
B. greenmail.
C. a poison pill.
D. a golden parachute.
14. The stock of Titan Inc. paid a dividend of \$2.50 this year. Dividends are expected to grow at the constant rate of 3% indefinitely. The expected return on the market is 11%, and the risk-free rate is 4%. The equity premium is expected to remain constant for the foreseeable future. If the beta of the stock is 0.76, according to CAPM, what is the maximum price you should pay for a share of Titan Inc.?
- A. \$40.74
B. \$27.63
C. \$39.56
D. \$26.82
15. ABC Development issued 20-year bonds one year ago at a coupon rate of 10.2%. The bonds make semiannual payments and have a par value of \$1,000. If the yield to maturity is 8.2%, what is the current bond price?
- A. \$991.90

- B. \$1,098.00
C. \$1,142.16
D. \$1,190.93
16. Striker Corp. has experienced growth of 20% for each of the last 5 years. Over this 5-year period, its return on equity has never exceeded 15%, its profit margin has held steady at 5%, and its total asset turnover has not changed. During the same period, it paid no dividends and issued no new equity. Which of the following can you most likely infer about Striker Corp. over the past 5 years?
- A. Its leverage has decreased.
B. Its leverage has increased.
C. Its leverage has remained constant.
D. None of the options are correct.
17. If a poorly-diversified portfolio becomes well-diversified, we would expect the portfolio's
- A. beta to increase.
B. beta to decrease.
C. rate of return to increase.
D. standard deviation to decrease.
18. Currently, Ranger Accessories sells 42,600 handbags annually at an average price of \$149 each. It is considering adding a lower-priced line of handbags that sell for \$79 each. The firm estimates it can sell 21,000 of the lower-priced handbags but expects to sell 7,200 fewer of the higher-priced handbags by doing so. What is the amount of annual sales that should be used when evaluating the addition of the lower-priced handbags?
- A. \$586,200
B. \$659,000
C. \$1,090,200
D. \$2,056,200
19. A stock had annual returns of 5%, -26%, 12%, and 28% for the past four years. The arithmetic average of these returns is _____% while the geometric average return for the period is _____%.
- A. 4.75; 11.39
B. 11.39; 4.75
C. 4.75; 2.73
D. 2.73; 4.75
20. Omega Corp. is being valued using discounted cash flow methodology with terminal value calculated as a growing perpetuity. Not including the terminal value, the present value of projected free cash flows for years 1 through 5 is \$280 million (total). In year 5, projections show a free cash flow of \$65 million.

- What is the estimated fair market value of Omega Corp.? Assume a WACC of 11% and a growth rate of 3%.
- A. \$762.18 million
 - B. \$776.64 million
 - C. \$1,092.50 million
 - D. \$1,116.88 million
21. The common stock of Lunar Tools has a beta of 1.24 and an actual expected return of 13.25%. The risk-free rate of return is 3.7% and the market rate of return is 11.78%. Which one of the following statements is true given this information?
- A. The actual expected stock return will graph above the security market line.
 - B. According to CAPM, the actual expected stock return indicates the stock is currently overpriced.
 - C. According to CAPM, the actual expected stock return indicates the stock is currently underpriced.
 - D. To be correctly priced according to CAPM, the stock should have an expected return of 13.56%.
22. The need for external financing:
- A. ignores any changes in retained earnings.
 - B. must be funded by long-term debt.
 - C. is unaffected by the dividend payout ratio.
 - D. will limit growth if unfunded.
23. Which of the following statements is false?
- A. Because capital expenditures can vary substantially from period to period, most practitioners rely on enterprise value to free cash flow multiples.
 - B. Common multiples to consider are enterprise value to EBIT, EBITDA, and free cash flow.
 - C. If two stocks have the same payout and EPS growth rates as well as equivalent risk, then they should have the same P/E ratio.
 - D. Looking at enterprise value as a multiple of sales can be useful if it is reasonable to assume that the firms will maintain similar margins in the future.
24. Which of the following statements is false?
- A. Because the cash flows promised by the bond are the most that bondholders can hope to receive, the cash flows that a purchaser of a bond with credit risk expects to receive may be less than that amount.
 - B. By consulting bond ratings, investors can assess the creditworthiness of a particular bond issue.
 - C. Because the yield to maturity for a bond is calculated using the promised cash flows, the yield of bonds with credit risk will be lower than that of otherwise identical default-free bonds.
 - D. A higher yield to maturity does not necessarily imply that a bond's expected return is higher.

25. Which of the following statements is true?
- A. Companies can have high growth, yet negative stock returns.
 - B. Giving stock options to management eliminates agency conflicts.
 - C. The older the firm, the more well-structured it is, and corporate control is better than it is for a newly established firm.
 - D. A major safeguard against management's undertaking a project that is not in shareholders' best interest is the need to raise capital to fund the project.
26. A firm that is worth \$2 million and is financed with 40% risk-free debt and 60% equity grows in value to \$3 million. What is its new debt-equity ratio?
- A. 63.2%
 - B. 36.4%
 - C. 66.7%
 - D. 26.7%
27. Which of the following statements regarding working capital management is (are) true?
- A. An irrevocable credit line will allow a firm to maintain its financial flexibility, even in times of financial distress, and is relatively low cost.
 - B. Investing cash in liquid assets, such as Treasury bills, allows a firm to maintain financial flexibility at no cost.
 - C. Matching income with liability streams works best if a firm's cash flows are fairly predictable.
 - D. All of the above are true statements.
28. You purchase a stock for \$53 and simultaneously buy a put option on the stock with a strike price of \$60 for \$8.50. Just prior to expiration, the stock is selling for \$62.50. What is your gain or loss in your position?
- A. \$9.50 gain
 - B. \$18.00 gain
 - C. \$1.50 loss
 - D. \$1.00 gain
29. The signaling effect theory of dividend policy suggests that
- A. management will be reluctant to cut dividends if the firm is expecting what they believe are temporary financial difficulties.
 - B. management will increase dividends to signal a "rosy prospect" even if they believe the dividend level is not sustainable.
 - C. an increase in the dividend payout ratio signals that management has acquired a major ownership interest in the firm.
 - D. Both A. and B. are true.

國立中正大學 113 學年度碩士班招生考試試題

科目名稱：財務管理
系所組別：財務金融學系

本科目共 7 頁 第 7 頁

30. Which of the following is an example of an arbitrage opportunity?

- A. You bought a stock when it was selling for \$7 a share, and it increased in value to over \$40 a share in less than 6 months.
- B. You are able to borrow money today for one year at 3% and simultaneously invest the proceeds in a project that is guaranteed to return 15% at the end of the year. There are no transaction costs associated with either the loan or the investment.
- C. You can play a game in which you will win \$100,000 if you draw any card but an ace out of a 52-card deck. If you draw an ace, however, you pay only \$1.00.
- D. You have found an investment that is guaranteed to offer you a 100% return on your investment in one year.

Part B. Problem Sets (25 points)

1. Consider a plant with expected annual revenues of \$60 million in perpetuity. Total costs, including energy costs, are completely variable and consistently 70% of revenues. Energy costs are estimated to be \$10.5 million per year. The plant has an asset beta of 1.15, the risk-free rate is 2%, and the market risk premium is 5%. The tax rate is 25%, and there are no other costs.
 - A. Assuming no growth, what would the value of the plant be today? (5 points)
 - B. Suppose that energy costs can be fixed at \$5 million per year (before tax) through a long-term contract. Assuming no growth, what would the value of the plant be under this arrangement? (5 points)
 - C. How would taking the contract in B. change the plant's cost of capital? Explain. (5 points)
2. Consider a firm planning to raise \$200 million to fund an expansion by issuing either new shares or new debt. Earnings next year are expected to be \$30 million with the expansion. The firm currently has 10 million shares outstanding, with a price of \$80 per share. Assume perfect capital markets.
 - A. If the \$200 million is raised by selling new shares, what would the next year's expected earnings per share (EPS) be? If the firm raises the \$200 million through debt financing with an interest rate of 10%, what would the next year's expected EPS be? (5 points)
 - B. What is the firm's forward P/E ratio if it issues equity? What is the firm's forward P/E ratio if it issues debt? Explain the difference under these two types of financing. (5 points)