

## 國立東華大學管理學院 106 第 1 學期 財務管理 第一次小考

- ✧ 計算題務必寫出過程、使用千分位符號(,)以及小數點標示清楚
- ✧ 若題目沒有特別說明，請計算至小數點以下第 2 位，第 3 位四捨五入。表示方式如 1,234.56，78.09%。
- ✧ 滿分 120 分

1. (30分) 代理問題與資訊不對稱。
  - (1). (4 分) 誰是公司的所有權人？
  - (2). (4 分) What does the phrase *limited liability* mean in a corporate context?
  - (3). (5 分) 為什麼公司(股份有限公司)會有代理問題？
  - (4). (6 分) 如何解決資訊不對稱的問題。
  - (5). (6 分) 公司可以採取財務激勵計畫來解決股東和經理人之間的代理問題。請說明以股票選擇權獎勵經理人的優點，以及可能產生的問題。
  - (6). (5 分) Are hostile takeovers necessarily bad for firms or their investors? Explain.
2. (9分) You have decided to form a new start-up company developing applications for the iPhone. Give examples of the three distinct types of financial decisions you will need to make.
3. (15分) Suppose you started a Web site hosting business and then decided to return to school. Now that you are back in school, you are considering selling the business within the next year. An investor has offered to buy the business for \$200,000 whenever you are ready.
  - A. Sell the business now.
  - B. Scale back the business and continue running it while you are in school for one more year, and then sell the business (requiring you to spend \$30,000 on expenses now, but generating \$50,000 in profit at the end of the year).
  - C. Hire someone to manage the business while you are in school for one more year, and then sell the business (requiring you to spend \$50,000 on expenses now, but generating \$100,000 in profit at the end of the year).
  - (1). (7 分) If the interest rate is 10%, which of the following three alternatives is the best choices? Why?
  - (2). (8 分) If you need \$60,000 in cash now to pay for school and other expenses, would selling the business be a better choice in that case? Why?

國立東華大學管理學院 106 第 1 學期 財務管理 第一次小考

4. (10分) You are offered an investment opportunity in which you will receive \$25,000 in one year in exchange for paying \$23,000 today. Suppose the risk-free interest rate is 6% per year.
- (1). (4 分) Should you take this project? Why?
  - (2). (6 分) If you don't have the \$23,000 needed to cover the initial cost of the project? Does the project still have the same value? Why?
5. (10分) 財務槓桿
- (1). (4 分) 請問衡量公司的財務槓桿 (leverage) 的意義為何？
  - (2). (6 分) 一般會使用負債權益比率定義財務槓桿，為什麼負債權益比率的分子不應該包括應付帳款卻包含一年內到期之長期負債和長期負債？請問向銀行短期借款這個項目要不要納入負債權益比率的分子的計算？為什麼？
6. (10分) For fiscal year 2015, Costco Wholesale Corporation had a net profit margin of 2.05%, asset turnover of 3.48, and a book equity multiplier (total assets/total shareholder's equity) of 3.15.
- (1). (4 分) Use this data to compute Costco's ROE using the DuPont Identity.
  - (2). (3 分) If Costco's managers wanted to increase its ROE by one percentage point, how much higher would their asset turnover need to be?
  - (3). (3 分) If Costco's net profit margin fell by one percentage point, by how much would their asset turnover need to increase to maintain their ROE?
7. (9分) For fiscal year 2015, Walmart Stores Inc. (WMT) had total revenues of \$484.65 billion, net income of \$16.36 billion, total assets of \$203.49 billion, and total shareholder's equity of \$81.39 billion.
- (1). (4 分) Calculate Wal-Mart's ROE directly, and using the DuPont Identity.
  - (2). (5 分) Comparing with the data for Costco in problem 6, use the DuPont Identity to understand the difference between the two firms' ROEs.
8. (7分) In early-2015, Abercrombie & Fitch (ANF) had a book equity of \$1390 million, a price per share of \$25.52, and 69.35 million shares outstanding. At the same time, The Gap (GPS) had a book equity of \$2983 million, a share price of \$41.19, and 421 million shares outstanding.
- (1). (4 分) What is the market-to-book ratio of each of these clothing retailers?
  - (2). (3 分) What conclusions can you draw by comparing the two ratios?

國立東華大學管理學院 106 第 1 學期 財務管理 第一次小考

9. (20分) See Table 2.5 (Next page, page 4) showing financial statement data and stock price data for Mydeco Corp.
- (1). (5 分) What were Mydeco's retained earnings each year?
  - (2). (5 分) Compute Mydeco's ROE each year from 2012 to 2016.
  - (3). (5 分) Compute Mydeco's ROA each year from 2012 to 2016.
  - (4). (5 分) Which return (ROE or ROA) is more volatile? Why?

TABLE 2.5

2012–2016 Financial Statement Data and Stock Price Data for Mydeco Corp.

Mydeco Corp. 2012–2016		(All data as of fiscal year end; in \$ million)				
Income Statement		2012	2013	2014	2015	2016
Revenue		401.9	361.6	429.6	513.6	602.6
Cost of Goods Sold		(192.1)	(175.4)	(207.1)	(248.3)	(295.8)
<b>Gross Profit</b>		209.8	186.2	222.5	265.3	306.8
Sales and Marketing		(65.0)	(64.4)	(84.3)	(104.9)	(121.1)
Administration		(61.8)	(57.1)	(59.0)	(66.9)	(79.8)
Depreciation & Amortization		(27.5)	(26.3)	(32.5)	(38.3)	(40.1)
<b>EBIT</b>		55.5	38.4	46.7	55.2	65.8
Interest Income (Expense)		(32.4)	(31.8)	(32.0)	(37.0)	(40.9)
<b>Pretax Income</b>		23.1	6.6	14.7	18.2	24.9
Income Tax		(8.1)	(2.3)	(5.1)	(6.4)	(8.7)
<b>Net Income</b>		15.0	4.3	9.6	11.8	16.2
<i>Shares outstanding (millions)</i>		56.8	56.8	56.8	56.8	56.8
<i>Earnings per share</i>		\$0.26	\$0.08	\$0.17	\$0.21	\$0.29
Balance Sheet		2012	2013	2014	2015	2016
<i>Assets</i>						
Cash		49.4	68.0	91.7	80.4	83.6
Accounts Receivable		87.6	70.6	69.3	77.4	84.2
Inventory		33.5	32.2	27.3	30.2	35.8
<b>Total Current Assets</b>		170.5	170.8	188.3	188.0	203.6
Net Property, Plant & Equip.		244.3	243.3	306.1	349.6	347.9
Goodwill & Intangibles		365.5	365.5	365.5	365.5	365.5
<b>Total Assets</b>		780.3	779.6	859.9	903.1	917.0
<i>Liabilities &amp; Stockholders' Equity</i>						
Accounts Payable		18.8	18.8	22.4	27.1	30.3
Accrued Compensation		7.6	6.3	7.5	7.7	9.4
<b>Total Current Liabilities</b>		26.4	25.1	29.9	34.8	39.7
Long-term Debt		498.9	498.9	572.2	597.5	597.5
<b>Total Liabilities</b>		525.3	524	602.1	632.3	637.2
Stockholders' Equity		255.0	255.6	257.8	270.8	279.8
<b>Total Liabilities &amp; Stockholders' Equity</b>		780.3	779.6	859.9	903.1	917.0
Statement of Cash Flows		2012	2013	2014	2015	2016
Net Income		15.0	4.3	9.6	11.8	16.2
Depreciation & Amortization		27.5	26.3	32.5	38.3	40.1
Chg. in Accounts Receivable		3.9	17.0	1.3	(8.1)	(6.8)
Chg. in Inventory		(2.9)	1.3	4.9	(2.9)	(5.6)
Chg. in Payables & Accrued Comp.		1.7	(1.3)	4.8	4.9	4.9
<b>Cash from Operations</b>		45.2	47.6	53.1	44.0	48.8
Capital Expenditures		(26.6)	(23.8)	(97.5)	(75.4)	(40.0)
<b>Cash from Investing Activities</b>		(26.6)	(23.8)	(97.5)	(75.4)	(40.0)
Dividends Paid		(5.2)	(5.2)	(5.2)	(5.2)	(5.6)
Sale (or purchase) of stock		—	—	—	—	—
Debt Issuance (Pay Down)		—	—	73.3	25.3	—
<b>Cash from Financing Activities</b>		(5.2)	(5.2)	68.1	20.1	(5.6)
<b>Change in Cash</b>		13.4	18.6	23.7	(11.3)	3.2
<i>Mydeco Stock Price</i>		\$7.02	\$3.55	\$5.86	\$8.33	\$11.57