Friday Discussion Handout on Taxes and Cash Flow 1/20/2012

Financial Ratios

1. Mario's Home Systems has sales of \$2,800, cost of goods sold of \$2,100, inventory of \$500, and accounts receivable of \$400. How many days, on average, does it take Mario's to sell its inventory?

Inventory turnover = \$2,100 ÷ \$500 = 4.2; Days in inventory = 365 ÷ 4.2 = 86.9 days

2. Syed's Industries has accounts receivable of \$700, inventory of \$1,200, sales of \$4,200, and cost of goods sold of \$3,400. How long does it take Syed's to both sell its inventory and then collect the payment on the sale?

Inventory turnover = \$3,400 ÷ \$1,200 = 2.83; Days in inventory = 365 ÷ 2.83 = 128.98; Accounts receivable turnover = \$4,200 ÷ \$700 = 6; Days' sales in receivables = 365 ÷ 6 = 60.83; Total days in inventory and receivables = 128.98 + 60.83 = 189.81 days = 190 days (rounded)

3. A firm has days' sales in inventory of 105 days, an average collection period of 35 days, and takes 42 days, on average, to pay its accounts payable. Taken together, what do these three figures imply about the firm's operations and its cash flows?

It takes, on average, 105 days to sell inventory once it is purchased by the firm, then it takes another 35 days to collect on the receivables. Thus, the firm must finance the inventory and receivables for 140 days. The first 42 days are financed with payables, on average, leaving 98 days worth of inventory and receivables that it must finance using other sources. In terms of cash flow, the average cash outflow occurs 42 days after inventory is purchased while the average cash inflow occurs 98 days later, which is 140 days after the inventory is purchased by the firm.

4. For the first time, UBER will make its financial statements available to the public when they IPO. As we talked in class, some information can be inferred from these statements and some cannot. Here is a list of things that you would like to know about the company. Circle the ones that CAN BE inferred directly from the Financial Statements:
Debt/Equity Ratio
UBER's Market Share
Future Growth Opportunities
Patents that UBER holds
Price that is paid to image and future potential for the companies UBER acquired to date.
Human Capital used by UBER

5. Draft a common-size income statement for a hypothetical firm using the following information: The tax rate is 50% . Net income, Depreciation, and Interest Expense are each 10% of Sales. Cost of Goods Sold is six times as big as Depreciation.

As a percentage of Sales, the common size income statement is as follows:

Sales 100%
COGS 60%
Dep 10%
Interest 10%
Pretax Income 20%
Tax 10%
Net Income 10%

6. Your firm has net income of $198 on total sales of $1,200. Costs are $715 and depreciation is $145. The tax rate is 34%. The firm does not have interest expenses. What is the operating cash flow?
A. $93
B. $241
C. $340
D. $383
E. $485

Earnings before interest and taxes = $1,200 - $715 - $145 = $340; Tax = [$198 ÷ (1 - .34)] - $198 = $102; Operating cash flow = $340 + $145 - $102 = $383

Here is the explanation as to how we arrive at the answer:

From the account values that are provided in the question, we can try and produce the Income Statement :

Sales $1,200
Costs $715
Depreciation $145
EBIT 340
Interest $0
Other Expenses ?
Tax (34%)
Net Income $198

If the Net Income is 198, this means that the Pretax Income was $198+tax. Then, Pretax Income - Pretax Income * 0.34 = 198, Then Pretax Income = 198/(1-0.34) = 300. Then Tax = 300-198 = 102.

From the OCF Formula we know that OCF = EBIT+Depreciation-Tax = 340+145-102 = 383

Knickerdoodles, Inc.

	2007	2008
Sales	**$ 740**	**$ 785**
COGS	**430**	**460**
Interest	**33**	**35**
Dividends	**16**	**17**
Depreciation	**250**	**210**
Cash	**70**	**75**
Accounts receivables	**563**	**502**
Current liabilities	**390**	**405**
Inventory	**662**	**640**
Long-term debt	**340**	**410**
Net fixed assets	**1,680**	**1,413**
Common stock	**700**	**235**
Tax rate	**35%**	**35%**

7. What is the net working capital for 2008?
A. $345
B. $405
C. $805
D. $812
E. $1,005

Net working capital = $75 + $502 + $640 - $405 = $812

8. What is the change in net working capital from 2007 to 2008?
A. -$93
B. -$7
C. $7
D. $85
E. $97

Change in net working capital = ($75 + $502 + $640 - $405) - ($70 + $563 + $662 - $390) = -$93

9. What is net capital spending for 2008?
A. -$250
B. -$57
C. $0
D. $57
E. $477

Net capital spending = $1,413 - $1,680 + $210 = -$57

10. What is the operating cash flow for 2008?
A. $143
B. $297
C. $325
D. $353
E. $367

Earnings before interest and taxes = $785 - $460 - $210 = $115; Taxable income = $115 - $35 = $80; Taxes = .35($80) = $28; Operating cash flow = $115 + $210 - $28 = $297

11. What is the cash flow of the firm for 2008?
A. $50
B. $247
C. $297
D. $447
E. $517

Cash flow of the firm = $297 - (-$93) - (-$57) = $447 (See problems 4 and 5)

12. What is net new borrowing for 2008?
A. -$70
B. -$35
C. $35
D. $70
E. $105

Net new borrowing = $410 - $340 = $70

13. What is the cash flow to creditors for 2008?
A. -$170
B. -$35
C. $135
D. $170
E. $205

Cash flow to creditors = $35 - ($410 - $340) = -$35

14. What is the cash flow to stockholders for 2008?
A. $408
B. $417
C. $452
D. $482
E. $503

Cash flow to stockholders = $447 - (-$35) = $482 (See problems 7 and 9); or, Cash flow to stockholders = $17 - ($235 - $700) = $482

For the True/False questions, you need to provide an explanation with one or two sentences:

15. TRUE / FALSE: in order to keep the balance sheet balanced, an increase in the total fixed assets must be offset by an equal increase in total liabilities and/or stockholders' equity.

Not necessarily. If fixed asset increase is financed by cash for example, it would not be necessary to increase debt and/or equity.

16. TRUE / FALSE: A company has a consistently increasing inventory turnover while having stable profit margin. This implies that the costs other than COGS are going down.

Not necessarily. It is, for example, possible that the inventory is low due to high demand (note that in this case, all costs are expected to be higher since more is produced)

17. TRUE / FALSE: A firm has negative net working capital. Over the following year, company pays its long term debt and increases its inventory. Other accounts under the current assets stay the same. Then, end of year net working capital will still be negative.