

**COMPLETE SOLUTIONS – Chap 3 HW – Business Finance**

**P3-4. LG 2: Classifying Inflows and Outflows of Cash**

Item	Change (\$)	I/O	Item	Change (\$)	I/O
Cash	+100	O	Accounts receivable	-700	I
Accounts payable	-1,000	O	Net profits	+600	I
Notes payable	+500	I	Depreciation	+100	I
Long-term debt	-2,000	O	Repurchase of stock	+600	O
Inventory	+200	O	Cash dividends	+800	O
Fixed assets	+400	O	Sale of stock	+1,000	I

**P3-5. LG 2: Finding Operating and Free Cash Flows**

(a) Cash flow from operations = Net profits after taxes + Depreciation

Cash flow from operations = \$1,400 + 11,600 This should be \$1,600.

Cash flow from operations = \$13,000 This should be \$3,000.

Note: some people in the business world call this measure “accrual cash flow”.

(b) NOPAT = EBIT × (1 - t)

NOPAT = \$2,700 × (1 - 0.40) = \$1,620

Note: This measure is used in Economic Value Added (“EVA”) calculations.

(c) OCF = EBIT - Taxes + Depreciation

OCF = \$2,700 - \$933 + \$11,600

OCF = \$13,367

Note: This measure is the closest to the “true” OCF, which is on the Statement of Cash Flows.

Note: This problem is for your learning and practice only, and is not covered in class or on the exam.

**P3-9. LG 4: Cash Budget–Advanced**

(a)

**Xenocore, Inc.**  
**(\$000)**

	<b>Sept.</b>	<b>Oct.</b>	<b>Nov.</b>	<b>Dec.</b>	<b>Jan.</b>	<b>Feb.</b>	<b>Mar.</b>	<b>Apr.</b>
<i>Forecast Sales</i>	\$210	\$250	\$170	\$160	\$140	\$180	\$200	\$250
Cash sales (0.20)			\$34	\$32	\$28	\$36	\$40	\$50
Collections								
Lag 1 month (0.40)			100	68	64	56	72	80
Lag 2 months (0.40)			84	100	68	64	56	72
Other cash receipts					15	27	15	12
Total cash receipts			<u>\$218</u>	<u>\$200</u>	<u>\$175</u>	<u>\$183</u>	<u>\$183</u>	<u>\$214</u>
<i>Forecast Purchases</i>	\$120	\$150	\$140	\$100	\$80	\$110	\$100	\$90
Cash purchases			\$14	\$10	\$8	\$11	\$10	\$9
Payments								
Lag 1 month (0.50)			75	70	50	40	55	50
Lag 2 months (0.40)			48	60	56	40	32	44
Salaries & wages			50	34	32	28	36	40
Rent			20	20	20	20	20	20
Interest payments					10			10
Principal payments								30
Dividends					20			20
Taxes								80
Purchases of fixed assets				25				
Total cash disbursements			<u>\$207</u>	<u>\$219</u>	<u>\$196</u>	<u>\$139</u>	<u>\$153</u>	<u>\$303</u>
Total cash receipts			???	\$200	\$175	\$183	???	\$214
Less: Total cash disbursements			<u>207</u>	<u>219</u>	<u>???</u>	<u>139</u>	<u>153</u>	<u>303</u>
Net cash flow			11	(19)	(21)	44	30	(89)
Add: Beginning cash			<u>22</u>	<u>??</u>	<u>14</u>	<u>??</u>	<u>37</u>	<u>67</u>
Ending cash			33	14	(7)	37	67	(22)
Less: Minimum cash balance			15	15	15	??	15	15
(b) Required total financing (Notes payable)				1	22			37
Excess cash balance (Marketable securities)			18			22	52	

(c) The line of credit should be at least  $\$37,000 \times 1.5 = \$55,500$  to cover the maximum borrowing needs for the month of April. This is based on the 150% rule of thumb, not taught in your textbook.

**P3-13. LG 5: Pro Forma Balance Sheet–Basic**

(a)

<b>Pro Forma Balance Sheet</b>	
<b>Leonard Industries</b>	
<b>December 31, 2007</b>	
<b>Assets</b>	
Current assets	
Cash	\$50,000
Marketable securities	?
Accounts receivable	300,000
Inventories	<u>360,000</u>
Total current assets	\$?
Net fixed assets	<u>658,000</u> <sup>1</sup>
Total assets	<u><u>\$1,383,000</u></u>
<b>Liabilities and stockholders' equity</b>	
Current liabilities	
Accounts payable	\$420,000
Accruals	60,000
Other current liabilities	<u>30,000</u>
Total current liabilities	\$510,000
Long-term debts	?
Total liabilities	\$860,000
Common stock	200,000
Retained earnings	<u>270,000</u> <sup>2</sup>
Total stockholders' equity	\$470,000
External funds required	<u>53,000</u> <sup>3</sup>
Total liabilities and stockholders' equity	<u><u>\$?</u></u>

<sup>1</sup> Beginning gross fixed assets	\$600,000
Plus: Fixed asset outlays	90,000
Less: Depreciation expense	<u>(32,000)</u>
Ending net fixed assets	\$658,000

<sup>2</sup> Beginning retained earnings (Jan. 1, 2007)	\$220,000
Plus: Net profit after taxes ( $\$3,000,000 \times 0.04$ )	120,000
Less: Dividends paid	<u>(70,000)</u>
Ending retained earnings (Dec. 31, 2007)	\$270,000

<sup>3</sup> Total assets	\$1,383,000
Less: Total liabilities and equity	<u>1,330,000</u>
External funds required	\$53,000

- (b) Based on the forecast and desired level of certain accounts, the financial manager should arrange for credit of \$???. Of course, if financing cannot be obtained, one or more of the constraints may be changed.
- (c) If Leonard Industries reduced its 2007 dividend to \$17,000 or less, the firm would not need any additional financing. By reducing the dividend, more cash is retained by the firm to cover the growth in other asset accounts.

**P3-14. LG 5: Pro Forma Balance Sheet when having to estimate two years' additions to retained earnings.**

(a)

<b>Pro Forma Balance Sheet</b>	
<b>Peabody &amp; Peabody</b>	
<b>December 31, 2008</b>	
<b>Assets</b>	
Current assets	
Cash	\$480,000
Marketable securities	200,000
Accounts receivable	1,440,000
Inventories	<u>2,160,000</u>
Total current assets	\$?
Net fixed assets	<u>4,820,000<sup>1</sup></u>
Total assets	<u><u>\$?</u></u>
<b>Liabilities and stockholders' equity</b>	
Current liabilities	
Accounts payable	\$1,680,000
Accruals	500,000
Other current liabilities	<u>80,000</u>
Total current liabilities	\$?
Long-term debts	<u>2,000,000</u>
Total liabilities	\$?
Common equity	4,065,000 <sup>2</sup>
External funds required	<u>775,000</u>
Total liabilities and stockholders' equity	<u><u>\$9,100,000</u></u>

<sup>1</sup>	Beginning gross fixed assets (January 1, 2008)	\$4,000,000
	Plus: Fixed asset outlays	1,500,000
	Less: Depreciation expense	<u>(680,000)</u>
	Ending net fixed assets (December 31, 2008)	<u>\$4,820,000</u>

<sup>2</sup> Note: Common equity is the sum of common stock and retained earnings.

	Beginning common equity (January 1, 2007)	\$3,720,000
	Plus: Net profits after taxes (2007)	330,000
	Net profits after taxes (2008)	360,000
	Less: Dividends paid (2007)	(165,000)
	Dividends paid (2008)	<u>(180,000)</u>
	Ending common equity (December 31, 2008)	<u>\$4,065,000</u>

(b) Peabody & Peabody must arrange for additional financing of at least \$775,000 over the next two years based on the given constraints and projections.