

## Fin 323

### An exercise:

The data shown at the right is about a company. (Actually it is problem 2-23.) Remember how a balance is constructed and how an income statement is derived.

If you can remember the very basic ideas behind financial statements you can work out the answers to the questions below:

FIND YOUR WAY BACK, INC. Balance Sheet as of December 31, 2005			
Assets		Liabilities	
Cash	\$ 18,500	Accounts payable	\$ 13,200
Accounts receivable	26,380	Notes payable	<u>20,150</u>
Inventory	<u>19,157</u>	Current liabilities	\$ 33,350
Current assets	\$ 64,037	Long-term debt	\$190,000
Net fixed assets	\$478,370	Owners' equity	<u>\$319,057</u>
Total assets	<u>\$542,407</u>	Total liabilities and owners' equity	<u>\$542,407</u>

FIND YOUR WAY BACK, INC. Balance Sheet as of December 31, 2006			
Assets		Liabilities	
Cash	\$ 19,870	Accounts payable	\$ 14,600
Accounts receivable	29,305	Notes payable	<u>22,870</u>
Inventory	<u>31,603</u>	Current liabilities	\$ 37,470
Current assets	\$ 80,778	Long-term debt	\$210,000
Net fixed assets	<u>\$564,320</u>	Owners' equity	<u>\$397,628</u>
Total assets	<u>\$645,098</u>	Total liabilities and owners' equity	<u>\$645,098</u>

2006 Income Statement	
Sales	\$785,000
Cost of goods sold	380,590
Selling & administrative	173,240
Depreciation	<u>75,800</u>
EBIT	\$155,370
Interest	<u>26,800</u>
EBT	\$128,570
Taxes	<u>44,999</u>
Net income	<u>\$ 83,571</u>
Dividends	\$ 15,000
Addition to retained earnings	\$ 68,571

**What can you say about this company? Such as:**

**How liquid is this company?**

**How efficient is this company?**

**How profitable is this company?**

**How much debt is used to finance the company?**

If you attempt to answer these questions you will “discover the ratios” for yourself. So concentrate on this page and try to answer the questions above for 2006. You might want something to compare the answers to, but that would just require additional data, the concepts would not change. See how far you get.

**Let's start with liquidity.** What would you want to look at? The relative amount of liquid liabilities verse liquid assets. What are liquid things called?

So: Current Assets/Current liabilities might be one measure.

More liquid? Get rid of Inventories which are less liquid than receivables so you would use:

$(\text{Current Assets} - \text{Inventories}) / \text{Current liabilities}$

Most liquid?  $\text{Cash} / \text{Current liabilities}$

**How would you measure efficiency?** Generally you would say something is efficient when it produces a lot of activity with very little in assets. So let's use sales as our estimate of activity. Then let's compare it to various assets that are being used.

One might be Sales to total assets (called asset turnover)

Another might be Sales to Accounts Receivables (receivable turnover)

Another might be Sales to inventory (or maybe in this case it would be better to use a different measure of activity, perhaps cost of goods sold).

Another might be Sales to Fixed Assets

Now an alternative measure of efficiency could be in days rather than times. All of these could be converted into days. Since these are annual measures; if you do something 10 times a year, how many days does it take?  $(365/10)$

**How profitable is a company?** Generally profits can be looked at absolutely or relatively. In most cases we look relatively. So you compare profits against something else.

So it might be net profits to sales. This tells us something about the amount of dollars that are kept for each dollar of sales. We could also measure it relative to our investment, either in total (assets) or in equity dollars. We could also use other measures of profits rather than net, perhaps operating profits (EBIT)

**How much debt does the company use?** This again requires a relative answer. So while we might just list the total amount of debt it is does not tell us much. So again you might look relatively.

So how much does the firm owe relative to what it owns? That would debt compared to total assets or you might compare debt to what the equity holder own. You could also ask how many times you could pay your interest out of income. So you would compare the income available to pay interest to the interest payment.

## **Cash Flows of the Firm**

Also let's look at the cash flows for this firm. If you wanted to know how much cash was generated by the operating activities of this firm what would you look at. First you take operating income (EBIT) and add back those things which are not cash—depreciation and take away the taxes. What left can be invested in the firm (either capital expenditures or working capital); paid out to debt holders; or paid to stockholders. It is also possible to generate additional capital by borrowing or selling additional stock. So you can get the Cash flow to stock holders and to creditors from this information. So if take the operating cash flows and deduct the investments (both short and long) you should end up the cash going to the creditors and the stockholders.

To get a spreadsheet with solutions: [www.vandenberg.info](http://www.vandenberg.info)