

1 Function of Accounting

1.1 What is the function of accounting?

Accounting is used to “keep score”, and if firm’s managers do not know the score, they cannot tell if their actions are appropriate. Although only accountants need to know how to *make* financial statements, everyone involved with business need to know how to *interpret* them.

1.2 The four basic financial statements that make up the annual report:

- The balance sheet
- The income statement
- The statement of retained earnings
- The statement of cash flows

1.3 Different users have different information needs. Examples, employees are concerned with the ability of the firm to operate as a going concern (employment security), creditors are concerned with the firm’s ability to repay debts as they become due, suppliers are concerned with the firm’s ability to pay for the goods/services supplied on a timely manner.

1.4 Financial statements aim to provide information that is useful to the general users.

1.5 *Financial analysis* is an evaluation of both a firm’s past financial performance and its prospects for the future. Typically it involves an analysis of the firm’s financial statements and its flow of funds.



Key terms:

Annual report – it is a report issued annually by a corporation to its stockholders. It contains basic financial statements, as well as management’s opinion of the past year’s operations and the firm’s future prospects.

Balance sheet – a statement of the firm’s financial position at a specific point in time.

Retained earnings – that portion of the firm’s earnings that has been saved rather than paid out as dividends.

Income statement – a statement summarizing the firm’s **revenues and expenses** over an accounting period, generally a quarter or a year.

Statement of retained earnings – a statement reporting how much of the firm’s earnings were retained in the business rather than paid out in dividends.

Statement of cash flows – a statement reporting the impact of a firm’s **operating, investing, and financing** activities on cash flows over an accounting period.

2 Financial Statements

2.1 Sample 1 Typical Balance Sheet

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Balance Sheet: Assets		
	<u>2001</u>	<u>2000</u>
Cash	7,282	57,600
AR	632,160	351,200
Inventories	<u>1,287,360</u>	<u>715,200</u>
Total CA	1,926,802	1,124,000
Gross FA	1,202,950	491,000
Less: Deprec.	<u>263,160</u>	<u>146,200</u>
Net FA	<u>939,790</u>	<u>344,800</u>
Total Assets	<u>2,866,592</u>	<u>1,468,800</u>

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Liabilities and Equity		
	<u>2001</u>	<u>2000</u>
Accts payable	524,160	145,600
Notes payable	636,808	200,000
Accruals	<u>489,600</u>	<u>136,000</u>
Total CL	1,650,568	481,600
Long-term debt	723,432	323,432
Common stock	460,000	460,000
Retained earnings	<u>32,592</u>	<u>203,768</u>
Total equity	<u>492,592</u>	<u>663,768</u>
Total L&E	<u>2,866,592</u>	<u>1,468,800</u>

2.2 The owner's equity is the net worth of the business. Another way of valuing net worth is to **subtract** what the business owes (liabilities) from what the business owns (assets):

$$\text{Assets} - \text{Liabilities} = \text{Owner's equity}$$

Or

$$\text{Assets} = \text{Liabilities} + \text{Owner's equity}$$

2.3 Common Stockholders' Equity or Net Worth is the capital supplied by common stockholders – capital stock, retained earnings, and certain reserves. Total **equity** is common equity plus preferred stock.

2.4 What can you comment on the following items based on the balance sheet shown in Sample 1 above?

- Inventories
- Gross Fixed Assets
- Long-term debt

2.5 One final note to keep in mind about the balance sheet is its **valuation**. In most countries, accounting rules (called Generally Accepted Accounting Principles) require that the balance sheet be valued at historical cost.

2.6 Sample 2 The Income Statement

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Income Statement		
	<u>2001</u>	<u>2000</u>
Sales	6,034,000	3,432,000
COGS	5,528,000	2,864,000
Other expenses	<u>519,988</u>	<u>358,672</u>
EBITDA	(13,988)	209,328
Depr. & Amort.	<u>116,960</u>	<u>18,900</u>
EBIT	(130,948)	190,428
Interest exp.	<u>136,012</u>	<u>43,828</u>
EBT	(266,960)	146,600
Taxes (40%)	<u>(106,784)</u>	<u>58,640</u>
Net income	<u><u>(160,176)</u></u>	<u><u>87,960</u></u>

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Other Data		
	<u>2001</u>	<u>2000</u>
No. of shares	100,000	100,000
EPS	(\$1.602)	\$0.88
DPS	\$0.110	\$0.22
Stock price	\$2.25	\$8.50
Lease pmts	\$40,000	\$40,000

2.7 The income statement shows the revenue and expense activities of the business for a period of time. For planning and control purposes, management generally forecasts monthly (or perhaps quarterly) income statement, and it then compares actual results to the budgeted statements.

2.8 Earnings per share is called the “bottom line”, denoting that of all the items on the income statement, EPS is the most important. **EPS is measured as net income after preferred dividends divided by the number of shares of common stock outstanding.**

2.9 Sample 3 The Cash Flow Statement

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Statement of Cash Flows (2001)

OPERATING ACTIVITIES	
Net income	(160,176)
Add (Sources of cash):	
Depreciation	116,960
Increase in A/P	378,560
Increase in accruals	353,600
Subtract (Uses of cash):	
Increase in A/R	(280,960)
Increase in inventories	(572,160)
Net cash provided by ops.	(164,176)

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L-T INVESTING ACTIVITIES	
Investment in fixed assets	(711,950)
FINANCING ACTIVITIES	
Increase in notes payable	436,808
Increase in long-term debt	400,000
Payment of cash dividends	(11,000)
Net cash from financing	<u>825,808</u>
NET CHANGE IN CASH	(50,318)
Plus: Cash at beginning of year	<u>57,600</u>
Cash at end of year	<u><u>7,282</u></u>

2.10 The purpose of the cash flow statement is to show a summary of the sources and uses of a business's cash during a particular period. It answers the critical question, "Where did my cash go?"

2.11 The cash flow statement can take many formats but the most common one breaks the statement into *three* sections:

- Cash from **operating activities**. This could include the collection of receivables, payment of payables, and purchases of inventory.
- Cash from **investing activities**. This could include the purchase or disposal of equipment.
- Cash from **financing activities**. This could include borrowing new money from lenders, repaying debt to lenders, new capital investments from the owners, and cash distributions to owners.

2.12 Sample 3 Statement of Retained Earnings

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Statement of Retained Earnings (2001)	
Balance of retained earnings, 12/31/00	\$203,768
Add: Net income, 2001	(160,176)
Less: Dividends paid	<u>(11,000)</u>
Balance of retained earnings, 12/31/01	<u><u>\$32,592</u></u>

2.13 Retained earnings represents a claim against assets. Moreover, firms retain earnings primarily to expand the business, and this means investing in plant and equipment, in inventories, and so on.

2.14 Changes in retained earnings occur because common stockholders allow the firm to reinvest funds that otherwise could be distributed as dividends.

3 Formula to use when performing Financial Statements Analysis

- Net operating profit after taxes (NOPAT) = Earnings before interest and tax (EBIT) X (1 – Tax rate)
- Net operating working capital (NOWC) = Current assets – Non-interest bearing current liabilities

- Operating capital = NOWC + Net fixed assets

3.1 Interest bearing liabilities include interest bearing loans, in which interest payments are made by borrowers to lenders.

4 Accounting income versus cash flow:

4.1 The firm's net income is important, but cash flow is even more important because dividends must be paid in cash and because cash is necessary to purchase the assets required to continue operations.

4.2 A business's net cash flow generally differs from its accounting profit because some of the revenues and expenses listed on the income statement were not paid in cash during the year.

4.3 The relationship between net cash flow and net income can be expressed as follows:

$$\text{Net cash flow} = \text{Net income} - \text{Noncash revenues} + \text{Noncash charges}$$

4.4 **Operating cash flow (OCF)** is that cash flow which arises from normal operations; the difference between sales revenues and cash operating expenses, after taxes on operating income. It is measured as:

$$\text{OCF} = \text{NOPAT} + \text{Depreciation and Amortisation (DEP)}$$

4.5 Free Cash Flow (FCF) = **OCF – Gross capital investment**

Or

$$\text{FCF} = \text{NOPAT} - \text{Net capital investment}$$

*FCF is defined as the difference between operating cash flows and mandatory equity investments

*Net capital investment is defined as the **movement in operating capital**.

*Depreciation is the charge for assets used in production.

4.6 Management has the discretion in the use of FCF, so the larger the FCF, the greater the firm's potential for financing growth, increasing dividends, paying off debt and so forth.

5 MVA and EVA

5.1 MVA or Market Value Added is defined as:

$$\text{MVA} = \text{Market value of equity} - \text{Equity capital supplied by investors}$$

5.2 EVA or Economic Value Added is defined as:

$$\begin{aligned} \text{EVA} &= \text{After-tax operating profit} - \text{After-tax cost of capital} \\ &= \text{EBIT} (1 - \text{Corporate tax rate}) - (\text{Total capital}) (\text{After-tax cost of capital}) \end{aligned}$$

5.3 In order to generate positive EVA, a firm has to more than just cover operating costs. It must also provide a return to those who have provided the firm with capital.

5.4 EVA takes into account the total cost of capital, which includes the cost of equity.

Reading/reference materials:

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- Shim J.K. and Siegel J.G. Financial Management. 2nd edition. McGraw-Hill 1998
- Brockington R. Financial Management. 6th edition. DP Publications Ltd. 1993