Financial Statements and Cash Flows

Topic 2

Contents

- Balance sheet statement and its managerial applications;
- Income statement and its managerial applications;
- The concept of cash flow from assets (free cash flow).

Balance Sheet reflects the financial position of a firm

- By "***financial position***" we mean:
  - Assets
  - Liabilities
  - Stockholders' (Shareholders', Owners') Equity

Elements of balance sheet

- Assets are economic resources which are owned by a business:
  - Result from past transactions (inventory, machinery purchases etc.)
  - Are expected to benefit future operations.

- Liabilities are obligations of the entity to outside parties ("*creditors*"):
  - Result from past transactions (purchase through credit, cash borrowing, etc.)
  - Are sources of financing for assets

- Owners' Equity indicates the amount of financing provided by owners of the business
  - Contributed
  - Retained earnings

Characteristics of Balance Sheet

1) There is a relationship between balance sheet elements:

Assets = Liabilities + Stockholders' Equity

This is also called the "**basic accounting equation**" or the "**balance sheet equation**" or the "**balance sheet identity**"

2) Balance Sheet provides a "*snapshot*" of a firm's financial position

- it's prepared at a particular moment of time
- it provides summarized information

Format of the Balance Sheet

AAA Corp.
Balance Sheet
As of December 31, 2008
(in thousands of dollars)

Assets		**Liabilities + Owners' Equity**	
Current Assets		Current Liabilities	
___	$_____	___	$_____
___	$_____	___	$_____
___	$_____	___	$_____
Non-current Assets		Non-current Liabilities	
___	$_____	___	$_____
___	$_____	___	$_____
___	$_____	___	$_____
		Owners' Equity	
		___	$_____
		___	$_____
		___	$_____
Total Assets	$_____	***Total L + SE***	$_____

Exercise 1

- Prepare a balance sheet for AAA Corp. as of December 31, 2008, based on the following information: cash = $150 000; patents and copyrights = $840 000; accounts payable = $224 000; accounts receivable = $241 000; tangible net fixed assets = $4 700 000; inventory = $400 000; accumulated retained earnings = $4 213 000; long-term debt = $1 894 000.

What can be derived from the Balance Sheet

1) The proportion of current assets to current liabilities which provides an estimate of firm's liquidity.

Liquidity

- The term "liquidity" has at least two meanings:
  - **asset liquidity** - ease and speed with which asset can be converted into cash
  - **firm liquidity** – its capability to pay off all its short-term liabilities in due course.

The assessment of firm's liquidity

ABC Corp.
Balance Sheet
As of December 31, 2008
(in thousands of dollars)

Assets		**Liabilities + Owners' Equity**	
Current Assets		Current Liabilities	
___	$_____	___	$_____
___	$_____	___	$_____
___	$_____	___	$_____
Non-current Assets		Non-current Liabilities	
___	$_____	___	$_____
___	$_____	___	$_____
___	$_____	___	$_____
		Owners' Equity	
		___	$_____
		___	$_____
		___	$_____
Total Assets	$_____	***Total L + SE***	$_____

Exercise 11

- XYZ company has the following **assets** and **liabilities**:
  cash = $2,000, manufacturing equipment = $13,500,
  inventory=$2,400, accounts receivable=$5,000, accounts payable = $4,000, short-term debt = $3,000.
  Calculate: 1) shareholders’ equity
  2) working capital in accounting and economic sense

Exercise 11

1) **Shareholders' equity =** 13,500+2,000+2,400+5,000-4,000-3,000=**15,900**
2) **Working capital in accounting sense=**2,000+2,400+5,000-4,000-3,000=**2,400**
3) **Working capital in economic sense=**2,000+2,400+5,000-4,000=**5,400**

Working capital

- Working capital (WC) is a *difference* between firm's *current assets* and *current liabilities*
- *Working capital* and *net working capital* are generally considered to be synonyms.

Working capital

WC = Current assets – Current liabilities

Accounts receivable

Inventory

Cash (required for operations)

Excess cash and marketable securities

Payments to suppliers

Accrued taxes

Accrued wages

Short-term debt

Another way to assess firm's liquidity

$$Current\ ratio = \frac{Current\ assets}{Current\ liabilities}$$

What can be derived from the Balance Sheet

2) The proportion in which debt and equity are distributed in the company.

The income statement

- provides an assessment of firm’s performance **over a particular period of time**

- The **income statement equation** is:

Revenues – Expenses = Income

- Revenues and expenses are shown in the income statement on the **matching principle**

The Income Statement

ABC Corp.
Income Statement
For the Year Ended December 31, 2009
(in thousands of dollars)

Sales revenue	$ 37 436
Less cost of sales (Cost of Goods Sold - COGS)	(20 980)
Less depreciation	(6 000)
Gross margin	16 456
Selling, general and administrative expenses	(3 624)
Operating Income (Earnings before interest and taxes)	12 832
Interest expense	(450)
Income before taxes	12 382
Provision for income taxes	(1 100)
Net income	**$ 11 282**

How the Income Statement relates to the Balance Sheet…

Condensed Balance Sheet
As of December 31, 2009

Assets

Current assets $ 19,126
Building and equip. 7,154
Land 981
Total assets $27,261

Liabilities and Owners' Equity
Liabilities $16,156

Owners' Equity
Paid-in capital 2,000
Retained earnings 9,105
Total liabilities and
owners' equity $27,261

Income Statement
For the Year 2009

Sales revenue $37,436
Less cost of sales 26,980
Gross margin 10,456
Less operating exp. 5,576
Operating income 4,880
Income before taxes 4,430
Provision for taxes 1,100
Net income, 2009 $ 3,300

Statement of Retained Earnings Retained
earnings Jan 1 $6,805
Add net income 3,300
10,105
Less dividends 1,000
Retained earnings Dec 31 $9,105

Accounting income and cash flow

- basically, they **are not the same thing**

- The **main reasons** why accounting income differs from cash flow are:
  - revenues and expenses are shown on the income statement *at the time they accrue* (not necessarily the time when cash exactly flows in and out)
  - income statement contains *noncash items* (most notably, depreciation)

Cash flow from assets (free cash flow)

- It's the cash flow generated by the company which is not invested into its assets and is, therefore, **free to distribution** to its creditors and shareholders.
- **It consists of three parts:**

  1) Operating cash flow
  2) Net investment in fixed assets
  3) Changes in working capital

Cash flow from assets (free cash flow)

Operating cash flow

- Net investment in fixed assets
- Change in working capital

= **Cash flow from assets (Free cash flow)**

Cash flow from assets = cash flow to creditors + cash flow to shareholders

Operating cash flow

Sales

- Cost of goods sold
- Depreciation
- Selling, General and Administrative expenses

= Operating profit (**Earnings before Interest and Taxes**)

- Taxes

\+ Depreciation

= **Operating cash flow**

Net investment in fixed assets

Ending net fixed assets

- Beginning net fixed assets

+ Depreciation

= **Net investment in fixed assets**

Changes in working capital

Ending working capital

\- Beginning working capital

= **Change in working capital**

Cash flow to creditors

Interest paid

\- New net borrowing

= **Cash flow to creditors**

Cash flow to stockholders

Dividends paid

\- New net equity raised

= **Cash flow to stockholders**