# Financial Statements and Cash Flows

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Topic 2



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- 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

- <u>Assets</u> are economic resources which are owned by a business:
  - Result from past transactions (inventory, machinery purchases etc.)
  - Are expected to benefit future operations.
- <u>Liabilities</u> 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
- <u>Owners' Equity</u> 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

<u>Current Assets</u> \$ \$	<u>Current Liabilities</u> \$ \$
Non-current Assets	<u>Non-current Liabilities</u> \$\$
	<u>Owners' Equity</u> \$ \$
Total Assets §	<u>Total L + SE</u> §

### Exercise I

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 = 4700000; inventory = \$400 000; accumulated retained earnings = \$4 213 000; long-term debt = \$1 894 000.

What can be derived from the Balance Sheet

I) 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\$\$\$	<u>Non-current Liabilities</u> \$\$\$
	<u>Owners' Equity</u> \$ \$
<u>Total Assets</u> §	<u>Total L + SE</u> §

# Exercise II

 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: I) shareholders' equity
2) working capital in accounting and
economic sense

# Exercise II

- 1) Shareholders' equity = 13,500+2,000+2,400+5,000-4,000-3,000=1 5,900
- 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)
<b>Operating Income (Earnings before interest and taxes)</b>		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<u>981</u>

Total assets \$27,261

Liabilities and Owners' Equity Liabilities \$16,156 Owners' Equity Paid-in capital 2,000 Retained earnings <u>9,105</u> Total liabilities and owners' equity <u>\$27,261</u>



# 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:

- I) 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