FI3300  
Corporation Finance  
Spring Semester 2010  
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Assistant Professor of Finance

Agenda
- Accounting Review:  
  - Income Statement  
  - Balance Sheet
- Background for the next 3 chapters:  
  how to interpret and work with financial statements

Learning objectives
- Income statement & Balance sheet  
  - Identify & define items  
  - Construct basic financial statements  
  - Describe the difference between accounting data and cash  
  - Explain the importance of accounting to a business  
  - Identify some ways in which a firm may (legally) manipulate its financial data

Income Statement
- The Income Statement is also called  
  - Earnings Statement  
  - Profit and Loss (P&L) Statement
- Summary of the company's
  - Revenues (+) and Expenses (-)
  - over a period of time (e.g., one quarter or one year)
- A flow measure
  - Each value on the income statement represents the cumulative amount of an item for the accounting period

Income Statement
- Net Sales = Gross Sales – (Returns and Allowances)
  - Gross Sales:
    - Sale revenue is recorded when the ownership is transferred from the seller to the buyer (Accrual rather than Cash Accounting)
  - Returns and Allowances:
    - Not all sales will result in full payment (money-back guarantee, trial period, default etc.)
Example: In 2006, Tanner, Inc. had Gross Sales of $1,253,400 and reported a Returns and Allowances estimate of $53,400.
What did Tanner, Inc. report as Net Sales in 2006? $
**Income Statement: COGS**

Cost of Goods Sold = + Beginning Inventory + Materials Purchases - Ending inventory

COST OF GOODS SOLD (COGS):
- direct costs of manufacturing/selling a product
- Retailer: COGS are the cost of materials purchased for resale
- Manufacturing company: materials, labor costs, manufacturing overhead
- Service company: usually no COGS on their income statement

**Example:**
In 2006, Tanner, Inc. sold 25 shirts. The company purchased 45 shirts from the manufacturer in 3 batches:
- The first batch of 20 shirts @ $8 a shirt
- The second batch of 15 shirts @ $10 a shirt
- The third batch of 10 shirts @ $14 a shirt

The cost of 45 shirts:
+ 20 x $8 = $160
+ 15 x $10 = $150
+ 10 x $14 = $140
= $450

What is the cost of the 25 shirts that Tanner, Inc. sold in 2006?

**Inventory Valuation**

Example: In 2006, Tanner, Inc. sold 25 shirts. The company purchased 45 shirts from the manufacturer:
- The first batch of 20 shirts @ $8 a shirt
- The second batch of 15 shirts @ $10 a shirt
- The third batch of 10 shirts @ $14 a shirt

FIFO (First In First Out):
(20x$8 + 5x$10) / 25 = $____ a shirt
20 shirts @ $8 a shirt
5 shirts @ $10 a shirt

LIFO (Last In First Out):
(20x$8 + 5x$10) / 25 = $____ a shirt
20 shirts @ $8 a shirt
5 shirts @ $10 a shirt

Average Cost (AC):
(20x$8 + 15x$10 + 10x$14) / 45 = $____ a shirt

**Income Statement: COGS, AC**

Example Continued:
Assume that Tanner, Inc. had no inventory in the beginning of 2006
Assume that Tanner, Inc. assigns the Average Cost to each shirt
Calculate the Cost Of Goods Sold (COGS)

Beginning Inventory = $____
Materials Purchases = $____
Ending Inventory = $____
Cost of Goods Sold = $____

**Income Statement: COGS, FIFO**

Example Continued:
Assume that Tanner, Inc. had no inventory in the beginning of 2006
Assume that Tanner, Inc. use the FIFO method
Calculate the Cost Of Goods Sold (COGS)

Beginning Inventory = $____
Materials Purchases = $____
Ending Inventory = $____
Cost of Goods Sold = $____

**Income Statement: COGS, LIFO**

Example Continued:
Assume that Tanner, Inc. had no inventory in the beginning of 2006
Assume that Tanner, Inc. use the LIFO method
Calculate the Cost Of Goods Sold (COGS)

Beginning Inventory = $____
Materials Purchases = $____
Ending Inventory = $____
Cost of Goods Sold = $____
Income Statement:

Operating Expenses

Operating Expenses:
- business-related expenses other than Cost Of Goods Sold (COGS) that the company incurs in the normal course of business

Operating Expenses include:
- Management salaries
- Advertising expenditures
- Lease payments
- Repairs & maintenance
- Research and Development (R&D)
- General & administrative expenses (salaries to paper clips)
- Depreciation included in operating expenses for retail companies

Interest and Taxes

Interest Expense:
The cost of borrowing money. Depends on the overall level of firm debt and the firm's interest rate

Example: In 2006, the company's debt outstanding was $500,000 its annual interest rate was 8%. Tanner's interest expense was: $0.08 \times 500,000 = \$______

Income Taxes:
Taxes are paid on the earned income (on earnings before taxes) at the federal, state and local levels
Taxes are paid on an estimated basis throughout the year
Taxes owed are calculated at the end of the year based on the firm's actual profit before taxes

Income Statement: Net Income, EPS

Net Income (Net Profit; Earnings):
The "bottom line" of the income statement. Reports the base profit earned by a firm in a given accounting period.

Note that Net Profit (Earnings) ≠ Cash-Flow

Earnings Per Share (EPS) = Net Income / Number of Shares Outstanding

Example: In 2006 Tanner, Inc. had 100,000 shares outstanding and its Earnings (income) Before Taxes (ETS) was $20,000. If the tax rate is 40%, calculate the Net Income and EPS.
Net Income = 0.4 \times \$20,000 = \$______
EPS = \$______ / 100,000 = \$______

Income Statement: Examples

Book Problem 2.4: Rapport, Inc. (a hardware retail company), 2006
Book Problem 2.5: Appully Company (a clothing retailer), 2006

Balance Sheet

- The Balance sheet is also called Statement of Financial Position
- Categorizes the company's resources as:
  - Assets
  - Liabilities
  - Shareholders' Equity
  - on a specific date (e.g., December 31, 2006)
- A stock measure (snapshot)
  - Each value on the balance sheet is the value of that account on a specific date
Balance Sheet Identity

\[
\text{Total Assets} = \text{Total Liabilities} + \text{Shareholders' Equity}
\]

Balance Sheet Items

<table>
<thead>
<tr>
<th>ASSETS</th>
<th>LIABILITIES and EQUITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current Assets</td>
<td>Current Liabilities</td>
</tr>
<tr>
<td>Net Fixed Assets</td>
<td>Long-Term Debt</td>
</tr>
<tr>
<td>Total Assets</td>
<td>Total Liabilities and Equity</td>
</tr>
</tbody>
</table>

Balance Sheet: Assets

**Current Assets:**
- Liquid assets that can be converted into cash within a short period (one year)
- Cash
- Net Accounts Receivable
- Inventories

**Net Fixed Assets:**
- Illiquid assets of permanent nature that are required for the normal conduct of a business
- Include assets such as equipment, buildings, vehicles, tools, computers, office equipment, furniture etc.

Balance Sheet: Current Assets

**Cash:**
- The most liquid asset
- Includes cash and marketable (near cash) securities such as Certificates of Deposits (CDs), Treasury bills, notes and bonds, High grade commercial paper etc.
- The availability of reported cash may be restricted if pledged as collateral

**Net Accounts Receivable (A/R):**
- When a company sells its products on credit, it is shown on the balance sheet as accounts receivable
- Accounts receivable remain on the balance sheet until they are paid
- Some amount of accounts receivable will never be collected (bad debt)
- **Allowance for Doubtful Accounts** is a reserve created as the company prepares for those losses

\[
\text{Net Accounts Receivable (A/R)} = \text{Gross A/R} - (\text{Allowance for Doubtful Accounts})
\]

Balance Sheet: Current Assets

**Net Accounts Receivable (A/R) Example:** Textbook example 2.7
Inventory: Raw materials, Work in process and Finished goods
Can be valued using the methods FIFO, LIFO or Average Cost

End of Year Inventory =
+ Beginning of Year Inventory
+ Purchases
- Cost Of Goods Sold (COGS)

Balance Sheet: Current Assets

Fixed Assets
Items of permanent nature such as equipment, buildings, vehicles, computers etc.
Gross Fixed Assets is the historical purchase price
Accumulated Depreciation accounts for the fact that all fixed assets, with the exception of land, are assumed to lose their economic value over time

Net Fixed Assets = Gross Fixed Assets - Accumulated Depreciation

Balance Sheet: Fixed Assets

Depreciation
- Straight-line
- Accelerated cost recovery

Examples: Textbook example on page 28, problem 2.8

Balance Sheet: Net Fixed Assets

Total Assets =
+ Current Assets
+ Net Fixed Assets

Assets must be financed by a combination of Liabilities (Debt) and Shareholders’ Equity

Balance Sheet: Liabilities

Current Liabilities:
- Short term liabilities that are expected to be paid within a short period (one year)
- Notes Payable
- Accounts Payable
- Accrued Expenses
- Current Portion of Long-Term Debt

Long Term Debt:
- Long term liabilities with maturities in excess of one year

Balance Sheet: Current Liabilities

Notes Payable
Short term borrowing: bank loan, line of credit

Accounts Payable (A/P)
Purchases made by the company from suppliers, on credit (the flip side of accounts receivable)

Accrued Expenses (Accruals)
Operating costs that the company has expensed on its income statement which have not been paid at the close of the reporting period (utilities, rent salaries taxes etc.)

Current Portion of Long-Term Debt
The principal portion of long term debt due over the next twelve months

Example: Textbook problem 2.9
Balance Sheet: Long Term Debt

Long-Term Debt
Liabilities with maturities in excess of 1 year
Usually it is finance long term assets such as
land building and equipment

Total Liabilities =
Current Liabilities + Long Term Debt

Balance Sheet: Equity

The firm's Assets are financed by Debt and Equity

Assets = Debt + Equity

After paying the firm's debt (short and long term liabilities /
debt) the residual firm value belongs to the shareholders
(equity)

Equity = Assets - Debt

Shareholders' equity =
- Preferred Stock
- Common Stock at Par
- Additional Paid-in Capital
- (Cumulative) Retained Earnings

Shareholders' Equity is also known as
Net Worth
Owners' Equity
Book Value of Firm's Equity

Preferred Stock
It is an hybrid security
Debt component: pays fixed periodic amount (like the
interest on debt)
Equity component: if payment is not made, the company
is not in default (in the case of unpaid debt there is
default)
Preferred dividends usually cumulative
No voting rights

Common Stock at Par
Arbitrary value assigned to the stock when issued
Use this information to calculate the number of shares
outstanding

Additional Paid-in Capital
Additional money, over and above par value, generated
when the company sold the stock

Historical Stock Price =
Common Stock at Par + Addition Paid-in Capital

Textbook Example: 2.10

(Cumulative) Retained Earnings
Cumulative total of all net income that was not
distributed as dividends, but rather reinvested in the
company
Note that this is a historical figure and does NOT
represent income available to shareholders

Annual Addition to Retained Earnings =
Net Income (Earnings) - Dividend Payout
Year End Retained Earnings =
+ Beginning Retained Earnings
+ Annual Addition to Retained Earnings
Balance Sheet

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<tr>
<td>Total Current Assets</td>
<td>Current Portion of LT Debt</td>
</tr>
<tr>
<td>Gross Fixed Assets (Accumulated Depreciation)</td>
<td>Total Current Liabilities</td>
</tr>
<tr>
<td>Net Fixed Assets</td>
<td>Total Liabilities</td>
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<tr>
<td>Total Assets</td>
<td>Preferred Stock</td>
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Examples and Practice

Balance Sheet: Textbook problem 2.14
Financial Statements: Nika and Chelsea's Lemonade Stand

Accounting

- Tool for record keeping
- Financial statements summarize the financial activity of a company during the accounting period.
- Many parties are interested in the company's financial "health":
  - Managers
  - Shareholders
  - Creditors
  - the IRS...

Manipulating Financial Data

- Accrual rather than Cash Accounting
  - Accrual accounting recognizes revenues as earned when sales are transacted, regardless of the actual date of payment. Likewise, expenses are recognized when they are incurred rather than when the actual cash payment is made.
- Discretionary allowances for doubtful debt: the choice will affect/smooth net sales
- Discretionary inventory valuation methods
- Discretionary depreciation method
- Discretionary expense items

We need non-discretionary CASH Flows