Chapter 3 -- Financial Statements, Cash Flow, and Taxes

- Financial statements and reports
- Basic financial statements
- Free cash flow
- MVA and EVA
- Income taxes

- Financial statements and reports

  Annual report

  A report issued annually to shareholders that contains:

  (1) Verbal statements: explain what happened and why; offer future prospects

  (2) Financial statements:

  - Balance sheet
  - Income statement
  - Cash flow statement
  - Shareholder's equity statement

  Importance of financial statements and reports

  - To investors: provide valuable information regarding the firm
  - To managers: for internal control and financial planning

- Basic financial statements

  (1) Balance sheet: a statement of a firms' financial position at a point in time

Cash & marketable securities		Accounts payable (A/P)
Accounts receivable (A/R)		Accrued wages and taxes (Accruals)
Inventory		Notes payable
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Current assets		Current liabilities ⎫
+		+ ⎬ Total liabilities
Net fixed assets		Long-term debt ⎭
+		+
Other assets		Common equity (c/s and R/E)
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Total assets	=	Total liabilities and equity

  Note: Current liabilities + long-term debt = total liabilities

  Common equity (Shareholder's equity) = total assets - total liabilities

  Common equity = common stock (c/s) + retained earnings (R/E)

  = paid-in capital + retained earnings

  Retained earnings are cumulative, assuming no preferred stocks

  Working capital: refers to current assets

Net working capital = current assets - current liabilities

Net operating working capital = current assets - (current liabilities - notes payable)

Market value vs. book value
Market value = the actual market price
Book value = (common equity) / (# of shares outstanding)

Table 3.1: Allied Food Product Balance Sheets

(2) Income statement: a report summarizing a firm's revenues, expenses, and profits during a reporting period

Sales
- Operating cost except depreciation and amortization

EBITDA
- Depreciation and amortization

Earnings before interest and taxes (EBIT)
- Interest expenses

Earnings before Tax (EBT)
- Income tax

Net income (NI)

NI can be used for cash dividend and/or retained earnings

Commonly used terms:
Earnings per share (EPS) = NI / number of shares outstanding
Dividend per share (DPS) = cash dividend / number of shares outstanding
Dividend payout ratio = cash dividend / NI
Retention ratio = retained earnings / NI

Table 3.2: Allied Food Products Income Statements

(3) Cash flow statement: a report showing how things affect the balance sheet and income statement will affect the firm's cash flows
Cash flow statement has four sections: operating, long-term investing, financing activities, and summary on cash flows over an accounting period

Table 3.3: Allied Food Products Cash Flow Statements

(4) Shareholder's equity statement
Last year's end balance
Add this year's R/E = NI - Common stock cash dividend
This year's end balance

Table 3.4: Allied Food Products Statement of Stockholders' Equity

- Free cash flow

  Accounting profit vs. cash flow
  Accounting profit is a firm's net income reported on its income statement.

  Net cash flow is the actual net cash that a firm generates during a specified period.

  Net cash flow = NI + depreciation and amortization

  Free cash flow: a mount of cash available for payments to all investors, including stockholders and debt-holders after investments to sustain ongoing operations

  FCF = EBIT*(1-T) + depreciation and amortization – (capital expenditures + Δ in net working capital)

- MVA and EVA

  MVA stands for market value added, which is the excess of the market value of equity over its book value

  EVA stands for economic value added, which is the excess of net operating profit after tax (NOPAT) over capital costs

  NOPAT = EBIT*(1-T)
  Capital costs = total investor-supplied operating capital*after-tax cost of capital

  Problem 3-5: MVA calculation
  $500 million of common equity, stock price is $60 per share, market value added is $130 million. How many shares are outstanding?
  Answer: (500 +130)/60 = 10.5 million shares

Problem 3-6: MVA calculation
Shareholders' equity = $35,000,000, number of shares outstanding = 2,000,000 shares, stock price = $30 per share, what is MVA?
Answer: market value of stock = 30*2,000,000 = $60,000,000
MVA = 60,000,000 - 35,000,000 = $25,000,000

- Income taxes

  Progressive tax rate system: the tax rate is higher on higher income

  Taxable income: gross income minus exceptions and allowable deductions as set forth in the Tax Code or the income that is subject to taxes

  Marginal tax rate: the tax rate applicable to the last dollar made
  Average tax rate: taxes paid divided by total taxable income

  Personal income tax:
  Interest income: taxed as ordinary income
  Dividend income: was taxed as ordinary income (currently is taxed at a maximum of 15%, will increase after 2012)
  Capital gains (short-term, less than a year): taxed as ordinary income
  Capital gains (long-term, more than a year): taxed at a maximum of 15% (will increase after 2012)
  Capital losses are tax deductible up to $3,000 or to offset capital gains

  Equivalent pre-tax yield vs. after tax return
  Equivalent pre-tax yield = tax-free return / (1 – T)
  After tax return = before tax return (1 – T)

  Example: suppose your marginal tax rate is 28%. Would you prefer to earn a 6% taxable return or 4% tax-free return? What is the equivalent taxable yield of the 4% tax-free yield?

  Answer: 6%*(1-28%) = 4.32% or 4% / (1-28%) = 5.56%
  You should prefer 6% taxable return because you get a higher return after tax, ignoring the risk

  Corporate income tax:
  Interest income is taxed as ordinary income
  Interest expenses are tax deductible
  Dividend income is 70% tax-exempt (70% dividend exclusion)
  Dividend paid is not tax deductible
  Capital gains are taxed as ordinary income
  Capital losses can only offset capital gains (carry back for 3 years or carry forward for 5 years)

Operating losses can offset taxable income (carry back for 2 years or carry forward for 20 years)

Deprecation: plays an important role in income tax calculation - the larger the depreciation, the lower the taxable income, the lower the tax bill

Depreciation methods:
Straight-line method
Double-declining balance method
Modified accelerated cost recovery system (MACRS)

Example: Corporate tax calculation

Sales	$4,500,000
OC excluding depreciation	(3,000,000)
Depreciation	(1,000,000)
Operating income	$ 500,000
Interest income	10,000
Dividend income $10,000	3,000 (because 70% exclusion)
Interest payment	(200,000)
Capital gains	20,000
Total taxable income	$ 333,000

Table 3-6 Corporate Tax Rates as of January 2008

If a Corporation's Taxable Income Is	It Pays This Amount on the Base of the Bracket	Plus This Percentage on the Excess over the Base (Marginal Rate)	Average Tax Rate at Top of Bracket
Up to $50,000	$ 0	15%	15.0%
$50,000–$75,000	7,500	25	18.3
$75,000–$100,000	13,750	34	22.3
$100,000–$335,000	22,250	39	34.0
$335,000–$10,000,000	113,900	34	34.0
$10,000,000–$15,000,000	3,400,000	35	34.3
$15,000,000–$18,333,333	5,150,000	38	35.0
Over $18,333,333	6,416,667	35	35.0

[16] On December 26, 2007, President Bush signed legislation that (1) increases the AMT exemption amounts for 2007 to $44,350 for single taxpayers and $66,250 for joint filers and (2) allows taxpayers to take several tax credits for AMT purposes through 2007.

Total tax = 22,250 + (333,000 – 100,000) * (0.39) = $113,120
Marginal tax rate = 39%; Average tax rate = (113,120 / 333,000) = 33.97%

- **Exercise**
  ST-1 and ST-2
  Problems: 1, 2, 3, 4, 8, and 9