Chapter 1

Corporate Finance and the Financial Manager

3 Questions for Financial Manager – What long-term investments should you take on? Where will you get the long-term financing to pay for your investment? How will you manage you every day financial activities?

Capital Budgeting – The process of planning and managing a firm's investment in long-term assets

Capital Structure – The mix of debt and equity maintained by a firm

Working capital management – Planning and managing the firm's current assets and liabilities

Forms of Business Organization

Sole Proprietorship – A business owned by a single individual

Partnership – A business formed by two or more co-owners

Corporation – A business created as a distinct legal entity owned by one or more individuals or entities

The Goal of Finance Management

Possible Goals

- Survive in Business
- Avoid financial distress and bankruptcy
- Beat the competition
- Maximize sales or market share
- Minimize costs
- Maximize profits
- Maintain steady earnings growth

- The Goal of financial management is to maximize the current value per share of existing stock

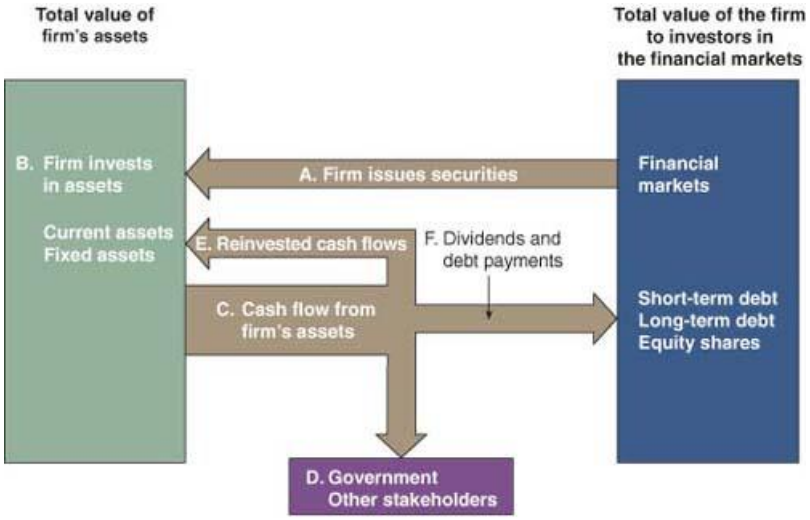
The Agency Problem and control of the Corporation

Agency Problem – The possibility of conflicts of interest between the shareholders and management of a firm

Corporate Governance – Rules for corporate organization and conduct

Stakeholder – Anyone who potentially has a claim on a firm

Financial Markets and the Corporation



Money Markets – Financial markets where short-term debt securities are bought and sold

Capital Markets – Financial markets where long-term debt and equity securities are bought and sold

Primary Markets – Refers to original sale of securities by governments and corporations **(**In Primary market transaction, corporation is seller and transaction raises money for corporation ex. public offerings and private placements)

Secondary Markets – Where securities are bought and sold after original sale **(**Secondary market transaction involves one owner or creditor selling to another, secondary market provides means for transferring ownership of corporate securities ex. auction markets and dealer markets)

Financial Institutions

Financial Institutions – Act as intermediaries between investors (fund suppliers) and firms raising funds

Trends in Financial Markets and Financial Management

Financial Engineering – Creation of new securities or financial processes

Derivative Securities – Options, futures, and other securities whose value derives from the price of another, underlying, asset

Regulatory Dialectic – The pressures financial intuitions and regulatory bodies exert on each other

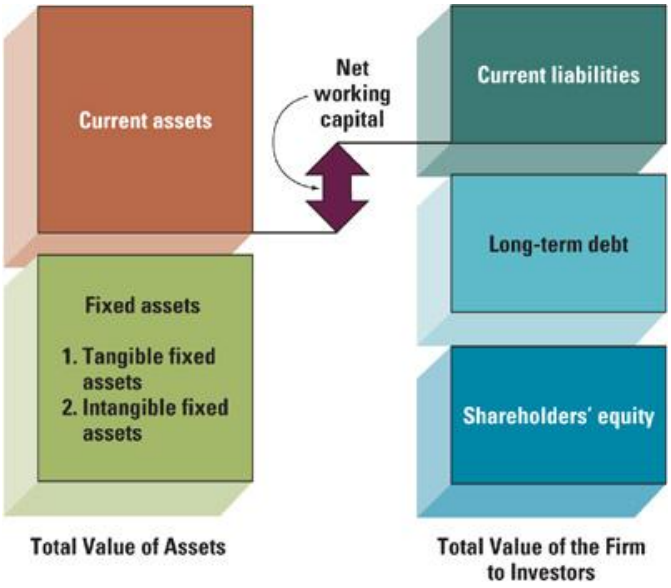
Chapter 2

Balance Sheet

Balance Sheet – Financial statement showing a firm's accounting value on a particular date

Generally Accepted Accounting Principles (GAAP) – The common set of standards and procedures by which audited financial statements are prepared

Mark-to-market – Accounting rules using market values rather than book values of assets and liabilities



The Income Statement

Income Statement – Financial statement summarizing a firm's performance over a period of time

Non-cash items – Expenses charged against revenues that do not directly affect cash flow, such as depreciation

Cash Flow

Cash flow from assets – The total cash flow to bondholders and cash flow to shareholders, consisting of: operating cash flow, capital spending, and additions to net working capital

Operating cash flow – Cash generated from a firm's normal business activities

Free cash flow – Another name for cash flow from assets

Cash flow to creditors - A firm's interest payments to creditors less net new borrowings

Cash flow to shareholders – Dividends paid out by a firm less net new equity raised

Taxes

Average Tax Rate – Total taxes paid divided by total taxable income

Marginal Tax Rate – Amount of tax payable on the next dollar earned

Dividend Tax Credit – Tax formula that reduces the effective tax rate on dividends

Capital Gains – The increase in value of an investment over its purchase price

Realized capital gains – The increase in value of an investment, when converted to cash

Loss carry-forward, carry-back – Using a year's capital losses to offset capital gains in past or future years

Capital Cost Allowance

Capital Cost Allowance (CCA) – Depreciation for tax purposes, not necessarily the same as depreciation under GAAP

Half-year rule – CRA's requirement to figure CCA on only one-half of an asset's installed csot for its first year of use

Net Acquisitions – Total installed cost of capital acquisitions minus adjusted cost of any disposals within an asset pool

Terminal Loss – The difference between UCC and the adjusted cost of disposal when the UCC is greater

Recaptured Depreciation – The taxable difference between adjusted cost of disposal and UCC when UCC is smaller

Chapter 3

Cash flow and financial statements: A closer look

Sources of cash – A firm's activities that generate cash

Uses of cash – A firm's activities in which cash is spent

Statement of Cash flows – A firm's financial statement that summarizes its sources and uses of cash over a specified period

Standardized Financial Statements

Common-size Statement – A standardized financial statement presenting all items in percentage terms, Balance Sheets are shown as a percentage of assets and income statements as a percentage of sales

Common-base-year-statement – A standardized financial statement presenting all items relative to a certain base year amount

Ratio Analysis

Financial ratios – Relationships determined form a firms financial information and used for comparison purposes

Current Ratio – Measures short-term liquidity = Current Assets/Current Liability

Other ratios

- Quick/Acid-Test Ratio = Current assets – Inventory / Current Liabilities
- Cash Ratio = Cash + Cash Equivalents / Current Liabilities
- Networking capital to total assets = Net working capital / Total assets
- Interval measure = Current assets / Average daily operating costs

Long-Term Solvency Measures

- Total Debt Ratio = Total assets – Total equity / Total Assets
- Debt/Equity Ratio = Total debt / Total equity
- Equity Multiplier = Total assets / Total equity
- Long-Term debt ratio = Long-Term debt/Long-term debt + Total equity
- Times interest earned ratio = EBIT (Earnings before interests and taxes) / Interest
- Cash Coverage ratio = EBIT + Depreciation / Interest

Asset Management or Turnover Measures

- Inventory turnover = Cost of goods sold / inventory
- Days' sales in inventory = 365 days / inventory turnover
- Receivables turnover = sales / accountings receivable
- Days' sales in receivables = 365 days / receivables turnover

Asset Turnover Ratios

- NWC (Net Working Capital) Turnover = Sales / NWC
- Fixed Asset Turnover = Sales / Net Fixed Assets
- Total Asset Turnover = Sales / Total Assets

Profitability Measures

- Profit Margin = Net Income / Sales
- ROA (Return on Assets) = Net Income / Total Assets
- ROE (Return on Equity) = Net Income / Total Equity

Market Value Measures

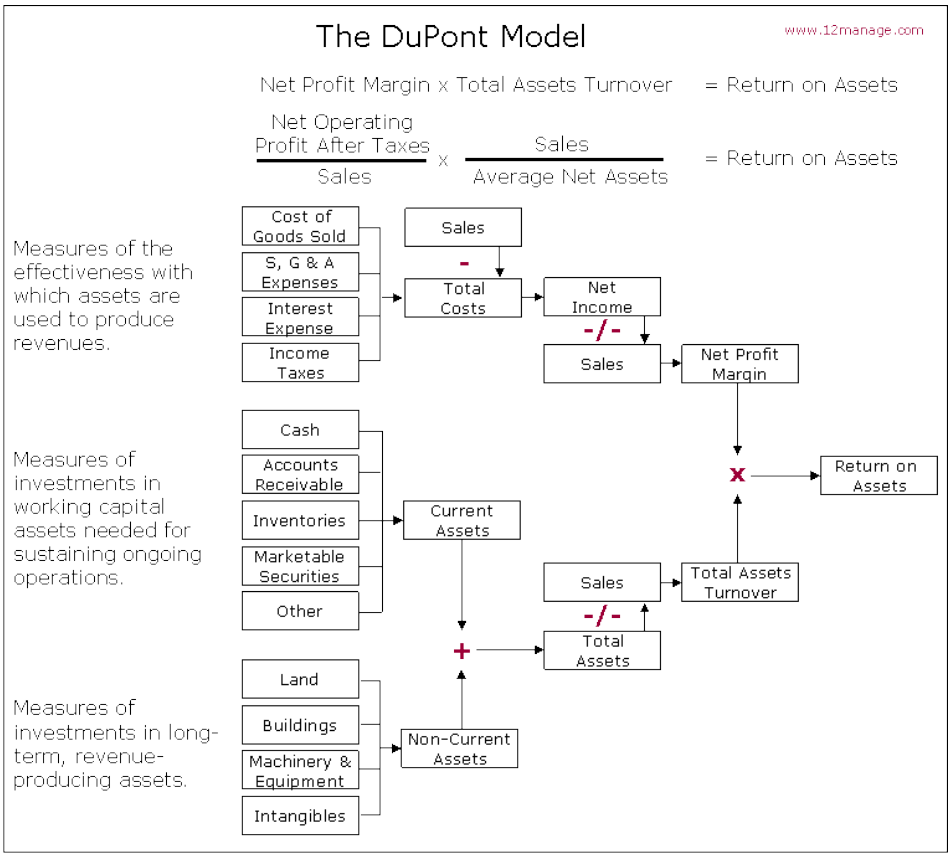
- EPS (Earnings Per Share) = Net Income / Shares Outstanding

- P/E (Price/Earnings) Ratio = Price per share / Earnings Per Share
- Market-to-book-ratio = Market value per share / Book value per share
- EV/EBITGA (Enterprise Value/Earnings before interest, tax, depreciation, and amortization) multiple = [Market Value of equity + market value of interest-bearing debt + minority interest – cash] / EBITDA

The Du Pont Identity

Du Pont Identity – Popular expression breaking ROE into three parts: profit margin, total asset turnover, and financial leverage. It also tells us that ROE is affected by three things:

- Operating Efficiency (as measured by profit margin)
- Asset Use efficiency (as measured by total asset turnover)
- Financial Leverage (as measured by the equity multiplier)
- ROE = Profit Margin x Total asset turnover x Equity Multiplier



(DU PONT ANALYSIS MODEL ON PAGE 76 IN TEXTBOOK)

Using Financial Statement Information

Internal Uses – Performance evolution, planning for future

External Uses – Long-term creditors and potential investors

Chapter 4

What is Financial Planning?

Planning Horizon – The long-range time period the financial planning process focuses on, usually the next two to five years

Aggregation – Process by which smaller investment proposals of each of a firm's operational units are added up and treated as one big project

The Percentage of Sales Approach

Percentage of Sales approach – Financial Planning method in which accounts are projected depending on a firm's predicted sales level

Dividend Payout Ratio – Amount of cash paid out to shareholders divided by net income = Cash Dividends / Net Income

Retention ratio or plowback ratio – Retained earnings divided by net income = Retained Earnings / Net Income

Capital intensity ratio – A firm's total assets divided by its sales, or the amount of assets needed to generate $1 in sales = Total Assets / Sales

External Financing Needed (EFN) – The amount of financing required to balance both sides of the balance sheet

External Financing and Growth

Symbols

- ***S = Previous year's sales***
- ***A = Total Assets***
- ***D = Total Debt***
- ***E = Total equity***
- ***p = Profit Margin***
- ***R = Retention Ratio***
- ***ROA = Return on Assets***
- ***ROE = Return on Equity***
- ***D/E = Debt/Equity Ratio***
- ***g = Growth rate in sales***

Increase in Total Assets = A x g

Addition to retained earnings = p(S)R x (1+g)

EFN = Increase in total assets – Addition to retained earnings = A(g) – p(S)R x (1+g)

EFN = -p(S)R + [A-p(S)R] x g

Internal Growth Rate – The growth rate a firm can maintain with only internal financing = (ROA x R) / (1 – ROA x R)

Debt Capacity – The ability to borrow to increase firm value

Sustainable growth rate – The growth rate a firm can maintain given its debt capacity, ROE, and retention ratio

D/E = New borrowing / Addition to retained earnings

New Borrowing = D/E[p(S)R(1+g)]

EFN* = Increase in total assets – Addition to retained earnings – New borrowing = A(g) – p(S)R x (1+g)[D/E] = 0

g* = ROE x R/[1 – ROE x R]

ROE = Profit Margin x Total Asset Turnover x Equity Multiplier = p(S/A)(1+D/E)

Chapter 5

Future Value and Compounding

Future Value (FV) – The amount an investment is worth after one or more periods. Also compound value. = $1 x $(1+r)^t$

Compounding – The process of accumulating interest in an investment over time to earn more interest

Interest on interest – Interest earned on the reinvestment of previous interest payments

Compound Interest – Interest earned on both the initial principal and the interest reinvested from prior periods

Simple interest – Interest earned only on the original principal amount invested

Present Value and Discounting

Present Value (PV) – The current value of future cash flows discounted at the appropriate discount rate = $1 x $[1/(1+r)^t] = \$1/(1+r)^t$

Discount – Calculate the present value of some future amount

Discount rate – The rate used to calculate the present value of future cash flows

More on Present and Future Values

FV = PV x (1+r)^t

PV = $FV_t / (1+r)^t = FV_t \times [1/(1+r)^t]$

Symbols

- ***PV = Present Value***
- ***FV_t = Future Value***
- ***r = Interest rate***
- ***t = Number of periods***
- ***C = Cash amount***

TIME VALUE CALCULATIONS

FV_t = $C \times (1+r)^t$

PV = $C / (1+r)^t$

PV = $FV_t / (1+r)^t$

Chapter 6

Valuing Level Cash Flows: Annuities and Perpetuities

Annuity – A level stream of cash flows for a fixed period of time

Annuity present value = C x (1-Present Value Factor/r) = $C \times ((1-1/(1+r)^t)/r)$

Annuity FV factor = (Future Value Factor – 1)/r = $((1+r)^t-1)/r$

Annuity Due – An annuity doe which the cash flows occur at the beginning of the period

Annuity due value = Ordinary annuity value x (1+r)

Perpetuity – An annuity in which the cash flows continue forever

Consol – A time of perpetuity

Cash flow = Perpetuity present value x Rate

Perpetuity PV = C/r = C x (1/r)

ANNUITY AND PERPETUITY CALCULATIONS

FV_t = C x $\{[1+r)^t - 1]/r\}$

PV = C x $\{1-[1/(1+r)^t]\}/r$

PV = C/r

Growing Perpetuity – A constant stream of cash flows without end that is expected to rise indefinitely = PV = C/r-g

Growing Annuity – A finite number of growing annual cash flows = PV = $(C/r-g)(1-(1+g/1+r)^t)$

Comparing Rates: The effect of compounding

Stated Interest Rate – The interest rate expressed in terms of the interest payment made each period. Also, quoted interest rate

Effective Annual Rate (EAR) – The interest rate expressed as if it were compounded once per year = $[1+(\text{Quoted rate}/m]^m-1$ (m=number of time interest is compounded during the year)

Annual Percentage Rate (APR) – The interest rate charged per period multiplied by the number of periods per year

EAR = $e^q - 1$ (q=quoted rate) (continuous compounding)

Loan Types and Loan Amortization

- **Pure Discount Loans**
- **Interest-Only Loans**
- **Amortized Loans**