

# Financial Analysis: A User Approach

## Chapter 13

### Equity Investment Analysis

#### Investment Purpose

Investing in equity securities can be driven from several different purposes:

- Long-term vs. Short-term
- Growth vs. Income

Portfolios – combinations of various investment types the collectively meet some pre-established purpose

Mutual Funds – instead of making investments in specific securities you can invest in mutual funds.

- Benefits include
  - Increased diversification relative to capital invested
  - Enhanced liquidity
  - Professional money managers
  - Diverse portfolio options
- Costs include
  - Fees and charges (typically 2%)
  - Actively managed funds can be less tax efficient
  - Less control

## Types of mutual funds

- Money market funds
- Stock funds
- Bond funds
- Balanced funds

## Other fund types:

- Asset allocation funds
- Index funds
- Income funds
- Aggressive growth funds
- Sector funds
- Regional funds

## Step 1- Investment Purpose

It is very important to consider your risk tolerance before you invest in equities.

## Step 2 – Corporate Overview

The growth in revenue and profitability will substantially determine the performance of an equity security. So examining a company, its industry, and the strategy of the company will be important in assessing the growth prospects of a company.

## Step 3 – Financial and Market Analysis

## Step 4 – Detailed Accounting Analysis

Examining a company's revenue and expense recognition policies and the important accounting estimates will be significant given the role of earnings in equity valuation.

## Step 5 - Comprehensive Analysis

Summarizing all of the work and determining what all the details mean.

## Step 6 – Investment Decision

For equities you are considering – buy or do not buy

For equities that you own – hold or sell

## Discounted Cash Flow Valuation

$$P_e = \sum_{t=1}^{\infty} (1 + r_e)^{-t} D_t$$

Where

- $P_e$  is the DCF Valuation of Common Equity at time  $t$
- $R_e$  is the cost of equity capital
- And  $D_t$

$$D_t = NI_t - (CE_t - CE_{t-1})$$

Where

- $D_t$  is the free cash flow to common equity at time  $t$
- $NI_t$  is the net income available to common at time  $t$
- $CE_{t,t-1}$  is the common equity at times  $t$  and  $t-1$

## Residual Income Valuation Model

$$P_e = CE_0 + \sum_{t=1}^{\infty} (1 + r_e)^{-t} RI_t$$

Where:

- $P_e$  is the RI Valuation of Common Equity at time  $t$
- $CE_0$  is common shareholders' equity at date as of the last financial statement date
- $r_e$  is the cost of equity capital
- $RI_t$  is residual income for time period  $t$  where

$$RI_t = NI_t - r_e CE_{t-1}$$

Where:

- $RI_t$  is the residual income for period  $t$
- $NI_t$  is the net income for period  $t$
- $r_e$  is the cost of equity capital
- $CE_{t-1}$  is the common equity at  $t-1$

In words residual income is the amount that net income exceeds the capital charge on common equity.

## Forecasting Sales Growth

- Probably the single most important (and difficult) item to forecast
- Extreme levels of sale growth mean revert quickly
- Basic Process:
  - Forecast industry sales growth based on macroeconomic data
  - Forecast firm sales growth based on industry and company specific factors
- Forecasting industry sales
  - You should look for macroeconomic data that
    - Leads and/or correlates with sales growth
    - Is regularly forecasted
    - Good examples:
      - Demographic trends
      - GDP growth
- Forecasting firm sales
  - Consider industry level competition
    - The larger the firms share in the industry the better
    - Smaller firms and/or rapidly growing industries present the most difficult case

- Growth comes from two sources
  - New investments – new stores, products, etc.
  - Growth from previous/current investments – same-store-sales increases, incremental sales from current customers, etc.
  - New investments generate substantially higher sales growth rates compared to growth from previous and current investments
- Make sure to review and consider:
  - Segment information
  - MD&A
- Terminal period sales growth rates should never be too high – 7% as a maximum with 5% the norm

## Expense Forecasts

- Cost of Goods Sold
  - COGS/Sales (1-GP Rate)
  - Can reflect economies of scales if this includes fixed costs
  - If economies of scale are present you should question if they are sustainable
  - Should compare to close competitors and questions the sustainability of any current advantage

- R&D Expense
  - While not logically linked to Sales like COGS, often practically linked
  - Think about life cycle considerations – early stage companies tend to have a larger percent of R&D/Sales than more mature companies
  - Think about how R&D can impact COGS/Sales
- SG&A Expenses
  - Normally contains both fixed and variable costs
  - Many fixed (and some variable) costs tend to be “sticky”
  - Can use regression to estimate economies of scale
    - Regress SG&A growth rates against sales growth rates
    - A slope less than 1 indicates the presence of economies of scale
- Depreciation and Amortization Expense
  - Forecasts depreciation expense using the historical ratio of Depreciation and Amortization Expense to Net (or gross) PP&E
- Interest Expense
  - This is forecasted by computing the ratio of interest expense to average debt
  - This amount should be adjusted for macroeconomic factors and firm-specific factors

- Nonoperating Income
  - Includes dividends received, interest income and income on investments
  - Also includes asset impairments and restructuring charges
  - Stop and think through whether these items are likely to persist or not. If not you should make an adjustment to the forecasted rate.
  
- Effective Tax Rate
  - This rate is computed by dividing the tax expense into earnings before income taxes
  - You should examine the tax footnote that includes a schedule explaining why the effective rate differs from the statutory rate. Think about whether the differences are likely to persist.
  - Remember that Net Operating Losses can be carried backward and forward, but a zero or abnormally low tax rate cannot persist indefinitely