Chapter 14

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Industry Analysis

Industry Analysis

❑ Second step in the fundamental analysis of common stocks

➤ Industries promising the most opportunity in the future should be considered

❑ Concepts of industry analysis related to valuation principles

❑ Continual analysis due to inconsistent industry performance over time

Industry Performance Over Time

- Potential value of industry analysis seen by assessing the performance of different industries over time

  - S&P's monthly stock price index over a long tome period shows industries perform differently over time

  - Stock performance affected by industry

- Industries in decline should be avoided

Industry Performance Over Time

❑Consistency of industry performance

➢Maintaining positions in growth industries leads to better returns than otherwise

❑Can industry performance be predicted reliably on the basis of past success?

➢Rankings inconsistent over time

➢Industries with recent poor performance should not be ignored

What is an Industry?

❑ Are industry classifications clear-cut?

❑ Industries cannot be casually identified and classified

- ➢ Diversified lines of business cause classification problems

- ➢ Industries continue to become more mixed in their activities and less identifiable

- ➢ e.g. Harvey Group is an American Stock Exchange company that showed the following breakdown by sales for one year: retailing of professional and home audio and video equipment, 56%; food brokerage, 44%. In what industry is Harvey group?

- ➢ There are complications in classifying even a seemingly 'clear' example such as General Motors, the world's largest automobile manufacturer. In 1984, GM acquired EDS, a computer services firm, and in 1985, it acquired Hughes Aircraft

Classifying Industries

❑ Standard Industrial Classification (SIC)

➢ On the basis of what is produced

➢ SIC codes have 11 divisions, A through K

➢ Each division has several major industry groups, designated by a two-digit code

➢ The major industry groups within each division are further subdivided into three-, four-, & five-digit SIC codes to provide more detailed classifications.

❑ Other Classifications: S&P (provides weekly stock indexes on roughly 110 industry groupings), Value Line (covers approximately 90 industries)

Analyzing Industries

❑ By stage in their life cycle

  ➢ Helps determine the health and future prospects of the industry

  ➢ Pioneering stage, Expansion stage, Maturity stage

❑ Pioneering stage

  ➢ Rapid growth in demand

  ➢ Opportunities may attract other firms and venture capitalists

  ➢ Difficult to identify likely survivors

  ➢ BD example: Assembly/value adding (Walton), Internet Service Provider

Analyzing Industries

❑ Expansion stage

➢ Survivors from the pioneering stage are identifiable

➢ Firm operations more stable, dependable

➢ Considerable investment funds attracted

➢ Financial policies firmly established

➢ Dividends often become payable

- Attractive to a wide group of investors

➢ BD example: Telecommunications industry (cell phone operators)

Analyzing Industries

❑Stabilization or maturity stage

➢Growth begins to moderate

➢Marketplace is full of competitors

➢Costs are stable rather than decreasing

➢BD example: RMG, Pharmaceuticals

❑Limitations of life cycle approach

➢A generalization that may not always apply

➢Tends to focus on sales, market share, and investment in the industry

Analyzing Industries

❑ Implications for stock prices

➤ Function of expected returns and risk

❑ Pioneering stage offers the highest potential returns, greatest risk

❑ Investors interested in capital gains should avoid maturity stage

❑ Expansion stage of most interest to investors

➤ Growth is rapid, but orderly

Qualitative Aspects

❑Historical Performance

➢Historical record of sales and earnings growth and price performance should be considered

• Although past cannot be simply extrapolated into the future, it does provide context

❑Competitive conditions in industry

➢Competition determines an industry's ability to sustain above-average returns

Porter's Competitive Factors

❑ More competition ⟶ less earnings ⟶ less dividends ⟶ low stock price

❑ More competition also means low growth opportunity, therefore return on investment would also be low

❑ Influences on return on investment

  ➢ Threat of new entrants

  ➢ Bargaining power of buyers (Walmart, JCPenney)

  ➢ Rivalry between existing competitors (Bell vs. Rogers)

  ➢ Substitute products or services

  ➢ Bargaining power of suppliers (De Beers Group – Diamond, Intel & AMD- microchip processor)

Industry Structure

❑Industry profitability is a function of industry structure

❑The major forms of competitive structure

- ➢ **Perfect competition**
- ➢ **Monopoly**
- ➢ **Oligopoly**
- ➢ **Monopolistic competition**

Industry Structure

❑ **Perfect Competition:**

      1. Many sellers

      2. Homogeneous product

      3. Firms are price takers (no influence over price)

      4. No barrier to entry/free entry

      5. Zero economic profit in the long run (As long as profit is positive, new firms enter and drives economic profit down to zero)

  e.g. Farm products like rice, wheat etc.

❑ The highest level of competition

❑ Stock performance – low price, growth opportunity of earnings is very low

Industry Structure

❑ **Monopoly:**

   1. Single seller

   2. The firm is Price maker (Total control over price if not
      regulated)

   3. No entry

   4. Produces less and charges higher price to make profit

e.g. When Citycell was the only Mobile phone company in
Bangladesh

❑ The lowest level of competition

❑ Stock performance – High price, growth opportunity of
  earnings is very high (if not regulated)

Industry Structure

❑ **Oligopoly:**

1. Few sellers

2. Homogeneous or differentiated product

3. Some control over price

4. Pricing/production decision becomes strategic (depends on what competitors are doing)

5. When competition is based on quantity – Cournot model; When competition is based on price – Bertrand model: in both cases, firm decisions are simultaneous; If one firm takes decision first and the other follows – Stackelberg model

e.g. Aircraft industry

❑ Competition level can be very low (in case of collusion) or can be very high (cut throat competition among the few competitors)

❑ Stock performance – if competition is low: high stock price, high growth opportunity of earning; if competition is high: low stock price, low growth opportunity of earning

Industry Structure

❑ **Monopolistic Competition:**

 1. Many sellers

 2. Decision no longer remains strategic

 3. Differentiated product

 4. Some control over price i.e. control over price in the short run

 5. No barrier to entry

 6. Long run zero economic profit assumption is retained

e.g. Fitness centers

❑ Low competition in the short run, High competition in the long run

❑ Stock performance: High price in the short run but not much growth opportunity of earning. May give high return if held for a short period.

Industry Structure

❑Measure of industry concentration:

- ➢ **Four-firm Concentration Ratio: $C4$**

- ➢ **Herfindahl-Hirschman Index: HHI**

- ➢ $C4$=Sum of the market shares of the top four firms of the industry.

- ➢ Higher the $C4$, higher the industry concentration, lower the level of competition

- ➢ General rule: High concentration – $C4$ 80% to 100%, Medium concentration - 50% to 80%, Low concentration - 0% to 50%

Industry Structure

❑ HHI = 10,000 × Sum of the square of market share of each of the firms in the industry

$$HHI = 10,000 \sum_{i=1}^{I} w_i^2$$

❑ Higher the HHI, higher the industry concentration, lower the level of competition

❑ General Rule: An industry with HHI less than 1,000 is considered to be a competitive marketplace; a result of 1,000-1,800 to be a moderately concentrated marketplace; and a result of 1,800 or greater to be a highly concentrated marketplace

Analyzing Industries

❑ Governmental effects

➤ Regulations and policies have significant effects on industries

❑ Structural changes in how economy creates wealth

➤ U.S. continues to move from an industrial to an information/communication society

➤ Structural shifts can occur even within relatively new industries

Evaluating Future Industry Prospects

❑ To forecast long-term industry performance investors should ask:

- Which industries are obvious candidates for growth and prosperity?

- Which industries appear likely to have difficulties as the country moves from industrial to an information-based economy?

Picking Industries for Next Year

❑Which industries are likely to show improving earnings?

  ➢Estimate expected earnings

  ➢Earning estimates notoriously inaccurate

❑Which industries are likely to show improving *P/E* ratios?

  ➢Investors tend to pay too much for favored companies in an industry

Picking Industries for Next Year

❑Likely direction of interest rates and which industries most affected by a significant rate change should be considered

❑Industries most affected by possible political events, new technology, inflation should also be considered

Business Cycle Analysis

❑ Analysis of industries by their operating ability in relation to the economy as a whole

- Some industries move closely with the business cycle, others not

❑ Growth industries

➢ Earnings expected to be significantly above the average of all industries

- Growth stocks suffer less during a recession
- Growth industries in the 1980s included genetic engineering, microcomputers, new medical devices. Current and future growth industries include robotics and smart phones.

Business Cycle Analysis

❑ Defensive industries

  ➢ Least affected by recessions and economic adversity e.g. food industry since people must eat regardless of the state of the economy

❑ Cyclical industries

  ➢ Move with the business cycle

  ➢ Most affected by recessions and economic adversity

  ➢ "Bought to be sold". When should investors pursue cyclical industries? When the prices of companies in the industry are low, relative to the historical record, and P/E ratios are high.

  ➢ The rationale is that earnings are severely depressed in a recession and therefore the P/E is high, and this may occur shortly before earnings turn around.

  ➢ Autos, ACs, refrigerators and iPods, for example, may be avidly sought when times are good, but such purchases may be postponed during a recession, because consumers can often go by using the old units.

Business Cycle Analysis

❑**Counter-cyclical industries** also exist, actually going opposite to the prevailing economic trend e.g. oil/energy industry – when oil price goes up, *SRAS* shifts to the left – stagflation occurs – economy enters recession. So, in this case energy price and the economy are moving in opposite directions.

Business Cycle Analysis

❑ Interest-sensitive industries

- Particularly sensitive to expectations about changes in interest rates

❑ Careful analysis of business cycle and likely movements in interest rates help make better buy/sell decisions

❑ Industry knowledge is valuable in selecting or avoiding industries

Chapter 15

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Company Analysis

Company Analysis

❑ Balance Sheet Method – Book Value Method, Liquidation Value Method

❑ Dividend Discount Model

❑ *P/E* Ratio Model

Du Pont Analysis

❏ Share prices depend partly on ROE

❏ Management can influence ROE

❏ Decomposing ROE into its components allows analysts to identify adverse impacts on ROE and to predict future trends

❏ Highlights expense control, asset utilization, and debt utilization

Du Pont Analysis

❑ The **EBIT/Sales** ratio is a measure of the firm's ability to operate efficiently. The larger the EBIT per dollar of sales, the better in terms of operational efficiency.

❑ EBIT/sales = Pretax, pre-interest profit margin

Du Pont Analysis

❑ **Asset turnover** is a measure of efficiency. Given some amount of total assets, how much in sales can be generated? The more sales per dollar of assets, where each dollar of assets has to be financed with a source of funds baring a cost, the better it is for a firm. The firm may have some assets that are unproductive, thereby adversely affecting efficiency

❑ Sales/Total assets = Asset turnover

Du Pont Analysis

❑Next we consider the impact of interest charges. The **interest burden** can be calculated as the ratio of pretax income to EBIT:

Interest burden = Pretax income/EBIT

Du Pont Analysis

❑ Effect of tax is also important.

❑ **Tax burden** = Net Income/Pretax income

❑ Finally, the effects of **leverage** must be considered. Firms can finance with either debt or equity. Debt, though a cheaper source of financing, is a riskier method, because of the fixed interest payments that must be systematically repaid on time to avoid bankruptcy.

❑ Financial leverage: Total Assets/Equity

❑ Leverage can magnify the returns to the stockholders or diminish them – depending on how judiciously it is used.

Du Pont Analysis

☐ ROE depends on the product of:

1) Profit margin on sales: EBIT/Sales

2) Total asset turnover: Sales/Total Assets

3) Interest burden: Pre-tax Income/EBIT

4) Tax burden: Net Income/Pre-tax Income

5) Financial leverage: Total Assets/Equity

- ROE = EBIT efficiency × Asset turnover × Interest burden × Tax burden × leverage