SECURITY VALUATION

Objective

This chapter covers methods of valuation of a company which are necessary before deciding whether to invest in these companies. Further, stages of business cycles and cash flow basics have been discussed.

Security valuation

- Top Down Approach: Macro to Company

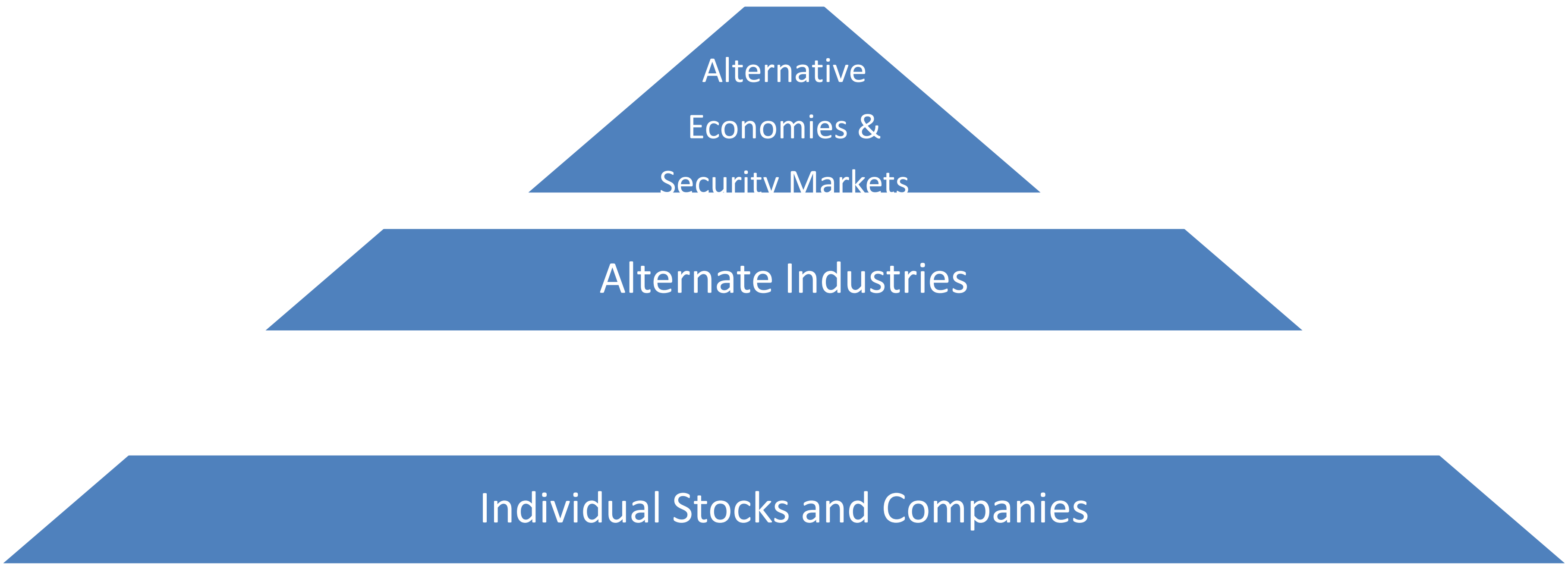
Alternative Economies and Security Markets

Alternate Industries

Individual Stocks & Companies

Security valuation

- Bottom Up Approach: Company to Macro



Industry Analysis

- Structural Economic and alternate Industries
  - Demographic
  - Lifestyles
  - Technology
  - Politics and regulation

- All these factors for a specific sector or industry will be useful in analyzing whether investment can be made in stocks belonging to that sector

Industry Analysis: Risk

These are the risk factors that may cause a change in the valuation of a company or sector. Changes in any of these following may create an adverse impact on the investments made in these firms:

- Market Competition
- Value chain Competition
- Rivalry Intensity
- Substitutes
- Buyer Power
- Supplier Power
- New Entrant
- Government Participation
- Risks and Covariance

Company Analysis

- Types of Stocks
  - **Growth Companies and Stock:** do not pay dividend; Invest the income again in business, can give great returns
  - **Defensive company and stock:** sectors like pharmaceutical and FMCG have low risk and prices do not fall sharply in overall falling markets. They are considered as defensive investments
    - Low or negative systematic risk
  - **Cyclic Companies and stock:** seasonal or cyclical growth in stocks.

    Ex – festival season for paint stocks
- Analysis
  - **Company sales forecast**
  - **Company profit margin**
  - **Company Pro forma analysis**

Equity: Concepts and Techniques

Following points are considered by international investors when investing in foreign countries (Global Industry Analysis)

- Anticipate real growth
- Monetary policy
- Fiscal policy
- Wage and employee rigidities
- Competitiveness
- Social and political situations and
- Investment climate
- Business Cycle
- Long-term sustainable growth

Stages of business cycle

- Complex control system with many causes and interacting private and government decision
- Stages
  - Recovery
  - Early upswing
  - Late upswing
  - Economy Slows
  - Recession
- Synchronization
- Growth Theory
- Limitations
  - Company bigger than country
  - Company operating in multiple countries
  - Company operating in one country's small part

Return on Investment

- Stream of Expected Returns (Cash Flows)
  - Certain investments give returns on a regular basis. (also called cash flows from the investments)
  - Form of Returns
    - Earnings, cash flow, dividends, interest rate etc.
- Required rate of return
  - Uncertainty in the investment will cause investors to demand a higher rate of return. More the risk in an investment, more is the required rate of return

Time Value of Money

- Interest Rate(r): Rate of return that reflects the relationship between differently dated cash flow
- Opportunity cost: Value the investor forgo by choosing a particular course of action
- R= Real risk-free interest rate + Inflation Premium + Default risk premium +Liquidity Premium + Maturity Premium
- Nominal risk free interest rate = Real risk-free interest rate + Inflation Premium   exp: T-bill

Time Value of Money

- Real risk-free interest rate: Interest rate for completely risk free security
- Inflation Premium: average inflation rate *expected* over the life time of investment
- Liquidity Premium: compensates loss of value, if instrument need to be converted to cash quickly
- Maturity Premium: compensates investor for increased sensitivity of market value of instrument to a change in market parameters as maturity is extended

Cash Flow analysis

- **Pro Forma Analysis for n years**

  Pro forma statements, are used for a process of presenting financial projections in a standardized format for a specific time period. Businesses use pro forma statements for decision-making in planning & control, and for external reporting to owners, investors, and creditors. Example: Pro forma Balance Sheet, Pro forma Income Statement, Pro Forma Cash Flow statements

- **Calculate Terminal growth rate**

  The terminal growth rate is an approximation that reflects the current growth potential of the company's cash flows. The company's growth rate will fluctuate with economic and industry cycles with the terminal growth rate representing an average growth rate

Cash Flow analysis

- **Calculate Cash Flow**

  The cash flow statement organizes and reports the cash generated and used in the Operations, Investment & Financing Activities

- **Calculate WACC**

  Weighted Average Cost of Capital is simply the weighted average expected cost for the company's obligations of raising capital - debt, preferred stock, and equity - that are issued by the corporation to finance its operations and investments

- **Calculate Value=DCF**
- **Calculate share value= Value/outstanding shares**

DCF(discounted cash flows)

- Net Present Value (NPV)
  - Value of future after tax cash flow discounted to get value at present
  - Exp.

$$NPV = \sum_{i=0}^{n} \frac{CF_t}{(1+r)^t}$$

Year	Cash Flow (Rs Mn)	Discount Rate (10%)	Discounted cash flow (Rs Mn)
0	-100	1.00	-100.00
1	16	0.91	14.55
2	18	0.83	14.88
3	26	0.75	19.53
4	32	0.68	21.86
5	36	0.62	22.35
6	40	0.56	22.58
		NPV	15.74

Estimation of Inputs

- Required rate of return (k)
  - Economy Risk Free return
  - Rate of Inflation
  - Risk Premium
- Expected Growth Rate
  - Estimating growth from fundamental
  - Estimating growth based on History
- Breakdown of ROE
  - ROE= Profit Margin X Total Asset Turnover X Financial Leverage
- Estimating Dividend Growth for foreign Stocks
  - Retention Rate
  - Net Profit Margin
  - Total Asset Turnover
  - Total Asset/ Equity Ratio

Sum of Parts Valuation Method

- Valuing a company by determining what its divisions would be worth if it was broken up and spun off or acquired by another company
- In most cases, larger companies have
  - Ability to take advantage of synergies
  - Economies of scale, unavailable to smaller companies
  - Enabling them to maximize a division's profitability and unlock unrealized value