Equity Investments-I
A Note on Asset Valuation

- Graham and Dodd postulated that investing and speculation were at the opposite end of the spectrum.
- Investing meant investing in securities at bargain prices or at a significant discount to their intrinsic values.
- Benjamin Graham was also instrumental in propagating the idea of professional ratings for analysts.
- The classic work “Security Analysis” written by Graham and Dodd stressed on the importance of investing on the concept of “intrinsic value.”
- The work was also used as a standard text by the first batch of candidates appearing for the CFA exam.
What defines value

- Valuation is an estimate of an asset’s future value. Some essential concepts of value include
  - Intrinsic value
  - Going-concern value
  - Liquidation value
  - Fair value
Intrinsic Value

- Intrinsic Value is an estimate by an analyst of the true worth of the security or an asset. It combines an estimate of the future expected returns from the asset with an appropriate valuation model to arrive at the worth of the security.
- The market price might significantly diverge from the intrinsic worth of the security. So the analyst looks for a market or corporate event which will be a catalyst for the divergence to disappear.
- The analyst is searching for abnormal returns or alpha which justifies his or her effort in analyzing the security.
- This is known as the *rational efficient market formulation* which recognizes that a rational investor will not incur the expense to analyze a security unless he is expected to get a higher reward for his efforts.
Estimates of value

• Going-concern value
  – All our valuation efforts as an analyst will focus on companies that are expected to continue operating in the future.
  – The company will continue its business activities and will always use its assets in an economically optimal way to obtain profits.

• Liquidation Value
  – Here we assume that the company is expected to wind-up its operations and liquidate its assets in the near future.
  – Concepts like orderly liquidation in which the non-perishable inventory can be sold during a longer period of time are also introduced.
Estimates of value

- **Fair Market Value**
  - The price at which an asset or a liability will change hands between a buyer and a seller when both the parties are mutually willing parties with no force involved in the deal is known as the fair market value.
  - This is often used in valuation related to assessing taxes.
  - A related concept is used in financial reporting for the purpose of impairment testing.

- **Investment Value**
  - This concept includes the potential synergies based on the investor’s requirements and expectations
Two Types of Alpha
- Ex ante Alpha
  = expected return - required return
- Ex post Alpha
  = historical holding period – historical return on similar assets

Following is the analysis report for Yes Bank Stock based on CAPM
Yes Bank: Expected Return: 15%, Actual Return: 16%, Beta = 2, risk premium: 3%, Rf = 6%
Dena Bank Share with Beta = 2, historical returns 15 %
HDFC Bank Share with Beta = 1.02, historical returns 11 %
ICICI Bank Share with Beta = 3.02, historical returns 19 %

- Calculate ex ante Alpha?
- Calculate ex post Alpha?
Calculating Alpha (Soln.)

- Ex ante Alpha
  - Expected return - required return
  - Required return = $R_f + B(R_m - R_f) = 12%$
    - $15 - 12 = 3%$

- Ex post Alpha
  - Historical holding period – historical return on similar assets
    - Dena Bank is similar asset
    - $16 - 15 = 1%$
Steps in Equity valuation

• Valuation involves five steps
  – Understanding the business
  – Forecasting the company performance
  – Selecting the appropriate valuation models
  – Converting forecasts to a valuation
  – Applying the valuation conclusions

• Understanding a business involves analysis of industry structure, the company’s business opportunities and challenges.

• The analysis of the business gives us an idea about the prospects of the industry in terms of profitability, underlying economic and technical characteristics, the demand-supply gap and other fundamental characteristics that drive the industry.
Understanding a business

- Industry structure can be analyzed through the use of Porter’s five forces
  - Intra-industry rivalry
  - New entrants
  - Substitutes
  - Supplier Power
  - Buyer Power

- A company can gain a relative advantage through the use of three generic corporate strategies
  - Cost leadership
  - Differentiation
  - Focus
Forecasting company performance

- Analyzing the company’s financial statement is a rich source of information for forecasting future company performance.
- Other sources of information are
  - Regulator mandated disclosures
  - Regulatory filings
  - Company press releases
  - Investor relations material
  - Analyst calls
- The term quality of earnings analysis broadly includes the scrutiny of all financial statements to evaluate the sustainability of a company’s performance and how accurately it reflects the economic reality.
Quality of Earnings Indicators: Revenues and Gains

• Accelerated revenue recognition is often used to hide a declining performance
  – Bill-and-hold policy for sales recognition.
  – Recording of sales prior to shipment or recording sales of software prior to installation at the customers location.
• Classification of non-operating income as part of operations
  – Non-recurring revenue may not come from day-to-day business activities
Quality of Earnings Indicators: Expenses and losses

• Recognizing too much or too little reserves
  – Restructuring reserves
  – Loan-loss or bad-debt reserves
  – Valuation allowances against DTA

• Deferral of expenses by capitalizing it as an asset

• Aggressive estimates and assumptions
  – Asset impairment
  – Long depreciable lives
  – Long periods of amortizations
  – High assumed discount rates
  – Low assumed rate of compensation growth for pension liabilities
  – High expected RoA
Quality of Earnings Indicators: Other issues

- Balance sheet issues
  - Use of off-balance sheet financing, such as leasing assets or securitizing receivables
- Operating cash flows
  - OCF is artificially inflated through an increase in bank overdrafts
Absolute Valuation Models

• Present Value Models
  – Dividend Discount models
  – Free Cash Flow To Equity models
  – Free Cash Flow to Firm models
  – Residual Income models

• Asset-based Value Models
Relative Valuation Models

- Relative valuation models are typically implemented using
  - Price multiples
    Ratio of stock prices to fundamental values such as cash flows or earnings
  - Enterprise multiples
    Ratios of total value of a common stock and debt net of cash and short-term investments to company’s operating assets
Issues in model selection

- Selection of a model should be consistent with the characteristics of the company.
- The model should be selected based on the following criteria
  - Consistency with the characteristics of the company
  - Appropriateness wrt. the given availability and quality of data
  - Consistency with the purpose of valuation
Contents of a research report

A research report should contain the following information. It should

- Contain timely information
- Is written in clear; incisive language
- Is objective and well researched
- Distinguishes between facts and opinion
- Contains analysis, forecasts, valuation, and a recommendation that are internally consistent
- Presents sufficient information to allow a reader to critique the valuation
- States the key risk factors involved in an investment in the company
- Discloses any key potential conflicts of interests
Format of a research report

- Table of Contents
- Summary and Investment conclusion
- Business Summary
- Risks
- Valuation
- Historical and pro forma tables
Case Study#1

• Rayon Pharma’s stock fell drastically after the FDA declined to approve further testing of its new drug. The new drug was supposed to provide relief to patients suffering from renal disorders. Market sentiments were very weak and the stock fell drastically from $35 to $20. The market price of $35 was based on forecasted earnings after the drug would be introduced into the market. Discuss the markets reaction to the event.

• Solution#
  – The price of $35 is based on the company’s estimated earnings through the sale of the new drug.
  – The company does not have any other drug in the pipeline.
  – As such the stock price is based on sentiments and the assumption that the drug would be successful and the company will be able to meet its earning estimates.
  – The loss in earnings due to the FDA ruling reduces the market price by $15.

• If the price recovered after Rayon Pharma released a press release that they were contesting the FDA ruling with some new data that was omitted when the original application was made. What is its implications.

• Solution#
  – The price of the stock is driven by sentiments in the market. The market price may significantly diverge from its intrinsic value and the stock might be placed on a downgrade watch.
Case Study#2

• Lukas Haas has recently joined Alpha Securities as an analyst. He decides to use the dividend discount model to value Alpha Chemicals, a company that produces industrial paints. Baar Chemicals has shown steady growth for the past five years. The company has also maintained a steady dividend of $5 for the last 20 quarters. Stephen Miles is another analyst with Alpha securities he performs a relative valuation of Baar chemicals and based on its intrinsic value he concludes that the stock is undervalued. Discuss the approach adopted by Lukas in evaluating Baar chemicals. Also discuss whether Stephen Miles is correct in his evaluation.

• Solution#
  – The DDM is used when the target company follows a steady dividend policy.
  – In the above example the company is showing steady growth for the past five years however the dividends do not show any relation to the company’s earnings.
  – The DDM would not be appropriate in this case.

• Solution#
  – Since Stephen is conducting a relative valuation he should value the company on the basis of a price multiple or enterprise value multiple.
  – However he compares the intrinsic value of the stock to arrive at the conclusion that it is undervalued.
  – The intrinsic value is generally used in absolute valuation methods.
Case Study#3

• Following is the analysis report for three Indian companies based on CAPM

1. Reliance : E: 15, A: 16, RR:12, SAR:15
2. HDFC : E:7, A:14, RR:8, SAR:10
3. IDBI : E:11, A:10, RR:9, SAR:12

• Where all no.s are in % and
  E: Expected return
  A: Actual Return
  RR: Required Return
  SAR: Similar Asset Return
Case Study #1

• #1 Calculate ex ante Alpha
  – Which stock would you prefer?

• #2 Calculate ex post Alpha
  – Which stock performed worst?

• #3 What can we say about a fund with 0 alpha?
  – With 1.0 Alpha?
  – With -1.0 Alpha?
Case Study: Solutions

• Sol #1  3, -1, 2

• Sol #2  1,4,-2

• Sol #3  A positive alpha of 1.0 means the fund has outperformed its benchmark index by 1%. Correspondingly, a similar negative alpha would indicate an underperformance of 1%.