**Assignment – Vallum**

**- By Prasoon Singh**

**1. What is equity investing, and how would you define it?**

- Equity investment is all about buying shares of companies to gain partial ownership, aiming for returns through capital gains and dividends. Investors buy shares on stock markets or through private equity.

**2. Can you explain the GARP style of investing?**

- GARP stands for Growth at a Reasonable Price. This investing combines growth and value strategies. Investors seek companies with strong growth prospects that are not overpriced, using metrics like earning per share (EPS) growth and the price/earning-to-growth (PEG) ratio. This approach balance to potential high returns and moderate risks by avoiding overvalued stocks and focusing on quality companies with strong fundamentals.

**3. When analysing companies listed on BSE & NSE, how do you differentiate between GARP style opportunities, growth-only, and value-only companies?**

- To differentiate between GARP, growth-only, and value-only companies on the BSE and NSE we can use several metrics like for:

1. GARP style

Price-to-earning (P/E) ration should be moderate. Also, price/earnings-to-growth (PEG) ratio is a key metric which indicates stock is fairly priced relative to its growth. Having strong fundamentals, consistent growth around 10 to 20 % annually and balanced growth is necessary.

1. Growth-only companies

These companies have high growth rates, often exceeding 20-30% annually and P/E ratio is typically high. These companies provide very low dividends and sometimes don’t. They focus on aggressive expansion and future potential.

1. Value-only companies

These companies typically have low P/E ratios, indicating they are undervalued relative to their earnings but they pay higher dividends and their growth is moderate or even low sometimes.

**4. How comfortable are you with Python? Please provide details about your knowledge and practical application level.**

- During my Data analytics journey, I learned python and did much of coding assignments which includes variables, conditional statements, loops, nested loops, list and tuples, string and functions, sets and dictionaries, etc. which gives me hands on experience in coding. Python is a perfect language for data analytics because there are several libraries are available for data manipulation and extraction like pandas, numpy, “matplotlib and seaborn” for visualisation, “selenium, beautifulsoup” for web scrapping, etc.

Also, I have done 2 projects on web scrapping using selenium where I extracted data from instahyre website and IPL website and stored them in csv file.

**5. Using Python, how would you determine if a company listed on BSE & NSE follows the GARP style, considering the available data for approximately 6000 companies?**

- We can determine if the company is listed in BSE or NSE follows GARP style or not by the steps given below:

1. Gathering and cleaning of data. Collect the necessary financial data for the companies which includes Net incomes, shares outstanding, stock prices, historical EPS (Earnings per share). After gathering, cleaning of data and removing outliers is very necessary to perform further calculations.
2. Calculation of Key metrics like:
   * EPS (Earnings per share) = Net income/ Shares outstanding
   * Price-to-Earnings (P/E) Ratio = Stock Price / EPS
   * EPS Growth Rate = ((Current Year EPS−Last Year EPS)/ Last Year EPS) X100
   * PEG (Price/Earnings to Growth) Ratio = (P/E ratio)/ EPS growth rate
3. Now we can apply GARP criteria to the calculated metrics.
   * P/E Ratio should be moderate, let’s say between 5 to 25.
   * EPS growth rate should typically between 10% to 20% annually.
   * PEG ratio should be around 1 or less.
4. Now the last step is to filter and identify the GARP companies. We can do this by filtering the companies that meet the P/E ratio and EPS growth criteria. After calculating PEG ratio, companies with a PEG ratio of 1 or less are considered to follow the GARP style.

By following these criteria, we can conclude that the company follows GARP style or not.

**6. Based on your knowledge, what insights can you derive and showcase about the following stocks: SBIN, Adani Enterprises, HUL, Tata Steels, Moil?**

- State Bank of India (SBIN)

* Largest public sector bank in India with a broad range of services.
* Strong financial performance with improving asset quality and digital initiatives.
* Performance is closely tied to the Indian economy.

Adani Enterprises

* Diversified conglomerate involved in coal mining, renewables, and airport operations.
* Growth driven by renewable energy projects and strategic acquisitions.
* Faces regulatory and environmental risks.

Hindustan Unilever Limited (HUL)

* Leading FMCG company with strong, trusted brands.
* Extensive distribution network and focus on sustainability.
* Consistent revenue growth from volume and premiumization.

Tata Steel

* One of the largest steel producers globally.
* Vertically integrated operations enhance efficiency.
* Growth linked to infrastructure demand and efforts to reduce debt.

MOIL Limited

* Top manganese ore producer in India, key for steel production.
* Performance dependent on the steel industry's demand.
* Benefits from market leadership and expansion plans.

**7. Are you familiar with web scraping techniques?**

- Yes, I’m familiar with web scrapping technique. I have done assignments on web scrapping as well as done 2 projects on web scrapping. I used selenium to scrap data from Instahyre website and IPL website to scrap data and used pandas to save it in csv file.

**8. If tasked with extracting the number of NRIs across PMSs from SEBI's monthly reports for June '23, Sep '23, Dec '23, and Mar '24, how would you approach this task in terms of process, time, output file, and data accuracy?**

**-** To extract the number of Non-Resident Indians (NRIs) across Portfolio Management Services (PMS) from SEBI's monthly reports, we can follow these steps:

* **Process**

1. Access reports from SEBI’s website for the specified months.

2. Extract the required data from each report.

3. Organize and clean the data.

* **Time**

1. Downloading: 10-15 minutes.
2. Extraction: 20-30 minutes per report manually; 10-15 minutes with tools.
3. Compilation: 15-20 minutes.

* **Output file**

1. Save the file in csv format.
2. Columns contains report date, number of NRIs, etc.

* **Data Accuracy**

1. Cross-check extracted data with original reports.
2. Ensure there is no null values and uniformity across entries.

**9. What configuration of devices do you believe is necessary to perform these tasks on a daily basis?"**

**-** To perform these tasks on daily basis, we will need:

1. **Computer/Laptop**:
   * **Processor**: Intel Core i5 / AMD Ryzen 5 or higher
   * **RAM**: 8GB+
   * **Storage**: 256GB or higher SSD storage
2. **Software**
   * Python with relevant libraries, a code editor (VS Code recommended)
   * Browsers like Chrome or Edge
   * High speed internet
   * Tools for visualisation like POWER BI, Tableau, Jupyter Notebook, etc.
3. **Additional tools**
   * Access to financial databases, APIs and scrapping tools.
   * Access to Microsoft office and Adobe acrobat pro.
   * Dual Monitor would be easier to compare data.
   * External hard drive or cloud storage for backup.