K.J. Somaiya Institute of Management Studies & Research

Course: PGDM Finance Tri IV

Security Analysis & Portfolio Management

Date of Exam: 24/09/2018   **Time: 3 Hours**

Marks: 50

Please Note:

1. **Section A is compulsory. It carries 20 marks.**

2. **Each question in Section B carries 15 marks. Attempt any two.**

3. <u>**The exam is Excel-based. Explanations and conclusions should be written in text box in the final solution worksheet.**</u>

4. <u>**All solutions should be saved in a single file across worksheets. Solutions in multiple files will not be evaluated.**</u>

SECTION A

Q1. **Optimal risky portfolio: Which portfolio to recommend?**

Appreciate Securities Ltd. is an upcoming portfolio management firm. In line with the product offerings of some established portfolio management firms, ASL's management has also decided to offer a standard portfolio product to its PMS clients. The young analysts at ASL have come up with two six-security portfolios. You have to evaluate their choice in terms of optimal risky portfolios and suggest which one is better? Use data given in file **'SAPMPGF2018EXAMDATASET'** for the purpose. Also explain conceptually how ASL will identify the optimal portfolio for each of its clients from the efficient set created by its analysts using mean variance optimization (MPT). Risk-free rate = 7.9 per cent.

Portfolio 1:

1.   GUJARAT ALKALI

2. SBI

3. M&M

4. ASIAN PAINTS

5. RIL

6. TCS

Portfolio 2:

1. HUL

2. MARUTI

3. ULTRATECH

4. DABUR

5. BAJAJFIN

6. GAIL

SECTION B

Q2. Consider a world where there are only two risky securities, A and B. The risk-return profile of these two stocks is as given in file **'SAPMPGF2018EXAMDATASET'.** Investors are interested in evaluating various portfolios (as given in the datafile) comprising these two securities in terms of their valuation. Use the data set to plot SML and graphically highlight the given portfolios in terms of their over or undervaluation.

Q3. Fill in the information in the template given in **'SAPMPGF2018EXAMDATASET'** and write a note on the role of beta in stock market.

Q4. Trace efficient frontier and Capital Market Line using the data set given in **'SAPMPGF2018EXAMDATASET'.** What is the utility of the two to the mean variance optimizers?

Q5. **Case**: **PE MULTIPLE**

The Indian auto industry became the 4th largest in the world with sales increasing 9.5 per cent year-on-year to 4.02 million units (excluding two wheelers) in 2017. It was the 7th largest

manufacturer of commercial vehicles in 2017. India is also a prominent auto exporter and has strong export growth expectations for the near future. Overall automobile exports from India grew at 6.86 per cent CAGR between FY13-18. In addition, several initiatives by the Government of India and the major automobile players in the Indian market are expected to make India a leader four wheeler market in the world by 2020. Overall domestic automobiles sales increased at 7.01 per cent CAGR between FY13-18 with 24.97 million vehicles getting sold in FY18.

The auto industry is set to witness major changes in the form of electric vehicles (EVs), shared mobility, Bharat Stage-VI emission and safety norms. Electric cars in India are expected to get new green number plates and may also get free parking for three years along with toll waivers.

In order to keep up with the growing demand, several auto makers have started investing heavily in various segments of the industry during the last few months. The industry has attracted Foreign Direct Investment (FDI) worth US\$ 18.413 billion during the period April 2000 to December 2017, according to data released by Department of Industrial Policy and Promotion (DIPP).

With all the positives being discussed about the auto sector, one of the key firm in the sector, Maruti Suzuki India seems to be in a spot of trouble. Its market capitalization has eroded and its first-quarter (2018-19) profit missed estimates as raw material costs weigh. Is future bleak for the stock? Use the data given in **'SAPMPGF2018EXAMDATASET'** to calculate Maruti's PE multiple and its value anchor, based on forecast for 2019.

Assumptions for forecasting:

1. Use % of sales method for forecasting, using simple averages.
2. Growth rate of Revenue From Operations [Gross] = 20%
3. Tax rate = 28%

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