**1.Large sample statistical analysis**

The analysis is intended to compare the performance of valuation models on a large sample of firms, which will be provided to students. The following steps represent core non-negotiable elements that must contain to fulfil the requirements. However, students wishing to conduct additional analyses within the context of the structure described below are encouraged to do so (while remaining within the overall word limit for the dissertation). As noted, in this case, no individual and additional supports will be provided for their additional analyses throughout the taught and surgery sessions.

Please note: the following steps provide a structure for your analysis.

Step 1

Compute value estimates for a large sample of firm-years using three flows-based models (i.e., DDM, DCF, and RIVM);

Compute value estimates for a large sample of firm-years using a multiples model.

You can choose any value driver for your multiples model, e.g., forward earnings measure in Liu et al. (2002).

Required

Draw conclusions about whether the reliability of accounting-based flows models and multiples models differ by comparing their absolute and relative pricing performance.

1.Briefly explain the implementation issues;

Use 6 per cent of market risk premium, 4 per cent of growth rate and two years of forecast period suggested in Francis et al. (2000).

Adopt the equity perspective for the DCF forecast.

2.Tabulate descriptive statistics (number of observations, mean, standard deviation, minimum, 1st quartile, median, 3rd quartile, maximum of main variables) for each absolute and relative model performance measure;

3.Test the equality of means and medians of valuation errors using the single sample t-test (mean), Wilcoxon signed-rank test (median), and OLS regression. This means that you should use three metrics of bias, accuracy, and explainability;

4.Conduct sensitivity tests by altering market risk premium, growth rate (e.g., 0 per cent or 4 per cent), and forecast period.

Step 2:

Construct subsamples of High/Low R&D firms using the definition suggested by Francis et al. (2000)

Ranking your sample firms based on the ratio of Compustat R&D spending to total assets

Consider the top 25 per cent of firms as the High R&D subsample

Consider firms with no or immaterial amounts of R&D expenditures as the Low R&D subsample

Required:

1.Compare the accuracy of value estimates using subsamples of High R&D and Low R&D firms;

2.Comment on whether the reliability of value estimates is affected by the level of R&D expenses (i.e., potential distortions in the book value of equity).

**2.Case study**

The analysis is intended to complement and extend insights provided by the large sample analysis by conducting a case study of a firm analysed in Part 1.

The following steps represent core non-negotiable elements that must contain to fulfil the requirements.

Step 3:

Select A company analysed in Part 1 that you believe to be appropriate to support your conclusion in Part 1, and summarise only briefly the business, industry, and financial status of the company as of the most recent fiscal years (e.g., three to five years; note that there is no pre-determined format for this preliminary analysis).

You can select any firm from any industry; Francis et al. (2000) argue that industry membership does not affect the performance of valuation models. However, given that value estimates are more likely to be reliable for stable firms, it is suggested to select a firm with sufficient firm years from a stable industry (e.g., manufacturing).

Relevant data can be acquired from annual reports and/or Thomson EIKON.

Step 4:

Analyse an analyst report(s) and comment on the valuation models and assumptions employed by analysts.

Note that your findings in Part 1 address which valuation model analysts seem to use to value equity securities. In this case study, you should investigate whether the practice of analysts is consistent with your findings in Part 1, e.g., whether RIVM (DDM, DCF, multiples) is indeed preferred by analysts in practice and, if not, how analysts mitigate any concerns regarding alternative models (e.g., you may investigate the assumptions adopted by analysts such as growth rate, forecast period, and discount rate). To this end, where appropriate, relate the analyses presented in Part 2 to those in Part 1.

Note, however, that a case study cannot be generalised; Nonetheless, the goal of this case study is to shed light on the actual valuation process employed by analysts.

Students can analyse either only one analyst report or multiple reports of different analysts. Selecting only one report will not be penalised.

Analyst reports can be downloaded from Thomson EIKON.

Required

Support your findings in Part 1 by analysing how analysts value the intrinsic value of firms in terms of the choice of valuation models and assumptions (e.g., growth rate and discount rate). (Note that you are NOT required to conduct any quantitative analysis in this case study).