Chapter 6: Interpretation and Recommendation

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6.1 Interpretation:

Based on the objective of the study to examine the impact of corporate risk on the value of the company, at the outset, the variables have been considered based on previous literature. The financial risk, operating risk and also total risk has been considered as a proxy of risk assessment. We further added the debt-equity ratio also as an independent variable based on literature. However, the suitability of the data series has been tested through descriptive analysis and different econometric tests. Based on Principal Component Analysis (PCA), financial risk (as demonstrated by EBIT/EBT) is the most important independent variable. However, operating risk and the debt-equity ratio has also been considered. The analysis through the variation inflation factor (VIF) of the three factors suggests that there is a multicollinearity problem among independent variables. It is certainly a matter of investigation of why financial risk and debt-equity ratio, both of which indicate long-term solvency position, do not highly correlate them.

In the descriptive analysis, the correlation matrix was conducted involving dependent and independent variables. It is observed that Economic value added (EVEBIDTA) has a relationship with PE ratio, cash PE ratio. Further, it is also observed that financial risk (FR), operating risk (OR) and also debt-equity ratio (DER) have a statistically significant correlation with four independent variables namely PE ratio, cash PE ratio, M-cap to sales ratio and relative economic value added (EVEBIDTA).

Three types of linear regression have been employed (i) Pool Regression Model (ii) Panel LS regression model (iii) Vector error correction model.

According to nonlinear regression, it is observed that financial risk and the debt-equity ratio has a significant negative impact on cash PE ratio or value multiples which is similar to the work of Opler and Titman (1994), McConnell *et al*. (1995), Fama and French (1998), Mollik (2008). So, if a company adopts a policy of reducing its debt, its debt-equity ratio would also reduce accordingly. Further, the lower level of debt would ensure less interest cost as a result of that financial risk (EBIT/EBT) would be reduced. Consequently, the value of the firm would increase due to the higher level of cash PE ratio. In a word, lower debt in the capital structure would ensure a higher value of the firm through higher cash PE multiple. However, according to Vector Autoregressive Correction Model (VECM), there is no short-run or long-run causality between risk variables as considered in the study and PE ratio. However, the price to book value (PBV) has short and long-run causality with risk variables. There is a short-run causality found between operating risks (OR) to PCEPS. When the fixed expenses are committed, operating risk emerges.

If a company borrows and invests in the fixed facility of the organization then through an increase in financial risk, PE & Cash PE multiple declines but operating risk affects the relative economic value added (EVEBIDTA) positively. So, to assesses the net effect on value by two opposite forces further research is required to be conducted. However, an increase in financial leverage and operating leverage both would lead to an increase in total risk significantly. From this viewpoint, it is always suggested that investment of fixed facility (infrastructure) should be financed by equity capital.

The considered data set was suffering from the problem of cross-section heteroskedasticity. For the purpose Panel, Estimated Generalized Least Square (EGLS) is a more suitable regression equation. It is observed from the regression results that the debt-equity ratio was negatively correlated with four valuation variables (PE, Cash PE, EVEBDITA and M-Cap to Sales). However, debt-equity is positively correlated with the Price to Book value ratio. Depending upon the yearly performances, the earning (for PE), cash earning (for CPE), economic value added (for EVEBDITA) and sales (M-cap to Sales) of the company all the data are generated in that particular year. On the other hand, the book value of the company is accumulated figure (past data are accumulated and also influenced by yearly performance) and more long term data in that sense. This phenomenon indicates that debt-equity has a positive impact on a long term basis but harms a short term basis. A company may require to assume debt to meet its financial requirements for the long term point of view. However, it is suggested that a company should not make a habit of borrowing consistently.

Further, according to the panel EGLS model, financial risk affects PE ratio positively. The operating risk negatively affects PE ratio and PBV ratio and positively affects EVEBIDTA. It is further confirmed that financial risk affects the PE ratio positively. Thus it is observed that there is consistency in results. However, the panel EGLS model is more suited to the data set as evidenced by R-squared. It is also important to note that the nature of the industry affects the valuation of the company. For the purpose, dummy variables were assigned for the nature of the industry to eliminate the effect of industry on valuation while regressing risk variables on valuation ratios.

There was enough indication that data series considered are not linear. To ensure it, the data series of risk variables has been prepared with risk variables classified and divided into different levels. The purpose is to examine whether all the levels of risk variable has a similar impact on the value of the firm or not. With this experiment, it is observed that at the outset debt-equity ratio influences valuation ratios positively. However, the debt-equity ratio influences the valuation ratio negatively. It is particularly observed that from the debt-equity level of 1.5 onwards, valuation gets negatively affected. The operating risk positively affects all the valuation ratios. The financial risk affects PE ratio, cash PE ratio and Price to Book value positively but at the same time affects economic value-added and M-Cap to sales negatively.

Finally, the polynomial curve has been considered to examine the relationship between risk variables and valuation ratios. It is observed that in the non-linear model PE ratio and Cash PE ratio both are influenced by a small level (below 1.5)of the debt-equity ratio negatively. On the contrary, the debt-equity ratio at the lower level affects M-Cap to sales positively, then negatively at a higher level. The economic value added is positively influenced by operating risk. Operating risk is also affected by PER positively. In the non-linear regression equation, financial risk affects PE ratio and cash PE ratio positively at first and then negatively.

The above results seemed contradictory. So, to arrive at some common interpretation, all valuation ratios have been considered at equal weight. Thus, the average coefficient was calculated for all the valuation ratios to understand the nature of the relationship between types of risks and valuation as a whole. It is observed that debt-equity affects value

negatively; it is observed that the debt-equity ratio affects value negatively; higher the DE lower would be the value of the company. The financial risk also affects the value of the company negatively. However, surprisingly OR affects the value of the company positively.

6.2. Recommendation:

6.2.1. Company:

From the above interpretation, we find the debt-equity ratio harms firm value. Therefore in the present context, it is suggested to the firms that before use of debt the project should be properly scrutinized and find out whether the return from the project is higher than the cost of debt. It is also recommended that the project life cycle should be taken care of. The implementation of proper risk management strategy by balancing financial risk and operating risk of the firm is a must. The firm value will be destroyed in the long run due to the mismanagement of the financial risk of the firm. It is observed in the study that the debt-equity ratio should not go beyond 1.5. It is also observed that the debt-equity of 0.25:1 is the most suitable proportion for the company. It is also recommended to use debt funds in real production purposes rather for remittance of day to day expenses. It was found in this work that operating risk-taking may bring higher value to the wealth of shareholders. So if the firm increases its operating activity by increasing fixed assets, its advantage helps to grow firm smoothly. But if they consume the borrowed fund for day to day expenses instead of investing in real investment the firm value will be negatively affected in the long run. It was observed in this work that up to a certain level the relationship between firm value and debt-equity is positive and also increasing and thereafter there is a decreasing trend which ultimately becomes negative. If organizations invest borrowed money in real investment it may increase the operating

risk of the firm but it wills also helps to increase the value of the firm in the long run. In the ever-changing volatile economy, the long-term contracts with fixed interest-bearing instruments may also create problems in the future because no one knows what would be the accurate rate of return in the future from the present project. Thus it is recommended that the fluctuating interest rate of the short term loan fund arrangement will be safer than long term fixed rated loan funds.

6.2.1. Investor and Portfolio Manager:

The investors are the main stakeholder of a company. An investor may be an equity shareholder or maybe a debt holder of a firm. They are the supplier of blood in the company. If investors can not expect the return from the market they will turn back from the market. Generally, the maximum number of investors purchase company security by viewing the return of that firm and the systematic risk of a firm. But in short-run company management can be able to bring a higher return by taking a higher risk in the firm. But that higher risk may destroy investors' fund value completely in the long run. So before investing money internal risk of the company will have to be studied along with the systematic risk. The internal risk of a firm is generated from a fundamental aspect of a firm and that aspect may not always be caught by measurement of the systematic risk of a firm. Investment decision ignoring the internal risk factor of the firm will be not prudent. The portfolio managers would also be able to construct a more efficient portfolio for the long run if the above mention risks are considered.

In the last decade, the companies borrowed heavily from financial institution including commercial banks. The said loan is given based on present financial condition or by viewing the absolute result of a firm or by noting goodwill and balance sheet of the firm.

But risk analysis was not provided due importance. In our work, it is found that there was a clear negative impact of debt-equity and financial risk on the firm value. It implies that some firms using debt funds above their optimum level. It increases firm risk by destroying investor's value. So the bank should be aware of that. Providing loans only viewing an absolute figure of the company may destroy the profitability of banks in the long run and may also put a question mark on the future of the bank. So they should try to incorporate internal risk in their decision-making process before giving a loan.

6.2.1. Government:

The government always plays a key role in any economic development of a country. The country's economic development takes place through economic policies. In our study, we found debt-equity have a negative relation with the firm value. So the government may immediately review the recommended debt-equity ratio to show that the company can add value for its owner. The market efficiency will increase if the government takes adequate policy about company management and reporting practices. If the internal risk is also reported mandatorily in the financial statement of the firm, market efficiency will also improve benefiting each stakeholder of the society. Speculative trading could be reduced by investing in company security. In an efficient market, finance chooses the most efficient path of productivity.

6.3 Limitation:

Limitations of the Study: Some minute limitations always remain during these types of studies. Such as:

- Only company internal risks have been taken for this study.
- Our study is limited for 2001-2002 to 2017-18.

- Due to data heterogeneity and abnormality some company and some years are rejected primarily.
- As my study is on BSE500 Company only and the sample not from other country indexes so the result may be differentiated to some extent if the cross country analysis is done.
- Data have an inflationary effect so if we convert the data with the inflationary effect the result may be different.
- Time value of money if consider the result may be different.
- The structural change was not considered here. If the said thing happened result may change its significance.
- Each and every data of Capitaline were not verified thoroughly with each company website.
- The regression fitted with the independent variables cannot able to estimate dependent variables variability completely due to omitted variables problem.

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