Impact of Risk on Corporate Valuation: A Study of BSE 500 Companies

Abstract

Research works on risk in general focus on portfolio risk considering market risk and credit risk of a firm, and with a little less attention are provided to the operational risk or financial risk of a business organization. These risks are very important for the business organization but the real understanding of risk will be much more complex and far from being well explored and understood if we do not consider the internal risk of a firm. There is a variety of "internal" risks besides systematic risk present in the complex business environment, which seriously threatens the profitability of an organization or which can disrupt or even destroy the business value of the company significantly. A number of research works have already been done for finding out the relationship between return and risk. Such works are mainly done for the evaluation of firm performance on the basis of the return of a business organization. So the researchers mainly wish to find out the determinants of return by which return can easily be estimated beforehand. But in today's dynamic and complex business environment of India, only return is not the ultimate issue for an investor, rather preservation and creation of the investment value of an investor is far more important over return. According to the past empirical work, risk has an impact on the return of a firm. There is a well-known proverb that high-risk, high return and low-risk low return. But whether the same concept is valid in case of the value of a firm? There have a number of different literature on capital structure theory among them in 1958 the renowned MM theory said that capital structure risk or financial leverage has no effect on the value of a firm where the capital market is perfect. Their assumption of an ideal financial environment excludes the

impact of tax, inflation and transaction costs. This theory received criticism that no firm actually operates in an environment without the impact of inflation, tax, and transactional costs. But later Modigliani and Miller (1963) demonstrate that when corporate tax laws allow the deductibility of interest payments, the value of a firm is an increasing function of financial leverage. Besides this important literature, there is much more literature all over the world where the positive and negative impact of financial leverage on the value of a firm was found empirically. As Indian economy is a growing economy (Bhattacharya and Shikthivel, 2004; Kurian, 2000; Bhattacharya and Mitra, 1990; Adabar, 2005) and its capital markets are efficient in weak form (Pandey, 2003; Bhatnagar, 2003; Sharma and Mahendru, 2009) (not perfect capital markets), there is no question of capital market being perfect. So according to capital structure theory leverage, cum risks may have some impact on the value of a firm. Further according to different literature (Khedkar EB, 2015), etc. operational leverage also has some effect on the ROE of the firm which may indirectly affect the value of the firm especially if it is a growth firm. Moreover, the studies conducted previously in India were only on the financial risk factor and value of the firm. Hardly any importance was given on the operational risk or total risk of a firm. Most financial management shows systematic risk (ß) from the perspective of a portfolio or the operating and financial characteristics of the firm. Previously the company-specific risk is totally ignored during any decision making process on the assumption that it is diversifiable. But recently company-specific risk has been playing an important role in the failure of some reputed company. But according to MM theory 1963 if a firm avails tax-shield then debt financing or financial risk may help to increase firm value. As in India interest is tax-deductible expenses it is expected that the firm value would be positively affected by increasing debt financing or in other

words increasing financial risk help to enhance firm value. On the other hand, when the firm increases operating risk, the firms indirectly help to increase the company value. Therefore two factors may be able to affect firm value favourably. So the present study was felt necessary. In this context, this work is an attempt to enlighten how different internal risk factors (operational risk, financial risk) are related to the firm value. This work offers an empirical approach to the relationship of value with internal risks of corporate. To examine the relationship an empirical study was conducted on BSE500 companies from 2001 to 2017 database. The number of statistical techniques such as descriptive analysis, regression analysis, etc. was conducted using the different econometric model and the outcomes of the result were tested to find out the significance of that model. Before implementing different econometrical model such as Pool OLS, Panel OLS, Robust least squared method, linear model, nonlinear model, fixed effect model and random effect model, numbers of statistical test such as unit root test for stationarity of the series, normality test for heterogeneity detection, autocorrelation test, serial correlation test for autocorrelation or serial correlation problem, Pedroni cointegration test, Johansen cointegration test for long run or short-run equilibrium detection, Wald test for finding out equality of two coefficient, Hausman test for applicability of fixed effect model over random effect model, were carried out. All the tests help to develop a better model with efficient estimation of the coefficient. Initially, the value of R^2 in the different models was significant with ambiguous results in coefficient value but after implementing polynomial regression finally, it was found that debt-equity and financial risk have a significant negative effect on the firm value and operating risk has a positive impact on the corporate value.

Keywords: Operating risk, Financial risk, Panel EGELS model, Polynomial model.