DEFAULT RISK LEVEL CHANGES IN CROSS-BORDER MERGERS AND ACQUISITIONS: INDIAN SCENARIO

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Abstract

With cross-border mergers and acquisitions (M&As) data we observe the role institutional, managerial and geographic factors on thedefault risk of acquiring companies after themerger. Using Distance to Default model the study analysing the default risk level of acquiring firm after mergers and acqusitions.The study reveals that M&A plays animportant role in firms default risk. The acquiring firm is getting theadvantage of overvaluation and stock price volatility. Geographic factors and industrial diversification also have a significant effect on post-merger default risk. From the study, it is clear that the corporates can manage their risk through cross-border mergers and acquisitions

Keywords: Cross-Border Mergers and Acquisitions, Acquiring Company, Target Company, Default Risk, Stock Price Volatility

Introduction

Liberalisation policies of governments changed the global financial integration and this integration resulted in rapid growth ofcross-border mergers and acquisition.Cross-border M&As are more complex compared to domestic M&As due to political and economic difference and governance norms. The difference in the country level characteristics of thehost country and thehome country will have an impact on every aspect of the firm. Changes in the accounting procedures and disclosures, corporate governance and business law changes affect the risk level of the firms.

The literature in mergers and acqusitions focus on the reasons for mergers and the how

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the merger affect the acquisition companies. These questions has been answered with the analysis in the value creation after mergers and acqusitions. But the studies are limited in focusing the changes in risk level of acquirers. Some studies provides evidence for the value deduction after mergers including the probability for bankuruptcy also. This paper attempts to examine the relationship of default risk on cross-border M&As. Cross-border M&As are complex transactions, acquirer and institutional level factors will change the risk level of the acquiring company. Firms can increase their value through cross-border M&As by acquiring targets in countries having weaker governing policies (Bris and Cabolis, 2008). Some studies are suggesting that the firm can raise their value by purchasing targets in the same industry (Dos Santos, Errunzaand Miller, 2008).

Traditionally M&A considered as a risk reduction tool for the combined firm (Amihud& Lev, 1981). When acquiring company and target companyhas risky cash outflows the capital restructuring will help in risk reduction and this risk is measured as default risk. The empirical evidence from US banking industry shows that the M&As will reduce the default risk after M&As due to the portfolio expansion (Emmons et.al., 2004). Some studies suggesting that the geographic diversification and activity changes also help to reduce the default risk (Emmons et al., 2004; Hughes et al., 1999). Some studies proving that these transactions have aneutralimpact on risk (Vallascas and Hagendorff2011).

Management actions like changes in leverage, compensation package, and managers share in stock options changes the post-merger risk level (Harford& Li, 2007; Furfine and Rosen, 2011; Morellec& Zhdanov, 2008). Managers can exploit the merger information and this could lead to increase in the risk after themerger (Moeller, Schlingemann, &Stulz, 2007). Overvaluation in stock price and firm's value will lead to more risk (Moeller et al., 2007; Dong, Hirshleifer, Richardson, & Teoh, 2006).
The distance between two countries negatively affects the firm in M&As (Uysal et al. 2008), and the study finds that returns from home transactions are twice than in host transactions. Erel et al. (2012) studied the distance effect in M&As and find that risk in thenearbynation is lesser than therisk in adistantnation.

Limited studies are available which explains the influence of default risk on cross-border M&As. Findings on domestic M&As may not be apt for cross-border M&As due to their characteristics. The study is based on cross-border M&As in Indian firms and tries to test the impact of institutional, managerial and geographical impact on the default risk.

Methodology and data

There are many commercially provided measures providing by the credit rating agencies to measure the default risk. In this study, we rely on the classical Distance to Default (DD) model of Merton (1974). Some extensions are made on this model by Bharath and Shumway (2008) which is considered as superior and suggested by Koerniadi et al. (2015).

According to Merton (1974), the distance to default is calculated as:

$$DD = \frac{\ln\left(\frac{V}{F}\right) + (\mu - 0.5\sigma_v^2)T}{\sigma_v\sqrt{T}}$$

Where V is firm's asset value, F is the face value of firms debt, μ is expected continues compound return on V, σ_v is the volatility of firms value and T is one year.

The probability of default is:

$$\pi = N(-DD)$$

F is total current liabilities plus one half of the long-term debt (Vassalaou & Xing, 2004). E is the market capitalization of firm's equity, then the volatility of each firm can be estimated as:

$$\sigma_v = (E/(E+F)\sigma_E + F/(E+F)\sigma_D$$

Where σ_D is σ_E 0.05+0.25 and σ_E is the annualised standard deviations of returns calculated from thirteen months to one month to announcement of merger (Bharath and Shumway 2008). Thus, distance to default model can be written as:

$$DD = \frac{\ln\left[\frac{E+F}{f}\right] + (r_{it-1} - 0.5\sigma_v^2)}{\sigma_v\sqrt{T}}$$

Where, r_{it-1} is proxy of expected return on asset (μ) and the probability to default will be: $\pi = N(-DD)$

Variable descriptions

The study used a number of variables based on the literature which will affect the default risk of the company. The following variables are used in the study for measuring this impact.

We measure excess stock price return to market return as STKR as the investor buy and hold the share for 12 months prior to themerger announcement. This variable will explain the valuation errors (Koerniadi et al. (2015).

The next variable market value (MKTVL) is calculated for firm's growth. It is calculated as thenatural logarithm of themarketcapitalisation of each firm. It is expected that if Tobin's q ratio is higher,then the firm's future growth will be better. And it also indicates that firm's overall risk is reducing ((Doukas, 1995). So we have chosen Tobin's q (TQ) as next variable.

Previous literature argues that firm will face ahigher level of risk if the capital structure involves more debt. We measure leverage (LEV) as a variable that explains the debt-equity involvement in the capital structure and as a variable that explains the managerial decisions also.

Koerniadi et al. 2015 opined that geographical distance has a significant impact on the risk level of firms which involve in cross-border M&As. In order to identify the geographical impact, we include the geographical distance (GEOD) between acquirer and target as a variable in the study.

The regression model

The following regression model is used to predict the changes in the probability of default risk due to the controlling variables.

$$\Delta DDPt = \propto + \beta STKR + \beta MKTVL + \beta TQ + \beta LEV + \beta GEOD + \varepsilon t$$

Where $\Delta DDPt$ is the change in distance to default probability, and it is measured using model of Bharath and Shumway (2008).

Data

We collect cross-border M&A data from Bloomberg database. The study is 300 cross-border mergers and acquisitions based on Indian companies engaged in cross-border mergers and acquisitions during 1st January 2012 to 31st December 2013.Only in the year of 2012 and 2013 show a downward trend in the total number of mergers and acquisitions in India after financial crisis. So the study interested to focus on the risk factor after the crisis period has influenced the mergers and acquisition deals in India. The firm financial data used for the study, overvaluation (SKTR), leverage effect (LEV), market capitalisation (MKTVAL), obtained from CMIE database. For measuring the distance (GEOD) between acquiring thecompany and target we calculated the distance between thehost country and home country capitals in themile and the data collected from http://www.mapsofworld.com.

Results and discussions

Table 1.

Descriptive statistics in

Table 1 - Summary Statistics					
	GEOD	**MKTVAL**	**SKTR**	**LEV**	**TQ**
Mean	8584.2273	507823.0217	1.5142	.7325	1.9061
Median	7994.5000	32302.1200	1.2300	.2400	1.0222
Std. Deviation	3598.19109	1021708.9632	3.54690	1.34656	2.36702
Minimum	1755.00	334.66	-4.23	.00	.08
Maximum	14535.00	4168662.82	9.91	6.51	7.76

Table 2 provides the results of regression results. It is found that the default risk of the company will reduce after cross-border M&As. The result of the study is inconstant with

the results of Furfine and Rosen (2011) while consistent with Leland (2007). Most of the mergers are cash transactions. The average geographic distance from India is 8584 km. The target companies are generally similar to Indian business regulatory environment.

Table2

- Regression Output		
	Beta	**Sig**
GEOD	0.009	0.002
MKTVAL	0.004	0.119
SKTR	0.181	0.000
LEV	0.002	0.629
TQ	.010	0.002

Depended variable Distance to default probability

Exceptleverage all the controlling variable have asignificantimpact on the default risk. The regression output of the variation in default risk examined by the variation in distance to default probability, on some of theindependent variables catching firm'sexplicit factors, market factors and geographic distance.

All the factors except leverage have asignificantimpact on the default risk. The managerial decisions, market overvaluations, thegeographical distance will affect the level of risk a company faces.

Even the target company's home country is having similar business regulatory environment compared to India the geographical distance is having a significant impact. It may due to cultural difference and the employee's resistance to the change in ownership.

While analysing we found Tobin's q ratio is increasing after M&As and it is a positive signal that the company is reducing their risk. The firm engaging in cross-border M&As will reduce the default risk.The most important finding is that overvaluations and geographic distance do have a vital role inacquiring company's post-merger default risk. While managerial decisions which affect the equity debt proportions do not

significantly impact on default risk and the result is consistent with Furfine and Rosen (2011) and Furfine and Rosen (2011). From the result, it is clear that the companies can adjust their risk level by controlling the variables in the cross-border M&As.

Conclusion

The studyexamines default risk of acquiring company after themerger with asample of Indian companies. By using a direct measure of risk, distance to default suggested by Koerniadi et al. (2015), Bharathet al. (2008), the study observed that the default risk level of a firm will reduce after the merger. The findings are consistent with Furfine and Rosen (2011). When we take out the variables that are expected to play a role in default risk after themerger, the managerial decisions, market overvaluations, geographical distance play a significant role in the default risk level of acquiring thefirm. In contrast to Koerniadi et al. (2015), we found that the managers use stock overvaluation to assume the mergers that increase the risk level and the geographical distance have a vital role in the default risk after themerger. Finally, the study found that managerial decisions which affect the equity debt proportions do not significantly impactonpost-merger default risk, theresult of the study consistent with Furfineet al. (2011).

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