

Cross-Border Mergers and Acquisitions and Default Risk

Hardjo Koerniadi
Auckland University of Technology
Private Bag 92006, Auckland, New Zealand

Chandrasekhar Krishnamurti
University of Southern Queensland
Toowoomba, QLD 4350, Australia

Alireza Tourani-Rad
Auckland University of Technology
Private Bag 92006, Auckland, New Zealand

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Abstract

Using a cross-country sample of mergers and acquisitions, we examine the role of cultural, institutional, geographic and managerial factors on post-merger default risk. We find that managerial factors and geographic distance play significant roles in affecting post-merger default risk. Our results suggest that, in contrast to a prior research on domestic mergers, the effects of managerial factors in cross border mergers on default risk are consistent with the information flow and the overvaluation hypotheses. We do not find any evidence indicating the relevance of institutional quality and culture on default risk.

Key words: Cross-border Mergers, Default risk, Idiosyncratic risk

JEL Classification: G34, G32, M14

1. Introduction

Cross-border mergers and acquisitions have been very popular in recent times accounting for 45% of total merger volume in 2007 (Erel, et al. 2012). The determinants of and motivations for cross-border transactions are different from domestic mergers due to cross-border effects. In these mergers, the distance of country-level characteristics between two countries, such as the quality of accounting disclosure, culture, geography, corporate governance and bilateral trade are reported to have significant roles (Ahern, et al., forthcoming; Erel et al., 2012). Firms engage in cross-border mergers increase value through several ways. Firms can create value by acquiring targets in countries with weaker governance regimes, (Moeller and Schlingemann, 2005; Bris and cabolis, 2008; Rossi and Volpin, 2004) or by purchasing targets in related industries (Dos Santos, Errunza and Miller, 2008). The opportunity to create value via cross-border mergers can also arise from wealth effects and valuation error. Froot and Stein (1991) suggest that a stronger domestic currency relative to other foreign currencies motivates firms to engage in cross border mergers as the price of foreign targets become less expensive. Similarly, when the stock price of an acquirer is overvalued, it is more likely to issue shares to acquire (undervalued) targets (Shleifer and Vishny, 2003).

A recent study suggests that mergers may affect not only firm value, but also firm default risk (Furfine and Rosen, 2011). Using a US sample of domestic mergers, Furfine and Rosen (2011) document that domestic mergers, on average, increase default risk of the acquiring firm. They find that idiosyncratic risk, past stock performance, valuation error, type of payment and agency problem are related to default risk in domestic mergers. The impact of cross-border mergers on firms' default risk however, has not been comprehensively examined.

In this paper we extend Furfine and Rosen (2011) by observing the effects of cross-border mergers on a firm's default risk. Prior studies on cross border mergers usually focus on US acquirer firms or total (US and non US) firms. US firms have different firm- and country-level

characteristics (for example, in terms of corporate governance, cultural and accounting regimes) from those of non US firms. We therefore explore this issue by decomposing our sample into three sub samples: US acquirers vs. non US targets, non US acquirers vs. US targets and non US acquirers vs. non US targets. Splitting our sample into these sub samples sheds further light on the effects of cross-border mergers on default risk.

We find that, on average, cross-border mergers reduce default risk, but the determinants are mostly different from those in domestic mergers and in each sub sample. We find evidence consistent with overvaluation of US firms may lead managers to make risk increasing mergers (Shleifer and Vishny, 2003). We also find that idiosyncratic risk is negatively related to default risk in two of the sub samples. This is inconsistent the results for domestic mergers (Furfine and Rosen, 2011), but consistent with the view that idiosyncratic risk is positively related to more efficient corporate investment (Durnev, Morck and Yeung, 2004; Ferreira and Laux, 2007). Firm size is negatively related to firm risk for US and non US acquirers, but not for non US firms acquiring US targets. We find that national culture has no significant relations with default risk. Finally, we find that mergers financed with shares are negatively related to default risk, but these relations are not statistically significant.

We contribute to the literature by examining the changes in default risk of acquirers after completing cross-border mergers. Our study offers several valuable insights. First, we provide evidence regarding the external validity of the relevance of managerial issues by examining subsamples of both US and non-US acquirers. Second, we examine the impact of the significance of cultural factors and geographic distance on post-merger default risk of acquiring firms. Third, we present evidence on the impact of institutional factors on post-merger default risk of acquiring firms.

The rest of the paper is organized as follows. In the next section, we describe our data and methodology. In section 3, we report the results of our empirical study. Our conclusions are offered in the final section.

2. Methodology and Data

2.1 Methodology

We follow Bharath and Shumway (2008) in measuring probability of default risk. Bharath and Shumway (2008) report that their distance to default model is superior in hazard models and in out of sample forecasts than the existing models.

We use independent variables that are reported to have significant effects on default risk in mergers and as determinants in cross-border mergers. Furfine and Rosen (2011) suggest that idiosyncratic risk, valuation errors proxied by past stock performance and market to book ratio, firm size and type of payment have significant impact on default risk in domestic mergers. They find that idiosyncratic risk increases default risk in domestic mergers. Their results are inconsistent with the notion that idiosyncratic risk is related to better information flow and more efficient capital investment (Durnev et al., 2004; Ferreira and Laux, 2007) Following Furfine and Rosen (2011) we measure idiosyncratic risk (VOL) as the standard deviation of the idiosyncratic component of the acquirer's stock return estimated over the six month period ending one month prior to the merger announcement. Inconsistent with the overvaluation hypothesis, Furfine and Rosen find that acquirers with poor past stock performance tend to make risk enhancing domestic mergers. Following their methodology, our proxies for valuation errors are the buy and hold return of an acquirer's stock in the 12 months ending at the end of the month prior to the merger announcement in excess of the market index (S&P 500 for US acquirers and MSCI for non US) return over the same period (RUNM) and Tobin's q. Market size (MKTVAL) is calculated as the natural logarithm of market capitalization and we use a dummy for mergers financed at least with stocks (SHARES). In addition, we also use a dummy if the acquirer's industry is the same as the target firm's industry (RELATED).

Erel et al. (2012) examine the determinants of cross-border mergers and acquisitions. They find that geography, the quality of accounting disclosure, and bilateral trade increase the likelihood

of mergers between two countries. They also indicate that cultural differences¹ play insignificant role in cross border mergers which is in stark odds with a recent study (Ahern et al., forthcoming).

Ahern et al. (forthcoming) examine the role of national cultural values on the pattern of cross-border merger activity and the gains they create. Using a comprehensive sample of 20,893 cross-border mergers from 52 different countries over 1991–2008, they find that culture has a significant and economically important effect on the volume of cross-border mergers. After controlling for country-level fixed effects and a range of country-pair variables such as shared legal origin, language, religion, geographic distance they find a strong negative relationship between cultural distance and the volume of cross-border merger activity between two countries. Particularly, the greater is the cross-country difference between the values of trust, hierarchy, and individualism, the smaller is the cross-border merger volume. Likewise, less cultural distance leads to higher combined announcement returns in cross-border mergers. Overall, the work of Ahern et al. (forthcoming) is consistent with the view that cultural differences impose costly frictions between firms leading to fewer mergers.

We control for country-level corporate governance mechanisms, such as the revised antidirector index (ANTIDIR), legal origin (ORIGIN), ownership concentration (OWN), stock market capitalization to GDP (STOCKMKTDEV), law enforcement index (ENFORCE), and accounting standards, such as the time to collect bounced checks (CHECK), prospectus disclosure index (DISC) and periodic filing index (DISCFIL), from Djankov, La Porta, Lopez De Silanes and Shleifer (2008). We also include the distance between the capital cities of a country pair (GEO).

We use the uncertainty avoidance score (UAI) from Hofstede (1980, 2001) as our proxy for natural cultural value. Uncertainty avoidance is one of the facets of natural cultural attributes constructed by Hofstede. Hofstede's uncertainty avoidance score has been used in finance by several scholarly works (Beugelsdijk and Frijns, 2010 and Anderson et al., 2011) in their studies on the determinants of the home bias. These studies show that institutional investors from high

¹ They have different measures of culture variables than Ahern et al.

uncertainty avoidance countries invest less in foreign equities, which may be supported by the belief that investors may perceive foreign assets to be more risky and hence do not invest in them.

Venaik and Brewer (2010) posit that Hofstede's uncertainty avoidance score principally measures the stress component of dealing with uncertain situations. Hofstede (2001) states that 'uncertainty avoiding cultures shun ambiguous situations. People in such cultures look for structure in their organizations, institutions and relationships, which makes events clearly interpretable and predictable'. He constructed the uncertainty avoidance score using three specific survey questions. These are:

1. How often do you feel nervous or tense (at work)? (1. Always to 5. Never).
2. How long do you think you will continue working for this company (or organization)? (1. Two year to 5. Until retirement).
3. Company rules should not be broken – even when the employee thinks it is in the company's best interest. (1. Strongly agree to 5. Strongly disagree).

These questions basically capture three features of uncertainty avoidance which are rule orientation, employment stability and stress. Responses from these questions are combined into one single measure of uncertainty avoidance.

Our industry and year fixed effect regression model is the following:

$$\begin{aligned}
 DMU_t = & \alpha + \beta_{RUNM}t + \beta_{VOL}t + \beta_Qt + \beta_{LEV}t + \beta_{SHARES}t + \beta_{LN_{GEO}}t + \beta_{LN_{MKTVAL}}t \\
 & + \beta_{RELATED}t + \beta_{DUAL}t + \beta_{DDANTIDIR}t + \beta_{DDORIGIN}t + \beta_{DDCHECK}t \\
 & + \beta_{DDSTOCKMKTDEV}t + \beta_{DDDISC}t + \beta_{DDDISCFIL}t \\
 & + \beta_{DDENFORCE}t + \text{Industry dummy} + \text{Year dummy} + \epsilon_t
 \end{aligned}$$

Definition of Variables:

DMU is the change in distance to default probability calculate following Bharath and Shumway (2008) DD model.

RUNM is the buy and hold return of an acquirer's stock in the 12 months ending at the end of the month prior to the merger announcement in excess of the market index (S&P 500 for US acquirers and MSCI for non US) return over the same period.

VOL is the standard deviation of the idiosyncratic component of the acquirer's stock return.

Q is Tobin's q.

LEV is leverage ratio.

SHARES is a dummy variable is the merger is financed at least partially with stock.

LNGEO is the natural logarithm of the distance between the acquirer's country and target's country.

LNMKTVAL is the natural logarithm of the market value of the acquiring firm at the end of the month prior to merger announcement.

RELATED is a dummy variable if the target's industry is the same as the acquirer's industry.

DUAI is the difference between the Uncertainty Avoidance Index which is a Hofstede's culture variable, of the acquirer's country and that of the target's country.

DDANTIDIR is a dummy variable if the difference between antidirector index of the acquirer's country is the same or greater than that of the target's country.

DDORIGIN is a dummy variable if the difference between the code for country origin of the acquirer's country is the same or greater than that of the target's country.

DDCHECK is a dummy variable if the difference between the time to collect bounced checks in the acquirer's country is the same or greater than that of the target's country.

DDSTOCKMKTDEV is a dummy variable if the difference between stock market development index of the acquirer's country is the same or greater than that of the target's country.

DDDISC is a dummy variable if the difference between prospectus disclosure index of the acquirer's country is the same or greater than that of the target's country.

DDDISCFIL is a dummy variable if the difference between disclosure in periodic filing index of the acquirer's country is the same or greater than that of the target's country.

DDENFORCE is a dummy variable if the difference between public enforcement index of the acquirer's country is the same or greater than that of the target's country.

2.2 Data

We collect cross-border mergers data from Zephyr database. Following Furfine and Rosen (2011), we select only complete deals with minimum ownership of 90%, cash and shares acquisition and mergers in non-financial and non-utility industries for the period from 1996 to 2012. From Zephyr, we obtain the announcement dates, types of payment and industry of acquirers and target firms. Firm financial data are obtained from Osiris database and stock return data are taken from Datastream. We use data from Osiris and Datastream to measure proxies for idiosyncratic risk (VOL), valuation errors (RUNM and M/B ratio), leverage (LEV), market value (MKTVAL) and default risk (Z-score). We obtain data on country level governance and accounting standards such as the revised antidirector index (ANTIDIR), country of origin (ORIGIN), time to collect bounced checks (CHECK), ownership concentration (OWN), stock market development (SOCKMKTDEV), prospectus disclosure index (DISC), periodic filing index (DISCFIL) and enforcement index (ENFORCE) from Djankov et al. (2008). We acquire data on national culture (UAI) from Hofstede's website. Following Erel et al. (2012), we calculate the distance between capital cities of a country pair (GEO) from mapsofworld.com. We then merge these samples and drop the missing observations. After deleting observations with missing variables, the final sample consists of 1,407 firm year observations.

3. Empirical Results

We provide descriptive statistics of our sample in Table 1². In Panel A, we describe features of our total sample. In subsequent panels, we provide details of subsamples based on whether the acquirers and targets are US or non US firms. For the overall sample, we find that default risk decreases after cross-border mergers. Also, most mergers are related mergers and are cash transactions. The median geographic distance between headquarters of acquirers and targets is approximately 3,700 miles. Targets countries typically have higher uncertainty avoidance scores than acquirer countries. Targets countries and acquirer countries are generally from similar legal origin and have nearly same antidirector index values. Typically, it takes longer to collect bounced checks in target countries than acquirer countries. In general, acquiring countries have better developed stock markets and have higher disclosure index than target countries.

In table 2, we report the correlation between key variables used in the study. Most correlation values, except for country-level governance variables, are small and do not have a potential for multicollinearity. The strong correlations among country-level governance variables preclude us from using these variables simultaneously in our multiple regressions.

We regress the change in default risk measured by DMU, the change in distance to default probability, on a number of independent variables capturing firm specific factors, culture, geographic distance and institutional quality. The results for the total sample are provided in Table 3, while subsample results are reported in Tables 4 through 6. The results from Table 3 reveal several interesting findings. First, it appears that idiosyncratic risk (VOL), managerial issues (RUNM) and geographic distance (LNGEO) significantly affect the post-merger default risk in the case of cross-border mergers. Consistent with the overvaluation hypothesis, firms with good past stock performance are likely to engage in risky acquisitions. The negative VOL is consistent with the notion that high idiosyncratic risk means better information flows which result in more efficient mergers that reduce default risk. Geographic distance between the two countries is

² All variables except the distance to default probability variable are winsorised at the 1% and 99% levels to control for outliers.

positively related to default risk. Second, firm size (LNMKTVAL) and culture (DUAI) do not seem to have any significant effect on post-merger default risk. The results also show that institutional quality does not have any significant effect on default risk.

We report results of subsample of US acquirers and international targets in Table 4. The results are similar to those in total sample. First, past stock performance and idiosyncratic volatility affect the post-merger default risk in the case of cross-border mergers. Second, when acquiring firms are large post-merger default risk tends to go down. In Table 5, we report results of subsample of international acquirers and US targets. There is strong evidence that geographic distance increases default risk with international acquirers and US target firms. This result is exactly opposite to that reported in Table 4 for the case of US acquirers. Our findings suggest that international acquirers do not overpay or act in an overconfident manner when using shares as the medium of exchange.

Finally in Table 6, we report results of subsample of international acquirers and international targets. Our results show that idiosyncratic risk, geographic distance and firm size matter when it comes to post-merger default risk.

4. Conclusion

In this paper, we examine the impact of cross-border acquisitions on post-merger default risk. Our major finding is that managerial factors and geographic distance do play significant roles in affecting post-merger default risk. In contrast to the findings of Furfine and Rosen (2011) we find that managerial incentives in cross border mergers are different from those in domestic mergers.

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Table 1 Descriptive statistics
Panel A. Total sample

	MEAN	SD	MIN	1Q	MEDIAN	3Q	MAX
DMU	-0.009	0.118	-0.862	-0.506	0.000	0.362	0.839
RUNM	0.002	0.090	-0.276	-0.230	-0.001	0.259	0.287
VOL	0.021	0.012	0.007	0.008	0.018	0.069	0.084
GEO (Miles)	3,177	2,503	153	156	3,669	10,557	10,557
MKTVAL (US\$ th)	11,142,208	30,880,233	8,875	12,389	1,804,288	149,743,810	277,060,300
TOBIN	2.098	1.360	0.458	0.597	1.693	7.521	9.165
SHARES	0.147	0.354	0.000	0.000	0.000	1.000	1.000
LEV	0.658	0.983	-3.939	-1.799	0.459	5.312	6.337
RELATED	0.594	0.491	0.000	0.000	1.000	1.000	1.000
UAI	-3.675	26.114	-65.500	-59.000	-2.000	61.000	63.000
DANTIDIR	0.274	1.448	-2.500	-2.455	0.000	4.000	4.000
DORIGIN	0.124	0.652	-1.000	-1.000	0.000	1.000	1.000
DCHECK	-0.110	1.151	-2.594	-2.480	-0.252	2.379	2.480
DSTOCKMKTDEV	9.914	78.883	-291.806	-212.558	15.560	195.772	317.656
DDISC	0.083	0.339	-0.610	-0.580	0.080	1.000	1.000
DDISCFIL	0.065	0.328	-0.800	-0.600	0.000	0.800	0.800
DENFORCE	-0.035	0.639	-1.000	-1.000	0.000	1.000	1.000

Panel B. US acquirers and International targets

	MEAN	SD	MIN	1Q	MEDIAN	3Q	MAX
DMU	-0.009	0.080	-0.508	-0.244	0.000	0.297	0.483
RUNM	0.010	0.082	-0.207	-0.204	0.006	0.258	0.259
VOL	0.019	0.009	0.007	0.007	0.017	0.052	0.054
GEO (Miles)	3,667	1,875	458	458	3,835	9,917	9,917
MKTVAL (US\$ th)	18,209,133	47,559,564	43,825	43,825	2,641,302	277,060,300	277,060,300
TOBIN	2.422	1.564	0.761	0.767	1.962	9.130	9.165
SHARES	0.085	0.280	0.000	0.000	0.000	1.000	1.000
LEV	0.655	0.862	0.000	0.000	0.435	5.107	5.312
RELATED	0.619	0.486	0.000	0.000	1.000	1.000	1.000
UAI	-7.691	20.117	-48.000	-48.000	-2.000	23.000	23.000
DANTIDIR	-0.952	1.002	-2.000	-2.000	-1.000	2.000	2.000
DORIGIN	0.483	0.500	0.000	0.000	0.000	1.000	1.000
DCHECK	-1.118	0.700	-2.594	-2.510	-1.048	0.325	0.325
DSTOCKMKTDEV	35.534	51.012	-106.818	-106.818	35.960	125.746	125.746
DDISC	0.321	0.233	0.080	0.080	0.250	1.000	1.000
DDISCFIL	0.212	0.271	0.000	0.000	0.000	0.800	0.800
DENFORCE	-0.458	0.445	-1.000	-1.000	-0.500	0.000	0.000

Panel C. International acquirers and US targets

	MEAN	SD	MIN	1Q	MEDIAN	3Q	MAX
DMU	-0.005	0.115	-0.712	-0.382	0.000	0.365	0.839
RUNM	-0.005	0.095	-0.276	-0.275	-0.009	0.220	0.222
VOL	0.022	0.012	0.008	0.008	0.018	0.070	0.072
GEO (Miles)	3779.360	2049.465	458.153	458.153	3668.508	9917.039	9917.039
MKTVAL (U	13583702.728	31290215.384	11986.560	12177.055	2035989.000	145201457.929	147383140.260
TOBIN	2.156	1.316	0.610	0.619	1.792	7.820	7.842
SHARES	0.164	0.371	0.000	0.000	0.000	1.000	1.000
LEV	0.714	1.058	-1.822	-1.673	0.456	5.734	5.741
RELATED	0.568	0.496	0.000	0.000	1.000	1.000	1.000
UAI	4.457	18.769	-23.000	-23.000	2.000	48.000	48.000
DANTIDIR	1.220	0.819	-1.000	-1.000	1.000	2.000	2.000
DORIGIN	-0.295	0.457	-1.000	-1.000	0.000	0.000	0.000
DCHECK	1.101	0.709	-0.325	-0.325	0.799	2.480	2.480
DSTOCKMK	-26.536	48.557	-108.336	-108.336	-35.960	106.818	106.818
DDISC	-0.236	0.140	-0.610	-0.593	-0.170	-0.080	-0.080
DDISCFIL	-0.126	0.207	-0.800	-0.800	0.000	0.000	0.000
DENFORCE	0.444	0.452	0.000	0.000	0.500	1.000	1.000

Panel D. . International (non US) acquirers and International (non US) targets

	MEAN	SD	MIN	1Q	MEDIAN	3Q	MAX
DMU	-0.011	0.136	-0.862	-0.720	-0.001	0.389	0.831
RUNM	0.001	0.092	-0.230	-0.224	-0.004	0.283	0.287
VOL	0.022	0.013	0.008	0.008	0.019	0.083	0.084
GEO (Miles)	2,586	2,869	153	155	995	10,557	10,557
MKTVAL (US\$ th)	5,925,353	12,641,847	8,875	8,877	1,316,647	77,832,268	78,816,531
TOBIN	1.887	1.218	0.458	0.461	1.531	7.457	7.521
SHARES	0.172	0.377	0.000	0.000	0.000	1.000	1.000
LEV	0.631	1.005	-3.939	-3.062	0.481	6.121	6.337
RELATED	0.593	0.492	0.000	0.000	1.000	1.000	1.000
UAI	-5.766	31.047	-65.500	-65.125	-7.000	63.000	63.000
DANTIDIR	0.452	1.457	-2.500	-2.500	0.000	4.000	4.000
DORIGIN	0.148	0.688	-1.000	-1.000	0.000	1.000	1.000
DCHECK	-0.194	0.935	-2.314	-2.298	-0.272	2.379	2.379
DSTOCKMKTDEV	15.060	95.911	-291.806	-291.806	24.968	317.656	317.656
DDISC	0.120	0.335	-0.583	-0.581	0.080	1.000	1.000
DDISCFIL	0.085	0.360	-0.600	-0.600	0.000	0.800	0.800
DENFORCE	-0.054	0.643	-1.000	-1.000	0.000	1.000	1.000

DMU is the change in distance to default probability. RUNM is the buy and hold return of an acquirer's stock in the 12 months ending at the end of the month prior to the merger announcement in excess of the market index (S&P 500 for US acquirers and MSCI for non US) return over the same period. VOL is the standard deviation of the idiosyncratic component of the acquirer's stock return. GEO is the distance between the acquirer's country and target's country. MKTVAL is the market value of the acquiring firm in the merger announcement year. Q is Tobin's q ratio. SHARES is a dummy variable is the merger is financed at least partially with stock. LEV is leverage ratio. RELATED is a dummy variable if the target's industry is

the same as the acquirer's industry. UAI is the difference between the Uncertainty Avoidance Index of the acquirer's country and that of the target's country. DANTIDIR is the difference between antidirector index of the acquirer's country and that of the target's country. DORIGIN is the difference between the code for country origin of the acquirer's country and that of the target's country. DCHECK is the difference between the time to collect bounced checks in the acquirer's country and that of the target's country. DSTOCKMKTDEV is the difference between stock market development index of the acquirer's and that of the target's country. DDISC is the difference between prospectus disclosure index of the acquirer's country and that of the target's country. DDISCFIL is the difference between disclosure in periodic filing index of the acquirer's country and that of the target's country. DENFORCE is the difference between public enforcement index of the acquirer's country and that of the target's country.

Table 2: Correlation matrix

Panel A. Total sample

	RUNM	VOL	GEO (Miles)	TVAL (US\$)	TOBIN	SHARES	LEV	RELATED	UAI	DANTIDIR	DORIGIN	DCHECK	STOCKMKTDEV	DDISC	DDISCFIL
VOL	-0.129														
GEO (Miles)	-0.009	0.027													
MKTVAL (US\$ th)	0.048	-0.186	0.072												
TOBIN	0.053	-0.100	-0.018	0.229											
SHARES	-0.043	0.251	-0.031	-0.061	-0.015										
LEV	-0.016	-0.020	-0.011	0.051	-0.087	0.002									
RELATED	0.013	-0.050	0.000	-0.054	-0.014	-0.004	-0.026								
UAI	0.007	-0.054	0.084	0.067	-0.044	-0.041	0.021	0.021							
DANTIDIR	-0.036	0.140	-0.025	-0.060	-0.074	0.069	-0.022	-0.038	-0.277						
DORIGIN	0.028	0.029	-0.060	-0.011	0.043	0.013	-0.038	0.011	-0.647	0.321	1.000				
DCHECK	-0.047	0.041	0.037	-0.024	-0.035	0.082	0.015	-0.039	0.333	0.161	-0.327	1.000			
DSTOCKMKTDEV	0.017	0.051	-0.018	0.000	0.048	0.005	-0.020	0.006	-0.513	0.183	0.498	-0.429	1.000		
DDISC	0.015	0.061	-0.012	-0.010	-0.003	-0.023	-0.014	0.020	-0.392	0.123	0.711	-0.511	0.570		
DDISCFIL	0.026	-0.019	0.001	-0.018	0.014	-0.024	-0.023	0.038	-0.381	0.165	0.721	-0.287	0.414	0.652	
DENFORCE	-0.031	0.112	0.103	-0.011	-0.079	0.063	0.004	-0.087	0.226	0.168	-0.341	0.632	-0.378	-0.355	-0.484

Panel B. US acquirers and International targets

	RUNM	VOL	GEO (Miles)	MKTVAL (US\$ th)	TOBIN	SHARES	LEV	RELATED	UAI	DANTIDIR	DORIGIN	DCHECK	STOCKMKTE	DDISC	DDISCFIL
VOL	-0.062														
GEO (Miles)	-0.009	0.047													
MKTVAL (US\$ th)	0.033	-0.213	0.046												
TOBIN	0.061	-0.071	-0.084	0.263											
SHARES	0.007	0.357	-0.034	0.074	0.067										
LEV	-0.033	-0.112	-0.011	0.117	-0.137	0.021									
RELATED	0.008	-0.012	0.049	-0.096	-0.082	-0.035	0.023								
UAI	0.063	-0.131	-0.106	0.108	0.018	-0.011	0.022	-0.076							
DANTIDIR	0.007	0.082	0.120	-0.027	-0.042	0.071	0.019	-0.001	-0.414						
DORIGIN	-0.006	0.053	0.300	-0.028	-0.030	-0.028	-0.026	0.077	-0.636	0.684					
DCHECK	0.014	-0.052	0.346	0.041	-0.051	-0.073	-0.008	-0.047	0.302	-0.282	0.045				
DSTOCKMKTE	0.005	0.167	0.105	-0.026	-0.068	0.059	-0.005	0.044	-0.587	0.423	0.515	-0.371			
DDISC	0.002	0.091	0.410	0.044	-0.099	0.012	0.009	0.086	-0.389	0.554	0.738	0.057	0.568		
DDISCFIL	0.021	0.016	0.224	-0.059	-0.066	-0.020	-0.015	0.119	-0.420	0.387	0.734	0.030	0.451	0.727	
DENFORCE	-0.009	-0.050	0.332	0.043	0.007	0.003	0.026	-0.065	0.330	-0.220	-0.190	0.601	-0.417	-0.123	-0.334

Panel C. International acquirers and US targets

	RUNM	VOL	GEO (Miles)	MKTVAL (US\$ th)	Q	SHARES	LEV	RELATED	UAI	DANTIDIR	DORIGIN	DCHECK	DSTOCKMKTDEV	DDISC	DDISCFIL
VOL	-0.223														
GEO (Miles)	0.055	-0.105													
MKTVAL (US\$ th)	0.082	-0.228	0.066												
Q	0.011	-0.006	-0.002	0.260											
SHARES	-0.064	0.364	-0.116	-0.142	-0.093										
LEV	0.010	-0.023	-0.021	0.025	-0.040	-0.027									
RELATED	0.027	0.016	0.021	-0.066	-0.011	0.007	-0.025								
UAI	-0.004	-0.078	0.015	-0.011	0.000	-0.095	-0.018	0.023							
DANTIDIR	-0.019	0.120	-0.052	0.085	0.022	0.023	-0.027	-0.027	-0.518						
DORIGIN	0.035	0.095	-0.096	0.098	-0.019	0.056	0.014	-0.009	-0.588	0.682					
DCHECK	0.042	-0.016	-0.020	0.008	-0.029	0.053	0.043	-0.010	0.212	-0.359	0.176				
DSTOCKMKTDEV	-0.029	0.080	0.000	-0.050	0.002	0.058	0.087	0.018	-0.502	0.205	0.176	-0.239			
DDISC	-0.105	0.132	-0.372	-0.223	-0.018	0.064	0.099	-0.026	-0.040	-0.013	-0.026	0.002	0.022		
DDISCFIL	0.068	-0.013	-0.051	0.074	-0.061	-0.021	0.012	0.035	-0.246	0.462	0.718	0.190	0.142	-0.052	
DENFORCE	-0.002	-0.043	-0.006	-0.015	-0.035	0.055	-0.027	-0.033	0.263	-0.363	-0.039	0.694	-0.393	-0.009	-0.243

Panel D. . International (non US) acquirers and International (non US) targets

	RUNM	VOL	GEO (Miles)	MKTVAL (US\$ th)	TOBIN	SHARES	LEV	RELATED	UAI	DANTIDIR	DORIGIN	DCHECK	DSTOCKMKTDEV	DDISC	DDISCFIL
VOL	-0.095														
GEO (Miles)	-0.037	0.097													
MKTVAL (US\$ th)	0.043	-0.193	0.038												
TOBIN	0.062	-0.138	-0.064	0.070											
SHARES	-0.041	0.149	0.023	-0.152	0.019										
LEV	-0.022	0.012	-0.018	-0.008	-0.095	0.011									
RELATED	0.004	-0.094	-0.025	-0.003	0.026	0.009	-0.048								
UAI	0.009	-0.043	0.119	0.135	-0.095	-0.048	0.026	0.066							
DANTIDIR	-0.002	0.104	-0.032	-0.081	-0.030	0.007	-0.060	-0.029	-0.431						
DORIGIN	-0.005	0.069	-0.133	-0.179	0.063	0.073	-0.049	-0.036	-0.661	0.757					
DCHECK	-0.039	-0.011	-0.065	-0.059	0.051	0.075	-0.020	-0.011	0.323	-0.368	-0.123				
DSTOCKMKTDEV	0.009	0.057	-0.018	0.041	0.097	0.010	-0.044	-0.025	-0.471	0.444	0.467	-0.349			
DDISC	-0.016	0.150	-0.004	-0.072	-0.015	0.017	-0.023	-0.030	-0.403	0.761	0.703	-0.251	0.567		
DDISCFIL	-0.020	0.015	-0.016	-0.095	0.048	0.017	-0.023	-0.013	-0.344	0.488	0.640	-0.112	0.355	0.615	
DENFORCE	0.002	0.163	0.078	0.012	-0.100	0.025	-0.013	-0.104	0.100	-0.079	-0.176	0.336	-0.236	-0.071	-0.405

DMU is the change in distance to default probability. RUNM is the buy and hold return of an acquirer's stock in the 12 months ending at the end of the month prior to the merger announcement in excess of the market index (S&P 500 for US acquirers and MSCI for non US) return over the same period. VOL is the standard deviation of the idiosyncratic component of the acquirer's stock return. GEO is the distance between the acquirer's country and target's country. MKTVAL is the market value of the acquiring firm in the merger announcement year. Q is Tobin's q ratio. SHARES is a dummy variable is the merger is financed at least partially with stock. LEV is leverage ratio. RELATED is a dummy variable if the target's industry is the same as the acquirer's industry. UAI is the difference between the Uncertainty Avoidance Index of the acquirer's country and that of the target's country. DANTIDIR is the difference between antidirector index of the acquirer's country and that of the target's country. DORIGIN is the difference between the code for country origin of the acquirer's country and that of the target's country. DCHECK is the difference between the time to collect bounced checks in the acquirer's country and that of the target's country. DSTOCKMKTDEV is the difference between stock market development index of the acquirer's and that of the target's country. DDISC is the difference between prospectus disclosure index of the acquirer's country and that of the target's country. DDISCFIL is the difference between disclosure

in periodic filing index of the acquirer's country and that of the target's country. DENFORCE is the difference between public enforcement index of the acquirer's country and that of the target's country.

Table 3. Cross-sectional Regressions: Determinants of Change in Risk Following Cross-Border Mergers for the total sample

RUNM	0.005*** (0.009)	0.005*** (0.008)	0.005*** (0.008)	0.005*** (0.008)	0.005*** (0.009)	0.005*** (0.009)	0.005*** (0.009)	0.005*** (0.009)	0.005*** (0.007)
VOL	-0.090*** (0.000)	-0.090*** (0.000)	-0.091*** (0.000)	-0.091*** (0.000)	-0.090*** (0.000)	-0.090*** (0.000)	-0.090*** (0.000)	-0.091*** (0.000)	-0.091*** (0.000)
Q	0.000 (0.746)	0.000 (0.755)	0.000 (0.766)	0.000 (0.746)	0.000 (0.746)	0.000 (0.747)	0.000 (0.791)	0.000 (0.760)	0.000 (0.784)
LEV	0.000 (0.311)	0.000 (0.302)	0.000 (0.319)	0.000 (0.309)	0.000 (0.311)	0.000 (0.311)	0.000 (0.303)	0.000 (0.313)	0.000 (0.306)
SHARES	-0.001 (0.139)	-0.001 (0.122)	-0.001 (0.146)	-0.001 (0.135)	-0.001 (0.138)	-0.001 (0.140)	-0.001 (0.130)	-0.001 (0.140)	-0.001 (0.124)
GEO	0.000*** (0.007)	0.000*** (0.007)	0.000*** (0.008)	0.000*** (0.007)	0.000*** (0.008)	0.000*** (0.007)	0.000*** (0.005)	0.000*** (0.010)	0.000*** (0.005)
MKTVAL	0.000 (0.111)	0.000 (0.140)	0.000 (0.104)	0.000 (0.116)	0.000 (0.112)	0.000 (0.111)	0.000 (0.101)	0.000 (0.117)	0.000 (0.136)
RELATED	0.000 (0.863)	0.000 (0.918)	0.000 (0.859)	0.000 (0.902)	0.000 (0.866)	0.000 (0.864)	0.000 (0.872)	0.000 (0.912)	0.000 (0.966)
DUAI	0.000 (0.759)	0.000 (0.614)	0.000 (0.958)	0.000 (0.892)	0.000 (0.868)	0.000 (0.772)	0.000 (0.949)	0.000 (0.919)	0.000 (0.859)
DDANTIDIR		0.000 (0.249)							0.000 (0.251)
DDORIGIN			0.000 (0.519)						0.000 (0.627)
DDCHECK				0.000 (0.400)					0.000 (0.491)
DDSTOCKMKTDEV					0.000 (0.903)				0.000 (0.928)
DDDISC						0.000 (0.989)			0.001 (0.219)
DDDISCFIL							0.000 (0.224)		-0.001 (0.246)
DDENFORCE								0.000 (0.591)	0.000 (0.946)
Year Effects	Y	Y	Y	Y	Y	Y	Y	Y	Y
Industry Effects	Y	Y	Y	Y	Y	Y	Y	Y	Y
N	1410	1410	1410	1410	1410	1410	1410	1410	1410
R-squared	0.052	0.053	0.052	0.052	0.052	0.052	0.053	0.052	0.055

The dependent variable is DMU, defined as the change in distance to default probability. RUNM is the buy and hold return of an acquirer's stock in the 12 months ending at the end of the month prior to the merger announcement in excess of the market index (S&P 500 for US acquirers and MSCI for non US) return over the same period. VOL is the standard deviation of the idiosyncratic component of the acquirer's stock return. Q is Tobin's q ratio. LEV is leverage ratio. SHARES is a dummy variable

is the merger is financed at least partially with stock. LNGEO is the natural logarithm of the distance between the acquirer's country and target's country. LNMKTVAL is the natural logarithm of the market value of the acquiring firm in the merger announcement year. RELATED is a dummy variable if the target's industry is the same as the acquirer's industry. DUAI is a dummy variable of one if the difference between the Uncertainty Avoidance Index of the acquirer's country and that of the target's country is the same or greater than that of the target's country, else zero. DDANTIDIR is a dummy variable of one if the difference between antidirector index of the acquirer's country is the same or greater than that of the target's country, else zero. DDORIGIN is a dummy variable of one if the difference between the code for country origin of the acquirer's country is the same or greater than that of the target's country, else zero. DDCHECK is a dummy variable of one if the difference between the time to collect bounced checks in the acquirer's country is the same or greater than that of the target's country, else zero. DDSTOCKMKTDEV is a dummy variable of one if the difference between stock market development index of the acquirer's country is the same or greater than that of the target's country, else zero. DDISC is a dummy variable of one if the difference between prospectus disclosure index of the acquirer's country is the same or greater than that of the target's country, else zero. DDISCFIL is a dummy variable of one if the difference between disclosure in periodic filing index of the acquirer's country is the same or greater than that of the target's country, else zero. DDENFORCE is a dummy variable of one if the difference between public enforcement index of the acquirer's country is the same or greater than that of the target's country, else zero.

*, **, *** are significance at 10%, 5%, 1% respectively.

Table 4 Determinants of Change in Risk Following Cross-border mergers: US acquirers vs. International targets

RUNM	0.021*** (0.000)	0.021*** (0.000)	0.021*** (0.000)	0.021*** (0.000)	0.021*** (0.000)	0.021*** (0.000)	0.021*** (0.000)	0.021*** (0.000)	0.021*** (0.000)
VOL	-0.280*** (0.000)	-0.284*** (0.000)	-0.281*** (0.000)	-0.282*** (0.000)	-0.280*** (0.000)	-0.275*** (0.000)	-0.282*** (0.000)	-0.281*** (0.000)	-0.280*** (0.000)
Q	0.000 (0.449)	0.000 (0.442)	0.000 (0.437)	0.000 (0.406)	0.000 (0.451)	0.000 (0.498)	0.000 (0.447)	0.000 (0.442)	0.000 (0.507)
LEV	0.001 (0.120)	0.001 (0.137)	0.001 (0.117)	0.001 (0.131)	0.001 (0.121)	0.001 (0.106)	0.001 (0.119)	0.001 (0.117)	0.001 (0.145)
SHARES	-0.001 (0.463)	-0.001 (0.403)	-0.001 (0.461)	-0.001 (0.459)	-0.001 (0.464)	-0.001 (0.502)	-0.001 (0.465)	-0.001 (0.457)	-0.001 (0.383)
GEO	0.001 (0.218)	0.000 (0.406)	0.001 (0.260)	0.001 (0.279)	0.001 (0.218)	0.001* (0.069)	0.001 (0.221)	0.001 (0.279)	0.001* (0.089)
MKTVAL	-0.001** (0.029)	-0.001** (0.027)	-0.001** (0.029)	-0.001** (0.028)	-0.001** (0.029)	-0.001** (0.042)	-0.001** (0.028)	-0.001** (0.030)	-0.001** (0.059)
RELATED	-0.001 (0.153)	-0.001 (0.172)	-0.001 (0.156)	-0.001 (0.170)	-0.001 (0.153)	-0.001 (0.168)	-0.001 (0.161)	-0.001 (0.164)	-0.001 (0.221)
DUAI	0.000 (0.996)	0.000 (0.721)	0.000 (0.852)	0.000 (0.873)	0.000 (0.985)	-0.001 (0.550)	0.000 (0.883)	0.000 (0.768)	0.001 (0.589)
DDANTIDIR		0.001 (0.288)							0.003* (0.090)
DORIGIN			0.000 (0.784)						-0.001 (0.723)
DDCHECK				0.001 (0.449)					0.000 (0.958)
DDSTOCKMKTDEV					0.000 (0.982)				0.001 (0.368)
DDISC						-0.003 (0.161)			-0.007** (0.033)
DDISCFIL							-0.001 (0.778)		0.002 (0.392)
DDENFORCE								0.001 (0.634)	0.000 (0.874)
Year Effects	Y	Y	Y	Y	Y	Y	Y	Y	Y
Industry Effects	Y	Y	Y	Y	Y	Y	Y	Y	Y
N	375	375	375	375	375	375	375	375	375
R-squared	0.161	0.164	0.162	0.163	0.161	0.166	0.162	0.162	0.178

The dependent variable is DMU, defined as the change in distance to default probability. RUNM is the buy and hold return of an acquirer's stock in the 12 months ending at the end of the month prior to the merger announcement in excess of the market index (S&P 500 for US acquirers and MSCI for non US) return over the same period. VOL is the standard deviation of the idiosyncratic component of the acquirer's stock return. Q is Tobin's q ratio. LEV is leverage ratio. SHARES is a dummy variable

is the merger is financed at least partially with stock. LNGEO is the natural logarithm of the distance between the acquirer's country and target's country. LNMKTVAL is the natural logarithm of the market value of the acquiring firm in the merger announcement year. RELATED is a dummy variable if the target's industry is the same as the acquirer's industry. DUAI is a dummy variable of one if the difference between the Uncertainty Avoidance Index of the acquirer's country and that of the target's country is the same or greater than that of the target's country, else zero. DDANTIDIR is a dummy variable of one if the difference between antidirector index of the acquirer's country is the same or greater than that of the target's country, else zero. DORIGIN is the difference between the code for country origin of the acquirer's country and that of the target's country. DDCHECK is a dummy variable of one if the difference between the time to collect bounced checks in the acquirer's country is the same or greater than that of the target's country, else zero. DDSTOCKMKTDEV is a dummy variable of one if the difference between stock market development index of the acquirer's country is the same or greater than that of the target's country, else zero. DDISC is the difference between prospectus disclosure index of the acquirer's country and that of the target's country. DDISCFIL is the difference between disclosure in periodic filing index of the acquirer's country and that of the target's country. DDENFORCE is a dummy variable of one if the difference between public enforcement index of the acquirer's country is the same or greater than that of the target's country, else zero.

*, **, *** are significance at 10%, 5%, 1% respectively.

Table 5: Determinants of Change in Risk Following Cross-border mergers: International acquirers and US targets

RUNM	0.001 (0.716)	0.001 (0.717)	0.002 (0.672)	0.001 (0.717)	0.001 (0.719)	0.001 (0.714)	0.002 (0.669)	0.001 (0.727)	0.002 (0.677)
VOL	-0.058 (0.129)	-0.058 (0.130)	-0.056 (0.144)	-0.057 (0.134)	-0.057 (0.136)	-0.057 (0.131)	-0.053 (0.163)	-0.058 (0.127)	-0.053 (0.168)
Q	0.000 (0.215)	0.000 (0.216)	0.000 (0.202)	0.000 (0.215)	0.000 (0.216)	0.000 (0.215)	0.000 (0.196)	0.000 (0.212)	0.000 (0.194)
LEV	0.000 (0.504)	0.000 (0.505)	0.000 (0.484)	0.000 (0.499)	0.000 (0.483)	0.000 (0.489)	0.000 (0.519)	0.000 (0.513)	0.000 (0.503)
SHARES	0.000 (0.629)	0.000 (0.631)	0.000 (0.668)	0.000 (0.632)	-0.001 (0.612)	0.000 (0.650)	0.000 (0.629)	0.000 (0.648)	0.000 (0.674)
GEO	0.001*** (0.007)	0.001*** (0.007)	0.001*** (0.010)	0.001*** (0.007)	0.001*** (0.007)	0.001*** (0.006)	0.001*** (0.009)	0.001*** (0.007)	0.001*** (0.009)
MKTVAL	0.000 (0.337)	0.000 (0.337)	0.000 (0.290)	0.000 (0.334)	0.000 (0.355)	0.000 (0.337)	0.000 (0.312)	0.000 (0.338)	0.000 (0.319)
RELATED	0.000 (0.577)	0.000 (0.578)	0.000 (0.555)	0.000 (0.579)	0.000 (0.568)	0.000 (0.574)	0.000 (0.500)	0.000 (0.596)	0.000 (0.516)
DUAI	0.000 (0.665)	0.000 (0.666)	-0.001 (0.411)	0.000 (0.641)	-0.001 (0.571)	0.000 (0.645)	-0.001 (0.458)	0.000 (0.870)	0.000 (0.749)
DDANTIDIR		0.000 (0.958)							0.001 (0.763)
DDORIGIN			-0.001 (0.332)						0.000 (0.905)
DDCHECK				0.000 (0.781)					0.000 (0.890)
DDSTOCKMKTDEV					0.000 (0.712)				0.000 (0.948)
DDISC						-0.001 (0.755)			-0.002 (0.697)
DDISCFIL							-0.001 (0.186)		-0.001 (0.448)
DENFORCE								0.000 (0.754)	0.000 (0.765)
Year Effects	Y	Y	Y	Y	Y	Y	Y	Y	Y
Industry Effects	Y	Y	Y	Y	Y	Y	Y	Y	Y
N	359	359	359	359	359	359	359	359	359
R-squared	0.137	0.137	0.139	0.137	0.137	0.137	0.142	0.137	0.142

The dependent variable is DMU, defined as the change in distance to default probability. RUNM is the buy and hold return of an acquirer's stock in the 12 months ending at the end of the month prior to the merger announcement in excess of the market index (S&P 500 for US acquirers and MSCI for non US) return over the same period. VOL is the standard deviation of the idiosyncratic component

of the acquirer's stock return. Q is Tobin's q ratio. LEV is leverage ratio. SHARES is a dummy variable is the merger is financed at least partially with stock. LNGEO is the natural logarithm of the distance between the acquirer's country and target's country. LNMKTVAL is the natural logarithm of the market value of the acquiring firm in the merger announcement year. RELATED is a dummy variable if the target's industry is the same as the acquirer's industry. DUAL is a dummy variable of one if the difference between the Uncertainty Avoidance Index of the acquirer's country and that of the target's country is the same or greater than that of the target's country, else zero. DDANTIDIR is a dummy variable of one if the difference between antidirector index of the acquirer's country is the same or greater than that of the target's country, else zero. DDORIGIN is a dummy variable of one if the difference between the code for country origin of the acquirer's country is the same or greater than that of the target's country, else zero. DDCHECK is a dummy variable of one if the difference between the time to collect bounced checks in the acquirer's country is the same or greater than that of the target's country, else zero. DDSTOCKMKTDEV is a dummy variable of one if the difference between stock market development index of the acquirer's country is the same or greater than that of the target's country, else zero. DDISC is a dummy variable of one if the difference between prospectus disclosure index of the acquirer's country is the same or greater than that of the target's country, else zero. DDISCFIL is a dummy variable of one if the difference between disclosure in periodic filing index of the acquirer's country is the same or greater than that of the target's country, else zero. DENFORCE is the difference between public enforcement index of the acquirer's country and that of the target's country.

*, **, *** are significance at 10%, 5%, 1% respectively.

Table 6: Determinants of Change in Risk Following Cross-border mergers: International (non US) acquirers and International (non US) targets

RUNM	0.000*** (0.889)	0.000*** (0.861)	0.000*** (0.889)	0.000*** (0.906)	0.000*** (0.891)	0.000*** (0.892)	0.000*** (0.883)	0.000*** (0.905)	0.000*** (0.922)
VOL	-0.072*** (0.000)	-0.073*** (0.000)	-0.072*** (0.000)	-0.072*** (0.000)	-0.072*** (0.000)	-0.072*** (0.000)	-0.072*** (0.000)	-0.071*** (0.000)	-0.070*** (0.000)
Q	0.000 (0.443)	0.000 (0.463)	0.000 (0.443)	0.000 (0.395)	0.000 (0.453)	0.000 (0.443)	0.000 (0.450)	0.000 (0.432)	0.000 (0.385)
LEV	0.000 (0.594)	0.000 (0.577)	0.000 (0.596)	0.000 (0.616)	0.000 (0.583)	0.000 (0.593)	0.000 (0.598)	0.000 (0.590)	0.000 (0.591)
SHARES	-0.001 (0.271)	-0.001 (0.275)	-0.001 (0.271)	-0.001 (0.275)	-0.001 (0.257)	-0.001 (0.272)	-0.001 (0.268)	-0.001 (0.273)	-0.001 (0.258)
GEO	0.000** (0.047)	0.000** (0.050)	0.000** (0.049)	0.000** (0.042)	0.000** (0.049)	0.000* (0.047)	0.000** (0.047)	0.000** (0.045)	0.000** (0.041)
MKTVAL	-0.000** (0.027)	-0.000** (0.024)	-0.000** (0.029)	-0.000** (0.031)	-0.000** (0.029)	-0.000** (0.027)	-0.000** (0.027)	-0.000** (0.025)	-0.000** (0.032)
RELATED	0.000 (0.333)	0.000 (0.348)	0.000 (0.333)	0.000 (0.315)	0.000 (0.333)	0.000 (0.333)	0.000 (0.337)	0.000 (0.369)	0.000 (0.379)
DUAI	0.000 (0.538)	0.000 (0.679)	0.000 (0.562)	0.000 (0.739)	0.000 (0.755)	0.000 (0.561)	0.000 (0.607)	0.000 (0.483)	0.000 (0.849)
DANTIDIR		0.000 (0.629)							0.000 (0.718)
DORIGIN			0.000 (0.974)						0.000 (0.857)
DCHECK				0.000 (0.413)					0.000 (0.363)
DDSTOCKMKTDEV					0.000 (0.648)				0.000 (0.640)
DDISC						0.000 (0.956)			0.000 (0.742)
DDISCFIL							0.000 (0.863)		0.000 (0.843)
DENFORCE								0.000 (0.619)	0.000 (0.392)
Year Effects	Y	Y	Y	Y	Y	Y	Y	Y	Y
Industry Effects	Y	Y	Y	Y	Y	Y	Y	Y	Y
N	676	676	676	676	676	676	676	676	676
R-squared	0.095	0.095	0.095	0.096	0.095	0.095	0.095	0.095	0.098

The dependent variable is DMU, defined as the change in distance to default probability. RUNM is the buy and hold return of an acquirer's stock in the 12 months ending at the end of the month prior to the merger announcement in excess of the market index (S&P 500 for US acquirers and MSCI for

non US) return over the same period. VOL is the standard deviation of the idiosyncratic component of the acquirer's stock return. Q is Tobin's q ratio. LEV is leverage ratio. SHARES is a dummy variable is the merger is financed at least partially with stock. LNGEO is the natural logarithm of the distance between the acquirer's country and target's country. LNMKTVAL is the natural logarithm of the market value of the acquiring firm in the merger announcement year. RELATED is a dummy variable if the target's industry is the same as the acquirer's industry. DUAL is a dummy variable of one if the difference between the Uncertainty Avoidance Index of the acquirer's country and that of the target's country is the same or greater than that of the target's country, else zero. DDANTIDIR is a dummy variable of one if the difference between antidirector index of the acquirer's country is the same or greater than that of the target's country, else zero. DDORIGIN is a dummy variable of one if the difference between the code for country origin of the acquirer's country is the same or greater than that of the target's country, else zero. DDCHECK is a dummy variable of one if the difference between the time to collect bounced checks in the acquirer's country is the same or greater than that of the target's country, else zero. DDSTOCKMKTDEV is a dummy variable of one if the difference between stock market development index of the acquirer's country is the same or greater than that of the target's country, else zero. DDISC is a dummy variable of one if the difference between prospectus disclosure index of the acquirer's country is the same or greater than that of the target's country, else zero. DDISCFIL is a dummy variable of one if the difference between disclosure in periodic filling index of the acquirer's country is the same or greater than that of the target's country, else zero. DDENFORCE is a dummy variable of one if the difference between public enforcement index of the acquirer's country is the same or greater than that of the target's country, else zero.

*, **, *** are significance at 10%, 5%, 1% respectively.