Does Geographic Dispersion Increase the Stock Price Crash Risk after M&A with Earnouts? Evidence from China

Tables

Table 1 Variable Definitions

Variable	*Description*
Ncskew	The negative skewness of firm-specific weekly returns following Hutton et al. (2009), and *F1ncskew*, *Ncskew* represent the crash risk in year t+1 and t, where t means the year of M&A.
Duvol	The down-to-up volatility of firm-specific returns following Hutton et al. (2009), and *F1duvol*, *Duvol* represent the crash risk in year t+1 and t, where t means the year of M&A.
Ifvam	A dummy variable for the earnout contract, *Ifvam*=1 if the acquirer and the seller sign an earnout contract, otherwise *Ifvam*=0.
Ssdist	Straight-line geographical distance between the acquirer and the target firm calculated by equation (5).
Ttdist	Use the data interface provided by Baidu Maps to obtain the route distance between the acquirer and the target firm.
Rw	The arithmetic mean value of firm-specific weekly returns in year t.
Sigw	The standard deviation of firm-specific weekly returns in the year t.
Oturnover	The detrended average daily stock turnover, calculated as the average daily share turnover in year t minus the average daily share turnover in year t−1.
Da	Information opacity measured by the discretionary accruals following Kothari et al. (2005) in the year t.
Lnta	The natural logarithm of total assets in the year t.
Roa	Net profit divided by total assets in the year t.
Lev	Total liability divided by total assets in the year t.
Overcon	Sum of top three executive salary divided by total executive salary.
Analyst	The natural logarithm of the number of analysts that cover the acquirer.

Table 2 Sample selection

Selection rules	Observations left
M&A transactions of China A-share listed companies from 2010-2021, where the listed companies are the acquirers	20376
Exclude observations with missing data of the target firm's name	14714
Exclude observations for which data are not available from the QCC website	6899
Exclude observations with missing data	5515
Exclude acquirers from the financial and insurance industries	5509

Notes: This table displays the sample selection process.

Table 3 Sample Description

Panel A Time profile

Year	*Observation*	*Percent*	*Year*	*Observation*	*Percent*
2010	197	0.036	2016	564	0.102
2011	278	0.050	2017	531	0.096
2012	459	0.083	2018	540	0.098
2013	575	0.104	2019	432	0.078
2014	425	0.077	2020	385	0.070
2015	615	0.112	2021	508	0.092
			Total	5,509	1.000

Panel B Industry of the acquirers

Industry	*Observation*	*Percent*	*Industry*	*Observation*	*Percent*
Agriculture	108	0.020	Pharmaceuticals & biological	348	0.063
Mining	172	0.031	Utilities	222	0.040
Food & beverage	149	0.027	Architecture	150	0.027
Textiles & apparel	88	0.016	Transportation & logistic	141	0.026
Timber & furniture	19	0.003	Information technology	618	0.112
Paper & printing	80	0.015	Wholesale & retail	242	0.044
Oils & Chemicals	569	0.103	Real estate development	224	0.041
Electronics	303	0.055	Social services	244	0.044
Metal & non-metal	405	0.074	Media & culture	102	0.019
Machinery, equipment & instrument	1,037	0.188	Conglomerates	288	0.052
			Total	5,509	1.000

Notes: This table displays the time profile and the industry distribution of the sample.

Table 4 Descriptive statistics

Variable	*Observations*	*Mean*	*Std.Dev*	*Min*	*Max*
Ifvam	5,509	0.330	0.470	0.000	1.000
F1ncskew	5,509	-0.218	0.960	-2.816	2.214
F1duvol	5,509	-0.134	0.774	-1.919	1.814
Ssdist	5,509	4.818	2.400	0.000	7.943
Ttdist	5,509	9.484	3.148	0.000	12.443
Ncskew	5,509	-0.307	0.979	-2.982	2.149
Duvol	5,509	-0.223	0.797	-2.141	1.830
Rw	5,509	0.000	0.008	-0.018	0.027
Sigw	5,509	0.054	0.021	0.020	0.124
Oturnover	5,509	-0.478	3.084	-12.853	10.682
Da	5,509	0.004	0.069	-0.246	0.208
Lnta	5,509	22.311	1.254	18.147	26.062
Roa	5,509	0.046	0.054	-0.187	0.221
Lev	5,509	0.451	0.200	0.016	0.911
Overcon	5,509	0.380	0.111	0.168	0.721
Analyst	5,509	7.751	9.048	0.000	39.000

Notes: This table displays the descriptive statistics of the sample. All variables are defined in Table 1.

Table 5 The effect of earnouts and geographic dispersion on stock price crash risk after M&A

Variable	*(1)*	*(2)*	*(3)*	*(4)*	*(5)*	*(6)*
	F1ncskew	*F1duvol*	*F1ncskew*	*F1ncskew*	*F1duvol*	*F1duvol*
Ifvam	-0.071**	-0.056**	-0.194***	-0.311***	-0.175***	-0.268***
	(-2.506)	(-2.512)	(-3.089)	(-3.455)	(-3.519)	(-3.759)
Ssdist			-0.010		-0.012**	
			(-1.546)		(-2.512)	
Ifvam_Ssdist			0.025**		0.024***	
			(2.226)		(2.752)	
Ttdist				-0.008*		-0.007**
				(-1.774)		(-2.005)
Ifvam_Ttdist				0.025***		0.022***
				(2.820)		(3.141)
Ncskew	0.056***		0.055***	0.055***		
	(3.499)		(3.472)	(3.488)		
Duvol		0.068***			0.068***	0.068***
		(3.777)			(3.774)	(3.759)
Rw	18.054***	15.229***	17.920***	17.967***	15.120***	15.140***
	(8.215)	(7.741)	(8.151)	(8.179)	(7.685)	(7.699)
Sigw	2.884***	2.709***	2.861***	2.801***	2.706***	2.636***
	(3.532)	(4.192)	(3.501)	(3.429)	(4.185)	(4.078)
Oturnover	-0.012***	-0.008**	-0.012***	-0.012***	-0.008**	-0.008**
	(-2.671)	(-2.157)	(-2.683)	(-2.649)	(-2.177)	(-2.131)
Da	0.334*	0.283*	0.334*	0.331*	0.285**	0.280*
	(1.832)	(1.960)	(1.833)	(1.817)	(1.977)	(1.944)
Lnta	-0.029**	0.002	-0.029**	-0.030**	0.002	0.002
	(-2.025)	(0.218)	(-2.032)	(-2.091)	(0.214)	(0.143)
Roa	-1.196***	-1.044***	-1.204***	-1.184***	-1.061***	-1.034***
	(-4.262)	(-4.698)	(-4.284)	(-4.219)	(-4.771)	(-4.652)
Lev	-0.276***	-0.261***	-0.274***	-0.269***	-0.259***	-0.255***
	(-3.290)	(-3.930)	(-3.262)	(-3.210)	(-3.903)	(-3.842)
Overcon	-0.074	-0.045	-0.074	-0.076	-0.044	-0.046
	(-0.638)	(-0.489)	(-0.640)	(-0.657)	(-0.482)	(-0.510)
Analyst	0.007***	0.004***	0.008***	0.007***	0.004***	0.004***
	(4.504)	(2.895)	(4.579)	(4.548)	(3.037)	(2.947)
_cons	0.457	-0.055	0.493	0.543	-0.009	0.022
	(1.379)	(-0.210)	(1.485)	(1.626)	(-0.036)	(0.083)
Ind&Year	Yes	Yes	Yes	Yes	Yes	Yes
N	5509	5509	5509	5509	5509	5509
Adj.R^2	0.124	0.154	0.124	0.125	0.156	0.156
F	19.982	25.535	19.182	19.263	24.588	24.618

Notes: This table displays the regression results for the effect of earnouts and geographic dispersion on stock price crash risk after M&A. Columns (1)-(2) reports the effect of earnouts on stock price crash risk, and Columns (3)-(6) reports the moderating effect of geographic dispersion. All variables are defined in Table 1. All

continuous variables are winsorized at 1st and 99th percentile levels. The value of t-statistics is in brackets; ***, **, * indicate that the parameter estimate is significantly different from zero at the 1%, 5% or 10% level respectively.

Table 6 Robust check: propensity score matching (PSM) and use other proxy for crash risk

	PSM				*Other proxy for crash risk*			
Variable	*(1)*	*(2)*	*(3)*	*(4)*	*(5)*	*(6)*	*(7)*	*(8)*
	F1ncskew	*F1ncskew*	*F1duvol*	*F1duvol*	*Gapncskew*	*Gapncskew*	*Gapduvol*	*Gapduvol*
Ifvam	-0.230**	-0.301*	-0.162**	-0.274**	-0.194***	-0.311***	-0.175***	-0.268***
	(-2.225)	(-1.902)	(-1.964)	(-2.177)	(-3.089)	(-3.455)	(-3.519)	(-3.759)
Ssdist	-0.015		-0.013		-0.010		-0.012**	
	(-1.190)		(-1.334)		(-1.546)		(-2.512)	
Ifvam_Ssdist	0.038**		0.027*		0.025**		0.024***	
	(2.013)		(1.782)		(2.226)		(2.752)	
Ttdist		-0.014		-0.014*		-0.008*		-0.007**
		(-1.462)		(-1.850)		(-1.774)		(-2.005)
Ifvam_Ttdist		0.027*		0.025**		0.025***		0.022***
		(1.722)		(2.041)		(2.820)		(3.141)
Ncskew	0.082***	0.083***			-0.945***	-0.945***		
	(2.902)	(2.942)			(-59.422)	(-59.461)		
Duvol			0.096***	0.096***			-0.932***	-0.932***
			(2.998)	(3.007)			(-51.713)	(-51.756)
Rw	17.195***	17.356***	14.701***	14.730***	17.920***	17.967***	15.120***	15.140***
	(4.539)	(4.585)	(4.337)	(4.350)	(8.151)	(8.179)	(7.685)	(7.699)
Sigw	2.405*	2.397*	2.984***	2.951**	2.861***	2.801***	2.706***	2.636***
	(1.672)	(1.665)	(2.604)	(2.575)	(3.501)	(3.429)	(4.185)	(4.078)
Oturnover	0.011	0.012	0.006	0.006	-0.012***	-0.012***	-0.008**	-0.008**
	(1.308)	(1.350)	(0.887)	(0.905)	(-2.683)	(-2.649)	(-2.177)	(-2.131)
Da	0.152	0.150	0.169	0.169	0.334*	0.331*	0.285**	0.280*
	(0.443)	(0.438)	(0.619)	(0.620)	(1.833)	(1.817)	(1.977)	(1.944)
Lnta	-0.018	-0.019	0.006	0.005	-0.029**	-0.030**	0.002	0.002
	(-0.666)	(-0.678)	(0.266)	(0.247)	(-2.032)	(-2.091)	(0.214)	(0.143)
Roa	-1.690***	-1.679***	-1.199***	-1.180***	-1.204***	-1.184***	-1.061***	-1.034***
	(-3.379)	(-3.353)	(-3.011)	(-2.963)	(-4.284)	(-4.219)	(-4.771)	(-4.652)
Lev	-0.099	-0.096	-0.137	-0.131	-0.274***	-0.269***	-0.259***	-0.255***
	(-0.669)	(-0.647)	(-1.166)	(-1.113)	(-3.262)	(-3.210)	(-3.903)	(-3.842)
Overcon	0.070	0.076	0.009	0.006	-0.074	-0.076	-0.044	-0.046
	(0.328)	(0.359)	(0.052)	(0.035)	(-0.640)	(-0.657)	(-0.482)	(-0.510)
Analyst	0.006**	0.006**	0.000	0.000	0.008***	0.007***	0.004***	0.004***
	(2.013)	(2.073)	(0.091)	(0.115)	(4.579)	(4.548)	(3.037)	(2.947)
_cons	0.554	0.607	0.145	0.211	0.493	0.543	-0.009	0.022
	(0.849)	(0.927)	(0.279)	(0.405)	(1.485)	(1.626)	(-0.036)	(0.083)
Ind&Year	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	1566	1566	1566	1566	5509	5509	5509	5509
Adj.R^2	0.175	0.174	0.225	0.226	0.580	0.581	0.613	0.613
F	8.895	8.870	11.820	11.869	178.226	178.394	203.555	203.621

Notes: This table displays the regressions results for robust check by PSM and changing proxy variables. Columns (1)-(4) reports the results after PSM, and Columns (5)-(8) reports the results when using the incremental

stock price crash risk as the dependent variable. All variables are defined in Table 1. All continuous variables are winsorized at 1st and 99th percentile levels. The value of t-statistics is in brackets; ***, **, * indicate that the parameter estimate is significantly different from zero at the 1%, 5% or 10% level respectively.

Table 7 Robustness check: substituting geographic dispersion as the explanatory variable

Variable	*(1)*	*(2)*	*(3)*	*(4)*
	F1ncskew	*F1duvol*	*F1ncskew*	*F1duvol*
Ifvam	-0.182***	-0.166***	-0.228***	-0.213***
	(-2.855)	(-3.302)	(-2.890)	(-3.407)
Distance	-0.011*	-0.013***		
	(-1.778)	(-2.648)		
Ifvam_Distance	0.023**	0.023**		
	(1.992)	(2.526)		
Duration			-0.013	-0.017***
			(-1.642)	(-2.592)
Ifvam_Duration			0.033**	0.033***
			(2.159)	(2.741)
Ncskew	0.056***		0.055***	
	(3.499)		(3.482)	
Duvol		0.068***		0.068***
		(3.799)		(3.777)
Rw	17.979***	15.178***	17.918***	15.102***
	(8.180)	(7.717)	(8.151)	(7.677)
Sigw	2.891***	2.728***	2.870***	2.710***
	(3.538)	(4.220)	(3.512)	(4.192)
Oturnover	-0.012***	-0.008**	-0.012***	-0.008**
	(-2.696)	(-2.189)	(-2.675)	(-2.165)
Da	0.337*	0.288**	0.335*	0.286**
	(1.850)	(1.999)	(1.835)	(1.980)
Lnta	-0.029**	0.003	-0.029**	0.003
	(-2.002)	(0.252)	(-2.024)	(0.225)
Roa	-1.215***	-1.068***	-1.198***	-1.054***
	(-4.325)	(-4.802)	(-4.265)	(-4.738)
Lev	-0.275***	-0.260***	-0.273***	-0.258***
	(-3.274)	(-3.911)	(-3.247)	(-3.884)
Overcon	-0.072	-0.043	-0.074	-0.044
	(-0.628)	(-0.472)	(-0.639)	(-0.486)
Analyst	0.008***	0.004***	0.007***	0.004***
	(4.594)	(3.041)	(4.570)	(3.011)
_cons	0.498	-0.008	0.507	0.007
	(1.502)	(-0.030)	(1.525)	(0.028)
N	5509	5509	5509	5509
Adj.R^2	0.124	0.155	0.124	0.156
F	19.169	24.577	19.179	24.596

Notes: This table displays the regression results on stock price crash risk following earnouts, accounting for the actual travel distance and time between the acquiring and target firms. All variables are defined in Table 1. All continuous variables are winsorized at 1st and 99th percentile levels. The value of t-statistics is in brackets; ***, **, * indicate that the parameter estimate is significantly different from zero at the 1%, 5% or 10% level

respectively.

Table 8 Robust check: control the heteroscedasticity and run clustering regressions

	Control the heteroscedasticity				*Clustering regressions*			
Variable	*(1)*	*(2)*	*(3)*	*(4)*	*(5)*	*(6)*	*(7)*	*(8)*
	F1ncskew	*F1ncskew*	*F1duvol*	*F1duvol*	*F1ncskew*	*F1ncskew*	*F1duvol*	*F1duvol*
Ifvam	-0.194***	-0.311***	-0.175***	-0.268***	-0.194***	-0.311***	-0.175***	-0.268***
	(-3.094)	(-3.441)	(-3.604)	(-3.712)	(-3.395)	(-4.381)	(-5.359)	(-4.685)
Ssdist	-0.010		-0.012**		-0.010		-0.012	
	(-1.556)		(-2.534)		(-1.366)		(-1.709)	
Ifvam_Ssdist	0.025**		0.024***		0.025***		0.024***	
	(2.259)		(2.821)		(3.124)		(4.399)	
Ttdist		-0.008*		-0.007**		-0.008*		-0.007*
		(-1.754)		(-2.059)		(-1.873)		(-2.088)
Ifvam_Ttdist		0.025***		0.022***		0.025***		0.022***
		(2.820)		(3.111)		(3.352)		(3.859)
Ncskew	0.055***	0.055***			0.055**	0.055**		
	(3.531)	(3.548)			(2.630)	(2.650)		
Duvol			0.068***	0.068***			0.068***	0.068***
			(3.823)	(3.808)			(3.521)	(3.522)
Rw	17.920***	17.967***	15.120***	15.140***	17.920***	17.967***	15.120***	15.140***
	(8.276)	(8.298)	(7.766)	(7.775)	(5.510)	(5.467)	(5.698)	(5.612)
Sigw	2.861***	2.801***	2.706***	2.636***	2.861***	2.801***	2.706***	2.636***
	(3.558)	(3.488)	(4.394)	(4.288)	(2.998)	(2.967)	(4.096)	(3.962)
Oturnover	-0.012***	-0.012***	-0.008**	-0.008**	-0.012**	-0.012**	-0.008	-0.008
	(-2.815)	(-2.778)	(-2.189)	(-2.142)	(-2.150)	(-2.107)	(-1.708)	(-1.669)
Da	0.334*	0.331*	0.285*	0.280*	0.334	0.331	0.285	0.280
	(1.744)	(1.727)	(1.950)	(1.915)	(1.330)	(1.303)	(1.530)	(1.493)
Lnta	-0.029**	-0.030**	0.002	0.002	-0.029	-0.030*	0.002	0.002
	(-2.000)	(-2.058)	(0.209)	(0.140)	(-1.714)	(-1.772)	(0.172)	(0.115)
Roa	-1.204***	-1.184***	-1.061***	-1.034***	-1.204***	-1.184***	-1.061***	-1.034***
	(-4.233)	(-4.173)	(-4.559)	(-4.451)	(-3.322)	(-3.338)	(-3.647)	(-3.647)
Lev	-0.274***	-0.269***	-0.259***	-0.255***	-0.274***	-0.269***	-0.259***	-0.255***
	(-3.369)	(-3.314)	(-3.967)	(-3.905)	(-3.332)	(-3.359)	(-4.389)	(-4.370)
Overcon	-0.074	-0.076	-0.044	-0.046	-0.074	-0.076	-0.044	-0.046
	(-0.646)	(-0.664)	(-0.480)	(-0.508)	(-0.407)	(-0.416)	(-0.303)	(-0.318)
Analyst	0.008***	0.007***	0.004***	0.004***	0.008***	0.007***	0.004**	0.004**
	(4.729)	(4.697)	(2.973)	(2.886)	(5.335)	(5.282)	(2.740)	(2.712)
_cons	0.493	0.543	-0.009	0.022	0.493	0.543	-0.009	0.022
	(1.464)	(1.605)	(-0.035)	(0.081)	(1.345)	(1.480)	(-0.029)	(0.070)
Ind&Year	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	5509	5509	5509	5509	5509	5509	5509	5509
Adj.R^2	0.124	0.125	0.156	0.156	0.124	0.125	0.156	0.156
F	22.023	21.994	27.099	26.912	--	--	--	--

Notes: This table displays the regressions results for controlling the heteroscedasticity and clustering regressions. Columns (1)-(4) reports the results after controlling the heteroscedasticity, and Columns (5)-(8) reports the

results for clustering regressions by industry. All variables are defined in Table 1. All continuous variables are winsorized at 1st and 99th percentile levels. The value of t-statistics is in brackets; ***, **, * indicate that the parameter estimate is significantly different from zero at the 1%, 5% or 10% level respectively.

Table 9 Results of the Heckman two-step estimation

Panel A: Heckman first stage		
Variable	*(1)* *Ssdistnum*	*(2)* *Ttdisnum*
Lnycs	0.229***	0.132***
	(51.012)	(29.327)

Panel B: Heckman second stage						
Variable	*(1)* *F1ncskew*	*(2)* *F1duvol*	*(3)* *F1ncskew*	*(4)* *F1ncskew*	*(5)* *F1duvol*	*(6)* *F1duvol*
Ifvam	-0.053*	-0.037	-0.195***	-0.301***	-0.170***	-0.255***
	(-1.792)	(-1.593)	(-2.982)	(-3.148)	(-3.289)	(-3.366)
Ssdist			-0.006		-0.005	
			(-0.616)		(-0.630)	
Ifvam_Ssdist			0.029**		0.027***	
			(2.428)		(2.870)	
Ttdist				-0.008*		-0.006
				(-1.700)		(-1.468)
Ifvam_Ttdist				0.026***		0.022***
				(2.733)		(3.022)
Lnycs	-0.009	0.004	-0.014	-0.011	-0.000	0.003
	(-0.408)	(0.254)	(-0.639)	(-0.495)	(-0.020)	(0.163)
Imr_Ssdist	-0.142		-0.219		0.095	
	(-0.335)		(-0.507)		(0.278)	
Imr_Ttdist		0.161		-0.185		0.132
		(0.478)		(-0.434)		(0.391)
Rw	13.854***	10.098***	13.806***	13.815***	10.050***	10.062***
	(6.952)	(6.401)	(6.929)	(6.936)	(6.374)	(6.382)
Sigw	2.023**	2.173***	1.905**	1.894**	2.066***	2.067***
	(2.125)	(2.883)	(1.995)	(1.988)	(2.735)	(2.741)
Oturnover	-0.013***	-0.008**	-0.014***	-0.013***	-0.008**	-0.008**
	(-2.836)	(-2.037)	(-2.895)	(-2.809)	(-2.108)	(-2.015)
Da	0.322	0.369*	0.293	0.308	0.344*	0.358*
	(1.313)	(1.900)	(1.189)	(1.256)	(1.762)	(1.847)
Lnta	-0.042***	-0.009	-0.042***	-0.043***	-0.009	-0.009
	(-2.770)	(-0.722)	(-2.761)	(-2.804)	(-0.714)	(-0.763)
Roa	-1.008***	-0.950***	-0.985***	-0.985***	-0.929***	-0.929***
	(-3.040)	(-3.617)	(-2.966)	(-2.969)	(-3.535)	(-3.540)
Lev	-0.212**	-0.253***	-0.207**	-0.204**	-0.248***	-0.245***
	(-2.402)	(-3.610)	(-2.334)	(-2.303)	(-3.535)	(-3.504)
Overcon	-0.125	-0.079	-0.122	-0.126	-0.076	-0.081
	(-1.020)	(-0.815)	(-1.001)	(-1.034)	(-0.790)	(-0.836)
Analyst	0.008***	0.004***	0.008***	0.008***	0.004***	0.004***
	(4.118)	(2.813)	(4.116)	(4.117)	(2.819)	(2.816)
_cons	0.838**	0.089	0.911**	0.948**	0.152	0.168

	(2.046)	(0.275)	(2.190)	(2.293)	(0.461)	(0.515)
Ind&Year	Yes	Yes	Yes	Yes	Yes	Yes
N	5115	5115	5115	5115	5115	5115
Adj.R^2	0.122	0.152	0.123	0.123	0.153	0.153
F	17.992	22.869	17.324	17.367	22.050	22.068

Notes: This table displays the results of the Heckman two-step estimation. Panel A reports the results of the first stage of the Heckman test, and Panel B reports the results of the second stage of the Heckman test. All variables are defined in Table 1. All continuous variables are winsorized at 1st and 99th percentile levels. The value of t-statistics is in brackets; ***, **, * indicate that the parameter estimate is significantly different from zero at the 1%, 5% or 10% level respectively.

Table 10 Results for the determinants of earnouts

Variable	*(1)* *Ifvam*	*(2)* *Ifvam*	*(3)* *Ifvam*	*(4)* *Ifvam*	*(5)* *Ifvam*
Ssdist	0.117***				
	(8.503)				
Ttdist		0.049***			
		(4.492)			
Multi			0.139*		
			(1.909)		
Roatarget				2.022***	
				(5.305)	
Lntatarget					0.317***
					(7.564)
Rw	-2.307	-2.162	-1.213	-7.471	-9.087
	(-0.483)	(-0.455)	(-0.254)	(-0.958)	(-1.195)
Sigw	12.476***	12.940***	12.540***	15.568***	15.800***
	(6.116)	(6.394)	(6.170)	(4.819)	(5.013)
Oturnover	-0.037***	-0.038***	-0.037***	-0.044**	-0.043**
	(-3.251)	(-3.376)	(-3.272)	(-2.397)	(-2.398)
Da	-0.175	-0.127	-0.112	0.124	0.195
	(-0.363)	(-0.265)	(-0.232)	(0.161)	(0.258)
Lnta	-0.318***	-0.318***	-0.317***	-0.182***	-0.431***
	(-8.237)	(-8.287)	(-8.190)	(-2.941)	(-6.178)
Roa	0.635	0.424	0.172	2.985**	3.767***
	(0.890)	(0.599)	(0.241)	(2.558)	(3.290)
Lev	-0.126	-0.134	-0.096	0.066	-0.254
	(-0.581)	(-0.625)	(-0.444)	(0.196)	(-0.745)
Overcon	0.452	0.469	0.549*	-0.562	-0.844*
	(1.508)	(1.572)	(1.836)	(-1.172)	(-1.796)
Analyst	-0.003	-0.001	0.000	-0.002	0.000
	(-0.600)	(-0.307)	(0.029)	(-0.289)	(0.010)
_cons	1.273	1.357	1.680	2.212	1.903
	(0.964)	(1.028)	(1.270)	(1.524)	(1.334)
Ind&Year	Yes	Yes	Yes	Yes	Yes
N	5509	5509	5403	2264	2365
Pseudo R^2	0.160	0.149	0.144	0.165	0.172
Wald Chi^2	1097.393	1044.004	983.896	984.385	524.187

Notes: This table displays the regressions results for the impact of M&A characteristics on whether to sign an earnout. Columns (1)-(5) report the effects of geographic dispersion (*Ssdist* and *Ttdist*), cross-industry mergers (*Multi*), target company's return on assets (*Roatarget*) and the natural logarithm of total assets (*Lntatarget*) before acquisition on the likelihood of signing earnouts. All variables are defined in Table 1. All continuous variables are winsorized at 1st and 99th percentile levels. The value of t-statistics is in brackets; ***, **, * indicate that the parameter estimate is significantly different from zero at the 1%, 5% or 10% level respectively.

Table 11 Results for takeover premium

	Fullsample		*Earnout sample*			*Non-earnout sample*			
Variable	*(1)*	*(2)*	*(3)*	*(4)*	*(5)*	*(6)*	*(7)*	*8)*	*(9)*
	Premium	*F1ncskew*	*F1ncskew*	*F1duvol*	*F1duvol*	*F1ncskew*	*F1ncskew*	*F1duvol*	*F1duvol*
Ifvam	3.387***								
	(8.362)								
Premium		-0.006	-0.014***	-0.006	-0.012***	-0.003	-0.006	-0.001	-0.005
		(-1.398)	(-2.579)	(-1.626)	(-2.766)	(-0.841)	(-1.005)	(-0.368)	(-0.920)
Ssdist		0.007		0.005		-0.010		-0.013**	
		(0.646)		(0.601)		(-1.461)		(-2.468)	
Ssdist_Premium		0.001		0.001*		0.000		0.000	
		(1.604)		(1.867)		(0.777)		(0.341)	
Ttdist			0.008		0.008		-0.009*		-0.008**
			(0.948)		(1.278)		(-1.850)		(-2.163)
Ttdist_Premium			0.002***		0.001***		0.001		0.000
			(2.801)		(3.011)		(0.962)		(0.900)
Ncskew		0.086***	0.086***			0.043**	0.043**		
		(3.141)	(3.161)			(2.139)	(2.138)		
Duvol				0.089***	0.089***			0.057**	0.056**
				(2.978)	(2.971)			(2.465)	(2.445)
Rw	36.555	16.137***	16.289***	13.328***	13.392***	19.735***	19.854***	16.515***	16.605***
	(1.343)	(4.852)	(4.914)	(4.476)	(4.515)	(6.473)	(6.518)	(6.061)	(6.099)
Sigw	48.228***	0.891	0.677	1.276	1.077	4.193***	4.146***	3.500***	3.421***
	(4.135)	(0.690)	(0.524)	(1.262)	(1.067)	(3.871)	(3.831)	(4.063)	(3.975)
Oturnover	-0.094	-0.004	-0.004	-0.007	-0.007	-0.016***	-0.016***	-0.007	-0.008
	(-1.450)	(-0.586)	(-0.589)	(-1.283)	(-1.294)	(-2.695)	(-2.714)	(-1.624)	(-1.629)
Da	4.925*	0.487	0.483	0.275	0.267	0.149	0.155	0.245	0.244
	(1.869)	(1.518)	(1.506)	(1.092)	(1.064)	(0.659)	(0.687)	(1.364)	(1.360)
Lnta	-0.154	-0.041	-0.045*	0.013	0.010	-0.020	-0.021	-0.002	-0.002
	(-0.740)	(-1.561)	(-1.691)	(0.607)	(0.467)	(-1.123)	(-1.167)	(-0.109)	(-0.163)
Roa	5.142	-1.127**	-1.039**	-0.848**	-0.767**	-1.200***	-1.191***	-1.147***	-1.118***
	(1.255)	(-2.346)	(-2.163)	(-2.256)	(-2.043)	(-3.318)	(-3.300)	(-3.987)	(-3.893)
Lev	-1.508	-0.176	-0.159	-0.137	-0.121	-0.330***	-0.331***	-0.300***	-0.300***
	(-1.233)	(-1.212)	(-1.096)	(-1.212)	(-1.069)	(-3.079)	(-3.091)	(-3.523)	(-3.529)
Overcon	-0.941	-0.060	-0.065	-0.052	-0.057	-0.139	-0.138	-0.069	-0.067
	(-0.566)	(-0.304)	(-0.328)	(-0.334)	(-0.367)	(-0.962)	(-0.957)	(-0.599)	(-0.586)
Analyst	-0.010	0.004	0.004	-0.001	-0.001	0.008***	0.008***	0.006***	0.005***
	(-0.433)	(1.376)	(1.353)	(-0.484)	(-0.526)	(4.048)	(4.044)	(3.460)	(3.384)
_cons	7.335	0.911	0.958	0.003	0.021	0.307	0.365	0.103	0.144
	(1.535)	(0.852)	(0.897)	(0.003)	(0.026)	(0.742)	(0.878)	(0.314)	(0.434)
Ind&Year	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	5415	1813	1813	1813	1813	3602	3602	3602	3602
Adj.R^2	0.044	0.178	0.182	0.234	0.239	0.107	0.108	0.125	0.125
F	7.270	10.123	10.353	13.882	14.199	11.079	11.117	12.974	12.941

Notes: This table displays the regressions results of the impact of takeover premium. Columns (1) shows the effect of earnouts on takeover premium in the full sample. Columns (2)-(5) and (6)-(9) show the effects of geographic dispersion and takeover premium on the post-merger stock price crash risk when earnouts are signed as well as when no earnouts are signed, respectively. All variables are defined in Table 1. All continuous variables are winsorized at 1st and 99th percentile levels. The value of t-statistics is in brackets; ***, **, * indicate that the parameter estimate is significantly different from zero at the 1%, 5% or 10% level respectively.

Table 12 Results for influence mechanism: the fulfillment of performance commitment

	Full sample		*T*		*T+1*		*T+2*	
Variable	*(1)*	*(2)*	*(3)*	*(4)*	*(5)*	*(6)*	*(7)*	*(8)*
	Complete	*Complete*	*Complete1*	*Complete1*	*Complete2*	*Complete2*	*Complete3*	*Complete3*
Ssdist	-1.814**		-0.444		-1.575**		-1.881**	
	(-2.392)		(-1.016)		(-2.155)		(-2.038)	
Ttdist		-1.957***		-0.728**		-1.568***		-2.076***
		(-3.087)		(-2.047)		(-2.600)		(-2.654)
Rw	324.847	326.479	229.405*	228.178*	307.117	305.634	299.168	296.709
	(1.437)	(1.447)	(1.758)	(1.752)	(1.474)	(1.469)	(1.165)	(1.158)
Sigw	-38.765	-32.876	-32.192	-26.537	-196.955*	-191.576*	-32.675	-26.165
	(-0.354)	(-0.301)	(-0.515)	(-0.425)	(-1.932)	(-1.882)	(-0.253)	(-0.203)
Oturnover	-1.228**	-1.222**	-0.288	-0.286	-0.938	-0.953	-0.426	-0.477
	(-1.996)	(-1.991)	(-0.839)	(-0.836)	(-1.608)	(-1.636)	(-0.588)	(-0.659)
Da	-0.849	2.198	-3.927	-2.567	-41.210*	-38.674	-69.954**	-67.768**
	(-0.032)	(0.083)	(-0.260)	(-0.170)	(-1.676)	(-1.573)	(-2.266)	(-2.198)
Lnta	-1.548	-1.335	-0.167	-0.080	-1.451	-1.313	0.832	1.033
	(-0.719)	(-0.621)	(-0.134)	(-0.064)	(-0.710)	(-0.642)	(0.323)	(0.401)
Roa	62.595	57.817	22.872	20.691	90.141**	86.797**	101.740**	97.144*
	(1.505)	(1.391)	(0.966)	(0.875)	(2.306)	(2.219)	(2.022)	(1.932)
Lev	21.763*	19.357	17.797**	16.735**	14.486	12.831	-7.693	-10.070
	(1.761)	(1.564)	(2.522)	(2.367)	(1.241)	(1.097)	(-0.519)	(-0.678)
Overcon	-4.268	-5.466	13.477	12.938	-23.105	-24.243	-33.404*	-34.366*
	(-0.255)	(-0.327)	(1.412)	(1.357)	(-1.462)	(-1.534)	(-1.657)	(-1.708)
Analyst	-0.070	-0.064	0.074	0.074	-0.070	-0.065	-0.028	0.002
	(-0.293)	(-0.269)	(0.521)	(0.527)	(-0.311)	(-0.289)	(-0.101)	(0.005)
_cons	107.173	110.911	86.631**	89.387**	131.772*	133.158*	72.459	75.555
	(1.492)	(1.547)	(2.060)	(2.128)	(1.933)	(1.956)	(0.882)	(0.921)
Ind&Year	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	925	925	974	974	936	936	814	814
Adj.R^2	0.025	0.029	0.007	0.011	0.032	0.034	0.050	0.053
F	1.591	1.692	1.182	1.265	1.775	1.832	2.066	2.145

Notes: This table displays the regressions results for geographic distance and M&A performance achievement. Columns (1)-(2) are the regression results of geographic distance on firm performance achievement for the full sample; columns (3)-(4), (5)-(6), and (7)-(8) are the regression results of geographic distance on firm performance achievement in the first, second, and third years after the acquisition, respectively. All variables are defined in Table 1. All continuous variables are winsorized at 1st and 99th percentile levels. The value of t-statistics is in brackets; ***, **, * indicate that the parameter estimate is significantly different from zero at the 1%, 5% or 10% level respectively.

Table 13 Results for influence mechanism: R&D investment

Variable	*(1)*	*(2)*	*(3)*	*(4)*	*(5)*	*(6)*
	F1rdta	*F1rdta*	*F1ncskew*	*F1ncskew*	*F1duvol*	*F1duvol*
Ifvam	0.001	0.003*	-0.167***	-0.273***	-0.158***	-0.232***
	(1.386)	(1.797)	(-2.583)	(-2.935)	(-3.081)	(-3.156)
Ssdist	-0.000		-0.007		-0.011**	
	(-0.458)		(-1.135)		(-2.088)	
Ifvam_Ssdist	-0.000*		0.020*		0.022**	
	(-1.785)		(1.758)		(2.380)	
Ttdist		0.000		-0.006		-0.006
		(0.293)		(-1.397)		(-1.534)
Ifvam_Ttdist		-0.000**		0.021**		0.019***
		(-2.093)		(2.344)		(2.590)
F1rdta			-2.808***	-2.784***	-2.651***	-2.626***
			(-3.120)	(-3.095)	(-3.720)	(-3.685)
Ncskew			0.052***	0.052***		
			(3.156)	(3.177)		
Duvol					0.066***	0.066***
					(3.566)	(3.554)
Rw	0.063**	0.063**	18.355***	18.376***	15.700***	15.698***
	(2.100)	(2.096)	(8.108)	(8.123)	(7.733)	(7.736)
Sigw	0.001	0.000	2.893***	2.847***	2.808***	2.754***
	(0.053)	(0.039)	(3.441)	(3.388)	(4.219)	(4.139)
Oturnover	-0.000	-0.000	-0.014***	-0.014***	-0.010***	-0.010***
	(-1.062)	(-1.077)	(-3.106)	(-3.071)	(-2.651)	(-2.608)
Da	-0.013***	-0.013***	0.280	0.280	0.219	0.217
	(-4.464)	(-4.484)	(1.499)	(1.496)	(1.481)	(1.464)
Lnta	-0.002***	-0.002***	-0.039***	-0.040***	-0.007	-0.007
	(-10.360)	(-10.327)	(-2.643)	(-2.688)	(-0.562)	(-0.615)
Roa	0.025***	0.026***	-1.188***	-1.174***	-1.077***	-1.055***
	(5.611)	(5.638)	(-4.033)	(-3.990)	(-4.618)	(-4.528)
Lev	-0.006***	-0.006***	-0.279***	-0.276***	-0.259***	-0.256***
	(-4.209)	(-4.245)	(-3.231)	(-3.188)	(-3.781)	(-3.738)
Overcon	-0.002	-0.002	-0.103	-0.104	-0.076	-0.078
	(-1.025)	(-1.039)	(-0.864)	(-0.871)	(-0.802)	(-0.824)
Analyst	0.000***	0.000***	0.008***	0.008***	0.005***	0.005***
	(12.570)	(12.540)	(4.867)	(4.846)	(3.626)	(3.545)
_cons	0.052***	0.052***	0.713**	0.755**	0.186	0.207
	(10.024)	(9.861)	(2.079)	(2.188)	(0.684)	(0.759)
Ind&Year	Yes	Yes	Yes	Yes	Yes	Yes
N	5243	5243	5243	5243	5243	5243
Adj.R^2	0.469	0.469	0.130	0.130	0.162	0.163
F	111.291	111.244	18.740	18.804	24.112	24.119

Notes: This table displays the regression results for the influence mechanism of R&D investment. Columns (1) - (2)

are the regression results of earnouts and geographic dispersion on R&D investment; columns (3) - (6) are the regression results of earnouts and geographic dispersion on stock price crash risk after controlling for R&D investment. All variables are defined in Table 1. All continuous variables are winsorized at 1st and 99th percentile levels. The value of t-statistics is in brackets; ***, **, * indicate that the parameter estimate is significantly different from zero at the 1%, 5% or 10% level respectively.

Table 14 Group regressions result: the impact of purchased share ratio of the target firm

Variable	*Lower percentage of equity acquisition (Buy<=0.5)*				*Higher percentage of equity acquisition (Buy>0.5)*			
	(1)	*(2)*	*(3)*	*(4)*	*(5)*	*(6)*	*(7)*	*(8)*
	F1ncskew	*F1ncskew*	*F1duvol*	*F1duvol*	*F1ncskew*	*F1ncskew*	*F1duvol*	*F1duvol*
Ifvam	-0.354***	-0.402***	-0.245***	-0.364***	-0.068	-0.200*	-0.086	-0.155*
	(-3.386)	(-2.621)	(-2.959)	(-2.995)	(-0.810)	(-1.720)	(-1.297)	(-1.683)
Ssdist	-0.019**		-0.021***		0.000		-0.003	
	(-2.325)		(-3.240)		(0.015)		(-0.357)	
Ifvam_Ssdist	0.053***		0.037**		0.007		0.013	
	(2.869)		(2.535)		(0.470)		(1.081)	
Ttdist		-0.014**		-0.013***		-0.001		-0.001
		(-2.379)		(-2.688)		(-0.105)		(-0.099)
Ifvam_Ttdist		0.032**		0.031***		0.017		0.014
		(2.154)		(2.591)		(1.515)		(1.518)
Ncskew	0.031	0.030			0.079***	0.078***		
	(1.317)	(1.308)			(3.570)	(3.555)		
Duvol			0.044*	0.043*			0.095***	0.094***
			(1.693)	(1.670)			(3.730)	(3.705)
Rw	15.346***	15.532***	13.762***	13.878***	20.109***	20.090***	16.588***	16.550***
	(4.652)	(4.708)	(4.713)	(4.752)	(6.740)	(6.741)	(6.135)	(6.126)
Sigw	4.847***	4.708***	4.219***	4.057***	1.226	1.159	1.448*	1.417
	(3.953)	(3.840)	(4.347)	(4.182)	(1.109)	(1.049)	(1.652)	(1.619)
Oturnover	-0.015**	-0.013**	-0.008	-0.008	-0.010	-0.010	-0.008	-0.008
	(-2.187)	(-2.005)	(-1.609)	(-1.455)	(-1.632)	(-1.623)	(-1.541)	(-1.546)
Da	0.358	0.368	0.269	0.271	0.288	0.286	0.281	0.280
	(1.355)	(1.394)	(1.285)	(1.294)	(1.137)	(1.129)	(1.403)	(1.396)
Lnta	-0.033	-0.033	-0.003	-0.005	-0.027	-0.028	0.008	0.008
	(-1.548)	(-1.561)	(-0.195)	(-0.273)	(-1.378)	(-1.394)	(0.508)	(0.489)
Roa	-1.747***	-1.717***	-1.501***	-1.450***	-0.700*	-0.680*	-0.640**	-0.627**
	(-4.324)	(-4.256)	(-4.686)	(-4.534)	(-1.775)	(-1.724)	(-2.048)	(-2.007)
Lev	-0.303**	-0.311**	-0.276***	-0.274***	-0.246**	-0.237**	-0.244***	-0.238**
	(-2.479)	(-2.551)	(-2.854)	(-2.837)	(-2.103)	(-2.027)	(-2.636)	(-2.571)
Overcon	-0.219	-0.206	-0.160	-0.155	0.044	0.039	0.052	0.047
	(-1.320)	(-1.240)	(-1.218)	(-1.183)	(0.274)	(0.241)	(0.404)	(0.369)
Analyst	0.009***	0.008***	0.005***	0.005**	0.007***	0.007***	0.003*	0.003*
	(3.765)	(3.720)	(2.640)	(2.553)	(2.752)	(2.751)	(1.693)	(1.685)
_cons	0.642	0.709	0.116	0.180	0.283	0.295	-0.168	-0.169
	(1.339)	(1.470)	(0.305)	(0.471)	(0.606)	(0.627)	(-0.454)	(-0.453)
Ind&Year	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	2743	2743	2743	2743	2752	2752	2752	2752
Adj.R^2	0.145	0.145	0.173	0.172	0.111	0.111	0.142	0.143
F	11.841	11.779	14.298	14.241	8.949	9.026	11.579	11.632

Notes: This table displays the group regression results of the purchased share ratio of the target firm. Columns (1)-

(4) present the results for observations with share ratio below or equal 50%, and columns (5)-(8) present the results for observations with share ratio above 50%. All variables are defined in Table 1. All continuous variables are winsorized at 1st and 99th percentile levels. The value of t-statistics is in brackets; ***, **, * indicate that the parameter estimate is significantly different from zero at the 1%, 5% or 10% level respectively.

Table 15 Group regressions result: the impact of the target firm's digitization

	Lower level of digitization（Digitarget=0）				*Higher level of digitization（Digitarget=1）*			
Variable	*(1)*	*(2)*	*(3)*	*(4)*	*(5)*	*(6)*	*(7)*	*(8)*
	F1ncskew	*F1ncskew*	*F1duvol*	*F1duvol*	*F1ncskew*	*F1ncskew*	*F1duvol*	*F1duvol*
Ifvam	-0.285***	-0.451***	-0.196***	-0.306***	-0.069	-0.153	-0.119*	-0.225**
	(-2.976)	(-3.447)	(-2.591)	(-2.959)	(-0.815)	(-1.229)	(-1.768)	(-2.277)
Ssdist	-0.016*		-0.016**		-0.001		-0.007	
	(-1.917)		(-2.455)		(-0.078)		(-0.912)	
Ifvam_Ssdist	0.040**		0.027**		0.006		0.017	
	(2.343)		(1.981)		(0.419)		(1.437)	
Ttdist		-0.008		-0.005		-0.009		-0.012**
		(-1.355)		(-1.067)		(-1.209)		(-2.045)
Ifvam_Ttdist		0.038***		0.025**		0.012		0.020**
		(2.939)		(2.447)		(1.004)		(2.068)
Ncskew	0.040*	0.041*			0.070***	0.069***		
	(1.801)	(1.862)			(3.058)	(3.057)		
Duvol			0.040	0.041			0.100***	0.099***
			(1.611)	(1.615)			(3.816)	(3.802)
Rw	20.743***	20.957***	15.419***	15.482***	13.796***	13.730***	13.746***	13.670***
	(6.249)	(6.323)	(5.216)	(5.243)	(4.655)	(4.633)	(5.113)	(5.088)
Sigw	2.805**	2.737**	3.125***	3.037***	3.030***	3.000***	2.409***	2.340**
	(2.424)	(2.370)	(3.413)	(3.321)	(2.640)	(2.615)	(2.645)	(2.570)
Oturnover	-0.026***	-0.025***	-0.020***	-0.020***	0.006	0.006	0.008*	0.008*
	(-4.006)	(-3.968)	(-3.980)	(-3.935)	(0.972)	(0.973)	(1.669)	(1.683)
Da	0.285	0.276	0.257	0.244	0.449	0.443	0.355	0.348
	(1.170)	(1.134)	(1.335)	(1.267)	(1.618)	(1.595)	(1.607)	(1.576)
Lnta	-0.045**	-0.045**	-0.006	-0.006	-0.018	-0.018	0.006	0.005
	(-2.233)	(-2.263)	(-0.367)	(-0.375)	(-0.856)	(-0.882)	(0.374)	(0.316)
Roa	-1.547***	-1.506***	-1.350***	-1.301***	-1.052***	-1.060***	-0.927***	-0.924***
	(-3.766)	(-3.673)	(-4.158)	(-4.011)	(-2.743)	(-2.764)	(-3.037)	(-3.032)
Lev	-0.399***	-0.393***	-0.334***	-0.331***	-0.131	-0.133	-0.177*	-0.178*
	(-3.329)	(-3.280)	(-3.526)	(-3.492)	(-1.114)	(-1.133)	(-1.902)	(-1.911)
Overcon	0.007	0.004	-0.033	-0.034	-0.204	-0.201	-0.081	-0.079
	(0.047)	(0.025)	(-0.264)	(-0.277)	(-1.216)	(-1.198)	(-0.607)	(-0.593)
Analyst	0.010***	0.009***	0.006***	0.006***	0.006***	0.006***	0.002	0.002
	(4.130)	(4.028)	(3.359)	(3.190)	(2.670)	(2.693)	(1.273)	(1.272)
_cons	0.947**	0.966**	0.226	0.208	-0.006	0.075	-0.213	-0.118
	(2.072)	(2.101)	(0.625)	(0.572)	(-0.011)	(0.152)	(-0.542)	(-0.299)
Ind&Year	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	3052	3052	3052	3052	2457	2457	2457	2457
Adj.R^2	0.120	0.121	0.138	0.138	0.154	0.154	0.196	0.197
F	10.666	10.727	12.382	12.357	11.389	11.428	14.894	14.991

Notes: This table displays the group regression results of the target firm's digitization. Columns (1)-(4), (5)-(8) represents the results for the low level of digitalization (*Digitarget*=0) and the high level of digitalization

(*Digitarget*=1), repectively. All variables are defined in Table 1. All continuous variables are winsorized at 1st and 99th percentile levels. The value of t-statistics is in brackets; ***, **, * indicate that the parameter estimate is significantly different from zero at the 1%, 5% or 10% level respectively.

Table 16 Group regressions result

Panel A Results for the excess executive compensation group regression								
	Higher excess executive compensation				*Lower excess executive compensation*			
Variable	*（F1eecomp1>0）*				*（F1eecomp1<=0）*			
	(1)	*(2)*	*(3)*	*(4)*	*(5)*	*(6)*	*(7)*	*(8)*
	F1ncskew	*F1ncskew*	*F1duvol*	*F1duvol*	*F1ncskew*	*F1ncskew*	*F1duvol*	*F1duvol*
Ifvam	-0.188**	-0.328**	-0.176**	-0.321***	-0.096	-0.044	-0.125	-0.064
	(-2.087)	(-2.518)	(-2.414)	(-3.033)	(-0.945)	(-0.297)	(-1.581)	(-0.556)
Ssdist	-0.005		-0.007		-0.006		-0.012	
	(-0.509)		(-0.879)		(-0.650)		(-1.549)	
Ifvam_Ssdist	0.028*		0.025*		-0.000		0.012	
	(1.775)		(1.908)		(-0.023)		(0.860)	
Ttdist		-0.009		-0.008		0.003		0.000
		(-1.240)		(-1.399)		(0.452)		(0.054)
Ifvam_Ttdist		0.030**		0.028***		-0.006		-0.001
		(2.299)		(2.679)		(-0.433)		(-0.067)
Ncskew	0.044*	0.047**			0.072***	0.072***		
	(1.866)	(1.977)			(2.898)	(2.896)		
Duvol			0.066**	0.068**			0.070***	0.070**
			(2.378)	(2.449)			(2.587)	(2.560)
Panel B Results for opacity group regression								
	Lower opacity				*Higher opacity*			
Variable	*(1)*	*(2)*	*(3)*	*(4)*	*(5)*	*(6)*	*(7)*	*(8)*
	F1ncskew	*F1ncskew*	*F1duvol*	*F1duvol*	*F1ncskew*	*F1ncskew*	*F1duvol*	*F1duvol*
Ifvam	-0.288***	-0.518***	-0.262***	-0.408***	-0.125	-0.146	-0.109	-0.148
	(-3.255)	(-3.865)	(-3.756)	(-3.856)	(-1.380)	(-1.192)	(-1.518)	(-1.529)
Ssdist	-0.008		-0.010		-0.010		-0.014**	
	(-0.912)		(-1.385)		(-1.119)		(-1.980)	
Ifvam_Ssdist	0.041**		0.040***		0.014		0.013	
	(2.529)		(3.135)		(0.901)		(1.079)	
Ttdist		-0.012*		-0.008		-0.003		-0.005
		(-1.873)		(-1.557)		(-0.465)		(-1.004)
Ifvam_Ttdist		0.045***		0.035***		0.009		0.011
		(3.379)		(3.385)		(0.781)		(1.123)
Ncskew	0.039*	0.040*			0.068***	0.068***		
	(1.781)	(1.815)			(2.916)	(2.909)		
Duvol			0.058**	0.059**			0.078***	0.077***
			(2.286)	(2.312)			(2.998)	(2.967)
Panel C Results for the inefficient investment group regression								
	Underinvestment				*Overinvestment*			
Variable	*(1)*	*(2)*	*(3)*	*(4)*	*(5)*	*(6)*	*(7)*	*(8)*
	F1ncskew	*F1ncskew*	*F1duvol*	*F1duvol*	*F1ncskew*	*F1ncskew*	*F1duvol*	*F1duvol*
Ifvam	-0.382***	-0.495***	-0.260***	-0.398***	-0.157	-0.052	-0.167	-0.048
	(-3.254)	(-2.800)	(-2.741)	(-2.791)	(-1.199)	(-0.278)	(-1.611)	(-0.324)

Ssdist	-0.025**		-0.022**		-0.031**		-0.024**	
	(-2.131)		(-2.377)		(-2.221)		(-2.233)	
Ifvam_Ssdist	0.071***		0.048***		0.010		0.019	
	(3.312)		(2.797)		(0.435)		(1.054)	
Ttdist		-0.027***		-0.019***		-0.004		-0.003
		(-3.252)		(-2.840)		(-0.381)		(-0.366)
Ifvam_Ttdist		0.048***		0.039***		-0.007		-0.003
		(2.757)		(2.761)		(-0.402)		(-0.228)
Ncskew	0.024	0.021			0.037	0.034		
	(0.741)	(0.669)			(1.106)	(1.021)		
Duvol			0.068*	0.067*			0.072*	0.068*
			(1.815)	(1.785)			(1.948)	(1.825)

Notes: This table displays the group regression results. Panel A presents the results for the excess executive compensation group regression. Panel B presents the results for the opacity group regression. Panel C presents the results for the inefficient investment group regression. All variables are defined in Table 1. All continuous variables are winsorized at 1st and 99th percentile levels. The value of t-statistics is in brackets; ***, **, * indicate that the parameter estimate is significantly different from zero at the 1%, 5% or 10% level respectively.

Table 17 Group regressions result: the impact of the business similarity

	Lower business similarity (Lower Similar)				*Higher business similarity (Higher Similar)*			
Variable	*(1)*	*(2)*	*(3)*	*(4)*	*(5)*	*(6)*	*(7)*	*(8)*
	F1ncskew	*F1ncskew*	*F1duvol*	*F1duvol*	*F1ncskew*	*F1ncskew*	*F1duvol*	*F1duvol*
Ifvam	-0.286***	-0.528***	-0.216***	-0.407***	-0.146*	-0.169	-0.158**	-0.168*
	(-2.904)	(-3.841)	(-2.754)	(-3.715)	(-1.751)	(-1.399)	(-2.400)	(-1.772)
Ssdist	-0.012		-0.012*		-0.008		-0.013*	
	(-1.439)		(-1.781)		(-0.930)		(-1.799)	
Ifvam_Ssdist	0.043**		0.030**		0.014		0.022*	
	(2.519)		(2.207)		(0.945)		(1.888)	
Ttdist		-0.009		-0.008*		-0.007		-0.005
		(-1.493)		(-1.685)		(-1.018)		(-1.042)
Ifvam_Ttdist		0.048***		0.035***		0.010		0.012
		(3.544)		(3.291)		(0.807)		(1.323)
Ncskew	0.042*	0.045**			0.066***	0.065***		
	(1.846)	(1.966)			(2.946)	(2.929)		
Duvol			0.052**	0.053**			0.085***	0.084***
			(1.973)	(2.024)			(3.374)	(3.353)
Rw	19.304***	19.473***	15.562***	15.640***	15.530***	15.498***	14.360***	14.378***
	(5.996)	(6.061)	(5.364)	(5.399)	(5.086)	(5.074)	(5.309)	(5.314)
Sigw	4.664***	4.575***	3.727***	3.643***	1.181	1.187	1.703*	1.687*
	(3.926)	(3.854)	(3.935)	(3.849)	(1.034)	(1.040)	(1.901)	(1.884)
Oturnover	-0.007	-0.008	-0.002	-0.002	-0.013**	-0.013**	-0.010**	-0.010**
	(-1.008)	(-1.036)	(-0.266)	(-0.277)	(-2.238)	(-2.213)	(-2.269)	(-2.226)
Da	0.360	0.353	0.281	0.274	0.290	0.285	0.297	0.292
	(1.417)	(1.389)	(1.387)	(1.353)	(1.088)	(1.072)	(1.422)	(1.396)
Lnta	-0.033	-0.034*	-0.004	-0.005	-0.021	-0.021	0.014	0.013
	(-1.634)	(-1.677)	(-0.265)	(-0.297)	(-0.988)	(-1.019)	(0.870)	(0.819)
Roa	-1.393***	-1.354***	-1.148***	-1.112***	-1.032**	-1.024**	-1.010***	-0.990***
	(-3.564)	(-3.471)	(-3.689)	(-3.579)	(-2.516)	(-2.497)	(-3.135)	(-3.073)
Lev	-0.369***	-0.359***	-0.313***	-0.307***	-0.181	-0.180	-0.215**	-0.214**
	(-3.119)	(-3.035)	(-3.319)	(-3.262)	(-1.503)	(-1.500)	(-2.274)	(-2.263)
Overcon	0.020	0.009	0.080	0.071	-0.196	-0.194	-0.182	-0.179
	(0.120)	(0.056)	(0.613)	(0.544)	(-1.203)	(-1.188)	(-1.421)	(-1.401)
Analyst	0.009***	0.009***	0.006***	0.006***	0.006**	0.006**	0.002	0.002
	(3.904)	(3.821)	(3.220)	(3.131)	(2.491)	(2.488)	(0.902)	(0.850)
_cons	0.580	0.635	0.136	0.178	0.314	0.346	-0.247	-0.239
	(1.226)	(1.336)	(0.361)	(0.469)	(0.662)	(0.726)	(-0.663)	(-0.637)
Ind&Year	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	2757	2757	2757	2757	2746	2746	2746	2746
Adj.R^2	0.128	0.130	0.153	0.154	0.127	0.127	0.167	0.166
F	10.381	10.548	12.559	12.709	10.273	10.274	13.813	13.746

Notes: This table displays the group regression results of the business similarity between the acquirer and the target firm. Columns (1)-(4) are results for the observations with lower business similarity, and Columns (5)-(8)

are results for the observations with higher business similarity. All variables are defined in Table 1. All continuous variables are winsorized at 1st and 99th percentile levels. The value of t-statistics is in brackets; ***, **, * indicate that the parameter estimate is significantly different from zero at the 1%, 5% or 10% level respectively.