高管多地经历与股价崩盘风险[1]

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Abstract: about 50% of chairmen or CEOs in Chinese listed companies have cross-provincial work experience. Whether does geographical diversity of executive experience affect the stock price crash risk? Existing theory provides two expectations. On the one hand, the occupational insurance hypothesis holds that general knowledge of cross-regional management promotes the negotiation skills of executives, thus reducing the motivation of hiding bad news and the probability of collapse. On the other hand, under the geopolitical effect hypothesis, cross-regional work experience means more interactions with power centers. It will increase the probability that the company suffers administrative intervention and the bad news is hidden. Our results show that the correlation between geographic diversity and stock price crash risk is stronger significantly in state-owned samples than private samples. In addition, in state samples, executives' cross-provincial experience (or cross-urban experience) and three indexes of stock price collapse have significantly positive correlation, while cross-regional experience and only one collapse index have significantly negative correlation in the private samples, and the other two indexes are not related. The conclusion indicates that geographical effect obtains the effective proof in Chinese state-owned companies. The conclusion can help us understand that geographical diversity of executive experience will have negative effect on shareholders' wealth, while regional segmentation and the non-market incentive mode of executives in state-owned companies may be institutional reasons of this effect.

Keywords: geographic diversity; stock price crash;property right

1. Introduction

Recently, widespread stock price crash down phenomenon appears in Chinese companies, so shareholders suffer huge losses. The literatures on stock price crash down show that the behavior that executives hide bad news is an important reason for crash down risk (Jin and Myers, 2006; Hutton et al., 2009; Kothari et al., 2009; Kim et al., 2011). In this paper, we study whether geographical diversity of executive experience affects crash risk of companies. Geographic data of Executive work experience we manually collect reveal that in the samples (chairmen and CEOs), about 50% of the samples have cross-provincial experience, and about 70% of them have cross-urban experience. This means that the executive experience has obvious variance in terms of geographical diversity. Cross-regional executive experience not only measures the generality of knowledge, but also describes geographical capital of executives. The effects of the two factors on stock price crash down are totally opposite, which also makes the issue worthy of testing. On the one hand, the importance of general knowledge increasingly

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stands out in the modern commercial society. It makes the negotiation ability of executives, because general knowledge can get a good market value so that the executives owning general knowledge more likely get a good job. Therefore, general knowledge of cross-regional operation weakens the motivation of executives hiding bad news. On the other hand, under the geopolitical effect, geographical diversity of experience means more interactions with power centers, which bears the higher cost of administrative intervention, thereby increasing motivation of hiding bad news and probability of stock prices collapse.

In the aspect of institutional factors about coordinating general knowledge and geopolitical effect, the nature of property right is a good moderating variable. The reason is that the executives' incentive mechanism of state-owned companies has lower degree of marketization, and higher level of administrator. It will impair market pricing function of general knowledge. On the other hand, the state-owned companies have more incentive to establish and maintain geopolitical capital, such as maintaining long-term good relationships with local government and the community. Therefore, it is easier for state-owned property right to inspire geopolitical effect rather than general knowledge effect. Our empirical results confirmed this conjecture. First of all, the nature of property right has obvious moderating effect between geographical diversity and stock price collapse. The state-owned property right significantly increases the correlation of cross-regional experience and stock price crash. Secondly, the geopolitical effect hypothesis gains strong support in state-owned samples, while general knowledge hypothesis receives weak support in non-state enterprises.

The main contributions of this paper are as follows: first of all, the executive experience could affect the company's stock price crash risk through geographical chanel, but its effect needs property right as the supporting environment. This paper provides evidence for it, and enriches the literatures about economic consequences of geographical characteristics which emerge recently (Morris, 2011; Landier et al., 2009; Garcia and Norli 2012). Secondly, in terms of executives with general knowledge, this paper tests the stock price crash risk from the perspective of geographical generality, but only limited evidence is obtained in non-state-owned samples. This paper provides reference for the literature in this field (Murphy and Zabojnik 2004; Custodio et al. 2013). The arrangement of the paper is as follows. We first analyze the expected effect of geographical diversity on stock price crash. Then, we describe diversification degree of Chinese executive experience in geography, and demostrate the model and sample characteristics. Thirdly, we expound the research results by using state-owned property right as the moderating variable. Finally, we draw a conclusion for the full paper and point out the research limitations.

2. Cross-regional experience of executives and stock price crash down risk

In research field of corporate finance and accounting, geographical characteristics gradually attain attention. For example, Bushman et al. (2004) presented that the more geographical segments of a company, the higher degree of information non-transparency and the higher agency cost. This prompted investors to require the quality of accounting information and the board. The researches of Garcia and Norli (2012) have shown that the higher geographical dispersion in annual reports, the higher investment recognition the company is. The importance of geographical characteristics triggers our interest in geographical diversity degree of executive experience. The geographical diversity of experience involves interdisciplinary theory, such as the new regionalism in political science (Rithmire, 2014). The theory helps us put forward geopolitical capital hypothesis.

2.1 Cross-regional general knowledge and position insurance hypothesis

The researches on the executives' characteristics show the proportion of CEO with general knowledge gradually increases (Murphy and Zabojnik, 2004). Relative to special knowledge, general

knowledge is easier to transfer, observe and impart, such as MBA diploma. General knowledge is multidimensional, cross-industry or cross-organization. The ability of executives with general knowledge is relatively easy to observe, and price in the competition, therefore, when they sign contracts with companies, they have higher bargaining power. For example, a CEO with MBA degree of a famous university once succeeds in a company, he will get the favor of others, because his knowledge and ability are suited to other companies, which makes him get a better remuneration contract. Custodio et al.(2013) found that, the general degree of CEO's knowledge depicted in the dimensions of cross-company and cross-industry of work experience is associated positively with the compensation of CEO, which proves the hypothesis. According to this hypothesis, executives with general knowledge have higher professional insurance degree.

For position insurance hypothesis, in terms of China's institutional environment, geographic diversity of CEO has special significance. This is mainly due to the great differences between regions of China. For example, each dimension of marketization degree has big difference (Fan and Wang, 1999; 2001; 2005; 2009). Therefore, companies in different provinces differ in the business, which also requires CEO's different knowledge accumulation. Obviously, for a CEO who is qualified in many areas, his cross-regional business knowledge is valuable to the company in different areas. Therefore, the CEO has better career insurance. He does not need a short-term behavior to modify his power signal, and has the weaker motivation of hiding bad news. Different from executives with management options, they have the characteristics of short-term behavior (Kim et al. 2011). Executives with professional insurance will not safeguard their own interests at the expense of stock price crash down.

2.2 Geopolitical effect hypothesis

Cross-regional experience cannot just help executives accumulate general knowledge, but also let executives have experience in dealing with different local governments. This experience also affects motivation of hiding bad news. In the emerging Chinese market, political science based on the regionalism also reminds our attention to the significant difference of interaction between local government and company (Rithmire, 2014). For instance, the central government in the process of developing private economy, does not determine private enterprise is state-owned or private, so that the local government has a different interpretation way. Thus, local governments' attitude toward private enterprise presents significant regional differences. This difference makes the company rely on the support environment provided by local government in a large extent. Local governments also rely on the company to provide employment and industrial production, etc. In addition to the understanding differences of central policy, significant differences also exist when the local government promotes the development of industry. Zheng (2013) pointed out that provincial government's local characteristics embodied in the negotiations with central government. He suggested "Behavior federalism" forms in the process of economic development. Under the rules of interaction, executives' experience based on geography measures the probability of interaction with multiple local governments. For example, Zhang (2009) explained Chinese economic growth: competition strategy of investment promotion and capital introduction by taking county as the unit shaped different investment environments. When governments of each county are attracting capital by competing, geographical diversity of executive experience may have impact on corporate performance. We expect that when a company interacts with multiple power centers, it will bear the cost of administrative intervention. Xia et al. (2011) have shown that China's listed companies need the relationship with government to realize cross-provincial investment so as to break the regional division. However, political connection is a double-edged sword, which may benefit the company or bring the cost of administrative intervention. Pantzalis and Park (2014) have found companies closer to the state administrative center can gain more abnormal return, indicating that the

market will regard the behavior of taking the initiative to build the relationship between politics and business as a risky move. Once the company moves to other state, abnormal return will disappear. Moreover, Piotroski et al. (2015) found that the state-owned holding company would be affected by administrative intervention and hide bad news, such as promotion event of provincial administrative officials. Therefore, we expect executives with work experience in more areas will face more administrative intervention costs, thus increasing the probability of hiding bad news and stock price crash risk.

2.3 Moderating effect of state-owned property right

In the general knowledge effect and geopolitical effect, we think the property right is an important moderate variable. On the one hand, due to natural links between state-owned companies and government, the degree of market operation is lower, and executive incentive also shows the administrative characteristics. Therefore, the geopolitical effect is more likely to appear in state-owned companies. Piotroski et al. (2015) concentrated on state-owned samples when investigating the companies under provincial administrative intervention hide bad news due to intervention. On the other hand, the prerequisite of general knowledge effect is that managers are in a developedmarket. This requires executives' operating results can be observed, and reasonably priced. Obviously, general knowledge effect of executives in state-owned companies is weaker than that in private companies. In view of this, we regard property right as a moderate variable in the model.

3. Research methodology

3.1 Research hypotheses and models

To test whether geographical diversity of executive experience influences stock price crash risk, we refer to the model of stock price crash risk suggested by (Kothari et al. 2009; Kim et al. 2011).

CRASH = f (GEO, Control Variables)……1

*CRASH = f (GEO, STATE, STATE*GEO, Control Variables)……2*

In Model 1, if the estimated coefficient of the geographical diversity of executive experience is positive significantly, it shows that general knowledge effect has played a major role. Contrarily, the estimated coefficient of the variable GEO is negative significantly, which shows that geopolitical effect has played a major role. Compared with the Model 1, Model 2 adds the property nature variable STATE and tests the moderating effect. We expect the estimated coefficient of the STATE*GEO is positive significantly, which means the state-owned property right is easier to stimulate the geopolitical effect.

3.2 Definitions of variables

GEO is the geographical diversity variable of executive experience. We depict it from two dimensions. Firstly, DPROV is a dummy variable. The value of DPROV is 1 when the CEO or chairman has cross-provincial work experienceand 0 otherwise. Secondly, DCITY equals 1when the CEO or the chairman has the cross-urban experience,and 0 otherwise.The city here refers to prefecture-level city. Executive experience data are from the CCEX database. The database discloses most work experience of CEOs and the chairmen. When determining the prefecture-level city of units involved in work experience, first of all, we determine some city information by use of geographic information of related-party-transactions from CSMAR database. When we determine the partial information, we require the name of work experience is consistent with the name of the related transaction parties. For the rest of the working units, we determine the cities through Baidu and other public search engines. The addresses of all working units are their registration places. About 0.5% of the units could not determine

the city through Baidu or public information. They can only determine the province. For these units, we assume that they are in the capital city of the province. Due to the samples are very few, we deletethese samples in the sensitivity test, which doesn't affect the results.

CRASH is the index of stock price crash risk. We refer to Hutton et al. (2009) and Kim et al. (2011).First of all, we use Model 3 to calculate the weekly specific returns:

$$Rt=\alpha+\beta1MRt-2+\beta2MRt-1+\beta3MRt+\beta4MRt+1+\beta5MRt+2+\varepsilon \quad \ldots\ldots 3$$

Rt is weekly return of the company, calculated from every Thursday to next Wednesday. MRt is weekly return of market according to the weighted average calculation of the tradeableshare value. We regress for each company by year, and regard residual as weekly abnormal return. Then, calculation method of weekly specific return W is log (1+ weekly abnormal return).

The first index DCRASH of stock price crash risk is a dummy variable. When the company has lower weekly specific return than the average of weekly specific return deducting 3.2 times of standard deviation, the variable is 1. This indicates that stock price crash appears to the company in the year t. The second index NCSKEW of stock price collapse is continuous variable. The calculation formula is:

$$NCSKEW_t=-[n(n-1)^{\frac{3}{2}}\sum W_t^3]/[(n-1)(n-2)(\sum W_t^2)^{3/2}$$

The third index DUVOL is continuous variable. We divided weekly specific return into high and low groups according to the mean by year and then use the following formula to definite DUVOL.

DUVOL=log(standard deviation of low group/standard deviation of high group).

In the model, three crash indexes take the return data of fiscal year of t + 1, and the independent variables take the data of year t.Themoderate variable STATE is a dummy variable. When the ultimate controller of the company is the state, its value is 1; otherwise its value is 0. In the aspect of control variables, ST is a dummy variable. When the company is assigned to special treatment due to losses for two consecutive years, its value is 1; otherwise its value is 0. MSHARE is share-holding percentage of executives. DTURN is the growth rate of turnover rate. SKEW_1 is the value of NVCKEW in the period of t. SIGMA is standard deviation of weekly specific return in the period of t. FRET is the mean of weekly specific return in the period of t. MTB is market to book value ratio. ROA is return on total assets. DACC2 is discretionary accrual calculated by modified Jones model .DE is the leverage ratio. SIZE is the natural logarithm of total assets of t.

3.3 Data and sample description

The sample period of this study is from 2007 to 2012. We choose this period for two reasons. One is that from 2007 Chinese listed companies comprehensively implemented the new accounting standards, so the financial data are consistent. The other is that the character data were determined according to resumes of the management in 2012. When Chinese executives disclose their work experience, the most of experience does not include the period data. Therefore, we assume that the same person has consistent work experience in the period of research. At this point, too early observations may lead to overvaluing geographic diversity of the samples.

Because the research variable needs the financial data in the period of t-1, our initial samples include 11401 A-share non-financial listed companies with the complete financial data in the period of t and t-1 from CSMAR. Subsequently, we require the work experience of chairman and CEO can be observed in the database. The total number of such samples is 8804. Again, when we calculate the collapse index, we require the annual effective weekly return of each observation value is not less than

26, and then remove the observations lack of the final controller and other variables. At last, the number of final samples is 8152.

To avoidimpact of outliers, for all continuous variables, we winsorize annually at the level of ± 1%. The descriptive statistics are shown in Table 1.

(Insert Table 1)

As can be seen from Table 1, the mean of DPROV is 0.51, showing that about 50% of executives in companies have cross-provincial work experience. The mean of DCITY is 0.7, showing that about 70% of executives in companies have cross-urban work experience. In terms of stock price crash, the mean of DCRASH is 0.07, which is less than that of the U.S. sample, because of price limitation of trading in the Chinese stock market.

4. Empirical results

4.1 Cross-provincial experience of executives and stock price crash

(Insert Table 2)

From the column (1), when the interaction term of STATE and DPROV is not included, the coefficient of DPROV is not significant, which means that in the whole sample, there is no direct evidence to support the general knowledge effect and geopolitical effect. And from the column (2), after adding the interaction term of STATE and DPROV, the result has significant changes. First of all, the STATE * DPROV is positive significantly, which means that the correlation of DPROV and COLLAPSE in state-owned samples is stronger than that in non-state-owned samples. This indicates that the state-owned property right is more advantageous to generation of geopolitical effect. Secondly, DPROV is negative significantly, showing that executives' cross-provincial experience reduces the effect of stock price crash risk in non-state-owned samples, which provides support for general knowledge hypothesis. In conclusion, the nature of property right has significant moderate effect. Geopolitical effect is very obvious in state-owned samples, while general knowledge effect has gained support in the non-state-owned samples.

(Insert Table 3)

In Table 3, we present the regression results of each group according to the STATE. DPROV is negative significantly in non-state-owned samples, while positive significantly in the state-owned samples. This shows that results of interactive items and grouping regression are consistent completely.

(Insert Table 4 - Table7)

Table 4 shows the effect of cross-provincial experience of executives on the second indicator NCSKEW of stock price crash. It can be seen from the column (1), when the interaction item of STATE and DPROV is not added, the coefficient of DPROV is not significant, but seeing from the column (2), after the interaction item of STATE and DPROV is added, STATE * DPROV is positive significantly, while DPROV is not significant, indicating that the property right also has significant moderate effect for NCSKEW. However, when the STATE=0, general knowledge effect is not verified in the non-state enterprises. Next, Table 5 verifies the results of Table 4 based on the grouping regression of the property right. DPROV is positive significantly in the state-owned group, while in the non-state group it is not significant. Table 6 and Table 7 show the effect of cross-provincial experience on the third indicator DUVOL of stock price collapse. The result is consistent with Table 4 and Table 5. In the model of interaction term, STATE*DPROV is positive significantly, and DPROV is not significant. In grouping regression, DPROV is

positive significantly in the state-owned group, but in the non-state groups it is not significant. In conclusion, the results based on cross-provincial area shows that the moderate effect of STATE in the three indicators of stock collapse are very obvious, and DPROV and 3 collapse indexes are significantly positive in state-owned samples, while only DPROV and one index are negative significantly in the non-state-owned samples. Therefore, geopolitical effect has strong support in the sample of state-owned shares, and general knowledge effect has weaker support in only non-state enterprises.

4.2 Test based on cross-urban experience

(Insert Table 8)

Geographic data of executive experience show that 70% of company executives have cross-urban work experience, significantly higher than the proportion of cross-provincial work experience. Therefore, we also test Model 1 with cross-urban experience. The results are shown in Table 8. From the table, the interaction of STATE * DCITY is significantly positive in all the 3 regressions, but DCITY is negative significantly only in 1 regression. This is similar to the regression results of cross-provincial regions. Finally, in the grouping regression, DCITY is positive significantly in the state-owned samples, showing that geographical effect still holds on the basis of the city-level data.

5. Conclusion

Whether executive experience affects stock price crash risk is worth testing, the difference of regionalism and property right in the Chinese market provides a good test environment. We collect data manually of work experience and judge whether cross province or cross city. We then test two contrary theoretical expectations. On the one hand, cross-regional work experience of executives means general knowledge and better job prospects, because the general talents can be replicated in other successful companies. As a result, these executives' motivation of hiding bad news is weaker. On the other hand, cross-regional work experience means that executives are more likely to interact with many local administrative centers, which will increase the probability of intervention. The phenomenon that more bad news is hidden will occur.

The results show that the correlation between the geographic diversity of executive experience and the stock price collapse in the state-owned sample is significantly stronger than that in the private sample. In addition, in the state samples, cross-regional work experience and 3 crash indexes are significantly positive, while cross-regional work experience and only one collapse index are negative significantly in the non-state-owned samples. The other two indexes are not related. Therefore, in the case of state-owned company, the cross-regional experience may lead to a higher probability of crash. On the one hand, this helps us understand the impact of geographic characteristics on the wealth of shareholders; on the other hand, it also shows that the non-market characteristics of state-owned property will weaken the effect of general knowledge.

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Table 1 Descriptive information

Variable	N	Minimum	Maximun	STD	Mean	Median
DCRASH	8152	0.000	1.000	0.258	0.072	0.000
NCSKEW	8152	-2.678	1.545	0.659	-0.302	-0.259
DUVOL	8152	-1.137	0.692	0.326	-0.198	-0.197
DPROV	8152	0.000	1.000	0.500	0.511	1.000

DCITY	8152	0.000	1.000	0.457	0.702	1.000
STATE	8152	0.000	1.000	0.499	0.533	1.000
ST	8152	0.000	1.000	0.135	0.019	0.000
MSHARE	8152	0.000	0.693	0.138	0.050	0.000
DTURN	8152	-0.846	7.264	0.812	0.091	-0.125
SKEW_1	8152	-2.625	1.587	0.635	-0.236	-0.203
SIGMA	8152	0.015	0.156	0.017	0.050	0.047
FRET	8152	-0.013	0.000	0.001	-0.001	-0.001
MTB	8152	0.078	5.439	0.826	0.927	0.668
ROA	8152	-0.312	0.236	0.058	0.041	0.038
DACC	8152	-0.426	0.442	0.095	-0.001	-0.004
DE	8152	0.040	1.262	0.220	0.479	0.487
SIZE	8152	18.783	25.829	1.231	21.744	21.589

DCRASH: CRASH DOWN,the first index of the probability of stock price crash down;

NCSKEW：CRASH DOWN,the second index;

DUVOL：CRASH DOWN,the third index;

DPROV：1 if the CEO or chairman have cross-provincial work experience,and 0 otherwise;

DCITY：1 if the CEO or the chairman have the cross-urban experience,and 0 otherwise;

STATE：1 if the company’s controller is state-owned, and 0 otherwise;

ST：1 if the company is titled with *ST due to two years of losses;

MSHARE：share-holdingpercentage of the management;

DTURN：the growth rate of turnover rate;

SKEW_1：value of NCSKEW in the period of t;

SIGMA：the standard deviation firm specific return;

FRET：mean of firm specific return;

MTB：market to book ratio;

ROA：return on assets;

DACC2：discretionary accrual calculated by modified jones model;

DE: leverage ratio;

SIZE: the natural logarithm of total assets;

Table 2 Logistic regression : cross-provincial experience of executives and stock price crash risk

	(1)	(2)
VARIABLES	DCRASH	DCRASH
DPROV	0.0402	-0.213*
	(0.446)	(-1.739)
STATE	-0.0464	-0.318**
	(-0.435)	(-2.291)
STATE_DPROV		0.505***
		(2.887)
ST	0.438	0.450
	(1.381)	(1.420)
MSHARE	0.628*	0.587*
	(1.847)	(1.741)
DTURN	-0.0267	-0.0219
	(-0.370)	(-0.303)
SKEW_1	0.0340	0.0320
	(0.486)	(0.458)
SIGMA	1.833	2.030
	(0.164)	(0.181)
FRET	38.87	46.55
	(0.207)	(0.247)
MTB	-0.319***	-0.326***
	(-2.976)	(-3.047)
ROA	0.159	0.187
	(0.162)	(0.191)
DACC	0.585	0.572
	(1.316)	(1.289)
DE	0.640**	0.632**
	(2.454)	(2.434)
SIZE	0.0614	0.0582
	(1.223)	(1.162)
CONSTANT	-4.929***	-4.684***
	(-3.936)	(-3.741)
Industry	Yes	Yes
Year	Yes	Yes
Observations	8,152	8,152
Pseudo R-squared	0.047	0.049

The p-values are based on standard errors clustered by firm. All of the variables are defined in Table 1. *, **, *** denote significance levelsat 10%, 5% and 1% respectively.

Table3 The grouping regression based on STATE

	STATE=0	STATE=1
VARIABLES	DCRASH	DCRASH
DPROV	-0.224*	0.321**
	(-1.804)	(2.557)
ST	-0.797	0.792**
	(-1.044)	(2.121)
MSHARE	0.480	2.954
	(1.338)	(1.413)
DTURN	-0.00811	-0.0376
	(-0.0790)	(-0.367)
SKEW_1	-0.0557	0.106
	(-0.565)	(1.077)
SIGMA	8.725	-1.159
	(0.535)	(-0.0755)
FRET	231.2	-45.41
	(0.825)	(-0.181)
MTB	-0.346*	-0.349***
	(-1.749)	(-2.622)
ROA	0.219	-0.243
	(0.177)	(-0.156)
DACC2	0.875	0.273
	(1.475)	(0.396)
DE	0.602*	0.766*
	(1.794)	(1.788)
SIZE	0.0731	0.0463
	(0.936)	(0.684)
CONSTANT	-6.628***	-3.940**
	(-3.451)	(-2.336)
Industry	Yes	Yes
Year	Yes	Yes
Observations	3,779	4,335
Pseudo r-squared	0.0662	0.0480

The p-values are based on standard errors clustered by firm. All of the variables are defined in Table 1. *, **, *** denote significance levelsat 10%, 5% and 1% respectively.

Table 4 Cross-provincial experience of executives and stock price crash:NCSKEW

	(1)	(2)
VARIABLES	NCSKEW	NCSKEW
DPROV	0.0180	-0.0200
	(1.202)	(-0.912)
STATE	-0.0207	-0.0578**
	(-1.193)	(-2.559)
STATE_DPROV		0.0706**
		(2.367)
ST	0.272***	0.273***
	(4.826)	(4.854)
MSHARE	0.282***	0.276***
	(4.471)	(4.391)
DTURN	-0.0206**	-0.0201**
	(-2.252)	(-2.199)
SKEW_1	0.0772***	0.0770***
	(6.441)	(6.438)
SIGMA	7.928***	7.997***
	(5.021)	(5.067)
FRET	84.13***	85.62***
	(3.844)	(3.913)
MTB	-0.125***	-0.125***
	(-8.968)	(-9.020)
ROA	0.815***	0.816***
	(5.145)	(5.145)
DACC2	-0.0846	-0.0864
	(-1.145)	(-1.169)
DE	0.209***	0.207***
	(4.637)	(4.599)
SIZE	0.0351***	0.0346***
	(4.170)	(4.124)
Constant	-1.181***	-1.146***
	(-5.893)	(-5.714)
Industry	Yes	Yes
Year	Yes	Yes
Observations	8,152	8,152
R-squared	0.096	0.096

The p-values are based on standard errors clustered by firm. All of the variables are defined in Table 1. *, **, *** denote significance levelsat 10%, 5% and 1% respectively.

Table 5 The grouping regression based on STATE: NCSKEW

	(1)	(2)
VARIABLES	NCSKEW	NCSKEW
DPROV	-0.0210	0.0572***
	(-0.932)	(2.819)
ST	0.187**	0.323***
	(2.283)	(4.354)
MSHARE	0.232***	0.213
	(3.455)	(0.241)
DTURN	-0.0144	-0.0258**
	(-1.062)	(-2.058)
SKEW_1	0.0636***	0.0850***
	(3.581)	(5.179)
SIGMA	8.008***	7.569***
	(3.268)	(3.637)
FRET	86.33**	80.30***
	(2.515)	(2.796)
MTB	-0.131***	-0.125***
	(-4.922)	(-7.559)
ROA	0.741***	0.878***
	(3.308)	(3.766)
DACC2	-0.0667	-0.0961
	(-0.645)	(-0.893)
DE	0.202***	0.244***
	(3.137)	(3.661)
SIZE	0.0307**	0.0342***
	(2.199)	(3.132)
CONSTANT	-1.154***	-1.090***
	(-3.635)	(-4.051)
Industry	Yes	Yes
Year	Yes	Yes
Observations	3,805	4,347
R-squared	0.074	0.119

The p-values are based on standard errors clustered by firm. All of the variables are defined in Table 1. *, **, *** denote significance levelsat 10%, 5% and 1% respectively.

Table 6 Cross-provincial experience of executives and stock price crash risk:DUVOL

	(1)	(2)
VARIABLES	DUVOL	DUVOL
DPROV	0.00998	-0.00537
	(1.339)	(-0.489)
STATE	-0.00940	-0.0244**
	(-1.084)	(-2.138)
STATE_DPROV		0.0286*
		(1.916)
ST	0.154***	0.154***
	(5.567)	(5.596)
MSHARE	0.136***	0.134***
	(4.416)	(4.348)
DTURN	-0.00964**	-0.00944**
	(-2.127)	(-2.083)
SKEW_1	0.0392***	0.0391***
	(6.795)	(6.790)
SIGMA	2.813***	2.841***
	(3.602)	(3.638)
FRET	28.25**	28.86**
	(2.522)	(2.575)
MTB	-0.0577***	-0.0580***
	(-8.808)	(-8.849)
ROA	0.413***	0.414***
	(5.181)	(5.182)
DACC2	-0.0688*	-0.0696*
	(-1.846)	(-1.865)
DE	0.0984***	0.0975***
	(4.469)	(4.435)
SIZE	0.0170***	0.0168***
	(4.077)	(4.040)
Constant	-0.594***	-0.580***
	(-5.947)	(-5.797)
Industry	Yes	Yes
Year	Yes	Yes
Observations	8,152	8,152
R-squared	0.093	0.094

The p-values are based on standard errors clustered by firm. All of the variables are defined in Table 1. *, **, *** denote significance levelsat 10%, 5% and 1% respectively.

Table 7 The grouping regression based on STATE:DUVOL

	STATE=0	STATE=1
VARIABLES	DUVOL	DUVOL
DPROV	-0.00607	0.0262***
	(-0.540)	(2.584)
ST	0.122***	0.173***
	(3.068)	(4.728)
MSHARE	0.105***	0.266
	(3.190)	(0.659)
DTURN	-0.00544	-0.0133**
	(-0.826)	(-2.102)
SKEW_1	0.0350***	0.0409***
	(4.110)	(5.137)
SIGMA	2.973**	2.568**
	(2.444)	(2.513)
FRET	29.71*	26.58*
	(1.667)	(1.852)
MTB	-0.0611***	-0.0576***
	(-4.608)	(-7.432)
ROA	0.381***	0.445***
	(3.431)	(3.743)
DACC2	-0.0531	-0.0835
	(-1.028)	(-1.517)
DE	0.0969***	0.118***
	(3.061)	(3.651)
SIZE	0.0139**	0.0170***
	(1.977)	(3.141)
Constant	-0.575***	-0.547***
	(-3.598)	(-4.075)
Industry	Yes	Yes
Year	Yes	Yes
Observations	3,805	4,347
R-squared	0.077	0.111

The p-values are based on standard errors clustered by firm. All of the variables are defined in Table 1. *, **, *** denote significance levelsat 10%, 5% and 1% respectively.

Table 8 Tests based on cross-urban experience

	(1)	(2)	(3)
VARIABLES	DCRASH	NCSKEW	DUVOL
DCITY	-0.201	-0.0518**	-0.0163
	(-1.427)	(-2.093)	(-1.284)
STATE	-0.406**	-0.0844***	-0.0318**
	(-2.291)	(-3.014)	(-2.213)
STATE_DCITY	0.496**	0.0844***	0.0292*
	(2.512)	(2.612)	(1.789)
ST	0.444	0.272***	0.154***
	(1.399)	(4.843)	(5.586)
MSHARE	0.613*	0.276***	0.134***
	(1.807)	(4.397)	(4.343)
DTURN	-0.0225	-0.0197**	-0.00930**
	(-0.311)	(-2.147)	(-2.050)
SKEW_1	0.0288	0.0768***	0.0391***
	(0.411)	(6.430)	(6.796)
SIGMA	1.410	7.885***	2.803***
	(0.126)	(4.990)	(3.586)
FRET	36.99	84.08***	28.26**
	(0.197)	(3.833)	(2.517)
MTB	-0.326***	-0.126***	-0.0583***
	(-3.061)	(-9.119)	(-8.927)
ROA	0.0836	0.801***	0.409***
	(0.0859)	(5.041)	(5.108)
DACC2	0.595	-0.0798	-0.0670*
	(1.336)	(-1.077)	(-1.793)
DE	0.642**	0.209***	0.0984***
	(2.470)	(4.651)	(4.472)
SIZE	0.0574	0.0350***	0.0170***
	(1.142)	(4.171)	(4.101)
Constant	-4.642***	-1.127***	-0.577***
	(-3.674)	(-5.602)	(-5.754)
Industry	Yes	Yes	Yes
Year	Yes	Yes	Yes
Observations	8,152	8,152	8,152
Pseudo R-squared	0.048	0.096	0.093

The p-values are based on standard errors clustered by firm. All of the variables are defined in Table 1. *, **, *** denote significance levelsat 10%, 5% and 1% respectively.