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Cross-Listing and Bonding Premium: Evidence from Chinese Listed Companies

Abstract   This paper examines whether cross-listing enables firms to earn a higher valuation. We contrast a sample of 580 Chinese firms cross-listed on the B-share market of China and 159 Chinese firms cross-listed on the Hong Kong H-share market against a control sample of domestic firms listed only on the A-share market of China. It is found that firms cross-listed on B-share and H-share markets both enjoy bonding premiums. Moreover, the bonding premium is larger for H-share firms than for B-share firms. Results show that the amount of bonding premium is positively related to the level of investor protection, which provides supporting evidence to the bonding theory.

Keywords   cross-listing, bonding theory, bonding premium

1   Introduction

In recent years, an increasing number of firms choose to cross-list their shares on the well-developed capital markets. For example, the percentage of non-US firms listed on the New York Stock Exchange increased from 8.5% to 15% between 1994 and 2003 (Chouinard & Souza, 2004). In China, a number of high-quality

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firms such as China Life Insurance and Bank of China also cross-listed on Hong Kong Stock Exchange. Why the cross-listing phenomenon is so widespread? Many studies support the explanation that cross-listing can make firms earn a higher valuation compared to their domestic peers. For example, Doidge (2004) finds that foreign companies with shares cross-listed in the U.S. have Tobin's Q ratios 16.5% higher than that of non-cross-listed firms from the same country. The valuation added is called bonding premium.

Where does the bonding premium come from? The international CAPM and shareholder basis theory suggest that cross-listing can increase the firms' shareholder base, distribute their risk to more shareholders, and decrease the cost and risk assumed by investors when constructing portfolios, which lower shareholders' cost of capital (Karolyi and Stulz, 2001; Foerster and Karolyi, 1999). Moreover, Lins (2002) finds that cross-listed firms can bypass the underdeveloped domestic capital market so that the firms' growth opportunities get the chance to be fairly priced. Cantale (1997) and Moel (1999) establish a signal model to demonstrate that by cross-listing, firms disclose more private information to investors, thus they can reduce the monitoring cost of external shareholders. However, Coffee (1999, 2002) and Stulz (1999) put forth the bonding theory, which argues that cross-listed firms, which self-selectively bind themselves to a new market and subject to more stringent legal regulatory and market constraints can effectively reduce the agency problem, win the trust of investors, lower the capital cost, and eventually raise their values.

Although the bonding theory of cross-listing has been widely accepted, empirical findings have not depicted a uniform picture. For example, Foerster and Karolyi (1999) and Doidge (2004) provide supporting empirical evidence consistent with the bonding theory form multiple perspectives, while Licht (2003) and Siegel (2005) contend that cross-listing may not be able to play a bonding role because they believe that judicial procedures and supervision are very easy to lapse for the nonresident firms.

The special institutional environment in China provides a useful setting to test the power of the bonding theory. In recent years, the number of Chinese firms cross-listed in H-share market is growing rapidly, and some of them list on domestic A-share market at the same time, which enables us to study the bonding premium on the same market price as a benchmark. Especially, Chinese firms can issue different classes of shares of the same voting right and cash flow. In other words, A-share market is reserved for trade by domestic Chinese investors while B-share market is solely for trade by foreign investors. B-share market is similar to A-share market in the legal system and similar to H-market in terms of financial reporting and information disclosure, while in aspect of market restriction, B-share market is between A-share and H-share markets. The quality gaps among A-share, B-share, and H-share market hence give us a chance to test

the bonding premium hypothesis based on the quality gaps among markets. Thus, by examining the difference of bonding premiums between B-share and H-share, we can provide empirical evidence for the bonding theory.

The test of the bonding theory also has a great referential significance to the choices of Chinese firms on whether to cross-list. Due to China's sustained rapid economic growth nowadays, there is an urgent need for substantial financial support. However, the setting of legal system regarding investor protection lags behind. According to LLSV (1998), firms may encounter difficulties in raising capitals and will take high capital cost in the environment of poor legal protection for investors. Therefore, it deserves great concern on how to raise enough capital at a reasonable cost to support the rapid growth of Chinese firms. Cross-listing can bond firms to a more stringent legal system, market restrictions and disclosure requirements; as a result, lower capital cost may ensue. Hence, it is of great significance to examine whether the bonding premium hypothesis is reasonable and whether the firms are able to lower the capital cost and improve their valuation.

Against a control sample of pure-domestically listed Chinese firms, we contrast a sample of Chinese firms cross-listed shares both on the A and B-markets (as AB-share) and Chinese firms cross-listed shares both on the A and H-markets (as AH-share) from 1998–2004. Tobin's Q and market-to-book ratio were used to capture the premium and seek for strong evidence supporting the bonding theory. We find that both AH-share firms and AB-share firms enjoy higher valuation than pure A-share firms. Most importantly, the cross-listing premium is larger for AH-share firms than for AB-share firms. The results are supportive to the theory that cross-listing can make firms earn a higher valuation and the amount of bonding premium is positively related to the level of investor protection. Furthermore, the conclusion remains the same after adjusting for self-selection. Consistent with the work of Stulz (1999) and Coffee (1999), this paper suggests that the bonding theory for cross-listing is effective. Also, it offers theoretical guidance for Chinese firms in how to raise capital for growth opportunities at a reasonable cost in the relatively under-developed capital market.

The remaining sections of the paper are organized as follows. Section 2 shows a theoretical analysis of why the cross-listing can bring in bonding premium. Data description and variables definition are given in Section 3. Section 4 presents statistical models and empirical findings. Robust tests read in Section 5. And Section 6 concludes the paper.

2   Theoretical Analysis

In the classical firms where owners are also the managers, there is no agency

problem because the cost of waste and idleness from managers are assumed by themselves. However, with the expansion of firms and the emergence of shareholding corporations, owners and managers become separated from each other. In this case, only owning part of the equity of the firm, managers assume only part of the cost of service consumption, idleness and malfeasance, but enjoy the full benefits of such activities. Therefore, relative to the classical firms, managers nowadays, have stronger incentives to shirk and retreat from the cost, which will decrease the value of firms and impair the interest of investors. Jensen and Meckling (1976) conduct a rigorous analysis of this phenomenon, and call it the agency problem.

For the dispersed shareholder right economy, such as the United States, it is a serious agency problem that managers appropriate perquisites out of the firm's resource because individual investors own so few shares that they lack the incentive and ability to supervise managers. However, Shleifer and Vishny (1997) argue that in many emerging markets, due to poor investor protection and highly concentrated shareholder right, managers are well supervised and restricted. In consequence, the main agency problem changes to the phenomenon that the controlling shareholders use the control right to serve their own interests and search for private benefits at the expense of minority shareholders. In China, it is not uncommon for controlling shareholders to carry out tunneling behaviors by impropriating the capital of listed firms or transferring resources by connected transactions.

LLSV (2002) construct a theoretical analysis on how the tunneling by controlling shareholders influences the market valuation of firms. Owning the control right, controlling shareholders can procure private benefits by tunneling. However, controlling shareholders have to bear the matched cost at the same time: one kind of cost is legal punishment once the tunneling is detected; the other kind is negative influence on the firm's future development and the discount of stock price from the self-preservation of investors. Thus, the degree of tunneling by controlling shareholders depends on the tradeoff between the benefit and cost. It means that the better legal system for investor protection and the higher cost of tunneling, the lower degree of tunneling.

However, the institutional environment of a country remains relatively stable in the short term. Therefore, it is difficult to restrict the tunneling by improving the legal setting for investor protection while cross-listing can solve the problem effectively. Domestic firms cross-listed in a higher quality market should comply with more stringent laws and supervisions so as to rent the perfect legal setting for investor protection. As tunneling can also impair the interests of foreign investors, once tunneling is found, law suits of both domestic and overseas markets are unavoidable. Furthermore, due to the better legal setting for investor protection, the judicial punishment overseas is much heavier than that of domestic markets. As a result, after cross-listing, the controlling shareholders

will reduce tunneling activities because they have to assume higher cost. In other words, cross-listing firms self-selectively bond themselves to higher quality capital market with better legal setting for investor protection, so as to restrict the tunneling of controlling shareholders, win the trust of investors, decrease the capital cost and finally raise the value of the firms.

However, Licht (2003) and Siegel (2005) argue that the bonding theory of cross-listing is unnecessarily effective because as firms cross-list in a foreign country, the overseas judicial and supervision are very easy to fail. On the contrary, Coffee (2002) points out that the deterrent effect plays a more important role than the law enforcement itself, and the deterrence is not equal to the actual degree of strictness of the punishment. In addition, besides the bonding effects from legal system, cross-listing also restricts the corporate behavior in respect of reputation. The information medium such as underwriters, auditors and financial analysts will do strict inspection on the cross-listing firms, and the information about tunneling is easily accessed to the capital market. Once this kind of information is acquired by investors, the stock price is bound to serious discount and it will greatly hurt the interests of controlling shareholders. On the whole, the majority of empirical evidence supports the bonding theory. Doidge (2004) and Wójcik, Clark and Bauer (2004) and many other papers are consistent with the bonding theory from aspects of firm valuation, corporate governance and so on.

For the capital market of Hong Kong, according to index of anti-director rights (LLSV, 1998), Hong Kong scores almost the same comparing to the United Kingdom and the United States, which indicates that the law for investor protection is sound in Hong Kong. According to the Index of Economic Freedom created by the Heritage Foundation and Wall Street Journal in 2004, Hong Kong and the mainland of China were ranked No.1 and No.140 respectively.[1] In addition, firms listed on domestic A-share market follow China Accounting Standards, while firms cross-listed on H-share market have to improve their financial reports for complying with the Hong Kong or International Accounting Standards. Therefore, both legal regulation and market conditions are better than those in the mainland of China. For B-share market, the level of regulation is almost equivalent to the A-share market and lower than the H-share market because it locates in the domestic market; in terms of market conditions, investors on B-share market are mainly foreign institutions.[2] Therefore, B-share market has stronger regulations than A-share market, but weaker than H-share market. Besides, B-share market is also in accordance with the International Accounting Standards. Thus, we can infer from the bonding theory that both firms cross-listed on H-share market and B-share market can enjoy the

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[1] Refer to http: //www.heritage.org/index/. Data is obtained on March 30th, 2010.

[2] The situation remained the same even after 2001, when the B-share market opened to the Chinese domestic investors.

cross-listing premium, and the level of the premium of the former is higher than the latter.

3 Research Design

3.1 Data Description and Sample Selection

All the data of finance and corporate governance comes from Wind Financial Database (WIND) and the Tsinghua Financial Data (THFD). Listed firms are classified into different industries on the basis of Industry Classification Index of Listed Company newly published in 2001 by China Securities Regulatory Commission (CSRC). Considering the large number of manufacturing firms, we take the first two codes to classify them, and choose the first one for the other industries.

The sample of this research includes all non-financial Chinese firms cross-listing shares both on the domestic A and Hong Kong H-market, as well as Chinese firms cross-listing shares both on the A and B-markets from 1998 to 2004. We use a matching method to choose the control sample. In each year of the study period, for each AH-share and AB-share firm, we will choose a pure A-share firm respectively as control firm, and there are two standards to determine the matched firms: Firstly, the target firm and the matched one are in the same industry; secondly, they have similar size of assets. Finally, we get 159 AH-share firms, 580 AB-share firms and 739 matched pure A-share firms. The sample distribution is shown in Table 1.

Table 1 Sample Distribution

	1998	1999	2000	2001	2002	2003	2004	Total
AH-share firms	17	18	18	23	26	28	29	159
AB-share firms	76	78	82	86	86	86	86	580
Matched A-share firms	93	96	100	109	112	114	115	739
Total	186	192	200	218	224	228	230	1 478

3.2 Data Description and Sample Selection

(1) Firm value. Tobin's Q (TQ) is a common proxy for valuation measure. Taking into account the liquidity of stocks, we use the book value to calculate the value of non-tradable shares when computing Tobin's Q. Meanwhile, we also use market-to-book ratio (MBR) to measure firm value. Especially, A-share, B-share and H-share market are segmented so that prices of the same stock vary on different markets; therefore, we use the A-share price as the base in our study.

(2) Cross-listing. We use the dummy variable AH to denote whether the firms

cross-listed in Hong Kong market or not. *AH* will take the value of 1 if the firms issue both A-shares and H-shares, and is zero otherwise. Similarly, dummy variable *AB* will equal to 1 if the firms issue both A-shares and B-shares, and equal to 0 otherwise.

(3) Control variables. The firms' main characteristic variables will be controlled, including size of the firm (*Size*), financial leverage (*Lev*), profitability (*ROA*), and sales growth rate (*Sgrow*). The size of the firm can be measured by the natural logarithm of the total assets at the end of this period; the debt-to-asset ratio is used for the financial leverage; return on assets (*ROA*) equals net income divided by average total assets; sales growth rate is calculated as dividing the change of sales by the sales of last year. In addition, we also use year and industry dummy variables to control the impacts from macroeconomics and industry characteristics.

Table 2 Variable Definition

Variable	Variable Explanation
TQ	= (book value of debt + net asset per share × non-tradable shares + market price per share × tradable shares)/(book value of debt + book value of equity)
MBR	= (book value of debt+market price per share × total shares)/(book value of debt + book value of equity)
AH	If the firm lists both on A-share and H-share markets at the same time, *AH* = 1, otherwise, *AH* = 0
AB	If the firm lists both on A-share and B-share markets at the same time, *AB* = 1, otherwise, *AB* = 0
Size	Size of the firm, measured by natural logarithm of total assets
Lev	Financial leverage of the firm, measured by debt-to-asset ratio
ROA	Return on assets, equals to net income/ average total income
Sgrow	Sale growth rate, equals to the change of sales/ sales of last year

Summary statistics of the variables we use in our regressions are displayed in Table 3.

Table 3 Summary Statistics

	Obs.	Mean	Median	S.D.	Minimum	Maximum	First quartile	Third quartile
TQ	1 478	1.555	1.370	0.625	–0.136	6.836	1.191	1.705
MBR	1 478	2.470	2.015	1.569	0.179	18.691	1.537	2.831
Size	1 478	21.624	21.596	1.009	18.776	26.855	21.003	22.226
Lev	1 478	0.502	0.469	0.433	0.009	8.502	0.336	0.597
ROA	1 478	3.219	3.998	11.268	–174.908	37.962	1.217	7.069
Sgrow	1 478	26.216	14.128	120.166	–98.695	2985.783	–2.131	33.044

4 Empirical Findings

The results of multiple regression analysis are shown in Table 4. We use simple pooled regression and random effects panel regression to get the results while using Tobin's Q and market-to-book ratio as dependent variables to denote the value of the firm.

Table 4 Multiple Regression Analysis Results

	Pool Data		Panel Data	
	TQ	*MBR*	*TQ*	*MBR*
AH	0.456	0.862	0.488	1.008
	(10.872)***	(8.088)***	(9.02)***	(6.23)***
AB	0.336	0.528	0.341	0.571
	(13.562)***	(8.389)***	(10.70)***	(6.03)***
Size	−0.330	−0.829	−0.327	−0.849
	(−23.227)***	(−22.937)***	(−21.20)***	(−19.49)***
Lev	0.462	1.144	0.4207	1.050
	(14.656)***	(14.289)***	(11.59)***	(10.97)***
Sgrow	0.000	0.000	0.001	0.0003
	(1.531)	(1.699)*	(1.66)*	(1.49)
ROA_{t-1}	0.007	0.013	0.007	0.0156
	(5.382)***	(4.251)***	(5.24)***	(4.71)***
Intercept	7.779	18.402	8.207	19.909
	(25.106)***	(23.374)***	(24.72)***	(21.26)***
Industry	Controlled	Controlled	—	—
Year	Controlled	Controlled	—	—
No. of observation	1 478	1 478	1 478	1 478
Adjusted R^2	51.2%	50.1%	34.16%	37.95%
F-value (Wald Chi)	54.416***	52.003***	570.82***	743.79***

Note: *, **, *** denote significant at the 10%, 5%, and 1% level, respectively. The value in the parentheses of pooled data is *t*-value, and the value in the parentheses of panel data is *Z*-value.

For the simple pooled regression results, using Tobin's Q as a proxy for the firm value, we can see that the dummy variable *AH* has a positive coefficient of 0.456, which is positive at 1% significance level. It means Tobin's Q of AH-share firms is higher than that of firms listing only in the A-share market by 0.456, after controlling the other factors; therefore, cross-listing can bring in higher valuation for firms. When using market-to-book ratio as a proxy for the firm value, the bonding premium is even larger, now the coefficient of *AH* is 0.862, which is also positive at 1% significance level. And it indicates that cross-listed firms has market-to-book ratio 0.862 higher than pure domestically listed firms.

The results demonstrate that firms cross-listed in Hong Kong can enjoy the bonding premium. The capital market in Hong Kong subject to more stringent investor protection, market restriction and disclosure requirements, so the tunneling of managers and controlling shareholders is restricted, as a result, the firms obtain the confidence of investors and get a higher market valuation.

In the pooled regression, the coefficient of the dummy variable *AB* is 0.336 when using Tobin's *Q* as the dependent variable, and is 0.528 when using market-to-book ratio as the dependent variable, both of which are positive at 1% significance level. It means that firms cross-listed on the B-share market can also enjoy the bonding premium. B-share market has stricter disclosure requirements as well as harsher market restrictions than those on A-share market with regards to investors and financial analysts, so the tunneling of managers and shareholders of the AB-share firms is restricted at a higher degree; as a result, the AB-share firms enjoy higher valuation when listed on the domestic market. Using Tobin's *Q* and market-to-book ratio to measure the firm values, we come to know that the average premiums are approximately 33.6% and 52.8% respectively.

This research further examines the difference in bonding premium between H-share market and B-share market, which can be realized by testing the difference of coefficients of variables *AH* and *AB*. When Tobin's *Q* is the dependent variable, the coefficient of *AH* is bigger than that of *AB* by 0.12; if we test statistically the null hypothesis for equality of the coefficients, the *F*-value is 7.73, which is significant at 1% level. It means that using Tobin's *Q* to measure firm value, AH-share firms have higher bonding premiums than AB-share firms. When market-to-book ratio is the dependent variable, the coefficient of *AH* is bigger than that of *AB* by 0.334, with *F*-value at 9.26, also significant at 1% level; thus we can also arrive at the conclusion that AH-share firms have higher valuation. Therefore, the evidence all support the theory inferences that capital market in Hong Kong has a more adequate legal setting for investor protection and stricter market restriction, so the bonding effect is stronger, leading to higher bonding premiums.

The premium is also significant in random effects panel regression. The coefficients of both *AH* and *AB* are significantly positive at 1% level whether we use Tobin's *Q* or market-to-book ratio as dependent variable. Therefore, both firms cross-listed on the H-market and firms cross-listed on B-market can achieve the bonding premiums, which is consistent with the bonding theory. When Tobin's *Q* is used as the proxy for firm value, the average premium of AH-share firms is about 49% while that of AB-share firms is about 34%, and χ^2 value testing the difference between the two is 6.8, significant at 1% level; when market-to-book is used as the proxy for firm value, the average premium of AH-share firms is about 100% while that of AB-share firms is 57%, and χ^2 value is also significant at 1% level. We give strong support to the bonding theory that

cross-listing on H-share market can bring in stronger bonding effect than B-share market, leading to higher bonding premiums for cross-listing firms.

For the control variables, the variable *Size* has a negative sign significant at 1% level in four models, which means that the size of a firm is negatively related to the market valuation. The financial leverage *Lev* has a positive sign significant at 1% level, suggesting that the more leverage leads to a higher valuation; this result is consistent with the leverage governance theory that debt finance can effectively restrict the activities of controlling shareholders and managers, so as to alleviate agency problems and raise the firm's value. The profitability proxy *ROA* is positive at 1% significance level, that is, the better profitability leads to a higher valuation, which is consistent with theoretical inference. Sales growth rate *Sgrow* has a positive coefficient which is marginally significant (at 10% significance level), indicating that the growth rate of a firm is positively correlated to the market valuation.

5 Robust Test

5.1 Endogeneity Check

We use the Heckman's (1979) two-step procedure to correct the endogenous problem. This method includes two steps: Firstly we construct the Probit model to explore the influencing factors of cross-listing. The following Probit model is used in order to estimate the probability that *AH* equals 1:

$$AH_i^* = \gamma w_i + \mu_i,$$
$$AH_i = 1, \ if \ AH_i^* > 0;$$
$$Prob \ (AH_{it} = 1 \mid X_{it}) = \phi(\gamma w_i).$$

The influencing factors mainly include the size of the firm, sales growth rate, the extent of earnings management (*EM*), industry and year variable according to the empirical evidence of existing literature (Lang, Smith and Yetman, 2003; Lang, Smith and Wilson, 2006), the extent of earnings management is estimated by Jones' model (1991) calculated as follows:

$$EM = GA / A_i - NA_i.$$

GA is the total accruals, and *NA* is the normal accrued profit adjusted by the year-end asset of last year, which can be calculated by:

$$NA_i = \alpha_1(1 / A_i) + \alpha_2(\Delta REV_i / A_i) + \alpha_3(PPE_i / A_i),$$

where ΔREV equals current revenue less revenue in last year for firm *i*; PPE_i is the current gross property, plant and equipment; A_i is the total assets for firm *i* in last year; $\alpha_1, \alpha_2, \alpha_3$ is industry characteristics parameters estimated from the

following regression model by using different industries grouped data:

$$GA_i / A_i = \alpha_1 (1/A_i) + \alpha_2 (\Delta REV_i / A_i) + \alpha_3 (PPE_i / A_i) + \varepsilon.$$

By calculating *EM* we estimate the normal accruals of a company successfully controlling the effects from the changes of the economic environment.

Similar to Doidge et al. (2004), we did not include other firm-characteristic variables in the selection equation to distinguish it from the second, OLS model specification. Then, we calculated the new variable *Lambda*[3] through the coefficients estimated from the Probit model：

$$Lamda = \varphi(\gamma w_i) / [\phi(\gamma w_i)(1 - \phi(\gamma w_i))],$$

where $\varphi(\gamma w_i)$ and $\phi(\gamma w_i)$ are Standard normal density function and Standard normal distribute function respectively.

Secondly we use the firm value proxy as independent variable to estimate the original model using OLS, but with an additional term: *Lambda*. Then, we can get the consistent estimated results.

The reason for endogeneity test is to control the self-selection bias when firms choose to cross-list. Based on the considerations of cost, firms with better corporate governance self-selectively choose to list or cross-list on the B-share or H-share market. In this way, this kind of firms has higher value originally; in other words, the cross-listing premium observed is not really due to bonding with a higher quality market, but from the prior self-selection. The self-selection of sample can lead to the phenomenon of endogeneity, which may make the coefficient estimation biased. Table 5 presents the results from Heckman's two-step method. We can see that the conclusions still hold after taking endogeneity into consideration. The market valuations of AH-share firms and AB-share firms are significantly higher than those of pure A-share firms, and AH-share firms enjoy higher values than AB-share firms.

5.2   Other Robust Checks

We test the robust of the empirical results using other ways to measure the variables. It is found that, the main conclusions remain unchanged when using the natural logarithm of sales as a proxy for the size of firms, active debt to assets ratio for financial leverage, return on equity for profitability, and the growth of net income for growth,. In addition, the matching method employed to test the bonding premium can help to decrease the impacts of endogeneity. We further test the case when using 3 matched firms to 1 objective firm, and get almost the same results. Therefore, the conclusion of our paper is robust.

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[3]   The estimation method of this variable comes from Doidge (2004).

Table 5 Heckman's Two-Step Procedure

	Probit model	Mean model	
		Dependent variable = *TQ*	Dependent variable = *MBR*
AH		0.418	0.730
		(9.795)***	(6.767)***
AB		0.340	0.544
		(13.813)***	(8.735)***
Size	0.791	−0.232	−0.487
	(10.768)***	(−8.345)***	(−6.914)***
Lev		0.461	1.140
		(14.689)***	(14.377)***
Sgrow	−0.004	0.000	−0.002
	(−2.213)**	(−2.677)***	(−3.915)***
ROA		0.007	0.014
		(5.531)***	(4.464)***
EM	−0.919		
	(−1.694)*		
Lambda		0.199	0.696
		(4.076)***	(5.635)***
Intercept	−24.144	4.198	5.890
	(−0.001)	(4.510)***	(2.503)**
Industry	Controlled	Controlled	Controlled
Year	Controlled	Controlled	Controlled
Obs.	1 478	1 478	1 478
R^2	McFadden R^2 29.92%	Adjusted R^2 51.7%	Adjusted R^2 51.1%
Sig.	LR Statistics 301.97***	*F*-statistics 53.724***	*F*-statistics 52.397***

Note: *, **, *** denote significant at the 10%, 5%, and 1% level, respectively. The value in the parentheses of probit model is *Z*-value, and the value in the parentheses of Heckman correction is *t*-value.

6 Conclusion

Against a control sample of pure A-share firms, we contrast a sample of AH-share firms cross-listed on H-share market and AB-share firms cross-listed on B-share market, and examine the differences in valuation of these firms based on A-share price by constructing econometric model. The empirical results show that both AH-share firms and AB-share firms enjoy the bonding premium, supporting the bonding theory of cross-listing. In other words, both H-share market and B-share market subject to better legal setting for investor protection

and harsher market restriction and disclosure requirement than domestic A-share market. Therefore, once a firm enters these higher quality markets, corporate governance can be improved and the agency problems of controlling shareholders and managers can be restrained. As a result, the firm can win the confidence of investors, lower the capital cost and raise the market valuation. Furthermore, AH-share firms enjoy higher valuation than AB-share firms, which suggests that H-share market has stronger bonding effect than B-share market because the capital market in Hong Kong has even better legal setting for investor protection. All the evidence gives strong support to the bonding theory.

The empirical results show that strengthening the institutional and market environment as well as improving the legal setting for investor protection can effectively reduce the capital cost and raise the firms' value. Moreover, the empirical evidence can provide new thought about how to raise capital at a reasonable cost in an emerging capital market such as China. In other words, although the legal system and market conditions of a country are relatively stable in the short term, firms can rent better legal and market setting by cross-listing, in order to win the confidence of investors and ultimately lower the capital cost.

References

Cantale S (1997). The choice of a foreign market as a signal. Unpublished working paper, INSEAD

Chen S K, Lin B, Wang Y, Wu L (2008). Cross-listing, corporate governance and firm performance. Advances in Business and Management Forecasting, 5: 19–46

Chouinard E, Souza C (2004). The rationale for cross-border listings. Bank of Canada Review, (winter): 23–30

Coffee J Jr. (1999). The future as history: The prospects for global convergence in corporate governance and its implications. Northwestern Law Review, 93: 641–707

Coffee J Jr. (2002). Racing towards the top? The impact of cross-listings and stock market competition on international corporate governance. Columbia Law Review, 102: 1757–1831

Doidge C, Karolyi G A, Stulz R (2004). Why are foreign firms listed in the U.S. worth more? Journal of Financial Economics, 71: 205–238

Foerster S, Karolyi G A (1999). The effects of market segmentation and investor recognition on asset prices: Evidence from foreign stocks listing in the U.S. Journal of Finance, 54: 981–1014

Jensen M C, Meckling W H (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. Journal of Financial Economics, 3: 305–360

Karolyi A, Stulz R (2001). Are financial assets priced locally or globally? Working paper, Ohio State University, Columbus, OH

La Porta R, Lopez-de-Silanes F, Shleifer A, Vishny R (LLSV) (1998). Law and finance. Journal of Political Economy, 106: 1112–1155

La Porta R, Lopez-de-Silanes F, Shleifer A, Vishny R (LLSV) (2002). Investor protection and corporate valuation. Journal of Finance, 57: 1147–1170

Lang M, Smith R J, Wilson W (2006). Earnings management and cross listing: Are reconciled

earnings comparable to U.S. earnings? Journal of Accounting and Economics, 42: 255–283

Lang M, Smith R J, Yetman M (2003). How representative are firms that are cross-listed in the United States? An analysis of accounting quality. Journal of Accounting Research, 41: 363–386

Licht A (2003). Cross-listing and corporate governance: Bonding or avoiding? Chicago Journal of International Law, 4: 141–163

Lins K, Strickland D, Zenner M (2002). Do non-U.S. firms issue equity on U.S. stock exchanges to relax capital constraints? Journal of Financial and Quantitative Analysis, 40(1): 109–133

Moel A (1999). The role of information disclosure on stock market listing decisions: The case of foreign firms listing in the U.S. Working paper, Harvard Business School, Boston, MA

Shleifer A, Vishny R (1997). A survey of corporate governance. Journal of Finance, 52: 737–783

Siegel J (2005). Can foreign firms bond themselves effectively by renting U.S. securities laws? Journal of Financial Economics, 75: 319–359

Stulz R M (1999). Globalization of equity markets and the cost of capital. Journal of Applied Corporate Finance, 12: 8–25

Wójcik D, Clark G L, Bauer R (2004). Corporate governance and cross-listing: Evidence from European companies. Working paper, www.ssrn.com