INSIDER OWNERSHIP AND BANK PERFORMANCE: EVIDENCE FROM THE FINANCIAL CRISIS OF 2007-2009

by

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Abstract

This paper examines the relation between insider ownership and bank performance in the United States before and during the recent financial crisis of 2007 – 2009. For the period before this crisis, we find a curvilinear relation between insider ownership and bank performance. Bank performance first increases, then decreases, and finally increases again with the rise of insider ownership. During the financial crisis, we find an inverted-U shaped relation between insider ownership and bank performance. Overall, our results are consistent with the notion that managers with higher ownership are better aligned the interests of shareholders (Jensen and Meckling 1976).Managers adopt effective strategies on the bank performance before the crisis, but those make a negative impact during the financial crisis.

Keywords: insider ownership; bank performance; financial crisis

To my dearest families, thanks for your endless love and continuous support to me throughout all years of my studies.

I love you forever!

献给我最爱的家人，感谢你们对我的爱与支持，

我爱你们！

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1. Introduction

Over the past three decades, researchers spark lively debate about how insider ownership affects firm performance. Some researchers argue that higher insider ownership is more favourable to firm performance, because higher insider ownership can better align the interests of shareholders and managers. Jensen and Meckling (1976) come up with the view that there is a positive relation between insider ownership and firm performance. Managers' incentive will be more convergent with shareholders' as their holdings of shares increase. Larger insider ownership will benefit both shareholders and managers because it increases managers' incentives to enhance firm performance. On the other hand, Morck, Shleifer, and Vishny (1988) argue that the relation between insider ownership and firm performance is non-linear. When insider ownership becomes larger, managers become more entrenched; hence, firm performance will decrease as the insider ownership increases beyond a certain point. The relation between insider ownership and firm performance is not monotonically increasing.

Although a large number of papers have examined the relation between insider ownership and firm performance (Morck et al., 1988; McConnell and Servaes, 1990; Fahlenbrach and Stulz, 2009a), relatively few papers have examined the relation between insider ownership and bank performance. In this paper, we focus on how the insider ownership influences American bank performance both before and during the recent financial crisis of 2007 – 2009. We measure insider ownership in two ways: the percentage of shares owned by the CEO, and the percentage of shares owned by the

directors and officers of the bank as a group. We measure bank performance using both return on assets (ROA) and Tobin's q.

For the period before the financial crisis, we find a curvilinear relation between insider ownership and bank performance. Bank performance first increases when the insider ownership is between 0 and 15 percent, then decreases until it reaches 50 percent, beyond 50 percent, bank value begins to increase again with the rise of insider ownership. This finding is consistent with the explanation proposed by Morck, Shleifer, and Vishny (1988): low levels of ownership align the interests of shareholders and managers, but high levels of ownership entrench managers. Finally, at very high levels of ownership, incentive alignment effect exceeds entrenchment effect.

We also find that during the financial crisis this relation changed. There exists an inverted-U shaped relation between insider ownership and bank performance. In particular, banks with high levels of insider ownership performed worse. This result supports the recent findings of Fahlenbrach and Stulz (2009b). That is, managers better aligned with shareholders performed worse in the recent financial crisis. These managers did not reduce their shares in anticipation of the coming recession and suffered large losses the same as the shareholders. Furthermore, we find that insider ownership is better measured using the percentage of shares owned by the directors and officers of the bank as a group, which is opposed to Griffith et al. (2002).

This paper joins the small literature that examines the impact of insider ownership on bank performance. Glassman and Rhoades (1980) test the relation between the degree of owner control and the goals in commercial banking. They find that owners controlled banks generate higher profit than managers controlled banks. Gorton and Rosen (1995) address the corporate control considerations, they use the sample in the 1980s, the time

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that U.S. banks is less profitable and more risky and propose that management entrenchment have the dominant effect on the bank failures, rather than the moral hazard regarding the deposit insurance. Shehzad et al. (2010) conduct an examination on the impact of bank ownership concentration concerning the bank riskiness. Using a sample of 500 commercial banks for 2005 to 2007, they find that concentrated ownership can reduce bank's non-performing loans ratio and affect the capital adequacy ratio. If the shareholder protection rights and supervisory control is low, ownership concentration can also reduce the bank riskiness. Our paper contributes to this literature by examining the relation between insider ownership and bank performance using data both before and during a severe financial crisis. In addition, we find that the relation changes during the crisis.

The rest of this paper proceeds as follows. Section 2 reviews previous studies and develops our hypotheses. Section 3 discusses the data and methodology that we used in the regression. Section 4 presents the empirical results of the regressions both in the pre-crisis and financial crisis period. Section 5 concludes this study.

2. Literature Review and Hypotheses Development

2.1 Literature Review

There have been many studies discussing the issues of managerial ownership and performance, but most are built on the firm value. In this section, we will conduct a brief review about these relevant contributions.

Morck, Shleifer, and Vishny (1988) make an investigation on the relation between management ownership and firm value by using Tobin's q as a measure of firm performance. They find that Tobin's q increases with insider ownership within the range of 0 to 5 percent. Once managerial ownership is beyond 5 percent level, the conditions of entrenchment play an important role associated with the management ownership, and Tobin's q decreases as ownership increases from 5 percent to 25 percent. They also find that Tobin's q increases slowly again beyond 25 percent. They suggest that convergence of interest effect still exists during the entire evolvement of ownership.

Stulz (1988) examines how the managerial control of voting rights influence the firm value. Stulz proposes that shareholders' wealth increases as the manager strengthens its control of voting rights. However, beyond a certain level, greater ownership of control rights can decrease the firm performance, because higher management ownership gives greater control to the manager. Moreover, Stulz argues that if managers can not be replaced by shareholders or hostile takeover, they have stronger incentives than others to maximize their own lifetime utilities.

McConnell and Servaes (1990) find a curvilinear relation between firm performance and insider ownership. Their research is based on the sample period of 1976 and 1986 and they assume that firm value is a function of the equity ownership. They find that the relation between Tobin's q and insider ownership is positive until the ownership reaches about 40 to 50 percent, and then becomes slightly negative. They also find a significantly positive relation between Tobin's q and institutional investors' ownership.

Fahlenbrach and Stulz (2009a) test the dynamic changes of managerial ownership and their implications for firm performance. They find that if firms perform well, it is

possible for managers to decrease their ownership. Similarly, when firms perform poorly, managers are more likely to increase their ownership.

In order to generate a meaningful result and overcome the failure of fixed effects regression, Benson and Davidson III (2009) use the pay-performance semi-elasticity instead of pay-performance sensitivity to measure the insider ownership. They find that there is an inverted U-shaped relation between managerial ownership and firm performance in terms of Tobin's q with fixed effects estimator.

However, some studies find that there is no evidence indicating that ownership has any influence on performance. Loderer and Martin (1997) examine the relation between managers' financial interests and firm performance. They find that acquisition performance and Tobin's q can influence the managerial ownership, but large managers' stockholdings cannot lead to better firm performance.

Cho (1998) also shows that corporate value affects ownership structure, but not vice versa. Instead of using ordinary least squares regression, they use the simultaneous regression suggesting that the investment affects corporate performance ,then in turn influence the ownership structure.

Similarly, Demsetz and Villalonga (2001) believe that no statistically significant relation between ownership structure and corporate performance, if ownership is made multi-dimensional and considered as an endogenous variable.

Indeed, there is disagreement on the issues of relation between insider ownership and firm value. To resolve this issue and highlight the bank performance, we make this paper to investigate how the insider ownership affects the bank performance as measured by ROA and Tobin's q.

2.2 Testable Hypotheses

We develop two hypotheses in this paper; the first hypothesis is to test whether the relation between CEO ownership and bank performance is significant and non-linear. This hypothesis is based on the views of Griffith (1999) and Griffith et al. (2002).They find that the CEO ownership has a dominating effect on the firm performance, not the management ownership if CEO ownership is separated out.Besides,they believe that Chief Executive Officer individually has the power to influence bank performance, including either positive or negative impact. The second hypothesis expands the scope of ownership, which adds the shares that directors and other officers hold (e.g., Benson et al. 2009). Adam et al. (2010) explain the importance of the boards of directors in a corporation. They state that board of directors is fundamental in a corporation development, and is often modelled as the single decision maker. We seek to see which, if any, measure of insider ownership is related to bank performance. In both hypotheses, we also include the squared and cubed terms of insider ownership in the regression models. If the relation between performance and ownership is significant and either the squared or cubed of ownership is significant, we can conclude that the relation is nonlinear. These two testable hypotheses are as follows:

H1: The relation between CEO ownership and bank performance is non-linear and significant.

H2: The relation between director and officer ownership and bank performance is non-linear and significant

3. Data and Methodology

3.1 Data sources

This paper uses the panel data set and pooled OLS regressions to investigate the relation between insider ownership and bank performance. The sample includes 100 largest publicly traded banks by the year 2000 assets that are headquarter in the United States and operated at anytime between 2000 and 2009. We use Compustat database at the Wharton Research Data Services (WRDS) to identify publicly traded banks and obtain accounting information. Ownership data are hand collected from proxy statements from the EDGAR database at the U.S. Securities and Exchange Commission as it is superior comparing to other data sources.

Table 1 presents the number of banks in our sample by year. The first seven years (2000-2006) are the periods before the financial crisis, and the last three years (2007-2009) are during the financial crisis (**Appendices Table 1**). The number of banks in our sample decreased during these 10 years. Cornett et al. (2009) explain that mergers and acquisitions rather than bank failures are the main reason behind this decrease.

3.1.1 Dependent variables

Return on Assets (ROA): ROA is defined as the net income divided by total asset. We use ROA to see how profitable banks are relative to their total assets and how efficient bank management is to use their assets generating profits. We calculate the annual average ROA percentage value of our sample banks.

As **Figure 1** shown, ROA was stable and about 1.2% during the period 2000 through 2006. However, since 2007 ROA dramatically decreased from 1.2% to -0.4%, which implies that the financial crisis hit the banking industry severely.

Figure 1

ROA Annual Average
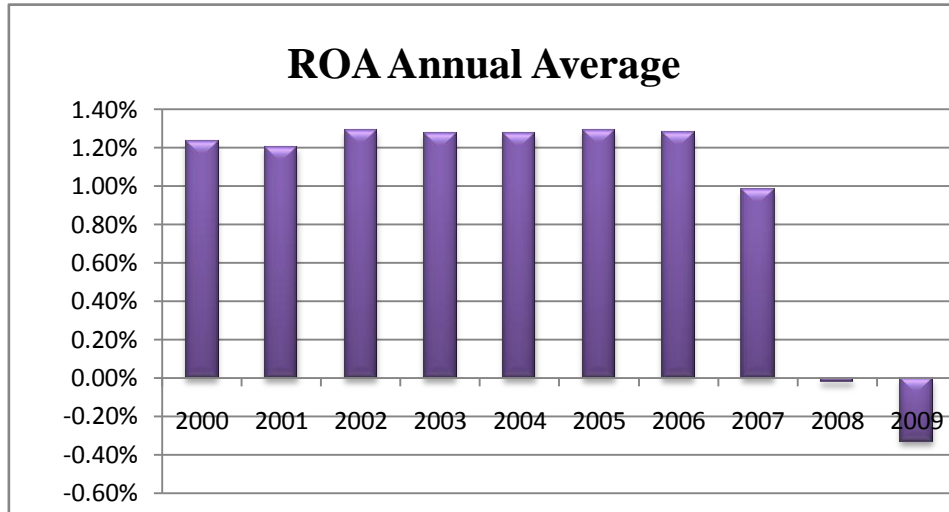
As shown in **Figure 2**, for our sample banks during the crisis period, the worst 25% percentile banks suffered greatest loss of 2%. The Median banks suffered moderate loss of 1%, and the 75% percentile suffered a loss of 0.5%.The difference among these three percentile is significant.

Figure 2

ROA Annual Percentile
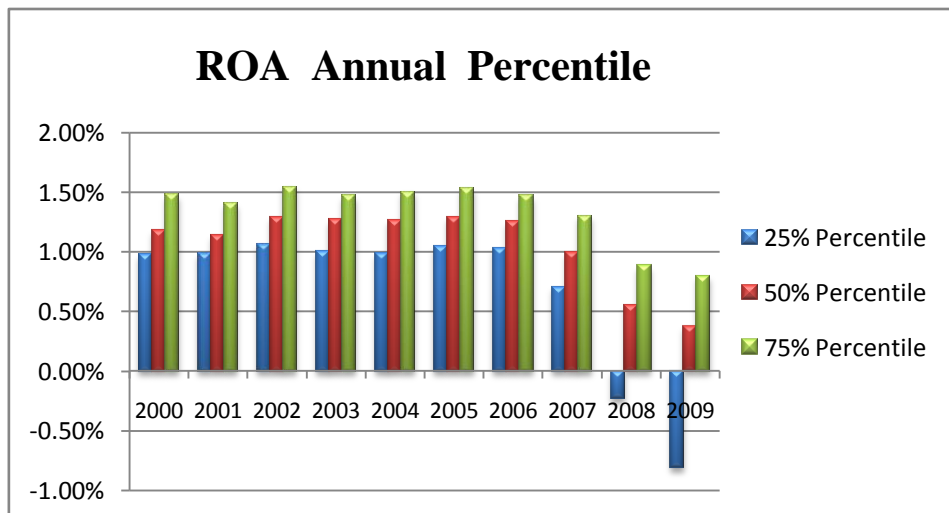
Tobin's q: We also use the Tobin's q to measure bank performance. It is defined as the market value of assets divided by the book value of assets of the bank. Market value of assets equals the sum of market value of equity and the book value of liabilities, and the book value of assets equals the sum of the book value of equity and the book value of liabilities. Higher value of q implies better performance. A q value greater than one indicates that the market value of assets is larger than the book value of assets. Morck ,Shleifer, and Vishny (1988), McConnell and Servaes (1990) and Griffith (1999) all use q as a measure of performance.

       Figure 3 presents that for our sample banks Tobin's q ranged from 1.05 to 1.15 before the recent financial crisis. During the depression, average Tobin's q dropped from 1.05 to 1.

Figure 3
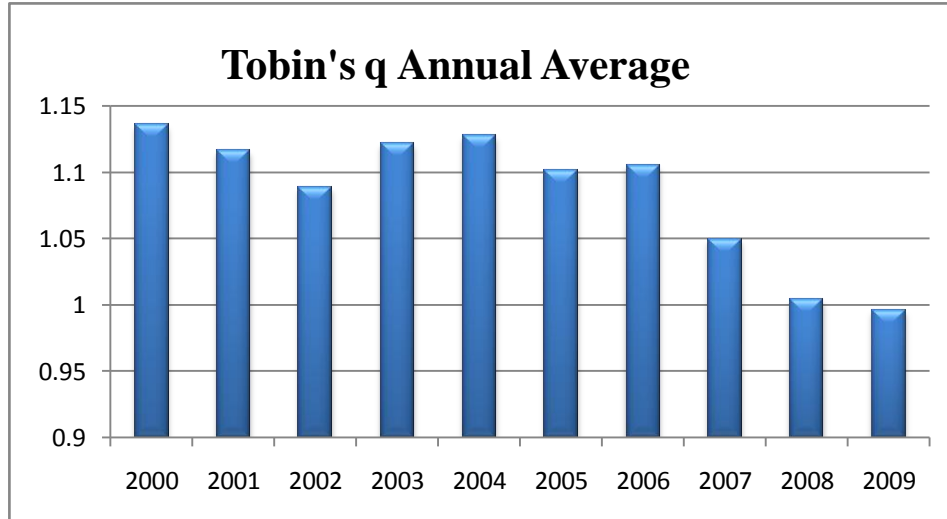
3.1.2 Independent variables

Bank Size: We use the natural log of total asset to measure bank size.

Capital Ratio: Capital Ratio is defined as total equity divided by total assets. It is a key financial ratio to measure banks' financial stability and capital adequacy. Generally, a higher capital ratio is associated with a safer bank.

CEO ownership is the percentage of common shares held by the Chief Executive Officer of the bank.

Director and officer ownership is the percentage of common shares held by the directors and officers of the bank as a group.

3.2 Methodology

We are trying to look for which, if any, of the ownership are statistically significant to predict the bank performance from the data we explained in section 3.1. We use the following equation to estimate the relation between insider ownership and bank performance:

$$\text{Performance}_{i,t} = \beta_0 + \beta_1 * \text{Size}_{i,t} + \beta_2 * \text{Capital}_{i,t} + \beta_3 * \text{Ownership}_{i,t} + \beta_4 * (\text{Ownership}_{i,t})^2$$

$$+ \beta_5 (\text{Ownership}_{i,t})^3 + \gamma_t + \varepsilon_{i,t} \tag{1}$$

In separate regressions $\text{Performance}_{i,t}$ is measured by ROA and Tobin's q, respectively. The independent variables include bank size, capital ratio, ownership, ownership square, and ownership cubic. Ownership is measured by CEO ownership or director and officer ownership, respectively. γ_t are year fixed effects, which are used to control for possible time variation in the banking industry. $\varepsilon_{i,t}$ is the random error.

Ownership is measured at the beginning of a fiscal year, while Size and Capital are measured at the end of the fiscal year.

We conduct separate Ordinary Least Squares (OLS) regressions for the period of 2000 to 2006 and the period of 2007 to 2009. Since observations on the same bank over time are likely to be dependent, standard errors are clustered at the bank level. We do not include bank fixed effects in the model, because year-to-year variation of insider ownership within a firm tends to be very small, and Zhou (2001) shows that fixed effects estimator lacks statistical power in this circumstance.

Table 2 presents the summary statistical of main variables. The dependent variables in the regressions are ROA and Tobin's q. We separate the 10-year period into two sub-periods and make a comparison of these two sub-periods. Before the financial crisis, the mean of ROA was 0.0126, however, the mean value decreased to 0.0024 during the crisis. The difference of the mean is 0.0103, which is statistically significant as indicated by the t-statistic of 8.6157. The standard deviation of ROA in the period of 2007 to 2009 increased a lot, which was 0.0155. Bank performance differed a lot during the financial crisis. We find similar results in the other performance of Tobin's q. The mean value of Tobin's q between 2000 and 2006 was 1.1147. It dropped to 1.0181 between 2007 and 2009. There is a significant mean difference at 1% level between the two sub-periods. In short, banks performed worse during the financial crisis. Due to mergers and acquisitions among publicly traded banks, average bank size increased during our sample period. In contrast to ROA and Tobin's q, the mean difference of insider ownership (measured either as CEO ownership or director and officer ownership) is not significant (**Appendices Table 2**).This is consistent with the findings of Fahlenbrach and Stulz (2009b), who show that bank insiders didn't reduce their

ownership during the recent financial crisis. As a result, they suffered a great loss along with other shareholders when the banks performed poorly during the recent financial crisis.

4. Empirical Results

4.1 Pre-crisis period

Table 3 reports the OLS regression results in the pre-crisis period from 2000 to 2006. In column (1) and (2), ROA is the dependent variable. In column (3) and (4), Tobin's q is the dependent variable. In column (1) and (3), CEO ownership is included in the regression. In column (2) and (4), director and officer ownership is included in the regression.

From the regression results, we find that the estimated coefficients on CEO ownership, CEO ownership square, and CEO ownership cubic are insignificant, no matter whether the dependent variable is ROA or Tobin's q. However, director and officer ownership enters significantly in both ROA and Tobin's q regressions. The sign of the estimated coefficients on director and officer ownership, director and officer ownership square and director and officer ownership cubic are positive, negative and positive.(**Appendices Table 3**)

We draw a curve line to present the results intuitively. **Figure 4** shows how the performance evolves with the changes of director and officer ownership in the pre-crisis period. The model indicates ROA increases when the director and officer ownership is between 0 and 15 percent, decreases between 15 and 50 percent, and increases again

when director and officer ownership is higher than 50 percent. This implies that the convergence of interest have a bigger impact than that of entrenchment as the rise value in ownership.

Figure 4
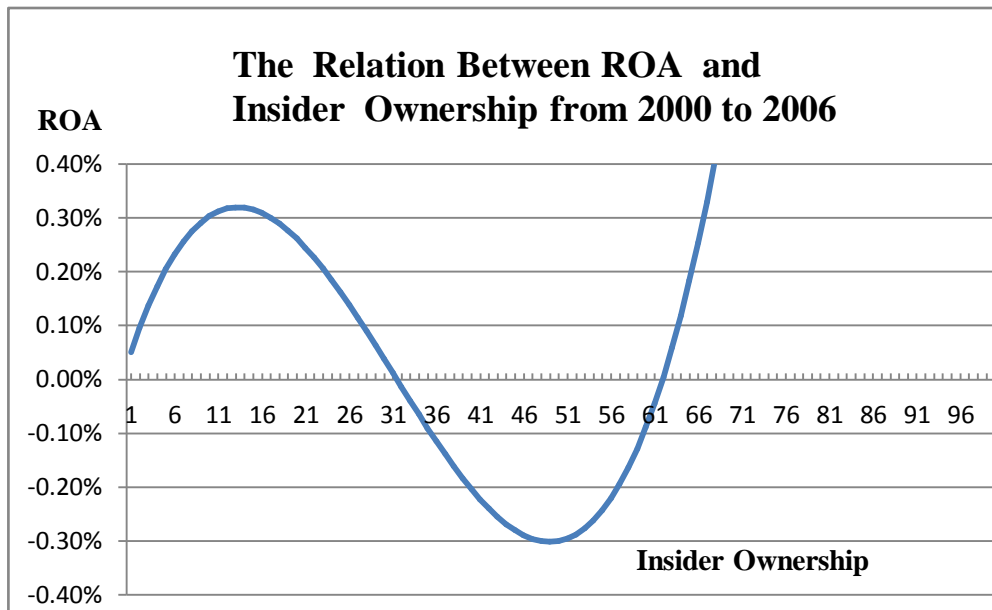
The relation between Tobin's q and director and officer ownership is similar. Tobin's q increases if the director and officer ownership is between 0 and 15 percent, decreases between 15 and 51 percent, when the market is not capabl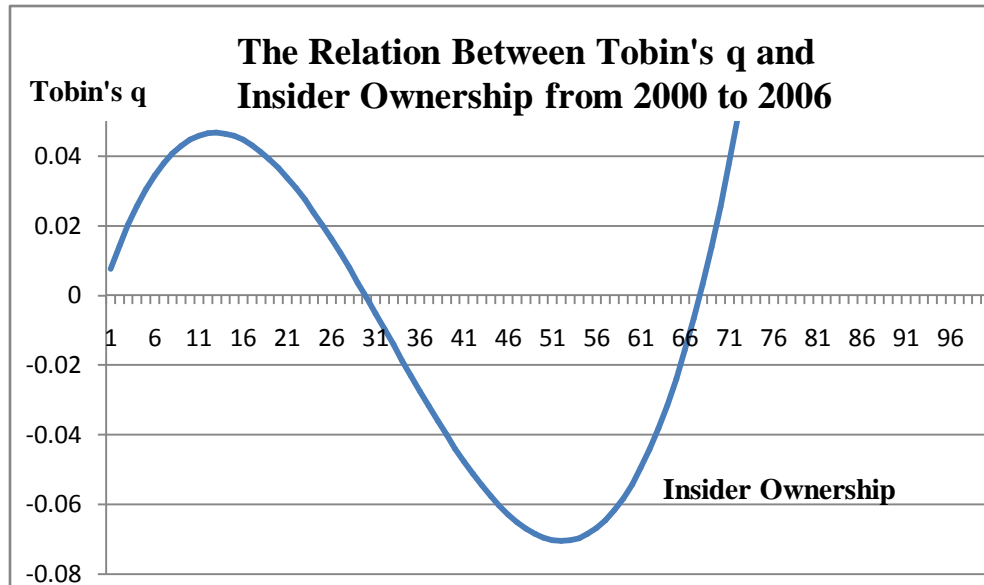e of disciplining directors and officers. Once the director and officer own more than 51 percent of the shares of the bank, we find that Tobin's q increases again with the rise of insider ownership. (**Figure 5**)

Figure 5

The Relation Between Tobin's q and Insider Ownership from 2000 to 2006

Overall, during the year of 2000 to 2006, insider ownership (as measure by director and officer ownership) has a non-linear relation with bank performance. Therefore, we reject the first hypothesis (that there is a non-linear and significant relation between CEO ownership and bank performance). But we cannot reject the second hypothesis (that there is a non-linear and significant relation between director and officer ownership and bank performance).Generally, our pre-crisis period results support both Jensen and Meckling's (1976) argument of convergence of interest, and Morck, Shlerifer, and Vishny's (1988) argument of managerial entrenchment. If managers hold some shares, they are motivated and have convergent interest with the shareholders, banks' value will increase. Directors and officers can benefit from the higher level of ownership by selling the equity at a higher price to outside investors (Stulz 1988). Specifically, Fahlenbrach and Stulz (2009a) explain that increases in shares owned by officers result in the positive relation between the first large increases in insider ownership and changes in bank performance, rather than the increases in shares owned by directors or the number

of shares outstanding. Sullivan and Spong (2007) propose that if the insiders concentrate on their wealth in the bank, then the variation of bank profit decreases .When hired-managers have enough motivation to control and monitor the bank, banks will face less risk in the market.But bank performance will decline when the director and officer ownership is beyond a certain level, such as 50 percent, managers are entrenched and turn to maximize their profits and utilities. Finally, when managers own a large amount of shares, bank performance increase again. Once managers obtain a high level of ownership, convergence of interest effect will dominant the entrenchment effect. In these figures, we can see that the convergence-of- interest effect have an influence through the whole evolvement of the ownership.

4.2 Financial Crisis period

Since the recent financial crisis caused a significant loss to the banking industry, we need to check whether the relation above is still valid during the crisis period. **Table 4** presents the regression results during the financial crisis from 2007 to 2009. The estimated coefficients on CEO ownership are significant when ROA is a dependent variable and insignificant when Tobin's q is a dependent variable. In contrast, the coefficients on director and officer ownership are statistically significant in both ROA and Tobin's q regressions. (**Appendices Table 4**) We calculate bank performance as a function of director and officer ownership. The model implies that ROA increases when director and officer ownership is between 0 and 25 percent, and decreases when the ownership is above 25 percent. (**Figure 6**)

Figure 6
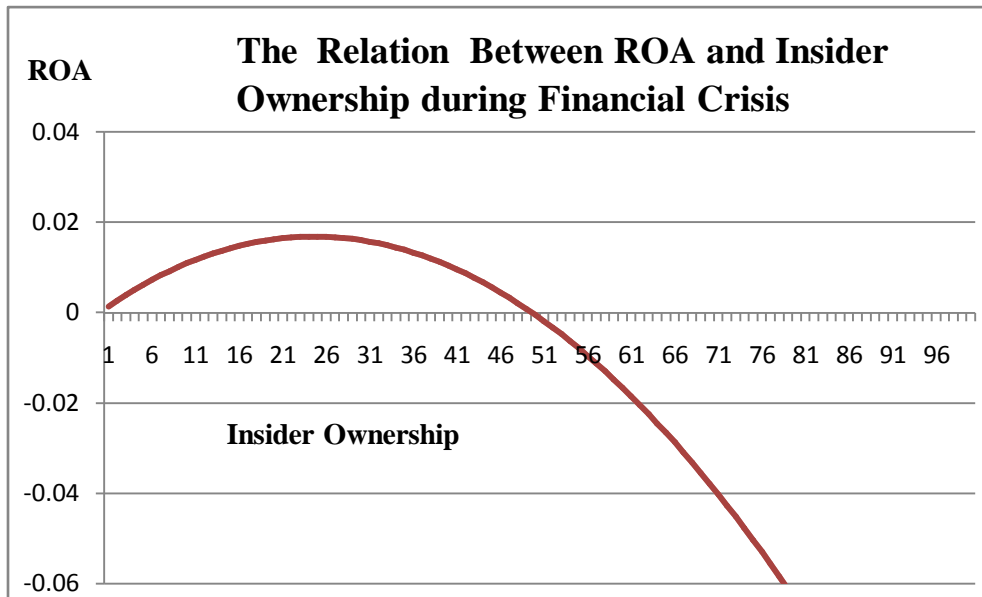
The Relation Between ROA and Insider Ownership during Financial Crisis

The relation between Tobin's q and director and officer ownership is similar. Tobin's q increases when the ownership is between 0 and 20 percent, and decreases as the director and officer ownership is above 20 percent (**Figure 7**).

Figure 7

The Relation Between Tobin's q and Insider Ownership during Financial Crisis
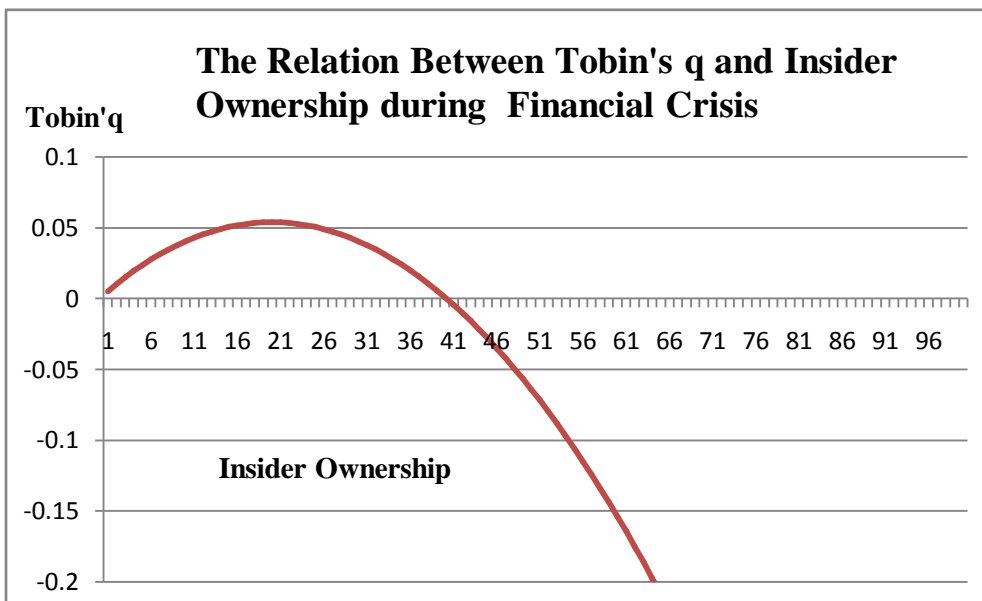
Overall, our results are consistent with the recent findings of Fahlenbrach and Stulz (2009b). They find that banks with higher insider ownership performed better

before the financial crisis, and performed worse during the crisis. They argue that managers with higher ownership have strong motivations to maximize shareholder interests. These managers adopted strategies that worked out very well before the crisis. However, the same strategies failed during the crisis. Our result supports their findings in the following sense. Before crisis, performance increases with insider ownership when ownership is above a critical level. During crisis, however, performance decreases with insider ownership beyond a critical level. People are willing to take some certain level of risk because higher risk can generate higher profits. Yet investors are very cautions about their money during the financial crisis, they do not want to take any risk .Hence, in the crisis period, high risk cannot lead to better performance. If managers continue to increase their shares of stock, they will suffer greater loss due to the economic depression.

Our results also suggest that insider ownership is better measured by director and officer ownership, rather than CEO ownership. These results are consistent with the notion that board of directors affects firm performance (Adam et al. 2010).

5. Conclusion

This study examines the relation between insider ownership and bank performance. Insider ownership is measured in two ways: CEO ownership, or director and officer ownership. We use ROA and Tobin's q to measure bank performance. The results are built on the sample of 100 largest publicly traded banks with headquarters located in the United States. The 10 years period of 2000 to 2009 is divided into two sub-

periods. The first sub-period is pre-crisis ranging from 2000 to 2006; the second one is in financial crisis beginning with 2007 through 2009.

For the sub-period before financial crisis, we find that the relation between bank performance and insider ownership is curvilinear, which is consistent with the result of Griffith et al.(2002)Performance rises until the director and officer ownership approaches 15 percent and declines when the ownership is between 15 percent and 50 percent approximately. After the optimum point of 50 percent, bank value rises again. In general, the result is confirming and consistent with the findings of Morck, Shleifer, and Vishny(1988) and McConnell and Servaes(1990).

During financial crisis, the relation between insider ownership and bank performance is still non-linear. Specifically, there is an inverted U-shaped relation. Bank performance first increases between 0 and 20 percent approximately, and then decreases when ownership is above 20 percent level. It indicates to investors that if the bank performance looks well, it may undertake the things that involve the potential risk or danger.

Lastly, we find that director and officer ownership better measures the alignment of interests between managers and shareholders. CEO ownership as the fraction of only one officer's shares is not a good indicator to display this relationship, which is opposite with the views of Griffith (1999).

Appendices

Table 1

Number of banks in our sample by year

Year	Number of Banks
2000	96
2001	91
2002	90
2003	89
2004	80
2005	73
2006	70
2007	62
2008	58
2009	55
Total	764

       This table presents the number of banks in our sample by year. We start with the 100 largest banks by the year 2000 assets headquartered in the United States. We obtain accounting data for our sample banks from the Compustat database at WRDS.

Table 2

Summary statistics of main variables in our sample

	2000-2006			2007-2009				
	Obs.	Mean	St Dev	Obs.	Mean	St Dev	Mean Difference	t-stat
ROA	589	0.0126	0.0051	175	0.0024	0.0155	0.0103***	8.6157
Tobin's q	589	1.1147	0.0857	175	1.0181	0.0679	0.0966***	15.5080
Size	589	4.2795	0.5613	175	4.4589	0.6405	-0.1794***	-3.3435
Capital	589	0.0867	0.0207	175	0.0876	0.0199	-0.0009	-0.5221
CEO Ownership	538	0.0257	0.0667	168	0.0386	0.2764	-0.0129	-0.5999
D&O Ownership	514	0.0812	0.0987	165	0.1537	0.5982	-0.0724	-0.7730

This table shows the number of observations, mean, standard deviation, and mean difference of the main variables used in our regressions. ROA is net income divided by the total asset. Tobin's q is the market value of assets divided by the book value of assets. CEO Ownership is the number of shares owned by the CEO divided by the total number of shares outstanding. Director and Officer Ownership (D&O Ownership) is the number of shares owned by the directors and officers of the bank as a group divided by the total number of shares outstanding. Size is the natural log of total asset. Capital Ratio is book value of equity divided by total assets. *** indicates statistical significance at the 1% level.

Table 3

The relation between insider ownership and bank performance in the pre-crisis period

	ROA		Tobin's q	
	(1)	(2)	(3)	(4)
Intercept	-0.000	-0.005	1.056***	0.984***
	(0.005)	(0.006)	(0.081)	(0.102)
Size	0.001	0.002*	-0.001	0.012
	(0.001)	(0.001)	(0.012)	(0.015)
Capital	0.124***	0.117***	1.040**	0.955*
	(0.031)	(0.031)	(0.516)	(0.512)
CEO Ownership	0.017		0.251	
	(0.031)		(0.544)	
(CEO Ownership)^2	-0.115		-2.151	
	(0.136)		(2.353)	
(CEO Ownership)^3	0.150		2.517	
	(0.148)		(2.651)	
D&O Ownership		0.053**		0.788*
		(0.022)		(0.403)
(D&O Ownership)^2		-0.254***		-3.806**
		(0.087)		(1.625)
(D&O Ownership)^3		0.272***		3.903**
		(0.088)		(1.773)
Year fixed effects	Yes	Yes	Yes	Yes
Observations	538	514	538	514
R-squared	0.261	0.298	0.120	0.151

This table presents the regression results that relate ROA and Tobin's q to Bank size, Capital ratio, and insider ownership during the pre-crisis period from 2000 to 2006. Robust standard errors are clustered at bank level and reported in parentheses. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Table 4

The relation between insider ownership and bank performance during crisis period

	ROA		Tobin's q	
	(1)	(2)	(3)	(4)
Intercept	-0.043***	-0.053***	1.023***	0.997***
	(0.016)	(0.018)	(0.051)	(0.056)
Size	0.002	0.004	-0.012	-0.007
	(0.002)	(0.003)	(0.009)	(0.011)
Capital	0.321***	0.319***	0.168	0.061
	(0.084)	(0.082)	(0.351)	(0.354)
CEO Ownership	0.305**		1.307	
	(0.135)		(1.129)	
(CEO Ownership)^2	-1.936**		-9.142	
	(0.938)		(7.582)	
(CEO Ownership)^3	0.518**		2.452	
	(0.252)		(2.032)	
D&O Ownership		0.138***		0.543*
		(0.049)		(0.299)
(D&O Ownership)^2		-0.287**		-1.385*
		(0.110)		(0.741)
(D&O Ownership)^3		0.018**		0.087*
		(0.007)		(0.047)
Year fixed effects	Yes	Yes	Yes	Yes
Observations	168	165	168	165
R-squared	0.315	0.329	0.203	0.212

This table presents the regression results that relate ROA and Tobin's q to Bank size, Capital ratio, and insider ownership during the crisis period from 2007 to 2009. Robust standard errors are clustered at bank level and reported in parentheses. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

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