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### Corporate Governance and Tunneling: Empirical Evidence from Turkey

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#### Abstract

This study investigates whether internal governance mechanisms affect tunneling through intercorporate loans for a sample of Turkish listed non-financial firms over the period 2006 to 2014. While the findings reveal a significant and positive relationship between state ownership and tunneling and a significant and negative relationship between foreign ownership and tunneling, the relationship between family ownership and tunneling is non-linear. In addition, while board size is negatively associated with tunneling, independent directors do not prevent the embezzlement of resources. Furthermore, the results indicate that while older firms, firms with family chairman and higher growth opportunities are more likely to engage in tunneling activities, firm size, high cash holding, leverage and financial distress do not affect tunneling.

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## 1. Introduction

Recent studies have revealed that ownership structure is highly concentrated outside of the U.S. and most companies are controlled by large shareholders. For instance, the clear majority of publicly held firms in Western Europe (Faccio and Lang 2002) and East Asia (Claessens *et al.* 2002) are controlled by large family shareholders. In these settings, the conflicts of interests between controlling shareholders and minority shareholders, which result in tunneling, become a major concern (Johnson *et al.* 2000, Shleifer and Vishny 1997).

Tunneling is described as the transfer of assets and profits out of firms for the benefit of controlling shareholders, which hurts the interests of minority shareholders (Johnson *et al.* 2000). Tunneling may take different forms including corporate loans to controlling shareholders, loan guarantees on behalf of controlling shareholders, outright theft, assets or products sales (purchases) at a price which is lower (higher) than market price to (from) a firm in which the controlling shareholder holds high stake and executive compensation (Johnson *et al.* 2000, Peng *et al.* 2011, Shan 2013). It is also possible for controlling shareholders to increase their share without any transfer of resources through dilutive share issues, minority freeze-outs, insider trading, creeping acquisitions, or other actions which expropriate the interests of small shareholders (Johnson *et al.* 2000). However, the former type of tunneling is more common, especially in emerging countries (Shan 2013). For instance, Chinese family firms hold high levels of cash for tunneling, which is detrimental for firm value (Q. Liu *et al.* 2015).

Few studies have investigated whether internal governance mechanisms can be used to protect minority shareholders from the embezzlement of resources by controlling shareholders in developing countries in which the rights of minority shareholders are not well protected by law. In one such study, Shan (2013) found that while state ownership and the number of board of directors' meetings increase resource transfers out of the firm, board independence decreases tunneling in China. Other internal governance mechanisms including foreign ownership, the size of board of directors and supervisory board, number of professional supervisors, and the number of supervisory board meetings were not found to have a significant impact on asset appropriation by large shareholders. Another study on China revealed that outsiders in the board of directors, audit without non-clean opinion, and dispersed ownership are effective internal governance mechanisms which prevent tunneling, whereas belonging to a business group result in asset appropriation (Gao and Kling 2008). However, little attention has been paid to emerging countries other than China. Therefore, the objective of the present study is to investigate the question of whether internal governance mechanisms including ownership structure and board characteristics have an impact on asset appropriation in Turkey.

Turkey provides an interesting case to analyse tunneling. It is a civil law country and the rights of minority investors are not well protected by law (La Porta *et al.* 1998). Thus, minority investors are likely to suffer from the embezzlement of resources. In addition, business groups are the major actors in the Turkish business system, thus, internal capital markets may be used by controlling shareholders to reallocate resources (Gonenc 2009).

## 2. Literature Review and Hypotheses

In emerging countries, the state still retains substantial ownership in firms. In these firms, de facto control rights are held by politicians. As monetary incentives do not guide their decisions, their main objectives do not mainly focus on efficiency or profitability (Gao and Kling 2012). Instead, objectives such as keeping social order and limiting unemployment are prioritized by state shareholders (Huyghebaert and Wang 2012, Shan 2013). Thus, external investors' interests do not necessarily converge with those of state shareholders (Huyghebaert and Wang 2012) and they may face severe agency problems (Ding *et al.* 2007). For instance, state

shareholders may cross-subsidize other firms that have financial difficulties. Empirically, while Shan (2013) and Huyghebaert and Wang (2012) showed that state ownership facilitates asset appropriation, Gao and Kling (2008) did not find a significant relationship between state ownership and tunneling. Based on these arguments and empirical evidence, we expect a positive relationship between state ownership and tunneling.

Foreign investors have a relative informational disadvantage compared to local investors (Leuz *et al.* 2009), therefore, they pay attention to corporate governance issues and are wary of firms with poor corporate governance (Kim *et al.* 2011). For instance, they are likely to invest in firms with board independence particularly in countries with poor legal environments and investor protection (Miletkov *et al.* 2014). Foreign ownership also leads to improvements in corporate governance. They monitor the management better and are likely to exert pressure for transparency and improvement of minority shareholders' rights (Peng 2003). Consequently, they may prevent firms from engaging in opportunistic behaviors like tunneling. Empirically, Shan (2013) found a negative relationship between foreign ownership and tunneling. Lam *et al.* (2012) also showed that foreign investors decrease asset appropriation. Accordingly, we expect a negative relationship between foreign ownership and tunneling.

In addition to financial objectives, family shareholders' decisions are usually driven by non-financial objectives such as the preservation and enhancement of family control and prestige, and these non-monetary goals may be at the expense of minority investors (Gomez-Mejia *et al.* 2011). Therefore, prior research argues that as family involvement in ownership increases, family shareholders gain full control over decision-making and the likelihood of expropriating wealth from minority shareholders increases (Claessens *et al.* 2002). Empirical studies also confirm this argument. For instance, Anderson and Reeb (2003) documented that as family ownership increases, the supervision over managers also increases and this eliminates their opportunistic behaviours. Thus, firm performance first increases as family ownership increases but then decreases when families' control of the firm increases since controlling family shareholders' expropriation incentives are amplified at a high level of control. Q. Liu *et al.* (2015) showed that when family shareholders hold excess control rights, they are more likely to have high cash for tunneling in China. Accordingly, we expect a negative relationship between a low level of family ownership and tunneling and a positive relationship between a high level of family ownership and tunneling.

Family members who hold essential management positions or control of the board have the opportunity to influence both daily and board decisions (Sacristan-Navarro *et al.* 2011). Prior literature argues that when family members involve in management, they are more likely to satisfy interests of the controlling family instead of those of minority shareholders (Morck and Yeung 2003). For instance, family CEO may use the firm's resources to offer family members benefits they would not otherwise obtain (Schulze *et al.* 2003). Empirically, Q. Liu *et al.* (2015) revealed that family firms' incentive to hold cash for tunneling increases when family members directly involve in management. Therefore, we propose a positive relationship between family management and tunneling.

Regarding board composition, several researchers noted a positive association between board size and strategic outcomes. In general, a larger board has access to a higher level of expertise, knowledge and skills compared to a smaller sized board (Van den Berghe and Levrau 2004). In addition, large boards are able to reduce the dominance by the CEO by providing different perspectives (Forbes and Milliken 1999, Goodstein *et al.* 1994). Resource dependency theory also considers a large board as a valuable resource for companies because it can provide improved access to the external environment, thus improving corporate governance and firm performance in general (Jackling and Johl 2009). Finally, a minimum number of directors is needed to guarantee that directors come from diverse backgrounds (Van den Berghe and De Ridder 2002) and improve board efficiency (Jensen and Murphy 1990). Empirically, Chen *et*

*al.* (2014) and Y. Liu *et al.* (2015) documented a negative relationship between board size and tunneling. Based on these arguments and empirical evidence, we expect that larger boards will be more likely to engage in optimal strategic decisions and prevent tunneling. Hence, a negative relationship between board size and tunneling activities is anticipated.

The number of independent directors is another board characteristic which received considerable attention in the literature. Board independence is considered a good means of improving corporate governance outcomes because independent directors will have positive behavioural motivations to prevent expropriation of minority shareholders (Shan and McIver 2011, Shan 2013). In addition, independent directors on the board are expected to alleviate inefficiencies (Y. Liu *et al.* 2015) and promote better governance practices in areas including related party transactions (Shan 2013). Despite these theoretical arguments, both a negative (Gao and Kling, 2008, Shan 2013) and a positive (Q. Liu *et al.* 2015) association between board independence and tunneling has been reported in the empirical literature. Accordingly, we do not make an a priori assessment of the relationship between board independence and tunneling.

Several firm-specific variables have also been investigated as potential correlates of tunneling activities. In general, excess high cash holdings are positively associated with tunneling (Q. Liu *et al.* 2015). On the other hand, larger firms have better internal corporate governance mechanisms and are thus less likely to engage in tunneling (Berkman *et al.* 2009, Jiang *et al.* 2010, Shan, 2013). The literature also suggests it is costlier for shareholders to tunnel a firm's assets if it has higher growth opportunities (Peng *et al.* 2011, Shan 2013). Finally, younger, highly leveraged and financially distressed firms were found to be less likely to engage in tunneling activities (Q. Liu *et al.* 2015, Y. Liu *et al.* 2015).

### 3. Methodology

#### 3.1. Sample and Data

Because a large volume of data had to be hand collected, the sample of this study focuses on companies listed on Borsa Istanbul 100 index. The period of analysis covers the years between 2006-2014 and excludes financial firms because of their unique accounting standards (Q. Liu *et al.*, 2015). Thus, the final sample has an unbalanced panel of 599 firm-years of observations.

Two sources were used to obtain the data. First, corporate governance data (i.e. ownership and board characteristics of firms) were manually collected from firms' compliance and annual reports published on the website of the Public Disclosure Platform. Second, the data on tunneling and other firm-specific variables were obtained from a local database developed by FINNET<sup>1</sup>.

#### 3.2. Variables

##### *Tunneling*

The most commonly used type of tunneling is through inter-corporate loans through which controlling shareholders divert resources from other companies which are also under their control (Y. Liu *et al.* 2015). Following prior studies in the literature (Y. Liu *et al.* 2015, Q. Liu *et al.* 2015, Jiang *et al.* 2010), we adopt the variable ORECTA, which is computed by dividing other receivables by total assets, to measure the extent of controlling shareholder's tunneling.

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<sup>1</sup> FINNET Elektronik Yayincilik Data Iletisim San. Tic. Ltd. Sti.

### *Governance variables*

To investigate the effect of ownership structure on tunneling, three different variables are adopted: State ownership, foreign ownership and family ownership. State (foreign, family) ownership is defined as the proportion of shares held by the state (foreign, family) shareholders. Following prior studies in the literature, we also include the square of the family ownership to control for a potential non-linear effect. In addition, two dummy variables are used to measure the effect of family management on tunneling. Family chairman takes the value of 1 in the presence of a family chairman and 0 otherwise, and family CEO takes the value of 1 in the presence of a family CEO and 0 otherwise.

In this study, board independence and board size are also used to examine the effect of board structure on tunneling. The number of independent directors is divided by the total number of board members to compute board independence. Board size is measured by the natural logarithm of the number of directors on the board.

### *Control variables*

Firm age, growth opportunities, firm size, cash holdings, leverage and financial distress are included to control for firm characteristics. Firm age is measured by the number of years since the firm's incorporation. Growth opportunities are measured by Tobin's  $Q$ , calculated as the market value of equity and book value of debt divided by the book value of total assets. Firm size is defined by the natural logarithm of total assets. High cash holding is a dummy variable which takes the value of 1 for firms which have the ratio of their cash holdings to total assets above the sample median. Leverage ratio is computed as the ratio of total debt to total assets. To control for the effect of financial distress on tunneling, we included a dummy variable which takes the value of 1 for firms that have the ratio of interest expense to operating income greater than 1 (Q. Liu *et al.*, 2015).

Five industry dummies and a crisis dummy for observations belonging to years 2008 and 2009, to control for the effect of the financial crisis, were also included in our analyses.

### **3.3. Estimation**

The following model was estimated using the pooled OLS technique:

$$ORECTA_{it} = \beta_0 + \beta_1 G_{it} + \beta_2 X_{it} + \varepsilon_{it} \quad (1)$$

where:

$ORECTA_{it}$  denotes the extent of tunneling of firm  $i$  in year  $t$ ,  $G_{it}$  is a vector of governance variables for firm  $i$  in year  $t$ ,  $X_{it}$  is a vector of control variables for firm  $i$  in year  $t$ ,  $\beta_0$ ,  $\beta_1$  and  $\beta_2$ , are vectors of parameters to be estimated, and  $\varepsilon_{it}$  is the error term.

The effects of outliers were minimized by winsorizing variables at the 1<sup>th</sup> and 99<sup>th</sup> percentiles (Campbell *et al.*, 2008). Industry clustered and robust standard errors are reported to address normality concerns.

## 4. Results

### 4.1. Descriptive Statistics

Descriptive statistics on our variables are displayed on Table 1. ORECTA registers a mean value of 0.0143 suggesting that on the average 1.43 percent of total assets are embezzled during the period 2006-2014. The mean values of state and foreign ownership are 5.68 and 14.97 percent respectively. Family ownership registers a mean value of 32.61 percent suggesting that families have a dominant role in the ownership structure of Turkish companies. Furthermore, a high percentage (46.30 percent) of the board chairs are family members. However, only a small percentage (4.69 percent) of CEOs are from family. Regarding board characteristics, the average number of directors on the board registers a mean value of 7.86 while the percentage of independent directors has a mean value of 14 percent.

Table 1. Descriptive statistics

<b>Variable</b>	<b>N</b>	<b>Mean</b>	<b>Std. Dev.</b>	<b>Min</b>	<b>Max</b>
<i>ORECTA</i>	597	0.0143	0.0307	0	0.2129
<i>Firm age</i>	596	36.6644	15.4794	8	76
<i>Tobin's Q</i>	597	2.0425	1.0093	1.0385	6.7813
<i>Firm size</i>	597	20.7775	1.4132	17.6438	23.7799
<i>High cash holding</i>	598	0.4983	0.5004	0	1
<i>Leverage</i>	597	48.9545	29.6899	6.4819	231.1141
<i>Financial distress</i>	598	0.1572	0.3643	0	1
<i>State ownership</i>	520	0.0568	0.1797	0	0.8458
<i>Foreign ownership</i>	510	0.1497	0.2559	0	0.9792
<i>Family ownership</i>	524	0.3261	0.2846	0	0.88
<i>Family chairman</i>	527	0.4630	0.4991	0	1
<i>Family CEO</i>	512	0.0469	0.2116	0	1
<i>Board size</i>	519	7.8593	2.1456	4	17
<i>Board independence</i>	516	0.1401	0.1543	0	0.5

To investigate a potential multicollinearity problem, Pearson correlation and variance inflation factor tests were used. As shown on Tables 2 and 3, all correlations are below 0.7 and all VIF values are smaller than 10, indicating that multicollinearity is not a concern (Lehman *et al.*, 1988).

Table 2. Pearson Correlation Matrix

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
<b>(1) ORECTA</b>	1													
<b>(2) Firm age</b>	-0.01	1												
<b>(3) Tobin's Q</b>	-0.13*	-0.18*	1											
<b>(4) Firm size</b>	0.01	0.09*	-0.32*	1										
<b>(5) High cash holding</b>	-0.09*	0.25*	0.02	0.10*	1									
<b>(6) Leverage</b>	0.10*	-0.17*	-0.03	0.15*	-0.33*	1								
<b>(7) Financial distress</b>	-0.03	-0.11*	-0.07	-0.14*	-0.05	-0.07	1							
<b>(8) State ownership</b>	0.06	0.16*	-0.13*	0.28*	0.07	0.07	-0.01	1						
<b>(9) Foreign ownership</b>	-0.11*	0.09*	0.09*	0.10*	0.03	-0.06	-0.13*	-0.09*	1					
<b>(10) Family ownership</b>	-0.03	0.06	-0.16*	0.06	-0.03	-0.04	0.03	-0.36*	-0.34*	1				
<b>(11) Family chairman</b>	-0.03	-0.01	-0.08	0.19*	0.13*	-0.03	0.03	-0.28*	-0.19*	0.66*	1			
<b>(12) Family CEO</b>	-0.04	-0.04	0.17*	-0.07	0.11*	-0.08	-0.02	-0.06	-0.09*	0.06	0.25*	1		
<b>(13) Board size</b>	-0.17*	0.08	0.05	0.35*	0.10*	0.11*	-0.06	-0.01	0.25*	0.05	0.04	-0.17*	1	
<b>(14) Board independence</b>	0.05	0.07	0.03	0.11*	-0.09	0.16*	-0.17*	-0.07	0.03	0.05	0.03	-0.01	0.04	1

\*significant at 5%

Table 3. VIF Diagnostics

	VIF	SQRT VIF	TOLERANCE
<i>Firm age</i>	1.28	1.1314	0.7813
<i>Tobin's Q</i>	1.36	1.1662	0.7353
<i>Firm size</i>	1.63	1.2767	0.6135
<i>High cash holding</i>	1.32	1.1489	0.7576
<i>Leverage</i>	1.24	1.1136	0.8065
<i>Financial distress</i>	1.09	1.0440	0.9174
<i>State ownership</i>	1.58	1.2570	0.6329
<i>Foreign ownership</i>	1.45	1.2042	0.6897
<i>Family ownership</i>	2.47	1.5716	0.4049
<i>Family chairman</i>	2.07	1.4387	0.4831
<i>Family CEO</i>	1.2	1.0954	0.8333
<i>Board size</i>	1.41	1.1874	0.7092
<i>Board independence</i>	1.09	1.0440	0.9174

## 4.2. Regression Results

Table 4 provides the regression results of pooled OLS. The first specification shows a positive relationship between state ownership and ORECTA, indicating that state shareholders are likely to transfer resources out of the company to maintain the operations of the parent company. However, the second model indicates a negative association between foreign ownership and ORECTA. These findings are consistent with the literature (Gao and Kling 2008, Shan 2013). In the third specification, we explored the impact of family ownership and family management on tunneling. The findings reveal that the relationship between family ownership and tunneling is convex. As the shares held by the family increases above a certain point, tunneling rises at an increasing rate. In addition, the presence of a family chairman on board increases the tunneling of controlling shareholders.

The fourth model which focused on board characteristics shows a negative relationship between board size and ORECTA and a positive relationship between board independence and ORECTA. These findings indicate that tunneling through intercorporate loans is worse when the board includes independent directors. These results question the effectiveness of independent directors in Turkey.

To investigate the relationship between board independence and tunnelling further, the fifth and last model introduces the interaction between board independence and family chairman. Once the interaction term is included, the coefficient of board independence becomes insignificant. However, the interaction term is positive and significant, meaning that if the board chairman is a family member, the existence of independent directors increases tunnelling through intercorporate loans.

Regarding control variables, firm size, high cash holding, leverage and financial distress have no impacts on tunneling. However, the negative and significant coefficient of Tobin's  $Q$  suggests that as the growth opportunity of the firm increases, tunneling through intercorporate loans decreases. There is also a positive and significant relationship between firm age and ORECTA.



Table 4. Pooled OLS Results

	Model 1			Model 2			Model 3			Model 4			Model 5		
	Coef	t-stat		Coef	t-stat		Coef	t-stat		Coef	t-stat		Coef	t-stat	
<i>Firm age</i>	0.0003	1.82	*	0.0003	2.33	**	0.0003	1.82	*	0.0003	2.31	**	0.0001	1.94	*
<i>Tobin's Q</i>	-0.0062	-3.51	***	-0.0061	-3.43	***	-0.0066	-3.39	***	-0.0066	-3.14	***	-0.0041	-2.63	***
<i>Firm size</i>	-0.0009	-0.82		-0.0003	-0.3		-0.0003	-0.31		0.0010	1.02		-0.0001	-0.1	
<i>High cash holding</i>	-0.0024	-0.84		-0.0030	-1.04		-0.0038	-1.22		-0.0018	-0.64		-0.0018	-0.58	
<i>Leverage</i>	-0.0001	-0.74		-0.0001	-0.79		-0.0001	-0.64		-0.0001	-1.1		0.0000	-0.05	
<i>Financial distress</i>	-0.0038	-1.23		-0.0057	-1.8	*	-0.0034	-1.08		-0.0007	-0.22		-0.0032	-0.71	
<i>State ownership</i>	0.0126	1.76	*												
<i>Foreign ownership</i>				-0.0121	-2.08	**									
<i>Family ownership</i>							-0.0560	-3.28	***						
<i>Family ownership<sup>2</sup></i>							0.0603	2.4	**						
<i>Family chairman</i>							0.0110	3.55	***				0.0063	1.69	*
<i>Family CEO</i>							0.0060	1.28							
<i>Board size</i>										-0.0025	-4.45	***	-0.0027	-3.77	***
<i>Board independence</i>										0.0185	1.68	*	-0.0123	-0.98	
<i>Board independence*</i> <i>Family chairman</i>													0.0428	2.29	**
<i>Constant</i>	0.0456	1.76	*	0.0354	1.53		0.0347	1.44		0.0236	1		0.0458	1.85	
<b>Number of obs</b>	520			510			498			516			513		
<b>F-stat</b>	4.05			4.14			4.9			4.46			3.62		
<b>Prob &gt; F</b>	0			0			0			0			0		
<b>R-squared</b>	0.1028			0.1099			0.1159			0.1471			0.1621		
<b>Root MSE</b>	0.0311			0.0311			0.0315			0.0303			0.0317		

\*\*\*, \*\*, and \* denote significance at 1%, 5%, and 10% respectively.

## 5. Conclusion

The objective of this study was to investigate the impact of corporate governance on tunneling of corporate resources through intercorporate loans in Turkish listed nonfinancial firms for the period 2006-2014. Corporate governance characteristics considered in this study included foreign, state, and family ownership levels as well as family management and board composition. Several important results emerged from our analysis.

First, consistent with our expectations tunneling was found to be positively related to state ownership. Consistent with prior studies (e.g. Shan 2013), this result suggests that state ownership concentration negatively affects strategic decisions among Turkish firms. On the other hand, the association between foreign ownership and tunneling was found to be negative. Therefore, foreign owners fulfill an effective role in monitoring tunneling activities in Turkish firms. These results suggest that Turkish firms could benefit from further privatization efforts and from policies aimed towards increasing the concentration of foreign owners. The results also revealed a convex relationship between family ownership and tunneling, suggesting that after a certain point, increasing family ownership is associated with more tunneling activities. Related to family management, results suggest that firms in which the chairman of the board is a family member are more likely to engage in tunneling activities. However, the existence of a CEO from the family did not have any impact.

Regarding board characteristics, our results revealed a negative association between board size and tunneling. This result is consistent with prior studies (Chen *et al.* 2014, Q. Liu *et al.* 2015), suggesting that larger boards benefit from a variety of expertise and intellectual capital, which improves corporate strategic decisions. In addition, tunneling was found to be positively related to the proportion of independent directors on the board if the chairman of the board is a family member. This finding suggests that merely increasing the number of independent directors on the boards of Turkish companies does not allow them to fulfill their monitoring role. A possible explanation for this finding could be that independent directors on Turkish boards are perfunctory (Y. Liu *et al.* 2015). In addition, most independent directors in Turkey are appointed by controlling shareholders and families. As a result, they need to show their loyalty to their appointers and become ineffective in monitoring and controlling firm's strategic decisions including tunneling in order to secure their positions.

The only control variables which turned out significant in our estimations were firm age and growth opportunities. Results showed that older firms are more likely to engage in tunneling which suggests that the longer a firm has been listed, the easier it becomes for controlling shareholders to pursue their interests. On the other hand, a negative association between a firm's Tobin's  $Q$  and tunneling was found. Consistent with prior studies, this finding suggests that it is more difficult for controlling shareholders to engage in tunneling through intercorporate loans if the firm has higher growth opportunities (Peng *et al.* 2011, Shan 2013).

The main limitation of this study is that we only considered a particular form of tunneling. Although intercorporate loans can clearly be interpreted as evidence of tunneling activities, the extent of the problem could be greater. In addition to employing alternative measures of tunneling, future studies could also consider additional corporate governance variables such as managerial ownership, deviation of voting rights from cash flow rights, the existence and size of external committees or the frequency of board meetings as potential determinants of tunneling activities. Second, the study focused only on companies on BIST-100 index. Future studies could address

this limitation by extending the sample size to a larger number of listed firms. A final limitation of the study is that results are based on a single country; which future studies can address by conducting comparative analyses on other emerging markets.

## References

- Anderson, R. C. and D. M. Reeb (2003) "Founding family ownership and firm performance: Evidence from the S&P 500" *The Journal of Finance* **58(3)**, 1301-1328.
- Berkman, H., R. A. Cole and L. J. Fu (2009) "Expropriation through loan guarantees to related parties: Evidence from China" *Journal of Banking and Finance* **33**, 141-156.
- Campbell, J. Y., J. Hilscher and J. Szilagyi (2008) "In search of distress risk" *Journal of Finance* **63**, 2899-2939.
- Chen, Y., Y. Wang and L. Lin (2014) "Independent directors' board networks and controlling shareholders' tunneling behaviour" *China Journal of Accounting Research* **7(2)**, 101-118.
- Claessens, S., S. Djankov, J. P. H. Fan and L. H. P. Lang (2002) "Disentangling the incentive and entrenchment effects of large shareholdings" *Journal of Finance* **57**, 2741-2471.
- Ding, Y., H. Zang and J. Zhang (2007) "Private vs. state ownership and earnings management: evidence from Chinese listed companies" *Corporate Governance: An International Review* **15(2)**, 223-238.
- Faccio, M. and L. H. Lang (2002) "The ultimate ownership of Western European corporations" *Journal of Financial Economics* **65(3)**, 365-395.
- Forbes, D. P. and F. Milliken (1999) "Cognition and corporate governance: Understanding board of directors as strategic decision-making groups" *Academy of Management Review* **3**, 489-505.
- Gao, L. and G. Kling (2008) "Corporate governance and tunneling: Empirical evidence from China" *Pacific-Basin Finance Journal* **16(5)**, 591-605.
- Gao, L. and G. Kling (2012) "The impact of corporate governance and external audit on compliance to mandatory disclosure requirements in China" *Journal of International Accounting, Auditing and Taxation* **21**, 17-31.
- Gonenc, H. (2009) "How do business group firms utilize internal capital markets?" *International Journal of Managerial Finance*, **5(4)**, 360-375.
- Gomez-Mejia, L. R., C. Cruz, P. Berrone and J. De Castro (2011) "The bind that ties: Socioemotional wealth preservation in family firms" *Academy of Management Annals* **5**, 653-707.
- Goodstein, J., K. Gautam and W. Boeker (1994) "The effects of board size and diversity on strategic change" *Strategic Management Journal* **15**, 241-250.
- Huyghebaert, N. and L. H. Wang (2012) "Expropriation of minority investors in Chinese listed firms: the role of internal and external corporate governance mechanisms" *Corporate Governance: An International Review* **20(3)**, 308-332.

Jackling, B. and S. Johl (2009) "Board structure and firm performance: Evidence from India's top companies" *Corporate Governance: An International Review* **17**, 492-509.

Jensen, M. and K. Murphy (1990) "Performance pay and top-management incentives" *Journal of Political Economy* **98**, 225-264.

Jiang, G., C. M. C. Lee and H. Yue (2010) "Tunneling through intercorporate loans: The China experience" *Journal of Financial Economics* **98**, 1-20

Johnson, S., R. La Porta, F. Lopez-de-Silanes and A. Shleifer (2000) "Tunneling" *American Economic Review Papers and Proceedings* **90**, 22-27.

Kim, W., T. Sung and S. J. Wei (2011) "Does corporate governance risk at home affect investment choices abroad?" *Journal of International Economics* **85**, 25-41.

La Porta, R., F. Lopez-de-Silanes and A. Shleifer (1999) "Corporate ownership around the world." *Journal of Finance* **52(2)**, 471-517.

Lam, K. C. K., H. Sami and H. Zhou (2012) "The role of cross-listing, foreign ownership and state ownership in dividend policy in an emerging market" *China Journal of Accounting Research* **5(3)**, 199-216.

Lehmann, D. R., S. Gupta and J. Steckel (1988) *Marketing research*. Reading, MA: Addison Wesley.

Leuz, C., K. Lins and F. Warnock (2009) "Do foreigners invest less in poorly governed firms?" *Review of Financial Studies* **22**, 3245-85.

Liu, Q., T. Luo and G. G. Tian (2015) "Family control and corporate cash holdings: Evidence from China" *Journal of Corporate Finance* **31**, 220-245.

Liu, Y., M. K. Miletkov, Z. Wei and T. Yang (2015) "Board independence and firm performance in China" *Journal of Corporate Finance* **30**, 223-244.

Miletkov, M. K., A. B. Poulsenb and M. B. Wintokic (2014) "The role of corporate board structure in attracting foreign investors" *Journal of Corporate Finance* **29**, 143-157.

Morck R. and B. Yeung (2003) "Agency problems in large family business groups" *Entrepreneurship Theory and Practice* **27**, 367-382.

Peng, M. W. (2003) "Institutional transitions and strategic choices" *The Academy of Management Review* **28(2)**, 275-296.

Peng, W. Q., K. C. J. Wei and Z. Yang (2011) "Tunneling or propping: Evidence from connected transaction in China" *Journal of Corporate Finance* **17**, 306-325.

Sacristan-Navarro, M., S. Gomez-Anson, and L. Cabeza-Garcia (2011) "Family ownership and control, the presence of other large shareholders, and firm performance: Further evidence" *Family Business Review* **24**, 71-93.

Schulze, W. S., M. H. Lubatkin and R. N. Dino (2003) "Exploring the agency consequences of ownership dispersion among the directors of private family firms" *Academy of Management Journal* **46(2)**, 179-194.

Shan, Y. G. and R. P. McIver (2011) "Corporate governance mechanisms and financial performance in China: Panel data evidence on listed non-financial companies" *Asia Pacific Business Review* **17**, 301-324.

Shan, Y. G. (2013) "Can internal governance mechanisms prevent asset appropriation? Examination of type 1 tunneling in China" *Corporate Governance: An International Review* **21(3)**, 225-241.

Shleifer, A. and R. W. Vishny (1997) "A survey of corporate governance" *The Journal of Finance* **52(2)**, 737-783.

Van den Berghe, L. and L. De Ridder (2002) *How to optimize the working of the board of directors*. Mechelen: Ced. Samsong.

Van den Berghe, L. and A. Levrau (2004) "Evaluating boards of directors: What constitutes a good corporate board?" *Corporate Governance: An International Review* **12**, 461-478.