CORPORATE OWNERSHIP AND CONTROL: NEW EVIDENCE FROM TAIWAN

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Abstract

Recent empirical literature on corporate governance has demonstrated that companies' shares are generally concentrated in the hands of particular families or wealthy investors. Claessens et al. (2002) analyzed the ownership structure in East Asian eight countries, but misestimated the Taiwanese condition that made them not find the positive incentive or negative entrenchment effects in Taiwan. This study tries to clear the ultimate control in Taiwan, use the detailed data to better understand the ownership structure in Taiwan and investigates the determinants for deviation of control from cash flow rights. Based on the findings, the companies' shares are common concentrated in the hands of the largest shareholder. We find that the deviation of control from cash flow rights is greater in the family-controlled companies than other type companies. Also the controlling shareholders use more pyramids and cross shareholding to increase their control rights that accompanies with deeply management participation. On the average, the controlling shareholders hold more than half board seats and usually occupy the chairman and general manger to enhance their control power in family-controlled companies. No matter in all sample or family-controlled companies, the controlling shareholders owns significantly less cash flow rights, occupy more board seats in deviation group companies than those without deviation. Corporate valuation is significantly lower in the companies with the divergence of control from cash flow rights than non-deviation companies.

Keywords: ownership, control, corporate governance, Taiwan

Introduction

Recent empirical literature on corporate ownership has demonstrated that the wide dispersion of ownership proposed by the traditional assumption[1] might not be as fit as previously conceived. Even in the United States, ownership is not completely dispersed. It is not uncommon for companies' shares to be concentrated in the hands of particular families or wealthy investors; a phenomenon that contradicts Berle and Means' (1932) presumption (Shleifer and Vishny, 1986; Morck, Shleifer and Vishny, 1988). Moreover, La Porta, Lapez-de-Silanes, Shleifer, and Vishny (1998) portrayed an even more concentrated ownership structure in the ten largest non-financial corporations across forty-nine developed as well as developing countries.

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[1] Berle and Means (1932) noted the prevalence of widely held corporations in the United States, in which ownership of capital was dispersed among small shareholders; however, control was concentrated in the hands of managers. More recently, the following corporate governance literature was originally derived from the Berle and Means study. This has also been propagated by Jensen and Meckling (1976), and Grossman and Hart (1980).

La Porta, Lopez-de-Silanes, and Shleifer (1999) investigated the issue of a corporation's ultimate control by tracing the chain of ownership and identifying the individuals with the most voting rights. Their study covered large corporations in twenty-seven wealthy economies and concluded that even the largest firms tend to have controlling shareholders. Although the controlling shareholder is occasionally the state, a family, usually the founder of the firm or his descendants frequently accounts for the majority shareholder. Claessens, Djankov and Lang (2000) adopted a similar approach to determine the ultimate control patterns in nine East Asian countries. Their empirical results show that large families reign over more than half of the East Asian corporations. Faccio and Lang (2002) analyzed the ultimate ownership and control in thirteen Western European countries. Firms are typically family-controlled except U.K. and Ireland[2].

La Porta et al. (1999), Claessens et al. (2000) and Faccio and Lang (2002) revealed some interesting information on the patterns of ultimate corporate ownership around the world and its effect on firm value. It is expected that more research in this area on an individual country basis should be continued to provide further insight into this area. According to Yeh, Lee and Woidtke (2001) and this study[3], Taiwanese listed companies are characterized as mostly family controlled with a high degree of concentrated ownership similar to the findings in the above studies. Hence, we used Taiwanese listed companies as an empirical sample that may generate some interesting findings in the corporate governance field. However, Claessens at al. (2000) reported a different finding about the ownership structure of Taiwanese listed companies. They indicated that the average voting rights held by the controlling shareholders was about 19 percent[4]. However, the average voting right is actually 30.3 percent in our findings, and 27.4 percent as surveyed by Yeh, Lee and Woditke (2001)[5]. Moreover, Claessens et al. (2000) did not correctly estimate the divergence between voting and cash flow rights in Taiwan. They reported the average cash flow rights owned by the ultimate owner in Taiwanese listed companies at about 16 percent and the average cash flow rights over voting rights at 0.83. However, our calculations for the above two figures were 21.7 percent and 0.71, separately. We argue that the above apparently mis-estimated figure for the average voting rights held by the controlling shareholders in Taiwan resulted from inadequate Taiwanese disclosure rules which allow companies to conceal the real identities of owners and provide misleading data about a firm's ownership structure.

Securities regulations in Taiwan require that listed companies disclose the identities of shareholders owning more than 10% of companies' stocks, and these shareholders have to file with the securities regulators of the purpose and financial sources of their investments. Subsequent transactions of these shares are also under regulatory restriction and disclosure requirement. Therefore, the controlling shareholders of Taiwanese listed companies tend to disperse their shareholdings into many accounts (family members or legal entities), especially family-controlled companies. They set up nominal investment companies funded by the listed companies they control, then buy those listed companies using the accounts of nominal investment companies. If these nominal investment companies do not own more than 10% of the stock in the company and do not appoint a representative serving as a director or supervisor, they do

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[2] Zingales (1994), Kunz and Angel (1996), Rydqvist (1996), Taylor and Whittred (1998), and Smith and Amoako-Adu (1999) also documented evidence of concentrated ownership by families in European, Canadian, and Australian markets.

[3] This is reported in Section II, Section III and Table 4.

[4] La Porta, Lopez-de-Silanes, Shleifer and Vishny (1998) also found the average control rights held by the largest shareholders in the U.S. and U.K. to be 20 percent and 19 percent respectively, but only 18 percent for the firms in Taiwan.

[5] Her and Mahajan (2000) found the average shareholding of a corporate insider to be 28.6 percent. Corporate insiders' holdings include shares owned by directors, supervisors and managers, including the holdings of their spouses and minor children.

not have to disclose the alterations in their shareholding based on the securities regulations in Taiwan. The foregoing approach not only disguises the shareholdings owned by the controlling shareholders from monitoring by the Security Exchange Commission, but also saves individual taxes for the controlling shareholders. The existing disclosure rules do not required listed companies to disclose the identities of the owners of these investment companies. The ultimate ownership structure of these listed companies may therefore not be fully disclosed. Controlling shareholders and their family members have great incentive to spread their shareholdings among family members in order not to exceed the 10% regulatory reporting requirement. This study provides further evidence to understand the ownership structure and the positive incentive effect and negative entrenchment effect of controlling shareholders in Taiwan to highlight the importance of sufficient information disclosure regulations with regard to the ownership structure research and corporate governance mechanism. This was carried out using (1) an examination of the detailed data to better understand the ownership structure and ultimate control in Taiwan; (2) investigating the determinants for deviation of control from cash flow rights; (3) explaining the difference of ownership structure, board variables and corporate characteristics between the non-deviation and deviation companies.

Literature Review and Taiwan Ownership Structure

1. Ownership structure

Recent researches doubted the assumption of widely dispersed ownership in the publicly traded companies. La Porta et al. (1999), Claessens et al. (2000) and Faccio and Lang (2002) surveyed ultimate control as well as the extent of concentrated ownership structures in publicly traded companies around the world. They found that publicly traded companies in most countries possess a higher level of ownership concentration and the existence of ultimate owners is not uncommon. La Porta et al. (1999) creatively investigated the issue of ultimate control in 27 wealthy countries, i.e., they traced the chain of ownership to determine who has the most voting rights. Using the criterion of judging the controlling shareholder based on the voting rights of the largest shareholder exceeding 20% (20% cutoff criteria). On average, 63.5% of the large public companies have controlling shareholders, and 76.3% of median sized public companies have controlling shareholders. Following the La Porta et al. (1999), Claessens et al. (2000) investigated 2980 public companies in 9 East Asian countries[6] and concluded that, on average, 57.1% of the public companies had controlling shareholders. That percentage would be 83.4% if Japanese companies were excluded. Faccio and Lang (2002) reported that 64.1% of the 5232 listed companies that they studied had controlling shareholder in 13 Western European countries. Using the 20% cutoff criteria[7], this percentage would be 79.5% if British and Ireland companies were excluded. This study analyzed 251 Taiwanese listed companies for 1998 and found that 70.1% of the listed companies had controlling shareholders. The concentrated ownership structure for Taiwanese listed companies is therefore similar to that in other countries around the world.

In Taiwan, controlling shareholders and their family members have great incentive to spread their shareholdings among family members in order not tot exceed the 10% regulatory reporting requirement. Yeh, Lee and Woditke (2001) found that the controlling family of a Taiwanese publicly listed and traded company might leverage their control over the company through the following three sources. (1) cross-shareholding from listed companies in the same

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[6] The 9 East Asian countries include Japan, Hong Kong, Taiwan, Korea, Singapore, Malaysia, Thailand, the Philippines, and Indonesia.

[7] The 13 Western European countries include Austria, Belgium, Finland, France, Germany, Ireland, Italy, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

family controlled group; (2) indirect shareholding through a pyramidal structure; and (3) the shareholding by nominal investment companies and other institutions under their control.

Yeh et al. (2001) took the Formosa Plastics Group as an example. It is composed of four listed companies: Formosa Plastics, Nan-Ya Plastics, Formosa Chemicals and Fiber, and Formosa Taffeta. In 1994 and 1995, the founder, Yung-Ching Wang together with his family members own 12.97% of Nan-Ya Plastics. Other listed companies controlled by Mr. Wang are Formosa Plastics and Formosa Chemicals and Fiber also own 4.93% and 4.75% of Nan-Ya's shares. Two nominal investment companies, Chin's International Investment Co. and Wan-Shoon International Investment Co. own 3.63% and 4.56% of Nan-Ya, respectively. Through Chang Gung University and Chang Gung Hospital, Mr. Wang again controls another 4.16% and 0.77% of Nan-Ya. Thus the shares in Nan-Ya that are ultimately controlled by the Wang family add up to 35.77%.

2. Ultimate control

La Porta et al. (1999) divided their samples into widely held companies and companies with ultimate control. Family control is the main pattern of ultimate control. Using the 20% cutoff criteria, 30% of the large and 45.15% of the median size public companies are classified as family controlled companies. Claessens et al. (2000) reported that 38.3% of the public companies in 9 East Asian countries are classified as family controlled companies. When Japanese companies are excluded, 58.7% of the public companies are family controlled companies. Faccio and Lang (2002) indicated that 44.3% of public companies in 13 Western European countries belonged to the family controlled company group, and 57.2% of these public companies are family controlled companies if British and Ireland companies are excluded. Yeh, Lee and Woditke (2001) reported that 51.44% of the listed companies in the Taiwan Stock Exchange in 1995 were family controlled using the 20% cutoff criteria. This study reported that 58.2% of the Taiwanese listed companies in 1998 were controlled by families. We conclude that Taiwanese listed companies are exemplary of the family dominated concentrated ownership structure.

Sample and Empirical Results Analysis

1. Sample

To calculate the control (voting) rights and cash flow ownership owned by the largest shareholder of Taiwanese listed companies, company prospectuses were used as the source for more complete data. Company prospectus not only disclose the names and immediate shareholdings of the largest 10 or 20 shareholders, but also show the director and supervisor board compositions, the major management team, and related party transactions to help delineate the relationships between business groupings and family members. We supplemented the above information with "Business Groups in Taiwan" published by China Credit Information Services LTD, a databank company that has been in business for more than three decades. "Business Groups in Taiwan" provides the group-affiliation information and family ties that assisted tracing the ultimate ownership, pyramid structure and cross-shareholding in group-affiliated companies. The data for this study included Taiwanese listed companies that issued a prospectus or were investigated in "Business Groups in Taiwan" for 1998.

The data first took those companies that were listed prior to the year-end 1997, 404 listed companies in all. Thirty-three companies in the financial sector were excluded because of their unique financial characteristics and/or the ownership regulations. We also eliminated those companies without ownership data, family ties and business groupings. A sample of 251 listed companies was used in this study. The sample companies were distributed among the

18 industrial sectors classified by the Taiwan Stock Exchange. The sampled companies constituted about 67.6% of 371 non-financial companies at yearend 1997. Their market capitalization value (book value of assets) was NT$5,346.7 billions (NT$3,844.5 billions), about 76.7% (78.2%) of the total market value (book value of assets) of non-financial companies at yearend 1997. The average market capitalization value (book value of assets) per sample company was not significantly different from the average market value (book value of assets) per non-financial company[8].

2. The separation of ownership and control

As in the study by Claessens et al. (2000), the definition of ownership relies on cash flow rights. The definition of control relies on the voting rights and use of pyramiding schemes and cross-holding as a means of separating the cash flow and voting rights. We followed the ultimate control concept proposed by La Porta et al. (1999) that meticulously traced the chain of ownership and identified the ultimate owners that owned the most control rights (the largest shareholders) by summing their direct and indirect voting rights in the firm. According to their definition, direct voting rights occur through shares registered in the name of the ultimate owner (include their family member). Indirect voting rights occur through shares held by entities that are controlled by the ultimate owner. In the majority of cases, the immediate shareholders of a corporation are themselves corporate entities, or investment companies and other legal entities (ex: non-for-profit foundations). We then identified their owners, the owners of their owners, etc. We used the total corporate entity ownership by each family group, defined as a group of people related through blood or marriage, as the unit of analysis[9]. The study of the separation of ownership and control requires data on both cash flow and voting rights that we calculated using the complete chain of ownership. In most cases, the ultimate owner of Taiwanese listed companies possessed several control rights chains through which to control the votes in a company. We followed the question asked in Claessens et al. (2000), "suppose that a family owns 11% of the stock of publicly traded Firm A, which in turn owned 21% of the stock of Firm B. The same family owns 25% of Firm C, which in turn owns 7% of the stock of Firm B. Looking at the control rights, we would say that the family controls 18% of Firm B, or the sum of the weakest links in the chain of voting rights. In contrast, we would say that the family owns about 4% of the cash flow rights of Firm B, or the sum of the product of the ownership stakes along two chains." We made a distinction between cash flow and voting rights using information from each firm on the pyramid structure and cross-shareholding among that group of firms. It is common for the ultimate owners of Taiwanese listed companies to enhance their control over a company through nominal investment companies and other entities. In most cases, these nominal investment companies and other entities appoint the family members of the ultimate owner or other people that they trust as representatives on their behalf to serve as directors and supervisors. We determined whether these ultimate owners control these nominal investment companies and other entities according to "Business Groups in Taiwan", a database of listed companies' news and company prospectus. The ultimate owners or companies under the same business group found these nominal investment companies and other entities. However, these nominal investment companies and other entities are private companies and it is impossible to identify their complete ownership

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[8] The average market capitalization value per sample company is 21.3 NT$ billion, which is not statistically significantly different from the average market value per non-financial company, 18.8 NT$ billion (t value is 0.78). The average book value of assets per sample company is 15.3 NT$ billion that is not statistically significantly different from the average book value of assets per non-financial company, 13.3 NT$ billion (t value is 1.13).

[9] Family ties include a person's spouse, parents, children, siblings, mother-in-law, father-in-law, brothers-in-law, sisters-in-law, daughters-in-law and sons-in-law.

structure. We therefore suppose that the ultimate owners and the companies that they control put up 50% of the capital for these nominal investment companies. In Table 1A, "Ownership" represents the share of cash flow rights held by the largest block-holder, and "Control" is the share of voting rights held by the largest block-holder. "Control minus Ownership" is a continuous variable, the simple difference between the share of voting rights and the share of cash flow rights in the hands of the largest shareholder. The "Ownership/Control ratio" represents the share of cash flow rights divided by the share of voting rights in the hands of the largest shareholder. From Table 1A, the largest shareholder in Taiwanese listed companies owns 30.3% of the voting rights on average and the median is 30.8%. This is significantly higher than the 18.96% and 21.28%, respectively, reported in that Table 5 (92 Taiwanese listed companies) by Claessens et al. (2000). It is also interesting to note that in Claessens et al. (2000), the median and the third quartile of control rights were 21.28% and 21.96%, respectively. From their statistics, about one quarter of their sampled companies (about 23 out of 92 firms) had control rights within such a narrow band (0.68%), which is rather unusual. Why did Claessens et al. (2000) underestimate the control rights of the largest shareholder for Taiwanese listed companies? We propose two possible explanations: (1) As mentioned in the introduction, the inadequate disclosure rules for Taiwanese listed companies allow the ultimate owners to conceal the real identities of entity owners with the result that Claessens et al. (2000) underestimated the voting rights held by the largest shareholders. (2) The information on pyramidal structure and cross-holdings among firms only covered listed companies in Claessens et al. (2000). According to the third quartile in Table 1A, more than one-fourth of the companies with a largest shareholder owned more than 41.2% of the voting rights. The above figure suggests that the ownership structure of the Taiwanese listed companies is not dispersed.

From Table 1A, in all samples, the largest shareholder of Taiwanese listed companies owned 21.7% of the cash flow rights on average with the median at 19.5%. The ratio of cash flow to voting rights (Ownership / Control ratio) was 0.713 on average. When we use the deviation in voting rights over cash flow rights (Control minus Ownership) to measure the extent of minority wealth expropriation, the mean and median were 8.7% and 5.2%, separately.

3. How are firms owned?

Controlling shareholders may use pyramidal structure and cross-holding mechanisms to enhance their company control rights. They also participate in management by serving as the top managers or control more than half of the seats on the board. These control right or management participation mechanisms avail the controlling shareholders with firm control.

Table 1B shows the enhancement means used by the largest shareholder. The pyramid dummy equals one if the ultimate owner exercises control through at least one publicly traded company, and zero otherwise[10] (La Porta et al., 1999). In all samples, 23.9% companies used a pyramidal structure. The cross-shareholding dummy equals one if the firm both has an ultimate owner and owns shares in its ultimate owner or in a firm that belongs to her chain of control, and zero otherwise[11] (La Porta et al., 1999). We found that the largest shareholder enhanced their voting rights through cross-shareholding in 40.1% companies of all samples.

Contrasting this with the figures reported by Claessens, et al. (2000), in only 8.6% of their sample companies did the largest shareholders use the cross-shareholding mechanism to enhance their control. It is common in Taiwan for the controlling shareholders to use corpo-

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[10] The ultimate owner owns a majority of the stock of one corporation that in turn holds a majority of the stock in another, a process that can be repeated a number of times.

[11] That is a company further down the chain of control has some shares in another company in the same business group.

rate resources to set up subsidiaries and let the subsidiaries acquire shares in the parent companies or other listed companies they controlled. Cross-shareholding is thus developed sophisticatedly. Disclosure rules for public companies were not well established to provide sufficient information to identify the ultimate owners in this structure. In the Claessens et al. (2000) study, the information on cross-holdings among firms was limited because their data only covered listed corporations. Many Taiwanese corporations are affiliated with business groups and hence all cross-holdings are private. We thus argue that the figures provided by Claessens et al (2000) with regard to the percentage of sample companies using the cross-shareholding mechanism are underestimated.

Table 1. Basic analysis

"Ownership" represents the share of cash flow rights held by the largest block-holder, and "Control" is the share of voting rights held by the largest block-holder. "Control minus Ownership" is a continuous variable, the simple difference between the share of voting rights and the share of cash flow rights in the hands of the largest shareholder. The "Ownership/Control ratio" represents the share of cash flow rights divided by the share of voting rights in the hands of the largest shareholder. Panel B shows the enhancement means used by the largest shareholder. The pyramid dummy equals one if the ultimate owner exercises control through at least one publicly traded company, and zero otherwise. The cross-shareholding dummy equals one if the firm both has an ultimate owner and owns shares in its ultimate owner or in a firm that belongs to her chain of control, and zero otherwise. The management dummy equaled one if family members of ultimate owner served as chairperson of the board and general managers of the controlling companies, and zero otherwise, while the board dummy equals one if the controlling shareholders own more than half of the seats on the board, and zero otherwise.

Variables	Mean	Standard	Q_1	Median	Q_3
A. Control and Ownership					
Control	0.303	0.163	0.159	0.308	0.412
Ownership	0.217	0.150	0.086	0.195	0.314
Control minus Ownership	0.087	0.096	0	0.052	0.145
Ownership-Control ratio	0.713	0.263	0.501	0.758	1
B. Enhancement Means					
Pyramid Dummy	0.239	0.427	0	0	0
Cross-shareholding Dummy	0.401	0.491	0	0	1
Management Dummy	0.478	0.501	0	0	1
Board Dummy	0.417	0.494	0	0	1

From Table 1, 23.9% of our sample companies exhibited a pyramid structure, whereas, this occurred in 49% of the sample companies in Claessens et al. (2000). The difference between the two studies might result from the composition of the sample companies. Conglomerate organizations tend to use a pyramid structure to control their subsidiaries more often than other organizations. We think that Claessens et al. used more conglomerate organizations in their sample companies because the market capitalization value of their 141 sample companies accounted for 66% of total number of Taiwan listed companies, while in our 251 sample companies were 77% of the total. The management dummy equaled one if family members of ultimate owner served as chairperson of the board and general managers of the controlling companies, and zero otherwise[12]. Taking the family-controlled companies as an example, the affiliates of the ultimate owner included controlling family members and representatives of companies that they controlled. In 47.8% of the companies in all samples, family members of the ultimate owner served as the chairperson of the board and the general managers. If the definition of La Porta et al. (1999) is adopted, 91.2% of the companies have family members of the ultimate owner serve as the chairperson of the board or the general managers. The board dummy equals one if the controlling shareholders own more than half of the seats

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[12] The Taiwan listed companies permit a legal entity's representatives to serve as directors, hence the president may be taken as the representative of that legal entity.

on the board, and zero otherwise. From table 1B, 41.7% of the companies in all samples dominated the board.

4. Who controls firms?

We further divided the samples into widely held companies and companies with ultimate owners based on La Porta et al. (1999). A widely held corporation is defined as a corporation that does not have any owner with significant control rights. A company has an ultimate owner (controlling shareholder) if this shareholder's direct and indirect voting rights in the firm exceed the cutoff point. The ultimate owners are further identified into five categories: (1) a family or an individual, (2) the State, (3) a widely held financial institution including a bank or insurance company, (4) a widely held corporation, and (5) miscellaneous, such as a cooperative or international joint ventures where the foreign company is the largest shareholder.

La Porta, et al. (1999) and Claessens, et al. (2000) determined ultimate ownership based on whether the controlling shareholders owned more than 10% or 20% control rights, the 10% and 20% cutoff criteria. Table 2 also takes this approach and provides comparative data for further analysis. From Panel A of Table 2, based on 10% cutoff criterion, it can be seen that family ownership constitutes the majority of ultimate control patterns. About 82.5% of our sample companies are classified as family controlled companies. In the study by Claessens et al. (2000) for 141 Taiwan listed companies, family controlled companies at 10% cutoff criterion constitute 65.6% of total number of companies. Claessens et al. (2000) reported that 10.4 % of their samples were controlled by financial institutions. This appears to be inconsistent with the banking regulations in Taiwan and may overestimate the influence of financial institutions in corporate ownership. The banking regulations in Taiwan prohibit any financial institution from investing in more than 5% of the shares in non-financial related businesses. Only 2.78% of all companies were controlled by widely held corporations in our study, while 18.1% of the companies in Claessens et al. (2000) were classified as widely held for 141 Taiwan listed companies. It is likely that nominal investment companies controlled by the largest family shareholders were considered non-related to the ultimate owners due to insufficient disclosure in the data of Claessens et al. (2000). The actual ultimate ownership was thus concealed from Claessens et al. Further, there are six companies whose largest controlling shareholders are foreign corporations in our sample, while Claessens et al. (2000) excluded these companies.

From Table 2B, it can be seen that when the criterion for ultimate ownership is increased from 10% to 20%, a family still constitutes the majority corporate ownership pattern. At the 20% cutoff criterion, 58.2% of the total number of companies are family-controlled, higher than the 48.2% shown by Claessens et al. (2000) for 141 Taiwan listed companies. The data in this study shows that widely held corporations or financial institutions constitute 2.8% and 0%, respectively, while the data in Claessens et al. (2000) show 17.4% and 5.2%, respectively. It is likely that Claessens et al. (2000) underestimated the percentage of family controlled shares because many family-controlled nominal investment companies are classified as financial institutions or unrelated to the ultimate family owners due to insufficient data. In Panel B, the miscellaneous group includes the largest shareholder as a foreigner or belonging to the cooperative pattern. In the cooperative pattern, the largest shareholder and the second largest shareholder should have more than 10% of shares and have at least one director on his behalf in the board. For example, the major two shareholders in the Zig Sheng Company own 19.87% and 19.33% of the shares, and 22.04% and 18.15% in Inrentec Corporation. We found 15 listed companies (6% of our total sample companies) in which the shareholding of the second largest shareholder exceeded 10% and owned one board seat, and 3 listed compa-

nies in which foreigners or foreign institutions owned more than 20% of the control rights. When two or more shareholders meet the criteria for control, we assigned control to the shareholder with the largest voting stake. The foregoing approach refers to La Porta et al. (1999) which is completely different from Claessens et al. (2000). Their definition of ultimate control implied that a firm could have more than one significant owner. "If a family has 30% of the voting rights and the widely held corporation has only 10%, then at the 10% cutoff the family and the corporation are each assigned one-half of the ultimate control. At 20% level, however, the firm is fully controlled by the family" (Claessens et al., 2000, p95). The above example could explain why in their Table 7 the proportion of family controlled companies at the 10% cutoff criterion is smaller than that at 20% in Indonesia, Hong Kong, Malaysia, Philippines, Thailand, and Singapore. To investigate the extent of control by the ultimate owner, it is necessary to know how many shares are needed to exercise control. Yeh, Lee and Woditke (2001) reported that the average critical control shareholding level is 15.3% (the third quartile is 19.01%) based on their 208 Taiwan listed companies sample in the years of 1994 and 1995[13]. They utilized the voting probability model proposed by Cubbin and Leech (1983) to calculate the critical control shareholding necessary to achieve control over a company. Thus, if the ultimate owner owns more than 20%, it is sufficient to exercise control. Therefore, we use the 20% cutoff criterion for classifying the pattern of ultimate control.

From Table 2B, under the 20% cutoff criterion, among the 176 firms with ultimate control, family control firms accounted for the majority (146 firms), leaving only five state-controlled, seven widely-held-company controlled and eighteen foreign-controlled and join venture firms. Because the sample sizes of the latter three types of firms (called as other control type) were not large enough for any meaningful statistical analysis, we paid attention to the family controlled companies.

Table 2. Control of listed companies in Taiwan

This table exhibits the comparison of control types of Taiwanese listed companies with the figures reported by Claessens et al (2000) at 10% and 20% cutoff points. In this table, the control types of Taiwanese listed companies are divided into widely held companies and companies with ultimate owners that further grouped into a family, a state, a financial institution, or a widely held corporation. The miscellaneous group includes the largest shareholder as a foreigner or belonging to the cooperative pattern.

A. 10% cutoff							
	Num. of	Widely	Family	State	Financial	Widely held	Miscellaneous
This study	251	23	207	8	0	7	6
Proportion	100%	9%	82.5%	3.2%	0	2.78%	2.5%
Claessens et al.	141	2.8%	65.6%	3%	10.4%	18.1%	0
B. 20% cutoff							
	Num. of	Widely	Family	State	Financial	Widely held	Miscellaneous
This study	251	75	146	5	0	7	18
Proportion	100%	29.9%	58.2%	2%	0	2.8%	7.1%
Claessens et al.	141	26.2%	48.2%	2.8%	5.3%	17.4%	0%

[13] Yeh, et al. (2001) adopted the probabilistic voting model proposed by Cubbin and Leech (1983), Leech (1987 a, b) and considered the structural difference in ownership. This approach begins with constructing a Herfindahl index of ownership concentration, which measures the diversification in a company's shareholding. It then considers the desired degree of control by the largest bloc. The critical amount of shareholding for control is necessary to achieve the desired control over the company is determined.

Table 3 shows the basic analysis of family-controlled and other pattern held companies under the 20% cutoff criterion. In family-controlled companies, on average, the largest share-holder holds 38.4% of the voting rights and 25.5% of the cash flow rights.

Table 3. Basic analysis (family-controlled and other companies)

This table shows the basic analysis of family-controlled and other pattern held companies under the 20% cutoff criterion. Under the 20% cutoff criterion, among the 176 firms with ultimate control, family control firms accounted for the majority (146 firms), leaving only five state-controlled, seven widely-held-company controlled and eighteen foreign-controlled and join venture firms. The latter three types of firms are called as other control type. The variable definitions are presented in Table 1.

Variables	Family Owners		Others	
	Mean	Standard Deviation	Mean	Standard Deviation
A. Control and Ownership				
Control	0.383	0.125	0.393	0.092
Ownership	0.255	0.138	0.372	0.113
Control minus Ownership	0.128	0.104	0.021	0.046
Ownership/Control ratio	0.654	0.268	0.935	0.151
B. Enhancement Means and Participate in Management				
Pyramid Dummy	0.288	0.454	0.233	0.430
Cross-shareholding Dummy	0.479	0.501	0.233	0.430
Management Dummy	0.501	0.534	0.433	0.504
Board Dummy	0.521	0.501	0.367	0.490

Table 4. Ownership concentration and family control around the world

Table 4 shows a comparison of the results for Taiwan listed companies with the figures of Claessens et al.(2000), La Porta et al. (1999) and Faccio and Lang (2002), using 20% voting rights as the criterion to determine the existence of an ultimate owner. I classified the study by Claessens et al. (2000) as nine East Asian countries and eight countries (excluding Japan), the study by Faccio and Lang (2002) as thirteen Western European countries and eleven (excluding the U.K. and Ireland), and the study by La Porta et al. (1999) as large and medium-sized publicly traded firms by their own classification.

	Countries	Sample period	20% cut off point	
			Exist ultimate owners[5]	Family controlled companies
This study	Taiwan	1998	70.1%	58.2%
Claessens et al. (2000)	Nine East Asian countries[1]	1996	57.11%	38.29%
	Eight East Asian countries (Except for Japan)	1996	83.39%	58.68%
La Porta et al. (1999) – 27 wealthy countries	Large publicly traded firms[2]	1995	63.52%	34%
	Medium-sized publicly traded firms[3]	1995	76.30%	45.15%
Faccio and Lang (2000)	Thirteen West Europe countries[4]	1997	63.1%	44.3%
	Eleven West Europe countries (Except for U.K. and Ireland)	1997	79.5%	57.2%

(1) The nine East Asian countries include Japan, Taiwan, Hong Kong, Korea, Singapore, Thailand, Malaysia, the Philippines and Indonesia.
(2) This sample consists of the top 25 firms ranked by market capitalization of common equity in each 27 wealthy countries at the end of 1995.
(3) This sample collects the smallest 10 firms in each country with market capitalization of common equity of at least US$ 500 millions in each 27wealthy countries at the end of 1995.
(4) The 13 Western European countries include Austria, Belgium, Finland, France, Germany, Ireland, Italy, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.
(5) It is the average calculated with weighting based on samples of each country.

On average, the wedge between the cash flow and control rights for the controlling family is 12.8% and the cash flow right is only 65.4% of control rights held by the controlling family. With other control types, the largest shareholder holds 39.3% of the voting rights and 37.2% of the cash flow rights. Therefore, family-controlled companies have greater serious separation of ownership and control rights than other controlled type companies. We discussed La Porta et al. (1999), Claessens et al. (2000) and Faccio and Lang (2000) in section II of the literature review. They conducted their study on ownership concentration and ultimate owners for 27 wealthy countries, nine East Asian countries and five Western Europe countries, respectively. Table 4 shows a comparison of the results for Taiwan listed companies with the above studies using 20% voting rights as the criterion to determine the existence of an ultimate owner. We classified the study by Claessens et al. (2000) as nine East Asian countries and eight countries (excluding Japan), the study by Faccio and Lang (2002) as thirteen Western European countries and eleven countries (excluding the U.K. and Ireland), and the study by La Porta et al. (1999) as large and medium-sized publicly traded firms by their own classification. As shown in Table 4, the degrees of ownership concentration in Taiwan listed companies and family controlled are similar to the above studies for the world.

5. The determinants of the separation of ownership and control

Table 5 shows the determinants for deviation in control from ownership rights. We found that the largest shareholder (or controlling family) could enhance their control rights through pyramids or cross-shareholding, and decrease their cash flow rights in the meanwhile in all sample and family-controlled companies. Similarly, the higher the equity market value, under the wealth limitation, the smaller the ownership rights (relative to control rights) the largest shareholder could put in. Furthermore, if the previous financial performance (EBIT) were higher, the largest shareholder would invest in more ownership rights to possess more profit rights. This would reduce the divergence in control and ownership rights and raise the ratio of ownership to control rights.

Table 5. The determinants of the separation in ownership and control

Table 5 shows the determinants for deviation in control from ownership rights. Pyramid dummy and cross-shareholding dummy represent the mechanisms leading to the separation in ownership and control that measured by "control minus ownership", the simple difference between the share of voting rights and the share of cash flow rights in the hands of the largest shareholder, and "Ownership/Control ratio", the share of cash flow rights divided by the share of voting rights in the hands of the largest shareholder. Besides, some control variables are also set in the regression, including management dummy, second largest dummy, the logarithm of market value, the logarithm of corporate age and EBIT.

Variables	Control minus Ownership		Ownership / Control ratio	
	All Sample	Family Owners	All Sample	Family Owners
Pyramid Dummy	0.087 (6.637)***	0.086 (4.727)***	-0.244 (-7.122)***	-0.223 (-5.058)***
Cross-shareholding Dummy	0.056 (4.718)***	0.058 (3.549)***	-0.159 (-5.328)***	-0.184 (-4.633)***
Management Dummy	0.002 (0.224)	-0.018 (-1.259)	0.003 (0.103)	0.029 (0.833)
Second Largest Share-holder Dummy	-0.007 (-0.556)	-0.006 (-0.377)	0.009 (0.285)	-0.029 (-0.727)
Ln (Market Value)	0.007 (1.258)	0.020 (2.553)**	-0.036 (-2.600)***	-0.053 (-2.766)***
Ln (Corporate Age)	-0.011 (-0.854)	-0.021 (-1.268)	0.049 (1.592)	0.066 (1.625)
EBIT	-0.194 (-2.077)**	-0.202 (-1.393)	1.155 (4.918)***	0.732 (2.092)**
Intercept	0.031 (0.544)	-0.012 (-0.149)	0.895 (6.217)***	1.005 (2.092)**
Adjusted R^2	35.81	42.90	46.11	49.64

*: significant at 10% level **: significant at 5% level ***: significant at 1% level

6. Comparing the deviation and non-deviation groups

In Table 6, we did not find that the largest shareholder in 63 companies (25.1% of all sample) enhanced their control rights through pyramids or cross-shareholding, therefore, the control rights held by the largest shareholder did not diverge from the cash flow rights (ownership) which we call non-deviation group. Those companies with separation of ownership and control are called the deviation group (188 companies). In all samples, there was no significant difference between the non-deviation and deviation groups on control rights held by the largest shareholder.

Table 6. Basic analysis of the separation in ownership and control

This table shows the comparison of non-deviation and deviation groups in ownership variables, board variables, and corporate characteristic variables. Panel A presents the figures by all sample and the figures in panel B are calculated by family-controlled companies. Ownership variables include "Control" representing the share of voting rights held by the largest block-holder and "Ownership" representing the share of cash flow rights held by the largest block-holder. The management dummy equaled one if family members of ultimate owner served as chairperson of the board and general managers of the controlling companies, and zero otherwise, while the board dummy equals one if the controlling shareholders own more than half of the seats on the board, and zero otherwise. The second largest shareholder dummy equals one if there is a second largest shareholder owned more than 3% shareholdings, and zero otherwise. The corporate age is calculated by the years from the company was established to 1998. The equity market value is the data at the year-end of 1998. EBIT represents the average ratio for the past five years of earnings before interest and taxes divided by assets. The corporate valuation is measured by the market value of the assets divided by the book value of the assets (market-to-book ratio of assets) at the year-end of 1998.

	Sample No.	Control	Ownership	Management Dummy	Board Dummy	Second Largest Shareholder Dummy	Corporate Age (year)	Equity Market Value (NT$ million)	EBIT	Corporate Valuation
A. All Sample										
Non-Deviation	63	0.296[1] (0.181)[2]	0.296 (0.181)	0.397 (0.493)	0.172 (0.380)	0.349 (0.481)	23.825 (9.008)	28044.8 (69467.8)	0.133 (0.071)	1.984 (1.071)
Deviation	188	0.306 (0.156)	0.190 (0.128)	0.505 (0.501)	0.500 (0.501)	0.197 (0.399)	26.713 (11.071)	17740.3 (24485)	0.093 (0.058)	1.677 (0.744)
t value (p value)		-0.439 (0.661)	4.265 (0.000)***	-1.493 (0.137)	-5.472 (0.000)***	2.489 (0.014)**	-2.073 (0.040)**	1.153 (0.253)	4.482 (0.000)***	2.106 (0.038)**
B. Family-controlled companies										
Non-Deviation	19	0.403 (0.133)	0.403 (0.133)	0.632 (0.496)	0.211 (0.419)	0.316 (0.478)	25.316 (6.617)	4806.1 (2849.3)	0.113 (0.041)	2.025 (0.856)
Deviation	127	0.380 (0.124)	0.233 (0.125)	0.520 (0.502)	0.567 (0.497)	0.228 (0.421)	26.811 (10.678)	17595.3 (26113)	0.094 (0.054)	1.593 (0.561)
t value (p value)		0.743 (0.459)	5.477 (0.000)***	0.916 (0.369)	-3.370 (0.002)***	0.829 (0.409)	-0.836 (0.409)	-5.174 (0.000)***	1.553 (0.123)	2.127 (0.046)**

1: The average control of non-deviation group.
2: It is the standard deviation in the parentheses.
3: In the non-deviation group, the pyramid dummy and cross-shareholding dummy nearly equal zero. We therefore did not put them in the difference analysis.
*: significant at 10% level
**: significant at 5% level
***: significant at 1% level

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Nevertheless, the average cash flow rights of non-deviation group (29.6%) were significantly higher than deviation group (19%). Based on our empirical results, there are 50% companies that the controlling shareholders own more than half of the board seats in deviation group significantly higher than the 17.2% in non-deviation group. That is it is more common in the companies of deviation group to occupy more board seats to enhance their control power. We stand on the suggestion by La Porta et al. (1999) and Claessens et al. (2000) to compare the difference in corporate size (measuring by the equity market value) and ages (the years from firm established to 1998) between the non-deviation and deviation group. We found that the average age of the non-deviation group (23.8 years) is significantly younger than the deviation group (26.7 years); however, the corporate size (measuring by the equity market value) of these two groups was not significantly different. We also found that 34.9% of the companies in the non-deviation group with the second largest shareholder holding more than 5% of the shares, which is significantly higher than the deviation group (19.7%). EBIT represents the average ratio for the past five years of earnings before interest and taxes divided by assets. The average EBIT for the non-deviation group was 13.3%, significantly higher than the 9.3% for the deviation group. The average corporate valuation for non-deviation group was 1.984, significantly higher than 1.677 for deviation group. The result implies the deviation group would have lower corporate valuation than non-deviation group thus the divergence may hurt corporate valuation. In family-controlled companies, the ownership rights of non-deviation group were 40.3% on average, significantly higher than the 23.3% of the deviation group. The average equity market value of the non-deviation group in family-controlled companies was 4.8 NT$ billion, significantly smaller than 17.6 NT$ billion for the deviation group[14]. We also found that the controlling shareholders own more than half board seats in 56.7% companies of deviation group, significantly higher than in 21.1% of non-deviation group. The controlling shareholders in company of deviation group tend to occupy the board seats to participate management and control the company decision. In addition, the average corporate valuation for non-deviation group was 2.025, significantly higher than 1.593 for deviation group. The difference of corporate valuation between non-deviation and deviation group is greater in family-controlled companies than in all samples.

Conclusions

To clear the ultimate control in Taiwan, this study uses the detailed data to better understand the ownership structure in Taiwan and investigates the determinants for deviation of control from cash flow rights. Then we compare the family-controlled and other control companies, and also explain the difference of ownership structure, board variables and corporate characteristics between the non-deviation and deviation companies.

Based on our findings, the companies' shares are common concentrated in the hands of the largest shareholder, controlling family or wealthy investors. This finding is similar with the ownership structure in East Asian countries. When comparing the family-controlled and other control type companies, we find that the deviation of control and cash flow rights is greater in the family-controlled companies than other control type companies. Also the controlling shareholders use more pyramids and cross shareholding to increase their control rights

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[14] Tobin's Q is a frequently used measure a company's market performance (Morck, Shleifer and Vishny, 1988; McConell and Servaes, 1990; and Cho, 1998). However, as Tobin's Q requires information on the replacement cost for corporate assets, which is not available from the Taiwan Stock Exchange. Lehn, Netter and Poulsen (1990) proposed that there is a highly correlated relationship between the Tobin Q value calculated from the replacement cost and book value. This study used the market value of the assets divided by the book value of the assets (market-to-book ratio of assets) to measure the relative firm valuation. The market value of the assets is defined as the sum of the market value of the equity and the book value of the debt. The mean and median corporate values of all sample companies were 1.76 and 1.50, respectively.

and even make the divergence of control rights from cash flow rights that accompanies with deeply management participation. The controlling shareholders hold more than half board seats and usually occupy the chairman and general manger to enhance their control power in family-controlled companies. When the largest shareholder (or controlling family) enhances their control rights through pyramids or cross-shareholding, it also decreases their cash flow rights in the meanwhile in all sample and family-controlled companies. The largest shareholder would also invest in more ownership rights to possess more profit rights if the past performance measured by EBIT is good. This would reduce the divergence in control and ownership rights and raise the ratio of ownership to control rights.

No matter in all sample or family-controlled companies, the controlling shareholders owns significantly less cash flow rights, occupy more board seats in deviation group companies than those without deviation. While the equity market value and corporate valuation are significantly lower in the companies with the divergence of control from cash flow rights.

This study provides the new evidence of ownership structure in Taiwan. Summarizing the findings in this paper, the ownership is concentrated in controlling shareholder in Taiwanese listed companies and the deviation of control and ownership is common especially in family-controlled companies. The controlling shareholders usually use the pyramids and cross shareholders to enhance their control rights.

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