

Yi-Chein Chiang (Taiwan), Bo-Song Lai (Taiwan)

Dividend payout policy decision: the role of foreign ownership

Abstract

In this study, the authors investigate the possible impact on corporate payout policy from the viewpoint of the role of foreign share ownership. Using Taiwanese listed firms as an example, the results demonstrate that foreign ownership plays an important role for the dividend payout decision of a firm, and firms are motivated by foreign ownership to pay dividend. However, the authors find little evidence that firms are motivated by foreign ownership to repurchase shares. The results are not conclusive in the Taiwanese Stock Market since they cannot be applied to domestic ownership.

Keyword: foreign ownership, dividend payout, share repurchase.

JEL Classification: G32, G35.

Introduction

With the increasing presence of foreign investors and their importance in the stock markets, this study attempts to investigate the possible impact on corporate dividend payout policy. Dividend payout is one of the indicators of a firm's performance and an important information investors assess to decide on investing in a firm. According to Chazi, Boubakri and Zanella (2011), a firm's dividend policy is important for investors looking for a source of stable income, for analysts seeking a valuation tool, and for managers deciding to return cash to shareholders or reinvest the money to finance a firm's growth opportunities. In addition, dividend policy is of interest for lenders because the dividends paid to shareholders might jeopardize the repayments that they expect to receive.

There is a large amount of literature that shows that equity markets around the world have become more integrated globally. With the continuation of economic liberalization in the world, many countries, including developed and developing, allow foreign investors to participate in domestic stock markets partly to increase the supply of capital (Bekaert and Harvey, 2000; Bekaert et al., 2001; Ramaswamy and Li, 2001), and thus ensuring liquidity and efficiency of these markets (Bekaert and Harvey, 2000). Therefore, the participation by foreign investors has increased over the years. In Taiwan, for example, the foreign shareholding ratio rose from 8.7% in 2000 to 34.6% in 2013. This significant increase of foreign ownership may cause a firm's management and even the government's decisions to be significantly affected (Wang, Hou and Khan, 2012), an issue interesting and worthy to be explored.

According to Hau (2001), Dvorak (2005), and Choe, Kho, and Stulz (2005), foreign investors face a high degree of information asymmetry compared to

domestic investors. Jiang and Kim (2004) demonstrate that the level of foreign ownership in a firm is inversely related to information asymmetry between firms and markets. Hence, it is very likely that foreign investors prefer dividends to retained earnings because the former is regarded less risky than the potential capital gains. Hence, it is likely that firms convey private information about their future prospects by paying dividends to attract foreign investors and increase foreign ownership (Baba, 2009). In addition, foreign shareholding may be a mechanism to improve corporate governance, especially in emerging markets. Chen, Chiou, Chou and Syue (2009) provide evidence that foreign ownership has a positive relationship with the long-run performance of equity issues due to increased independent and effective monitoring. Therefore, firms may have incentives to attract foreign investors as their shareholders. One way to do this is through their payout policies.

Agency theory identifies corporate payouts as an important mechanism to mitigate the free cash flow problem by distributing cash to outside shareholders (Easterbrook, 1984; Jensen, 1986; La Porta et al., 2000). Prior studies find that firms distribute permanent cash flows through dividends and allocate temporary cash flows through share repurchases (Guay and Harford, 2000; Jagannathan, Stephens and Weisbach, 2000). The flexible and discretionary nature of share repurchases may induce corporate insiders to mislead outside investors, and render less informed shareholders vulnerable to expropriation by the better informed (Brennan and Thakor, 1990).

Traditionally, literature has shown that institutional ownership affects dividend policy, such as Eckbo and Verma (1994), Moh'd et al. (1995), Crutchley et al. (1999), Jagannathan et al. (2000), Allen, Bernardo and Welch (2000), Short, Zhang and Keasey (2002), and Grinstein and Michaely (2005). With the increasing importance of foreign investors in the stock markets, Baba (2009), Jeon, Lee and Moffett (2011), Wang et al. (2012) and Lam, Sami and Zhou (2012) have examined the relationship between foreign ownership and dividend payout policy in stock markets in Japan, Korea, Taiwan and

© Yi-Chein Chiang, Bo-Song Lai, 2015.

Yi-Chein Chiang, Corresponding author, Professor, International Trade Department, College of Business, Feng Chia University, Taiwan
Bo-Song Lai, Master Student, International Trade Department, College of Business, Feng Chia University, Taiwan.

China. Among these, Jeon et al. (2011) are the only authors mentioning the relationship between foreign ownership and share purchases, using Korean firms as an example; the others only investigate dividend payout policy. Little has distinguished the results between dividend payout and share repurchase from the viewpoint of the internationalization of a firm's share ownership structure.

Since foreign investors may serve as independent and effective monitors, especially in Asia where firms are more likely controlled by certain groups or families (Yeh, Lee and Woidtke, 2001), firms are more likely to pay out their cash to reduce overinvestment problems, predicting firms with higher foreign ownership also have higher payout. In this study, we would like to contribute the literature by investigating the role of foreign ownership, as well as the literature related to the payout policies in three ways by using Taiwanese listed firms. First, we focus on the role of foreign ownership and investigate whether a firm's dividend payout policies would be influenced by the level of foreign ownership. Second, since there are two popular payout policies to distribute cash to shareholders, dividend and share repurchase, we investigate if the result of dividend payout is also applicable for share repurchase. Third, we check if the result of foreign ownership is an overall phenomenon in the stock market and can be applicable to domestic ownership.

Our empirical results from the Logit, OLS and GMM models consistently demonstrate that there is a positive relationship between foreign ownership and dividend payout, but an insignificant relationship between foreign ownership and share repurchases. The results indicate that firms are motivated by foreign ownership to pay dividend, but

not to repurchase shares. Our results demonstrate that foreign ownership impacts on firms' dividend payout decisions. However, the result is not conclusive in the Taiwanese stock market since it is different from the results of domestic ownership.

The framework of this study is organized as follows: Section 1 briefly introduces foreign ownership in the Taiwanese stock market; Section 2 introduces the literature related to foreign ownership; Section 3 details on the sample, variables and methodology; Section 4 presents the results. Finally, the last section concludes the study.

1. Taiwanese Stock Market and foreign ownership

Taiwan opened its stock market in 1983 by allowing its domestic investment trust companies to raise overseas funds for investment in the local market. In 1991, Qualified Foreign Institutional Investors (QFIIs) were allowed to invest directly in the local stock market. Furthermore, direct investment by individual foreign investors has been allowed since 1996. The ceiling for total foreign investments was 10% in 1991, gradually increasing to 50% in 2000. Taiwan cancelled almost all the limitations of foreign ownership by the end of 2001 when joining the WTO. Foreign investors can own 100% of any stock listed in the Taiwan Stock Market except for some key industries. In the same year, the weights of Taiwan stock index in the MSCI index increased from 50% to 100%¹.

Table 1 shows that the number of listed firms in the Taiwanese Stock Market increased from 531 in 2000 to 838 in 2013, and the foreign shareholding ratio has increased from 8.78% in 2000 to 34.6% in 2013.

Table 1. Foreign ownership and payout statistics

Year	No. of listed firms	Foreign shareholding ratio, %	No. of listed firms paying dividend	Amounts of dividend (NT\$ billion)	No. of listed firms repurchasing share	Amounts of share repurchases (NT\$ billion)
2000	531	8.78	157	72.9	136	70.8
2001	584	8.82	238	161.3	124	47.1
2002	638	16.3	283	163.5	90	44.3
2003	669	22.6	357	245.4	98	51.8
2004	697	23.2	403	376.6	175	115.3
2005	691	31.8	435	574.4	111	43.8
2006	688	34.0	436	329.9	106	64.0
2007	698	32.9	487	752.7	108	106.3
2008	718	30.4	532	940.1	270	142.1
2009	741	31.9	453	476.2	64	26.7
2010	758	32.9	525	734.9	46	33.2
2011	790	32.3	611	908.6	146	63.6
2012	809	34.0	588	742.2	82	19.9
2013	838	34.6	605	667.9	52	21.8

Source: Annual statistic report of TSE.

¹ Taiwan stock index was included in the EMF index of MSCI since 1996. The initial weight was 50% since there were still strict limitations in the Taiwanese Stock Market. The ceiling for total foreign investments was 20% in 1996.

2. Literature review

2.1. Characteristics of foreign ownership. Kang and Stulz (1997) provide evidence that foreign investors in Japan prefer large, low leverage firms and firms with high export ratios. Dahlquist and Robertsson (2001) demonstrate that foreign investors in the Swedish stock market prefer large firms and those with high liquidity. Lin and Shiu (2003) find that foreign ownership is positively correlated with firm size and export ratio but negatively correlated with book to market equity. Jiang and Kim (2004) find that information asymmetry affects foreign ownership preferences, and foreign investors prefer larger firm size, good profitability, lower financial leverage ratio, and avoid high proportion of cross-shareholding companies.

2.2. Institutional factors and dividend payout. Shleifer and Vishny (1986) mention that large institutional investors have advantage of economies of scale to perform monitoring roles. Rozeff (1982) and Easterbrook (1984) suggest that the payment of dividends forces firms to go to external capital markets for additional funding and, thus, undergo monitoring by the capital market. Eckbo and Verma (1994) argue that institutional ownership prefers free cash flow to be distributed in the form of dividends, and, thus, forces managers to pay out dividends. Moh'd et al. (1995) report a significant and positive association between dividends and institutional shareholders. Crutchley et al. (1999) also find that institutional investors prefer firms with higher dividend payout. Jagannathan et al. (2000) show that firms increasing payouts have significantly higher institutional ownership than firms with decreasing payouts. Short et al. (2002) examine UK firms and strongly support a positive association between dividend payout policy and institutional ownership. Grinstein and Michaely (2005) do not find evidence supporting the notion that institutional investors are attracted to high dividend-paying firms.

2.3. Foreign ownership and corporate dividend policy. Baba (2009) investigates listed firms from 1995 to 2005 in the Japanese stock market. His empirical results show that if a firm has paid dividends, it will have a higher proportion of foreign ownership; also, if a firm increases (decreases) dividend payment, foreign ownership will increase (decrease). By using listed firms from 1996 to 2004 in the Taiwanese Stock Market, Wang et al. (2012) provide evidence that foreign investors preferred firms with lower cash dividends before the balanced dividend policy period, i.e., 1996-2000, but they tend to prefer higher cash dividends after the balanced dividend policy period, i.e., 2000-2004. Jeon et al. (2011) examine the relationship between foreign ownership and payout policy in the Korean stock

market from 1994 to 2004. Their results indicate that foreign investors prefer firms that pay dividend, but do not prefer to buy back shares. In addition, they find little evidence that domestic institutional ownership has a significant effect on payout policy. Lam et al. (2012) investigate the Chinese Stock Market where the listed firms are dominated by state-owned and government-controlled companies, showing that foreign ownership has significantly negative effect on cash dividends during the period of 2001-2006.

3. Data, variables and methodology

3.1. Data and variables. We used data that came from the TEJ (Taiwan Economic Journal) database. Because the Securities and Exchange Commission (SEC) of Taiwan did not permit listed firms to repurchase their shares before 2000 to prevent firms manipulate their share prices, the data of share repurchase in TEJ start from 2000. To be comparable, we started the analysis in 2000. Table 1 shows that the number of firms with dividend payouts rose from 157 in 2000 to 605 in 2013, and the total amount of dividends rose from NTDS\$ 72.9 billion in 2000 to NTDS\$ 667.9 billion in 2013.

The data are selected as follows: (1) we selected firms listed on the TSE; (2) following the literature, financial firms were excluded because many of their characteristics are very different from non-financials such as financial leverage; (3) we excluded firms listed for less than one year, because new firms often have a honeymoon effect and investors tend to hold more shares; (4) we excluded firms which were broken up, rearranged, or merged and firms with data missing during this period. After that, all variables were winsorized at their upper and lower 0.5% to mitigate the impact of outliers.

Following Denis and Osobov (2008) and Baba (2009), the firm-specific attributes used in this study are as follows.

1. Dividend Payout Dummy equals 1 if a firm pays dividend and 0, otherwise.
2. Dividend Payout Ratio is defined as the ratio of the amount of dividends to total assets of a firm.
3. Foreign ownership ratio is defined as shares of foreign investors divided by total shares outstanding.
4. Profitability is defined as ROA, a firm's net income divided by total assets. Both the cash flow hypothesis and the pecking order hypothesis predict that profitable firms tend to pay more dividends.
5. Firm size is defined as the log of total assets of the firm. The maturity hypothesis predicts that mature firms with accumulated assets and few investment opportunities tend to pay more dividends.

6. Market to book ratio is defined as market value of equity divided by the book value of equity; it is a proxy for future investment opportunities. The maturity hypothesis and the signaling hypothesis both predict a negative sign for dividends.
7. Earned equity measures the life cycle stage of a firm and is defined as retained earnings divided by total equities. The life cycle theory predicts a positive relation between dividend payout and earned equities.
8. Debt ratio is defined as book value of current and long-term debts divided by total assets. Both the cash flow hypothesis and the pecking order hypothesis predict a negative sign of dividends.
9. Growth of total assets is defined as $(total\ assets_t - total\ assets_{t-1})$ divided by $total\ assets_t$, and is a proxy for current investment opportunities. The maturity hypothesis predicts a negative sign of dividends.

3.2. Methodology. We use the Logit, OLS and GMM models to investigate whether foreign ownership would affect Taiwanese listed firms' dividend policies; the control variables follow Denis and Osobov (2008), and Baba (2009).

The outcomes of a firm's dividend policy include two discrete alternatives, pay or non-pay. Thus, the binary choice model is an appropriate method for us to use. For the Logit model, $Y(Payout)_{it}$ equaling to 1 means firm i pays dividends in year t , and equal to 0 otherwise. For the OLS model, $Y(Payout)_{it}$ is the dividend payout ratio, and the standard errors of regressions are corrected for autocorrelation and heteroscedasticity by using the Newey-West Method. The equation can be expressed as follows:

$$Y(Payout)_{it} = \beta_0 + \beta_1 FR_{it} + \beta_2 Prof_{it} + \beta_3 SIZE_{it} + \beta_4 MBR_{it} + \beta_5 LC_{it} + \beta_6 DR_{it} + \beta_7 Growth_{it} + \varepsilon_{it}, \tag{1}$$

where FR is foreign ownership ratio; $Prof$ is a firm's profitability; $SIZE$ is a firm's size; MBR is a firm's market to book ratio; LC is a firm's life cycle stage; DR is a firm's debt ratio; $Growth$ is a firm's growth of total assets.

The GMM model is used to capture both cross-sectional variation and autocorrelation in the payout ratio; the lag value of the payout ratio is included to consider the potential feedback effect of the payout ratio.

$$Y(Payout)_{it+1} = \beta_0 + \beta_1 Payout_{it} + \beta_2 FR_{it} + \beta_3 Prof_{it} + \beta_4 SIZE_{it} + \beta_5 MBR_{it} + \beta_6 LC_{it} + \beta_7 DR_{it} + \beta_8 Growth_{it} + \varepsilon_{it}. \tag{2}$$

4. Results

4.1. Descriptive statistics of variables. Table 2 presents the descriptive statistics and correlation matrix of the main variables, which provides a check for multicollinearity. Interactions among the full set of independent variables are too low to preclude the generation of unstable coefficients in the regression analysis. The mean of foreign ownership is 17.60%, and foreign ownership is positively associated with dividend payout. In addition, the mean of dividend payout is 13.15%, consistent with the findings of Aivazian, Booth and Cleary (2003) that dividend yields in emerging markets tend to be higher than their US counterparts.

Table 2. Descriptive statistics and correlation matrix

	Mean	Standard deviation	Dividend payout	Foreign ownership	Profitability	Firm size	Market to book ratio	Earned equity	Debt ratio	Growth
<i>Dividend payout</i>	0.1315	0.1851	1.0000							
<i>Foreign ownership</i>	0.1660	0.1188	0.291	1.0000						
<i>Profitability</i>	0.0477	0.8535	0.6167	0.1662	1.0000					
<i>Firm size</i>	6.8792	0.5651	0.1151	0.4513	0.0852	1.0000				
<i>Market to book ratio</i>	1.1567	0.9204	0.2215	0.1023	-0.0297	-0.0824	1.0000			
<i>Earned equity</i>	0.0689	0.2095	0.079	0.0141	0.1624	0.0802	-0.0998	1.0000		
<i>Debt ratio</i>	0.4390	0.1718	-0.2152	-0.0314	-0.2988	0.2649	-0.0248	-0.1315	1.0000	
<i>Growth</i>	0.1221	0.3887	0.1215	0.0236	0.088	-0.0285	0.0414	-0.0032	-0.039	1.0000

4.2. Does foreign ownership increase dividend payouts? From the results of panel A and panel B in Table 3, the coefficients of foreign ownership in the Logit model are both significantly positive, indicating that foreign ownership causes firms to pay dividend in the contemporary and the lag-1 year models. In addition, the coefficients of foreign ownership in the OLS model are both significantly positive, indicating that higher foreign ownership

causes firms to pay more dividends in the contemporary and the lag-1 year models. In the panel C of the GMM model, the same result is obtained. Our results provide evidence that an internationalization in firm share ownership structure causes firms to adjust their dividend policies accordingly. This might be because foreign investors face a higher degree of informational asymmetry relative to domestic shareholders, and,

hence, generally prefer dividends to retained earnings because the latter might never materialize as future dividends. Hence, firms will convey private information about their future prospects by paying dividends to attract foreign investors and increase foreign ownership. Although Taiwan has withholding tax, just like many countries, our results demonstrate that foreign investors still prefer dividend, maybe due to the fact that withholding tax rates can be reduced under Double Taxation Agreements, or the effect is dominated by the information asymmetry effect, as mentioned above. Our empirical results are consistent with Baba (2009), Jeon et al. (2011) and Wang et al. (2012) in the Korean, Japanese and Taiwanese markets, but in

contrast with the results of Lam et al. (2012) in the Chinese market.

The results show that a firm's profitability and size have significantly positive effect on dividend payout. These results are consistent with the free cash flow, pecking order, and maturity hypothesis. Market to book ratio has a significantly positive effect on dividend payout, consistent with the pecking order hypothesis. Earned equities have a significantly positive effect on dividend payout, consistent with the life cycle hypothesis. The debt ratio has a significantly negative effect on dividend payout, consistent with the free cash flow and the pecking order hypothesis.

Table 3. Results of the impact of foreign ownership on dividend payout

	Panel A the contemporary model dividend payout (<i>t</i>)				Panel B the Lag model dividend payout (<i>t</i> -1)				Panel C dividend payout (<i>t</i> -1)
	OLS	Logit	OLS	Logit	OLS	Logit	OLS	Logit	GMM
C	0.0849*** (19.393)	0.3034*** (8.9355)	-0.107** (-2.3792)	-2.8819*** (-4.9016)	0.1113*** (21.323)	0.4744*** (14.25)	-0.0795 (-1.1897)	-1.2541*** (-2.5861)	-0.5585*** (-4.5348)
Dividend payout									0.4267*** (19.194)
Foreign ownership	0.0044*** (9.9731)	0.0511*** (13.987)	0.002*** (6.0131)	0.0067 (1.5814)	0.0035*** (8.9608)	0.0396*** (11.767)	0.0028*** (4.5154)	0.0118*** (3.0378)	0.0039*** (7.9085)
Profitability			0.0105*** (17.957)	0.2013*** (9.2182)			0.0145*** (11.621)	0.1027*** (9.4946)	-0.0016 (-0.8372)
Firm size			0.0096 (1.2348)	0.4082*** (4.5677)			0.015 (1.6102)	0.2765*** (3.6643)	0.0907*** (4.5814)
M/B ratio			0.0672*** (4.6368)	-0.0883 (-0.7748)			0.042*** (4.1956)	-0.2543*** (-3.6935)	-0.0312 (-1.4774)
Earned equity			0.1403*** (6.8689)	13.946*** (13.251)			-0.0002 (-0.4505)	6.5351*** (15.753)	0.0866* (1.9111)
Debt ratio			0.0001 (0.795)	-0.0185*** (-6.3729)			-0.0003 (-1.2164)	-0.012*** (-4.9744)	-0.0003 (-0.9935)
Growth			5.78E-05 (1.1226)	-0.0002 (-0.1286)			-0.0006*** (-4.5692)	-0.0044*** (-2.8832)	0.0005* (1.9242)
F-statistic	690.17***		717.53***		357.59***		475.98***		
LR statistic		332.24***		4205.57***		202.74***		2704.76***	
J-statistic									5.29E-16
Adj-R ²	0.11	0.04	0.48	0.47	0.05	0.03	0.35	0.35	0.65

Note: ***, **, and * represent statistical significance at 1%, 5%, and 10% levels, respectively.

4.3. Does foreign ownership increase share repurchases? In addition to dividend payout, the other popular way for firms to distribute cash is share repurchase. Prior studies have provided evidence that share repurchases are used as a more flexible means of distributing cash compared to dividends that are sticky. We then ask another question: What is the relationship between share repurchases and foreign ownership? Do firms also adjust share repurchases according to foreign ownership?

From the results of panel A and panel B in Table 4, the coefficients of foreign ownership in the Logit model are not significant in the contemporary and the lag-1 year models; the coefficients of foreign

ownership in the OLS model are also insignificant in the contemporary and the lag-1 year models. The result of the GMM model in panel C is also insignificant. Our results indicate that the relationship between foreign ownership and share repurchases is insignificant, and foreign ownership does not lead firms to repurchase shares. Our empirical results are consistent with Jeon et al. (2011) in the Korean market. The flexible and discretionary nature of share repurchases may cause corporate insiders to mislead outside investors, and render less informed shareholders vulnerable to expropriation by the better informed (Brennan and Thakor, 1990). Kalev, Nguyen and Oh (2008) demonstrate the information asymmetry between

local and foreign investors and confirm that foreign investors have a preference for firms with less information asymmetry. Foreign investors prefer to invest and trade in stocks with more transparent information (Dahlquist and Robertsson, 2001; Kang and Stulz, 1997). Share repurchases have been considered of low credibility due to their inherent flexibility (Vermaelen, 1981), especially for less informed foreign investors. We conclude that foreign

investors prefer firms that do not distribute cash by repurchasing shares and retain the flexible and discretionary nature of share repurchases.

To summarize, due to information asymmetry, foreign investors prefer long-term commitment of dividend payout over share repurchase. Thus, firms adjust their dividend payout policies accordingly to attract foreign investors.

Table 4. Results of the impact of foreign ownership on share repurchase

	Panel A the contemporary model share repurchase (<i>t</i>)				Panel B the lag model share repurchase (<i>t</i> -1)				Panel C share repurchase (<i>t</i> -1)
	OLS	Logit	OLS	Logit	OLS	Logit	OLS	Logit	GMM
C	2.6428*** (10.478)	-1.3993*** (-37.226)	9.2976*** (3.8108)	-1.9093*** (-4.1607)	3.0122*** (13.167)	-1.4498*** (-36.824)	3.0268 (1.457)	-3.9667*** (-8.72)	4.5287* (1.6589)
Share repurchase									0.1925*** (12.472)
Foreign ownership	0.0099 (0.5621)	-0.0022 (-0.8916)	0.0118 (0.7789)	-0.0038 (-1.2145)	0.02 (1.1374)	-0.0007 (-0.2932)	0.0018 (0.1115)	-0.0097*** (-2.9082)	0.0212 (0.9557)
Profitability			0.0571** (2.5616)	-0.025*** (-3.4526)			0.0509** (2.2402)	-0.0242*** (-4.085)	0.1161* (1.6488)
Firm size			-0.4381 (-1.2283)	0.276*** (3.9722)			0.3903 (1.2154)	0.4764*** (7.175)	-0.0622 (-0.1477)
M/B ratio			-0.5623*** (-4.0353)	-0.9782*** (-8.5622)			0.1897 (1.1892)	-0.1697*** (-3.1689)	-0.3202 (-0.8021)
Earned equity			0.0008 (0.0829)	1.3228*** (7.1936)			-0.0203 (-1.5488)	1.2806*** (7.446)	0.4082 (0.7013)
Debt ratio			-0.0554*** (-4.8792)	-0.0061*** (-2.6685)			-0.0731*** (-6.3423)	-0.0127*** (-5.6168)	-0.0143*** (-2.7944)
Growth			-0.0345*** (-5.3755)	-0.008*** (-3.8726)			0.0041 (0.5532)	0.002 (1.4555)	-0.0226 (-1.1389)
F-statistic	2.84**		15.56***		2.81**		16.17***		
LR statistic		0.74		270.87***		0.079		142.33***	
J-statistic									3.86E-22
Adj-R ²	0.0002	0.0001	0.02	0.04	0.0003	0.0001	0.02	0.02	0.03

Note: ***, **, and * represent statistical significance at 1%, 5%, and 10% levels, respectively.

4.4. Further test. We investigate whether the results above are an overall phenomenon in the Taiwanese stock market, for both foreign and domestic investors. That is, do firms also adjust dividend payout or share repurchases according to domestic ownership?

With regards to the dividend payout, the results of the Logit, OLS and GMM models are shown in panels A, B and C in Table 5. The coefficients of domestic ownership in the three models are almost significantly negative, indicating that domestic ownership causes firms to pay fewer dividends in the contemporary and the lag-1 year models.

As to share repurchase, the results of the Logit and OLS models shown in panel A and panel B in Table 6 indicate that the coefficients of domestic ownership are close to being significantly positive in the contemporary and the lag-1 year models. In the GMM model, the result is insignificantly positive. Therefore, the results are not the same as the dividend payout.

Our further tests demonstrate that foreign and domestic ownership have a different impact on a firm's payout policies. Firms only increase dividend payout for foreign ownership, not for domestic ownership. In addition, firms repurchase shares only based on domestic ownership, not on foreign ownership.

Table 5. Results of the impact of domestic ownership on dividend payout

	Panel A the contemporary model dividend payout (<i>t</i>)				Panel B the lag model dividend payout (<i>t</i> -1)				Panel C dividend payout (<i>t</i> -1)
	OLS	Logit	OLS	Logit	OLS	Logit	OLS	Logit	GMM
C	0.5232*** (12.364)	3.4797*** (16.004)	0.0962 (1.4508)	-2.6633*** (-3.4661)	0.214*** (20.113)	3.5765*** (9.7843)	-0.1534* (-1.8842)	-0.9916 (-1.377)	0.2365*** (6.5564)
Dividend payout									0.7153*** (47.045)

Table 5 (cont.). Results of the impact of domestic ownership on dividend payout

	Panel A the contemporary model dividend payout (<i>t</i>)				Panel B the lag model dividend payout (<i>t</i> +1)				Panel C dividend payout (<i>t</i> +1)
	OLS	Logit	OLS	Logit	OLS	Logit	OLS	Logit	
Domestic ownership	-0.0044*** (-9.9552)	-0.0306*** (-13.179)	-0.002*** (-6.1308)	-0.0029 (-0.871)	-0.0008*** (-6.9654)	-0.0317*** (-8.1219)	-0.0005** (-2.3553)	-0.0037 (-1.0614)	-0.0013*** (-8.5835)
Profitability			0.0105*** (18.015)	0.2141*** (10.649)			0.0135*** (12.072)	0.1244*** (6.9581)	-0.003*** (-3.6474)
Firm size			0.0095 (1.2175)	0.4129*** (4.5899)			0.0399*** (3.4746)	0.3089*** (3.7462)	-0.0113*** (-3.2153)
M/B ratio			0.0671*** (4.6276)	-0.0632 (-0.5392)			0.0439*** (3.8281)	-0.2771*** (-4.1663)	-0.0004 (-0.1084)
Earned equity			0.1397*** (6.8192)	14.167*** (14.042)			-0.0003 (-0.7751)	6.1341*** (7.1365)	0.1139*** (7.4673)
Debt ratio			0.0001 (0.8102)	-0.0175*** (-6.0327)			-0.0008*** (-3.4019)	-0.014*** (-5.3664)	3.36E-05 (0.3203)
Growth			5.70E-05 (1.1121)	0.0066** (2.3693)			-0.0006*** (-3.9342)	-0.0017 (-0.8389)	-0.0003 (-0.9181)
F-statistic	674.69***		718.19***		48.51***		351.06***		
LR statistic		236.86***		4182.81***		183.18***		2473.78***	
J-statistic									2.14E-20
Adj-R ²	0.11	0.03	0.48	0.55	0.007	0.03	0.27	0.35	0.62

Note: ***, **, and * represent statistical significance at 1%, 5%, and 10% levels, respectively.

Table 6. Results of the impact of domestic ownership on share repurchase

	Panel A the contemporary model share repurchase (<i>t</i>)				Panel B the lag model share repurchase (<i>t</i> +1)				Panel C share repurchase (<i>t</i> +1)
	OLS	Logit	OLS	Logit	OLS	Logit	OLS	Logit	
C	3.1922*** (13.886)	-2.8155*** (-26.753)	2.2652*** (1.3664)	-5.4045*** (-13.765)	1.3397*** (4.5724)	-2.7321*** (-24.529)	-0.0195 (-0.0114)	-5.7787*** (-13.669)	4.6936* (1.8067)
Share repurchase									0.2025*** (15.344)
Domestic ownership	0.0044 (0.2872)	0.0136*** (11.984)	0.0136 (3.7215)	0.0134*** (8.8053)	0.0174*** (5.01275)	0.0128*** (10.611)	0.0151*** (3.2893)	0.014*** (8.1216)	0.01 (0.7016)
Profitability			0.0244** (1.5213)	-0.0352*** (-6.2315)			0.0514*** (2.8369)	-0.02*** (-3.6898)	-0.1292** (-2.1009)
Firm size			0.3571 (1.3558)	0.5409*** (9.6648)			0.5941** (2.0986)	0.5351*** (9.3072)	0.2211 (0.7245)
M/B ratio			-0.3559*** (-2.5828)	-0.4567*** (-5.9234)			0.2769* (1.6703)	-0.136*** (-2.7626)	0.954*** (2.7743)
Earned equity			-0.0031 (-0.5194)	1.2215*** (8.0756)			-0.0183** (-2.2041)	1.1882*** (7.5741)	0.5052 (1.0083)
Debt ratio			-0.0557*** (-5.7816)	-0.0095*** (-4.5597)			-0.0689*** (-6.588)	-0.0126*** (-5.8075)	-0.0741*** (-5.2586)
Growth			-0.0273*** (-7.4017)	-0.0109*** (-5.8743)			0.0006 (0.1278)	0.0007 (0.5577)	0.0215 (0.5921)
F-statistic	0.15		17.35***		17.95***		17.51***		
LR statistic		109.03***		374.91***		95.29***		218.57***	
J-statistic									5.86E-22
Adj-R ²	0.0002	0.02	0.02	0.06	0.02	0.01	0.02	0.04	0.04

Note: ***, **, and * represent statistical significance at 1%, 5%, and 10% levels, respectively.

Conclusion

In this study, we use non-financial firms listed on the Taiwanese Stock Market with firm-specific attributes to investigate whether foreign ownership would affect a firm's payout policy, including dividend payout and share repurchase, by using the Logit, OLS and GMM regression models.

Our results show that foreign ownership has a positive impact on dividend payout policy, and

firms tend to increase their dividend payout according to foreign ownership. However, this result does not apply to share repurchase, nor to domestic ownership. We conclude that a firm could use dividend payout to distribute cash to attract foreign investors. Our results can be useful for firms to adjust their financial strategies according to the possible internationalization of ownership structure.

References

1. Aivazian, V., L. Booth and S. Cleary (2003). Do emerging market firms follow different dividend policies from U.S. firms? *The Journal of Financial Research*, 26, pp. 371-387.
2. Allen, F., A.E. Bernardo and I. Welch (2000). A theory of dividends based on tax clienteles, *Journal of Finance*, 55, pp. 249-253.
3. Baba, N. (2009). Increased presence of foreign investors and dividend policy of Japanese firms, *Pacific-Basin Finance Journal*, 17, pp. 163-174
4. Beakert, G. and C.R. Harvey (2000). Foreign speculators and emerging equity markets, *Journal of Finance*, 55, pp. 565-613.
5. Beakert, G. and C.R. Harvey and C.T. Lundblad (2001). Emerging equity markets and economic development, *Journal of Development Economics*, 66, pp. 465-504.
6. Brennan, M.J. and Thakor, A. (1990). Shareholder preferences and dividend policy, *Journal of Finance*, 45, pp. 993-1018.
7. Chazi, A., Boubakri, N. and Zanella, F. (2011). Corporate dividend policy in practice: Evidence from an emerging market with a tax-free environment, *Pacific-Basin Finance Journal*, 19, pp. 245-259.
8. Chen, Y.R., Chiou, J.R., Chou, T.K. and Syue, M.S. (2009). Corporate governance and long-run performance of equity issues: The role of foreign ownership in Taiwan, *Asia Pacific Management Review*, 14, pp. 27-46.
9. Choe, H., Kho, B.C. and Stulz, R. (2005). Do domestic investors have an edge? The trading experience of foreign investors in Korea, *Review of Financial Studies*, 18, pp. 795-829.
10. Crutchley, C.E., Jensen, M.R.H., Jahera Jr., J.S. and Raymond, J.E. (1999). Agency problems and the simultaneity of decision-making: The role of institutional ownership, *International Review of Financial Analysis*, 8, pp. 177-197.
11. Dahlquist, M. and G. Robertsson (2001). Direct foreign ownership, institutional investors, and firm characteristics, *Journal of Financial Economics*, 59, pp. 413-440.
12. Denis, D.J. and Osobov, I. (2008). Why do firms pay dividends? International evidence on the determinants of dividend policy, *Journal of Financial Economics*, 89, pp. 62-82.
13. Dvorak, T. (2005). Do domestic investors have an information advantage? Evidence from Indonesia, *Journal of Finance*, 60, pp. 817-839.
14. Easterbrook, F.H. (1984). Two agency-cost explanations of dividends, *American Economic Review*, 74, pp. 650-659.
15. Eckbo, B.E. and Verma, S. (1994). Managerial share ownership, voting power, and cash dividend policy, *Journal of Corporate Finance*, 1, pp. 33-62.
16. Grinstein, Y. and Michaely, R. (2005). Institutional holdings and payout policy, *Journal of Finance*, 61, pp. 1305-1336.
17. Hau, H. (2001). Geographic patterns of trading profitability in Xetra, *European Economic Review*, 45, pp. 757-769.
18. Jagannathan, M., Stephens, C. and Weisbach, M. (2000). Financial flexibility and the choice between dividends and stock repurchases, *Journal of Financial Economics*, 57, pp. 355-384.
19. Jensen, M. C. (1986). Agency costs of free cash flow, corporate finance and takeovers", *American Economic Review*, 76, pp. 323-329.
20. Jeon, J. Q., Lee, C. and Moffett, C. M. (2011). Effects of foreign ownership on payout policy: Evidence from the Korean market, *Journal of Financial Markets*, 14, pp. 344-375.
21. Jiang, L. and J.B. Kim (2004). Foreign equity ownership and information asymmetry: Evidence from Japan, *Journal of International Financial Management and Accounting*, 15, pp. 185-211.
22. Kalev, P.S., Nguyen, A.H., and Oh, N.Y. (2008). Foreign versus local investors: who knows more? Who makes more? *Journal of Banking and Finance*, 32, pp. 2376-2389.
23. Kang, J.K. and R.M. Stulz (1997). Why is there a home bias? An analysis of foreign portfolio equity ownership in Japan, *Journal of Financial Economics*, 46, pp. 3-28.
24. La Porta, R., Lopea-de-Silanes, F., Shleifer, A. and Vishny, R.W. (2000). Agency problem and dividend policies around the world, *Journal of Finance*, 55, pp. 1-33.
25. Lam, C.K., Sami, H. and Zhou, H. (2012). The roles of cross-listing, foreign ownership and state ownership in dividend policy in an emerging market, *China Journal of Accounting Research*, 5, pp. 199-216.
26. Lin, C.H. and C.Y. Shiu (2003). Foreign ownership in the Taiwan stock market – an empirical analysis, *Journal of Multinational Financial Management*, 13, pp. 19-41.
27. Moh'd, M.A., Perry, L.G. and Rimbey, J.N. (1995). An investigation of the dynamic association between agency theory and dividend policy, *Financial Review*, 30, pp. 367-385.
28. Ramaswamy, K. and Li, M. (2001). Foreign investors, foreign directors and corporate diversification: an empirical examination of large manufacturing companies in India, *Asia Pacific Journal of Management*, 18, pp. 207-222.
29. Rozeff, M. (1982). Growth, beta, and agency costs as determinants of dividend payout ratios, *Journal of Financial Research*, 5, pp. 249-259.
30. Shleifer, A., and Vishny, R.W. (1986). Large Shareholders and Corporate Control, *Journal of Political Economy*, 94, pp. 461-488.
31. Short, H., Zhang, H. and Keasey, K. (2002). The link between dividend policy and institutional ownership, *Journal of Corporate Finance*, 8, pp. 105-122.

32. Vermaelen, T. (1981). Common stock repurchases and market signaling: An empirical study, *Journal of Financial Economics*, 9, pp. 139-183.
33. Wang, Y.J., Hou, H. and Khan, W. (2012). Foreign institutional ownership and firm dividend payout: the case of Taiwan, *Journal of Emerging Market*, 11, pp. 72-80.
34. Yeh, Y.H., Lee, T.S. and Woidtke, T. (2001). Family control and corporate governance: Evidence from Taiwan, *International Review of Finance*, 2, pp. 21-48.