Dividend Policies, Legal Regimes And Market Systems In The Asia Pacific Region

C. T. Lin

International Graduate School of Management, University of South Australia, City West Campus, Adelaide 5000 Australia (chienting.lin@unisa.edu.au)

Abstract: This study sets out to test two agency models of dividends. The first model known as the "outcome" model hypothesizes that dividends are the result of effective legal protection of minority shareholders, who are able to extract payments from firms. The second model known as the "substitute" model argues that dividends substitute the monitoring roles of the stakeholders. Using aggregate data from 11 Asia-Pacific countries, I find evidence consistent with the "outcome" model, which predicts that dividend payouts by firms operating in strong legal environments are higher and less sensitive to changes in current earnings.

Keywords**:** *Dividend Policy, information asymmetry, agency theory, legal regimes and financial system.*

1. INTRODUCTION

How a firm chooses its dividend policy has long been a puzzle to financial economists (see Black (1976)). The fact that dividends are often taxed at a higher marginal personal rate than capital gains on ordinary shares require firms to gross up higher before-tax return. Hence, firms should find dividend payouts to be less attractive than other alternatives that generate less tax liabilities. This traditional view of dividends however is difficult to explain why firms persist to pay high level of dividends in many developed economies where taxation of dividends is considerably higher.

Several studies that have examined the effect of taxation on dividend payouts provide mixed results. Elton and Gruber (1970) find that share prices decline by less than the full amount of the dividend on ex-dividend days are consistent with the idea that personal taxes make dividends less valuable than capital gains. Eades, Hess and Kim (1984) however, counter argue that the magnitude of the decrease in share prices is not caused by the tax effect. They provide evidence that the stock dividends yield similar result even though they do not carry any tax consequence. Porterba (1987) and La Porta, Lopez-De-Silanes, Shleifer and Visney (LLSV, 2000) in their comprehensive studies on the U.S. and on 46 countries respectively, investigate whether personal tax rate changes on after-tax dividends relative to after-tax retained earnings have any significant effect on firm's payout policy. Although some empirical support is found for the tax effect on the payout ratio, they find that the results are sensitive to how earnings and payout ratios are measured.

Given that the tax theory on dividend policy is far from conclusive, recent effort has been focused on the information asymmetry between corporate insiders (managers) and outsiders (minority shareholders and the market) to solve the dividend puzzle. The basic idea here is that outsiders have less information about firms than the corporate insiders and thereby any credible behaviour (in this case, dividend payouts) by managers may carry information content which in turn may affect the values of the firms. Two competing theories of dividends arise from this market imperfection. One theory developed from information asymmetry is based on the agency theory of Jensen and Meckling (1976). Agency problems arise when corporate insiders behave in their own interest at the expense of the outside shareholders. Their actions may range from channelling firms' resources for personal use to committing negative NPV projects for asset growth and diversification (see Jensen (1986), Gomes (2000) and LLSV (2000)). To mitigate these agency costs, the outside shareholders may prefer a high dividend policy. Cash payout is thus seen as a mean to reduce undistributed profits available to the firms. In this context, a bird-in-the-hand is preferable to a bird-in-the-bush.

An external factor that might affect the severity of the agency problem is the legal regime in which firms operate. LLSV (2000) argue that strong company laws and legal protection of outside

shareholders lower the agency costs by allowing the shareholders the right to participate in important corporate issues, to call extraordinary shareholders' meetings, and to sue the company for damages. For example, under an effective legal system, outside shareholders can elect directors who tend to favour high dividend payouts, sue managers for excessive salaries and bonus, or dump shares for a possible takeover target to force firms to disgorge cash and restrict the unlimited use of earnings by the insiders. In short, a positive relationship should exist between the legal rights of the outside shareholders and the firms' cash payouts.

Legal protection of outside investors however varies substantially across countries and thus the extent of agency problems and firms' dividend policies may also differ. Watson (1974) points out that commercial laws come from two broad traditions, namely the common law of English origin and the civil law of Roman origin. The common law has spread mostly to Commonwealth countries whereas the civil law has largely been adopted by the continental Europe and by countries that are under its historical influence. In a comprehensive study of 49 countries on the legal protection of investors and creditors, LLSV (1998) find that common-law countries do offer stronger investor legal rights than civil-law countries. These legal rights are derived by corporate laws rather than inherent in securities themselves. In a follow-up study, LLSV (2000) confirms that firms in common-law countries pay higher dividends than firms in civil-law countries. Their findings are thus consistent with the idea that high dividend policy is the result of effective laws limiting managers from misusing or misinvesting firms' earnings and of the legal powers of the minority shareholders to extract them. Investors, who have poor legal protection on the other hand, take whatever dividends they can get at the discretion of the firms.

Another macro factor of agency cost is the institutional structure through which firms raise capital. Agency cost may vary substantially between "German-Japanese" banking model and "Anglo-Saxon" capital market model. The main different between these two models is the extent to which banks being delegated to monitor firms. In the formal model, banks tend to play the dominant role of monitoring since bank loans are the overwhelming source of financing in the debt market. On the other hand, banks play a more limited role in the latter model, as debt markets tend to be more complete in the sense that public debt issues are an important alternative to bank loans.

Fama (1985) compares bank loans with publicly traded bonds as inside debt versus outside debt. He argues that banks have continuous access to firms' information that is not publicly available and are in the better position to overcome the problem of information asymmetry than other lenders. Consequently, moral hazards and agency costs are reduced under bank loan arrangements. Consistent with this view, James (1987) reports that stock market reacts favourably to firms' bank loan announcements in contrast to the neutral or negative responses to the public security offering announcements. Diamond (1991) and Rajan (1992) also point out that public debt involves less monitoring by "uninformed" debtholders who rely more on public information such as borrowers' track record, analyst reports and bond ratings. Bond contracts are thus more rigidly structured and are characterised as arm's length transactions compared to informed transactions in bank loans. Based on the argument, agency costs are thus higher in firms that rely primarily on corporate bond offerings to raise funds. Consequently, different dividend policies may exist in these two types of financial systems. Such difference in the financing arrangements and agency problems is evidenced by Dewenter and Warther (1998) who find that Japanese dividends are less sticky and are more responsive to changes in earnings than their U.S. counterparts because Japanese firms have less information asymmetry and fewer agency conflicts. Japanese firms, especially Keiretsu-member firms have closer ties with the investors through larger cross-holdings with banks and other firms.

In summary, the two agency theories of dividends discussed above explain how dividend policies are determined through different mechanisms. The first model referred as the "outcome" model by LLSV (2000) argues that dividends are an outcome of the effective legal protection of shareholders. It predicts that firms operating in countries with good shareholder protection have higher dividend payouts. It also implies that other things equal, dividends are sticky and are less sensitive to changes in current earnings. The second model known as the "substitute" model hypothesizes that dividends substitute the monitoring roles of the stakeholders. It argues that dividends are not as important as in bank-centric markets and hence predicts that the dividend payouts should be lower. At the same time, it implies that firms are more willing to change or omit dividends, and are more responsive to changes in current earnings.

In this article, I examine the predictions of these two agency models on dividends using a sample of 11 Asia-Pacific countries. These countries are chosen because they provide good variations in the legal and financial structures. Furthermore, to my knowledge, this is the first study that addresses the dividend policy issues in Asia-Pacific region in such context of agency problems. The remaining sections of the paper are structured as follows. Section 2 describes the data. Section 3 reports the empirical findings. The last section concludes.

2. DATA

The 11 Asia-Pacific countries in the sample include Australia, Hong Kong, Indonesia, Japan, Korea, Malaysia, New Zealand, Philippines, Singapore, Taiwan and Thailand. The sampling period in this study is from 1991 to 2001, which is the longest common period available among these countries. To obtain the annual dividend payout ratio for each country, the annual dividend yields are multiplied with the annual price-earning ratio of each Datastream market index. For testing the stability of dividends and their sensitivity to earning changes, quarterly aggregate dividends and earnings are used. They are constructed by taking the product of the market value of each index with its dividend yields and with its price-earning ratios respectively.

To test the two versions of the agency theories of dividends, countries are sorted by their institutional structures and legal regimes independently. For institutional structure, two ratios that measure the depth of banking system provided by International Monetary Fund (IMF) are used as a proxy to differentiate countries that follow the banking model or the capital market model. The ratio of bank domestic credit to GDP (Credit/GDP) measures the relative size of domestic credit provided by the banking sector while the ratio of liquid liabilities to GDP (Liquid/GDP) measures the relative size of bank deposits including currency or M3 in the economy. Countries are first ranked according to each of the two measurements that are based on the average ratios of 1990 and 1999. The two ranks are then averaged to create a ranking index, which is then used to classify each country in either the banking model or the capital market model. Since IMF does not provide the two ratios for Taiwan, no rank index can be computed. However, Taiwan is placed in the bank-oriented market because of its similarities with Japan in its banking system.

Table 1 presents the groupings of 11 countries into bank-oriented market and capital-oriented market according to the ranking index. Since the ratios only measure the depth of banking system rather than providing a benchmark for the two types of the financial systems, all the 10 countries with the ranking indices are equally divided between the two markets. Therefore, Hong Kong, Japan, Malaysia, Thailand, Singapore and Taiwan are grouped under bank-centric market, and New Zealand, Korea, Australia, Philippines and Indonesia are grouped in the capital-centric market. From the table, Hong Kong and Japan are the most bank-oriented economies in Asia Pacific where banks play an overwhelming role in providing domestic credit. On the other end of the spectrum, Philippines and Indonesia have less than a third of bank credit as a percentage of their GDP compared to Hong Kong and Japan.

These countries are also sorted based on their legal regimes. LLSV (1998) argue that countries around the world basically follow one of the two broad legal traditions: civil law or common law. I follow LLSV (1998) classification and report the two-way sorts of the 11 economies according to both of their legal and financial systems in Table 2. Not surprisingly, all the Commonwealth countries in the sample follow common laws while others with the exception of Thailand adopt civil laws. Following closely with the Anglo Saxon model, Australia and New Zealand are the only countries that follow both common laws and capital oriented systems. On the other end of the spectrum, Japan and Taiwan are the only civil law and bank centric countries. Overall, the combination of different legal regimes and institutional structures are well represented in the sample.

3. RESULTS

Table 3 presents the average dividend payout ratios of the 11 countries in the sample from 1991 to 2001. As clearly shown, the dividend policies among these countries are substantially different where it ranges from 73.06% in New Zealand to 16.03% in the Phillippines. This large dispersion seems more apparent in countries of different legal regimes rather than in those of different institutional structures. To distinguish these two effects, the averages of dividend payouts in each of the legal and financial combinations are calculated. I find that the average dividend payouts are higher in the common-law countries

Table 1. Average Measures of Depth of Banking System in the Asia-Pacific Countries [a]

Country	Credit/GDP (%) [b]	Rank	Liquid/GDP (%) [c]	Rank	Ranking Index [d]
		Bank Oriented			
Hong Kong	148.55	2	202.15	1	1.5
Japan	205.40	1	156.65	2	1.5
Malaysia	113.65	4	100.20	4	4
Thailand	116.50	3	94.65	5	4
Singapore	85.20	6	122.40	3	4.5
Taiwan	-	-	-	-	-
		Nonbank Oriented			
New Zealand	100.30	5	85.30	6	5.5
Korea	81.15	7	74.20	7	7
Australia	81.00	8	61.95	8	8
Philippines	47.85	9	52.15	9	9
Indonesia	53.00	10	48.80	10	10

[a] Data provided by International Monetary Fund's international financial statistics.

[b] Credit/GDP is the average of 1990 and 1999 domestic credit provided by banking sector as a percentage of GDP.

[c] Liquid/GDP is the average of 1990 and 1999 bank deposit and currency as a percentage of GDP.

[d] Ranking index is the average of the ranks based on the average ratios of Credit/GDP and Liquid/GDP.

Table 2. Legal and Financial Systems in the Asia Pacific Countries

Legal Regime [a]	Bank Centred	Capital Centred
Civil Law	Japan Taiwan	Korea Philippines Indonesia
Common Law	Hong Kong Malaysia Singapore Thailand	Australia New Zealand

[a] Based on LLSV (1998) findings.than in the civil-law

Table 3. Average Dividend Payout Ratios from 1991 to 2001

	Country	Average Payout Ratio (%)	
		Capital Centred	Bank Centred
Civil Law	Korea	30.29	-
	Philippines	16.03	-
	Indonesia	28.06	-
	Japan		41.02
	Taiwan		34.33
	Average	24.79	37.68
Common Law	Australia	66.73	-
	New Zealand	73.06	-
	Singapore	-	38.59
	Hong Kong	-	45.68
	Malaysia	-	38.39
	Thailand	-	41.73
	Average	69.90	41.10
Common vs Civil law [a]		2.37 **	
Bank vs Capital market		0.55	

[a] Mann-Whitney tests for equality between two samples. See Conover (1980) for a detailed discussion on the nonparametric test.

** denotes statistical significance at the 5 percent level.

than in the civil-law countries in both bank and capital centric markets. In fact, with the exception of Japan, all civil countries have lower average payouts than any common-law countries. To test the equality of dividend payouts between the two legal regimes, a Mann-Whitney test is conducted using 10 years of data for each country. The average payout data due to its limited number of observations cannot be carried out for meaningful tests. The equality of dividend payouts between the two legal regimes is rejected at the 5 per cent level after controlling for the financial structure. The evidence is thus consistent with LLSV (2000) findings. In contrast, when legal system is controlled, no consistent pattern in average payouts appears between the two markets. The capital-oriented economies under the common law regime have higher payouts than bank-oriented economies, but those in the civil law regime have lower payouts. The Mann Whitney test also fails to reject the equality of the payout ratios between the two markets.

The sensitivities of dividend changes to earning changes are also examined among the countries in the sample and using two different measures to estimate the dividend responses, the results are shown in both Table 4 and Table 5. Table 4 first reports the Pearson's correlation coefficient between the percentage changes in current dividend and the percentage changes in current earnings in each of the 11 Asia-Pacific countries. Consistent with the outcome model, which predicts that dividend policy is a function of investor legal protection, correlations tend to be lower in the common-law countries in both types of the financial markets. This is particularly evidenced in the capital-centric economies where

Australia and New Zealand have lower coefficients than all their counterparts in the civil law regime. An interesting result in the table is the negative dividend response to earnings changes in Thailand. A further examination on the behaviour of aggregate dividends and earnings suggests that such result may be driven by the combination of the sharp drop in earnings in the late 1990s during the Asia financial crisis and Thailand's sticky dividend policy. Overall, the dividend policies in the common-law countries are found to be significantly less sensitive to their current earnings than their civil-law counterparts at the 5 percent level. On the other hand, when the correlations between the countries in the two financial systems are compared, the test for equality of correlation between bank-centric countries and market-centric countries again cannot be rejected. Hence, no evidence is found to support the substitute model of dividends.

Table 4. Correlation between Dividend Changes and Earning Changes

	Country	Correlation Coefficient	
		Capital Centred	Bank Centred
Civil Law	Korea	0.8552	-
	Philippines	0.8749	-
	Indonesia	0.6672	-
	Japan	-	0.4955
	Taiwan	-	0.7876
Common Law	Australia	0.4577	-
	New Zealand	0.6594	-
	Singapore	-	0.1601
	Hong Kong	-	0.8044
	Malaysia	-	0.4759
	Thailand	-	-0.4939
Common vs Civil law [a]		-2.01 **	
Bank vs Capital market		-1.09	

[a] Mann-Whitney tests for equality between two samples.

** denotes statistical significance at the 5 percent level

To test the robustness of the correlation results, I follow Lintner's (1956) approach to estimate the degree of dividend smoothing by firms in each sampled country. In Lintner's stylised model, the degree of responsiveness of dividends to changes in earnings is captured by the speed of adjustment (SOA) in the following equation:

$$d_t - d_{t-1} = a + c(re_t - d_{t-1}) \qquad (1)$$

where d_t and d_{t-1} are dividends at time t and $t-1$, c is the speed of adjustment, r is the target payout ratio, and e_t is the earnings at time t. From his survey study on the U.S. firms, Linter (1956) argues that the changes in dividends follow an adaptive process. Firms tend to smooth out changes in dividends over time by adjusting dividends partially towards the target dividend (re_t) each year. The degree of adjustment is measured by the coefficient c. A large coefficient in c thus indicates high correlation between changes in dividends and earnings. To estimate SOA, simple regressions can be run on the following version of equation 1:

$$d_t = a + (1-c)d_{t-1} + cre_t \qquad (2)$$

where SOA can be obtained from the coefficient of d_{t-1}.

Table 5 reports the results of regressions on equation 2. The Lintner model seems to work well in the sample especially those countries of Anglo-Saxon origin. Using the aggregate data, the adjusted R^2 ranges from 0.99 in Australia to 0.67 in Indonesia. The lagged dividends in all countries except Korea are significant in explaining the current dividends at the 1 percent level. However, base on the SOA estimates, the stability of the dividends varies substantially across countries. On one end of the spectrum, firms in Korea, Phillippines and Taiwan change dividend levels more often to earning changes with the estimates of 1.0181, 0.8288 and 0.6968 respectively. On the other end, firms in New Zealand, Thailand and Australia are much less responsive to earning changes with the estimates of 0.0978, 0.1024 and 0.1330 respectively. On average, I find that the dividend policies in the common-law countries are significantly "smoother" than those in the civil-law countries at the 10 percent level. When countries are sorted in terms of their financial systems, no significant difference in the SOA is found between bank-centric and capital-centric economies. The results obtained from the Lintner model are therefore consistent with the correlation evidence presented in Table 4.

4. CONCLUSIONS

Using aggregate data of 11 Asia-Pacific countries that differ in both legal and financial systems from 1991 to 2002, I find that the empirical results are consistent with the "outcome" model. Dividend policies of firms operating in countries with better protection of shareholders are found to be higher and less sensitive to changes in earnings. In contrast, no evidence is found to support the "substitute model" which predicts that firms in bank-centric markets pay lower dividends and have speedier adjustment of dividends to

changes in earnings. This however, may imply that although banks play an important role in monitoring firms, the reduction in agency cost is far less than the reduction that can be achieved by dividend policies through legal means. While it is

Table 5. Speed of Adjustment Estimates from the Lintner Model

Country	Dividend $_{t-1}$	Earning $_t$	Speed of Adjustment	Adjusted R ^{2}
		Civil-law Countries		
Japan	0.8341 (11.22)	0.0132 (2.39)	0.1659	0.77
Indonesia	0.6470 (6.38)	0.0345 (2.52)	0.3530	0.67
Taiwan	0.3032 (3.24)	0.1899 (7.24)	0.6968	0.85
Philippines	0.1712 (2.87)	0.1719 (13.64)	0.8288	0.96
Korea	-0.0181 (-0.18)	0.1631 (9.89)	1.0181	0.89
		Common-law Countries		
New Zealand	0.9022 (34.32)	0.0898 (3.48)	0.0978	0.99
Thailand	0.8976 (14.20)	0.0118 (0.57)	0.1024	0.84
Australia	0.8670 (13.00)	0.0931 (2.38)	0.1330	0.99
Singapore	0.6700 (4.99)	0.0868 (1.93)	0.3300	0.82
Hong Kong	0.6352 (10.22)	0.1501 (5.81)	0.3648	0.98
Malaysia	0.5348 (7.01)	0.1393 (5.94)	0.4652	0.97
Common vs Civil law [a]	-1.83 ***			
Bank vs Capital market	-0.18			

[a] Mann-Whitney tests for equality between two samples. *** denotes statistical significance at the 10 percent level. Numbers in the parentheses are T-statistics.

beyond the scope of this study, the findings in this paper may further suggest that corporate governance is an important micro-determinant of dividend policy and that firms with stronger governance rules may result in higher payout policies.

5. REFERENCES

Black F., The Dividend Puzzle, *Journal of Portfolio Management*, 2, 5-8, 1976.

Connover W.J., Practical Nonparametric Statistics, *John Wiley & Sons*, 1980.

Dewenter K. and V. Warther, Dividends, Asymmetric Information and Agency Conflicts: Evidence from A Comparison of Dividend Policies of Japanese and US firms, *Journal of Finance*, 53, 879-904, 1998.

Diamond D., Monitoring and Reputation: The Choice Between Bank Loans and Directly Placed Debt", *Journal of Political Economy*, 99, 689-721, 1991.

Eades K.M., P. J. Hess, and E.H. Kim, On Interpreting Security Returns During the Ex-Dividend Period, *Journal of Financial Economics*, 13, 3-34, 1984.

Elton E., and M. Gruber, Marginal Stockholders Tax Rates and the Clientele Effects, *Review of Economics and Statistics*, 52, 68-74, 1970.

Fama E., What's Different About Banks?, *Journal of Monetary Economics*, 15, 29-39, 1985.

Gomes A., Going Public with Asymmetric Information, Agency Costs, and Dynamic Trading, *Journal of Finance*, 2000.

James C., Some Evidence on the Uniqueness of Bank Loans, *Journal of Financial Economics*, 19, 217-236, 1987.

Jensen M., Agency Cost of Free Cash Flow, Corporate Finance, and Takeover, *American Economic Review Papers and Proceedings*, 76, 323-329, 1986.

Jensen M. and W. Meckling, Theory of the Firm: Managerial Behaviour, Agency Costs, and Capital Structure, *Journal of Financial Economics*, 3, 305-360, 1976.

La Porta R., F. Lopez-De-Silanes, A. Shleifer and R.W. Vishny, Law and Finance, *Journal of Political Economy*, 106, 1113-1155, 1998.

La Porta R., F. Lopez-De-Silanes, A. Shleifer and R.W. Vishny, Agency Problems and Dividend Policies Around the World, *Journal of Finance*, 1-31, 2000.

Linter J., Distribution of Incomes of Corporations Among Dividends, Retained Earnings and Taxes, *America Economic Review*, 46, 97-113, 1956.

Porterba J., Tax Policy and Corporate Saving, *Brookings Paper on Economic Activity*, 18, 455-503, 1987.

Rajan R., Insiders and Outsiders: The Choice Between Informed and Arm's Length Debt, *Journal of Finance*, 47, 1367-1400, 1992.

Watson A., Legal Transplants: An Approach to Comparative Law, *Charlottesville: University of Virginia Press*, 1974.