

SHAREHOLDER STRUCTURE AND DIVIDEND POLICY IN THE DEVELOPED MARKETS OF ASIA-PACIFIC

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ABSTRACT

The objective of this study is to examine the relationship between the shareholder structure and dividend policy of an entire region – the developed markets in the Asia-Pacific region. The results show that at least three shareholder groups influence the dividend policy of companies. The group of investment advisors favours higher dividend payments. However, the greatest likelihood to receive extraordinary dividend payments is with shares of companies with a high stake of government investors. Further, the group of minority shareholders show a negative influence, which might be affected by the low interest-rate period and hence the lack of alternative investment opportunities for members of this group.

KEY WORDS

Asia-Pacific, dividend policy, developed markets, shareholder structure, ownership, dividend payments

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1 INTRODUCTION

The sharing of companies' annual net profits with their shareholders – this process is inseparable from a long history of capital markets and stock corporations. At the beginning, a company's shareholders were simultaneously the employees as well as owners of that enterprise. However, the control of business – more specifically, the company management and the

ownership – has become separated over time. The split has led eventually to the practice of a company's annual net profit being shared with its shareholders, who are the owners of the company, through dividend payments to provide compensations for the capital that they made available for the company and the associated risks. Over the years, the sharing

of the company's net profit has developed into its dividend policy. In a narrow sense, the term "dividend policy" could be understood by the dividend payment behaviour of stock corporations (Guserl and Pernsteiner, 2015). This behaviour includes three crucial decisions: first, whether net profits will be shared, second, which proportion of the annual net profit will be distributed; and third, which form of dividend will be used. These three decisions are made by the company management and approved by the shareholders at the annual shareholders' meeting, where the dividend is officially announced.

Due to the fact that the dividend policy is usually controlled only by the management board – which is, however, influenced by shareholders with the most significant stake of the company – it has become a common issue for all market participants (Dutta and Saadi, 2011). The issue exists between company management and shareholders, as well as between the various groups of shareholders. The reason for the problem field of dividend policy lies in the essential differences in the interests of all involved and affected parties, especially between the numerous groups of shareholders (Baker, 2011).

On the one hand, there are common individual shareholders with a low number of holding shares and limited access to sources of information. They have different preferences than investors with high company stakes. Individual shareholders commonly pursue their preferences from a short-term view, which means they usually aim for the highest returns on their invested capital in the shortest possible period.

On the other hand, there are majority investor groups such as institutional investors, family owners, private equity investors, founders and even more, which also show diverse interests when it comes to dividend policy (Clark and Monk, 2017). For instance, the investment decisions of pension and in-

surance companies, determined as institutional investors, are related to long-term goals. In contrast, the decisions of hedge fund managers are oriented towards rather short-term goals. Besides, family owners, which are determined as controlling shareholders, usually have extensive and faster access to company information than all other groups of shareholders as they are commonly directly involved in the company management and hence in the company decisions. Therefore, their preferences in terms of dividend policy might differ essentially among majority investors (Talmor and Vasvari, 2011).

Accordingly, in terms of the dividend policy, there are not only differences in the interests between the groups of minority shareholders and majority shareholders, but also among majority shareholders and even among investors of institutional associations. Consequently, the question arises, which groups of shareholders are able to influence the dividend policy of companies.

Against the background of this question, several studies have dealt with the issue of dividend policy. However, most of recent studies focused their examinations on one market development level and on one single market – i.e. single country. Concerning the globalisation, the present study also examines one market development level as well as the previous studies, however, its objective is to widen the scope of the investigation to an entire region. The results could contribute more extensive information and hence greater transparency, especially for minority shareholders, who usually have only access to public information. Therefore, the objective of the present study is to investigate which groups of shareholders influence dividend policy of companies in the most important indices of developed markets in Asia-Pacific that includes Japan, Hong Kong, Singapore, New Zealand and Australia.

2 THEORETICAL BACKGROUND AND RELATED LITERATURE

From the ordinary shareholder's point of view – they are owners of the firm – the earned annual net profit should be distributed because the dividend payout is their compensation for the capital they made available for the company, including an extra charge for the entailed risks (Guserl and Pernsteiner, 2015). However, the dividend disbursements are not only related to the shareholder's yields, but they also affect the company's future efficiency and the interests of all stakeholders. In the event of the corporation's decision to reinvest its annual net profit instead of pouring it out as dividend, both shareholders and stakeholders would be affected positively. It means the company would not be withdrawn from its capital, so that its enterprise value does not decrease. Consequently, the shareholder's share value would remain steady or rather increase due to the positive outlook of the impacts in terms of the investment. In addition, the corporation's creditworthiness would be positively driven by the reinvestment as well, which would, in turn, lead to favourable impacts on both shareholder and stakeholder.

In case the company management decides to raise the dividend distribution in order to grow the shareholder's wealth, although the annual net profit had decreased in the previous periods, it is necessary to go into the capital market and acquire funds for the dividend payment or reduce the investment. However, the decision to reduce necessary investments entails risks for the company's future efficiency. Consequently, it is reasonable that the management should consider the disbursement holistically – it includes the consideration of investment, financing, and the interests of shareholders as all these are connected with each other (Baker, 2011).

Moreover, it is apparent that the differences in interests, especially between the various groups of shareholders, show the relevance of the issue of dividend policy. From the management point of view, it could be judicious

to attempt to bring a balance between all shareholders with the dividend policy, especially between the numerous shareholder groups and their various preferences. Shareholders might prefer high dividends, low dividends, or even zero dividends, since all these might be connected with their investment strategy. For instance, shareholders who aim for passive investment commonly favour stable and continuous dividend distributions, independent of the variances in the corporation's net income (Ellermann, 2003). However, in contrast to passive shareholders, investors of young and emerging companies are more concerned to reach high growth rates, as their strategy lies rather in the reinvestment of the entire net profit to increase the revenue growth as much as possible. The growth leads consequently to an increase in the enterprise value and hence in the share value.

However, such a specific form of dividend policy as the total reinvestment may not maximise the worth of all shareholders. For example, dividend distributions take place on a current basis, whereas any reinvestment and hence the company growth is a future approach. Therefore, shareholders in corporations with a payout-friendly dividend policy remove their insecurity promptly, while the uncertainty remains for investors in growth companies (Van Horne and Wachowicz, 2008).

Regarding these diverse interests, there exist incentives on the part of the groups of majority shareholders to attempt to exercise control towards the company management. Accordingly, the management is in the position to act in the best interests of one or more influencing investor groups through a specified dividend policy and to the disadvantage of minority shareholders. Therefore, it is important to deal with the issue dividend policy to provide more extensive information and hence greater transparency which groups of investors are eventually influence the dividend decisions of companies.

In this context, numerous studies have dealt with the problem field dividend policy. Therefore, there is a vast body of research literature that gives an appropriate overview of this issue. However, the largest proportion of these studies have focused just on monetary potential influencing factors like a company's cash-flow, debts, equity capital, annual net profit, fixed assets, and market capitalisation. As opposed to the variety of studies related to the monetary influencing factors, only a limited number of previous studies have considered the shareholder structure or rather ownership structure as a potential influencing factor on dividend policy. The results of the recent studies with similar methodological approach are provided in the following:

Thanatawee dealt with the relationship between shareholder structure and dividend policy on the market of Thailand (Thanatawee, 2012) and China (Thanatawee, 2014). In the results related to his study in Thailand, it seems that corporations were paying higher dividends when their shares are held by a large proportion of institutional investors. In contrast, individual shareholders are accounted for a negative relationship, which means they favour lower dividend payments. In his second study, conducted in China in 2014, the findings show evidence that the dividend policy is positively driven by the largest shareholders and government agencies, whereas the institutional investors and the foreign investors are accounted for lower dividend payments (Thanatawee, 2014). Besides, the results of China are in contrary to the findings of his study of Thailand, which means there is not a uniform picture.

Furthermore, Kumar (2003) investigated the relationship between dividend policy and corporate governance and the ownership structure on the markets of India. He identified a negative relationship between the dividend payments and the institutional investors and a positive relationship in the event of the companies are held by holding corporations. Setiawan and Kee Phua (2013) investigated 248 companies in the

Indonesian Stock Exchange over a period of two years. They examined the relationship between dividend payments and corporate governance. Their findings show that the lower the level of corporate governance, the higher the amount of dividend payments. Besides, there is also evidence that poor corporate governance has adverse effects on the group of minority shareholders.

Mehrani et al. (2011), examined the influence of the shareholders groups on the dividend policy of companies listed on the Tehran Stock Exchange of Iran. The findings demonstrate a positive influence on dividend payments if the stake of shareholders is highly concentrated. In contrast, the relationship is negatively influenced by the institutional investors. However, in case the stake of institutional investors is highly concentrated, the dividend policy is positively influenced.

Warrad et al. (2012) investigated the shareholder groups and they influence on the dividend payments of companies in Jordan. The results constitute that foreign investors have advantageous effects on the dividend policy. Further, the results also reveal that there is no relationship between private investors, the government and the dividend policy.

The last similar study was conducted by Ullah et al. (2012) in Pakistan that also dealt with the shareholder structure and dividend payments. The results show a negative influence of the managerial ownership on the companies' dividend policies, whereas institutional investors and foreign investors affected the dividend payments positively.

In summary, the findings of the explained previous studies are not showing a consistent picture of the relationship between the shareholders and the companies' dividend policy. A good example of the contradiction constitutes the studies of Thailand and China from Thanatawee (2012, 2014). The results exhibit a different picture, although both studies are conducted in the same region and in similar markets.

3 METHODOLOGY AND DATA

The present study examines the relationship between the shareholder structure and dividend policy of companies, listed in the most important indices of developed market in the Asia-Pacific region for the year 2018. The developed markets of the Asia-Pacific region are represented by five countries, such as Japan, Hongkong, Singapore, New Zealand, as well as Australia. The chosen selection is connected to the ‘MSCI Pacific Index’ of the established MSCI Inc., formerly Morgan Stanley Capital International Inc. (short MSCI). MSCI Inc. is well-known as the global leading benchmark provider of equity market indices (Carrel, 2008). MSCI indices are tracking more than 90 per cent of the international equity assets.

The initial sample size consisted of 555 corporations, which were listed on the most important indices of the five developed countries – the Nikkei 225 Index of Japan (Nikkei), the Hang Seng Index of Hong Kong (HSI), the Straits Time Index of Singapore (STI), the New Zealand Stock Exchange of New Zealand (NZE), and the Australian Securities Exchange of Australia (ASX200) – as of 31 December 2018. To compile an appropriate sample, it was necessary to exclude 68 companies that belong to the financial and banking industry due to different accounting rules. The retention of these companies would affect the monetary dependent variable. In addition, only companies that distributed dividends to their shareholders were considered for the study so that 38 further companies were removed from the sample. Eventually, 449 companies remain in the sample for the investigation of developed markets in the Asia-Pacific region for the financial year 2018. Regarding the distribution of the 449 companies. Companies of Japan are account for 44 per cent and companies of Australia for 34 per cent of the sample. This high stake is related to the size and hence to the economic importance of these two countries – it means that they have the largest stock exchange indices. Therefore, these two countries are accounted for 78 per cent of the sample, followed by New Zealand with almost 10 per

cent, and Singapore and Hong Kong with 6 per cent each to complete the sample.

3.1 Dividend Policy

The dependent variable for this study is represented by dividend payments. However, there are several measures to represent the dividend policy. The most commonly used measures are the dividend payout ratio, the dividend yield, and the dividend amount per share. All measures have been used as a dependent variable in numerous studies, and there is no evidence of a single preferred measure. However, since it appears appropriate to exclude all additional influencing factors, and the measure dividend yield is influenced by share prices and the dividend payout ratio by net incomes, this study uses the total dividend amount per share as dependent variable. The data were extracted from the companies’ annual financial statements of this year 2018.

3.2 Independent Variables

In order to explain the companies’ dividend policy, it is to determine which groups of shareholders influence the dividend amount and whether is their influence driven negatively or positively. For this purpose, eleven main independent variables and two monetary control variables have been chosen. Tab. 1 provides an overview of the determinants.

The first independent variable is represented by the percentage of shares held by investment advisors, also known as mutual funds or financial advisors (INVAD). Investment advisors are professionals and belong to the group of majority shareholders. Usually, they have discretionary authority over the assets of their customers and manage directly their assets that include securities analysis, investment recommendations, and direct management (Hung et al., 2008).

The percentage of shares held by banks constitutes the second independent variable (BANK). Banks, on the one hand, represent

Tab. 1: Determinants of the Dividend Policy

Abbreviation	Independent variables	Definition
INVAD	investment advisors	Share proportion of the group in a company
BANK	banks	Share proportion of the group in a company
PEINS	pension funds & insurance companies	Share proportion of the group in a company
GOV	government investors	Share proportion of the group in a company
HEDG	hedge fund managers	Share proportion of the group in a company
CORP	holding corporations	Share proportion of the group in a company
INDV	individual investors	Share proportion of the group in a company
TOP1	largest shareholder group	Share proportion of the largest group in a company
TOP3	shareholder concentration	Share proportion the three largest groups in a company
INST	institutional investors	Total number of investors
CONSH	controlling shareholders	Total number of controlling shareholders
MCAP	market capitalisation	Market value of all outstanding shares of a company
CFPS	free cash flow per share	Free cash flow divided by all outstanding shares of a company

the voting proxy of their clients; they are, on the other hand, pursue their own interests as lenders. Correspondingly, it is interesting to find out whether banks influence the dividend policy and in which direction. A negative influence might be in favour of their interests as lenders, while a positive influence might be in favour of their clients who are often small investors and hence belong to the groups of minority shareholders that usually prefer high dividend payments (Baker, 2011).

Pension funds and insurance companies (PEINS) are the third variable and measured by the percentage of holding shares as well. Pension funds are entities or funds that are dedicated to providing retirement income; they are established by companies. The goal of these funds is to generate stable and long-term growth in the yield to ensure pensions for their employees when they retire. It should be mentioned that pensions funds are one of the largest institutional investors and hence combine one of the biggest pools of investment capital in the world (Monks and Minow, 2011). In addition to pension funds, insurance companies are part of the independent variable as well. This allocation is related to the background that insurance companies are commonly represented by life insurers and assigned to long-term investors who do not pursue significant management influence (Monks and Minow, 2011).

The fourth independent variable, which is also measured by the percentage of holding shares, is represented by government investors

(GOV). To government investors belong individuals, institutions, or agencies that have control over a country, state, or nation. Government relatives often hold a significant stake of companies of system-relevant fields, such as the energy, food, and healthcare sectors, especially in emerging markets (OECD, 2015).

The next variable is related to hedge fund managers (HEDG) and is also measured by the percentage of holding shares. Hedge fund managers, who can be single managers or entities, differ essentially from investment advisors. Usually, they require a significant initial minimum on investment and hence are only available for a limited number of investors (Shain, 2008). In addition, they are more flexible in their investment strategies compared to investment advisors. Hedge fund managers do not need a high daily liquidity to ensure that predominantly small investors can join and leave the investment fund on a day-to-day basis. As their clients invest high amounts of capital, they can set up a private partnership with an individual strategy aligned to the risk preferences of their respective clients.

Holding companies (CORP) build the sixth independent variable, which is also measured by the percentage of holding shares. Holding companies are defined as parent companies that control several other companies. They do not produce any goods or services since their focus lies only on managing their subsidiaries and investments.

The seventh variable is represented by individual shareholders (INDV) and measured by the percentage of holding shares. The group of individual shareholders combines all groups of small investors and therefore represents the group of minority shareholders. As previously explained, this shareholder group differs significantly from the other groups of investors as their investments, preferences, and influences are not comparable – even not within the group itself. In addition, the previous studies of Thanatawee (2012 and 2014), which were conducted in two countries in Asia-Pacific confirmed the contrary picture of the group's influence.

To examine whether the group with the most significant number of shares among the described shareholder groups is accountable for higher or lower dividend payments, the eighth independent variable is used to represent the largest shareholder group (TOP1). The largest shareholder group is measured by the highest stake of company shares of the first seven variables.

The last independent variable measured by the share proportion in a company is represented by the shareholder concentration (TOP3). Regarding the studies on Thailand and China (Thanatawee 2012 and 2014) and another study on Japan (Harada and Nguyen, 2011), the shareholder concentration was measured by the percentage of company shares held by the five largest shareholders. In terms of the present study in which the shareholders were divided into seven groups, the consideration of the five most significant groups of shareholders seems quite broad. Therefore, the shareholder concentration is measured by the highest proportion of company shares by the three largest shareholder groups.

The following independent variable is related to institutional investors (INST) and is measured, in contrast to the previous variables, by the total number of institutional shareholders. As opposed to the first six variables in which the institutional investors were divided into specific groups, this variable shows institutional investors independent of their respective group. This variable will be used to make a

statement whether institutional investors at all influence the dividend policy and in which direction.

Controlling shareholders, also known as insiders (CONSH), represent the last primary independent variable, which is likewise measured by the total number of controlling investors. Among the group of controlling shareholders are family owners, private equity investors, founders, and executives with a threshold of holding shares above 5 per cent. Members of this shareholder group usually are directly involved in the company management and hence these shareholders have the capability to exercise immediate influence on dividend policy (Erismann-Peyer et al., 2008). The outcomes of the following regression analysis will demonstrate whether the anticipated influence of controlling shareholders on the management board affects the dividend distributions by companies. In addition to the 11 main independent variables, two essential control variables – market capitalisation and free cash flow per share – are used in the regression analysis.

The first control variable, market capitalisation (MCAP), shows the company value on stock exchange markets and is determined by multiplying the share price with the number of outstanding shares. The market capitalisation is also an indicator of the company size and its maturity. Companies with higher market capitalisation are more mature and more liquid due to lower growth potential and hence lower investments (Rashid and Islam, 2008). Against this background, the likelihood of higher dividends with higher market capitalisation is expected.

The second variable free cash flow per share (CFPS) is measured by dividing the total free cash flow by the outstanding shares and indicates the liquidity per share the company earned in the respective period (Stickney et al., 2010). Accordingly, free cash flow per share is the actual return of investment that the shareholders made available to the company. As free cash flow is calculated by operational cash flow minus capital expenditures – i.e. plus the cash flow from investing activities which is commonly a negative amount – the total sum is

the remaining cash amount that belongs to the company owner (Mulford and Comiskey, 2005).

Descriptive Statistics

In order to provide an overview of the distribution of dividend amount per share, shareholder structure and two control variables of the sample, the descriptive statistics were carried out. The Tab. 4 with all results is provided in the Annex.

Regarding the dependent variable dividend per share (DPS), the result of the mean shows that the dividend per share, paid by the companies and reported in their annual financial statement of the year 2018, amounts to 0.41 cent USD. The highest dividend amount per share was paid by the commercial real estate company Unibail-Rodamco-Westfield SE, which is known as the largest real estate company in Europe. The company took over the Australian Westfield Corporation in December 2017 so that the company is consequently listed in the Australian Index ASX200.

Regarding the shareholder structure, the group of investment advisors (INVAD) holds, on average, almost 52 per cent of the company shares, thereby holding the highest company stake in the entire sample. The result reflects the significance of this shareholder group, its investment funds, and hence its possibility to exercise substantial influence towards the company management. It is also apparent that other institutional investor groups, such as banks (BANKS), pension and insurance companies (PEINS), governments (GOV), and hedge fund managers (HEDG), hold, on average, a stake below the 10 per cent level. Only the group of holding companies (CORP) accounts for a 15.78 per cent ownership fraction.

The independent variable individual investors (INDV), represented by the group of minority shareholders, shows that this group owns, on average, 10.15 per cent of dividend-paying companies. In this context, the group accounts for more than 50 per cent ownership of 32 companies, while its ownership amounts only to a level below 1 per cent of 204 companies in this sample.

The mean of the largest shareholder group (TOP1) shows that the ownership of the largest shareholder group amounts, on average, to more than 62 per cent. The maximum value of 99.6 per cent belongs to the group of investment advisors. Further, it can be stated that the shareholder structure of developed countries in the Asia-Pacific region is highly concentrated, which is demonstrated by the result of the variable shareholder concentration (TOP3). The three largest shareholder groups account for, on average, above 90 per cent ownership. Even the 25th percentile shows a value above 83 per cent.

The number of institutional investors (INST) displays that, on average, in every company there are 259 investors who are connected with an institutional association. With 1,053 institutional owners, the highest number of institutional investors in this sample belongs to the multinational conglomerate company Tencent Holdings Limited, which is listed on the HSI of Hong Kong. Contrary to this significant number of institutional investors, the New Zealand healthcare company Arvida Group Limited shows only 13 institutional investors.

Regarding the number of controlling shareholders (CONSH), the results display that the companies, on average, are owned by at least 10 family owners, private equity investors, or founders and executives with a threshold of shareholdings above the level of 5 per cent. The first of two control variables, market capitalisation (MCAP), shows that the market value of companies in developed Asia-Pacific countries amounts, on average, to more than USD 13 billion. However, the outlier with a market capitalisation of USD 471 billion is the same company – Tencent Holdings Limited, which is listed on the HIS of Hong Kong with the highest number of institutional investors. The company's market capitalisation amounts the twofold of the second highest market capitalisation of the company China Mobile Limited, which is also listed on the HSI.

Regarding the free cash flow per share (CFPS), there are 10 companies in the sample that show a negative free cash flow per share,

while eight companies show a free cash flow of zero. Consequently, these companies had no liquidity to pay dividends to their shareholders. However, despite having no liquidity, these companies did not hesitate to pay dividends to their shareholders. The highest dividend per share in these 18 companies was paid by the company Unibail-Rodamco-Westfield SE. The company paid USD 9.237 to each share – the highest dividend per share in the entire sample.

Research Model and Hypothesis

The study deals with the question if there is a relationship between the shareholder structure and the dividend policy and in which direction leads the respective relationship. Therefore, the study is going to examine which groups of shareholders are accountable for higher or lower dividend payments. The study pursues the same goal as the multiple linear regression, which means it wants to investigate whether there is a relationship between the response variable and several independent variables (Yan and Su, 2009). Therefore, the multiple linear regression model is used for the following examination with the equation:

$$\begin{aligned} \text{DPS}_i = & \beta_1 \text{INVAD}_i + \beta_2 \text{BANK}_i + \\ & + \beta_3 \text{PEINS}_i + \beta_4 \text{GOV}_i + \\ & + \beta_5 \text{HEDG}_i + \beta_6 \text{CORP}_i + \\ & + \beta_7 \text{INDV}_i + \beta_8 \text{TOP1}_i + \\ & + \beta_9 \text{TOP3}_i + \beta_{10} \text{INST}_i + \\ & + \beta_{11} \text{CONSH}_i + \beta_{12} \text{MCAP}_i + \\ & + \beta_{13} \text{CFPS}_i + u_i \end{aligned}$$

The dependent variable which is represented by the dividend amount per share (DPS) and 11 independent variables which are represented by the shareholder groups of investment advisors (INVAD), banks (BANK), pension funds and insurance companies (PEINS), governments (GOV), hedge fund managers (HEDG), holding corporations (CORP), individual investors (INDV), largest shareholder group (TOP1), shareholder concentration (TOP3), institutional investors (INST), and controlling shareholders (CONSH), as well as the two

control variables market capitalisation (MCAP) and free cash flow per share (CFPS), were created to examine whether there is a linear relationship between the dependent variable and the independent variables.

After the measures of the dividend policy and its determinants were determined and the research model have been chosen, the hypothesis for the following examination can be framed:

Hypothesis: The shareholder structure of developed markets in the Asia-Pacific region influences the dividend policy of companies.

Since it is necessary to evaluate the data sample for the following regression analysis, several assumptions need to be confirmed. As the results of the descriptive statistics show, it is apparent that the sample shows a considerable scattering and variances so that it is to be assumed that the collected data are not normally distributed. Therefore, it was necessary to transform the data of each variable to ensure that the results of the following multiple linear regression can be reasonably interpreted. The successful transformation is one of the assumptions that needs to be evaluated by regression diagnostics.

Regression diagnostics are used to assess the multiple linear regression model and thus to ensure its validity (Rencher and Schaalje, 2008). The multiple linear regression model is assuming normality, linearity, no autocorrelation, and homoscedasticity, as well as no collinearity (Dunn and Smyth, 2018). Correspondingly, regression diagnostics evaluate these five model assumptions. The statistical tests used to validate that the multiple linear regression analysis is the right research model for the sample are – Shapiro-Wilk test to verify normality, Ramsey-Reset test to verify linearity, Durbin-Watson test to confirm no autocorrelation, Breusch-Pagan test to uncover heteroscedasticity, and variance inflation factor to confirm no collinearity. The results of all tests conducted, which are provided in Tab. 5 in Annex, show that all five assumptions have been successfully validated. Hence, the regression diagnostics confirms that the chosen multiple linear regression model is the right statistic method for this data sample.

4 RESULTS AND DISCUSSION

The study aims to analyse whether there is a relationship between the shareholder structure and the dividend policies of companies in developed markets in the Asia-Pacific region for the financial year 2018.

The results of the multiple linear regression analysis show that three groups of shareholders show a p -value below the significant level of 5 per cent. Therefore, the dividend policies of companies in developed markets in the Asia-Pacific region has been influenced by at least three shareholder groups. Correspondingly, the hypothesis, framed in Chapter 3, can be accepted. Tab. 2 provides an overview of the outcomes of the multiple linear regression analyses.

As Tab. 2 shows, model 1 of the regression analysis considers both control variables market capitalisation and free cash flow per share. Model 2 includes all shareholder groups which are defined by the share proportion in a company. Model 3 considers in addition to the shareholder groups, the total number of institutional investors and controlling shareholders. Model 4 includes all variables of Model 1–3.

The results of model 4 shows that 5 of 13 examined independent variables demonstrate significant influence to the dividend policies of companies. Three out of five influencing factors are represented by the shareholder groups known as investment advisors (INVAD), governments (GOV), and individual investors (INDV). Two out of these five predictors are finance-related and belong to the two control variables called market capitalisation (MCAP) and free cash flow per share (CFPS). All the five influencing factors are below the significant level of 5 per cent.

The group of investment advisors (INVAD) shows a p -value of 0.002 and hence a value below the 1 per cent level which means that the evidence of the influence of this group on the dividend policy is significant. The variables' estimated coefficient of 0.122 is positive and hence investment advisors positively influence the dividend per share of the year 2018. The value of the coefficient explains the effect of

the respective independent variable on the dependent variable dividend per share (DPS). It means, in case the group of investment advisors rises by one unit, i.e. 100 basis points, the dividend per share rises by the coefficient of 0.122 USD. Further, the positive influence of this group confirms the finding of the study of Thanatawee (2012), that was conducted in the same region; however, in Thailand, an emerging market. Therefore, the statement can be met that investment advisors, which belongs to institutional investors and hence to majority investors, supporting higher dividend payments in both emerging and developed markets in Asia-Pacific.

The significant influencing shareholder group of government investors (GOV) displays a high coefficient 1.123 and hence a substantial effect on the dividend policy. The group's estimated influence on the dividend payments per share amounts to 1.123 USD. Besides, it is the highest value of the sample. It means this group is accountable for the strongest influence on the companies' dividend payments of developed countries in Asia-Pacific. The result leads to the conclusion that the likelihood of receiving dividends above the average is significantly greater in companies with higher government stake than in companies with a high stake of other shareholder groups. Besides, the result is consistent with the findings of the study of Thanatawee (2014) of the emerging market in China. The findings of his study display a positive relationship between the government stake and the companies' dividend payments as well. However, it is in contrary to the study of Turkey (Al-Najjar and Kılınçarslan, 2016) which shows a negative association. The reason for the results of the study of Turkey may lie in the continuous decrease of the Turkish lira, which leads to missing alternative investments, in particular, for government investors.

The results show further that dividend policy is also significantly driven by the group of individual investors (INDV) – this group exerts influence on dividend policy in a negative direction. It is the only group of all

Tab. 2: Influencing factors on dividend policy, linear regression model (dependent variable: dividend per share of 2018)

Independent Variables	Model 1	Model 2	Model 3	Model 4
INVAD (investment advisors)		0.119** (0.041)	0.122** (0.037)	0.122*** (0.038)
BANK (banks)		-0.105 (0.090)	-0.099 (0.088)	-0.096 (0.084)
PEINS (pension & insurance companies)		-0.029 (0.050)	-0.024 (0.049)	-0.022 (0.043)
GOV (government investors)		1.123** (0.377)	1.122** (0.378)	1.123** (0.376)
HEDG (hedge fund managers)		0.015 (0.027)	0.018 (0.027)	0.014 (0.024)
CORP (holding corporations)		0.049 (0.070)	0.041 (0.059)	0.041 (0.058)
INDV (individual investors)		-0.090** (0.059)	-0.089** (0.051)	-0.089** (0.051)
TOP1 (largest shareholder group)		0.049 (0.060)	0.050 (0.067)	0.054 (0.055)
TOP3 (shareholder concentration)		-0.359 (0.230)	-0.359 (0.220)	-0.384 (0.240)
INST (institutional investors)			-0.012 (0.053)	-0.011 (0.061)
CONSH (controlling shareholders)			-0.001 (0.019)	-0.004 (0.039)
MCAP (market capitalisation)	0.236*** (0.074)			0.235*** (0.078)
CFPS (free cash flow per share)	-0.563*** (0.036)			-0.565*** (0.041)
Number of companies	435	435	435	435
R^2	0.612	0.571	0.563	0.597

Note: *** denote significance below 1% level, ** denote significance at 5% level, * denote significance at 10% level.

significant influencing shareholder groups with adverse effects on the dividend policies of companies. The coefficient shows a negative value of -0.089 , which is the lowest value among all significant influencing factors within the sample. Nevertheless, even though the coefficient of the group has the lowest value in the sample and therefore has the least influence, it is still significant. Consequently, the results show evidence that the group of small investors which represents all minority shareholders do not support high dividends in developed countries in Asia-Pacific. A reason for this could be the current low interest rate period and the consequent lack of alternative investments. Further, it confirms the results of Thanatawee (2012) in the market on Thailand as well as the results of the study in the

market on Turkey (Al-Najjar and Kılınçarslan, 2016) in which dividend payments were also negatively driven by the group of minority shareholders.

Regarding the control variable market capitalisation (MCAP), the results show a p -value far below the 1 per cent level and an estimated coefficient of 0.235, which means that dividend payments are positively influenced by the enterprise value. It was expected as companies with a higher market capitalisation are commonly more established and have lower growth potential, and hence, lower investment requirements (Rashid and Islam, 2008). Lower investment requirements lead to higher liquidity, which is available for dividend disbursements to shareholders – the owners of the company.

The last significant influencing factor in this sample is the control variable called free cash flow per share (CFPS). The coefficient with a value of -0.565 shows a significantly negative influence on dividend policy. So, a higher free cash flow per share lets the firms pay lower dividends. It is controversial because a high free cash flow provides companies with the necessary liquidity to pay dividends to their shareholders. However, the result is consistent with studies on the developed market of Germany (Topalov, 2013) and the United States of America (Frankfurter et al., 2003) in which the dividend payments were also negatively affected by the free cash flow.

Robustness Check

In order to provide a robustness check of the analysis conducted, three additional examinations with the multiple linear regression analysis

were carried out. The objective, timeframe, methodological approach and data sample of these additional analyses are equal to the present study. It means these three analyses were conducted – first in the emerging markets in Asia-Pacific – second in the developed markets in Europe – third in the emerging markets of Europe. The timeframe of all examinations was the year 2018 and the research objectives were the examination of the relationship between the shareholder structure and dividend policy. The outcomes of all examinations, are provided in Tab. 3.

As the results of Tab. 3 provide, the outcomes of the show similar results, in particular regarding the two control variables market capitalisation and free cash flow per share. In summary, it can be assumed that the robustness of the results of the multiple linear regression analysis could be confirmed.

5 CONCLUSION

This study aimed to examine whether the shareholder structure influences the dividend policy of companies in the developed markets within the Asia-Pacific region. The results demonstrate an extraordinary positive influence by government investors. Besides, the results also show a positive influence by the group of the investment advisors, which is, however, significantly lower. In contrary to these both groups of shareholders, minority shareholders, i.e. the group of individual investors, affects negatively the dividend policies of companies in the region. The reason might be the lack of alternative investment opportunities due to the low interest rate period in almost all developed markets, and in particular in the two major markets of firstly, Japan with a key interest rate of -0.10 per cent, set by Japan's central bank, and secondly, of Australia with a key interest rate of 0.75 per cent, set by Australia's central bank. Minority shareholders commonly do not have the necessary potential and knowledge to reinvest the received dividend payments abroad with similar investment opportunities as institutional investors have. Therefore, they

might be interested that the company earnings remain and be reinvested to participate on the company's growth and hence the increase of its enterprise value.

Furthermore, it is apparent that minority shareholders and majority shareholders follow different goals in terms of the dividend policy. Besides, the financial literature, which met the statement that minority shareholders favour rather higher than lower dividend payments (Ellermann, 2003), could not be confirmed since as the results demonstrate, small shareholders favour lower dividends in developed markets of Asia-Pacific. The second statement of the financial literature that shareholders tend to extract the companies with their liquidity due to the lower investment requirements in developed markets (Baker and Powell, 2005), could only be confirmed for majority investors. The group of minority shareholders shows a contradictory picture in the present study.

In addition, both control variables market capitalisation and free cash flow per share show influence on the dividend policy as well but not in a consistent direction. The market

Tab. 3: Influencing factors on dividend policy in Asia-Pacific and Europe
(dependent variable: dividend per share of 2018)

Independent Variables	Dev. markets Asia-Pacific	Emerg. markets Asia-Pacific	Dev. markets Europe	Emerg. markets Europe
INVAD (investment advisors)	0.122** (0.038)	0.017 (0.037)	-0.132** (0.053)	0.029 (0.038)
BANK (banks)	-0.096 (0.084)	0.020 (0.096)	-0.067 (0.072)	0.006 (0.032)
PEINS (pension & insurance companies)	-0.022 (0.043)	-0.012 (0.034)	-0.083*** (0.028)	-0.220** (0.096)
GOV (coverment investors)	1.123** (0.376)	-0.109 (0.096)	-0.013 (0.031)	-0.194** (0.072)
HEDG (hedge fund managers)	0.014 (0.024)	-0.071 (0.079)	-0.029 (0.048)	0.065 (0.083)
CORP (holding corporations)	0.041 (0.058)	-0.020** (0.008)	-0.085** (0.034)	0.001 (0.007)
INDV (individual investors)	-0.089** (0.051)	-0.018 (0.017)	-0.010 (0.056)	-0.032 (0.054)
TOP1 (largest shareholder group)	0.054 (0.055)	0.114* (0.063)	0.054 (0.053)	0.090 (0.086)
TOP3 (shareholder concentration)	-0.384 (0.240)	-0.103 (0.099)	-0.014 (0.065)	-0.077 (0.064)
INST (institutional investors)	-0.011 (0.061)	-0.262*** (0.046)	-0.055 (0.068)	0.094 (0.095)
CONSH (controlling shareholders)	0.004 (0.039)	-0.047* (0.026)	0.063** (0.031)	0.004 (0.080)
MCAP (market capitalisation)	0.235*** (0.078)	0.760*** (0.177)	0.233*** (0.076)	0.104 (0.076)
CFPS (free cash flow per share)	-0.565*** (0.041)	-0.655*** (0.055)	0.621*** (0.040)	0.691*** (0.058)
Number of obs.	435	703	644	105
R^2	0.597	0.607	0.681	0.665

Note: *** denote significance below 1% level, ** denote significance at 5% level, * denote significance at 10% level.

capitalisation shows, as expected, a positive influence, whereas the free cash flow per share affects the dividend policy negatively. The reason for the negative influence of free cash flow per share might be the same as for the group of minority shareholders. It means that the shareholders, who ultimately decide about the usage of the corporations' earnings, might prefer that the incomes remain within the companies, which leads to higher enterprise values because of no withdrawal of the company's equity capital. The increase of the enterprise values leads correspondingly to higher demand on the respective company shares and therefore to higher share values, which might be more

profitable for the shareholders than dividend disbursements.

In conclusion, the study provides additional information for current and prospective shareholders, who like to invest in developed markets in the Asia-Pacific region. However, the lack of sufficient studies which focus on more than a single market needs to be filled. Therefore, it would be desirable if more studies deal with the entire region, however, with different timeframes in order to provide a clearer picture, especially for minority shareholders due to their detriment regarding the sources of information and financial knowledge.

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8 ANNEX

Tab. 4: Descriptive statistics of developed markets in Asia-Pacific

Variables	Mean	Median	Minimum	Maximum	25th Percentile	75th Percentile
DPS	0.411	0.242	0.001	9.237	0.109	0.469
INVAD	51.748	50.556	1.192	99.637	34.896	67.974
BANK	6.361	3.863	0.000	30.248	0.041	11.467
PEINS	1.902	0.876	0.000	42.677	0.476	1.238
GOV	9.870	6.202	0.000	94.706	2.256	11.550
HEDG	3.458	0.217	0.000	26.728	0.009	5.996
CORP	15.779	6.516	0.000	95.906	0.457	20.094
INDV	10.153	1.626	0.000	94.436	0.159	10.017
TOP1	62.469	60.375	2.235	99.637	49.263	76.728
TOP3	90.570	93.718	30.717	100	83.838	98.102
INST	259	274	13	1,053	117	363
CONSH	10	10	0	38	7	12
MCAP	13,215	4,941	240	471,455	1,946	12,635
CFPS	1.984	0.829	-1.189	28.039	0.242	2.578

Tab. 5: Regression diagnostics of developed markets in Asia-Pacific

Shapiro-Wilk normality test	W = 0.96788		<i>p</i> -value = 0.5016			
Ramsey – Reset test	RESET = 1.3260	df1 = 3,	df2 = 432	<i>p</i> -value = 0.212		
Durbin-Watson test	DW = 2.0448		<i>p</i> -value = 0.558			
Breusch-Pagan test	BP = 11.881	df = 13		<i>p</i> -value = 0.3522		
Variance Inflation factor						
INVAD	BANK	PEINS	GOV	HEDG	CORP	INDV
2.184683	2.806374	1.662682	2.455062	2.588667	2.510626	2.517416
INST	CONSH	TOP1	TOP3	MCAP	CFPS	
4.757153	1.355487	3.215313	5.137437	4.496969	1.655117	

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