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## GENERAL & APPLIED ECONOMICS | RESEARCH ARTICLE

# Board governance on dividend initiation by initial public offerings: Evidence from The Malaysian stock market

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**Abstract:** Within the realm of corporate finance, IPO (refers to the process of offering shares of corporation to the public for the first time) companies in Malaysia received little attention from the academic scholarly works. An important area of inquiry for IPO companies is to investigate the board characteristics impact on dividend initiation. With use of the agency theory principles, four argumentative hypotheses were proposed. The current study used a pooled cross-sectional data with a total sample size of 372 companies listed in the Malaysian Stock Market. The results of this study revealed that the independence of board and the size of board were found to have a positive and significant impact on the decision to initiate dividend for IPO companies. However, multi-seats were found to have a negative and significant impact on the decision to initiate dividend. But, CEO duality were found to be irrelevant to the decision of initiating dividend.

**Keywords:** Agency theory; board characteristics; dividend initiation; Malaysian stock market; IPO companies

**Subjects:** G3; G35; G41

## 1. Introduction

The main objective of a firm's management is to maximize the wealth of stockholders (Ma, 2012; Van Horne & Wachowicz, 2001). Among other vital financial decisions, the decision to pay

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## PUBLIC INTEREST STATEMENT

Various stakeholders are predicted to benefit from this study. By understanding the factors influencing dividend initiation decisions, IPO firms could observe the effects of ownership structures on the dividend initiation. Therefore, IPO companies could make the most effective decisions to satisfy the desire of such shareholders. In addition, this study provides a significant contribution to the Malaysian Code on Corporate Governance (MCCG), since it investigates how the board of directors of a company affect dividend policy decisions (dividend initiation). Hence, it enables Malaysian policymakers related to corporate governance to observe how their reforms work. In doing so, Malaysia can reap the benefits in attracting more foreign investors, who can ensure that their rights are guaranteed by the good corporate governance.

dividends is deemed to be an important one. Management can maximize the wealth of shareholders, either by distributing dividends, or retaining dividends for future investment. The decision of paying cash dividends is not simplistic for matured companies and it seems to be the same for IPO companies. The management of IPO companies are usually in dilemma to initiate dividend after going public. This is mainly due to different reasons such companies experience profit decline a year after going public, in such case they will be reluctant to initiate dividends, as they need the generated profit to grow their business. Under such condition, IPO companies prefer internal funding, since raising fund from external sources (i.e. debt and equity) could be an expensive option for them.

Despite this, IPO companies are exhibited to high amount of asymmetric information as well as a weak corporate governance. Hence, IPO companies are more prone to agency problems compared to matured companies. Such agency problems could raise the concerns of external investors about the “wealth expropriation phenomenon”. According to Faccio et al. (2001), the concern over the wealth expropriation, could results in demanding dividend payment by external investors. Therefore, debt initiation by IPO companies can be an option to mitigate the agency problems. It is further clarified that the issue of wealth expropriation is common among East Asia countries. This is particularly true for Malaysia, as the ownership concentration is relatively high causing a potential problem of wealth expropriation. Kale et al. (2012) and Ma (2012) argued that newly listed firms of different characteristics than established ones. These newly listed firms are young firms, development trended firms that follow creative product and technologies, and are anticipated to invest in fields such as research and development, capital expenditure and advertisement over the after IPO stage in an endeavor to attain market share. They are also described to be liable to high agency costs (Jain et al., 2009). This could be due to several reasons; their governance is not yet well-established and or low external monitoring.

The role of board of directors is well emphasized in keeping efficient corporate governance, because agency conflicts may arise as a result of separation of ownership and control (Jensen & Meckling, 1976). In a dynamic environment, the board of directors become very important for facilitating the functionality of organizations (Sharma, 2011). Boards are anticipated to do various tasks. For instance, some tasks are: the oversight of managers to minimize agency conflict (Roberts et al., 2005; Shleifer & Vishny, 1997), hiring and firing of management (Hermalin & Weisbach, 1998), and supplying strategic guidance for the company (Hendry & Kiel, 2004). In addition, boards sought to safeguard interests of stockholders in a competitive environment whilst keeping managerial accountability to achieve better company performance (McIntyre et al., 2007). Claessens et al. (2000) claimed that a better corporate governance framework can serve firms in different ways, such as: gaining financing easily (La Porta et al., 2000), minimizing capital costs, ameliorate stakeholder interests, and generally obtaining better performance for firms.

This study aims to establish an empirical evidence on the impact of board of directors’ characteristics on IPO companies’ decisions to initiate dividends. Although the relationship between corporate governance elements and cash dividend payment is well documented in other scholarly works. But what makes this study a unique one, is the attempt to establish a relationship between the board of directors’ characteristics and dividend initiation for IPO companies. There were few identified international studies as in (Adjaoud & Ben-Amar, 2010; Jiraporn et al., 2011); however, they were mainly focusing on dividend payment for matured companies. They did not study the relationship between the characteristics of board and dividend policy (dividend initiation). They did not argue with certainty as to which of these characteristics cause the positive relationship between board characteristics and dividends initiation.

Furthermore, in the context of Malaysia, most of the studies related to corporate governance have concentrated on the relationship between governance and performance, rather than dividend policies (dividend initiation) (Abdullah, 2004; Abidin et al., 2009; Haniffa and Hudaib 2006; Ponnu, 2008; Shukeri et al., 2012; Zakaria et al., 2014). Therefore, there are two issues that remain

empirically unjustified. First, although the literature enriched us with the impact of board of directors on dividend decisions/payments, such documented literature has limited our understanding to the separate effects of board of directors' characteristics on decision of dividends initiation. With this said, the current study empirically seeks to assess the unique contribution of each of board directors' characteristics on the decision of initiating dividends. Second, there is a modest attempt to assess the impact of board of directors on the decision of initiating dividends within Malaysian context, as most of studies had rather focused on the relationship between board of director and performance and overlooked its impact on initiating dividends.

Former studies in the field of IPOs' dividend policy have been conducted predominantly in the American grounds (Bulan et al. 2007; Jain et al., 2009; Kale et al., 2012). The results obtained from the USA cannot be directly applied to Malaysia as they vary in terms of ownership structure, regulations, and others factors that may affect dividend initiation decision. Faccio and Lasfer (2000) also highlighted some differences between Britain and America in term of activism of stockholders, and stockholders' categories. In that context, Malaysia is distinct from other countries as the ownership structure in Malaysia is more concentrated compared to the United States and the United Kingdom (Haniffa & Hudaib, 2006). Besides, the practices of corporate governance also differ between these two environments. In the advanced market, corporate governance is considered to have good practices, providing stockholders high protection, compared to emerging market that have poor governance, an ineffectual system of governance being highly identified as a root cause of collapse or deterioration of companies' performance in emerging markets. Additionally, examining the effect of corporate governance on the pay-out policy in an emerging economy is important, due to the fact that the stock market in such economy is less mature, has ambiguity of information (i.e. level of disclosure in emerging markets considered less compared with the advanced markets) and is less stable (volatility of stock market is considered high in an emerging markets compared with an advanced economy; Wellalage et al., 2014).

Therefore, enforcing logic of global setting on environments like Malaysia, argues that companies with weak corporate governance and with ownership concentration in the hand of large stockholders must pay dividends in order to protect shareholders from misbehavior of management of firm (Jabbouri, 2016; La Porta et al., 2000). Stockholders may favor dividends, especially when these stockholders are worried about expropriation by the management of firms (Mitton, 2004). This behavior of favoring the dividends may be even robust in the emerging economies markets where the protection of rights of stockholders is weak, and risk of expropriating by management is greater under concentrated ownership. (Jabbouri, 2016). Rahman and Muhamad (2013) indicated to weak corporate governance in Malaysia. This makes Malaysia an interesting environment in which to study the effect of board governance on the dividend policy of newly listed firms. Thus, research on the pay-out policy for an emerging economy like Malaysia is significant for offering evidence-based images to investors for investment resolutions on the market and country.

## 2. Literature of review

### 2.1. Independent directors and dividend policy

if as anticipated by regulators and suggested by the theory of the agency, increasing independent directors enhance indoor oversights and smooth disciplining of managers. Then it is anticipated that, with others factors constant, the tendency of a firm to initiate dividends will increase with the increase in the degree of independent directors' impersonation on the board. To concur with such principle, Sharma (2011) examined the relationship between independent directors (their ratio on board) and tendency to initiate dividends in the United States. The findings revealed that the relation between independence of board and tendency to initiate dividends is positive. Belden et al. (2005) also found a positive relation between independence of board and dividend payments.

Borokhovich et al. (2005) examined the relation between board independence and dividend payments using a sample of 192 firms in the United States for the period of 1992–1999. Differently, their findings showed that board independence has a significantly negative correlation with dividend payments. Similarly, Iqbal (2013) found that independent directors negatively affect the dividend policy. They argued that negative effects for independent directors could be due to the lack of clearly defined roles, or more likely that companies employ incapable non-executive directors to provide effective oversight. This leads to weak corporate governance (when corporate governance is weak agency problems arise), which may negatively affect dividend policy.

In context of Malaysia, Bolbol (2012) examined the effect of board composition with other mechanisms of corporate governance (size of board, insider ownership, family, etc.) utilizing a sample of 50 Malaysian construction firms listed in Bursa Malaysia for the financial year of 2010. The findings indicated that independence of the board is negatively related with dividend payments, but not significantly. Mansourinia et al. (2013) studied the effects of board independence on the dividend policy in the Tehran Stock Exchange utilizing a sample of 140 corporations for the period 2006–2010. Their results indicated that there is no influence of board independence on the dividend policy. Using a large pool of data from the Malaysian stock market, it is necessary to verify the impact of independent directors on dividend initiation by IPO companies. Therefore, the following hypothesis is proposed:

*H<sub>1</sub>: There is a significant relationship between independence of board and dividend initiation decision of IPO companies.*

## **2.2. Board size and dividend policy**

Jensen (1986) stated that there should be a maximum of seven to eight members in the board of directors, in order for effective performance. He added that this will promote communication, cohesiveness, and coordination. Raheja (2005) showed that the coordination costs for larger board size is high, which makes oversight more inefficacious. Moreover, smaller Boards minimize a potential free riding problem by individual directors, and hence enhance their processes of decision-making.

Therefore, considering small boards are effective in overseeing the actions of management and giving advice, as proposed by former studies (Callen et al., 2003; Kang et al., 2007), it expected that the agency cost will be reduced. Thus, as argued by D'souza and Saxena (1999), agency problem is negatively related to dividend policy of a company. It is anticipated that dividend initiations are more probable with small board size.

On contrary, greater board could also be effective in overseeing managers of firms and control them, and thus reduce problems of agency; because large number of directors will review the administrative procedures. Also, increasing the board size also means that more directors will benefit the firm from to their skills and experiences into the firms (Goodstein et al., 1994). J. W. Coles et al. (2001) indicated that greater board sizes increase performance of companies, particularly when it works in a complex environment.

Abidin et al. (2009), pointed out that large boards give more notion, skills, and experience which are shared among members of board to evolve strategies that eventually help to improve performance. Therefore, large board sizes will be effective in its monitoring role, which minimizes agency cost, thus it is anticipated that dividend initiations are more likely with large board size.

Van Pelt (2013) revealed that the relationship between board size and dividend payout is positive. Gill and Obradovich (2012) indicated that the size of boards positively affects the dividend policy. Bokpin (2011) showed that the effects of board size on the dividend payments are significant and positive. Bolbol (2012) found that the effect of the board size on the payout policy to be negative but insignificant for a sample of 50 Malaysian construction firms listed in Bursa Malaysia for the financial year of 2010. In

conclusion, the results are mixed about the effects of board size and dividend policy; thus the following is hypothesized:

*H<sub>2</sub>: There is a significant relationship between board size and dividend initiation decision of IPO firms.*

### **2.3. Multiple directorships and dividend policy**

The relationship between multiseats held by directors and dividend policy (dividend imitation) could be perceived as: these directors through serving on multiple boards can gain knowledge and skills which will enable them to do their role in overseeing the behaviors of management effectively and give better advice that will ultimately serve the interests of shareholders (Lorsch & MacIver, 1989). It can be expected that these members who have multiple seats, to adopt policies such as dividend initiation in order to limit the ability of managers to waste the resources of firm by follow their own interests rather than interests of stockholders. Dividends initiation could be as an external mechanism of oversight as proposed by (Easterbrook, 1984). On the other hand, in light of the “business hypothesis” multiple seats could bring negative effects on the dividend initiation as those directors are unable to monitor management’s behaviors effectively, (Ferris et al., 2003), due to their busy schedule and multiple tasks from different boards. Sharma (2011) concurred with such interpretation and it was found that multiple seats held by independent directors have significantly negatively effect on the dividend initiation decision of IPO firms.

*H<sub>3</sub>: There is a significant relationship between multiple directorships and dividend initiation decision of IPO firms.*

### **2.4. Duality of CEO and dividend policy**

Baliga et al. (1996) argued that companies which separate the roles of CEO and chairman of the board have good quality of corporate governance and are more effective. Therefore, as argued by Iqbal (2013), role of duality correlates with inefficient corporate governance system, that is, corporate governance is not strong, thus agency problem will be increased (Dittmar & Mahrt-Smith, 2003). D’souza and Saxena (1999) argued that agency problem is negatively correlated with dividend payment. In line with this interpretation, Chen et al. (2011) found the CEO duality impact negatively on the dividend payment. In contrast of this, Stewart (1991) argued that duality assist in improving decision making through the presence of a more focused concentration on the objectives of firms and promoting enforcement of operational decisions more rapidly. Dahya et al. (1996) indicated that duality permits a chief executive officer with strategic vision to form the fate of a company, with lower board intervention, which could also lead to enhancing performance via clear and unshackled command of the board (Rechner & Dalton, 1991). On the other hand, in line with entrenchment hypothesis, entrenched CEOs are inclined to pay dividend to reduce the agency problem and discourage oversight from the shareholders. In line with this, Gill and Obradovich (2012) showed that the CEO duality have a significantly positive effect on the dividend policy. Hu and Kumar (2004) and Faccio et al. (2001) provided evidence supporting the positive relationship between chief executive officers’ power and dividend policy.

*H<sub>4</sub>: There is a significant relationship between CEO duality and dividend initiation decision of IPO firms.*

## **3. Research methods**

### **3.1. Data collection**

The pooled cross-section data rather than a panel data was used in this study. Since the gathering of data for the study period are not in the same units (here, units are IPO firms targeted during the period of study 2002–2013). For example, Ma (2012) examined the dividend policy of IPO firms on the sample of London

market during the period of 1990–2010. He used the pooled cross-section in the analysis for the variables that (e.g. institutional ownership, managerial ownership, locks agreement and underpricing) were incorporated in the study. Therefore, the researchers tracked IPO firms in different years, from 2002 to 2013. The number of firms that went public each year varies.

### 3.2. Sampling procedures

This study focuses on IPO companies in Bursa Malaysia from 2002 to 2013. All firms that went public between 2002 and 2013 will be included in this study. Also, only non-financial firms will be included in the sample. Financial firms such as banks will not be included because they possess different regulations due to the divergence in the requirements of regulations (Haniffa & Hudaib, 2006). Data related to the board of directors and ownership structure, as well as other financial variables will be obtained from the annual report. Companies that have missing data regarding their board of directors and ownership structure, and other financial variables will be excluded from this study. Finally, all those companies that are delisted, acquired by other companies or suspended firms are excluded from the target sample. Table 1 shows the target sample, and filtering of sample. As indicated in Table 1, the criteria of inclusion were applied and out of 454 companies only 372 companies were selected for further analysis.

Table 2 shows the distribution of IPO firms that were included in the current research in the considered sectors. The highest percentage of companies was in the Industrial Products sector (29.3%), followed by 25.0% in the Trading/Services sector. In third place is the Technology sector (19.4%). The rest of the IPO companies were distributed in the Consumer Products sector (12.9%), Properties sector (4.0%), Construction sector (3.8%), Real Estate Investment Trust (REITS) sector (3.2%), the Plantation sector (1.9%), and finally, the special purpose acquisition company stock (SPAC) sector contributes (0.5%).

Former studies also show the same pattern of distribution of Malaysian companies among sectors. For instance, Amran and Che Ahmad (2011) examined the relationship between tools of governance and performance of firms. 424 firms were included in the sample of analysis, out of which 30.2% came from industrial products, 25.5% came from trading services, and 14.8% from consumer products. The rest was distributed among other sectors. Also the sample IPO companies (50 firms) during 2007–2008, in the study of Saleh and Ismail (2010), showed that most of these IPO firms were focused in the sectors of industrial products: 11 firms (22%), trading services: 22 firms (44%), consumer products: 5 firms (10%), and technology: 4 firms (8%).

### 3.3. Measurement

Table 3 shows the proxies used to measure the different variables under investigation in this study. The dividend payment is also influenced by other factors as derived from the literature review. Therefore, these factors (leverage, growth, size of firms, growth opportunities) were controlled.

### 3.4. Data analysis

The current research will use logistic regression in order to test the research hypothesis. The logistic regression uses a dependent variable that has a categorical dichotomy, and for independent variables that are categorical or continuous. The dependent variable of this research is the probability of a firm to initiate dividends or not, which means that IPO companies may pay dividends, or not. Thus, there are two options values, one for payer companies and zero for nonpayer companies. In the logistic regression, the restrictions such as a normality distribution, multicollinearity, among others, are not applicable as those in the ordinary least squares (Gujarati, 1995).

### 3.5. Goodness of fit of logistic model

Goodness-of-Fit in the logistic model is tested by the Likelihood ratio  $\chi^2$ , whereby LR is the likelihood ratio, and  $\chi^2$  is the Chi-square test. The Likelihood ratio is an indicator of the goodness of fit for the current theoretical model. It is used to test whether the variables under investigation are not equal to zero. Thus, the associated null hypothesis of this test is that all of the variables'

**Table 1. Target sample and filtering of sample**

Year	Total	Delisted	Acquired	Suspended	Missed-data	Finance	Total	Remains-yearly
2013	17				5	2	7	10
2012	17				2	1	3	14
2011	28				2		2	26
2010	29		1		1		2	27
2009	14				1		1	13
2008	23						0	23
2007	26	2			1	1	4	22
2006	40	4			2		6	34
2005	79	4	1	1	2	3	11	68
2004	72	7	2		4	2	15	57
2003	58	4	5		7	1	17	41
2002	51	6	2		6		14	37
Total	454	27	11	1	33	10	82	372



**Table 2. Frequency of sectors**

Sector	Freq.	Percent	Cum.
Industrial products	109	29.30	29.30
Trading/services	93	25.00	54.30
Consumer products	48	12.90	67.20
Properties	15	4.03	71.24
Plantation	7	1.88	73.12
Construction	14	3.76	76.88
REITS	12	3.23	80.11
Technology	72	19.35	99.46
SPAC	2	0.54	100.00
Total	372	100.00	

**Table 3. Measurement of variables**

Variables	Measurement	Former study
Depend variable	Dummy variable with a value of one for firms that initiated dividends; otherwise zero	(Ma, 2012; Jain et al., 2009; Kale et al., 2012.)
Role duality	Dummy variable: takes a value of one when CEO is also chairman of board; otherwise takes zero	Core et al. (2001) and Haniffa and Hudaib (2006)
Size of board	Gross number of directors on the board of directors of the firm	Haniffa and Hudaib (2006)
Multiple directorships	The percentage of directors who own at least one additional seat in another firm to aggregate number of directors on the board of firm	Haniffa and Hudaib (2006)
Independence of board	The percentage of independent non-executive directors to an aggregate number of directors on the board	Sharma (2011)
Size of firm	A log of total assets	Ma (2012)
Leverage	The proportion of total debt to the gross assets of the firm	Haniffa and Hudaib (2006)
Profitability	Profit after tax divided by the gross assets of the firm	DeAngelo et al. (2004), Fama and French (2001), Haniffa and Hudaib (2006)
Growth opportunities = Q ratio	Ratio of market value of ordinary shares + total debt divided by the book value of gross assets of firm	Haniffa and Hudaib (2006)
Industry	Dummies for sectors	Haniffa and Hudaib (2006)

coefficients in the regression model are equal to zero. Second, Pseudo R-square is also assessed to determine how the independent variables explained variation in the dependent variables. Finally, the Hosmer-Lemeshow test (HL test), which compares the observed events with predicted events. If this HL statistic calculated insignificant, it can be said that there is no proof based on this test that such a model has lack of fit (Mittlböck & Schemper, 1996).

Evaluating discriminatory performance of the logistic model will be through the rate of sensitivity (proportion of cases correctly predicted to be as an event) and the rate of specificity (proportion of cases correctly predicted to be as a nonevent). So, this test indicates the ability of the logistic model to predict the interested events. Assessment of the area under Receiver operating characteristic curve (AUC),



which is considered to represent the capability of logistic regression model to correctly assort the cases that have an event and these that do not have event. So, this test with ideal diagnostic capability, will possess an AUC equals one. Model incapability to discriminate between cases which have or do not have a selected outcome, will possess an AUC equals 50%. Generally, the value lies between two extreme values (one and zero). If the value of AUC moves from 50% and close to one, it indicates having good discrimination performance (Allison & Llc, 2014).

#### 4. Findings

Table 4 shows the descriptive statistics for the continuous variables used in this study. The average of Tobin's Q (this ratio measures growth options of investments of firms) was found to be 1.7392. This indicates that firms in the sample, on average, have 1.7392 Tobin's Q, with 1.001726 standard deviation. This implies that individual firms in this sample, on mean, were little over 1.001726 far from mean. Besides, the minimum and maximum values of Tobin's Q for the companies show that those companies have a minimum score of 0.51% and maximum score of 6.76. Other studies in Malaysia, reported that average of Tobin's Q was 1.898 (Abdullah & Ismail, 2013), and 1.13 (Haniffa & Hudaib, 2006).

In addition, the descriptive analysis shows that corporations, on average, have 6.9057% profitability (return on assets (ROA) measures profitability of firm), with standard deviation of 6.59765%, which in turn, signifies that the profitability of each firm in this sample, on mean, is away from the average of profitability by about 6.597645%. The firms generated -7.7% (minus profitability means firms have loss) as a minimum profitability and 29.39% profitability as a maximum. Former studies in context of Malaysia reported that the mean of ROA, for example, (Ramli, 2010) in his sample mentioned that ROA was 5.40%, and Abdullah and Ismail (2013) indicated that the mean of ROA was 11%. While, Haslindar Ibrahim et al. (2008), found that ROA was 3.2% in their sample.

On the other hand, the descriptive statistics table indicates that the size of corporations on average, is 18.2683 (size of firms measured based on the natural logarithm of total assets), with 1.36246 standard deviation, which in turn, indicates that the size of each company in this sample is far from the mean of company size, on mean, about 1.36246. The lower size for these firms was 14.04 and maximum size was 24.30. Ramli (2010), found that the mean of gross asset (measured by the natural logarithm of gross assets) in his sample was 17.72. Mohamad-Nor et al. (2010), found that the mean of size of natural logarithm of gross assets was 11.65. while, Ayoib et al. (2003) found that the mean of company size was 12.414 (log).

Additionally, the descriptive analysis shows that companies in the sample used debt, on average, 16.1951%, with a 15.58655 standard deviation. This implies that the leverage ratio of each of these corporations is away, on average, from the mean of leverage by about 15.58655, while, the lower debt ratio utilized by these companies was (zero) and highest debt ratio was 72.94%. According to Rahim et al. (2013), firms in Malaysia depend on the equity market, besides bank borrowings, as a primary source of external financing, mainly because the bonds market is still very limited in the country. Haslindar Ibrahim et al. (2008), found that that leverage was 26% in their sample for the 1999–2005 in Malaysia. Also the mean of leverage was 25.7% in the sample for the period 2002–2005 (Borhanuddin, 2011). Also, Ramli (2010) found that the mean of leverage was 21.8%.

The descriptive statistic table reflects that the mean of the board size is 7.1882. This shows that firms in the sample have on average about 7.1882 director-members sitting on their boards. With Standard Deviation of 1.78102, this indicates that every board of directors of companies in this sample is far, on average, from the mean by about 1.78102. Meanwhile, the lower size of board for a corporation in the sample was 5 members as directors, and the highest size of board had 15 members as directors.

**Table 4. Descriptive statistics**

Variable	Mean	Std. Dev.	Min	Max	Kurtosis	Skewness
Tobin-Q	1.739239	1.001726	.51	6.76	8.42507	2.134676
ROA	6.905663	6.597645	-7.7	29.39	4.482005	1.090545
LN(asset) = Firm size	18.2683	1.362461	14.03865	24.29789	4.826583	.8259963
Leverage	16.19509	15.58655	0	72.94	3.013102	.8688885
Size-board	7.188172	1.781023	5	15	4.390063	1.030597
Multiseat	32.00605	15.45795	0	66.67	2.481579	.0532494
Independence	38.12924	7.143247	27.27	66.66	4.956322	1.144155

Previous studies in Malaysia reported also similar, for instance, Abdullah (2004), found that size of board for year of 1994, 1995, and 1996 were 7.66, 7.78, and 7.68 respectively, Shukeri et al. (2012), found that mean of board size was 7.35, Rahman and Muhamad (2013), found in the sample of 512 companies in 2009 year that size of board was 7.572. While, Mohamad-Nor et al. (2010), found that the mean of size of the board in their sample was about 7.64 members.

On the other hand, the selected companies in this study have on average a 38.1292% on the independent board of directors, with 7.143247% standard deviation. This implies that each ratio of independence of board in the sample is away, on average, from the mean of independence of board by about 7.143247. A minimum representation of independent board of directors equal to 27.27%, and maximum representation equal to 66.66%. Generally, this indicated that Malaysian IPO companies meet the recommendation of the Malaysian government in terms of corporate governance, where a third of the board's members should be independent directors. Former researches in the context of Malaysia reported similar, for instance, Mohamad-Nor et al. (2010), found that the mean of independence of board was 39%, Shukeri et al. (2012), found that mean of mean of independent directors was 45.11%, Rahman and Muhamad (2013), found in the sample of 512 companies in 2009 year that independent directors was 29.86%. While, Abdullah (2004), indicated that the proportion of independence of board for the period 1996 – 2000 was 39%.

Besides, the descriptive analysis table shows that members of board of directors for firms incorporated in the current study who have multiple seats on the other boards, on average, were 32.0060%, with a 15.45795% standard deviation, which in turn, signifies that every ratio of multiple directorships is away, on average, from the mean by about 15.45795%. The lower value of these members who serve on other boards was zero and the maximum value for these members who serve on other boards was 66.67%. In Malaysia, members of boards in the majority of the firms held positions on the boards of directors in others firms (Caliyurt & Idowu, 2014, p. 225). For example, (Haniffa & Hudaib, 2006) reported that directors of board who had at least one additional seat on other boards were 22.5% in their sample.

On the other hand, Table 5 shows companies with duality vs. nonduality. Nonduality is very common among listed companies in Malaysian Stock Market.

Furthermore, Table 6 shows that 46.8% of the IPO firms initiated dividends, and 53.2% did not initiate dividends. This means that over half of the firms did not initiate dividends.

Based on the findings in Table 7, the IPO firms that initiated dividends had less growth, and were more profitable and larger in size in terms of assets than those that did not initiate dividends.

**Table 5. Frequency of duality**

Duality	Freq.	Percent	Cum.
Non-Duality	314	84.41	84.41
Duality	58	15.59	100.00
Total	372	100.00	

**Table 6. Frequency of initiation**

Initiation	Freq.	Percent	Cum.
NON-paying	198	53.23	53.23
Paying	174	46.77	100.00
Total	372	100.00	

**Table 7. Test of differences between nonpaying and paying firms**

Initiation	Mean-nonpayer	Mean-payer	Mean difference	T-statist-difference
Tobin-Q	1.4636	1.9759	-.51232	4.9618***
ROA	5.981969	7.960533	-1.97856	-2.8751**
LNasset	17.92321	18.65305	-.7298431	- 5.3177***
Leverage	12.76861	19.78093	-7.012319	-4.3244***
Size-board	6.939394	7.471264	-.5318704	-2.9025**
Multi-seat	34.63527	29.00996	5.625311	3.5373***
Independence	36.9948	39.41451	-2.419713	-3.2902***

Significance level at .1%, .5%, and .10% respectively.

Fama and French (2001) and Ma (2012), reported that payer dividend which was large in size, was more profitable, and had less growth option. Also Denis and Osobov (2008), through intentional sample, confirmed such results in the United States, the United Kingdom, and Canada. Also, results of table shows that IPO firms that initiated dividends were found to have a high leverage ratio. The difference is statistically significant. This finding is consistent with former studies, Jain et al. (2009) and Kale et al. (2012), too found that the leverage ratio for IPO firms who initiated dividends was higher than nondividend initiating ones. Contrary, Sharma (2011), found no difference between those who initiated dividends and those who did not initiate dividends in terms of leverage. While, Officer (2006) found that initiated dividends had less leverage ratio than counterparts that did not initiate dividend.

In terms of board of directors, the IPO firms that initiated dividends were found to have a large board size and more independence of the board, and members of the board of directors had less other membership on other boards. Divergence between initiating dividends and not initiating dividends was statistically significant. Also Sharma (2011), found that IPO firms who initiated dividends had busy members of board compared to firms that did not initiate dividends. Similar findings in terms of independence reported by Cornett et al. (2011), they found that initiating dividends had more representation by external directors on the board. On the contrary, Officer (2006) reported that the board of the firm paying dividends was controlled by insider executive directors, that is, the firm had less external independent directors. Sharma (2011) found no difference between those who paid dividends and those who did not pay dividends in terms of

**Table 8. Correlation matrix**

VA	IN	Q	RO	LN	LE	SZ	MU	ID	DU
IN	1								
Q	-.246	1							
RO	.135	.145	1						
LN	.285	-.274	-.048	1					
LE	.233	-.334	-.106	.170	1				
SZ	.160	-.067	-.004	.244	.145	1			
MU	-.191	.099	-.138	.048	-.039	-.103	1		
ID	.173	-.052	.101	.101	.005	-.195	.053	1	
DU	.048	-.079	.079	-.051	-.039	-.174	-.017	.043	1

VA, variable; IN, Initiation; Q, TobinQ; RO, ROA; LN, LNasset; LE, Leverage; SZ, sizeboard; MU, Multiseat; ID, Independence; DU, Duality.

independence. Officer (2006) found that dividend-payers have large boards compared to non-payers dividend.

Table 8 presents the Pearson correlation among the variables considered in the current study. According to the analysis of the correlation, it is observed that the correlation between the Tobin's Q and dividend initiation is negative ( $-0.246$ ), whereas the correlation between leverage ratio, natural logarithm of asset and ROA, and dividend initiation, was positive (values are<sup>1</sup> 0.2327, 0.2848, and 0.135 respectively). On the other hand, the factors of the board of directors were found to be associated with dividend initiation in the size of the board, duality, and independence of the board, are positive (values are 0.1603, 0.0477, and 0.1733 respectively). Multiple seats were negatively correlated with dividend initiation ( $-0.1911$ ).

The proposed hypotheses are tested with the logistic regression model using Stata Software Version 12. four proposed hypotheses with dividend initiation are investigated in terms of their significance.

Table 9 shows the results of the logistic regression model (model-1) without the incorporation of control variables. In Table 10 the control variables were introduced in the model (model-2).

The findings of goodness of fit show that value of the Likelihood ratio (LR) in model one is 38.59, and the  $p$  value is less than 5% (0.0000). Thus, the null hypothesis is rejected. The Pseudo R-squared value in this model is 0.0761%, which means that the independent variables incorporated in model-1 explained 0.0761% of the variation in the dependent variables. This suggests that the model has a goodness of fit. Also, the findings show that value of the Hosmer–Lemeshow (HL) test in model-1 is 9.85 and its  $p$  value is 0.2760. This implies that the HL test is insignificant. Hence, the null hypothesis is accepted (where  $H_0$ : fitted model has goodness of fit). This in turn proposes that there is no proof for the lack of agreement between the observed and anticipated cases.

The value of the LR is 94.21, and its  $p$  value is less than 5% (0.0000) in model-2. Therefore, the null hypothesis is rejected, and the alternative hypothesis is accepted, that is, the variables' coefficients are not zero. This suggests that the model is well fitted. Also, the pseudo R-squared value in the model is 0.2098%, which means that independent variables that are included model-2 explained 0.2098% of the variation in the dependent variables. Besides, The analysis of goodness of fit shows that the value of the HL-statistic of model-2 is 9.08 and its  $p$  value 0.3354, which in turn suggests that the HL test is not significant. Therefore, the null hypothesis is accepted, that the

**Table 9. Logistic regression results (model-1)**

Variables	Model-1	
	Coefficients	Z value
Size-board	.243718	3.64***
Multiseat	-.0251378	-3.41***
Independence	.0686452	4.10***
Duality	.2633208	0.87
Constant	-3.75138	-4.05***
Number-observations	367	
LR Chi-square	38.59***	
Pseudo R-square	0.0761	
HL-statistic	9.85 (0.2760) <sup>a</sup>	

Significance level at .1%, .5%, and .10% respectively.

<sup>a</sup>The value between brackets is the value of  $p$  value of HL test.

**Table 10. Logistic regression results (model-2)**

Variables	Model-2	
	Coefficients	Z value
Size-board	0.16336	1.94*
Multiseat	−0.0328	−3.4***
Independence	0.06316	3.13***
Duality	0.4135	1.16
Tobin-Q	−0.3425	−2.03**
ROA	0.05536	2.67**
LNasset	0.32494	2.75**
Leverage	0.02476	2.67**
Industrial	−0.3066	−0.55
Trading	−0.4006	−0.73
Consumer	−1.0272	−1.77*
Properties	−0.719	−0.88
Plantation	0.17159	0.18
Construction	−0.0933	−0.12
REITS	1.97721	1.62
Technology	−0.4771	−0.82
SPAC	0	
Constant	−8.4126	−3.5***
Number—observations	324	
LR Chi-square	94.21***	
Pseudo R-square	0.2098	
HL-statistic	<b>9.08 (0.3354)</b>	

Significance level at .1%, .5%, and .10% respectively.

**Table 11. Evaluating discriminatory performance of the logistic model<sup>a</sup>**

	Model-1	Model-2
Sensitivity	<b>52.05%</b>	<b>72.33%</b>
Specificity	<b>72.45%</b>	<b>75.76%</b>
Correctly classified	<b>62.94%</b>	<b>74.07%</b>
AUC	<b>0.6722</b>	<b>0.7956</b>

<sup>a</sup>It can be said that the logistic regression model offers good diagnosing performance if the coefficients in the regression model assist to predict which events will evolve the outcome  $Y = 1$ , that is, event and that will not evolve the outcome  $y = 0$ , that is, nonevent. One way to gauge discriminatory performance involves utilizing the fitted logistic regression model to determine how to prophesy which case will be an event and which will be a nonevent. After running the fitted logistic model, the observations are classified based on the predicted likelihood in the diagnosis table, according to cut off point (in software Stata, cut off point is default at 50%).

Thus, each observation that has an estimated likelihood which is equal or more than cut off point is categorized as a one, that is, success of event (this is called true positives). The same thing goes for the case with estimated likelihood lower than 50% being categorized as a zero, that is, of nonevent (this is called true negative). The percentage of true positives among all events is sensitivity, and the percentage of true negatives among all nonevents is specificity. Thus if sensitivity and specificity equal one, the logistics regression model has perfect accuracy in prediction (Linden, 2006). In other words, the ideal test is one that gauges or predicts 100% for sensitivity and 100% for specificity.

state fitted model has goodness of fit. Besides, the result of the HL-test indicates that there is agreement between the observed and anticipated cases.

In terms of the ability of the current fitted model (model-1) to distinguish between who initiated dividends and who did not initiate dividends, the results based on the Table 11 indicate that rate of Sensitivity is 52.05%, which means that the model correctly identified about 52% of sets who initiated dividends, and it correctly classified the sets of those who did not initiate dividends in about 72.45%. Besides, the current model provides about 62.94% as a comprehensive identification for who initiate and who do not.

The findings obtained from the Table 11 point out that fitted model-2 has the capability to differentiate between who pay dividends and who do not pay dividends. Where, the results indicated that rate of sensitivity is 72.33%, this means that the model correctly identified about 72.33% of the group who initiate dividends while, it correctly determined the group of who do not pay dividends in about 75.76% (this rate of Sensitivity). Furthermore, the model provides about 74.07% as a comprehensive identification for who initiate and who do not initiate dividends.

In the logistic model is recommended to evaluate the comprehensive discriminatory accuracy through computing the area under the curve (AUC). Therefore, the assessment area under Receiver operating characteristic curve (AUC) is considered to represent the capability of the logistic regression model to correctly assort the cases that have an event and those do not have an event. This test with ideal diagnostic capability, will possess an AUC equals one, whereas, a model incapable of discriminating between cases which have or do not have a selected outcome, will possess an AUC equal 50%. In other words, overall assessment will be according to the ability of model to differentiate the events that are correctly predicted to be as events (i.e. who initiated dividends) and those events that are wrongly predicted to be as events (Kleinbaum & Klein, 2010, P. 356).

The value of area under Receiver operating characteristic curve (AUC) for model-1 is 0.6722. This shows the predictive power of this model, which in turn, points out to the ability of model to diagnose between the cases that are correctly estimated to be events (i.e. who initiated dividends), and those case that are wrongly predicted to be as events. Thus, this fitted model has 0.6722% ability to differentiate between the cases that are correctly predicted to initiate dividends from those that are wrongly predicted to initiate dividends. This in turn, proposes that the value of AUC for a case that selected at random from the positive set has test value greater than a case opted at random from the negative set 0.6722% of the time.

The value of AUC for model-2 was found to be 0.7956. This in turn points to the capability of model-2 to discriminate between the cases that are correctly predicted to initiate dividends, and cases that are falsely estimated to initiate dividends. Hence, this fitted model has predictive power of about 0.7956% to differentiate between the cases that are correctly predicted to initiate dividends from those wrongly predicted to initiate dividends. In other words, the value of AUC means that a case opted at random from the positive set has test value greater than a case opted at random from the negative set 0.7956% of the time.

#### **4.1. Testing hypotheses**

The variables of the board of directors (independence of board, size of board, multiple seats, and duality) are proposed to have a significant relationship with dividends.

The findings obtained from the analysis of logistics regression model points out that IPO firms with the independent directors on their boards, are more likely to initiate dividends, and also the results are statistically significant in two tested models. So, H1 received support; there is a positive relationship between independence of the board and the dividend initiation decision of IPO firms. In addition, the coefficients of independence of the board for these fitted models-1 and -2, are as follows: 0.0686452 and 0.0631572, respectively. This suggests that increasing the independence of the board by one unit, keeping all else in the model fixed, leads to increase of estimated log odds of likelihood of initiating dividends in model-1 by 0.0686452, and in model-2 0.0631572.



Furthermore, the results in the logistic regression table show that IPO firms with large boards are more probable to initiate dividends. Also, these findings were found to be statistically significant in models-1 and -2. Hence, H2 received support; there is a positive relationship between size of the board and the dividend initiation decision of IPO firms. The coefficients of board size in models-1 and -2, are: 0.243718 and 0.1633598 respectively. This in turn, proposes that increasing the size of board by one unit, results in increase of the estimated log odds of probability of initiating dividend, for example, in model-2 by 0.1633598 and in model-1 by 0.243718.

Similar analysis of logistic regression model points out that IPO companies that have on their board of directors, members who serve on the other boards are less likely to initiate dividends. The findings were found to be statistically significant in all fitted models-1 and -2. Therefore, H3 received support as well. There is a negative relationship between multiple directorships and the dividend initiation decision of IPO firms. Additionally, the parameter of multi seats found to be in the models-1 and -2, are: -0.0251378, and -0.0328014 respectively. This implies that increasing the multi seats by one unit, leads to decrease the estimated log odds of the likelihood of initiating dividend, holding all others in the model fixed, for instance, in model-1 by -0.0251378 and in model-2 by -0.0328014.

Finally, the findings achieved from the logistic regression models show that IPO firms that have duality of CEO on their boards of directors are more likely to initiate dividends, but the results were found to be insignificant in models-1 and -2. Thus, H4 is not supported; there is a positive relationship between duality and the dividend initiation decision of IPO firms.

#### **4.2. Control variables on the dividend initiation**

The current study used control variables that were found to have a great effect on dividend initiation. The analysis of logistic regression shows that IPO firms that are in growth stage are less likely to initiate dividends, also the findings were statistically significant. In terms of the coefficient of Tobin's Q the value found is to be -0.3425387. This suggests that increase the Tobin's Q by one unit, holding all else in the model constant, leads to decrease in the estimate of log odds of probability of initiating dividends by -0.3425387. Meanwhile, the findings of logistic regression point out that IPO firms that generated high profits (ROA) are more probable to initiate dividends. These results are found to be statistically significant. The coefficients of ROA is 0.0553611. This means that increasing the profitability by one unit, keeping other things equal in the model, leads to increase in the estimated log of odds of probability of initiating dividends by 0.055361.

On the other hand, the obtained findings from analysis of the logistic model indicate that large IPO companies are more likely to initiate dividends. Also the findings were found to be statistically. Besides that, the analysis of the logistic model shows that the coefficients of size of firm in the model is found to be 0.3249409. This means that increasing the size of the company by one unit, maintaining other things in the model are fixed, leads to increase of the estimated log of odds of probability of initiating dividends by 0.3249409.

The findings achieved from fitted logistic regression indicate that IPO firms that use debt are more likely to initiate dividends, and these the results were found to be statistically significant in model. Parameters of leverage found to be 0.023390. This implies that increasing the leverage ratio by one unit, granting other things in the model are constant, leads to increase in the estimated log of odds of likelihood of initiating dividends by 0.0247649. Lastly, all of the sectors do not have a significant relationship with the dividend initiation by IPO firms. The sign of parameters of REITS and construction sectors were positive, while the remaining sectors had negative signs. Therefore, the IPO firms that belong to sectors other than the REITS and construction sectors are less likely to initiate dividends. However, the findings show insignificant values, except the parameter (-1.027164) of the consumer sector was found to be statistically significant in model.

## 5. Discussion

Four hypotheses were proposed in this study. Three of them were confirmed to have a significant impact on the decision to initiate dividend. Using the agency theoretical underpinning, the literature provided mixed of argument about how the board characteristics effect the decision to initiate dividend. However, this study provided empirical justification in a unique context. In this regard, it was found that independence of board, board size and multi-seats have a significant impact on the decision to pay dividend by IPO companies. First of all, increasing the number of independent directors was found to have a positive influence on initiating dividends. Such findings contradict with findings of Al-Najjar and Hussainey (2009), they found that independence of the board's impact on the probability of dividends is negative. But, the finding is in line with the interpretation provided by (Alias et al., 2013; Sharma, 2011). They argued based on the principle of agency theory that increasing independent directors enhances indoor oversights and smooth disciplining of managers. Therefore, adding more independent members on the board of directors in Malaysia increases dividend payments through reducing free cash flow, which may otherwise be wasted. The current findings are in line with prediction of "outcome model", that is, dividends are outcome of good governance practices (La Porta et al., 2000). This based on that existence of independent directors on the board improve task of board in monitoring management of firm. These independent directors adopt distributing dividend in order to increase additional monitoring by external market. In this perspective, good governance and pay-out policy are seen as a complementary in protecting interests of stockholders. Also, Alias et al. (2013) mentioned that adding more independent members on the board of directors in Malaysia increases dividend payments through reducing free cash flow, which may otherwise be wasted.

On the other hand, the results of this study indicate that size of board positively affects the dividend initiation decision. The positive relationship between the board size and dividend initiation could be seen when a large board considers good corporate governance, as it provides effective oversight (Iqbal, 2013). Thus, it reduces agency problems simply because a large number of directors reviewed administrative procedures. Furthermore, a large board offers more notions, skills, and experience for members of the board, which are shared among them, and improve their overall performance (Zakaria et al., 2014). Dividend initiation could also be considered an additional tool in monitoring the behavior of managers, besides the oversight of a large board. One could argue that members of the board of directors in IPO firms may attempt to convey to the market that they are actively performing their duties in oversight management through initiating dividend. Otherwise, these funds may be used for the private interests of the management, that is, the funds are wasted. In other words, as the main job for the board of directors is to save the right of shareholders from opportunistic behavior of managers, one of the ways for the board of directors to do this is to distribute profits to owners of firms. Thus, the board removes cash from the hands of managers. Moreover, this means that stockholders' wealth will not be expropriated by large shareholders. This is particularly important in Malaysia, as it is distinguished by a highly concentrated ownership structure, which raises concern about the wealth of the minority. Besides, Faccio et al. (2001) argued that the expectation of expropriation causes investors to demand higher dividends from companies that are more probable to expropriate their wealth, such as East Asia. Hence, the findings of this study are in line with Iqbal (2013), who found a significantly positive relationship between size of board and propensity to pay dividends in Pakistan.

The hypothesis of busyness' predicts that members of the board who serve on other boards may become busy, which eventually affects the function of effectively monitoring the behavior of the management. The negative relationship between multiseats and decision to initiate dividend could be attributed to busyness hypothesis. Carpenter and Westphal (2001) indicated that the ability to process information by these members may be limited, as they become too busy for this task. Furthermore, this is in line with the result of Sharma (2011) in the United States. Managers who are not efficiently monitored might force agency problems on the company as evidenced in a lower tendency to distribute dividends (Sharma, 2011). According to Tarkovska (2012), the presence of busy directors on the board increases the cash holding by the firm.

The finding of the current study shows that duality has a positive effect on the decision initiation of IPO firms, but it is insignificant impact. This result is consistent with the findings of Iqbal (2013), it was found that the role of duality positively affects the dividend policy in Pakistan, but is insignificant. The insignificant relationship between CEO duality and dividend initiation in the context of Malaysian IPO firms could be due to the non-practice CEO duality; where a majority of the companies in this study do not gather between the CEO and the chairman of board. This may be due to their commitment to the recommendation by MCCG (2002), which stresses not to combine the role of the CEO and the chairman in order to ensure appropriate monitoring of the top management. a different interpretation can be offered as in such environment where ownership is concentrated (the ownership structure in Malaysia is highly concentrated) in the hands of large stockholders, CEO duality does not have power to effect the decision of dividend initiation. In other words, CEO duality, in the presence of control shareholders, does not have enough power to impact the decision of the corporation.

This research finds that IPO firms with high profit, less option for investing, and large size, are more likely to initiate dividends. Also the findings were statistically significant. The findings could be explained by the maturity hypothesis, where it predicts that mature firms are more probable to initiate dividend than the immature counterparts. These firms are distinguished by their large size, high profitability, and less options for investment. In contrast, companies that are in a stage of growth are distinguished by their small size, less profitability, and plenty of options for investment. The corporate dividend policy may be designed according to the phase of the life cycle of the corporation (Ma, 2012). A mature firm's demand for funds begin reducing as the company has less options for investing, encounters a decline in systematic risk, and reaches the point where earnings are accumulated (DeAngelo et al., 2006). Former studies found similar results in the United States (Bulan et al., 2007 ; Fama & French, 2001; Jain et al., 2009; Kale et al., 2012; Sharma, 2011).

This study also found that IPO firms that use debt are more likely to initiate dividends. Similar, former studies have presented similar findings in the United States (Jain et al., 2009; Kale et al., 2012; Sharma, 2011). Scholars indicated that an increase in the ratio of debt means more funds are available to distribute dividends, thus, the relationship between debt and dividend policy is positive (Ghosh & Sirmans, 2006). The findings could be seen in the context of the lifecycle hypothesis, which states that firms that are newly founded tend to have more leverage ratio, as they need to finance expanding, thus, high leverage companies find it more probable to initiate dividends as funds are available for such decisions (Eije & Megginson, 2008).

Finally, the sectors (dummy variables for each sector) have no effect on the dividend initiation decision of IPO firms. To the best of the researcher's knowledge, previous studies generally do not focus on sectors in examining dividend initiation decision of IPO firms, except for Kale et al. (2012). Their study did not report the findings about the sectors, but they only mentioned in the model (industries, yes controlled). Similarly, Ramli (2010) mentioned that he only controlled sectors without reporting the findings. This could be due to the dividend initiation decision of IPO firms is not affected by specific sectors. As such, a strategic decision may be determined by more important factors, such ownership structure, board governance, characteristics of firms, profitability, growth, etc.

### 5.1. Recommendation

Based on the findings of this study, it is recommended that policymakers related to the reform of governance to give particular attention to the members of the board who hold multiple seats, because becoming busy with multiple tasks may distract them from their main duties. The reform of governance in 2002, and its revision in 2007 and 2012, do not mention a recommendation about this issue (e.g. the reform of governance and its revision stressed the independence of the board). This is will be needed to consider by policymakers as the ultimate aim of reform of governance is to ensure best practices in running the firm, which eventually reflects guaranteed

the rights to all stockholders. Furthermore, the findings of this study carries important recommendation for investors. In a sense, investors who appreciate dividends may buy shares in IPO firms that have a board with more independence, a large size, and less busy members, since firms that possess these traits are more likely to initiate dividend.

## 5.2. Future studies

Denis and Osobov (2008) stated that they failed to provide proof supporting the catering theory outside of the USA market based on the international sample. Therefore, in future, studies may try to test this theory on the IPO firms in the context of Malaysia. Beside, these future studies may be able to answer the question of whether the catering theory can be used to explain the decision of dividend initiation by IPO firms. This in turn, will give more insight about the dividend policy of IPO firms in Malaysia.

On the other hand, future studies may employ others factors to test the Signaling theory in Malaysia market, for instance, underpricing and underwriter reputation. For example, this theory posts that a good quality firm is able to use underpricing as a signal device to convey its quality to the market, that is, its prospects about future profit. Holding this assumption true, it can be expected that a firm which is more profitable is more likely to pay than a counterpart that does not underprice. Also, the reputation of an investment bank which conducts the IPO for a firm, signals the quality of the firm. This is based on the idea that a good quality investment bank is more careful about its reputation in the market; therefore, it investigates the quality of the management of a firm and its prospects before for instance, assigning price of shares that will be offered in the market. So, an IPO firm that does its IPO with a high-reputation investment bank, all else being constant, is seen as high quality and having good future skylines. Thus, it is expected to generate high profits, and is more probable to pay dividends compared to the IPO firm that does its IPO with a lower quality investment bank. Findings outside Malaysia related to this area are mixed (see, e.g. Jain et al., 2009; Kale et al., 2012; Ma, 2012). All this gives investors more insight about the decision of dividend initiation, and whether these above-mentioned factors have an effect on the decision of dividend initiation of IPO firms.

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## Notes

1. These value are for correlation coefficient.

## References

Abdullah, S. N. (2004). Board composition, CEO duality and performance among Malaysian listed companies. *Corporate Governance: The International Journal of Business in Society*, 4, 47–61. doi: 10.1108/14720700410558871

Abdullah, S. N., & Ismail, K. N. I. K. (2013). Gender, ethnic and age diversity of the boards of large Malaysian firms and performance. *Jurnal Pengurusan*, 38, 27–40. <https://doi.org/10.17576/pengurusan-2013-38-03>

Abidin, Z. Z., Kamal, N. M., & Jusoff, K. (2009). Board structure and corporate performance in Malaysia. *International Journal of Economics and Finance*, 1(1), 150–164. <https://doi.org/10.5539/ijef.v1n1p150>

Adjaoud, F., & Ben-Amar, W. (2010). Corporate governance and dividend policy: Shareholders' protection or expropriation? *Journal of Business Finance & Accounting*, 37(5–6), 648–667. DOI: 10.1111/j.1468-5957.2010.02192.x

Alias, N., Rahim, R. A., Nor, F. M., & Hasimi, M. (2013). Board structure, free cash flow and dividend per share: Is there interaction effect? *Proceedings of 23rd international business research conference* (pp. 1–11).

Allison, P. D., & LLC, S. H. (2014). Measures of fit for logistic regression. *SAS Global Forum*, 2(1970), 1–12.

Al-Najjar, B., & Hussainey, K. (2009). The association between dividend payout and outside directorships. *Journal of Applied Accounting Research*, 10(1), 4–19. <https://doi.org/http://doi.10.1108/09675420910963360>

Amran, N. A., & Che Ahmad, A. C. (2011). Family business, board dynamics and firm value: Evidence from Malaysia. *Journal of Financial Reporting and Accounting*, 7(1), 53–74. <https://doi.org/10.1108/19852510980000641>

Ayoib, C. A., Ishak, Z., & Abd Manaf, N. A. (2003). Corporate governance, ownership structure and corporate diversification: Evidence from the Malaysian listed companies. *Asian Academy of Management*

- Journal*, 8(2), 67–89. <http://web.usm.my/aamj/8.2.2003/AAMJ%208-2-4.pdf>
- Baliga, B. R., Moyer, R. C., & Rao, R. S. (1996). CEO duality and firm performance: What's the fuss? *Strategic Management Journal*, 17(1), 41–53. [https://doi.org/10.1002/\(SICI\)1097-0266\(199601\)17\(1\)<41::AID-SM170141-11>3.0.CO;2-1](https://doi.org/10.1002/(SICI)1097-0266(199601)17(1)<41::AID-SM170141-11>3.0.CO;2-1)
- Belden, S., Fister, T., & Knapp, B. O. B. (2005). Dividends and directors: Do outsiders reduce agency costs? *Business and Society Review*, 110(2), 171–180. <https://doi.org/10.1111/j.0045-3609.2005.00009.x>
- Bokpin, G. A. (2011). Ownership structure, corporate governance and dividend performance on the Ghana stock exchange. *Journal of Applied Accounting Research*, 12(1), 61–73. <https://doi.org/10.1108/09675421111130612>
- Bolbol, I. I. (2012). *Board characteristics and dividend payout of Malaysian companies* [Doctoral dissertation]. Universiti Utara Malaysia.
- Borhanuddin, R. I. (2011). Cash holding, leverage, ownership concentration and board independence: Evidence from Malaysia. *Malaysia Accounting Review*, 10(1), 63–88. <http://dx.doi.org/10.24191/mar.v10i1.229>
- Borokhovich, K. A., Brunarski, K. R., Harman, Y., & Kehr, J. B. (2005). Dividends, corporate monitors and agency costs. *The Financial Review*, 40(1), 37–65. <https://doi.org/10.1111/j.0732-8516.2005.00092.x>
- Bulan, L., Subramanian, N., & Tanlu, L. (2007). On the timing of dividend initiations. *Financial Management*, 36(4), 31–65. doi: <http://doi.org/10.2139/ssrn.472943>
- Caliyurt, K. T., & Idowu, S. O. (2014). Corporate governance: An international perspective the summing up. *Corporate governance* (pp. 357–365). Springer Berlin Heidelberg.
- Callen, J. L., Klein, A., & Tinkelman, D. (2003). The contextual impact of nonprofit board composition and structure on organizational performance: Agency and resource dependence perspectives. *Voluntas: International Journal of Voluntary and Nonprofit Organizations*, 21(1), 101–125. <https://doi.org/10.1007/s11266-009-9102-3>
- Carpenter, M. A., & Westphal, J. D. (2001). The strategic context of external network ties: Examining the impact of director appointments on board involvement in strategic decision making. *Academy of Management Journal*, 44(4), 639–660. <https://doi.org/10.5465/3069408>
- Chen, L., Lin, C., & Kim, Y. C. (2011). Financial characteristics, corporate governance and the propensity to pay cash dividends of Chinese listed companies. *International Business and Management*, 3(1), 176–188. <http://dx.doi.org/10.3968/jibm.1923842820110301.1Z0653>
- Claessens, S., Djankov, S., & Lang, L. H. (2000). The separation of ownership and control in East Asian corporations. *Journal of Financial Economics*, 58(1–2), 81–112. [https://doi.org/10.1016/S0304-405X\(00\)00067-2](https://doi.org/10.1016/S0304-405X(00)00067-2)
- Coles, J. W., McWilliams, V. B., & Sen, N. (2001). An examination of the relationship of governance mechanisms to performance. *Journal of Management*, 27(1), 23–50. <https://doi.org/10.1177/014920630102700102>
- Coles, J. W., McWilliams, V. B., & Sen, N. (2001). Journal of management. *An Examination Of The Relationship Of Governance Mechanisms to Performance*, 27(1), 23–50. doi: <https://doi.org/10.1177/014920630102700102>
- Cornett, M. M., Fayman, A., Marcus, A. J., & Tehranian, H. (2011). Dividends, maturity, and acquisitions: Evidence from a sample of bank IPOs. *Review of Financial Economics*, 20(1), 11–21. <https://doi.org/10.1016/j.rfe.2010.11.001>
- D'souza, J., & Saxena, A. K. (1999). Agency cost, market risk, investment opportunities and dividend policy—an international perspective. *Managerial Finance*, 25(6), 35–43. <https://doi.org/10.1108/03074359910765993>
- Dahya, J., Lonie, A. A., & Power, D. M. (1996). The case for separating the roles of Chairman and CEO: An analysis of stock market and accounting data. *Corporate Governance—An International Review*, 4(2), 71–77. <https://doi.org/10.1111/j.1467-8683.1996.tb00136.x>
- DeAngelo, H., DeAngelo, L., & Skinner, D. J. (2004). Journal of financial economics. *Are Dividends Disappearing? Dividend Concentration and The Consolidation Of Earnings*, 72(3), 425–456. available at <https://EconPapers.repec.org/RePEc:>
- DeAngelo, H., DeAngelo, L., & Stulz, R. (2006). Dividend policy and the earned/contributed capital mix: A test of the life-cycle theory. *Journal of Financial Economics*, 81(2), 227–254. <https://doi.org/10.1016/j.jfineco.2005.07.005>
- Denis, D. J., & Osobov, I. (2008). Why do firms pay dividends? International evidence on the determinants of dividend policy. *Journal of Financial Economics*, 89(1), 62–82. <https://doi.org/10.1016/j.jfineco.2007.06.006>
- Dittmar, A., & Maht-Smith, J. (2003). Corporate governance and the value of cash holdings. *Journal of Financial Economics*, 83(3), 599–634. <https://doi.org/10.1016/j.jfineco.2005.12.006>
- Easterbrook, F. H. (1984). Two agency-cost explanations of dividends. *American Economic Review*, 74(4), 650. <https://doi.org/10.2307/1805130>
- Eije, H., & Megginson, W. (2008). Dividend and share repurchases in the European Union. *Journal of Financial Economics*, 89(2), 347–374. <https://doi.org/10.1016/j.jfineco.2007.11.002>
- Faccio, M., Lang, L. H., & Young, L. (2001). Dividends and expropriation. *American Economic Review*, 91(1), 54–78. <https://doi.org/10.1257/aer.91.1.54>
- Faccio, M., & Lasfer, M. A. (2000). Do occupational pension funds monitor companies in which they hold large stakes? *Journal of Corporate Finance*, 6(1), 71–110. [https://doi.org/10.1016/S0929-1199\(99\)00016-4](https://doi.org/10.1016/S0929-1199(99)00016-4)
- Fama, E. F., & French, K. R. (2001). Disappearing dividends: Changing firm characteristics or lower propensity to pay? *Journal of Financial Economics*, 60(1), 3–43. [https://doi.org/10.1016/S0304-405X\(01\)00038-1](https://doi.org/10.1016/S0304-405X(01)00038-1)
- Ferris, S. P., Jagannathan, M., & Pritchard, A. C. (2003). Too busy to mind the business? Monitoring by directors with multiple board appointments. *The Journal of Finance*, 58(3), 1087–1111. <https://doi.org/10.1111/1540-6261.00559>
- Ghosh, C., & Sirmans, C. F. (2006). Do managerial motives impact dividend decisions in REITs? *The Journal of Real Estate Finance and Economics*, 32(3), 327–355. <https://doi.org/10.1007/s11146-006-6805-8>
- Gill, A., & Obradovich, J. (2012). Corporate governance, institutional ownership, and the decision to pay the amount of dividends: Evidence from USA. *International Research Journal of Finance and Economics*, 97(September), 60–71. [https://digitalcommons.liberty.edu/bus\\_fac\\_pubs/26/utm\\_source=digitalcommons.liberty.edu%2Fbus\\_fac\\_pubs%2F26&utm\\_medium=PDF&utm\\_campaign=PDFCoverPages](https://digitalcommons.liberty.edu/bus_fac_pubs/26/utm_source=digitalcommons.liberty.edu%2Fbus_fac_pubs%2F26&utm_medium=PDF&utm_campaign=PDFCoverPages)
- Goodstein, J., Gautam, K., & Boeker, W. (1994). The effects of board size and diversity on strategic change. *Strategic Management Journal*, 15(3), 241–250. <https://doi.org/10.1002/smj.4250150305>
- Gujarati, D. N. (1995). *Basic Econometrics*. McGraw-Hill, Inc.



- Haniffa, R., & Hudaib, M. (2006). Corporate governance structure and performance of Malaysian listed companies. *Journal of Business Finance & Accounting*, 33(7-8), 1034–1062. <https://doi.org/10.1111/j.1468-5957.2006.00594.x>
- Haslindar Ibrahim, M., Samad, F. A., & Amir, A. (2008). *Board structure and corporate performance: Evidence from public-listed family-ownership in Malaysia*. Social Science Research Network.
- Hendry, K., & Kiel, G. C. (2004). The role of the board in firm strategy: Integrating agency and organizational control perspectives. *Corporate Governance: An International Review*, 12(4), 500–520. <https://doi.org/10.1111/j.1467-8683.2004.00390.x>
- Hermalin, B. E., & Weisbach, M. S. (1998). Endogenously chosen boards of directors and their monitoring of the CEO. *American Economic Review*, 96–118. <https://EconPapers.repec.org/RePEc:aecrev:v:88:y:1998:i:1:p:96-118>
- Hu, A., & Kumar, P. (2004). Managerial entrenchment and payout policy. *Journal of Financial and Quantitative Analysis*, 39(4), 759–790. <https://doi.org/10.1017/S0022109000003203>
- Iqbal, K. (2013). Determinants of organizational justice and its impact on job satisfaction. A Pakistan base survey. *International Review of Management and Business Research*, 2(1), 48. <http://dx.doi.org/10.2139/ssrn.2278993>
- Jabbouri, I. (2016). Determinants of corporate dividend policy in emerging markets: Evidence from MENA stock markets. *Research in International Business and Finance*, 37(C), 283–298. <https://doi.org/10.1016/j.ribaf.2016.01.018>
- Jain, B. A., Shekhar, C., & Torbey, V. (2009). Payout initiation by IPO firms: The choice between dividends and share repurchases. *The Quarterly Review of Economics and Finance*, 49(4), 1275–1297. <https://doi.org/10.1016/j.qref.2009.09.003>
- Jensen, M. C. (1986). Agency costs of free cash flow, corporate finance, and takeovers. *The American Economic Review*, 76(2), 323–329. <https://EconPapers.repec.org/RePEc:aecrev:v:76:y:1986:i:2:p:323-29>
- Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*, 3(4), 305–360. [https://doi.org/10.1016/0304-405X\(76\)90026-X](https://doi.org/10.1016/0304-405X(76)90026-X)
- Jiraporn, P., Kim, J. C., & Kim, Y. S. (2011). Dividend payouts and corporate governance quality: An empirical investigation. *Financial Review*, 46(2), 251–279. <https://doi.org/10.1111/j.1540-6288.2011.00299.x>
- Kale, J. R., Kini, O., & Payne, J. D. (2012). The dividend initiation decision of newly public firms: Some evidence on signaling with dividends. *Journal of Financial and Quantitative Analysis*, 47(2), 365–396. <https://doi.org/10.1017/S0022109012000063>
- Kang, H., Cheng, M., & Gray, S. J. (2007). Corporate governance and board composition: Diversity and independence of Australian boards. *Corporate Governance: An International Review*, 15(2), 194–207. <https://doi.org/10.1111/j.1467-8683.2007.00554.x>
- Kleinbaum, D. G., & Klein, M. (2010). *Logistic regression: A self-learning text*. Springer Science & Business Media.
- La Porta, R., Lopez-De-Silanes, F., Shleifer, A., & Vishny, R. W. (2000). Agency problems and dividend policies around the world. *The Journal of Finance*, 55(1), 1–33. <https://doi.org/10.1111/0022-1082.00199>
- Linden, A. (2006). Measuring diagnostic and predictive accuracy in disease management: An introduction to receiver operating characteristic (ROC) analysis. *Journal of Evaluation in Clinical Practice*, 12(2), 132–139. <https://doi.org/10.1111/j.1365-2753.2005.00598.x>
- Lorsch, J., & MacIver, E. (1989). *The reality of America's corporate board*. Harvard Business School Press.
- Ma, T. (2012). *Corporate dividend decisions* [Doctoral dissertation]. City University London.
- Mansourinia, E., Emamgholipour, M., Rekabdarkolaei, E. A., & Hozoori, M. (2013). The effect of board size, board independence and CEO duality on dividend policy of companies: Evidence from Tehran stock exchange. *International Journal of Economy, Management and Social Sciences*, 2(6), 237–241. <https://www.semanticscholar.org/paper/The-Effect-of-Board-Size%2C-Board-Independence-and-on-Mansourinia-Emamgholipour/7a29aa612c3c890972a9b4f9a795750201a9d9ec>
- MCCG. (2002). *Malaysian code on corporate governance*. Report on Corporate Governance. Securities Commission.
- McIntyre, M. L., Murphy, S. A., & Mitchell, P. (2007). The top team: Examining board composition and firm performance. *Corporate Governance: The International Journal of Business in Society*, 7(5), 547–561. <https://doi.org/10.1108/14720700710827149>
- Mittlböck, M., & Schemper, M. (1996). Explained variation for logistic regression. *Statistics in Medicine*, 15(19), 1987–1997. [https://doi.org/10.1002/\(SICI\)1097-0258\(19961015\)15:19<1987::AID-SIM318>3.0.CO;2-9](https://doi.org/10.1002/(SICI)1097-0258(19961015)15:19<1987::AID-SIM318>3.0.CO;2-9)
- Mitton, T. (2004). Corporate Governance and Dividend Policy in Emerging Markets, *Emerging Markets Review* 5 (4), 409–426. Available at SSRN: <https://ssrn.com/abstract=809404>
- Mohamad-Nor, M. N., Shafie, R., & Wan-Hussin, W. N. (2010). Corporate governance and audit report lag. *Asian Academy of Management Journal of Accounting and Finance*, 6(2), 57–84. [https://EconPapers.repec.org/RePEc:usm:journl:aamjaf00602\\_57-84](https://EconPapers.repec.org/RePEc:usm:journl:aamjaf00602_57-84)
- Officer, M. (2006). *Dividend policy, dividend initiations, and governance* (Unpublished working paper). University of Southern California.
- Ponnu, C. H. (2008). Corporate governance structures and the performance of Malaysian public listed companies. *International Review of Business Research Papers*, 4(2), 217–230. <https://pdfs.semanticscholar.org/6dda/ac19182e0fabeb9622fa4430-d97a3c3b8233.pdf>
- Raheja, C. G. (2005). Determinants of board size and composition : A theory of corporate boards owen graduate school of management. (May), 40(02), 283–306. Available at: [https://EconPapers.repec.org/RePEc:cup:jfinqa:v:40:y:2005:i:02:p:283-306\\_00](https://EconPapers.repec.org/RePEc:cup:jfinqa:v:40:y:2005:i:02:p:283-306_00) <https://doi.org/10.2139/ssrn.522542>
- Rahim, R. A., Sopian, R. Z. Z., Yong, O., & Auzairy, N. A. (2013). Flipping Activity and Subsequent Aftermarket Trading in Malaysian IPOs. *Asian Academy of Management Journal of Accounting and Finance*, 9(1), 113–128. [https://EconPapers.repec.org/RePEc:usm:journl:aam-jaf00901\\_113-128](https://EconPapers.repec.org/RePEc:usm:journl:aam-jaf00901_113-128)
- Rahman, A. H., & Muhamad, F. S. (2013). *Corporate governance and firms cash holding in Malaysia*. *Proceeding of the international conference on social science research*. ICSSR. Organized by WorldConferences.net.
- Ramli, N. M. (2010). Ownership Structure and dividend policy: Evidence from Malaysian companies. *International Review of Business Research* ..., 6(1), 170–180. <http://www.bizresearchpapers.com/16.Nathasa.pdf>
- Rechner, P. L., & Dalton, D. R. (1991). CEO duality and organizational performance: A longitudinal analysis.

- Strategic Management Journal*, 12(2), 155–160.  
<https://doi.org/10.1002/smj.4250120206>
- Roberts, J., McNulty, T., & Stiles, P. (2005). Beyond agency conceptions of the work of the non-executive director: Creating accountability in the boardroom. *British Journal of Management*, 16(s1), S5–S26. <https://doi.org/10.1111/j.1467-8551.2005.00444.x>
- Saleh, N. M., & Ismail, A. H. (2010, August). The role of audit quality and corporate governance in mitigating earnings management for Malaysian Ipo. *International Conference on Business and Economic Research- ICBER* (pp. 1–15).
- Sharma, V. (2011). Independent directors and the propensity to pay dividends. *Journal of Corporate Finance*, 17(4), 1001–1015. <https://doi.org/10.1016/j.jcorpfin.2011.05.003>
- Shleifer, A., & Vishny, R. W. (1997). A survey of corporate governance. *The Journal of Finance*, 52(2), 737–783. <https://doi.org/10.1111/j.1540-6261.1997.tb04820.x>
- Shukeri, S. N., Shin, O. W., & Shaari, M. S. (2012). Does board of director's characteristics affect firm performance? Evidence from Malaysian public listed companies. *International Business Research*, 5(9), 120. <https://doi.org/10.5539/ibr.v5n9p120>
- Stewart, R. (1991). Chairmen and chief executives: An exploration of their relationship. *Journal of Management Studies*, 28(5), 511–528. <https://doi.org/10.1111/j.1467-6486.1991.tb00766.x>
- Tarkovska, V. (2012). Busy boards, corporate liquidity and financial risk : Evidence from UK panel data busy boards. *Corporate liquidity and financial risk : Evidence from UK panel data* (pp. 1–37).
- Van Horne, J. C., & Wachowicz, J. M., Jr. (2001). *Principles of financial management*. Pearson Education.
- Van Pelt, T. (2013). *The effect of board characteristics on dividend policy* (Unpublished working paper). pp. 1–62. Tilburg School of Economics and Management, Department of Finance. Tilburg University.
- Wellalage, N. H., Fouzi, F., Wang, G., & Basyith, A. (2014). Corporate governance and cash dividend policy: Evidence from Chinese IPOs. *Malaysian Accounting Review*, 13(1).
- Zakaria, Z., Purhanudin, N., & Palanimally, Y. R. (2014). Board governance and firm performance: A panel data analysis. *Journal of Business Law and Ethics*, 2 (1), 1–12.



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