# Determinants of Dividend Payout Policy:
# Evidence from a Philippine Context [1]

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Using data of Philippine-listed firms from 2014 to 2018, this study tests how determinants of dividend payout policy affect cash dividend payout's likelihood and magnitude. It shows liquidity, firm size, and insider ownership, measured as an insider as the largest shareholder, having a significant positive effect on dividend payout likelihood. Dividend payout magnitude is positively affected by profitability and leverage, and negatively affected by insider ownership. Liquidity, leverage, and insider ownership have contradictory results for both likelihood and/or magnitude of dividend payout, and may require further studies using either more appropriate measures and/or methodologies.

*Keywords*: Dividend payout policy, dividends, dividend payout determinants, largest stockholder, insider ownership

## 1 Introduction

Dividend payout policy research largely revolves around its impact on firm valuation. There are two major schools of thought: (1) dividend payout is irrelevant to a firm's current valuation in the light of *"perfect capital markets, rational behavior, and perfect certainty"* (Miller & Modigliani, 1961, p. 411) that started the whole debate; and (2) dividend payout policy increases stock prices (Graham & Dodd, 1934/2008). The debate continues.

Dividends, despite their *"irrelevance,"* are still being declared and paid out. Studies have tried to explain this *"dividend puzzle"* (Black, 1976) and have generated four different views (Baker, Powell, & Veit, 2002) with varying results. These are: (1) dividends as a signaling mechanism (Bhattacharya, 1979; John & Williams, 1985; Miller & Rock, 1985); (2) dividends and its tax implication (Black & Scholes, 1974; Brennan, 1970; Brennan & Thakor, 1990; Kalay & Michaely, 2000; Litzenberger & Ramaswamy, 1979); (3) dividends as a means of distributing a firm's free cash flow (DeAngelo & DeAngelo, 2006; Jensen, 1986); and (4) dividends as a sure return compared to stock returns (Bhattacharya, 1979).

Dividends are considered a signal of management's assessment of a firm's earnings and earning potential which, in turn, affects current market valuation. Models of Bhattacharya (1979), John and Williams (1985), and Miller and Rock (1985) have been subjected to empirical tests which confirmed the signaling content of dividends. Separating the signaling content of dividends from the signaling content of earnings, however, remains a challenge.

Dividends are a form of income subject to income tax or final tax in the case of the Philippines. Tax on net capital gains from the sale of stocks is generally lower than tax on dividend income. For Philippine corporations, net capital gains from sale of stocks not publicly traded are subject to a final tax of 15%, while dividend income is subject to a 30% income tax rate (TRAIN Act of 2017). Black and Scholes (1974) do not find any relationship between expected returns and dividend yield in the light of taxes. Litzenberger and Ramaswamy (1979), on the other hand, show a positive relationship between expected returns and dividend yield before taxes. This is bridged by Kalay and Michaely (2000) concluding that the results of the latter's study are still consistent with the results of the former's study but differ only due to time-series return variations. Brennan (1970, p. 423) demonstrates mathematically that *"for a given level of risk, investors require (a) higher total return(s)"* from dividend-paying securities due to the higher tax rate on dividends. Subsequently, Brennan and

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Thakor (1990) conclude that investors still preferred dividends for small distributions despite the tax implication, but prefer repurchases for large distributions.

De Angelo and De Angelo (2006) counter the Miller and Modigliani's (1961) irrelevance theorem by developing a trade-off theory. Dividends are used to distribute free cash flows to help balance flotation and other costs and agency costs of free cash flows, such as management's possible poor choices in the use of available funds (Jensen, 1986).

Dividends are also viewed as sure returns as opposed to the more uncertain stock returns, making dividends superior. This is the *"bird-in-the-hand"* fallacy (Miller & Modigliani, 1961, p. 424; Bhattacharya, 1979, p. 260). Bhattacharya (1979) argues that an increase in dividend payout does not increase the firm's value by reducing risk of investing in uncertain projects if no dividends have been declared.

Because of its perceived impact on a firm's valuation and the rationale behind its persistent use, dividend payout policy remains an important management tool. As such, identifying the determinants of dividend payout policy is a rich topic, and has been a subject of several research works.

Profitability, liquidity, leverage, investment opportunities, firm size, and ownership structure are the common determinants identified for dividend payout specifically cash dividends. Merging insights from various empirical works and using data of Philippine-listed firms from 2014 to 2018, this study tests the impact of these determinants on two aspects of dividend payout policy: (1) the likelihood of dividend payout; and (2) the magnitude of dividend payout.

In the logit regression of the six determinants on the likelihood of dividend payout, liquidity, firm size, and ownership structure, specifically insider as the largest stockholder, have a significant positive effect on likelihood. The results on liquidity and ownership structure are contrary to the study's hypotheses similar to the contradicting results of other empirical tests.

In the ordinary least squares (OLS) regression of the six determinants on the magnitude of dividend payout, two models are used. The first model considers all samples, while the second model considers only instances when a firm has made cash dividend payouts. In the first model, liquidity and firm size have a positive and significant effect on magnitude while investment opportunities, a negative impact. In the second model, profitability and leverage have a significant positive impact on magnitude while ownership structure, a negative effect.

Liquidity, leverage, and ownership structure show inconsistent results with the study's hypotheses on the likelihood and/or magnitude of dividend payout. The inconsistency arising from liquidity and leverage is unsurprising given the conflicting results in previous empirical studies. Liquidity has positive results when it signifies excess cash flows that may be distributed as dividends (Benito & Young, 2003). Moreover, the study shows that it only matches the hypothesis when the firm has already decided to pay out dividends. This may mean: (1) the decision to pay out may not consider liquidity when defined as a quick ratio; and (2) a lag of some variables in the regression may be in order since past values may have a more significant effect on future decisions. Leverage has a positive impact on dividend payout ratio when management views dividend payout as a sign of stability allowing the firm better access to capital (Alli, Khan, & Ramirez, 1993; Myers & Bacon, 2004). Future research can determine more apt measures and methodology for testing liquidity and leverage.

Ownership structure, specifically insider ownership, may have been affected by the sample tested. Eighty-three percent of the sample has insiders as the largest stockholder. In the Philippines, many listed companies begin as family corporations before going public; thus, a significant number of founder-managers have the largest stockholding. Similarly, many listed companies are subsidiaries of larger firms. The parent firm can be considered an insider, having control over management and decision-making of the subsidiary. Using insider ownership concentration can perhaps be a more effective measure in future studies.

## 2    Determinant of Dividend Payout Policy

Researchers have tested various determinants of dividend payout policy and their impact on payout likelihood, magnitude or both for almost 70 years since the work of Lintner (1956) on targeted dividend payout ratio. No consensus has been reached. Most research work consistently identify profitability, liquidity, leverage, investment opportunities, firm size, and ownership structure as the

six factors firms considered in dividend payout policy. These six determinants are also considered for this study.

## 2.1   Profitability

Profitability has been one of the most prominent determinants of dividend payout policy. Dividends are, after all, paid out of unappropriated retained earnings. Stockholders expect a share of the profits during a profitable year. Firms also use dividends and changes in dividend payout policy to signal potential future earnings (Bhattacharya, 1979; John & Williams, 1985; Miller & Rock, 1985), and to assure that payout is not a one-off event. Studies show that firms are more likely to pay out dividends if they are profitable (Banerjee, Gatchev, & Spindt, 2007; Denis & Osobov, 2008; Fama & French, 2001; Jensen, Soldberg, & Zorn, 1992; Myers & Bacon, 2004; Truong & Heaney, 2007). The magnitude of the payout has also shown a positive relationship with profitability (Fama & French, 2001; Jensen et al., 1992). Lintner (1956) also includes profits in his theoretical model but focuses more on a firm's inertia regarding dividend payout policy because stockholders expect stable and regular dividend distribution. This means that management generally avoids dividend cuts and commits a firm to pay out dividends at the same level at the very least (Lintner, 1956).

Hypothesis 1a: High profitability increases the likelihood of dividend payout.
Hypothesis 1b: High profitability increases the magnitude of dividend payout.

## 2.2   Liquidity

Since dividends are more commonly in the form of cash, liquidity is another consideration of a firm's dividend payout policy. A firm needs to remain liquid to meet its current obligations and its working capital needs. Darling (1957, p. 214) explains how maintaining *"an adequate level of future liquid balances places the dividend decision within the constraints of a budget."* After all, cash dividend payout has an impact on available liquid assets now and in the future. An improvement in liquidity from increases in profitability is often tempered by increases in working capital needs (Darling, 1957). A firm trying to increase or maintain a high level of liquidity lowers its dividend payout (Gupta & Banga, 2010). Moreover, Alli et al. (1993) identify financial slack – the sum of cash balance, marketable securities, and unused debt capacity – as a managerial consideration for dividend payout; in their analysis, it exhibits a negative relationship with dividend payout ratio.

Benito and Young (2003) consider liquidity in a different perspective and focus largely on the consideration for omitting dividends – the level of residual cash flows in the light of available investment opportunities and debt servicing. The results of their study show that having "*a high level of cash flow lowers the probability of omitting a dividend*" (Benito & Young, 2003, p. 545).

Although Benito and Young's (2003) results are compelling, this study considers liquidity as more of an attenuating factor to dividend payout. Working capital demands to fuel growth, and debt repayment and covenants that require firms to maintain a certain high level of liquidity are more valid circumstances that may dampen the propensity to pay out dividends, as compared to actual cash flows that may or may not be restricted for use.

Hypothesis 2a: High level of liquidity decreases likelihood of dividend payout.
Hypothesis 2b: High level of liquidity decreases the magnitude of dividend payout.

## 2.3   Leverage

A firm's leverage has been identified as another determinant of dividend payout policy. High levels of leverage increase the likelihood of a dividend cut, a reduction of dividends paid out (Benito & Young, 2003; Gupta & Banga, 2010; Myers & Bacon, 2004; Rozeff, 1982). Benito and Young (2003) observe that: (1) firms prefer to finance dividend payouts with retained earnings rather than with debt or equity financing in the long run; and (2) high levels of indebtedness are associated with large and regular payments of interest that constrain the distribution of dividends. Contrarily, Myers and Bacon (2004) observe that financial leverage is positively correlated with dividend payout. By sustaining high dividend payouts, firms are able to convey a strong financial reputation, and gain better access to capital markets (Myers & Bacon, 2004). Better access to markets, in turn, give firms the flexibility to switch between debt to equity, lowering transaction costs, which allow *"more stable and possibly higher*

*dividend payments"* (Alli et al., 1993, p. 528). This study takes the relationship that has been commonly observed in previous studies.

Hypothesis 3a: High level of leverage decreases likelihood of dividend payout.

Hypothesis 3b: High level of leverage decreases the magnitude of dividend payout.

## 2.4   Investment opportunities

Studies that considered investment or growth opportunities have mix results. Fama and French (2001) use two proxies for investment opportunities (also called growth opportunities) – market-to-book ratio and asset growth rate. Their study shows that greater investment opportunities and investments reduce the propensity to pay out dividends similar to the results of Alli et al. (1993), Banerjee et al. (2007), Jensen et al. (1992), and Rozeff (1982).

Fama and French (2002), in a subsequent study, encounter a positive relation between market-to-book ratio and dividend payout. They explain it as an expected result if the ratio is considered as providing information about profitability rather than investment opportunities. This is also noted by Alli et al., (1993). This positive relationship persists when using sales or revenue growth rates as proxies for investment opportunities (Gupta & Banga, 2010; Myers & Bacon, 2004). Denis and Osobov (2008) using the proxies of Fama and French (2001) and sales growth rates show mixed results when applied to firms from other countries such as Canada, Germany, and Japan.

Hypothesis 4a: Greater investment opportunities decreases likelihood of dividend payout.

Hypothesis 4b: Greater investment opportunities decreases the magnitude of dividend payout.

## 2.5   Firm size

Large firms are more likely to declare and pay out dividends (Alli et al., 1993; Banerjee et al., 2007; Denis & Osobov, 2008; Fama & French, 2001, 2002; Gupta & Banga, 2010; Mehta, 2012). Firm size is generally associated with stability (Alli et al., 1993; Fama & French, 2002), being more profitable (Denis & Osobov, 2008; Fama & French, 2001), having better access to capital (Alli et al., 1993; Fama & French, 2002; Mehta, 2012), and having excess resources such as greater availability of free cash flows (Banerjee et al., 2007; Gupta & Banga, 2010).

Proxies for size vary from natural logarithm of total assets (Alli et al., 1993; Fama & French, 2001), to New York Stock Exchange (NYSE) percentile, which is the percent of NYSE firms that have the same or smaller market capitalization (Denis & Osobov, 2008; Fama & French, 2001). Gupta and Banga (2010) use the product of the closing year-end price and number of shares outstanding as a measure of market capitalization, a proxy for firm size.

Hypothesis 5a: Large firm size increases likelihood of dividend payout

Hypothesis 5b: Large firm size increases the magnitude of dividend payout.

## 2.6   Ownership structure

Some studies, such as discussed in the following paragraphs, identify ownership structure as having an impact on a firm's dividend payout policy, and vice versa. These are generally focused on the type of the majority owner or stockholder.

Insider or managerial ownership (equity owned by directors, officers, and their immediate families) generally result in lower dividend payout (Alli et al., 1993; Jensen et al., 1992; Myers & Bacon, 2004; Rozeff, 1982; Short, Zhang, & Keasey, 2002; Truong & Heaney, 2007). Rozeff (1982) best demonstrates the interplay between agency costs and transaction costs of external financing, and type of ownership in determining the optimal dividend payout. Greater insider ownership reduces agency costs or information asymmetries since management and owners have access to the same information; hence, it lowers the need to use dividends as a signaling mechanism. Owners, regardless if insider or outsider, strive to reduce transaction costs of external financing. In reducing both costs, higher degree of insider ownership results in a lower optimal dividend payout (Rozeff, 1982).

On the other hand, institutional ownership (shares held by institutions) generally increases dividend payout (Alli et al., 1993; Myers & Bacon, 2004; Short et al., 2002). Although financial institutions, similar to insider ownership, have a negative relationship with dividend payout; given these institutions' expertise in monitoring financial performance, they are not compelled to use dividends as signaling mechanisms to stockholders (Truong & Heaney, 2007).

Barclay, Holderness, and Sheehan (2008) distinguish between operating corporate block holders and financial block holders. Operating corporate block holders are more interested in the firm's performance, and may influence dividend payout policy by actually reducing it. Financial block holders are more passive and, in investing, are not influenced by a firm's dividend payout policy.

Grinstein and Michaely (2005) demonstrate that the dividend payout policy affects firm ownership, and conclude that institutional investors: (1) avoid firms that do not pay dividends; (2) choose firms that pay fewer dividends, among dividend-paying firms; and (3) prefer firms that regularly repurchase shares. This contradicts corporate finance theory's expectations that: (1) institutions induce firms to make higher payouts, and reduce the free cash flow problem (Jensen, 1986); (2) firms attract institutions by paying more dividends (Allen, Bernardo, & Welch, 2000); and (3) institutions, given their information advantage, prefer repurchases over dividends (Brennan & Thakor, 1990).

Concentration of ownership to a few large stockholders has also been considered a determinant of dividend payout in some studies (Claessens, Djankov, & Lang, 2000; La Porta, Lopez-De-Silanes, & Schleifer, 1999;). A growing trend towards higher ownership concentration in a few stockholders – family, institution, and state – in firms is observed around the world (Claessens et al., 2000; La Porta et al., 1999). This trend may result in the expropriation of wealth from minority stockholders. Mancinelli and Ozkan (2006) observe, in listed Italian firms at the end of 2001, a negative impact of voting rights of the largest shareholder on the firm's dividend payout policy. A more recent study of Thanatawee (2013), of Thai firms from 2002 to 2010, demonstrates that firms that have highly concentrated ownership and have an institution as its largest stockholder are more likely to pay out dividends.

Given the nature of available data, this study focuses on insider ownership.

Hypothesis 6a: Having an insider as the largest stockholder decreases the likelihood of dividend payout.

Hypothesis 6b: Having an insider as the largest stockholder decreases the magnitude of dividend payout.

Insiders refer to directors, officers, and their immediate family members, stockholders holding more than 50% of the firm's common stocks, and corporate stockholders, although holding less than 50%, have shared directors or officers.

## 3    Sample

Philippine-listed firm data from 2014 to 2018 (with the addition of 2013 Total Assets data) are taken from the Worldscope Database and Thomson Reuters/Refinitiv Eikon. Stockholder information is supplemented with reportorial requirements submitted to the Philippine Securities and Exchange Commission, and the Philippine Stock Exchange, such as the General Information Sheets (GIS), Information Statements (SEC Form 20-IS), and the List of Top 100 Stockholders (PSE Disclosure Form 17-12).

Observations are instances when a listed firm either paid or did not pay dividends from 2014 to 2018. Since there are instances of incomplete data for some years, those observations are dropped. A total of 518 observations composed of 117 listed firms with complete information are subject to regressions. The 117 listed firms come from different sectors and subsectors ranging from Industrial to Services (See Appendix I). The average age from founding and from listing with the PSE is 41.76 and 28.44 years, respectively. There is no obvious indication if age from founding or from listing has an impact on propensity to pay out dividends. This may be a topic for further studies. In terms of frequency of dividend payout during 2014 to 2018 – 36% are nonpayers; 15% occasional payers (missed paying dividends in some years), and 49% regular dividend payers (paid every year). Out of the 36% non-payers, 64% register losses before interest and taxes. There is only one observation where dividends were still paid despite a loss before interest and taxes was incurred.

Although dividends can have different forms (i.e., stock dividends or property dividends), this study only considers cash dividends in the sample.

## 4    Methodology

Appendix II shows a summary of variables, the results, and techniques used in previous studies.

Hypotheses run along the two major aspects of dividend payout policy – likelihood and magnitude. Variables for testing, their measurements, and expected relationships with likelihood and magnitude based on hypotheses are in Table 1.

**Table 1. Variables, Measurement, and Expected Relationship of Determinants**

| Types of variable | Determinant | Variable Name | Variable | Measurement | Expected Relationship |
|---|---|---|---|---|---|
| Dependent | Dividend Likelihood | Dividend payout decision | $DP_{it}$ | $1, if\ dividends\ were\ declared$ <br> $0, otherwise$ | |
| Dependent | Dividend Magnitude | Dividend payout | $D_{it}$ | $\dfrac{Dividends\ per\ share}{Earnings\ per\ share}$ | |
| Independent | Profitability | Return on Assets | $P_{it}$ | $\dfrac{Earnings\ before\ interest\ \&\ taxes}{Total\ assets}$ | Positive |
| Independent | Liquidity | Quick ratio | $LQ_{it}$ | $\dfrac{Cash\ \&\ Equivalents + Accounts\ Receivable}{Current\ liabilities}$ | Negative |
| Independent | Leverage | Debt-to-asset ratio | $LV_{it}$ | $\dfrac{Total\ liabilities}{Total\ assets}$ | Negative |
| Independent | Investment opportunities | Asset growth | $I_{it}$ | $\dfrac{Total\ asset_{it} - Total\ asset_{it-1}}{Total\ asset_t}$ | Negative |
| Independent | Firm size | Natural logarithm of total assets | $S_{it}$ | $\ln(Total\ assets)$ | Positive |
| Independent | Ownership structure | Type of largest stock holder | $OS_{it}$ | $1, if\ largest\ stockholder\ is\ an\ insider$ <br> $0, otherwise$ | Negative |

Based on Fama and French (2001) and others that came after them (Banerjee et al., 2007; Denis & Osobov, 2008; Truong & Heaney, 2007), and using additional determinants, the relation between the six determinants and the likelihood of dividend payout is tested using a logit regression.

$$DP_{it} = \beta_0 + \beta_1 P_{it} + \beta_2 LQ_{it} + \beta_3 LV_{it} + \beta_4 I_{it} + \beta_5 S_{it} + \beta_6 (OS_{it} P_{it})\ (Model\ 1) \tag{1}$$

The relation between the six determinants and the magnitude of dividend payout is tested using an OLS regression (Alli et al., 1993; Gupta & Banga, 2010; Mehta, 2012; Myers & Bacon, 2004; Rozeff, 1982). The OLS regression is done twice: (1) Model 2a using all 518 observations, where the set of dividend payouts $DP_{it} = 0\ and\ 1$; and (2) Model 2b using only 278 observations, where $DP_{it} = 1$.

$$D_t = \beta_0 + \beta_1 P_{it} + \beta_2 LQ_{it} + \beta_3 LV_{it} + \beta_4 I_{it} + \beta_5 S_{it} + \beta_6 (OS_{it} P_{it})\ (Model\ 2) \tag{2}$$

# 5    Results and Discussion

**Table 2. Summary Statistics**

| Variable | Mean | Standard Deviation | Min | Max |
|----------|------|--------------------|-----|-----|
| $DP_{it}$ | 0.54 | 0.50 | 0 | 1 |
| $D_{it}$ | 17.37 | 23.37 | 0 | 99.32 |
| $P_{it}$ | 0.05 | 0.27 | -5.50 | 1.28 |
| $LQ_{it}$ | 0.27 | 0.19 | 0.01 | 1 |
| $LV_{it}$ | 5.99 | 23.16 | 0.29 | 309.73 |
| $I_{it}$ | 0.08 | 0.30 | -5.32 | 1.00 |
| $S_{it}$ | 16.56 | 2.17 | 7.94 | 20.89 |
| $OS_{it}$ | 0.83 | 0.38 | 0 | 1 |

**Table 3. Regression Results**

| Variable | Model 1 Logit Regression | Model 2a OLS Regression $DP_{it} = 0\ and\ 1$ | Model 2b OLS Regression $DP_{it} = 1$ |
|----------|--------------------------|-----------------------------------------------|----------------------------------------|
| $P_{it}$ | 5.007 | 35.601 | 108.212*** |
|  | (5.17) | (23.71) | (30.48) |
| $LQ_{it}$ | 1.570* | 15.477*** | -7.490 |
|  | (0.77) | (4.67) | (11.03) |
| $LV_{it}$ | -0.008 | 0.001 | 1.772* |
|  | (0.01) | (0.01) | (0.79) |
| $I_{it}$ | -1.022 | -15.097* | 13.079 |
|  | (0.87) | (6.91) | (11.61) |
| $S_{it}$ | 1.027*** | 4.537*** | 0.827 |
|  | (0.09) | (0.43) | (1.01) |
| $OS_{it}$ | 10.897* | -18.593 | -64.310* |
|  | (4.23) | (23.24) | (26.45) |
| Constant | -18.004*** | -61.891*** | 8.198 |
|  | (1.60) | (7.13) | (20.32) |
| N | 518 | 518 | 278 |
| R² |  | 0.186 | 0.073 |
| Adjusted R² |  | 0.177 | 0.053 |

* p<0.05, ** p<0.01, *** p<0.001

**Table 4. Expectation versus Results of Regression on Dividend Payout Decision**

| Determinants | Hypotheses | Model 1 Logit Regression Result | Model 1 Logit Regression Significance | Model 2a OLS Regression, all observations Result | Model 2a OLS Regression, all observations Significance | Model 2b OLS Regression, observations with $DP_t = 1$ Result | Model 2b OLS Regression, observations with $DP_t = 1$ Significance |
|--------------|------------|--------|--------------|--------|--------------|--------|--------------|
| $P_{it}$ | + | + | Not significant | + | Not significant | + | Significant at 0.1% |
| $LQ_{it}$ | - | + | Significant at 5% | + | Significant at 0.1% | - | Not significant |
| $LV_{it}$ | - | - | Not significant | + | Not significant | + | Significant at 5% |
| $I_{it}$ | - | - | Not significant | - | Significant at 5% | + | Not significant |
| $S_{it}$ | + | + | Significant at 0.1% | + | Significant at 0.1% | + | Not significant |
| $OS_{it}$ | - | + | Significant at 5% | - | Not significant | - | Significant at 5% |

## 5.1    Likelihood of dividend payout

Model 1 shows that the likelihood of dividend payout has positive relationships with profitability, liquidity, firm size, and insider ownership, and negative relationships with leverage and investment opportunities. This is consistent with the hypotheses except for liquidity and insider ownership, which are expected to be negative. Among the six determinants, only liquidity, firm size, and insider ownership are significant to the dividend payout decision.

Liquidity's impact on the likelihood of dividend payout of Philippine firms is contrary to this study's hypothesis and other studies particularly those that use current ratio as a measure of liquidity (Alli et al., 1993; Mehta 2012; Myer & Bacon, 2004). In the hypothesis, quick ratio is considered as a level of liquidity a firm desires to achieve. On another perspective, higher quick ratio may signify excess cash flows that can be distributed back to stockholders. This can be indirectly linked to the results of Gupta and Banga (2010) that conclude a significant positive relationship when cash flow from operations is used as a measure of liquidity. In their study, strong liquidity is viewed as a trigger of greater likelihood of dividend payout to keep stockholders happy.

Research, meanwhile, has consistently shown that firm size has a significant and positive relationship with dividend payout policy (Alli et al., 1993; Banerjee et al., 2007; Denis & Osobov, 2008; Fama & French, 2001; Mehta, 2012). Larger Philippine firms (particularly in terms of total assets) have a higher likelihood of declaring dividends compared to smaller firms.

When the largest stockholder of Philippine firms is an insider, the likelihood that firms declare dividends increases. The positive relationship is inconsistent with the results of most studies (Alli et al., 1993; Jensen et al., 1992; Myers & Bacon, 2004; Rozeff, 1982; Short et al, 2002; Truong & Heaney, 2007). On average, 83% of this study's observations had insiders as the largest stockholder (See Table 2). This can be subject to further investigation either by expanding the samples, or by using ownership concentration rather than the largest stockholder as a measure of ownership concentration. Listed firms in the Philippines are either: (1) family corporations where the largest stockholders are family members who are also part of management; or (2) subsidiaries of other listed firms where parent firms exercise control in decision-making.

## 5.2    Magnitude of dividend payout

Model 2a's results on liquidity and leverage of Philippine firms in relation to the magnitude of the dividend payout are not consistent with the hypothesized relationships. Leverage is, however, not significant. Liquidity, investment opportunities, and firm size are significant.

Similar to Model 1, Model 2a's liquidity's relationship with magnitude of dividend payout is contrary to this study's hypothesis (Alli et al., 1993; Mehta 2012; Myer & Bacon, 2004). The results seem to imply that liquidity is more related to the presence of excess resources available for distribution to stockholders (Gupta & Banga, 2010), rather than the maintenance of a firm's liquidity requirement. Results of Model 2b may confirm this observation as the regression shows the expected negative result. Liquidity as a firm requirement becomes a consideration once the decision to pay out dividend has been made.

When there is growth in assets (investment opportunities), Philippine firms forego or declare less dividends. This is consistent with studies that show the negative relationship between investment opportunities and dividend payout (Banerjee et al., 2007; Denis & Osobov, 2008; Fama & French, 2001).

Larger Philippine firms declare higher dividends than smaller firms. This is also consistent with studies by Alli et al. (1993), Banerjee et al. (2007), Denis and Osobov (2008), Fama and French (2001), and Mehta (2012). Large firms are associated with excess resources available and more stable business.

Model 2b results have lower $R^2$ and adjusted $R^2$ than Model 2a, which may indicate a worse fit of the Model 2b regression line. Aside from this, its results show inconsistent relationships for two determinants – leverage and investment opportunity. Between these two, only leverage is significant. Leverage shows a positive relationship with dividend payout magnitude. This may corroborate Myers and Bacon's (2004) observation that high dividend payout is a means to ensure strong financial reputation allowing easy access to external capital. It may be interesting to test in future studies if specific industries may affect the relationship between leverage and dividend payout.

Aside from leverage, profitability and insider ownership are also significant in Model 2b. Both variables are consistent with existing literature: (1) more profitable Philippine firms pay higher dividends (Banerjee et al., 2007; Denis & Osobov, 2008; Fama & French, 2001; Jensen et al., 1992; Myers & Bacon, 2004; Truong & Heaney, 2007); and (2) Philippine firms with an insider as the largest stockholder pay out less dividends (Alli et al., 1993; Jensen et al., 1992; Myers & Bacon, 2004; Rozeff, 1982; Short et al, 2002; Truong & Heaney, 2007).

## 6    Conclusion

The results of this study show a consistent positive relationship of dividend payout likelihood and magnitude with profitability and size across the three models. Their significance in relation to the dependent variables, however, vary.

Liquidity, leverage, and insider ownership have inconsistent results with the hypotheses of this study. Liquidity results in a positive relationship which arises when liquidity signifies excess cash flows that may be distributed as dividends (Benito & Young, 2003). The expected negative relationship only occurs when the firm already has decided to pay dividends, which may signify liquidity constraining the magnitude of the payout. The results on leverage support conclusions made by some researchers that firms use higher dividend payout to create stronger financial reputations which allow better access to external capital (Alli et al., 1993; Myers & Bacon, 2004). Many Philippine-listed companies are either family-owned or are subsidiaries of larger firms. This may have affected the results on insider ownership.

There are several possible areas for future study – do panel regressions, lag variables, measure variables differently, consider stock repurchase instead, include additional determinants.

One, if firms' annual data is consistently complete, a panel data regression can be performed, which can consider time and/or industry fixed effects that may not have been captured by this study.

Two, time lags in some or all variables may be introduced. Some measures used may not explain the dependent variable well because relationships are drawn from the same year-end data. Dividend likelihood and magnitude may be made on the basis of past information for some or all determinants rather than current information. If all variables are lagged, possible structural equations for future studies are

$$DP_t = \beta_0 + \beta_1 P_{it-1} + \beta_2 LQ_{it-1} + \beta_3 LV_{it-1} + \beta_4 I_{it-1} + \beta_5 S_{it-1} \\ + \beta_6 (OS_{it-1} P_{it-1}) \ (for \ likelihood) \qquad (3)$$

$$D_t = \beta_0 + \beta_1 P_{it-1} + \beta_2 LQ_{it-1} + \beta_3 LV_{it-1} + \beta_4 I_{it-1} + \beta_5 S_{it-1} \\ + \beta_6 (OS_{it-1} P_{it-1}) \ (for \ magnitude) \qquad (4)$$

In the case of liquidity, for example, several relationships may arise. One view is that the liquidity ratio of the prior year may serve as a guide to decision-makers if dividends can be paid out, and in what magnitude, for the current year. Higher liquidity in the prior year may mean sufficient or excess resources available for dividends, thus, a stronger propensity to declare dividends and its possible increased magnitude in the current year. Or another view is that the current period's liquidity ratios may differ between dividend-paying firms and non-dividend paying firms. Holding all things constant, the liquidity ratios of a dividend-paying firm are expected to be lower than a non-dividend paying firm's liquidity ratios. The payment of dividends is a drain on the current period's liquidity. As a corollary, the liquidity ratios of a non-dividend paying firm are expected to be higher than the liquidity ratios of a dividend-paying firm. The results of testing these relationships may bring clarity to the conflicting findings of this study and of other studies on dividend payout policy using liquidity as a determinant.

Three, future studies can consider more appropriate measures. Ownership concentration can be used to measure insider ownership rather than just identifying the largest stockholder (Alli et al., 1993; Jensen et al., 1992; Myers & Bacon, 2004; Rozeff, 1982; Short et al., 2002). Analysis of concentration may still be done in the light of different ownership types. Liquidity can be measured by cash ratio or

operating cash flow (Gupta & Banga, 2010). This can also be extended to cash conversion ratio where we can determine how efficiently net profits are converted to cash. Debt ratio can be used as a measure for leverage (Benito & Young, 2003; Jensen et al., 1992; Truong & Heaney, 2007).

Four, this study only focused on payout policy in the form of cash dividends. The low dividend and non-payers may have used stock repurchase as another mode of payout. Stock repurchases or the interaction between stock repurchases and dividends can be a subject of another study.

Five, other than variables considered in this study, future researchers may also consider including variables such as life-cycle stage and free cash flow.

- Life-cycle stage. Fama and French (2001) note a changing characteristic of firms paying cash dividends in their study of listed non-financial non-utility firms from 1972 to 1999. Newly listed firms are generally characterized as small in size *"with low profitability but with high growth rates that have never paid dividends"* (Fama & French, 2001, p. 5). DeAngelo, DeAngelo, and Stulz (2006) and Denis and Osobov (2008) test the life-cycle theory of dividends by measuring life-cycle stage as retained earnings as a proportion of total equity (and of total assets). They note that *"dividend payers tend to have high earned equity relative to contributed capital"* (DeAngelo et al., 2006, p. 253).
- Free cash flow. Jensen (1986) considers free cash flow as a problem. Management may end up using the excess cash in low-yielding investments or wasting it in operating inefficiencies, so paying out dividends can solve or mitigate this problem by reducing free cash flow (Jensen, 1986). Consistent with the life-cycle theory of dividends, empirical tests show that more mature firms tend to pay higher dividends (DeAngelo et al., 2006; Denis & Osobov, 2008; Thanatawee, 2011).

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## Appendix I
### Demographic information on firms in the sample

A. Sampled Listed Firms Categorized by Sector/Subsector and by Frequency of Dividend Payout

| Sector/Subsector | Non-payer | Occasional | Regular | Total | % of Total |
|---|---|---|---|---|---|
| Financials | 1 | - | 1 | 2 | 2% |
|    Other Financial Institutions | 1 | - | 1 | 2 | 2% |
| Holding Firms | 5 | 1 | 10 | 16 | 14% |
|    Holding Firms | 5 | 1 | 10 | 16 | 14% |
| Industrial | 10 | 9 | 20 | 39 | 33% |
|    Chemicals | - | 2 | 2 | 4 | 3% |
|    Construction, Infra., & Allied Services | 1 | 2 | 1 | 4 | 3% |
|    Electrical Components & Equipment | 2 | - | 3 | 5 | 4% |
|    Electricity, Energy, Power & Water | 1 | 1 | 9 | 11 | 9% |
|    Food, Beverage & Tobacco | 6 | 4 | 5 | 15 | 13% |
| Mining & Oil | 7 | 1 | 2 | 10 | 9% |
|    Mining | 7 | 1 | 2 | 10 | 9% |
| Property | 8 | 1 | 11 | 20 | 17% |
|    Property | 8 | 1 | 11 | 20 | 17% |
| Services | 11 | 6 | 13 | 30 | 26% |
|    Casino & Gaming | 2 | 3 | 3 | 8 | 7% |
|    Education | - | - | 1 | 1 | 1% |
|    Hotel & Leisure | 2 | - | - | 2 | 2% |
|    Information Technology | 2 | 1 | - | 3 | 3% |
|    Media | 1 | - | - | 1 | 1% |
|    Other Services | 2 | - | - | 2 | 2% |
|    Retail | - | - | 3 | 3 | 3% |
|    Telecommunication | - | - | 2 | 2 | 2% |
|    Transportation Services | 2 | 2 | 4 | 8 | 7% |
| **TOTAL** | **42** | **18** | **57** | **117** | **100%** |
| *% of Total* | *36%* | *15%* | *49%* | | *100%* |

B. Average Years from Founding and Listing

| Sector/Subsector | Non-payer | Occasional | Regular | Total | Min | Max |
|---|---|---|---|---|---|---|
| Average Years from Founding | 43.52 | 40.56 | 40.84 | 41.76 | 7 | 115 |
| Average Years from Listing | 31.12 | 25.94 | 27.26 | 28.44 | 5 | 71 |

**Appendix II**
**Empirical studies on determinants of dividend payout policy**

| Author (Year) | Dependent variable — Dividend Payout | Profitability | Liquidity | Leverage | Independent variable — Investment/Growth Opportunities | Firm size | Ownership structure | Others | Technique used related to dividend payout decisions |
|---|---|---|---|---|---|---|---|---|---|
| Alli et al. (1993) | 3-year average dividend payout ratio | | Cash flow variability: OLS estimate of the coefficient of variation in cash flows for a 10-year period (–); Financial slack: sum of cash balances and marketable securities and unused debt capacity (–) | Beta (–); Ratio of net plant to total assets (+) | 3-year average realized capital expenditure by average total assets (–); 5-year average growth rate in operating income (–) | Natural log of total assets (+) | Ratio of common shares owned by institutions to shares outstanding (+); Dispersion of ownership: ratio of the number of shareholders to total outstanding shares (–; n.s. (not significant)); Ratio of shares held by insiders to total shares outstanding (–) | Variability in capital structure: standard deviation around the mean of annual capital structure changes (+); Stability of past dividends (+) | Common factor analysis; OLS regression |
| Banerjee et al. (2007) | Dividend payers | Earnings to asset ratio (+) | | | Rate of growth of assets (–); Market-to-book ratio (–) | NYSE percentile (+) | | | Logit regression |
| Benito and Young (2003) | Dividend omission (binary); Dividend cut | Profit over common stock (–) | | Net debt over market value of assets (+) | Investment over capital stock (–); Tobin's Q: the ratio of market value to replacement cost of capital) (+ for dividend omission; – for dividend cut) | | | Cash flow over capital stock (–); Interest gearing (+); Log of sales (–) | Probit regression |

| Author (Year) | Dependent variable: Dividend Payout | Independent variable: Profitability | Liquidity | Leverage | Investment/Growth Opportunities | Firm size | Ownership structure | Others | Technique used related to dividend payout decisions |
|---|---|---|---|---|---|---|---|---|---|
| Denis and Osobov (2008) | Dividend payout decision | Ratio of earnings before interest to total assets (+) | | | Ratio of market value to total assets (mixed results); Ratio of change total assets from the past period to current total assets (mixed results); Lagged sales growth (mixed results) | Percent of firms in the benchmark population with smaller market capitalization at the end of the year (+) | | Ratio of retained earnings to the book value of equity (+) | Logit regression |
| Fama and French (2001) | Dividend payers | Ratio of firm's earnings before interest to its total assets (–) | | | Rate of growth of assets (–); Market-to-book ratio (–) | NYSE percentile (+) | | | Logit regression |
| Gupta and Banga (2010) | Dividend rate | 7-year average net profit ratio – net profit over net sales (–; n.s.) | 7-year average cash from operations (+) | 7-year average debt-equity ratio (–) | 7-year average annual sales growth (+; n.s.) | | 7-year average institutional shareholdings – percentage of holdings of financial institution, bank, mutual funds and other institutions in a company (+; n.s.) | | Factor/ principal component analysis; OLS regression |
| Jensen et al. (1992) | Ratio of dividends to operating income | Ratio of operating income to total assets (+) | | Ratio of long-term debt to the book value of total assets (–) | 5-year growth rate in sales (–); Expenditure for plant, equipment, and R&D as a percentage of total assets (–) | | Percentage of shares held by insiders (officer, director, or any individual who is actively involved in the decisions of the firm) (–) | Business risk: standard deviation of the first difference in operation income divided by total assets (–) | Three-stage least squares regression |

| Author (Year) | Dependent variable | Independent variable | | | | | | | Technique used related to dividend payout decisions |
|---|---|---|---|---|---|---|---|---|---|
| | Dividend Payout | Profitability | Liquidity | Leverage | Investment/Growth Opportunities | Firm size | Ownership structure | Others | |
| Mehta (2012) | | Return on equity (−); Return on assets (−; n.s.); earnings per share (−; n.s.) | Current ratio (n.s.) | Ratio of short term and long-term liabilities to total shareholder's fund (n.s.) | | Natural log of total assets (+) | | Risk: price-earnings ratio (−) | Backward multiple linear regression |
| Myers and Bacon (2004) | Dividend payout ratio | Net profit margin (+; n.s.) | Current ratio (−; n.s.) | Total debt to total equity ratio (+; considered anomalous) | 5-year sales growth (+) | | Total shares owned by non-insiders (−; n.s.); Percentage of insider ownership (−); Percentage of institutional ownership (+) | 5-year EPS growth (+; n.s.); Price to earnings ratio (+) | OLS regression |
| Rozeff (1982) | 7-year average dividend payout ratio | | | Beta coefficient (−) | Average growth rate of revenues (−); Value Line's forecast of average growth rate of revenues (−) | | Percentage of common stock held by insiders (−); Natural logarithm of number of common stockholders (+) | | OLS regression |
| Short et al. (2002) | Change in dividend ($D_t - D_{t-1}$) | | | | | | Interaction of earnings and institutional ownership (+); Interaction of earnings and managerial ownership (−; of some significance) | | Generalized least squares regression |

| Author (Year) | Dependent variable | | Independent variable | | | | | | Technique used related to dividend payout decisions |
|---|---|---|---|---|---|---|---|---|---|
| | Dividend Payout | Profitability | Liquidity | Leverage | Investment/Growth Opportunities | Firm size | Ownership structure | Others | |
| Truong and Heaney (2007) | Dividend payers | Ratio of net earnings after tax before extraordinary items to total assets (+) | | Ratio of total debt to total assets (−) | Ratio of book value of assets less shareholder equity plus the market value of equity to the book value of total assets (−) | | Largest shareholder type: financial institution (+; n.s.), insider (−; n.s.), or state/government (+; n.s.); Total ownership held by the largest shareholder (−); Square of total ownership held by the largest shareholder (+) | Common law or civil law (−); Industry dummy variable to control for industry effects | Logit regression |

Source: Literature review