Research Article

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Dividends Payout and Earnings Predictability: Evidence from a Developing Country

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Abstract

This study investigates the relation between dividends payout and earnings predictability of firms listed on the Egyptian Stock Exchange as an emerging African market. We depend on a sample of firms listed on the Egyptian stock exchange (EGX100) during 2014-2018. To test the hypotheses, we use two independent sample t-test and OLS regression. The principal analysis revealed that dividends payout improves the ability of current earnings to forecast firms' future earnings. Results also indicated that dividends payout could enhance the ability of current earnings to forecast one year-ahead cash flow. To the best of our knowledge, this is the first study that examines the implications of dividends payout on earnings predictability in the Egyptian market. The findings present new insights to investors, researchers, and regulators concerned with agency conflicts of interest within the firm. It also presents evidence on the potential alternative mechanisms for decreasing agency costs in African emerging markets.

Keywords: *Earnings predictability, Dividends payout, Egypt, Emerging market*

1. Introduction

Several scholars have investigated the different impacts of dividends payout policies. A set of studies informed positive impacts of dividends payout policies such as persistent earnings and earnings quality (e.g., Skinner and Soltes, 2011; Ham et al., 2020; Pathak and Ranajee, 2020). Despite the present extensive evidence on dividends payout, minimal studies investigate the effect of dividends payout on earnings predictability (Al-Dhamari and Ismail, 2014). This is because the literature has focused on other determinants of earnings predictability such as audit quality (Hussainey, 2009) and corporate governance (Al-Dhamari and Ismail, 2014; Mollah et al., 2019). Thus, the present work addresses the effect of dividends payout on earnings predictability by presenting evidence from an emerging African market—the Egyptian stock market. This is also important because most reported evidence in the literature is using data from advanced markets such as the US context (e.g., Skinner and Soltes, 2011; Møller and Sander, 2017; Ham et al., 2020). Other studies focused on Asian developing markets (e.g., Welker et al., 2017 in China; Nguyen and Bui, 2019 in Vietnam; Pathak and Ranajee, 2020 in India). Yet, to the best of our knowledge, no previous related research conducted African emerging markets such as Egypt.

Emerging economies with their unique features such as modest levels of investor protection and premature governance practices, compared to developed settings, are worthy of a particular investigation. In this regard, He et al. (2017), for example, show less likelihood of dividends paying firms to commit earnings management in settings with lower levels of investor protection. Further, although Pathak and Ranajee (2020) showed a positive impact of dividends payout on Indian firms' earnings quality, this relation was found to be negative during the financial crisis period. Hence, the unique contextual and environmental features of emerging contexts can have their implications for the relationship between dividends payout and earnings predictability.

The Egyptian context has some unique features that can have impacts on the dividends payout-earnings predictability relationship. In contrast to developed countries such as the USA and UK, Egypt is a code law country in which local accounting standards are centrally developed by governmental institutions and imposed on listed firms (Ebaid, 2012). This refers to the different institutional context of accounting information in Egypt in terms of politicization of the accounting system (Ball et al., 2000). Further, as the situation in the majority of emerging markets, the Egyptian stock market faces a weak legal environment and hence, weak governance systems (Bremer and Ellias, 2007), and lower degrees of investor protection, in contrast to the case in developed and stabilized stock markets (Mostafa, 2016). These institutional features can affect the quality of financial reporting. For instance, they may facilitate some earnings management practices to boost the reported financial results (Ebaid, 2012).

The principal analysis in this study revealed that dividends payout enhances the ability of current earnings to forecast future (one-year-ahead) earnings. Besides, the results indicated that dividends payout could improve the ability of current earnings to forecast one year-ahead cash flow (CF) (see Ebirien et al., 2019). This work contributes to the previous studies by addressing the effect of dividends payout on the ability of current earnings forecast future earnings, and CFs; an issue that is not widely investigated in the previous studies. In addition, this study focuses on the Egyptian market as one of the important African emerging markets that are rarely investigated.

The remaining of the study is structured as follows. Sections 2 presents literature review and hypotheses development. Section 3 clarifies research methods. Sections 4 and 5 present data analyses and discuss the results. Finally, Section 6 concludes the paper.

2. Literature Review and Hypotheses Development

A significant portion of the literature shows that free cash flow, rather than profit distributions, can be related to suboptimal management actions. These actions include the engagement in unprofitable projects that yield negative returns (Chung et al., 2005) and resorting to malpractices (such as earnings management practices) to hide the present losses (Welker et al., 2017; Nguyen and Bui, 2019). For example, Welker et al. (2017) found lower discretionary accruals in Chinese firms with higher dividends payout.

Moreover, other related studies linked dividends payout to financial reporting quality. In this regard, using evidence from Indonesia, Sirait and Siregar (2014) show that increases in dividends payout are related to improvements in earnings quality. Similarly, Nguyen and Bui (2019) addressed the relation between Vietnamese-listed firms' dividends policy and earnings quality and observed that dividend-paying firms have better earnings quality. Likewise, Pathak and Ranajee (2020) reported a positive impact of dividends payout on Indian firms' earnings quality.

This impact of dividends payout can be explained concerning the idea that dividends payout, as other scholars indicated, can have valuable information content about corporate behaviour and situation. This information content can provide users with signals about the firm's (anticipated) performance (e.g., Nissim and Ziv, 2001; Brav et al., 2005). In this regard, Penman (1983) suggested that dividends declaration conveys information about US corporate management's expectations. Similar findings are also observed by Lee (2010) in the Singapore context. Further, supporting this perspective, Møller and Sander (2017) show that both US firms' dividends payout and earnings can help users predict their future dividends policy. Recently, Ham et al. (2020) found that changes in dividends convey information concerning US's firms' income changes.

In contrast, other studies linked dividends payout and lower levels of FCF to negative issues or practices. For example, in the US context, Edelstein et al. (2008) found that Real Estate Investment Trusts yielding lower CFs and lower chances of getting funds from external sources are primarily associated with real earnings management actions to modify their dividends policies. Other studies indicated that dividends payout is not related to better future profits (Grullon et al., 2005; Kalay and Lemmon, 2008). Finally, some studies show that higher dividends do not convoy information regarding future earnings (e.g., Benartzi et al., 1997; Grullon et al., 2005).

Other studies indicated that dividends payout may provide insights into future permanent earnings (see Ham et al., 2020). That is, some studies linked dividends payout and lower FCFs to positive issues such as better earnings growth in the future (see Brav et al., 2005; Lee, 2010; Skinner and Soltes, 2011). For example, Arnott and Asness (2003) showed that higher levels of dividends payout are related to efficient projects and improvement in US future profit results. Brav et al. (2005) found that the stability of future earnings is connected to the dividends payout policy. Further, in the Singapore market, Lee (2010) shows that increases in dividends payout are related to a steady rise in future profitability. Using US data, Skinner and Soltes (2011) found that dividends paying firms mostly present persistent earnings—rather than losses—in the future.

From the above, it is observed that there are inconclusive results reported in the literature regarding the impact of dividends payout policies. Further, minimal studies are done in emerging contexts, as most studies focused on developed and stabilized markets. We contribute to the previous studies by investigating the relation between dividends payout and EP, which is not widely examined in the literature, bringing evidence from an emerging African market.

Some studies referred to the potential prediction ability of dividends payout. In this regard, Griffin (1976) concluded that there is unique information contained in dividends. Griffin found that the impact of both earnings per share (EPS), dividends-per-share, and EPS forecasts on the evaluation of anticipated earnings is significant. Penman (1983) examined if dividends declaration and earnings forecasts can help predict firm value, finding that this is not possible if the firm did not modify their dividends according to the earnings level inferred by the earnings forecasts. Ofer and Siegel (1987) show that studying variations in dividends can help analysts improve their projections about US future corporate earnings. Al-Dhamari and Ismail (2014) reported that Malaysian firms with higher levels of CFs (i.e., lower dividends payout) face difficulty in predicting future earnings. These implications of dividends make us suggest that dividends payout policy can provide important insights concerning the firm's future earnings and cash flow. Thus, we investigate the relationship between dividends payout and predicting future corporate earnings and cash flow. Using newer evidence from an emerging market that is rarely examined—the Egyptian stock market—we formulate our hypotheses as follows:

H1: Dividends payout improves current earnings' ability to predict future earnings.

H2: Dividends payout improves current earnings' ability to predict future cash flow from operations.

3. Study Design

3.1 Sample and data

We depend on a sample of the Egyptian firms listed on the Egyptian Stock Exchange. Mainly, we use firms listed on the EGX100 index during the period from 2014 to 2018. The annual reports were attained from Egypt for Information Dissemination (EGID) firm. The initial sample size was 100 firms within five years. The banking and financial services sector has been excluded because the nature of institutions working in this sector may affect the accuracy of our results. The financial statements for the year 2019 are used to measure the prediction ability of 2018 earnings, applying the previously mentioned standards. Thus, 29 firms were excluded, making the final sample size 71 firms with 355 observations, as explained in Table 1.

Table 1: Sample structure according to sectors

No.	Sector	No. of firms	No. of observations	% Out of total
1	Food and beverage	11	55	15.5%
2	Construction and materials	9	45	12.7%
3	Industrial goods, services and automobiles	7	35	9.85%
4	Travel and leisure	5	25	7%
5	Real estate	11	55	15.5%
6	Personal and household products	6	30	8.5%
7	Natural resources	6	30	8.5%
8	Chemicals	7	35	9.85%
9	Telecommunications	1	5	1.4%
10	Technology	2	10	2.8%
11	Healthcare and pharmaceuticals	2	10	2.8%
12	Media	1	5	1.4%
13	Retail	1	5	1.4%
14	Oil and gas	2	10	2.8%
	Total	71	355	100%

3.2 Research models and variables measurement

We focus on earnings predictability as one of the most popular proxies for accounting-based earnings quality. Earnings predictability indicates how current earnings can help in forecasting future earnings. This is founded on the view that earnings numbers that are probable to repeat themselves are of higher quality (Eliwa et al., 2016). As per the IASB Framework, information has a "predictive value" if it assists investors to forecast future results such as corporate financial performance (Melville, 2008). We measure earnings predictability by the slope coefficient from a regression of one-year-ahead earnings ($EARN_{it+1}$) on current earnings ($EARN_{it}$) (Al-dhamari and Ku Ismail, 2012). To examine whether the dividends payout mitigates firms' agency problems and increases their predictive ability of earnings, the researchers extend the future earnings-current earnings relationship by the addition of dividends to the relationship (Al-Dhamari and Ismail, 2013). If dividends payout enhances how current earnings forecast future earnings, we anticipate a positive coefficient of current earnings and dividends ($EARN_{it} \times DIV_{it}$) (Velury and Jenkins 2006; Skinner and Soltes 2011).

Following Velury and Jenkins (2006), the researchers extend the future earnings-current earnings relationship by controlling for corporate characteristics, such as corporate size, financial leverage, growth, and loss (see also Al-Dhamari and Ismail, 2014; Vichitsarawong and Pornupatham, 2015). This is important to confirm that the moderating impact captures only the interactive influence of dividends payout variables. Here, Firm size ($FSize_{it}$) is measured by the natural logarithm of total assets for a firm (i) in a year (t). Leverage (LEV_{it}) is the level of total liabilities to total assets for a firm (i) in a year (t). Firm loss ($Loss_{it}$) is a binary variable with the value of 1 for loss-making firms (i) in a year (t), and 0 for other firms (Al-Dhamari and Ismail, 2013). Firm Growth ($FGrowth_{it}$) is measured by percentage change in sales for a firm (i) in a year (t). We also include some governance characteristics as control variables such as board independence and CEO duality. Board independence ($Non\_Executives_{it}$) is measured by the ratio of the number of external directors to the total directors' number. CEO duality ($Duality_{it}$) is measured as a dummy variable that equals 1 when CEO and the board chair are the same person, and 0 otherwise (Shrivastav and Kalsie, 2016). Thus, the following model is used to test H1:

$$EARN_{it+1} = \alpha + B_1(EARN_{it}) + B_2(DIV_{it}) + B_3(DIV_{it} \times EARN_{it}) + B_4(FSize_{it}) + B_5(LEV_{it}) + B_6(GROWTH_{it}) + B_7(Loss_{it}) + B_8(Non\_Executives_{it}) + B_9(Duality_{it}) + B_{10}(\text{Industry Dummies}) + B_{11}(\text{Year Dummies})\ Model\ (1)$$

In addition, to confirm that our findings are not driven by the possibility that smoothed future earnings are simply more predictable, we use future cash flow (CFO_{it+1}), not only future earnings ($EARN_{it+1}$), as the dependent variable (Shu and Thomas, 2019). We deal with this issue by concentrating on future cash flows, which are independent of future earnings' properties (Baik et al. 2020). In this regard, Velury and Jenkins (2006) confirmed that the predictive value of earnings happened when current earnings can anticipate expected future cash flow. To examine whether dividends payout mitigates firms' agency problems and increases their earnings predictability, we extend the future cash flow-current earnings relation by adding dividends to the relationship. If dividends payout enhanced how current earnings predict future cash flow, we anticipate a positive coefficient of current earnings and dividends ($EARN_{it} \times DIV_{it}$). Following Velury and Jenkins (2006); Skinner and Soltes (2011); Al-Dhamari and Ismail (2014); Vichitsarawong and Pornupatham (2015), we present the variables and measurements used in this study in Table 2. Hence, the following model is used to test H2:

$$CFO_{it+1} = \alpha + B_1(EARN_{it}) + B_2(DIV_{it}) + B_3(DIV_{it} \times EARN_{it}) + B_4(FSize_{it}) + B_5(LEV_{it}) + B_6(GROWTH_{it}) + B_7(Loss_{it}) + B_8(Non\_Executives_{it}) + B_9(Duality_{it}) + B_{10}(\text{Industry Dummies}) + B_{11}(\text{Year Dummies})\ Model\ (2)$$

Table 2: Variables' definition and measurement

Variable	Description	Measurement
$EARN_{it}$	Current earnings	Net income before extraordinary items of firm (i) in year (t)deflated by lagged total assets.
$EARN_{it+1}$	One-year-ahead earnings deflated by lagged total assets.	Net income before extraordinary items of firm (i) in year (t+1) deflated by lagged total assets.
CFO_{it+1}	One-year-ahead cash flow from operations deflated by lagged total assets (Shu and Thomas, 2019).	Cash flow from operations of firm (i) in year (t)deflated by lagged total assets.
DIV_{it}	Dividends payout	Dummy variable that takes 1 if the firm (i) has paid dividends in year (t), zero otherwise.
$FSize_{it}$	Firm size	The natural logarithm of total assets for firm (i) in year (t).
LEV_{it}	FirmLeverage	The ratio of total liabilities to total assets for firm (i) in year (t).
$Loss_{it}$	Loss-making firm	A binary variable with value that equal 1 for loss firms (i) in year (t), and 0 for other firms.
$Growth_{it}$	Firm growth	The percentage change in sales for firm (i) in year (t).
$Non\text{-}Executives_{it}$	Board independence	The ratio of the number of external directors to the total directors' number.
$Duality_{it}$	CEO duality	Dummy variable that equals 1 when CEO and chairman of the board are the same person, and 0 otherwise.

4. Analysis and Findings' Discussion

4.1 Descriptive statistics and correlations

As per Table 3, there is an increase in the rates of dividends distribution in the sample, especially in the telecommunications, retail, and oil and gas sectors. All firms in those industries made dividends during the study period. Further, 82.9%, 80%, and 73.3% of the total firms working in chemicals, media, and construction and materials sectors distributed dividends during the study period, respectively. Also, 63.3%, 60%, and 50% of total firms working in personal and household products, technology, and natural resources sectors distributed dividends during the study period, respectively.

Table 3: Dividends payout according to sectors

No.	Sector	Dividends payers' firms		None-dividends payers' firms	
		No.	%	No.	%
1	Food and beverage	22	40%	33	60%
2	Construction and materials	33	73.3%	12	26.7%
3	Industrial goods, services and automobiles.	16	45.7%	19	54.3%
4	Travel and leisure	11	44%	14	56%
5	Real estate	22	40%	33	60%
6	Personal and household products	19	63.3%	11	36.7%
7	Natural resources	15	50%	15	50%
8	Chemicals	29	82.9%	6	17.1%
9	Telecommunications	5	100%	0	0%
10	Technology	6	60%	4	40%
11	Healthcare and pharmaceuticals	5	5%	5	5%
12	Media	4	80%	1	20%
13	Retail	5	100%	0	0%
14	Oil and gas	10	100%	0	0%
	Total	202	56.9%	153	43.1%

As per table 4 (panel A), it is found that the average profitability of the firm ($EARN_{it}$) has a mean value of 0.0588, a standard deviation of 0.10996, a minimum value of -0.160, and a maximum value of 0.280. This means the existence of a variation in the profitability of the sample firms. In addition, we notice that the leverage of firms (LEV_{it}) has a mean value of 0.4116, a standard deviation of 0.25690, a minimum value of -0.000, and a maximum value of 1.00. This reflects the increase in debts to total assets ratios in our sample. Also, we can notice that 56.9% out of the total firms in our sample pay dividends during the study period. In contrast, 21.7% out of the entire firms incurred losses during the study period. Panel B of Table 4 shows the variables' mean values, distinctly for dividend-paying firms and non-dividend-paying firms. Dividend-paying firms are characterized by higher profitability ($EARN_{it}$), more future profitability ($EARN_{it+1}$) and (CFO_{it+1}), higher firm size ($FSize_{it}$), lower leverage (LEV_{it}), and lower incidence of losses ($Loss_{it}$).

Table 4: Descriptive Statistics

Panel A: Descriptive statistics for the full sample					
Variable	Mean	Median	Std. Dev.	Minimum	Maximum
$EARN_{it}$	0.0588	0.0398	0.10996	-0.160	0.280
$EARN_{it+1}$	0.0575	0.0412	0.10811	-0.160	0.279
CFO_{it+1}	0.0346	0.0216	0.09589	-0.142	0.231
$FSize_{it}$	21.0321	20.9977	1.82199	17.04	25.47
LEV_{it}	0.4116	0.3848	0.25690	-0.000	1.00
$Growth_{it}$	0.1156	0.0824	0.44544	-0.745	1.02
$Non\_Executives_{it}$	0.7350	0.7800	0.17118	0.330	1.00

Dummy Variables Frequencies											
DIV_{it}				$Loss_{it}$				$Duality_{it}$			
Dividends		None-Dividends		Loss-making firms		None loss-making		Duality		None-duality	
No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
202	56.9%	153	43.1%	77	21.7%	278	78.3%	236	66.5%	119	33.5%

Panel B: Means of the variables across dividends payers' firms and non-dividends payers' firms			
Variable	Dividends payers' firms	None-Dividends payers' firms	Difference
	Mean	Mean	
$EARN_{it}$	0.1038	-0.000	0.10447***
$EARN_{it+1}$	0.0999	0.0016	0.09830***
CFO_{it+1}	0.0663	-0.0072	0.07350***
$FSize_{it}$	21.5140	20.3960	1.11805***
LEV_{it}	0.3852	0.4465	-0.06134**
% $Loss_{it}$	7.4%	40.5%	-33.1%***
$Growth_{it}$	0.1383	0.0855	0.05286
$Non\_Executives_{it}$	0.7353	0.7346	0.00077
% $Duality_{it}$	69.3%	62.7%	-6.6%

Notes: $EARN_{it+1}$, is net income before extraordinary items of firm (i) in year (t+1) deflated by lagged total assets (Kochiyama and Nakamura, 2021). CFOit+1, is CF from operations of firm (i) in year (t) deflated by lagged total assets. EARNit is net income before extraordinary items of firm (i) in year (t) deflated by lagged total assets (Al-Dhamari and Ismail, 2013). DIV_{it} is a dummy variable that takea 1 if the firm (i) has paid dividends in year (t), and zero otherwise. FSizeit is the natural logarithm of total assets for firm (i) in year (t). LEVit is the ratio of total liabilities to total assets for firm (i) in year (t) (Faulkender et al., 2012). Lossit is a binary variable with value of 1 for loss firms (i) in year (t), and 0 for other firms (Alfraih, 2017). $Growth_{it}$ is the firm growth and is measured by the percentage change in sales for firm (i) in year (t). $Non\_Executives_{it}$ is the ratio of the number of external directors to the total directors' number. $Duality_{it}$ is a dummy variable that equal 1 when CEO and board chair are the same person, and 0 otherwise (Shrivastav and Kalsie, 2016). *, **, *** refer to two-tailed significance at the 0.10, 0.05 and 0.01 levels, respectively.

As observed in Table 5, there is a significant positive association between currents earnings ($EARN_{it}$) and future earnings and cash flow ($EARN_{it+1}$, CFO_{it+1}) ato.01 level. There is a significant positive association between dividends payout (DIV_{it}) and future earnings and cash flow ($EARN_{it+1}$, CFO_{it+1}) ato.01 level. There is a significant positive association of firm size ($FSize_{it}$) on future earnings and cash flow ($EARN_{it+1}$, CFO_{it+1}) at 0.01 and 0.05 levels, respectively. There is a significant negative association between leverage (LEV_{it}) and future earnings and cash flow ($EARN_{it+1}$, CFO_{it+1}) at 0.01 level. There is a significant negative relation between firm loss ($Loss_{it}$) and future earnings and cash flow ($EARN_{it+1}$, CFO_{it+1}) ato.01 level.The results show an insignificant relation between firm growth ($Growth_{it}$), $Non\_Executives_{it}$ ($Non\text{-}EX_{it}$), board duality ($Duality_{it}$), and future earnings and cash flow ($EARN_{it+1}$, CFO_{it+1}).

Table 5: Correlation matrix between the main variables

	$EARN_{it+1}$	CFO_{it+1}	$EARN_{it}$	DIV_{it}	$FSize_{it}$	LEV_{it}	$Loss_{it}$	$Growth_{it}$	Non_Ex_{it}	$Duality_{it}$
$EARN_{it+1}$	1									
CFO_{it+1}	0.527***	1								
$EARN_{it}$	0.767***	0.456***	1							
DIV_{it}	0.451***	0.380***	0.471***	1						
$FSize_{it}$	0.190***	0.116**	0.184***	0.304***	1					
LEV_{it}	-0.227***	-0.233***	-0.267***	-0.118**	-0.047	1				
$Loss_{it}$	-0.517***	-0.326***	-0.647***	-0.398***	-0.183***	0.312***	1			
$Growth_{it}$	0.048	-0.004	0.108**	0.059	0.061	0.111**	-0.110**	1		
$Non\_Executives_{it}$	0.043	0.049	0.090*	0.002	0.015	-0.085	-0.041	-0.017	1	
$Duality_{it}$	0.074	0.050	0.046	0.069	0.003	-0.159***	-0.061	0.018	-0.226***	1

Notes: $EARN_{it+1}$, is net income before extraordinary items of firm (i) in year (t+1) deflated by lagged total assets (Kochiyama and Nakamura, 2021). CFOit+1, is CF from operations of firm (i) in year (t) deflated by lagged total assets. EARNit is net income before extraordinary items of firm (i) in year (t) deflated by lagged total assets (Al-Dhamari and Ismail, 2013). DIV_{it} is a dummy variable that takea 1 if the firm (i) has paid dividends in year (t), and zero otherwise. FSizeit is the natural logarithm of total assets for firm (i) in year (t). LEVit is the ratio of total liabilities to total assets for firm (i) in year (t) (Faulkender et al., 2012). Lossit is a binary variable with value of 1 for loss firms (i) in year (t), and 0 for other firms (Alfraih, 2017). $Growth_{it}$ is the firm growth and is measured by the percentage change in sales for firm (i) in year (t). $Non\_Executives_{it}$ is the ratio of the number of external directors to the total directors' number. $Duality_{it}$ is a dummy variable that equal 1 when CEO and board chair are the same person, and 0 otherwise (Shrivastav and Kalsie, 2016). *, **, *** refer to two-tailed significance at the 0.10, 0.05 and 0.01 levels, respectively.

4.2 Empirical results

As shown in Table 6, in model 1, we investigate the ability of current earnings to forecast one-year-ahead earnings ($EARN_{it+1}$). We found that the coefficients of current earnings and dividends payout are positive and significant at 1% and 10% levels (β=0.536, 0.017, t= 6.922, 1.688), respectively. We also found that the coefficient of current earnings and dividends ($EARN_{it}\times DIV_{it}$) is positive and significant at 5% level (β=0.181, t= 2.084). These results confirm that dividends payout enhances the ability of current earnings to forecast future earnings. This supports our first hypothesis (*H1: Dividends payout enhances current earnings' ability to forecast future earnings*).

This finding supports the previous research that argues that dividends payout can contribute to valuable information content about corporate future financial behaviour and situation (Nissim and Ziv, 2001; Brav et al., 2005; Lee, 2010). It also supports the argument that dividends payout can provide insights into future permanent earnings (Ham's et al., 2020). Finally, it supports studies that linked dividends to the projections of future earnings, such as Arnott and Asness (2003) in the USA context and Al-Dhamari and Ismail (2014) in the Malaysian context. However, it is different from other studies showing that increases in dividends do not convoy information regarding future earnings (e.g., Grullon et al., 2005). This variance highlights the importance of interpreting results concerning the context where they are found.

In model 2, we investigate the ability of current earnings to forecast one-year-ahead cash flow from operations (CFO_{it+1}). We found that the coefficient of current earnings is positive and insignificant (β=0.056, t= 0.603), the coefficient of dividends payout is positive and significant at 10% level (β=0.021, t= 1.705), and the coefficient of current earnings and dividends ($EARN_{it}\times DIV_{it}$) is positive and significant at 1% level (β=0.342, t= 3.270). These results indicate that dividends payout can improve the ability of current earnings to forecast one year-ahead cash flow (Ebirien et al., 2019). This supports our second hypothesis (*H2: Dividends payout improves current earnings ability to predict future cash flow from operations*).

However, regarding control variables (i.e., firm size, leverage, growth, loss, board independence, and CEO duality), despite the present correlation between control variables and future projected earnings and cash flow (Table 5), it is found that they do not have any significant effect in model 1. This finding is inconsistent with Al-Dhamari and Ismail (2014). In model 2, control variables have the same results compared to model 1, except that financial leverage showed a significant negative impact on the ability of dividends payout to forecast future cash flow.

This unique finding may be due to the dominant effect of $EARN_{it}$ that can cancel the influence of other existing variables. This is consistent with Achen (2000), who noted that when one or more lagged dependent variables included as explanatory variables, they can squash the influences of other factors. This can make the original variables have no real difference (Achen, 2000). Also, this finding supports the unique nature of the Egyptian market characterised by the dominant influences of accounting-based information over all other (non-financial) information (including governance mechanisms) (e.g., Ragab and Omran, 2006; Hassan et al., 2009; Dahawy and Samaha, 2010; Mostafa, 2016). This is because the latter kind of information is not well developed and hence, not widely used and have minimal effects, in the Egyptian market, as the case in many emerging markets that have marginalised legal and governance systems (Samaha and Stapleton, 2008).

Table 6: OLS regression findings for the effect of dividends payout on earnings predictability ($EARN_{it+1}$, CFO_{it+1})

	Model (1)		Model (2)	
	Dependent ($EARN_{it+1}$)		Dependent (CFO_{it+1})	
	Coefficient	t-value	Coefficient	t-value
Constant	-0.026	-0.496	0.071	1.135
$EARN_{it}$	0.536	6.922***	0.056	0.603
DIV_{it}	0.017	1.688*	0.021	1.705*
$EARN_{it}\times DIV_{it}$	0.181	2.084**	0.342	3.270***
$FSize_{it}$	0.002	0.984	-0.002	-0.578
LEV_{it}	0.006	0.329	-0.044	-2.077**
$Growth_{it}$	-0.009	-1.042	-0.008	-0.806
$Loss_{it}$	-0.015	-1.087	-0.020	-1.239
$Non\_Executives_{it}$	-0.002	-0.074	-0.005	-0.189
$Duality_{it}$	0.009	0.924	-0.009	-0.796
Industry Dummies	Yes		Yes	
Year Dummies	Yes		Yes	
Observations	355		355	
F. Test	21.659		6.085	
R^2	0.632		0.325	
Adjusted R^2	0.603		0.272	
VIF	< 6		< 6	

Notes: EARNit+1, is net income before extraordinary items of firm (i) in year (t+1) deflated by lagged total assets (Kochiyama and Nakamura, 2021). CFOit+1, is CF from operations of firm (i) in year (t) deflated by lagged total assets. EARNit is net income before extraordinary items of firm (i) in year (t) deflated by lagged total assets (Al-Dhamari and Ismail, 2013). DIVit is a dummy variable that takea 1 if the firm (i) has paid dividends in year (t), and zero otherwise. FSizeit is the natural logarithm of total assets for firm (i) in year (t). LEVit is the ratio of total liabilities to total assets for firm (i) in year (t) (Faulkender et al., 2012). Lossit is a binary variable with value of 1 for loss firms (i) in year (t), and 0 for other firms (Alfraih, 2017). Growthit is the firm growth and is measured by the percentage change in sales for firm (i) in year (t). Non_Executivesit is the ratio of the number of external directors to the total directors' number. Dualityit is a dummy variable that equal 1 when CEO and board chair are the same person, and 0 otherwise (Shrivastav and Kalsie, 2016). *, **, *** refer to two-tailed significance at the 0.10, 0.05 and 0.01 levels, respectively.

5. Robustness Test: Using Alternative Proxies for Dividends Payout

Following some studies in the literature, we also use two alternative proxies for dividends payout, instead of the dummy variable (DIV) (see, e.g., Al-Najjar and Hussainey 2009; Skinner and Soltes 2011; Nguyen and Bui 2019). Specifically, we use dividends yield (DY), measured by dividends per share scaled by stock price, and dividends payout ratio (DIVE), measured by dividends per share scaled by EPS (Al-Najjar and Hussainey 2009; Skinner and Soltes 2011; Nguyen and Bui 2019). We split dividends payers' firms into quintiles drawing upon dividends yield and dividends payout ratios. Table 7 presents OLS regression results using the two alternative proxies for dividends payout (DY_{it}, $DIVE_{it}$).

As shown in table 7, concerning dividends yield as an alternative proxy for dividends payout (models 1 and 3), the coefficients of current earnings and dividends yield ($EARN_{it}\times DY_{it}$) are positive and significant at 1% level (β=0.174, 0.126; t= 10.026, 5.061), respectively. This finding confirms the previous results, indicating that dividends yield (DY_{it}) improves the ability of current earnings to forecast one and two-years-ahead earnings. Moreover, the coefficient of current earnings and dividends yield ($EARN_{it}\times DY_{it}$) (model 2) is positive and significant at a 1% level (β=0.084, t= 4.035). This indicates that the dividends yield

(DY_{it}) can improve the ability of current earnings to predict one-year-ahead cash flow (Ebirien et al., 2019). However, the coefficient of current earnings and dividends yield ($EARN_{it}$×DY_{it}) (model 4) is positive and insignificant (β=0.030, t= 1.249). This indicates that dividends yield (DY_{it}) does not enhance the ability of current earnings to predict two-years-ahead cash flow (Ebirien et al., 2019).

Concerning the use of dividends payout ratio as the other alternative proxy for dividends payout, we found that the coefficients of current earnings and dividends payout ratio ($EARN_{it}$×$DIVE_{it}$) (models 1 and 3) are positive and significant at 1% level (β=0.186, 0.151; t= 11.222, 6.279), respectively. This finding indicates that the dividends payout ratio ($DIVE_{it}$) improves the ability of current earnings to forecast one and two-years-ahead earnings. Moreover, the coefficients of current earnings and dividends payout ratio ($EARN_{it}$×$DIVE_{it}$) (models 2 and 4) are positive and significant at a 1% level (β=0.099, 0.068, t= 5.000, 2.950), respectively. This finding indicates that the dividends payout ratio ($DIVE_{it}$) improves the ability of current earnings to forecast one and two-years-ahead cash flow.

These findings mostly agree with the previous findings. It is worth noting that, in all tests, the positive effect of dividends payout on improving the ability of current earnings to predict two-years-ahead cash flow did not appear except in the last robustness test (where dividends payout ratio was used as a proxy for dividends payout). Overall, our results indicate that H1 is accepted, and H2 is partially accepted.

Table 7: Robustness tests, depending on alternative proxies for dividends—payout dividends per share (DY), and dividends payout ratio (DIVE)

	Model (1)		**Model (3)**		**Model (1)**		**Model (3)**	
	Dependent $EARN_{it+1}$)		Dependent(EARNit+2)		Dependent(EARNit+1)		Dependent(EARNit+2)	
	Coefficient	t-value	Coefficient	t-value	Coefficient	t-value	Coefficient	t-value
Constant	-0.036	-0.654	-0.101	-1.369	-0.034	-0.622	-0.092	-1.235
$EARN_{it}$	0.083	1.987**	-0.045	-0.826	0.088	2.160**	-0.057	-1.059
DY_{it}	0.000	0.098	0.019	2.800***				
$EARN_{it}$×DY_{it}	0.174	10.026***	0.126	5.061***				
$DIVE_{it}$					0.000	-0.109	0.012	2.022**
$EARN_{it}$×$DIVE_{it}$					0.186	11.222***	.0151	6.279***
$FSize_{it}$	0.004	1.672	0.005	1.568	0.004	1.662*	0.005	1.672*
LEV_{it}	-0.006	-0.317	-0.007	-0.271	0.000	0.022	0.010	0.393
$Growth_{it}$	-0.008	-0.977	-0.011	-0.922	-0.006	-0.752	-0.011	-0.909
$Loss_{it}$	-0.031	-2.503**	-0.015	-0.857	-0.029	-2.327**	-0.017	-0.947
$Non\_Executives_{it}$	-0.005	-0.186	-0.004	-0.118	-0.012	-0.486	-0.017	-0.520
$Duality_{it}$	0.009	0.929	0.010	0.806	0.008	0.829	0.009	0.681
Industry Dummies	Yes		Yes		Yes		Yes	
Year Dummies	Yes		Yes		Yes		Yes	
Observations	355		284		355		284	
F. Test	20.842		8.975		20.667		8.496	
R^2	0.626		0.468		0.623		0.453	
Adjusted R^2	0.596		0.416		0.593		0.400	
VIF	< 6		< 6		<6		< 6	
	Model (2)		**Model (4)**		**Model (2)**		**Model (4)**	
	Dependent (CFO_{it+1})		Dependent (CFO_{it+2})		Dependent (CFO_{it+1})		Dependent (CFO_{it+2})	
	Coefficient	t-value	Coefficient	t-value	Coefficient	t-value	Coefficient	t-value
Constant	0.022	0.336	-0.036	-0.502	0.034	0.522	-0.007	-0.095
$EARN_{it}$	-0.025	-0.505	0.007	0.135	-0.023	-0.481	-0.006	-0.123
DY_{it}	0.011	1.837*	0.025	3.726***				
EARNit×DYit	0.084	4.035***	0.030	1.249				
$DIVE_{it}$					0.008	1.622	0.017	3.063***
$EARN_{it}$×$DIVE_{it}$					0.099	5.000***	0.068	2.950***
$FSize_{it}$	0.000	-0.101	0.001	0.243	0.000	-0.139	0.000	0.138
LEV_{it}	-0.043	-1.995**	-0.026	-1.091	-0.037	-1.754*	-0.014	-0.565
$Growth_{it}$	-0.008	-0.815	-0.014	-1.269	-0.006	-0.634	-0.014	-1.248
$Loss_{it}$	-0.015	-1.019	-0.039	-2.311**	-0.011	-0.766	-0.034	-1.976**
$Non\_Executives_{it}$	-0.008	-0.267	0.008	0.261	-0.019	-0.637	-0.010	-0.324
$Duality_{it}$	-0.005	-0.413	0.008	0.685	-0.006	-0.563	0.005	0.420
Industry Dummies	Yes		Yes		Yes		Yes	
Year Dummies	Yes		Yes		Yes		Yes	
Observations	355		284		355		284	
F. Test	5.830		5.585		5.764		5.735	
R^2	0.319		0.354		0.316		0.359	
Adjusted R^2	0.264		0.290		0.261		0.296	
VIF	< 6		< 6		< 6		< 6	

6. Conclusion

In this research, we examined the effect of dividends payout on the ability of firms' current earnings to forecast future earnings and cash flow. The main analysis revealed that dividends payout improves the ability of current earnings to anticipate future earnings. Findings also indicated that dividends payout could improve the ability of current earnings to predict one year-ahead cash flow (see Ebirien et al., 2019). Further, to check the validity of the main results, a robustness test is used by: measuring using two alternative proxies for dividends payout (i.e., dividends yield and dividends payout ratio). The results mostly agreed with the main results, indicating that H1 is accepted and H2 is partially accepted.

Our findings support the previous research that argues that dividends payout can indicate valuable information content about corporate future financial behaviour and situation (Brav et al., 2005; Lee, 2010). The present findings also support the arguments that dividends payout can provide insights into future permanent earnings (Ham et al.., 2020). Finally, it supports studies that linked dividends to the projections of future earnings (e.g., Arnott and Asness, 2003; Al-Dhamari and Ismail, 2014). However, it is different from other studies that do not see dividends convoying valuable information about corporate future earnings (e.g., Benartzi et al., 1997; Grullon et al., 2005). This difference highlights the importance of interpreting results concerning the context where they are found, noting that the majority of the previous studies are done in advanced and stable contexts such as the US context.

This work contributes to the previous studies by addressing the impact of dividends payout on the ability of earnings to forecast future earnings and CF, an issue that is not widely investigated in the previous studies. That is, the literature focuses on other determinants of earnings predictability, such as audit quality (Hussainey, 2009) and corporate governance (Mollah et al., 2019). Further, this study focuses on the Egyptian market as one of the important African emerging markets rarely investigated so far in the literature. This is important because most reported evidence in the literature is using data from advanced settings such as the US context (see, e.g., Møller and Sander, 2017; Ham et al., 2020). We found that 56.9 of the sample firms are paying dividends. The results of this study agree with the agency theory, implying that firms making dividends distributions are more able to predict earnings. This would eventually decrease agency costs in these firms by, for instance, allowing more monitoring, enhancing the quality and value of disclosed information, and directing management actions towards the firm's best interests. The findings also confirm the argument the dividends payout in this kind of emerging markets can work as an alternative governance mechanism supporting the present marginalised legal and governance regulations in these markets (Bremer and Ellias, 2007; Mostafa, 2016).

The study has some implications for analysts, investors, regulators, and researchers. It is observed that the agency cost could be lower for dividends payer firms. The results indicated that analysts could better predict future earnings in dividend-paying firms. Investors are anticipated to have persistent future earnings and cash flow in dividends-paying firms. For regulators, our findings direct them to the importance of reducing the agency problem through paying more attention to governance-related regulations. This could eventually guide or enhance investors' decisions.

Finally, this work is not without limitations. Firstly, we did not test the impact of dividends payout on the ability of earnings to predict stock returns, which could be examined in a future study. Also, it is worth noting that, in all tests, the positive influence of dividends payout on improving the ability of current earnings to forecast two-years-ahead cash flow did not appear, except in the last robustness test (where dividends payout ratio was used as a proxy for dividends payout). This may be ascribed to the resort of dividends paying firms to income smoothing practices, an issue that we did not examine in this study. Thus, future research may examine the impact of dividends payout on income smoothing practices and if these practices affect the earnings and cash flow predictability. Further, the findings of this study should be applicable to the Egyptian stock market and other emerging markets in the region with similar institutional and contextual characteristics. Finally, since this study used data during the period 2014-2018, we invite future research to extend this period by including the following years. This can, for instance, help us understand the effect of the COVID-19 pandemic as a global health crisis on the dividends payout-earnings predictability relationship.

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