Dividend policy and earnings quality in Vietnam

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Abstract

Purpose – The purpose of this paper is to examine the relationship between dividend policy and earnings quality of Vietnamese listed firms.

Design/methodology/approach – The sample includes firms listed on Vietnam stock exchange during the period between 2010 and 2016. Two measures of earnings quality are the annual firm-specific absolute value of residuals from Dechow and Dichev's (2002) model and from Dechow and Dichev (2002) as modified by McNichols's (2002) model. The firms' dividend policy is captured by dividend paying status. This is a dummy variable that takes the value of 1 if the firm pays dividends and 0 otherwise. In addition, dividend yield and dividend payout ratio, which are continuous variables, are also used in this paper as alternative proxies for dividend policy.

Findings – Using panel data analysis, this paper documents that dividend payers have higher earnings quality than dividend non-payers. Dividends are an indicator of earnings quality. These findings are consistent with prior studies. After controlling for variables that may be related to earnings quality as well as for the year and industry fixed effects, this relation remains unchanged. In addition, this result is also robust after controlling for firm fixed effects.

Originality/value – This paper offers the empirical evidence on the relation between dividend policy and earnings quality in Vietnam, which is a frontier market.

Keywords Earnings management, Vietnam, Earnings quality, Dividend policy, Frontier market

Paper type Research paper

1. Introduction

There are various theories developed to explain the reason why firms pay dividends. One of these explanations is signaling theory which proposes that firms pay dividends to signal favorable information to the capital market. Because of asymmetric information, the managers can access information that the market cannot. To reduce these information asymmetries, the managers can send signal to investors through corporate financial decisions. Dividend policy is a signaling device that the managers can use to convey information about firms' prospects to investors. However, the empirical evidence on this theory is mixed (Bernartzi *et al.*, 1997; Nissim and Ziv, 2001; Grullon *et al.*, 2002; Grullon *et al.*, 2005). Recent studies investigate the information content of dividends by examining dividends-earnings quality association and find that dividends provide information about earnings quality (Tong and Miao, 2011; Skinner and Soltes, 2011; He *et al.*, 2017; Deng *et al.*, 2017). Using data of developed and emerging markets, these studies show that dividend payers' earnings quality is higher than that of dividend non-payers.

This paper examines the relation between dividend policy and earnings quality in Vietnam. There are several reasons why we use Vietnamese data. First, examining this relation may be more significant in Vietnam because Vietnamese firms' reported earnings quality is lower than that in developed markets. Second, dividend policy is less stable in Vietnam, especially a substantial decrease in the proportion of dividend payers from 2010 onward. Third, Vietnam's investor protection environment is weaker than developed markets. Therefore, whether dividends are an indicator of earnings quality in Vietnam is an important question.

Moreover, this paper is also motivated by the fact that prior studies on the relation between dividend policy and earnings quality are mostly conducted in developed and emerging markets. Thus, examining this relation in a different institutional setting such as Vietnam, which is a frontier market, might provide further evidence on the information content of dividends and help generalize the results.

Specifically, Vietnamese financial market is dominated by debt. Banks are the largest suppliers of capital for firms and thus they have a great influence on the firms' decision making. The average debt-to-market equity ratio of the sample firms over the study period is 3.18, which is very high. Thus, debt is significantly higher than equity in the firms' capital structure. Additionally, the equity market is thin and illiquid. The yearly proportion of days with no trading volume, which is an inverse measure of trading activity, increases substantially from 3 percent in 2010 to 31 percent in 2016. Consequently, the transaction costs are so high that investors want to receive income from dividends but capital gains.

In addition, because of the negative impacts of the global financial crisis, the average reported earnings of the sample firms decrease in the period 2010–2012 but these numbers have increased from the year 2013 onward. Moreover, the average percentage of firms that report losses is only 6 percent. However, there is a significant change in the proportion of the firms paying dividends over the sample period. At the beginning of this period, 85 percent of listed firms pay dividends whereas only 65 percent of firms do so in 2016. Therefore, examining whether dividend payers have higher earnings quality in Vietnam during this period is of interest.

In this paper, the annual firm-specific absolute value of residuals from Dechow and Dichev's (2002) model and from Dechow and Dichev (2002) as modified by McNichols's (2002) model are two measures of earnings quality. To capture dividend policy, both dummy and continuous variables are used. Specifically, dividend paying status, dividend yield and dividend payout ratio are used as independent variables. In addition, other factors that may affect the earnings quality including earnings quality of the previous year, firm performance, growth, firm size, firm age and financial leverage are also controlled.

Based on the sample of the firms listed on Vietnam stock exchange during the period between 2010 and 2016, this paper finds the positive relation between dividend policy and earnings quality. This means that dividend payers have higher earnings quality than that of dividend non-payers. This empirical evidence indicates that dividends are informative about earnings quality and is in line with Tong and Miao (2011), Skinner and Soltes (2011), He *et al.* (2017) and Deng *et al.* (2017).

While a growing empirical research has focused on the relation between financing/ investment decisions and earnings quality, there is limited evidence on dividends-earnings quality association. This paper contributes to the literature on the relation between dividend policy and earnings quality by providing empirical evidence on this relation from a frontier market in which the earnings quality is not high and thus dividends can deliver more significant information content.

The remainder of this paper is structured as follows. The next section presents the literature review on the association between dividend policy and earnings quality. Data and methodology are described in Section 3. Section 4 provides the results and discusses the findings. Robustness tests are presented in Section 5. Finally, Section 6 concludes the paper.

2. Literature review

Earnings quality is an indicator of the quality of financial reporting. The quality of earnings consists of a discretionary and a nondiscretionary component (Francis *et al.*, 2004). The nondiscretionary component of the earnings quality is determined by the business model and environment, while the discretionary component depends on the financial reporting process. Earnings quality is both a good indicator of future operating performance, and a useful measure of firm valuation. High-quality earnings accurately reflect the current operating performance or intrinsic value of a firm. Thus, high-quality earnings are also called sustainable earnings. On the contrary, earnings have low quality when they are managed. Managed earnings are the result of management's purposeful intervention in the process of financial reporting to obtain some private benefits (Schipper, 1989). Healy and Wahlen (1999) mention three groups of incentives underlying earnings management including capital market incentives, contractual incentives and anti-trust or government regulation incentives. Earnings management occurs when managers use judgment in financial reporting and in structuring transactions to alter financial reports to either mislead some stakeholders about the underlying economic performance of the company or influence contractual outcomes that depend on reported accounting numbers. Therefore, earnings management decreases earnings quality. In Dichev *et al.*'s (2013) survey, CFOs believe that it is difficult for outside observers to unravel earnings management. In any given period, about 20 percent of the firms manage earnings to misrepresent economic performance, and for such firms 10 percent of EPS is managed. Only about 60 percent of earnings management is income increasing, while 40 percent relates to income-decreasing activities.

Many studies consider earnings management around corporate events such as initial public offerings (Teoh *et al.*, 1998a), seasoned equity offerings (Teoh *et al.*, 1998b; Shivakumar, 2000) and acquisitions (Bergstresser *et al.*, 2006; Louis, 2004; Karim *et al.*, 2016) while other studies explore managerial incentives for earnings management (Healy, 1985; Burns and Kedia, 2006). Another strand of literature examines whether earnings management is affected by dividend policy.

Following Lintner (1956), managers are reluctant to increase dividends unless they believe that dividends can be sustained at the new level. Therefore, they want to maintain a constant stream of dividends over time. By paying dividends, managers can convey information to investors about the quality of the earnings numbers reported in their financial statements. In their survey of CFOs, Brav *et al.* (2005) support this argument as they indicate that the stability of future earnings and a sustainable change in earnings are two of the most important factors in determining the firms' dividend policies. Because fraudulently reported earnings typically reverse in future periods (Dechow *et al.*, 1996), they are not sustainable earnings. Thus, firms that manage earnings are less likely to increase dividends.

According to the information content of dividends hypothesis, dividends could convey information about the firms' earnings prospects. Specifically, dividend increases signal good news while dividend decreases signal bad news. Brav *et al.* (2005) find that managers believe dividend decisions convey information to investors, however, they do not use dividends explicitly and deliberately as a costly signal to change market's perceptions concerning future earnings prospects.

The first evidence on the relation between dividend policy and earnings management is provided by Kasanen *et al.* (1996). They find that the firms manage earnings upwards in response to pressure from large institutional shareholders to pay dividends. In addition, Daniel *et al.* (2008) and Atieh and Hussain (2012) support the hypothesis that the firms manage earnings to meet dividend thresholds. Both dividend payers and dividend non-payers manage earnings, however, the likelihood of upward earnings management is significantly greater in dividend payers than dividend non-payers. Using earnings persistence as a proxy for earnings quality, Skinner and Soltes (2011) find that dividend payers have more persistent earnings

than non-dividend payers. Tong and Miao (2011) also document that dividend paying status is indicative of firms' earnings quality thus a potential piece of information provided by dividends is related to earnings quality. Although dividends are informative about earnings quality, they do not ensure that a firm is not overstating earnings. Caskey and Hanlon (2013) find that among 330 fraud-accused firms, 72 dividend-paying firms paid out $20bn in ordinary cash dividends. However, firms accused of fraud are less likely to pay dividends relative to non-fraud firms and are less likely to increase dividends or maintain a consistent relation between earnings and dividends while committing fraud. The evidence on the positive relation between dividend policy and earnings quality is also found in emerging markets such as China and Indonesia (Deng *et al.*, 2017; Sirait and Siregar, 2014). Furthermore, this relation varies across countries with different institutional strength and transparency (He *et al.*, 2017).

Overall, these studies find evidence that is consistent with the information content of dividends hypothesis. This paper examines whether dividend policy provides information about earnings quality within Vietnam's institutional setting. Using a sample of the firms listed on Vietnam stock exchange, this paper documents that dividend policy is an indicator of earnings quality. This finding is in line with those prior studies.

3. Data and methodology
3.1 Data
This paper examines the relation between dividend policy and earnings quality of the firms listed on Vietnam stock exchange. Two measures of earnings quality are absolute value of the regression residuals from models (1) and (2). These two models are estimated annually by the Industry Classification Benchmark (ICB) 10-industry classifications. Following Daniel *et al.* (2008), Skinner and Soltes (2011), Tong and Miao (2011) and Atieh and Hussain (2012), financial firms and utilities are excluded from the sample. In addition, following Daniel *et al.* (2008), this paper requires at least five observations for each year and each industry. To meet this requirement, two industries of oil and gas and telecommunications are also excluded thus the number of industries is 6. Panel A of Table I reports the number and percentage of observations per industry. Data are extracted from Datastream. The final sample includes listed firms from 2010 to 2016, resulting in 2,727 firm-year observations.

Variables	Definition
Dependent variables	
EQDD	Absolute value of the regression residuals estimated using Dechow and Dichev's (2002) model
EQDDM	Absolute value of the regression residuals estimated using Dechow and Dichev's (2002) model as modified by McNichols (2002)
Independent variables	
DIV	Dividend paying status that takes the value of 1 if a firm pays cash dividends in year t and 0 otherwise
DY	Dividend yield defined as dividends per share scaled by stock price
DIVE	Dividend payout ratio defined as dividends per share scaled by earnings per share
Control variables	
ROA	Return on assets defined as net income plus interest expense scaled by total assets
SALESG	Sales growth defined as change in sales scaled by previous year sales
BEME	Book value of equity scaled by market value of equity
LNME	Natural logarithm of market capitalization
AGE	Number of years since a firm has been listed on Vietnam stock exchange
LTDA	Long-term liabilities scaled by total assets

Table I.
Variables definition

3.2 Earnings quality

Earnings quality is a multi-dimensional concept. Francis *et al.* (2004, 2005) identify seven measures of earnings quality, including accruals quality, persistence, predictability, smoothness, value relevance, timeliness and conservatism. Based on the underlying assumptions about the function of financial reporting, these seven measures of earnings quality are classified into accounting-based and market-based measures. The accounting-based measures are accruals quality, persistence, predictability and smoothness, which are estimated using accounting data. The market-based measures are value relevance, timeliness and conservatism. These measures are estimated using both accounting data and returns data. Specifically, accounting-based earnings quality measures assume that the function of earnings is to allocate cash flows to reporting periods via accruals, while market-based earnings quality measures assume that the function of earnings is to reflect economic income as represented by stock returns. In addition, Francis *et al.* (2004, 2005) distinguish between innate and discretionary determinants of earnings quality. Innate determinants derive from business models and operating environments, whereas discretionary determinants are associated with accounting choices, implementation decisions, managerial error, auditing, governance and enforcement. CFOs believe that about half of earnings quality is determined by business model, industry and macroeconomic conditions (Dichev *et al.*, 2013).

Due to the availability of data, this paper uses accruals quality as a measure of earnings quality. This measure is based on the view that earnings that map more closely into cash flows are of better quality. Dechow and Dichev's (2002) measure of earnings quality captures the mapping of working capital accruals into last-period, current-period and next-period cash flows from operations. Specifically, the first measure of earnings quality (EQDD) is the absolute value of the residuals from Dechow and Dichev's (2002) model:

$$\Delta WC_{i,t} = \gamma_0 + \gamma_1 CFO_{i,t-1} + \gamma_2 CFO_{i,t} + \gamma_3 CFO_{i,t+1} + \eta_{i,t}, \tag{1}$$

where $\Delta WC_{i,t}$ is the change in working capital. $CFO_{i,t-1}$, $CFO_{i,t}$ and $CFO_{i,t+1}$ are cash flow from operations of firm i for year $t-1$, year t and year $t+1$, respectively. All variables are deflated by average total assets.

In additional, McNichols (2002) suggests adding variables capturing the change in current period sales and level of property, plant and equipment to increase the explanatory power of Dechow and Dichev's (2002) model. Specifically, the second measure of earnings quality (EQDDM) can be estimated from the following model:

$$\Delta WC_{i,t} = \gamma_0 + \gamma_1 CFO_{i,t-1} + \gamma_2 CFO_{i,t} + \gamma_3 CFO_{i,t+1} + \gamma_4 \Delta Sales_{i,t} + \gamma_5 PPE_{i,t} + \eta_{i,t}, \tag{2}$$

where $\Delta Sales_{i,t}$ is the change in sales and $PPE_{i,t}$ is property, plant and equipment. All variables in Equation (2) are also deflated by average total assets. The firm-specific absolute value of the residuals is estimated annually by the ICB from both Equations (1) and (2). Larger values of residuals imply lower earnings quality because there is less precision about the mapping of current accruals into current-period, last-period and next-period operating cash flows.

Because each measure has both strengths and weaknesses (Dechow *et al.*, 2011), almost studies that examine the effect of dividend policy on earnings quality use various measures of earnings quality simultaneously. The measures of earnings quality estimated from the Dechow and Dichev (2002) model and the Dechow and Dichev (2002) model as modified by McNichols (2002) are used in many studies, such as Daniel *et al.* (2008), Tong and Miao (2011), He *et al.* (2017) and Deng *et al.* (2017). Therefore, this paper also uses these two measures to proxy for earnings quality.

3.3 Dividend policy

The main independent variable is dividend policy. It is proxied by dividend paying status (DIV), which is a dummy variable that takes the value of 1 if the firm pays dividends,

and 0 otherwise. In robustness tests, two alternative continuous proxies for dividend policy are used instead of dividend paying status (DIV). Specifically, those are dividend yield (DY) and dividend payout ratio (DIVE).

3.4 Control variables

In addition to dividend policy, other factors might also affect earnings quality. Following previous studies, firm performance (ROA), growth (SALESG, BEME), firm size (SIZE), financial leverage (LTDA) and firm age (AGE) are included in the model. Specifically, Doyle *et al.* (2007) document that firms with poor performance will have incentives to manage earnings. However, DeAngelo *et al.* (1994) suggest that poor performance can limit opportunities to manage earnings whereas Francis *et al.* (1996) do not find an association between poor performance and write-offs.

Besides that, Dechow *et al.* (2011) show a negative relation between growth and earnings quality. In addition, Watts and Zimmerman (1990) argue that larger firms might have more incentives to manage earnings than smaller firms. Therefore, larger firms are expected to have higher earnings quality. According to DeFond and Jiambalvo (1994), managers in firms with high leverage have incentives to manage earnings to avoid violating debt covenants. Such actions can reduce earnings quality. LaBelle (1990) also shows that debt levels are associated with earnings quality.

Furthermore, McNichols (2002) argues that growth firms have lower earnings quality than mature firms. The maturity of the firms is positively related to earnings quality. He *et al.* (2017) and Deng *et al.* (2017) support this argument whereas Sirait and Siregar (2014) find that the relation between firm age and earnings quality is negative. Finally, following He *et al.* (2017), prior year's earnings quality is positively related to current year's earnings quality. Thus, the lagged dependent variable (EQ_L) is also included in the regression model. In addition, all regressions include industry and year fixed effects.

3.5 Empirical model

To examine the relation between dividend policy and earnings quality, two measures of earnings quality (EQDD and EQDDM) are regressed on dividend policy (DIV), while controlling other variables that may affect earnings quality including earnings quality of the previous year (EQ_L), firm performance (ROA), growth (SALESG and BEME), firm size (SIZE), firm age (AGE) and financial leverage (LTDA).

In addition, to mitigate the potential endogeneity concerns, all other independent variables are lagged by one year, following Skinner and Soltes (2011), Atieh and Hussain (2012), Caskey and Hanlon (2013) and He *et al.* (2017). Thus, the empirical model takes the following form:

$$EQ_{i,t} = \beta_0 + \beta_1 DIV_{i,t-1} + \beta_2 EQ_{i,t-1} + \beta_3 ROA_{i,t-1} + \beta_4 SALESG_{i,t-1} + \beta_5 BEME_{i,t-1}$$

$$+ \beta_6 SIZE_{i,t-1} + \beta_7 AGE_{i,t-1} + \beta_8 LTDA_{i,t-1} + \mu_{i,t}. \tag{3}$$

Table I presents definitions of all variables used in this paper.

To eliminate the influence of outliers, all variables are winsorized at the top and bottom 1 percent.

4. Empirical findings

The structure of the sample, by number and percentage of observations per industry, is provided in Panel A. Panel B presents descriptive statistics of all variables used in the regression model. The mean of DIV shows that the average percentage of observations paying dividends is 70.1 percent. Additionally, Panel B of Table II shows that earnings quality (EQDD) has an average value of 0.072. Compared with prior studies of Tong and Miao (2011),

Panel A: number and percentage of observations per industry

Industry	No. of observations	Percentage of observations
Technology	125	5
Industrials	1,331	49
Consumer services	285	10
Health care	106	4
Consumer goods	471	17
Basic materials	409	15
Total	2,727	100

Panel B: descriptive statistics of variables

Variable	Mean	Median	SD	Min.	Max.
EQDD	0.072	0.052	0.072	0.000	0.666
DIV	0.701	1.000	0.458	0.000	1.000
ROA	0.091	0.078	0.085	−0.150	0.416
LNME	11.754	11.639	1.458	8.811	15.871
SALESG	0.134	0.088	0.383	−0.645	1.946
BEME	1.691	1.449	1.026	0.335	5.936
AGE	5.582	5.000	2.615	2.000	16.000
LTDA	0.087	0.027	0.129	0.000	0.578
No. of observations	2,727				

Table II.
Summary statistics

He *et al.* (2017) and Deng *et al.* (2017), Vietnamese firms' earnings quality is lower than US firms but higher than Chinese firms. The range of variation of most variables is not wide. Thus, the dispersion is relatively narrow among all firms in the sample.

Table III compares dividend payers to dividend non-payers using univariate tests of the difference between these two groups of firms. Means and medians of earnings quality (EQDD), as well as other control variables including firm performance (ROA), sales growth (SALESG), book-to-market equity ratio (BEME), firm size (LNME), firm age (AGE) and financial leverage (LTDA) are reported in Table III. Table III shows the *p*-values of the *t*-test for the difference in mean values and the Wilcoxon test for the difference in median values between dividend payers and dividend non-payers.

Both the *t*-tests and Wilcoxon tests show that earnings quality (EQDD), firm performance (ROA), sales growth (SALESG), book-to-market equity ratio (BEME), firm size (LNME) and financial leverage (LTDA) are significantly different across dividend payers and dividend non-payers. Specifically, Table III shows that means and medians of earnings quality (EQDD)

				Measure of earnings quality				
		Dividend payers			Dividend non-payers		Tests for differences	
Variable	Nobs	Mean	Median	Nobs	Mean	Median	Mean	Median
EQDD	1,912	0.070	0.049	815	0.078	0.057	−0.008***	−0.008**
				Control variables				
		Dividend payers			Dividend payers		Tests for differences	
Variable	Nobs	Mean	Median	Nobs	Mean	Median	Mean	Median
ROA	1,912	11.530	9.324	815	3.521	3.508	8.009***	5.816***
SALESG	1,912	14.776	10.346	815	10.198	2.575	4.577***	7.771***
BEME	1,912	1.500	1.305	815	2.140	1.928	−0.640***	−0.623***
LNME	1,912	11.908	11.792	815	11.393	11.215	0.515***	0.577***
AGE	1,912	5.565	5.000	815	5.620	5.000	−0.055	0.000
LTDA	1,912	8.029	2.391	815	10.299	4.017	−2.270***	−1.626***

Notes: The sample includes 2,727 firm-year observations in the period from 2010 to 2016. Nobs is the number of firm-year observations. **,***Statistical significant at the 5 and 1 percent levels, respectively

Table III.
Dividend payers and
dividend non-payers
comparisons

of dividend payers are significantly smaller than those of dividend non-payers. Both dividend payers and dividend non-payers manage their earnings, however, dividend payers have higher earnings quality than dividend non-payers.

In addition, Table III also presents other differences between dividend payers and dividend non-payers. Dividend payers' financial leverage (LTDA) is much lower than that of dividend non-payers. In contrast, firm performance (ROA) and firm size (LNME) of dividend payers are significantly higher than those of dividend non-payers. This means that dividend payers are larger, more profitable and less leveraged than dividend non-payers, consistent with Tong and Miao (2011) and He *et al.* (2017). However, dividend payers have higher sales growth (SALESG) and lower book-to-market equity ratio (BEME) than dividend non-payers whereas these two groups of firms have no difference in age (AGE).

Table IV presents the correlation coefficients of all variables used in this paper. The measure of earnings quality (EQDD) is negatively correlated with dividend policy (DIV). Similarly, earnings quality (EQDD) is also negatively correlated with book-to-market equity ratio (BEME), firm size (LNME), firm age (AGE) and financial leverage (LTDA). In contrast, earnings quality (EQDD) is positively correlated with sales growth (SALESG). Additionally, the correlation coefficients between the remaining variables are relatively low. Thus, it can be concluded that multicollinearity is not a concern in the model.

To examine the relation between dividend policy and earnings quality, this paper uses two measures of earnings quality, these are the absolute value of the residuals from the Dechow and Dichev (2002) model and from the Dechow and Dichev (2002) model as modified by McNichols (2002). These two measures of earnings quality (EQDD and EQDDM) are regressed on dividend paying status (DIV). In addition, other determinants of earnings quality are also controlled, including prior year's earnings quality (EQ_L), firm performance (ROA), growth (SALESG and BEME), firm size (LNME), firm age (AGE) and financial leverage (LTDA).

Table V presents the relation between dividend policy and earnings quality. In the first column, the absolute value of the residuals from the Dechow and Dichev (2002) model is regressed on dividend paying status. The coefficient of DIV is negative and statistically significant at 1 percent level. This negative relation between DIV and EQDD implies that dividend payers' reported earnings quality is higher. Dividend payers often have a more stable cash flow, resulting in higher earnings quality. Therefore, dividends can convey additional information to investors about earnings. The similar results are obtained for the residuals from the Dechow and Dichev (2002) model as modified by McNichols (2002) in the second column. These results are consistent with Tong and Miao (2011), Sirait and Siregar (2014), He *et al.* (2017) and Deng *et al.* (2017).

This paper finds evidence that dividend payers' earnings quality is higher than that of dividend non-payers. Dividends are an indicator of earnings quality in Vietnam, which is a more opaque information environment than in developed markets. Therefore, dividend policy can be a reliable information source in decision making for investors.

	EQDD	DIV	ROA	SALESG	BEME	SIZE	AGE
DIV	−0.056***						
ROA	−0.028	0.431***					
SALESG	0.101***	0.055***	0.153***				
BEME	−0.034*	−0.286***	−0.334***	−0.054***			
LNME	−0.041**	0.162***	0.283***	0.105***	−0.449***		
AGE	−0.065***	−0.010	−0.057***	−0.067***	0.020	0.119***	
LTDA	−0.045**	−0.081***	−0.176***	0.031	0.035*	0.357***	−0.055***

Notes: *,**,***Statistical significant at the 10, 5 and 1 percent levels, respectively

Table IV.
Correlation matrix

	EQDD	EQDDM
DIV	−1.204*** (0.334)	−1.551*** (0.374)
EQ$_L$	0.092*** (0.020)	0.129*** (0.027)
ROA	−0.016 (0.019)	−0.020 (0.020)
SALESG	0.008 (0.006)	0.008 (0.005)
BEME	−0.473*** (0.168)	−0.324* (0.172)
LNME	−0.370*** (0.120)	−0.399*** (0.121)
AGE	−0.067 (0.058)	−0.111* (0.063)
LTDA	−0.035*** (0.011)	−0.029** (0.012)
Constant	0.154*** (0.018)	0.147*** (0.018)
F	32.62***	11.71***
R^2	14.52%	8.36%
Industry fixed effects	Yes	Yes
Year fixed effects	Yes	Yes
No. of observations	2,727	2,727

Notes: The values in parentheses are standard errors clustered by firm. *,**,***Statistical significant at the 10, 5 and 1 percent levels, respectively

Table V.
The relation between
dividend policy and
earnings quality

In addition, the coefficients of EQ$_L$ are positive at the 1 percent level, meaning that the prior year' earnings quality is closely related to the current year' earnings quality. Besides that, the results on the other control variables are consistent with previous studies such as Barth *et al.* (2008), Tong and Miao (2011), He *et al.* (2017) and Deng *et al.* (2017). Specifically, the coefficients of book-to-market equity ratios (BEME), firm size (LNME) and financial leverage (LTDA) are negative. Correspondingly, the firms that have higher book-to-market equity ratios, larger and highly leveraged have higher earnings quality. However, the coefficients of firm performance (ROA), sales growth (SALESG) and firm age (AGE) are statistically insignificant. Therefore, this paper finds no relation between these firm characteristics and earnings quality.

5. Robustness tests

To test whether the above results are robust and reliable, two alternative proxies for dividend policy are used as explanatory variables. Specifically, two measures of earnings quality (EQDD and EQDDM) are regressed on dividend yield (DY) and dividend payout ratio (DIVE), respectively. The results presented in Table VI are obtained by replicating the baseline regressions in Table V. In Tables VI and VII, only coefficients of dividend policy are presented for conserving space.

Table VI presents the results where dividend yield (DY) and dividend payout ratio (DIVE) are used to proxy for dividend policy. As reported in Table VI, both coefficients of

	EQDD		EQDDM	
DY	−0.045** (0.021)		−0.058*** (0.021)	
DIVE		−1.147*** (0.333)		−1.354*** (0.344)
F	32.54***	32.69***	12.11***	12.19***
R^2	14.23%	14.43%	7.67%	7.98%
Industry fixed effects	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes
Number of observations	2,727	2,727	2,727	2,727

Notes: The values in parentheses are standard errors clustered by firm. **,***Statistical significant at the 5 and 1 levels, respectively

Table VI.
The regression results
with other two proxies
for dividend policy

DY and DIVE are negative, consistent with the results presented in Table V. Thus, the positive relation between dividend policy and earnings quality is robust when two continuous explanatory variables are used instead of dividend paying status (DIV).

In addition, to obtain consistent estimates for regression parameters, the panel data methodology is used in this paper to control unobservable heterogeneity. By including the individual effect into the regression (unobservable firm characteristics), fixed-effects models mitigate the omitted variable problem by capturing unobservable firm characteristics.

Table VII presents the results when the firm fixed effects are controlled. The research results are robust with three proxies for dividend policy (DIV, DY and DIVE) as well as two measures of earnings quality (EQDD and EQDDM). Therefore, both the original tests and the robustness tests find the positive relation between dividend policy and earnings quality in Vietnam.

In summary, the above results find that the relation between dividend policy and earnings quality is positive and statistically significant at 1 percent level. Specifically, firms paying dividends have higher earnings quality. After controlling for variables that may be related to earnings quality as well as for the year and industry fixed effects, this relation remains unchanged. In addition, the findings are not affected by the firm fixed effects.

6. Conclusions

Almost investors pay close attention to firms' earnings, however, this number can be distorted by management. In those cases, the earnings cannot reflect firms' performance accurately. A high-quality earnings number which accurately reflects the firm's current operating performance is a good indicator of future operating performance. It is also a useful summary measure for assessing firm value. Earnings quality can vary among the firms as a function of accruals even in the absence of intentional earnings manipulation. Unlike the determination of cash flows, the determination of earnings requires estimations and judgments, and some firms require more forecasts and estimates than others. Those firms in growing industries will typically have high accruals. However, accruals are likely to contain estimation errors, which reduce earnings quality because they must be corrected in future earnings and are irrelevant for valuation. Therefore, large accruals can indicate great underlying volatility in the firm's operations and low-quality earnings.

Most of the existing literature focuses on the relation between financing or investment decisions and earnings quality of the firms. However, the evidence on the dividends-earnings quality relation is limited. Prior studies find that dividend payers' earnings quality is higher than that of dividend non-payers. These results are obtained by examining the relation between dividend policy and earnings quality in developed and emerging markets.

This paper investigates whether dividend policy is related to earnings quality in Vietnam, which is a frontier market, during the period between 2010 and 2016. The empirical evidence indicates that dividend payers have higher earnings quality than dividend payers. Although Vietnam's institutional settings are different from those of developed markets, the positive

	EQDD			EQDDM		
DY	−0.110*** (0.028)			−0.118*** (0.028)		
DIV		−1.211** (0.511)			−2.081*** (0.547)	
DIVE			−1.606*** (0.434)			−1.789*** (0.422)
F	20.35***	14.31***	14.26***	11.21***	7.20***	7.12***
R^2	6.76%	6.39%	6.12%	3.84%	3.87%	3.38%
Firm fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
No. of observations	2,727	2,727	2,727	2,727	2,727	2,727

Table VII.
The regression results with firm fixed effects

Notes: The values in parentheses are robust standard errors. **,***Statistical significant at the 5 and 1 percent levels, respectively

relation between dividend policy and earnings quality still holds. This result is robust with three proxies for dividend policy and remains unchanged after controlling other factors as well as the firm fixed effect. The reported earnings of dividend payers are more reliable than that of dividend non-payers, thus, investors can refer to dividend policy for assessing financial health of firms. Therefore, understanding the relation between dividend policy and earnings quality can help investors make right decisions.

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