The impact of director's financial expertise on dividend payout: Evidence from Vietnamese listed companies

ABSTRACT

This study explores the impact of director's financial expertise on dividend payout ratio, based on 499 listed companies in Vietnam from 2008 to 2019. Using pooled ordinary least square (pooled OLS), fixed effect model (FEM), and generalized least square (GLS) regressions, we find that the financial expertise of director significantly influences dividend payout. We also find a positive relationship between director's expertise and company's leverage. These findings suggest a significant nexus between director's financial expertise and corporate management which includes financing and distributing decisions. Accordingly, we can consider the financial literacy of the board and senior management a factor to evaluate the company's performance.

Key words: financial expertise, dividend payout; financial leverage.

JEL classifications: G53, G32, G35.

1.   Introduction

Dividends have always been a topic that attracts different attention from shareholders and external people of corporations. For many years, numerous studies have been conducted to explore the relationship between a company's dividends and various factors, such as the ownership ratio of management participants (Jensen and Meckling, 1976), tax rates (Miller and Scholes, 1978), profit margins (Gill et al, 2010), ownership dispersion of the company (Chen and Dhiensiri, 2009), and the ownership ratio by the State (Truong Dong Loc, 2013), etc. Results from those studies have highlighted some crucial characteristics of corporate governance and management (board structure, independence level of the board, etc.) that influence a company's dividend policy. For instance, the ownership ratio of management participants has a positive impact on the company's dividend policy (Jensen and Meckling, 1976), and the ownership ratios of insiders and the State significantly affect the dividend policies of companies (Al-Malkawi, 2007), etc.

In Vietnam, the decision to distribute profits is one of the crucial financial decisions that strongly impact the operations, development, and benefits of shareholders in a company. This decision determines the percentage of profits the company retains for reinvestment and the ratio of dividends the company pays to shareholders. An effective dividend

policy helps the company balance the retained capital for reinvestment and the portion of profits distributed to shareholders. Consequently, this allows shareholders to receive passive income throughout their investment.

However, in recent years, the dividend policies of listed companies in Vietnam have been attracting increasing attention not only from shareholders but also from the media - press and external people of the companies. In 2023, some companies continuously maintained a high dividend payout ratio to shareholders. For example, Phan Thiet Export Garment Joint Stock Company finalized a cash dividend payment of 20% (1 share will be received 2,000 VND), and Ha Giang Mechanical and Minerals Joint Stock Company paid a cash dividend at a rate of 15% (1 share will be received 1,500 VND). Despite the economic recovery after the COVID-19 pandemic and companies resuming business activities with a trend of paying dividends to shareholders, there are still some companies that have not distributed dividends to shareholders for several years. An example is Hai Phat Investment Joint Stock Company (HPX), which stated it had no funds to pay dividends for the year 2021 despite the time has gone.

According to the outlined plan, the company will pay a 5% cash dividend to shareholders, with the final implementation scheduled for October 2022. However, the payment is still pending because the company has not balanced its cash flow sufficiently to fulfill the dividend payment. Simultaneously, the company cannot ensure sufficient funds to pay outstanding due debts if dividends are paid to the shareholders. On the other hand, during the annual general meeting of shareholders for the financial year 2022 at Saigon Thuong Tin Commercial Joint Stock Bank (STB), many shareholders expressed dissatisfaction with the fact that the bank achieved high profits and increased stock value, yet Sacombank has not distributed dividends to shareholders for seven consecutive years.

Indeed, a company can also achieve success without necessarily paying dividends to shareholders. Some world corporations like Apple or Google have opted not to pay dividends to shareholders for an extended period (Ciaccia, 2012). However, many investors choose to invest in reputable and large-cap companies not only with the expectation of profiting from stock price differentials but also with the desire to accompany the company for an extended period and enjoy dividends corresponding to the company's growth. This has created a conflict of perspectives on dividend payouts

between shareholders and the company's management, evident in some shareholder meetings this year.

One of the most critical tasks of financial management in a company is to maximize the value of business throughout suitable financial decisions. To maintain a long-term position for the company and gain the trust of shareholders, the board of directors and management must strive to build effective operational plans to enhance business activities, maximize profits, and strike a balance between cash reserves in the company and the use of a reasonable financial leverage ratio. Furthermore, once the company achieves high profitability, it should share the gained benefits with the shareholders who have accompanied the company, thereby building trust among the shareholders. A company with financially competent directors is expected to prioritize these goals to establish a suitable dividend policy for shareholders. In light of these considerations, the authors pose a research question for the topic: Does a company managed by directors with financial expertis effectively balance financial decisions to maintain stability in the company's financial situation, thereby providing a better dividend payout ratio for shareholders? This question has sparked our interest to undertake this research!

Most research studies have analyzed different aspects of the relationship between management activities, company operations, and dividend policies. However, only a few studies, such as the one conducted by Custódio and Metzger (2014), have highlighted the relationship between the financial expertise of directors and the dividend policy of a company. This could be a notable gap, as a thorough examination of this issue would provide investors with specific insight into whether companies with financially competent directors effectively fulfill their role in maximizing the value of the business and, at the same time, implement an efficient dividend distribution policy for shareholders. This information could offer investors an additional basis for selecting stocks that align with their individual investment goals.

2. Literature review

2.1 Theoretical backgrounds

2.1.1 Modigliani-Miller Theorem on Corporate Capital Structure

The Modigliani-Miller theory on corporate capital structure by Franco Modigliani and Merton Miller (1961) is the well-known theory related to a company's dividend policy. This theory argues that the dividend policy does not impact the value of the firm or the

stock price. The value of the firm and its stock price depends on the ability to generate income and the risk associated with the tangible assets that the company has invested in, rather than the combination of debt and equity securities. In other words, the value of the firm and its stock price is determined by the company's investment policy. Meanwhile, the effects of a dividend policy on the value of the firm and its stock price can be precisely offset by various forms of financing.

However, to hold the theory of Franco Modigliani and Merton Miller, the research market must be an efficient and perfect capital market with assumptions of no taxes and transaction costs. Additionally, the two researchers argued that the clientele effect also does not impact stock value. A company adopting a reduced dividend policy may lose a significant number of shareholders, as these shareholders may invest in other companies with more attractive dividend policies. This could temporarily lower the stock price of the company. However, some investors may anticipate that the new dividend policy reflects the current undervaluation of the company's stock and choose to buy more shares. According to the theory of Franco Modigliani and Merton Miller, these transactions will occur immediately, incurring no transaction costs for investors, resulting in the stock value remaining unchanged.

The theory of Franco Modigliani and Merton Miller also does not deny that in reality, there is empirical evidence showing that changes in dividend policies do impact stock prices. If a company's dividend policy changes to increase dividends, this could signal to shareholders that the management expects higher future earnings. Conversely, if the company's dividend policy moves towards reducing dividends, it could be a signal of declining future profitability for the company. Although the theory of Franco Modigliani and Merton Miller holds true only under the condition of a perfect market, this research is still considered a foundation for subsequent studies to build upon and develop.

2.1.2 Bird-in-the-Hand Theory on High Cash Dividend Policy (Gordon, 1963)

The "Bird-in-hand theory" on high cash dividend policy was developed by Gordon in 1963. This theory posits that in imperfect market conditions, as seen in reality, dividend policies play a crucial role and impact the stock value of a company. Gordon's theory is based on the perspective that "a bird in the hand is worth two in the bush." This implies that most investors prefer the certainty of "the bird in hand," meaning higher dividends as a guaranteed income in the present, rather than the uncertainty of "two in the bush,"

referring to potential future capital gains. Therefore, shareholders tend to invest in companies with a higher dividend payout ratio compared to stocks of companies with lower dividend payouts.

Gordon's theory (1963) suggests that investors often choose to invest in companies with a stable dividend payout policy because retaining profits for reinvestment and using reinvestment to increase stock prices in the future involves more risk than receiving immediate cash dividends. To maximize the market value of the company, corporate leadership should adopt a higher dividend payout policy.

2.1.3 Signalling Theory (Lintner, 1956)

The signaling theory indicates a change in a company's dividend policy is considered as a "signal" sent to investors about the company's future growth prospects. Lintner's (1956) research can be seen as a landmark study proposing a dividend research model based on signaling theory. Until now, many researchers have built upon and developed this theory.

The signaling theory was further refined by two researchers, Miller and Rock (1985). They pointed out the asymmetry of information between corporate managers and shareholders. The information gap within and outside the company makes it challenging for investors to accurately assess the potential value of the company based on stock prices. In this context, dividends play a crucial role as a useful tool for corporate managers to transmit information to the market, providing investors with additional insights into the company's growth prospects, and thereby attracting more investors. In other words, dividends can communicate hidden information about the potential development of the company in the future.

2.1.4 Agency Cost Theory (Fama and Miller, 1972 & Jensen and Meckling, 1976)

The agency cost theory was first introduced by Fama and Miller in a study in 1972. This theory was later reinforced and further developed by Jensen and Meckling (1976). The agency cost theory emphasizes that agency costs arise when there is a conflict of interest between corporate managers (Management) and shareholders (Stockholders). Shareholders entrust their capital to corporate managers so that they can operate and develop the business to achieve the goal of maximizing value for the company and providing the highest benefits to the shareholders.

When corporate management aims to benefit shareholders, they may increase the dividend payouts to their shareholders. Higher dividend payments reduce retained earnings for reinvestment in the business, thereby requiring companies to raise capital from external sources for growth. When raising funds externally, the company must undergo future scrutiny from lenders and investors. In return, this reduces agency costs between shareholders and corporate management, thereby increasing the market value of the company.

However, corporate managers may sometimes act not solely for the benefit of shareholders in reality. If there is too much idle cash, financial managers may pursue overly risky projects or inefficient capital expenditures. To address this issue, shareholders may request the company to distribute dividends. As the company's idle cash decreases, agency costs and losses from inefficient investments also decrease, leading to an increase in the company's overall value. This theoretical argument has inspired the authors to delve deeper into this research direction.

2.2 Empirical evidence

Nowadays, numerous studies have been conducted to explore the factors influencing the dividend policies of companies. Research from various countries worldwide has highlighted the correlation between corporate governance features (board size, board independence, ownership stakes of board members) and a company's dividend policy. Additionally, these studies have indicated that financial conditions within a company, such as scale, revenue, financial leverage, and liquidity,... also significantly impact its dividend policy:

The research by Lintner, J. (1956) is considered one of the pioneering research efforts in investigating factors influencing a company's dividend policy. This research highlighted several key points, such as companies determining dividend policies and the dividend payout ratio to shareholders, depending on the goal of ensuring that the company can meet the capital investment needs for long-term growth. Furthermore, the study also indicates that company managers believe shareholders prefer a stable dividend policy. Therefore, companies are willing to pay higher dividends when company managers believe that the company's profits will sustainably grow in the future.

The research by Rozeff (1982, using data from 1,000 U.S. companies across 64 different industries, found a positive correlation between the number of shareholders and the dividend payout ratio. Additionally, the research revealed an inverse relationship between the dividend payout ratio to shareholders and market risk, revenue growth, and internal ownership of the company.

The research by Clifford S. Ansness and Robert D. Arnott (2001), using a dataset of companies within the Standard & Poor's 500 Stock Index from 1926 to 2001, concluded that a reduction in dividends paid to shareholders would lead to a decline in the business's earning power. According to Clifford S. Ansness and Robert D. Arnott, companies reducing dividends are essentially seen as a reflection of management's ultimate response to cope with weakened cash flow in subsequent years.

The research by Husam-Aldin N. Al-Malkawi (2007), using data collected from companies listed on the Amman Stock Exchange (Jordan) during the period from 1989 to 2000, revealed that the ownership ratio held by insiders and the shareholding by the state significantly influenced the dividend policies of these companies. Additionally, when considering other independent variables, the authors concluded that the company's operating time, achieved profit, and scale impact the dividend payout ratio to the company's shareholders. Notably, the experimental evidence obtained from this study also supports the relevance of the agency cost theory.

The research by Ahmed and Javid (2009), examining the factors influencing the dividend policies of 320 non-financial companies listed on the Karachi Stock Exchange (Pakistan) from 2001 to 2006, indicated that earnings per share (EPS) at the current time strongly impact the dividend payout ratio of companies. Companies with stable EPS and high free cash flow often pay high dividends. Additionally, the study explored the relationship between the dividend payout ratio and liquidity, debt ratios, and firm size. It concluded that the dividend payout ratio to company shareholders has a positive correlation with ownership concentration and market liquidity but a negative correlation with debt ratios and company size.

The research by Gill, Biger, and Tibrewala (2010), collecting data from 500 companies in the United States in 2007, revealed that the dividend payout ratio depends on profit margin, debt-to-equity ratio, revenue growth rate, and tax rates. Specifically, profit margin, revenue growth rate, and debt-to-equity ratio strongly influence the dividend

payout ratio for service companies in the United States. Additionally, the dividend payout ratio for manufacturing companies depends on factors such as profit margin, market-to-book ratio, and tax rates.

In Vietnam, the research by Truong Dong Loc (2013), analyzing data from 62 listed companies on the Hanoi Stock Exchange (HNX) in 2010, demonstrated the correlation of the dividend payout ratio of companies with EPS, the debt-to-equity ratio, and the state ownership ratio of shares. The authors' research yielded similar results regarding the dividend payout ratio of companies having statistically significant relationships with EPS and the debt ratio, as found in studies conducted by Ahmed and Javid (2009) and Custódio and Metzger (2014).

However, there have not been many individual studies specifically analyzing the relationship between the financial expertise of directors and the dividend policy of companies. A research on "CEO's Work Experience and Firm's Financial Policies" Custódio and Metzger (2014), analyzing 25,562 directors samples from 1,500 different companies, concluded that companies with directors who have experience in the financial expertise tend to use financial leverage approximately 6% higher than the average, and they tend to pay higher dividends to shareholders compared to companies without directors with financial expertise.

On the other hand, whether this conclusion applicable to the economic situation in Vietnam, especially during the period from 2008 to 2019. During this time, Vietnam's economy experienced various fluctuations due to the impact of the global economic recession from 2008 to 2009 but later witnessed significant growth of companies from 2012 onward. The question arises: Did companies with financially skilled management leverage more for stability during this period? Simultaneously, did they effectively balance financial decisions to achieve an optimal dividend policy for investors? Based on these questions, the authors decided to collect and examine data on Vietnamese companies from 2008 to 2019 to study the impact of the financial expertise of directors on the use of financial leverage in these companies. Additionally, the study aims to investigate the relationship between the financial expertise of directors and the dividend payout ratio to shareholders during this period.

2.3 Hypothesis development

Based on the "Bird-in-the-hand" theory by Gordon (1963), investors prefer receiving dividends from a company as a certain portion of profits they can hold in hand to compensate for the risks they bear when investing in the company. Drawing on the signaling theory by Lintner (1956), dividends play a role as a signal, enabling corporate managers to convey information to the market. This helps attract more investors, contributing capital to the company, allowing it to expand its funding sources and undertake projects with high efficiency. This aligns to maximize the company's value and returns for shareholders. Based on the agency costs theory introduced and refined by Jensen and Meckling (1976) which emphasized the existing conflicts in views between shareholders (company owners) and corporate managers (company operators). Building on empirical research regarding the impact of managerial and operational roles on a company's dividend policy, as outlined by researchers such as Rozeff (1982), Al-Malkawi (2007), Ahmed and Javid (2009), Truong Dong Loc (2013), Custódio and Metzger (2014).

We argue that if a company aims to maintain a long-term position, focusing on sustainable development and gaining trust from shareholders, the board of directors and executives need to make efforts to build effective operational plans. This will enhance business activities, maximize profits, and ensure the sharing of those benefits with shareholders, who have been accompanying the company through dividend payments. This serves as a signal indicating the sustainable development of the company, fostering trust among shareholders, especially those with a long-term investment perspective, considering dividends as a certain income corresponding to the risks they may accept during the period of holding company shares. Moreover, the current practice of dividend payments in Vietnam is seen as a solution to mitigate existing conflicts of views between shareholders and management. It aims to reduce internal issues within companies and contribute to the long-term development of businesses in Vietnam. This highlights a profound correlation between financial decisions made by management and the interests of shareholders, emphasizing the sustainable development of the company. Based on these reasons, the authors put forward the hypothesis for the research as follows:

H1: Companies with financially specialized directors tend to pay higher dividends to shareholders compared to companies without financially specialized directors.

Furthermore, the research by Custódio and Metzger (2014) also revealed that company with the directors with financial expertise tend to use higher financial leverage by 6% compared to companies without the directors with financial expertise. An imprudent decision regarding financial leverage may lead to difficulties for a business in raising funds to repay debts to creditors if the business faces unforeseen challenges from the external environment. The mismanagement of financial decisions can be a factor contributing to the bankruptcy of a company, implying that shareholders might lose their invested capital with no dividend payments. Therefore, the effectiveness of financial decisions made by directors with financial expertise is considered a crucial criterion for ensuring the long-term development of the company. From this perspective, shareholders can expect the company to signal stable dividend payments corresponding to the strong growth potential of the company (Lintner, 1956). Hence, the authors formulate Hypothesis 2 for the research model as follows:

H2: There is a difference in the use of financial leverage between companies with the directors with financial expertise and those without the directors with financial expertise.

3.   Data, model and methodology

3.1 Data

This research uses data from 499 companies listed on the Ho Chi Minh Stock Exchange (HoSE) and Hanoi Stock Exchange (HNX) during the period from 2008 to 2019. The data collection spans 12 years, comprising a total of 5,988 observed samples that were collected and synthesized. The research data was provided by FiinGroup (one of the integrated service providers of financial data, business information, and industry research in Vietnam). In addtion, the authors supplement the dataset with information on Vietnam's gross domestic product (GDP Vietnam) for the period from 2008 to 2019 to examine the economic aspects of Vietnam and the dividend payout ratio of companies.

3.2 Model

3.2.1 Emperical model

Based on the overall research and the presented research hypotheses *(Appendix_Table 1)*, the authors analyze the relationship between the financial expertise of the board of directors and the dividend payout ratio of the company using the following model:

$$LOG\_DPR_{i,t} = \alpha + \beta_1 DFE_{i,t} + \beta_2 CONTROLS_{i,t-1} + \varepsilon_{i,t}$$

In which:

- LOG_DPR represents the dividend payout ratio of company i at time t.
- DFE represents the directors with financial expertise of company i at time t.
- CONTROLS represent the variables: LDPR (dividend payout ratio in the previous year), SIZE (size of the company), LEV (financial leverage used by the company), NPM (net profit margin of the company), EPS (earnings per share of the company), GR_RE (revenue growth), TOBINQ (Tobin's Q ratio), GDPVN (Vietnam's GDP).
- The variables SIZE, LEV, NPM, EPS, GR_RE, TOBINQ, GDPVN - are used at a lag of one period (t-1) compared to the dividend payout ratio at the current period. Therefore, when running the data in Stata, these variables are included in the model with the names: LSIZE, LLEV, LNPM, LEPS, LGR_RE, LTOBINQ, LGDPVN.
- ε is the assumed random error term with a normal distribution

3.2.2 Dependent Variable

The dependent variable in the study is LOG_DPR (Log_Dividend Payout Ratio of the firm). This variable is determined by taking the logarithm of the firm's Dividend Payout Ratio (DPR). Additionally, the Dividend Payout Ratio (DPR) is calculated by dividing Dividend Per Share (DPS) by Earnings Per Share (EPS).

$$\text{Dividend Payout Ratio (DPR)} = \frac{\text{Dividend Per Share (DPS)}}{\text{Earnings Per Share (EPS)}}$$

In previous research, Ahmed and Javid (2009), Gill, Biger, Tibrewala (2010), Kyle A. Profilet (2013), etc. have all used this measurement for the Dividend Payout Ratio (DPR) of the firm. Building on the same root and aiming to reduce the length of the data

and limit the error term in the model, we decided to use the logarithm of the dividend payout ratio (LOG_DPR) of the corporations in this research.

3.2.3 Independent Variable

The independent variable used to analyze the impact on the dividend payout ratio of the firm is the directors with financial expertise (DFE). This is a type of DUMMY variable, collected from the FiinGroup data provider, and is determined by assigning "1" to firms with financial specialist directors and "0" to firms without financial specialist directors. In the 2014, Custódio and Metzger also used this variable to assess the impact of directors' experience on the financial policies of the company.

3.2.4 Control Variables

Dividend Payout Ratio of the previous year (DPR $_{t-1}$): This variable is defined by taking the dividend payout ratio in the year t-1. In the 2022 research, Do Thi Ha Thuong, Pham Tuan Phat, and Dang Thanh Phuong Ngoc used the same variable with data collected from 23 commercial banks in Vietnam during the period from 2010 to 2021 to examine the influencing factors on the dividend policies of commercial banks. The results of the study indicate that the Return on Equity (ROE), Dividend Payout Ratio of the previous year (DPR t-1), and revenue growth rate (GROWTH) have a positive impact on dividend policies, while factors such as bank size (SIZE) and financial leverage (LEV) have a negative impact on dividend policies. Therefore, based on this research, the authors decided to use the variable Dividend Payout Ratio of the previous year (DPR t-1) as a control variable in the model.

Company size (SIZE): This variable is defined by taking the natural logarithm of the total assets of the enterprise. In the studies by Al-Malkawi (2007) and Nguyen Thi Minh Hue (2014), company size has been shown to have a significant impact on the dividend policies of the company. Additionally, Bushra and Mirza (2015) showed that the company size has an inverse relationship with the dividend payout ratio (DPS) in their evaluation of dividend policies at 75 companies in Pakistan during the period 2005-2010. Therefore, the authors decided to include this variable in the study to re-examine the impact of enterprise size on the dividend payout ratio of the companies in the data collected for the research.

Financial leverage (LEV): This variable is determined by taking the ratio of the company's debt to its equity value. In various research by Ahmed and Javid (2009), Gill,

Biger, Tibrewala (2010), Truong Dong Loc (2013), Nguyen Kim Phuoc and Pham Tien Minh (2021) also found out the debt-to-equity ratio of the company has an inverse correlation with the dividend payout ratio of the company.

Net Profit Margin (NPM): The net profit margin is calculated by taking the net income divide to the total revenue. In 2010, the research by Gill, Biger, and Tibrewala found that the profit margin has an impact on the dividend payout policies of service and manufacturing companies in the United States. Therefore, in this study, the authors decided to use the net profit margin to examine whether it is a statistically significant factor for the dividend payout ratio of the surveyed companies in Vietnam or not.

Earnings Per Share (EPS): Earnings per share is determined by taking the after-tax profit (after preferred stock dividends are paid) and dividing it by the number of shares outstanding. The research by Ahmed and Javid (2009), Truong Dong Loc (2013), Custódio and Metzger (2014), Bushra and Mirza (2015), Nguyen Kim Phuoc and Pham Tien Minh (2021) all indicate that Earnings Per Share (EPS) is statistically significant and positively correlated with the dividend payout ratio of businesses.

Revenue Growth (GR_RE): This variable is determined by subtracting the revenue in year t from the revenue in year t-1, then dividing it by the revenue in year t-1. In prior research such as Gill (2010), Chen and Dhiensiri (2009), Truong Dong Loc and Pham Phat Tien (2015) have shown that the revenue growth rate of a business has an inverse impact on the dividend payout ratio of the company.

Tobin's Q Ratio (TOBINQ): This variable is sourced from data provided by FiinGroup. Specifically, TobinQ is calculated by dividing the market value of a company by the replacement cost of its assets. This variable is a commonly used index pioneered by James Tobin of Yale University (USA), who hypothesized that the combined market value of all companies in the stock market must be equal to their replacement cost. In 2006, the research by DeAngelo indicated that companies with higher TobinQ need to retain more cash for future investments and, therefore, tend to have lower dividend payouts. On the same page, research conducted by Tran Thi Thanh Hai and Nguyen Thi Thu Nguyet (2022) also used this variable to assess the impact of TobinQ on dividend payout policies in Vietnam. Therefore, the authors decide to use this variable as a control variable in our research.

GDP of Vietnam (GDPVN): This variable is measured by the total gross domestic product (GDP) of Vietnam from 2008 to 2019. This variable is added to the research to investigate how fluctuations in Vietnam's economic conditions affect the dividend payout ratio of companies.

However, because the dividend payout ratio is often determined based on the after-tax profit that the company achieved in the previous year, the authors additionally employ variables SIZE, LEV, NPM, EPS, GR_RE, CUR, TOBINQ, and GDPVN at a later point in time compared to the dividend payout ratio at the period under consideration. Therefore, when constructing the model, these variables are included in the model as LSIZE, LLEV, LNPM, LEPS, LGR_RE, LCUR, LTOBINQ, and LGDPVN.

3.3 Methodology

In the research paper, the author will conduct a regression analysis using the Fixed Effects Model (FEM). The FEM is considered an effective tool in panel data analysis, capable of controlling for unobserved factors that are constant over time, thereby helping to reduce bias in research results. Especially, the authors used panel data of 499 listed companies over 19 years, so using the Fixed Effects Model (FEM) for analysis aims to control for these unobserved factors and limit bias in the research results. After conducting the regression, the authors will test the regression assumptions in the research model to identify any shortcomings. Then, the authors will use the Generalized Least Squares (GLS) regression model to address any deficiencies that could bias the results, thereby making the study's findings more reliable.

4. Results

4.1 Descriptive statistics

Table 4.1. Descriptive statistics of varibales

Variable	Obs	Mean	Std. dev.	Min	Max
LOG_DPR	3,591	-.5656561	.876516	-4.58035	7.25575
DFE	5,714	.5141757	.4998427	0	1

LDPR	4,169	1.182384	22.85009	-157.7407	1416.225
LSIZE	5,478	26.96418	1.517267	21.87363	33.29389
LLEV	5,478	1.77888	3.204829	.0005888	140.2583
LNPM	5,466	.0411424	1.571763	-56.51423	28.90916
LEPS	5,478	2585.991	3208.086	-10609	51411
LGR_RE	4,965	1.185516	32.92488	-24.16174	2038.04
LTOBINQ	4,992	1.049764	.4832739	.09	9.04
LGDPVN	5,489	205.0464	65.46758	99.13	310.11

Table 4.1 presents the descriptive statistics of the variables, including the dividend payout ratio (LOG_DPR), the ratio of directors with financial expertise, and the control variables used in the study. From the data table, it can be observed that LOG_DPR, with 3,591 observations, has a mean value of -0.5656561 and a standard deviation of 0.876516. The highest value of LOG_DPR is 7.25575, and the lowest is -4.58035. Despite taking the logarithm, there is still a relative disparity in the dividend payout ratios among companies, ranging from those paying the highest dividends to those paying the lowest. This indicates a lack of uniformity in income distribution policies for shareholders among the researched companies in Vietnam, with some companies implementing robust shareholder income distribution policies, while others reinvest a portion of post-tax income back into the company.

Directors with financial expertise variable (DFE) has 5,714 observations, receive the highest value as 1, which indicates for the companies have financial expertise directors and lowest value as 0, which indicates for the companies do not have financial expertise directors. The mean of this variable is 0.5141757, which relects that the companies with financial expertise directors and the companies without financial expertise directors in used data is approximately equal.

Most of the researched companies are relatively similar in scale, with the largest value of the variable LSIZE reaching 33.29389 and the smallest value being 21.87363. Despite being similar in scale, there is a significant difference in revenue growth (LGR_RE) among the companies. The highest profit growth is 2,038.04%, while the lowest growth is -24.16174%. The substantial difference in revenue growth (LGR_RE) and the similarity in the scale of companies (LSIZE) partly indicate that, although companies may be similar in scale, they operate in different specialized fields, and the management structure in each company is different. This leads to variations in revenue growth among companies.

The financial leverage variable (LLEV) has the highest value of 140.2583 and the lowest value of 0.0005888, indicating significant differences in the use of debt among the companies. Some companies appear not to use debt in their business operations (LLEV approximates 0), while others use relatively high levels of debt (LLEV approximates 140), meaning the debt to be repaid is 140 times the equity. This may expose companies to higher risks in debt repayment when facing external environmental fluctuations. The average financial leverage for companies in the dataset is approximately 1.77888.

Furthermore, the variables LEPS and LNPM show differences in earnings per share and net profit margin among the researched companies. The highest earnings per share is 51,411 VND, while some companies have negative earnings per share at -10,609 VND. Additionally, the net profit margin of companies ranges from the lowest value of -56.5142 to the highest value of 28.90916, with an average concentration at 0.0411424. The Tobin's Q variable (LTOBINQ) reaches the highest value of 9.04 and the lowest value of 0.09, indicating a wide range of variations in the ratio between market value and replacement value of tangible assets for Vietnamese companies. The average Tobin's Q coefficient for Vietnamese companies concentrates around 1.049764.
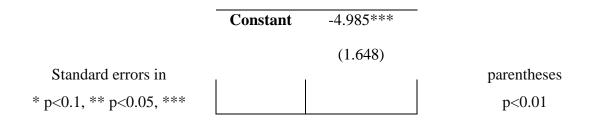
Finally, the GDP of Vietnam (LGDPVN) in the dataset fluctuates from 99.13 to 310.11, with the average GDP value in Vietnam during this period being 205.0464.

On the other hand, all correlation coefficient values among variables in the correlation matrix *(Appendix_Table 2)* are less than 0.5. Therefore, most all variables in the research model have weak correlations with each other. The researched model is considered appropriate.

4.2 Fixed Effects Model (FEM) regression

Table 4.2. FEM regression result

Variable	FEM
DFE	0.119
	(0.0856)
LDPR	0.0372**
	(0.0173)
LSIZE	0.171***
	(0.0638)
LLEV	-0.0968***
	(0.0246)
LNPM	0.192
	(0.209)
LEPS	-0.0000463***
	(0.00000767)
LGR_RE	0.0116*
	(0.00680)
LTOBINQ	-0.145***
	(0.0450)
LGDPVN	0.00104***
	(0.000379)

Constant	-4.985***
	(1.648)

In FEM regression model *(Table 4.2)*, the p-value of DFE variable are greater than 0.1. This indicates that directors with financial expertise (DFE) variable is not statistically significant in relation to the dividend payout ratio of firm.

Dividend payout ratio in the previous year (LDPR) are statistically significant for the firm's dividend payout ratio (DPR). The statistical significance level was below 5%.

Firm size (LSIZE), earnings per share (LEPS), Vietnam's GDP (LGDPVN) and Tobin's Q Ratio (LTOBINQ) are statistically significant for the dividend payout ratio (DPR) at 1% significance level.

The financial leverage of the firm (LLEV) has also p-value smaller than 0.01 in FEM regression model. This indicates that the LLEV variable has a strong statistical significance at the 1% level in the FEM model.

Net profit margin (LNPM) is not statistically significant for the dividend payout ratio (DPR) at the 10% significance level. On the contrary, revenue growth (LGR_RE) is statistically significant for the dividend payout ratio (DPR) at the 10% significance level in FEM model.

The question of whether there is any relationship between the directors with financial expertise and the company's ability to use financial leverage. To test this relationship, authors re-evaluate the correlation coefficient between the two variables, which is -0.0930. Therefore, there is no strong correlation that could lead to multicollinearity between these two variables. Then, the authors use Pooled OLS regression method to estimate the regression relationship between the directors with financial expertise (DFE) and the company's financial leverage (LEV).

Table 4.3. Regression between DFE and LLEV variable

	Pooled OLS
	LLEV
DFE	-0.816***
	(0.118)

Constant	2.118***	
	(0.0668)	

Observations	5403

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

This results show that the directors with financial expertise has an impact on the firm's financial leverage (p_value < 0.01). However, this relationship is negative, which is different from the finding of Custódio and Metzger (2014) in their previous study. According to Custódio and Metzger (2014), a firm with financially skilled CEOs tends to use financial leverage over 6% higher than the other firms. Furthermore, the authors use the Independent Samples t-test to examine whether there is a difference in the use of financial leverage between companies with financial expertise of directors and companies without financial expertise of directors.

According to Custodio và Metzger (2014), we propose hypothesis:

H2: There is a difference in financial leverage usage between companies run by directors with financial expertise and companies not run by directors with financial expertise.

Table 4.4. The result of Independent Sample T-Test:

Group	Obs	Mean	Std. err.	Std. dev.	[95% conf.	interval]
0	2,621	2.08102	0.070881	3.628779	1.942032	2.220007
1	2,782	1.426809	0.035796	1.888032	1.35662	1.496998
diff		0.654211	0.07806		0.5011825	0.807239
t = 8.3809					Pr(|T| > |t|) = 0.0000	

The result of Independent Sample T-Test *(Table 4.4)* show that t = 8.38.9 and prob value = 0.0000 < 0.05. Therefore, Therefore, there is a difference in the use of financial leverage between companies with directors with financial expertise and companies without directors with financial expertise.

Therefore, we accept hypothesis H2, there is a difference in the rate of using financial leverage between companies with directors with financial expertise and companies without directors with financial expertise. The companies without the directors with financial expertise often use financial leverage 0.6542% higher than companies administrate by directors with financial expertise. One notable thing is that the results obtained after analyzing data at companies in Vietnam are different from the research made by Custódio and Metzger in 2014 on companies with directors with financial expertise tend to use financial leverage higher than the average of 6%, and they tend to pay higher dividends to shareholders than companies without the directors with financial expertise.

4.4 Robustness checks

4.4.1 Heteroskedasticity and autocorrelation

The authors will conduct the Wald test and the Wooldridge test to examine the heteroscedasticity and autocorrelation in the model.

Table 4.5 The result of the Wald test and the Wooldridge test

Model	Tests	Results	Conclusion
FEM	Heteroskedasticity	chi2 (451) = 35821.46 $Prob>chi2 = 0.0000$	Heteroscedasticity occurs in the model
	Autocorrelation	F(1, 362) = 46.026 $Prob > F = 0.0000$	Autocorrelation occurs in the model

4.4.2 Omitting variables

One of the causes leading to bias in research results is the omitted variables in the model. To examine the the omitted variables in the model, the authors will conduct Ramsey test in Pooled OLS regression model. The outcome shows as below

Table 4.6 The result of the Ramsey test

Model	Tests	Results	Conclusion
Pooled OLS	Omitted variables	$F(3, 2983) = 2.33$ *Prob > F = 0.0724*	There is no omitted variables in the research model.

4.4.3 Endogeneity

Endogeneity is one of the reasons can also lead to the uncertainty and bias in the research results. To check whether the independent variable (DFE) is endogenous or exogenous variable in the research model, authors will use the Durbin Wu – Hausman test with DFE as the instrumented varible and LLEV LTOBINQ as the instrument variables. The results of the test shows as below

Table 4.7 The result of the Durbin Wu – Hausman test

Variable	Durbin Wu – Hausman Test	Result	Conclusion
DFE	Endogeneity	Durbin (score) chi2(1) = 0.70217 *(p = 0.4021)* Wu-Hausma F (1,2987) = 0.700225 *(p = 0.4028)*	DFE is exogenous variable

4.5 Resolving the shortcomings of FEM regression

To address the heteroskedasticity and autocorrelation in the FEM model that can lead to bias and incorrect results in the research model, the authors will decide to use the GLS (Generalized Least Squares) regression to resolve the shortcomings of the FEM model.

Table 4.8 FEM and GLS regression

VARIABLES	FEM	GLS
DFE	0.119	0.0627**
	(0.0856)	(0.0296)
LDPR	0.0372**	0.0699***
	(0.0173)	(0.0206)
LSIZE	0.171***	-0.0380***
	(0.0638)	(0.00773)
LLEV	-0.0968***	0.00210
	(0.0246)	(0.00560)
LNPM	0.192	0.354***
	(0.209)	(0.0944)
LEPS	-0.0000463***	-0.0000597***
	(0.00000767)	(0.00000453)
LGR_RE	0.0116*	0.00486
	(0.00680)	(0.00538)
LTOBINQ	-0.145***	-0.0164
	(0.0450)	(0.0214)
LGDPVN	0.00104***	0.000981***
	(0.000379)	(0.000172)
Constant	-4.985***	0.371*
	(1.648)	(0.198)
Observations	2996	2970

Standard errors in parentheses

*** $p<0.01$, ** $p<0.05$, * $p<0.1$

4.6 Discuss research results

The results of resolving the shortcomings of the model using the GLS method show: directors with financial expertise (DFE), dividend payout ratio in the previous year (LDPR), firm size (LSIZE), net profit margin (LNPM), earnings per share (LEPS), Vietnam GDP (LGDPVN) all have a statistically significant impact on the dividend payout ratio (DPR) of the firm. In addition, the variables financial leverage (LLEV), revenue growth (LGR_RE), and Tobin's Q Ratio (LTOBINQ) do not appear to have statistical significance in affecting the company's dividend payout ratio.

Directors with financial expertise (DFE) has a positive impact on the company's dividend payout ratio and statistically significant at the level 5% (p_value of variable DFE < 0.05 and $\beta 1 = 0.0627$). Therefore, authors reject hypothesis H0 and accept hypothesis H1, companies have directors with financial expertise in corporate governance activities often pay more dividends to shareholders than companies that have no directors with financial expertise.

The previous year dividend payout ratio in previous year (LDPR) has an impact on the current dividend payout ratio of the firm and statistically significant at the level 1, this is a positive relationship (p_value of the LDPR variable < 0.01 and $\beta 2 = 0.0699$). This is completely consistent with the research results of Dr. Do Thi Ha Thuong, Dang Thanh Phuong Ngoc, Pham Tuan Phat (2022) have previously pointed out the positive relationship between the dividend payout ratio in the previous year and the current dividend payout ratio of firm. The results from table 4.8 show that 1 unit increase in the dividend payout ratio in the previous year will cause the current dividend payout ratio to increase by 0.0699 unit.

Firm size (LSIZE) has a negative impact on the company's dividend payout ratio and is statistically significant at the 1% level (p_value of the variable SIZE < 0.01 and $\beta 3 = -0.038$). This is completely consistent with the research results of the authors Al-Malkawi (2007), Nguyen Thi Minh Hue (2014) and Bushra and Mirza (2015). From there, it can be concluded that large-scale businesses are often limited in paying dividends to shareholders; 1 unit increase in the size of the firm will cause the dividend payout ratio to decrease 0.038 unit. The research results can be considered from the perspective that

when firm want to achieve large scale, they need a lot of capital to reinvest in expanding the company, so firm often do not distribute after-tax profits to their shareholders. Firm use that money to buy machinery, equipment and expand their business. This is also an important basis for investors to consider when chose firm to invest. If investors decide to invest in large-scale companies that are increasingly expanding in scale, they may have to trade off not receiving dividends or receiving dividends at a low rate in the long time because the company spends a lot of resources on reinvesting and expaining company.

Financial leverage (LLEV) is statistically significant for the firm's dividend payout ratio in the FEM model. However, after eliminating autocorrelation and heteroskedasticity in the model, financial leverage (LEV) is no longer statistically significant for the firm's dividend payout ratio. (p_value of variable LEV > 0.1). This is completely contrary to the authors Ahmed and Javid (2009), Gill, Biger, Tibrewala (2010), Truong Dong Loc (2013) when authors believe that the debt-to-equity ratio of an firm has negative correlation with the company's dividend payout ratio. On the other hand, by regression testing between directors financial expertise and the financial leverage. The results show that directors with financial expertise has an impact on financial leverage. This result is completely consistent with the results of the two authors Custódio and Metzger (2014).

Net profit margin (LNPM) has positive impact on the firm 's dividend payout ratio is statistically significant at the 1% level (p_value of NPM variable < 0.01 and $\beta 5 = 0.354$). This shows that firms with high net profit after tax on total revenue is likely to pay high dividends to shareholders, 1 unit increase in net profit margin will will cause the dividend payout ratio to increase 0.354 unit. This research result is also consistent with the results that Gill, Biger, and Tibrewala's researchs indicated in 2010.

Earnings per share (LEPS) has a strong impact on the dividend payout ratio to shareholders of the firm, however the authors find an negative relationship between EPS and dividend payout ratio of the firm at statistical significance level 1% (p_value of EPS variable < 0.01 and $\beta 6 = -0.0000597$). Specifically, an increase of 1 unit in EPS will cause the dividend payout ratio decrease 0.0000597 unit. Although the number decreased very little, the results of this study are different from the studies of Ahmed

and Javid (2009); Truong Dong Loc (2013); Custódio and Metzger (2014); Bushra and Mirza (2015).

Revenue growth (LGR_RE) is not statistically significant to the company's dividend payout ratio (p_value of EPS variable > 0.1 and $\beta 7 = 0.00486$). The results of this study are different from the research results of Gill (2010); Chen and Dhiensiri (2009); Truong Dong Loc and Pham Phat Tien (2015) indicated before. However, taking a real example of banks in Vietnam in recent times, banks have high and very stable revenue growth rates but rarely pay cash dividends, even banks do not implement other forms of dividends, which causes the dividend ratio decrease. Therefore, it can be seen that although the results obtained from this study may be different from previous studies, it is not completely contrary to the current situation of many companies. Furthermore, it shows that a firm with a high revenue growth rate does not mean it will use the profits from that revenue growth to pay shareholders, but can use the profits to reinvest in expanding the firms or use that profit to make provisions, avoiding systemic risks related to sudden changes in companies 's external environment.

Tobin's Q Ratio (LTOBINQ) is not statistically significant to the company's dividend payout ratio (p_value of the variable LTOBINQ > 0.01 and $\beta 8 = -0.0164$). This result is inconsistent with conclusion of DeAngelo et al. in the study in 2006. According to DeAngelo et al.'s research, companies with higher Tobin's Q Ratio need to retain cash because these companies need more cash for future investments, so these businesses tend to pay less dividends. On the contrary, in this study, in the Vietnamese market, although Tobin's Q Ratio also has a negative impact on the rate of dividend payout ratio, this is not statistically significant.

GDP Vietnam (LGDPVN) has a strong correlation at statistically significant at the 1% level and in the same direction with the dividend payout ratio of the businesses studied in the model (p_value of GDPVN < 0.01 and $\beta 9 = 0.000981$). This shows that when the economy grows, businesses also tend to pay more dividends to shareholders. An increase of 1 unit in Vietnam's GDP will cause the company's dividend payout ratio increased to 0.000981 units. This is a new aspect of consideration in the authors' research model.

5. Conclusion and discussion

After analyzing a data set of 5,988 observation samples from 499 companies listed at Hochiminh Stock Exchange (HoSE) and Hanoi Stock Exchange (HNX) during the period from 2008 to 2019, we have found a positive relationship between the directors with financial expertise and the firm 's dividend payout ratio. This finding contributes to a small part of the research hypothesis on the relationship between the business operating process, management activities and the company's dividend payment policy.

5.1 Concluding remarks

Firstly, the paper has shown a strong statistically significant relationship between the ration of directors with financial expertise and the financial leverage of companies in Vietnam. Moreover, the paper also shows that the directors with financial expertise has an negative relationship with the use of leverage of companies (β = -0.8131). The companies administrate by directors without financial expertise use the financial leverage 0.6542% higher than the companies have directors with financial expertise. This conclusion is contrary to the conclusion previously pointed out by Custódio and Metzger (2014). The explanation for this can be seen from the perspective that in Vietnam, companies have directors with financial expertise often carefully review the financial situation of the companies and carefully consider the use of financial leverage. Mainly, because companies in Vietnam are mostly developing companies, the use of too high financial leverage can make these companies unable to pay debts in the face of rapid fluctuations and cannot be determined in advance from the economic environment in Vietnam.

Secondly, thanks to the analysis of observational data samples about listed businesses in Vietnam. This study also tested the assertion of Custódio and Metzger (2014) that in reality there is a statistically significant relationship between financial expertise of directors and dividend payout ratio of the companies.

Thirdly, the paper also contributes to answering the concerns of many shareholders about companies, why revenue growth is high, but businesses do not pay dividends for shareholders. Based on the model from the study, it can be explained that when a business has a high revenue growth rate, that business does not necessarily have to

distribute profits to shareholders but can use those profits to reinvest in assets and increase the scale of the business. This also contributes to increasing value of comapny. However, this does not receive complete approval from the company's shareholders, especially those shareholders who wish to invest long-term in the company and consider dividends as part of the income they deserve receive annually from the risks they may bear when they invest their capital in this company.

5.2 Executive summary

Through the research article, authors intend to provide a specific basis for companies about the positive impact of arranging directors with financial expertise in corporate governance activities. Companies should consider assigning directors with financial experience such as accounting, auditing, corporate finance, etc. to operate and decide on the company's strategies. Choosing the right members with good professional capabilities not only helps the business make appropriate financial decisions but also ensures the companies's ability to maintain operations in the future. In the period 2022 - 2023, many businesses listed on the Vietnamese stock exchange will lose the ability to pay interest on loans and bonds due to using financial leverage many higher than equity. This not only affects business operations but also directly affects the shareholders who have entrusted their capital to the company, especially effective for shareholders who wish to invest long-term to receive annual dividends from the company. From the connection with the basic theories and empirical studies listed in chapter two of the study, the authors have developed and expanded this topic with the desire to provide solutions to ensure dividend rate paid to shareholders, while reducing agency conflicts that may arise between shareholders and company managers regarding dividend payments.

5.3. Limitations

Firstly, the data is analyzed by the authors do not cover all companies currently present on the Vietnamese stock market, the data set only shows 499 companies in the period from 2008 to 2019. Many companies operating in Vietnam have not yet been surveyed in the research model. This also partly explains why the residuals in the research model have not yet reached a completely normal distribution.

Secondly, due to missing data in the main model, the authors have not been able to consider some issues such as stationarity of the model.

Thirdly, many points in the research have not been fully commented and argued by authors. At the same time, there are still many qualitative factors affecting dividends that are not measured and mentioned in research such as the personality of directors, the personality of investors in Vietnam, and the actual financial level of the company, market participants, etc.

5.4. Future research agenda

Through the hypotheses researched and presented by authors, authors expect that research article can contribute a small part of the argument to the larger topic of the relationship between the business operating process, the implement corporate governance activities and dividend payment policies. The goal is that many other studies can explore in depth how the characteristics of the directors will affect operational efficiency and relationships with shareholders within company. In addition, with the conclusions drawn from the research, the authors hope to provide an additional argument to help companies clearly see the positive impacts of arranging directors have financial expertise in business management. In addition, the study also provided evidence to explain why companies have favorable business operations and high revenue growth rates but are stagnant in paying dividends to shareholders, helps investors have a correct view of companies management activities and choose the right company to invest in according to their own personal goals.

List of abbreviations

FEM: Fixed effect model.

GLS: Generalized least square.

HNX: Hanoi Stock Exchange.

HoSE: Ho Chi Minh City Stock Exchange.

JSC: Joint Stock Company.

JSCB: Joint Stock Commercial Bank.

OLS: Ordinary least square.

TABLES

Table 1. Summary of variables

VARIABLES	NAME OF VARIABLE	FORMULA	LITERATURE
Dividend Payout Ratio	LOG_DPR	LOG_DPR = LOG (Dividend Per Share/ Earnings Per Share)	Ahmed và Javid (2009) Gill,Biger,Tibrewala (2010) Kyle và Frank (2013)
The directors with financial expertise	DFE	Dummy variable. Takes the value of 1 if the company has a director with financial expertise. Takes the value of 0 if the company does not have directors with financial expertise.	Custódio and Metzger (2014)
Dividend Payout Ratio of the previous year	LDPR	LDPR is calculated by taking the DPR of the previous year.	Do Thi Ha Thuong, Pham Tuan Phat, Dang Thanh Phuong Ngoc (2022)
Company size	SIZE	SIZE = Log (Total Asset)	Al-Malkawi (2007) Nguyen Thi Minh Hue (2014) Bushra and Mirza (2015)

VARIABLES	NAME OF VARIABLE	FORMULA	LITERATURE
Financial leverage	LEV	LEV = Company debts/ Company equity value	Ahmed and Javid (2009) Gill, Biger, and Tibrewala (2010) Truong Dong Loc (2013) Nguyen Kim Phuoc, Pham Tien Minh (2021)
Net Profit Margin	NPM	NPM = Net income/ Total revenue	Gill, Biger, Tibrewala (2010)
Earning Per Share	EPS	EPS = Net income/ Shares Outstanding	Ahmed and Javid (2009) Truong Dong Loc (2013) Custódio and Metzger (2014) Bushra and Mirza (2015) Nguyen Kim Phuoc, Pham Tien Minh (2021)
Growth Revenue	GR_RE	GR_RE = (Revenue year (t) − Revenue year (t-1)) / (Revenue year (t-1))	Gill (2010) Chen and Dhiensiri (2009) Truong Dong Loc and Pham Phat Tien (2015)

VARIABLES	NAME OF VARIABLE	FORMULA	LITERATURE
Tobin's Q Ratio	TOBINQ	TOBINQ = Book Value of Equity / Market Value of Equity	DeAngelo and al (2006) Tran Thi Thanh Hai và Nguyen Thi Thu Nguyet (2022)
GDP of Vietnam	GDPVN	GDPVN = Gross Domestic Product of Vietnam	

Table 2. Correlation matrix

	LOG_DPR	DFE	LDPR	LSIZE	LLEV	LNPM	LEPS	LGR_RE	LTOBINQ	LGDPVN
LOG_DPR	1.0000									
DFE	-0.0005	1.0000								
LDPR	0.2109	-0.0151	1.0000							
LSIZE	-0.0679	-0.0017	0.0126	1.0000						
LLEV	-0.0054	-0.0934	0.0025	0.1712	1.0000					
LNPM	-0.0710	0.0149	-0.0003	0.0285	-0.0248	1.0000				
LEPS	-0.2766	0.0381	-0.0313	0.0668	-0.1013	0.0896	1.0000			
LGR_RE	0.0089	-0.0019	-0.0038	-0.0004	0.0013	0.0004	-0.0198	1.0000		
LTOBINQ	-0.1004	0.0700	-0.0151	0.1053	-0.0545	0.0507	0.3962	-0.0084	1.0000	
LGDPVN	0.1748	0.0199	0.0067	0.1945	-0.0098	-0.0301	-0.1404	-0.0027	0.0016	1.0000

Table 3. Pooled OLS regression of DFE, LLEV, LTOBINW variables

	Pooled OLS
	DFE
LLEV	-0.00958***
	(0.00159)
LTOBINQ	0.0445***
	(0.00963)
Constant	0.428***
	(0.0116)
Observations	4966

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 4. 2SLS regression results

	2SLS Regression
	LOG_DPR
DFE	-0.313
	(0.370)
LDPR	0.127***
	(0.017)
LSIZE	-0.0316***
	(0.0106)
LNPM	0.316***
	(0.118)
LEPS	-0.0000757***
	(0.00000544)
LGR_RE	0.00552
	(0.00377)
LGDPVN	0.000869***
	(0.000305)
Constant	0.447
	(0.331)

Observations	2996
Instrumented: DFE	
Instruments: LDPR LSIZE LNPM LEPS LGR_RE LGDPVN LLEV LTOBINQ	

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 5. Durbin Wu – Hausman test

Tests of endogeneity
H0: Variables are exogenous

Durbin (score) chi2(1)   = .70217 (p = 0.4021)
Wu-Hausman F(1,2987) = .700225 (p = 0.4028)

REFERENCES

Lintner, J. (1956). Distribution of Incomes of Corporations Among Dividends, Retained Earnings, and Taxes. The American Economic Review, 46(2), 97–113.

Miller, M. H., & Modigliani, F. (1961). Dividend Policy, Growth, and the Valuation of Shares. *The Journal of Business*, 34(4), 411–433.

Gordon, M. J. (1963). Optimal Investment and Financing Policy. The Journal of Finance, 18(2), 264–272. https://doi.org/10.2307/2977907

Michael C. Jensen, William H. Meckling. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics,* 3(4), 305-360. https://doi.org/10.1016/0304-405X(76)90026-X

Fama, E.F. and Miller, M.H. (1972) The Theory of Finance. Dryden Press, Illinois.

Merton H. Miller, Myron S. Scholes. (1978). Dividends and taxes. *Journal of Financial Economics,* 6(4), 333-364. https://doi.org/10.1016/0304-405X(78)90009-0

Michael S. Rozeff. (1982). Growth, Beta And Agency Costs As Determinants Of Dividend Payout Ratios. *The Journal of Financial Research*, 5, 249-259. https://doi.org/10.1111/j.1475-6803.1982.tb00299.x

Custódio, C., & Metzger, D. (2014). Financial expert CEOs: CEO′s work experience and firm′s financial policies. *Journal Of Financial Economics*, *114*(1), 125-154. doi: 10.1016/j.jfineco.2014.06.002

Ahmed, Hafeez and Javid, Attiya Yasmin (2008): The determinants of dividend policy in Pakistan, *International Research Journal of Finance and Economics*, 29, 110-125.

Trần, T., & Nguyễn, T. (2022). "The impact of financial reporting quality on corporate dividend policy - Experimental research on Ho Chi Minh City stock exchange". Science &Amp; Technology Development Journal - Economics - Law And Management. doi: 10.32508/stdjelm.v6i1.858

Ciaccia, C. (2012). Can Apple Investors Sue for a Dividend? Retrieved from https://www.cnbc.com/2012/02/17/can-apple-investors-sue-for-a-dividend.html

Arnott, Robert D. and Asness, Cliff S. (2001). Does Dividend Policy Foretell Earnings Growth? http://dx.doi.org/10.2139/ssrn.295974

Al-Malkawi, H. (2007). Determinants of Corporate Dividend Policy in Jordan: An Application of the Tobit Model. *Journal of Economic and Administrative Sciences*, 23, 44-70. https://doi.org/10.1108/10264116200700007

Amarjit Gill et al. (2010). The relationship between working capital management and profitability: Evidence from The United States. *Business and Economics Journal,* 10, 1-9.

Gill, A., N. Biger and R. Tibrewala (2010), "Determinants of dividend payout ratios: Evidence from United States", *The Open Business Journal*, 8 – 14.

Truong Dong Loc. (2013). Các Nhân Tố Ảnh Hưởng Đến Chính Sách Cổ Tức Của Các Công Ty Niêm Yết Trên Sở Giao Dịch Chứng Khoán Hà Nội. *Tạp chí khoa học và đào tạo ngân hàng.* 135 (37).

Loc, T. Đ., & Tien, P. P. (2015). Các nhân tố ảnh hưởng đến chính sách cổ tức của các công ty niêm yết trên sở giao dịch chứng khoán thành phố Hồ Chí Minh. *Tạp chí Khoa học Đại học cần Thơ*, 38, 67-74.

Chen, J., & Dhiensiri, N.. (2009). Determinants Of Dividend Policy: The Evidence From New Zealand. *International Research Journal Of Finance And Economics*, 34, 18-28.

Profilet, Kyle A. (2013). Dividend Policy And Stock Price Volatility In The U.S. Equity Capital Market. *Theses & Honors Papers*. 145.

Do Thi Ha Thuong, Pham Tuan Phat, Dang Thanh Phuong Ngoc. (2022). Các yếu tố nội tại ảnh hưởng đến chính sách cổ tức của các ngân hàng thương mại Việt Nam. *Tạp chí Ngân hàng*.

Nguyen Thi Minh Hue. (2015). Impact of dividend announcement on stock price of listed companies on Ho Chi Minh City Stock Exchange. *Economics Development Journal*, 26(5), 44.

Bushra and Mirza. (2015). The Determinants of Corporate Dividend Policy in Pakistan. *The Lahore Journal Of Economics*, 20(2), 77-98.

Nguyen Kim Phuoc and Pham Tien Minh. (2021). Các yếu tố ảnh hưởng đến tỉ lệ chi trả cổ tức: Nghiên cứu thực nghiệm các công ty hàng tiêu dùng. *Tạp Chí Nghiên cứu Tài chính - Marketing*, 65(5), 71-85. https://doi.org/10.52932/jfm.vi65.211

Chen, J., & Dhiensiri, N.. (2009). Determinants Of Dividend Policy: The Evidence From New Zealand. *International Research Journal Of Finance And Economics*, 34, 18-28. Sid. https://sid.ir/paper/647524/en

Deangelo, H. & Deangelo, L. (2006), The irrelevance of the MM dividend irrelevance theorem, *Journal of financial economics*, 79, 293-315.