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Tác động của đòn bẩy tài chính và tỷ lệ chi trả cổ tức đến giá trị doanh nghiệp: tình huống nghiên cứu tại ngành bất động sản Việt Nam

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TÓM TẮT

Bài báo nghiên cứu tác động của đòn bẩy tài chính và tỷ lệ chi trả cổ tức đến giá trị doanh nghiệp với mẫu nghiên cứu của 29 doanh nghiệp bất động sản niêm yết tại Sở Giao dịch Chứng khoán Thành phố Hồ Chí Minh (HOSE) và Sở Giao dịch Chứng khoán Hà Nội. Sử dụng phương pháp bình phương nhỏ nhất (OLS), hồi quy hai giai đoạn (2SLS) và Generalized Method of Moments (GMM), chúng tôi đã tìm thấy bằng chứng về tác động tích cực của đòn bẩy tài chính và tỷ lệ phân phối cổ tức trên giá trị doanh nghiệp. Kết quả về tác động dương của đòn bẩy tài chính đối với giá trị doanh nghiệp có thể được giải thích bằng thuyết đánh đổi và thuyết đại diện. Và tác động tích cực của tỷ lệ chi trả cổ tức đến giá trị doanh nghiệp có thể được thuyết bird in hand, thuyết đại diện và thuyết tín hiệu lý giải. Nghiên cứu được kỳ vọng cung cấp thêm bằng chứng thực nghiệm đến cộng đồng học thuật về cách nhà quản trị tài chính trong ngành bất động sản Việt Nam thực hiện hai chính sách tài chính như thế nào từ góc nhìn của các thuyết tài chính nổi tiếng.

Từ khóa: *Cấu trúc vốn, tỷ lệ chi trả cổ tức, giá trị doanh nghiệp.*

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Effect of financial leverage and dividend payment on Corporate Value: Case in Vietnamese real estate sector

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ABSTRACT

The study examines the effect of financial leverage and dividend payments on firm value using a sample of 29 listed real estate firms from the Ho Chi Minh Stock Exchange (HOSE) and the Hanoi Stock Exchange (HNX). By employing the Ordinary Least Square (OLS), Two-stage Least Square (2SLS), and Generalized Method of Moments (GMM) estimation methods, we obtain robust evidence of the positive effect of leverage and dividend distribution on real estate sector corporate value. The findings of a favorable effect of financial leverage on firm value are explained well by the trade-off and agency theorems. Additionally, the beneficial impact of dividend payments on corporate value can be explained by the bird in hand, agency, and signaling theorems. The study is expected to provide more evidence to the research community on how Vietnamese real estate financial managers execute two major financial policies from the perspective of the well-known financial theorem.

Keywords: *Capital structure, payout policy, value of firm.*

1. INTRODUCTION

"What is the effect of capital structure or dividend distribution on firm value?" is a long-standing problem in the academic community that has attracted considerable research. According to the irrelevance theory,[1,2] leverage and dividend distribution do not impact corporate value in the perfect market assumption. Many scholars put efforts into explaining this issue, such as trade-off,[3] pecking order,[3,4] signaling,[5] and agency theory;[6] however, the outcomes still need to be clarified.

Trade-off theory[3] proposes that leverage benefits the firm's performance. Pecking order theory[3,4] proposes that companies prefer internal over external funds and debt over equity when they need finance. Signaling theory[5] revealed that if the firms have excellent growth prospects, the managers will increase the debt level to signal to outsiders, and vice versa. According to agency theory,[6,7] financial leverage could reduce agency costs by lowering the managers' opportunities to withdraw the firms' free cash flows. After that, many empirical studies try to reveal the correct answer to the question, but the findings look controversial.[8-10]

Many scholars have worked hard to reach a clear conclusion about the impact of dividend distribution on firm value. Bird in hand[11] and signalling[12] suggest that dividends are very crucial and send a message wealth of companies to the investor. From the agency theory perspective,[6,7] dividend can be used as an ideal tool to minimize the agency cost in the manager-shareholder relationship. Many scholars[13-15] tried

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to explain this issue; however, the results look disputed.

Vietnam is considered a dynamic economy with significant growth. Even though COVID-19 significantly impacted all sectors of the economy, Vietnam maintained positive growth, with 2.91% and 2.59% in 2020 and 2021, respectively. Real estate, one of 21 level-one industries (according to Decision 27/2018/QD-TTg on the promulgation of Vietnamese industries), is ranked ninth in GDP contribution (as announced by the National Financial and Monetary Policy Advisory Council). This sector took 3.58% of the total GDP in 2021, especially for the first six months of 2022, when real estate took 3.32% of total GDP (General Statistics Office announcement).

The facts prove that financial issues such as information asymmetry, agency problems, and conflict of interest in the real estate sector have become more critical. The COVID-19 pandemic and global economic fluctuations have put many real estate companies in a difficult position. Some of them violated the law, which has placed this sector in a difficult position. On March 29, 2022, Trinh Van Quyet, Chairman of the Board of Directors of FLC Group Joint Stock Company (FLC), was arrested and committed for the acts of "manipulating the stock market," "concealing information in securities trading activities," as specified in Article 211 of the Penal Code. Next, Do Anh Dung, Chairman of Tan Hoang Minh (April 2022), and Truong My Lan, Chairwoman of the Van Thinh Phat Holdings Group Corporation (October 2022), were prosecuted for violating the law on the fraudulent appropriation. From the above necessities in theoretical research and reality's needs, there should be more research on the effect of the two major financial decisions on firm value, particularly in this industry.

Combining all the above arguments, we decide to investigate the effect of leverage and dividend payout on firm value in Vietnam's real estate firm in the 2010 - 2021 period. The study is one of a few research discovering how capital structure and payout policies influence the value of real estate firms. It continues to provide evidence supporting well-known theorem and extends the previous studies using the case study in Vietnam. Especially the study reveals that debt is employed as an instrument to minimize the conflict of interest. Additionally, dividends are signal to show the firm's wealth and a mechanism to limit the managers' exploitation for their own purposes.

2. THEORETICAL FRAMEWORK AND LITERATURE REVIEW

2.1. Effect of financial leverage on firm value

Irrelevance Theory: Under certain conditions, such as equivalent information, parallel interest rates, risk-free debt, and transaction cost without taxes, Modigliani and Miller[1] proposed that the value of each firm does not rely on the capital structure. On the other hand, these assumptions conflict with reality.[2] By studying the tax shield effect, the authors remade the theory and came to the conclusion that when interest payments have permission to be deductible by the laws, the company's market value will rise with leverage.[2]

Trade-off and pecking order theory: Myers[3] recommended two theorems related to the firm's capital structure. From the trade-off theory perspective, the firm will establish an optimal proportion of debt and equity. The managers need to find an ideal combination to maximize firm value. Unless there are enough retained earnings, the debt will be preferred over new equity issuing. As the result the greater leverage, the higher firm's value. In addition, the author proposes the pecking order theory assuming a priority hierarchy for funding: internal funds, debts, and equity. So internal funds are preferred over external funds.

Agency theory: Jensen and Meckling[7] suggested that debt might be utilized to decline agency costs in manager-shareholder conflicts of interest. The higher debt levels, the lower free cash flows. Liability can diminish opportunities for managers to exploit money for personal

purposes. For example, the managers might invest in some unprofitable projects.[6] On the other hand, debt might support managers to increase their ownership in the firm. Thus, financial leverage is sometimes better for the management group. So, from the standpoint of agency theory, leverage benefits their firm value.

Numerous empirical studies focused on capital structure's impact on firm value from 1995 to 2019; however, the results look deputed. The first research stream revealed the unfavourable effect of debt on corporate value. Fosu, et al.[10] employed 1,446 firms in 1995 – 2013, revealing the negative association between debt level and firm value by taking advantage of Ordinary Least Square, Fixed Effect, and 2-step Generalized Method of Moment methodology. Two other studies[8,9] exposed the same results. Vo and Ellis[9] conducted a study with 1,214 firm-year samples in Vietnam. They proved that financial leverage has an unfavourable impact on Vietnamese firm value by utilizing fixed effect estimation. Employing Ordinary Least Square, Fixed Effect, and 2-step Generalized Method of Moment, Chakraborty[8] proved a similar outcome with a sample of 1,169 non-financial Indian companies from 1995 to 2008.

However, some research suggested that debt positively impacts on corporate value.[16,17] Cheng and Tzeng[16] explained that leverage has a beneficial impact on firm value in case of 645 listed companies on Taiwan Securities Exchange (TSE) by the Generalized Method of Moment method in the 2000 - 2009 period. In addition, Jihadi, et al.[17] found the similar outcome with 2,245 index-listed firms on Indonesia Stock Exchange from 2014 to 2019. The others discovered that leverage does not impact on firm value.[15,18] Both employed data from Indonesian firms and multiple regression analyses with different research periods.

The inconsistencies appear due to different research periods, sample sizes, countries, and econometric methodologies. The extended research period and complicated methodology led to positive[10] or adverse outcomes.[16] On the other hand, studies using a small dataset and a short research period revealed disputed results.[15,17,18] This difference shows that the impact of capital structure on firm value is still a gap in the academic world.

2.2. Effect of dividend payout on firm value

Irrelevance theory: Miller and Modigliani[19] proposed the irrelevance theory arguing that shareholders' wealth is not affected by dividend policy in the absence of taxes and market imperfections. The authors asserted that the firm value is determined by the earnings derived from the investment policies.

Bird in Hand Theory[11] concluded that a high dividend payout ratio would increase shareholders' ability to maximize asset value. Thus, investors are more interested in receiving dividends from their investments than selling their shares. Therefore, dividend payments might benefit the corporate value.

Agency theory[6,7] argued that there is a traditional conflict of interest between agencies and owners. Dividends might be employed to limit the managers' overinvestment in some unprofitable projects. The higher dividend payment to shareholders might help to decrease the agency's cost. From this viewpoint, higher dividends will support increasing firm value.

Signaling theory[12] suggested that dividends can be used to send prospect signals to outside investors. The authors contended that dividend payment is an effective method to minimize the severe effect of information asymmetry.

Similarly, the influences of dividend payment on firm value have numerous consequences.[13-15] Dang, et al.[14] pointed out that higher dividends guarantee greater firm value in the case of Vietnam. The study used 2,278 firm-year samples from Ho Chi Minh Stock Exchange and General Least Square estimation methodology in the 2006 - 2017 period. Employing the data of 635 firms from 2001 to 2011 and fixed effect method, Anton[13] brought

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out the same findings. However, Husna and Satria[15] revealed that dividends do not affect on firm value. The author analysed a sample of 32 listed firms on Indonesia Stock Exchange from 2013 to 2016.

This disparity can be attributed to the nation, the magnitude of the data collection, and the technique. Research that was conducted over a lengthy time period found a favourable impact of dividends.[13,14] Others that were undertaken over shorter periods and smaller samples did not find meaningful outcomes. In addition, only a few researchers used the strategy to eliminate endogeneity. Therefore, more investigations need to be carried out to answer the open question.

2.3. Hypothesis development

From all the theorems and literature reviews, we can see that there are two viewpoints on leverage's effect on firm value. Based on the agency and trade-off theories, firm leverage is predicted to enhance corporate value. On the other hand, anticipating the pecking order theory, it is clear that retained earnings are crucial to a firm's expansion. Thus, higher leverage might harm the firm value.

The Vietnam real estate sector is in the growth stage, and most companies are young. Thus, monetary funds are vital to them. The needs of external finance might be higher than the other sector to finance the fast expansion. Real estate managers might follow the agency and trade-off theorem. Therefore, level of debt might positively impact firm value. We propose the first hypothesis as below:

Hypothesis 1: Financial Leverage positively impacts firm value.

Next, consider the influence of dividend payments on firm value. Three famous theorems, bird in hand, agency, and signalling, predict the favourable impact of dividends on firm value. On the contrary, pecking order theory reveals that managers might favour retained earnings to finance their businesses. This conclusion provides the prediction that dividend payout can harm the firm value.

Regarding Vietnam's real estate case, information asymmetry is relatively dramatic. The outsiders lack information about firms and profitable projects, so they might miss the opportunity to invest in the right companies. As a result, a dividend can be viewed as an effective way to persuade an outsider to finance. We believe that dividends might push the firm's value up. The second hypothesis is listed below:

Hypothesis 2: Dividend payout has a positive effect on firm value.

3. RESEARCH METHODS

3.1. Data

Data is hand-collected from 29 real estate companies in two stock exchange markets: Ho Chi Minh Stock Exchange (HOSE) and Hanoi Stock Exchange (HNX), from 2010 to 2021. According to the Vietnam State Securities Commission, there are 56 non-financial listed real estate firms in HOSE and HNX. Thus, the sample accounts for 51,78% of the population. Financial information was extracted from the audited financial statements. Stock prices were compiled from the transaction history. Dividend payment information is collected from each company's announcements by year on www.cafef.vn. All the data is winsorized at 1% 99% to eliminate all the outliers.

3.2. Variables

3.2.1. Dependent variable

The main dependent variable is the q ratio (TOBINQ), which is created by the sum of the market value of common shares, the book value of preferred shares, and the book value of total liabilities divided by the book value of total assets.[14,20] The ratio measures how much difference between the market value and the book value of firm. This proxy has been used popularly in accounting, economics, and finance studies in measuring the firm value.[14,21]

3.2.2. Independent variable

The main independent variables are LEV and DIVP. LEV represents financial leverage and is computed by dividing total debt by total equity.[17,22] DIVP stands for dividend payout ratio, and it is calculated by dividing the dividend per share by earnings per share.[14] Furthermore, the study employs dividend per total asset (DIVTA) as an alternative proxy for dividend distribution.[23,24]

3.2.3. Control variables

The study utilizes two control variables, which are AGE and SIZE, representing the age and size of the companies, respectively.[14,25] The number of years since the company was founded is used to calculate AGE[25]. Mature companies, according to the life cycle perspective, have fewer investment opportunities and higher cash flows.[26] Thus, they might reach a higher business value. Next, SIZE is measured by the natural logarithm of total assets.[14] Business size is expected to positively correlate with firm value thanks to its capacity to generate more cash flows.

Table 1. The variables.

Variables	Formula
TOBINQ	(Market value of equity + Book value of debt)/ Book value of total assets.
LEV	Debt/ equity
DIVP	Dividend per share/ Earnings per share
DIVTA	Total cash dividends/ Total assets
AGE	Age of company
SIZE	Ln (total assets)
GOV	The percentage of government ownership

3.3. Research model

Employing models from the previous research,[14,27] we decide to create a main model as below:

$$TOBINQ_{it} = \beta_0 + \beta_1 DIVP_{it} + \beta_2 LEV_{it} + \beta_3\ SIZE_{it} + \beta_4 AGE_{it} + u_i\ (1)+$$

Additionally, we used the same model with dynamic panel data.

$$TOBINQ_{it} = \beta_0 + \beta_1 TOBINQ_{it-1} + \beta_2 DIVP_{it} + \beta_3 LEV_{it} + \beta_4\ SIZE_{it} + \beta_5 AGE_{it} + u_i\ (2)+$$

The paper uses three main method: Ordinary Least Square (OLS), Two-stage Least Square (2SLS), and System Generalized Method of Moment (GMM-SYS). By employing OLS, the explanatory variable might correlate with unobserved and time-constant characteristics, causing biased and inconsistent results.[28] FE and RE were introduced to solve this problem. FE requires that time-varying covariates not correlate with the time-varying error term.[29] RE necessitates the non-correlation between explanation variables and specific effect. If the assumptions are not met, FE and RE estimators will be inconsistent.[30] As a result, we decide to employ the 2SLS[21] and GMM-SYS[31,32] to address the main endogeneity concerns and produce more consistent outcomes.

4. EMPIRICAL RESEARCH

4.1. Descriptive statistics

Table 2. Descriptive statistics.

	Obs	Mean	SD	Min	Max
TOBINQ	341	0.979	0.294	0.373	2.028
DIVP	344	0.301	0.379	0.000	2.098
DIVTA	345	0.541	0.170	0.057	0.946
LEV	341	1.526	1.188	0.000	6.311
SIZE	331	28.323	1.311	24.847	33.294
AGE	343	12.309	4.433	4.000	26.000
GOV	348	0.161	0.232	0.000	0.788

Table 2 indicates that, on average, the q ratio of Vietnamese firms is 0.979, with the highest value being 2.0284 and the lowest value being 0.373. The mean value of TOBINQ revealed that the firm market value equals 97.9% of the book value. LEV has a mean of 152.6%, implying that debt exceeds equity 1.526 times in the sample. The highest value of LEV is 6.311, which shows that debt is more

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than six times as large as equity. DIVP has an average value of 0.301, which reveals that real estate firms spend 30.12% of their earnings to pay dividends. The maximum dividend amount is 2.0979, implying that the company used 209.79% of its earnings to pay the dividend. It is a special case of the rewarded dividend paid in 2013 by Thuduc Housing Development Corporation (Security code: TDH). AGE has a mean value of approximately 12 years, with the longest and the newest being 26 years and four years, respectively. SIZE has an average value of 28.33, with maximum and minimum values of 33.29 and 24.847, respectively.

4.2. Correlation analysis

Table 3. Pearson analysis.

	TOBINQ	DIVP	DIVTA	LEV	SIZE	AGE	GOV
TOBINQ	**1**						
DIVP	-0.0243	**1**					
DIVTA	0.1491***	0.6527***	**1**				
LEV	0.1978***	0.058	-0.168***	**1**			
SIZE	0.0369	-0.0712	-0.084	-0.0339	**1**		
AGE	0.1461***	-0.0611	0.019	-0.0459	0.3529***	**1**	
GOV	0.0608	0.3882***	0.3868***	0.0143	-0.0729	-0.2098***	**1**

****, **, * : 1%, 5%, 10% significant level*

Regarding the correlation analysis, Table 3 shows the results of the Pearson correlation coefficients for all variables. We can see that TOBINQ and LEV have a significantly positive association. However, the relationship between TOBINQ and DIVP failed to reach significance. Both LEV and AGE correlate positively with TOBINQ.

4.3. Regression analysis

Table 4 illustrates regression outcomes from the first model using two estimation methods, which are OLS and 2SLS. To test heteroscedasticity, we used Breusch–Pagan test. The significant p-value indicates the rejection of the null hypothesis of homoscedasticity. Thus, the OLS estimation must use robust standard errors. Additionally, VIF values (Variance Inflation Factor) less than 3 reflect a low correlation among variables, or low multi-collinearity. However, the OLS method contains some bias, which may result in a muddled conclusion. As a result, we decided to use the 2SLS to avoid endogeneity and produce concrete findings for the study. We choose the percentage of government ownership as an instrumental variable, which is highly correlated with DIVP, but is uncorrelated with TOBINQ. The results prove that financial leverage and dividend payment positively affect firm value. The significant findings strongly support hypotheses 1 and 2.

Table 5 demonstrates the results from the second model with dynamic panel data. The findings prove that some companies are evaluated highly thanks to their previous performance. Hence, the lag value of TOBINQ is added to the main model to retest the impact of debt level and dividend payment on firm value. We use the OLS and GMM two-step system to demonstrate the positive effect of both firm values.

Table 4. Impact of leverage and dividend payout on firm value.

Dependent variable	**TOBINQ**	
Method		**2SLS**
LEV	0.038***	0.033***
	(0.011)	(0.011)
DIVP	0.081**	0.290***
	(0.032)	(0.090)
SIZE	0.032***	0.040***
	(0.011)	(0.012)
AGE	-0.005	-0.006
	(0.004)	(0.005)
Const	0.004	0.015
	(0.306)	(0.337)
Year dummies	Yes	Yes
Observations	311	311
R-squared	**0.390**	**0.304**
Breusch–Pagan test (p-value)	**0.000**	

****, **, * : 1%, 5%, 10% significant level*

Table 5. Impact of leverage and dividend payout on firm value on dynamic panel data.

Dependent variable	**TOBINQ**	
Method		**GMM SYS**
L1.TOBINQ	0.544***	0.342***
	(0.051)	(0.089)
LEV	0.022**	0.026*
	(0.009)	(0.014)
DIVP	0.066**	0.077**
	(0.026)	(0.030)
SIZE	0.017*	0.023
	(0.009)	(0.020)
AGE	0.001	-0.005
	(0.004)	(0.007)
Const	-0.419	-0.145
	(0.256)	(0.524)
Year dummies	Yes	Yes
Observations	282	282
Breusch–Pagan test (p-value)	**0.000**	
AR (2) (p-value)		0.366
Hansen (p-value)		0.955

****, **, * : 1%, 5%, 10% significant level*

Breusch–Pagan test shows that heteroscedasticity exists in model. Thus, the robust standard errors are employed in OLS estimation. Furthermore, many studies proved that OLS contains bias; thus, GMM-SYS is employed. The AR(2) and Hansen test imply the absence of second-order autocorrelation in data, confirming the estimation method's statistical meaning. Outcomes from the two methods once confirm our above conclusions.

4.4. Robustness tests

To validate our conclusion, we replaced the primary dependent variable (dividend payment) with its alternative proxy (DIVTA). The results of the two models continue to show that leverage and dividend distribution increase the value of real estate firms.

Table 6. Robustness Test 1.

Dependent variable	**TOBINQ**	
Method	**OLS**	**2SLS**
LEV	**0.053*****	**0.057*****
	(0.010)	(0.010)
DIVTA	**4.152*****	**5.693*****
	(0.648)	(1.509)
SIZE	**0.044**	**0.049*****
	(0.011)	(0.011)
AGE	**-0.008****	**-0.010****
	(0.004)	(0.004)
Const	**-0.107**	**-0.281**
	(0.294)	(0.328)
Year dummies	Yes	Yes
Observations	312	312
R-squared	**0.457**	**0.446**

****, **, * : 1%, 5%, 10% significant level*

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Table 7. Robustness test 2.

Dependent variable	**TOBINQ**	
Method	**OLS**	**GMM-SYS**
L1. TOBINQ	**0.471*****	**0.192**
	(0.051)	(0.146)
LEV	**0.036*****	**0.043***
	(0.009)	(0.023)
DIVTA	**2.974*****	**4.755****
	(0.581)	(2.031)
SIZE	**0.028*****	**0.030**
	(0.009)	(0.018)
AGE	**-0.002**	**-0.004**
	(0.003)	(0.009)
Const	**-0.655*****	**-0.155**
	(0.250)	(0.502)
Year dummies	Yes	Yes
Observations	311	283
R-squared	0.5864	
AR (2) (p-value)		0.573
Hansen (p-value)		0.895

****,**,* : 1%, 5%, 10% significant level*

5. CONCLUSIONS

The study finds that leverage and dividend distribution have a beneficial impact on firm value in 29 real estate companies in the 2010 - 2021 period. The positive effect of financial ratios on firm ratios can be explained from an agency and trade-off perspective. Next, the favourable effect of dividends on the q ratio maintains the conclusion of agency, bird in hand, and signaling theory. This finding of a positive effect can be explained by the unique feature of the real estate industry's high growth. On the other hand, the favourable impact of dividends on the Q ratio shows that managers in real estate tend to use dividends as a signal or tool to minimize agency costs. Following that, we recommend that real estate managers use financial leverage and dividend payout to send a prospective signal to outsiders while minimizing agency problems.

Besides, we conducted the t-test with two groups (paying dividends and paying no dividends). Surprisingly, the dividend-paying subsample borrowed the most. Additionally, the recent financial scandals of some enormous real estate firms reveal that many companies have coped with financial distress and severe agency problems. From empirical research evidence and reality, the management in this sector seems to use both financial tools simultaneously to satisfy investors and widen their business.

However, until now, only Article 135, Enterprise Laws provided instructions on dividend payments with the following contents: payment conditions, the form of dividends, the due date, and the dividend announcement. There needs to be a more apparent requirement for safe financial guarantees for real estate and all companies.

Based on the above findings, the authority should impose a more detailed dividend distribution policy concerning the debt and cash flow situation. If this policy can be implied, the real estate sector can develop more safely and stably.

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