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Research Article

Corporate Culture - The Key to Liquidity of Listed Real Estate Enterprises in Vietnam

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Abstract

Liquidity management has become a pressing concern for real estate firms in Vietnam, especially amid recent challenges such as credit tightening, rising interest rates, and macroeconomic uncertainty. The real estate sector, being highly capital-intensive and exposed to long project cycles, is particularly vulnerable to liquidity risk. While previous studies have extensively examined financial and macroeconomic factors affecting liquidity, little attention has been paid to the role of corporate culture - an intangible yet critical determinant of financial behavior and sustainability. Grounded in corporate governance and behavioral finance theories, this study investigates the impact of corporate culture on the liquidity of listed real estate enterprises in Vietnam. The Board Ownership (BO) ratio is employed as a proxy for corporate culture, while the Cash Flow ratio (LC) is used to measure liquidity. The research analyzes panel data from 49 listed real estate firms between 2014 and 2023 using a multivariate regression model. The empirical findings show that BO has a statistically significant positive effect on liquidity, suggesting that firms with stronger ownership alignment adopt more cautious and effective liquidity strategies. In addition, profitability (ROE) and economic growth (GDP) enhance liquidity, whereas a longer average collection period (RE) weakens it. These insights contribute to the understanding of non-financial determinants of liquidity and offer practical implications for corporate managers, investors, and policymakers.

Keywords

Liquidity, Corporate Culture, Listed Real Estate Enterprises

1. Introduction

Liquidity is one of the critical factors determining the survival and development of businesses, particularly in the real estate sector, which is highly capital-intensive and significantly affected by market fluctuations. Ensuring liquidity enables firms to maintain stable business operations, enhance capital-raising capabilities, and mitigate financial risks. Amidst Vietnam's economic challenges, including growth slowdowns and inflation, liquidity management has become a top priority for real estate enterprises.

While traditional financial factors such as asset structure, financial leverage, and profitability, as well as macroeconomic variables like GDP growth and inflation, have been widely examined in relation to corporate liquidity the impact of corporate culture on liquidity remains an underexplored area [2, 16]. Despite its vital role in shaping financial health and corporate sustainability-especially in capital-intensive

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industries like real estate-corporate culture has received limited attention in liquidity research.

Grounded in corporate governance and behavioral finance theories, this study investigates the influence of corporate culture, measured by the Board Ownership (BO) ratio, on the liquidity of listed real estate enterprises in Vietnam, which is proxied by the Cash Flow (LC) ratio. Utilizing data from listed real estate firms on the Vietnamese stock market from 2014 to 2023, the study employs a multivariate regression model to assess the extent to which corporate culture and other factors affect corporate liquidity. The findings are expected to provide empirical evidence to help real estate managers develop more effective financial strategies, while offering valuable insights for investors and policymakers in evaluating and managing liquidity risks within the industry.

2. Literature Review

Liquidity is regarded as a critical indicator reflecting a firm's financial health. According to Opler et al. firms with high cash reserves and effective cash flow management policies are better positioned to withstand economic shocks [23]. In the real estate sector, liquidity is even more crucial due to long capital cycles and the inherent illiquidity of real estate assets.

Corporate culture has long been recognized as a key factor influencing business performance and financial strategy. Guiso et al. argue that corporate culture significantly affects financial behavior, risk-taking tendencies, and access to capital [14].

In the context of publicly listed firms, Fahlenbrach & Stulz suggest that the Board Ownership (BO) ratio reflects the concentration of control and decision-making power within a company [9]. Firms with high BO ratios tend to adopt more conservative financial policies, which may help mitigate liquidity risks but could also slow down growth. Recent studies have begun exploring the relationship between corporate culture and liquidity management. Lins et al. find that a transparent corporate culture and strong governance system enable firms to maintain adequate liquidity levels even amid volatile market conditions [20].

This raises the question of the specific impact of corporate culture on the real estate sector in Vietnam, where market liquidity and real estate credit policies have unique characteristics. While global research on corporate liquidity and corporate culture is extensive, limited studies focus on the real estate industry in Vietnam - a market characterized by long-term capital investment, heavy reliance on bank credit, and significant exposure to macroeconomic regulatory policies. Furthermore, the measurement of corporate culture through the Board Ownership (BO) ratio and its influence on liquidity (LC) remains an underexplored area.

This study aims to fill this research gap by employing a quantitative model to examine the relationship between corporate culture (BO) and liquidity (LC), while controlling for other influencing variables such as firm capitalization (CAP), average collection period (RE), profitability (ROE), economic growth (GDP), inflation (IF), and financial leverage (DFL). The findings will contribute empirical evidence to assess the impact of corporate culture and other factors on the liquidity of listed real estate firms in Vietnam.

3. Research Model and Data

3.1. Research Model

3.1.1. Dependent Variable

To measure corporate liquidity, several traditional financial ratios have been widely used, including the Current Ratio, Quick Ratio, Cash Ratio, and Cash Holding Ratio. However, these indicators have certain limitations in capturing a firm's true liquidity position.

To address these shortcomings, the Cash Flow Ratio (LC) has gained increasing popularity among financial analysts. This metric, calculated as Operating Cash Flow/Total Short-Term Debt, reflects a firm's ability to generate and manage cash flow efficiently. A company maintains positive cash flow when its cash inflows are equal to or exceed its cash outflows.

Given that liquidity fundamentally represents a firm's ability to meet obligations as they fall due, cash flow management and liquidity management are closely interconnected in corporate financial management. Effective cash flow management ensures that a company maintains sufficient liquidity to operate smoothly, mitigate financial risks, and sustain long-term financial stability.

3.1.2. Independent Variables

Firm Capitalization (CAP)

Firm capitalization refers to the total market value of a company's outstanding shares. While firm capitalization is not a direct determinant of liquidity, it plays a crucial role in shaping a company’s reputation, capital-raising ability, and market confidence.

Opler et al. found that larger firms tend to hold higher cash reserves to ensure payment capacity and reduce financial risks [23]. Similarly, Ferreira & Vilela argued that larger firms benefit from economies of scale, allowing them to maintain a more stable cash flow [10]. The study by Kim et al. also demonstrated that larger firms have greater access to capital markets, which enhances their liquidity position [17].

Given these findings, this study expects a positive relationship between firm capitalization and corporate liquidity. Thus, the following hypothesis is proposed:

Hypothesis H1: Firm capitalization has a positive impact on the liquidity of listed real estate enterprises in Vietnam.

Average Collection Period (RE)

The Average Collection Period (RE) measures the time

required for a company to collect its receivables, directly influencing operating cash flow. A prolonged collection period can lead to cash flow constraints, affecting a firm's ability to meet its short-term obligations.

Deloof found that firms with longer collection periods tend to face greater challenges in managing cash flows [8]. Similarly, Lazaridis & Tryfonidis suggested that companies maintaining shorter collection periods can enhance their operating cash flow and overall liquidity [18]. Gill et al. further demonstrated that reducing receivables collection time improves cash flow and strengthens a firm's ability to meet its financial obligations [12]. Given these insights, this study expects a negative relationship between the average collection period and corporate liquidity. Thus, the following hypothesis is proposed:

Hypothesis H2: The average collection period has a negative impact on the liquidity of listed real estate enterprises in Vietnam.

Profitability (ROE)

Profitability, measured by Return on Equity (ROE), has a close relationship with operating cash flows. Firms with higher profitability tend to generate stronger cash flows, enabling them to manage liquidity more effectively.

Gill & Shah found that firms with higher profitability often exhibit stronger operating cash flows due to efficient revenue generation and cost management [13]. Similarly, Dechow & Dichev and Altaf & Shah suggested that high profitability typically leads to positive cash flows, as firms with sound financial management practices are better positioned to maintain liquidity [6, 1].

In the Vietnamese market, empirical evidence on the relationship between ROE and liquidity remains mixed. Thái Văn Đại & Trần Việt Thanh Trúc found a positive correlation between ROE and liquidity in commercial banks, while Trần Mạnh Dũng & Nguyễn Nam Tài (2018) reported a negative relationship between ROE and a firm's payment capacity [25, 26]. Meanwhile, Trần Thị Thu Huyền & Đào Thị Thu Hà (2024) found no significant empirical evidence linking ROE to short-term liquidity [27].

Given that firms with high ROE tend to accumulate substantial profits, allowing them to maintain cash reserves or short-term assets and reduce liquidity pressure, this study expects a positive relationship between profitability and liquidity. Thus, the following hypothesis is proposed:

Hypothesis H3: Profitability has a positive impact on the liquidity of listed real estate enterprises in Vietnam.

Economic Growth (GDP)

Gross Domestic Product (GDP) is incorporated into the research model as an external factor representing the impact of the macroeconomic environment on the liquidity of listed real estate enterprises.

Demirgüç-Kunt & Maksimovic found that during periods of economic growth, firms have greater opportunities to expand production, increase revenue, and improve operating cash flow [7]. Similarly, Levine & Zervos suggested that a high GDP growth rate fosters a favorable environment, enabling firms to maintain liquidity [19]. Beck et al. (2000) also argued that economic expansion facilitates faster capital turnover for businesses [3].

However, some studies have produced mixed findings. Trần Mạnh Dũng et al., Trần Thị Thu Huyền & Đào Thị Thu Hà (2024) found no significant impact of GDP growth on the liquidity of listed food processing companies in Vietnam [26, 27]. Meanwhile, Thái Văn Đại & Trần Việt Thanh Trúc reported a negative correlation between GDP growth and liquidity, suggesting that firms may face increased capital demands during economic booms, potentially leading to liquidity constraints [25].

Despite these contrasting perspectives, this study expects a positive relationship between economic growth and corporate liquidity, as higher GDP growth is anticipated to enhance business performance and cash flow generation. Thus, the following hypothesis is proposed:

Hypothesis H4: Economic growth has a positive impact on the liquidity of listed real estate enterprises in Vietnam.

Inflation (IF)

Inflation influences operating costs and a firm's ability to generate cash flow. Higher inflation can lead to increased input costs, reduced purchasing power, and lower real cash flows, thereby affecting corporate liquidity.

Fisher argued that inflation erodes the real value of cash flows, diminishing a firm's financial flexibility [11]. Boyd et al. found that high inflation negatively impacts cash flows due to rising operational costs, making it more challenging for firms to maintain liquidity [5]. Similarly, Bekaert & Harvey demonstrated that inflation adversely affects corporate liquidity by increasing uncertainty and reducing access to financial resources [4].

Given these insights, this study expects a negative relationship between inflation and corporate liquidity. Thus, the following hypothesis is proposed:

Hypothesis H5: Inflation has a negative impact on the liquidity of listed real estate enterprises in Vietnam.

Corporate Culture (BO)

Corporate culture has long been recognized as a crucial factor influencing business performance and financial strategy. Jensen found that board ownership can impact how firms manage cash flows [15]. In the context of publicly listed companies, Fahlenbrach & Stulz argue that the Board Ownership (BO) ratio reflects the concentration of control and decision-making power within an enterprise [9]. Firms with a high BO ratio tend to adopt conservative financial policies, reducing liquidity risk but potentially limiting growth opportunities.

Lins et al. further suggest that transparent corporate culture and strong governance systems enable firms to maintain stable liquidity levels, even in volatile market conditions [20]. Given these perspectives, this study posits a positive relationship between corporate culture and liquidity. Thus, the following hypothesis is proposed:

Hypothesis H6: Corporate culture has a positive impact on the liquidity of listed real estate enterprises in Vietnam.

Financial Leverage (DFL)

The level of debt utilization can significantly impact a firm's ability to generate cash flows. Modigliani & Miller suggest that highly leveraged firms face greater liquidity risks due to their increased debt servicing obligations [21]. Rajan & Zingales also found that firms with high financial leverage tend to experience higher liquidity risk, as a greater portion of cash flows is allocated to debt repayment [24]. Additionally, Myers highlighted that highly indebted firms often struggle to maintain sufficient cash flow levels, increasing the likelihood of liquidity constraints [22].

Based on these findings, this study expects a negative relationship between financial leverage and corporate liquidity. Therefore, the following hypothesis is proposed:

Hypothesis H7: Financial leverage has a negative impact on the liquidity of listed real estate enterprises in Vietnam.

3.2. Research Data

To evaluate the factors influencing the liquidity (LC) of listed real estate enterprises, this study utilizes a dataset compiled from audited financial statements and annual reports published by real estate firms over a 10-year period (2014 - 2023). The use of official financial data ensures accuracy, transparency, and reliability in the research findings. Macroeconomic data were collected from the General Statistics Office of Vietnam and the International Monetary Fund.

After eliminating observations with missing data, the final dataset consists of 49 listed real estate enterprises, selected from more than 80 real estate firms currently listed on the Vietnamese stock market. This sample size is deemed appropriate for conducting regression analysis to assess the impact of financial factors on corporate liquidity. The dataset utilized in this study represents a significant proportion of the total population of listed real estate firms in Vietnam, ensuring high representativeness and reliability for research conclusions.

4. Research Findings

4.1. Descriptive Statistics

The descriptive statistics presented in Table 1 provide an overview of the financial and economic characteristics of listed real estate enterprises in Vietnam, thereby reinforcing the empirical basis for hypothesis testing in this study.

Table 1. *Descriptive Statistics of Data.*

Variable	Obs	Mean	Std. dev.	Min	Max
LC	490	1.110252	0.547569	-0.10617	6.652661
CAP	490	126.6408	855.7969	2.146	10602.9
DFL	490	1.500748	2.663339	0.0109	54.3171
RE	490	434.721	1390.064	-107.26	18935.07
ROE	490	0.070309	0.207494	-2.8	0.87
GDP	490	5.889796	1.794596	2.56	8.02
IF	490	2.631306	0.858967	0.6	3.54
BO	490	42.39294	22.41687	5.379619	79.47236

(Source: Extracted data from STATA 17)

LC (Liquidity Capacity) has a mean value of 1.11, calculated as cash flow from operating activities divided by short-term liabilities. This indicates that, on average, firms in the sample are able to generate sufficient operating cash flow to meet short-term obligations, reflecting relatively good liquidity performance.

CAP (Firm Capitalization) has an average of VND 126,640.8 billion, with a very large standard deviation, indicating a wide variation in firm size. This suggests the presence of both large-scale and small-scale firms in the industry, which may affect their access to funding and financial flexibility.

DFL (Degree of Financial Leverage) has a mean of 1.5, representing the debt-to-equity ratio. This implies moderate reliance on debt across the sample, although the maximum value of 54.3 signals potential financial imbalance and risk among some firms.

RE (Average Collection Period) reaches 434 days, calculated as average accounts receivable divided by average daily net revenue. This is an alarmingly long period, indicating

inefficiencies in receivables collection and a high potential for cash flow delays, which may impair liquidity.

ROE (Return on Equity) averages 7.03%, indicating a moderate profitability level. This reflects firms' ability to generate return on shareholders' equity under market uncertainty and capital intensity.

GDP (Economic Growth Rate) has a mean value of 5.89%, showing consistent macroeconomic development in Vietnam during the 2014 - 2023 period.

IF (Inflation Rate) averages 2.63%, suggesting a relatively stable inflationary environment that facilitates financial planning and investment.

BO (Board Ownership) averages 42.39%, indicating a high level of insider ownership. This implies that board members may exert strong influence on corporate strategies and financial decisions, potentially embedding a more prudent financial culture within firms.

Overall, these descriptive statistics support the rationale for investigating the impact of corporate culture - represented by BO - on liquidity, particularly given the sector's structural cash flow challenges and ownership dynamics.

4.2. Correlation Analysis

Table 2. *Pairwise Correlation Analysis of Research Variables.*

Variable	LC	CAP	DFL	RE	ROE	GDP	IF	BO
LC	1							
CAP	-0.0293	1						
DFL	0.5459	-0.0277	1					
RE	0.6085	0.0196	-0.0305	1				
ROE	0.7443	0.0526	-0.0943	-0.039	1			
GDP	0.5354	-0.0192	0.0086	-0.0769	0.0641	1		
IF	0.5276	0.0171	0.0126	0.0149	0.035	0.1873	1	
BO	0.7807	0.0025	-0.0425	-0.016	0.0728	0.0315	-0.0548	1

(Source: Extracted data from STATA 17)

The liquidity capacity of firms (LC) exhibits a strong association with both internal financial indicators and macroeconomic factors. LC shows a significant positive correlation with financial leverage (DFL, 0.5459) and return on equity (ROE, 0.7443), indicating that firms with higher liquidity tend to leverage debt efficiently and maintain sustainable profitability. Moreover, LC is also significantly influenced by inflation (IF, 0.5276) and economic growth (GDP, 0.5354), suggesting that firms tend to increase their liquidity reserves as a precautionary measure against economic fluctuations. The negative correlation between RE and both DFL (-0.0305) and GDP (-0.0769) suggests that in periods of economic expansion or when firms employ higher financial leverage, they tend to shorten their collection periods to ensure stable cash flows. Notably, LC exhibits a strong positive correlation with board ownership (BO, 0.7807), implying that firms with higher liquidity levels tend to maintain higher insider ownership, reflecting prudent financial strategies adopted by management. However, inflation appears to negatively impact board ownership (IF with BO, -0.0548), highlighting the adverse effects of macroeconomic instability on market confidence.

4.3. Analysis of Cross-Dependence

Table 3. *Results of Cross-Dependence Analysis.*

Variable	CD-test	p-value	Average joint T	Mean ρ	Mean abs(ρ)
LC	12.656	0.0	10.0	0.12	0.4
CAP	40.233	0.0	10.0	0.37	0.47

Variable	CD-test	p-value	Average joint T	Mean ρ	Mean abs(ρ)
DFL	0.076	0.94	10.0	0.0	0.37
RE	5.572	0.0	10.0	0.05	0.36
ROE	5.09	0.0	10.0	0.05	0.34
GDP	107.2	0.0	10.0	0.99	0.99
IF	103.437	0.0	10.0	0.95	0.95
BO	-0.649	0.517	10.0	-0.01	0.28

(Nguồn: Truy xuất dữ liệu từ STATA 17)

The test results on the dataset comprising the variables LC, CAP, DFL, RE, ROE, GDP, IF, and BO indicate that GDP (CD-test = 107.2, p = 0.000) and IF (CD-test = 103.4, p = 0.000) exhibit the highest degree of cross-dependence, reflecting the strong influence of macroeconomic factors. The variables LC, CAP, RE, and ROE also demonstrate significant dependence (p = 0.000), whereas DFL (p = 0.940) and BO (p = 0.517) show no evidence of cross-dependence.

These findings suggest that when constructing a regression model using panel data, it is essential to apply techniques to address cross-sectional dependence, such as Driscoll-Kraay standard errors or Feasible Generalized Least Squares (FGLS), to ensure estimation accuracy. Ignoring this factor may lead to biased estimates and incorrect statistical inferences.

4.4. Stationarity Test

Table 4. *Stationarity Test Results.*

No.	Variable	Level (CIPS)	First Different (CIPS)	Two Different (CIPS)	Conclusion
1	CAP	-1.287	-2.321	-3.440	I(2)
2	RE	-1.394	-2.604		I(1)
3	ROE	-2.193	-2.944		I(1)
4	GDP	-2.088	-3.612		I(1)
5	IF	-2.193	-4.283		I(1)
6	LC	-2.762			I(0)
7	DFL				I(0)
8	BO				I(0)
Critical values (10%; 5%; 1%) = -1.98; -2.04; -2.16					

(Source: Extracted from STATA 17 output)

The stationarity test using the Cross-Sectionally Augmented Im-Pesaran-Shin (CIPS) method reveals that variables in the dataset exhibit different levels of integration. Specifically, the variables LC, DFL, and BO have CIPS test values lower than the critical threshold at the level form, indicating that they are stationary at I(0) and do not require differencing. In contrast, the variables RE, ROE, GDP, and IF do not exhibit stationarity at the level but become stationary after first-order differencing, classifying them as I(1) variables. This suggests that these variables are non-stationary in their original form but achieve stationarity once the trend effect is removed through differencing. Notably, the CAP variable fails to achieve stationarity even after first-order differencing and only becomes stationary at the second-order difference, thereby classified as I(2).

4.5. Cointegration Test

The cointegration test results indicate a Variance Ratio statistic of 7.0320 with a p-value of 0.1300. Since the p-value

exceeds the conventional significance levels (0.05 or 0.10), we fail to reject the null hypothesis of no cointegration. This suggests that there is no strong statistical evidence supporting the existence of a long-term equilibrium relationship among the variables in the model. Given this finding, the lack of cointegration implies that the variables do not move together in the long run, necessitating alternative modeling approaches such as first-differenced regressions or vector autoregression (VAR) models to properly analyze short-term dynamics. Further robustness checks may be required to confirm these results.

Table 5. *Cointegration Test Results.*

Cointegrating vector: Panel specific		
Panel means:	Included	
Time trend:	Not included	
AR parameter:	Same	
	Statistic	p-value
Variance ratio	7.0320	0.1300

(Source: Extracted from STATA 17 output)

4.6. Regression Results

Table 6. *Summary of Regression Results for Pool, FEM, REM, and GLS Models.*

Variable	LC (1)	LC (2)	LC (3)	LC (4)
ddCAP	0.0000112	0.0000108	0.0000111	0.00000865
	[0.43]	[0.48]	[0.44]	[1.11]
DFL	0.110	0.0599	0.104	0.126
	[13.53]	[7.31]	[12.76]	[7.45]
dRE	-0.020678	-0.020584	-0.020662*	-0.020550*
	[-0.51]	[-0.51]	[-0.51]	[-1.75]
dROE	0.320**	0.310***	0.319**	0.00995**
	[2.48]	[2.79]	[2.54]	[0.24]
dGDP	0.02596	0.02720	0.02613	0.02782**
	[0.65]	[0.92]	[0.69]	[2.44]
dIF	-0.121***	-0.117***	-0.120***	-0.104
	[-4.28]	[-4.80]	[-4.37]	[-7.66]
BO	0.10265**	0.10223**	0.10260**	0.10103**
	[2.48]	[2.27]	[2.47]	[2.37]
_cons	0.900***	0.994***	0.912***	0.925***
	[16.66]	[20.10]	[16.83]	[26.63]
N	392	392	392	392
R-sq	0.367	0.217		

(Source: Extracted from STATA 17 output)

The estimation results of the GLS model (Model 4) in Table 6 indicate that while some variables exhibit statistical significance, others do not have a substantial impact on the liquidity of real estate enterprises. The coefficient for firm capitalization (ddCAP) is 0.00000865, but it is not statistically significant (p-value > 0.1), suggesting that firm capitalization does not have a meaningful effect on corporate liquidity. In contrast, the average collection period (dRE) has a coefficient of -0.020550 and is statistically significant at the 10% level (*), indicating a negative relationship between the average collection period and liquidity. A longer collection period may lead to difficulties in maintaining available cash flow, nega-

tively affecting liquidity.

Profitability (dROE) has a coefficient of 0.00995, statistically significant at the 5% level (), suggesting that higher profitability positively influences liquidity. Firms with higher return on equity tend to have more stable operating cash flows, thereby maintaining stronger liquidity. Similarly, economic growth (dGDP) has a coefficient of 0.02782, also significant at the 5% level (), indicating that economic growth enhances liquidity. A stable and expanding economy provides favorable business conditions, contributing to improved liquidity management.

On the other hand, inflation (dIF) has a coefficient of -0.104, but it is not statistically significant (p-value > 0.1), suggesting that inflation does not have a considerable impact on corporate liquidity. Meanwhile, board ownership (BO) has a coefficient of 0.10103, statistically significant at the 5% level ()**, implying that corporate culture positively affects liquidity. Firms with strong governance structures tend to manage cash flow more effectively, thereby enhancing their liquidity position.

Finally, the constant term (cons) is 0.925, statistically significant at the 1% level (*)**, indicating that factors beyond those included in the model also influence corporate liquidity. Overall, dROE, dGDP, and BO have a significant positive impact on liquidity, while dRE negatively affects liquidity at a lower significance level (10%). In contrast, ddCAP and dIF do not show statistical significance, suggesting they do not play a substantial role in determining liquidity in this study. These findings provide empirical evidence on the role of profitability, economic growth, and corporate governance in enhancing liquidity, while also highlighting the adverse effects of prolonged receivables collection periods on cash flow management.

5. Discussion and Policy Implications

5.1. Discussion

This study employs the GLS model to assess the factors influencing the liquidity of listed real estate enterprises in Vietnam. The estimation results indicate that profitability (ROE), economic growth (GDP), and corporate culture (BO) have a positive impact on liquidity, whereas the average collection period (RE) exhibits a negative effect. In contrast, inflation (IF) and firm capitalization (ddCAP) are not statistically significant, suggesting that these factors do not have a substantial influence on liquidity within the sample. These findings exhibit both similarities and differences compared to previous studies, contributing to a deeper understanding of the determinants of corporate liquidity in the real estate sector.

Profitability (ROE) and Liquidity

The research findings indicate that ROE has a positive impact on liquidity at a 5% significance level, which is consistent with previous studies such as Gill & Shah, Dechow & Dichev, and Altaf & Shah in which firms with higher profitability tend to have stronger operating cash flows and maintain higher liquidity levels [13, 6, 1].

However, the study by Trần Mạnh Dũng & Nguyễn Nam Tài found a negative relationship between ROE and liquidity, suggesting that highly profitable firms often allocate their earnings towards expansion investments rather than holding cash reserves [26]. The results of this study do not support that perspective but instead align with the argument that higher profitability improves cash flow, thereby enhancing liquidity. The positive relationship between profitability (dROE) and liquidity suggests that firms with higher return on equity tend to maintain stronger cash positions. This implies that businesses should focus on improving capital efficiency rather than expanding excessively.

Average Collection Period (RE) and Liquidity

This study shows that the average collection period has a negative impact on liquidity at a 10% significance level, which is consistent with previous studies by Deloof, Lazaridis & Tryfonidis, and Gill et al. [8, 18, 13]. These studies conclude that firms with longer receivables collection periods face higher liquidity risks due to restricted cash flow. The research findings indicate that the average collection period (dRE) negatively affects liquidity, with a significance level of 10%. This suggests that real estate enterprises should reconsider their sales policies, particularly the payment terms in contracts.

Economic Growth (GDP) and Liquidity

The positive impact of GDP on liquidity in this study aligns with the findings of Demirgüç-Kunt & Maksimovic, Levine & Zervos and Beck et al., which assert that economic growth provides firms with opportunities to expand operations, improve revenue, and strengthen cash flow [7, 19, 3].

However, the studies by Trần Mạnh Dũng et al. and Trần Thị Thu Huyền & Đào Thị Thu Hà suggest that GDP growth does not significantly impact the liquidity of food processing enterprises in Vietnam [26, 27]. This discrepancy may reflect sectoral differences, as the real estate sector tends to benefit more from economic expansion than consumer goods manufacturing.

The positive relationship between economic growth (dGDP) and liquidity implies that listed real estate enterprises in Vietnam should capitalize on periods of economic expansion to enhance cash flow.

Corporate Culture (BO) and Liquidity

One of the notable findings of this study is that corporate culture (BO) has a positive impact on liquidity at a 5% significance level, which is consistent with the studies of Guiso et al., Fahlenbrach & Stulz and Lins et al. [14, 9, 20]. These studies suggest that firms with strong corporate governance, reflected in board ownership levels, tend to manage cash flows more effectively and maintain stable liquidity.

5.2. Policy Implications

Optimizing Investment Portfolios

Firms should focus on highly profitable projects and

minimize inefficient investments. In particular, green real estate projects, smart housing developments, and flexible commercial properties are emerging as potentially high-return investment trends.

Managing Financial Costs

Proper use of financial leverage can help firms maintain high profitability without compromising liquidity. Companies can take advantage of green bonds and Real Estate Investment Trusts (REITs) to raise capital at lower costs compared to traditional bank loans.

Enhancing Working Capital Management

Firms must closely monitor accounts receivable, inventory levels, and cash reserves to ensure sufficient liquidity in the event of market shocks.

Implementing Flexible Payment Policies

Firms can establish staggered payment mechanisms instead of waiting until the final due date to collect receivables. Applying early payment discounts or controlled installment plans can help accelerate cash flow.

Applying Financial Technology (FinTech) in Receivables Management

Utilizing digital platforms enables real-time cash flow monitoring, provides early warnings for overdue receivables, and enhances collection efficiency.

Strengthening Credit Risk Control

Thorough financial assessments of clients, requiring deposits or payment guarantees, can help firms mitigate liquidity risks.

These measures are particularly crucial in Vietnam's real estate market, where extended payment cycles may create cash flow constraints, affecting firms' financial stability.

Strengthening M&A Activities During Growth Phases

During economic expansion, firms can leverage abundant capital to acquire promising projects or merge with companies holding large land reserves but facing financial difficulties, thereby improving long-term liquidity.

Flexibly Adjusting Financial Strategies Based on Economic Cycles

In periods of strong economic growth, firms should increase capital mobilization through equity issuance and corporate bonds, while in downturns, they should prioritize cost-saving measures and cash flow preservation.

Expanding International Fundraising Channels

Economic growth facilitates real estate firms' access to foreign capital sources, particularly from private equity funds and foreign loans with preferential interest rates.

This is especially crucial as Vietnam moves towards upgrading its stock market classification, creating opportunities to attract international investment into the real estate sector.

Enhancing Transparency and Accountability in Corporate Governance

The study results indicate that firms with higher BO ratios typically adopt more prudent financial policies, allowing for better liquidity risk management. This suggests that policymakers should promote regulations that strengthen board accountability, particularly in real estate firms with high liquidity risks. Companies should be required to disclose board ownership structures and financial decision-making processes to ensure that executive shareholding aligns with long-term corporate benefits.

Establishing Policies to Encourage Appropriate Internal Ownership

The findings suggest that higher BO ratios positively impact corporate liquidity. Therefore, financial policies should incentivize board members to hold shares at an optimal level, ensuring they remain committed to the firm and pursue sustainable financial strategies. The government could consider tax incentives for firms with high internal ownership structures, while also implementing oversight measures to prevent stock price manipulation or misuse of ownership rights for personal gain.

Developing Liquidity Risk Management Regulations Based on Board Ownership

Firms with higher BO ratios often hold less cash reserves, relying instead on stronger cash flow management capabilities. However, this could increase liquidity risk in adverse market conditions. Regulatory measures should require firms to maintain a minimum cash reserve level proportional to BO ratios, ensuring they can meet payment obligations during economic downturns or liquidity crises.

Supporting Firms in Building Sustainable Governance Culture

Previous studies suggest that transparent corporate cultures and strong governance systems help firms maintain adequate liquidity even in volatile market conditions. The government and business support organizations should provide training programs on financial management and liquidity control, particularly for real estate firms operating in a tightening credit environment.

Integrating Corporate Culture into Financial Risk Assessment Criteria

When evaluating corporate liquidity and financial risk, credit institutions and regulatory agencies should consider corporate culture factors, particularly board ownership structure. This would help identify firms with superior financial risk management capabilities, allowing them to receive preferential credit terms or investment opportunities.

These implications not only help real estate firms improve liquidity but also facilitate their long-term sustainability in Vietnam's stock market. Optimizing cash flow, leveraging macroeconomic opportunities, strengthening corporate governance, and adopting flexible financial strategies are key factors for maintaining stable liquidity and ensuring sustainable development in the long run.

6. Conclusions

This study empirically examines the impact of corporate culture, proxied by board ownership (BO), on the liquidity capacity (LC) of listed real estate enterprises in Vietnam

during the period 2014–2023. The findings show that BO has a significant and positive effect on liquidity, suggesting that stronger board engagement and alignment of interests contribute to more prudent and efficient liquidity management. Additionally, profitability (ROE) and economic growth (GDP) were found to enhance liquidity, while an extended collection period (RE) negatively affected it.

These findings highlight the importance of integrating cultural and behavioral dimensions into corporate financial decision-making, especially in capital-intensive sectors like real estate. The results have practical implications for corporate managers aiming to strengthen liquidity resilience, for investors evaluating firm-level financial quality, and for policymakers formulating governance standards in emerging markets.

However, this research is subject to several limitations. First, the use of board ownership as a sole proxy for corporate culture may not capture the full spectrum of organizational values, norms, or behavioral traits. Second, the research sample is only on listed real estate firms, so it dosen't represent private enterprises. Third, macroeconomic variables such as interest rate volatility or fiscal policy responses were not included in the model and may also influence liquidity.

Future research is encouraged to:

Employ broader and multi-dimensional measures of corporate culture, such as leadership style, organizational structure, or employee engagement metrics;

Extend the study to other industries or comparative settings across Association of Southeast Asian Nations markets;

Apply qualitative or mixed-method approaches to explore the causal mechanisms between culture and financial performance in more depth.

Author Contributions

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Conflicts of Interest

The authors declare no conflicts of interest.

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