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### A Study of Cash Holdings and Capital Structure on Financial Performance in Listed Insurance Companies in Vietnamese Stock Market

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#### Abstract

Research on cash holdings and capital structure in insurance companies is an important area to understand how insurance companies manage and utilize their financial resources. Studies focus on analyzing the decisions of insurance companies regarding cash holdings and the influencing factors such as investment strategy, financial risk, capital requirements, and industry regulations. By analyzing financial data and performance indicators, researchers can gain insights into the impact of these factors on the cash holdings of insurance companies. Additionally, research also focuses on the relationship between cash holdings and financial performance, including profitability, growth, and

risk. The capital structure of insurance companies is also a significant part of research in this field. Studies often concentrate on analyzing how insurance companies structure their capital, including debt-to-equity ratio and leverage ratio. By understanding the capital structure better, researchers can assess financial risk, liquidity, and financial strength of insurance companies. Research on cash holdings and capital structure in insurance companies plays a vital role in providing in-depth information and understanding of financial management in the insurance industry, while supporting managers in making optimal strategic decisions.

**Keywords:** Cash Holding, Capital Structure, Accounting, Finance, Listed Insurance Companies

**JEL Codes:** M40, M41, F65, G30

#### 1. Introduction

Cash holding in insurance companies refers to the ownership of cash or cash equivalents in the company's accounts. Holding a large amount of cash helps insurance companies improve liquidity, making it easier to meet expenditure needs. However, cash holding entails two types of costs: Holding costs and opportunity costs, both of which coexist with three main motives: Transactional, precautionary, and speculative activities.

Research by Almeida *et al.* (2004) <sup>[1]</sup> found a positive correlation between fluctuations in cash holdings and cash flows, indicating that companies increase (decrease) cash holdings when they experience increasing (decreasing) cash flows. Additionally, the authors also found evidence that financially constrained companies hold more cash when cash flows are depleted, while unconstrained companies do not. Riddick and Whited (2006) <sup>[23]</sup> examined the impact of cash flows on the sensitivity of corporate cash holdings and their conclusion contradicts that of Almeida *et al.* (2004) <sup>[1]</sup>, showing a negative correlation between cash holdings and changes in cash flows. Specifically, when a company's cash flows increase, cash holdings decrease and vice versa.

Cash holdings enable companies to finance investments and other debts to avoid high costs associated with external capital raising. Acharya *et al.* (2007) <sup>[2]</sup>, Almeida *et al.* (2004) <sup>[1]</sup>, Bates *et al.* (2009) <sup>[4]</sup>, Riddick and Whited (2009) <sup>[23]</sup> all agree that companies with increasing cash flows typically allocate cash holdings to investments, as positive cash flow shocks often reflect higher yields in real assets. Therefore, companies may reduce cash holdings to support high-yield projects.

These studies provide evidence that cash holdings impact firm value, however, specific metrics can have positive or negative effects depending on individual independent and dependent variables. Many studies also indicate that the accumulation of a company's cash reserves is one of the significant factors influencing these financial decisions. The more cash companies hold, the more likely they are to use cash inefficiently, especially leading to skewed investment decisions: Underinvestment and overinvestment. Consequently, companies tend to restrict investments and implement dividend policies with high payout ratios

or use debt as a mechanism to control excessive cash flow. The capital structure in insurance companies is approached from various perspectives. It reflects the degree of debt and equity usage to finance the formation of insurance company assets. The extent of debt utilization can influence the behavior of managers as well as their financial decisions.

Research on the impact of capital structure on firm efficiency originates from data analysis in developed countries. Roden & Lewellen (1995) [18] examined the capital structure of 48 US firms during the period 1981-1990 and identified a positive relationship between capital structure and firm efficiency. Hadlock & James (2002) [7] suggested that firms with higher profitability tend to utilize more debt. In recent years, this relationship has also been explored in developing countries. Majumdar & Chhibber (1999) [11] studied the relationship between capital structure and firm efficiency in India, revealing an inverse relationship between the level of debt usage and firm profitability. Salim (2012) [19] similarly found an inverse relationship between the level of debt usage and firm efficiency among companies listed on the Malaysian Stock Exchange.

In Vietnam, the relationship between capital structure and firm efficiency has also been studied by several researchers. Nguyen Tan Vinh (2011) [11] investigated this relationship among companies listed on the Hanoi Stock Exchange and found a positive correlation. Le & Phung (2013) [10] utilized data from listed companies on the Vietnam Stock Market during the period 2007–2011 to study the relationship between capital structure and firm efficiency, revealing that debt usage has a positive relationship with firm efficiency.

However, according to the author's research, there has been no study to date on the impact of cash holdings and capital structure on the operational efficiency of listed insurance companies on the Vietnam stock exchange. The insurance market has recently developed steadily. The level of penetration and insurance density reflects the level of development of the insurance sector in a country. Along with this, the market capitalization of companies is one of the factors used to evaluate businesses. In terms of market capitalization in the insurance sector at present, Bao Viet Group (BVH) remains the largest market-capitalized insurance business, followed by PVI and VNR.

Based on practical needs and theoretical contributions aimed at identifying suitable cash management methods and an appropriate capital structure to enhance the operational efficiency of insurance companies, the author chooses the topic of: "A study of Cash Holdings and Capital Structure on Financial Performance in Listed Insurance companies in Vietnamese stock market"

## 2. Literature Review

### 2.1 Theory of Cash holding

The first hypothesis, stemming from the "Trade-off Theory," developed by Keynes (1936), argues that firms maximize their value by considering the marginal costs and benefits of holding cash. According to the Trade-off Theory, the size of a firm is negatively related to cash holdings because larger firms can easily access financing sources at lower costs (Ferri and Jones, 1979).

The Trade-off Theory predicts a negative correlation between profitability and cash holdings. Profitable firms are expected to have sufficient cash flows to avoid inefficient investment issues (Caglayan-Ozkan and Ozkan, 2002) [15]

some studies, such as Bates *et al.* (2009) [4], have found a negative correlation between profitability and cash holdings. However, research by Mai Thanh Giang (2016) [12] shows a positive correlation between cash holdings and profitability. Bates *et al.* (2009) [4] argue that the cost of capital may increase the ability to borrow, thus reducing the need for cash. Lee and Song (2012) [8] found a negative correlation between the cost of capital and cash holdings in companies after the Asian financial crisis. However, Opler *et al.* (1999) [16] observed that cash holdings increased relative to the cost of capital.

### 2.2 The theory of Miller and Modigliani

Capital structure is a topic of significant interest among researchers. The cornerstone of capital structure theory is the Modigliani-Miller theorem proposed by these two authors in 1958. Subsequently, the theory of capital structure has been further developed by researchers.

The Modigliani-Miller proposition serves as the foundation for capital structure theory. Miller & Modigliani (1958) [13] argued that in a perfect market, capital structure does not affect the value of a firm. Therefore, there is no optimal capital structure for a specific business. However, the assumptions of a perfect market such as no transaction costs, no taxes, symmetric information, and borrowing rates equal to risk-free rates are not applicable to the actual operational environment of businesses. Hence, researchers have introduced assumptions that the value of a firm and its operational efficiency are impacted by the capital structure.

### 2.3 The theory of Capital Structure (CST) and Financial Performance Efficiency

Watson and Head (2007) [21] stated that capital structure reflects the value of debt a company uses compared to its equity. Indices reflecting capital structure include debt-to-equity ratio, long-term debt-to-equity ratio, long-term debt-to-total capital ratio, and short-term and long-term debt-to-equity ratio. In this study, we use the debt-to-equity ratio as the capital structure index. This index shows the proportion between two basic sources of capital a company uses to finance its operations: Debt and equity.

The capital structure of a business, as defined by Baker and Martin (2011) [3], is the blend of debt and equity that a business uses to finance its production assets, operations, and future development. This is a direct determinant of overall capital costs and contributes to the overall risk level of the business.

Dessi and Robertson (2003) [6] confirmed that the debt ratio has a positive impact on financial performance because debt holders seek to exploit growth and investment opportunities to increase the company's profitability. Wei *et al.* (2005) [22] assumed that the debt ratio has a positive relationship with financial performance when it is low (from 24.52% to 1.13%) and has a negative impact if the ratio is higher.

Empirical studies support the view that capital structure has a negative impact on business performance, such as Singh and Faircloth (2005) [20], Dawar (2014) [5], and Le (2015) [10], who argue that a high debt ratio will reduce future investments and therefore negatively affect business performance and future development capabilities.

## 3. Research Methods

Vietnam currently has 25 companies operating in the insurance sector, including 18 life and non-life insurance

companies, 5 insurance brokerage firms, and 1 reinsurance company, with a total of 13 insurance companies listed on the Vietnam Stock Exchange.

In recent years, the Vietnamese economy has experienced significant growth, especially since the government's strategic development plan for the insurance industry until 2010 was issued, providing direction for insurance companies in building their business strategies and contributing to the strong development of the insurance sector in Vietnam.

The research utilizes a dataset on cash holdings collected from the annual financial reports of 13 insurance companies listed on the Ho Chi Minh City Stock Exchange (HSX) and the Hanoi Stock Exchange (HNX) from 2018 to 2022. The data is extracted from financial reports available on the financial securities data platform. <https://finance.vietstock.vn/> and [www.cafef.vn](http://www.cafef.vn).

#### 4. Research Results

##### Cash Holding (CASH)

CASH is synthesized and analyzed in detail according to Tables 1 and 2 as follows:

**Table 1:** CASH of Listed Insurance companies during the Period 2018-2022

Stock code	2018	2019	2020	2021	2022	Average 2018-2022
ABI	27.39%	1.86%	1.96%	1.73%	2.51%	7.09%
AIC	5.60%	9.00%	11.36%	6.34%	0.01%	6.46%
BHI	3.48%	4.63%	1.89%	2.22%	1.69%	2.78%
BIC	1.28%	2.13%	1.69%	0.50%	0.43%	1.21%
BLI	25.67%	17.42%	18.50%	29.54%	25.50%	23.33%
BMI	2.91%	4.12%	2.29%	2.99%	2.40%	2.94%
BVH	1.91%	3.70%	4.63%	3.16%	12.55%	5.19%
MIG	4.25%	0.26%	0.22%	1.40%	0.10%	1.24%
PGI	3.30%	1.90%	1.79%	1.58%	1.62%	2.04%
PRE	2.03%	1.90%	1.21%	0.76%	10.12%	3.20%
PTI	9.06%	1.55%	3.84%	1.78%	2.86%	3.82%
PFH	10.90%	5.32%	5.00%	12.51%	10.37%	8.82%
VNR	5.25%	1.47%	0.79%	75.65%	71.72%	30.98%

Sources: <https://finance.vietstock.vn/>, [cafef.vn](http://www.cafef.vn), and authors synthesized

**Table 2:** Average Cash Holding (CASH) over the Years of Listed Insurance companies

Description	2018	2019	2020	2021	2022	Average 2018-2022
CASH	7.92%	4.25%	4.24%	10.78%	10.91%	7.62%

Sources: <https://finance.vietstock.vn/>, [cafef.vn](http://www.cafef.vn), and authors synthesized

Enterprises holding more cash are less sensitive to monetary policies compared to those holding less cash. A study conducted by Yang *et al.* (2017)<sup>[24]</sup> continues to support this conclusion. Holding more cash helps alleviate pressure related to managers' performance and encourages excessive investment in projects that benefit themselves (Phan, 2022)<sup>[17]</sup>.

##### Capital structure (DER)

DER is synthesized and analyzed in detail according to Tables 3 and 4 as follows:

**Table 3:** DER of Listed Insurance companies during the Period 2018-2022

Stock code	2018	2019	2020	2021	2022	Average 2018-2022
ABI	151%	188%	186%	168%	157%	151%
AIC	136%	152%	182%	231%	248%	136%
BHI	105%	151%	241%	195%	203%	105%
BIC	141%	156%	140%	135%	156%	141%
BLI	173%	196%	223%	213%	237%	173%
BMI	146%	150%	185%	216%	191%	146%
BVH	631%	544%	603%	670%	848%	631%
MIG	272%	232%	262%	276%	352%	272%
PGI	259%	280%	313%	258%	302%	259%
PRE	351%	422%	380%	462%	543%	351%
PTI	236%	308%	284%	293%	362%	236%
PFH	41%	43%	47%	39%	31%	41%
VNR	123%	125%	122%	118%	106%	123%

Sources: <https://finance.vietstock.vn/>, [cafef.vn](http://www.cafef.vn), and authors synthesized

**Table 4:** Average Capital Structure over the Years of Listed Insurance Companies

Description	2018	2019	2020	2021	2022	Average 2018-2022
DER	213%	227%	244%	252%	287%	245%

Sources: <https://finance.vietstock.vn/>, [cafef.vn](http://www.cafef.vn), and authors synthesized

Enterprises should choose an appropriate capital structure. Each capital-raising instrument of the enterprise incurs certain costs, such as the interest payments on debt instruments. Therefore, the capital structure policy needs to balance the interests of shareholders, the board of directors, management, and creditors. In the process of selecting managers, it is necessary to plan for a capital structure that suits the specific characteristics of each company and its developmental stages.

#### 5. Discussion and implications

Vietnam is increasingly integrating into the global economy, opening up many investment opportunities and increasing income, leading to an enhanced demand for healthcare services among the population, especially in the insurance sector. Therefore, the development of insurance companies is essential. The level of cash holdings of an insurance company is appropriate when it maintains a proper capital structure ratio. Most listed insurance companies maintain an inappropriate cash holding ratio. Research results show that there exists an optimal cash ratio, specifically for insurance companies with the stock code ABI at 7.09%, to maintain the financial performance of the company at a good level. Therefore, companies in the research sample should adjust their cash holdings during economic fluctuations and focus on ongoing projects. The economic situation is always changing, so insurance companies do not necessarily have to hold cash at an optimal level, but they can flexibly hold cash within a range around the optimal level and maintain a close relationship. Continue to check the rationality of the cash holding ratio. If a company holds too much cash, its financial performance will decrease, and it will not be able to take advantage of other development opportunities in the future.

## 6. Conclusion

In the current context, cash holdings and capital structure play a crucial role in the business activities of insurance companies listed on the Vietnam stock market. Liquidity and capital structure are two determining factors for the flexibility and stability of an insurance company, especially in today's volatile business environment. Proper cash management helps insurance companies maintain liquidity and payment capabilities in emergency situations, while also facilitating investment in new development projects. However, holding too much cash can lead to capital waste and reduce the efficiency of resource utilization.

Equally important is the capital structure, with careful consideration between debt and equity. A proper capital structure not only helps insurance companies optimize capital costs but also creates a strong financial foundation, minimizing risks and increasing profitability. However, it is important to remember that there is no one-size-fits-all formula for all insurance companies, and cash management and capital structure need to be flexible and tailored to the specific conditions of each company and market. Diversity in approaches and management will create flexibility and diversification, thereby enhancing the competitive strength of the insurance industry in the market.

Therefore, cash holdings and capital structure not only affect business efficiency but also determine the sustainability and development of insurance companies in the Vietnam stock market. To achieve sustainable success, companies need to continuously monitor and adjust their financial management strategies in response to market reactions and business conditions.

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