THE IMPACT OF POLICY UNCERTAINTY ON STOCK LIQUIDITY IN VIETNAM'S M&A MARKET

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Abstract - This study investigates the impact of policy uncertainty on stock liquidity in Vietnam's M&A market. Using a comprehensive sample of M&A acquisition deals over the 2005-2020 period, we find that policy uncertainty is negatively associated with stock liquidity of target firms, indicating that firms should increase their information disclosure to improve the information environment during periods of increased asymmetric information due to policy uncertainty. We also find that higher levels of policy uncertainty lead to lower market valuations of target firms, reflecting greater market skepticism about the completion of the transaction and related synergy benefits. This study highlights the importance of transparency in improving stock liquidity and suggests that policymakers need to consider the impact of domestic economic and investment policies on M&A activity and stock liquidity in Vietnam.

Key words - Policy uncertainty; Stock liquidity; Merger and acquisition (M&A); Synergy; Cumulative abnormal return (CAR)

1. Introduction

Due to the escalation of global integration and the mounting levels of political, economic, and environmental uncertainties at the national level, the decisions made by governments regarding economic and political policies have become increasingly challenging to predict for both firms and investors [1]. Consequently, the capacity of firms and investors to face and adapt to policy uncertainty is becoming increasingly crucial for their long-term viability. This requires a deep understanding of the consequences of economic and political policy uncertainty, as well as how business strategies, decision-making processes, and market behaviors can be adjusted to adapt to policy uncertainty. While existing studies have provided evidence of the impact of policy uncertainty on firms and the real economy, most of these studies focus on developed markets, and particularly, very few studies evaluate the impact of policy uncertainty on merger and acquisition (M&A) markets.

The study conducted by [2] investigates how policy uncertainty at the national level affects M&A, where acquirers and target firms may be located in countries with varying degrees of policy uncertainty. The findings reveal that if the target firm operates in an environment with high policy uncertainty, the acquiring firm tends to purchase a significantly smaller share in the target firm. Essentially, the study indicates that acquiring firms are less inclined to acquire a majority stake in target firms situated in countries with volatile macro-policy environments. Even, the results appear to be unrelated to a country's institutional environment's quality. [3] further investigate whether national policy risks influence the choice of payment method in cross-border mergers and acquisitions using a multi-country sample. The study finds that policy uncertainty is negatively related to cash payment method. Specifically, acquirers tend to offer non-cash payment method if the deal takes place in the target country with high policy uncertainty.

The current empirical findings also highlight the significance of stock liquidity in M&A markets. Stock liquidity is the ease with which shares of a stock can be bought or sold without substantially affecting the stock price [4]. The pioneering works of [5] and [6] revealed that asymmetric information in the market affects stock liquidity. Asymmetric information increases, the stock becomes less liquid. In the context of M&A markets, acquiring firms tend to select target firm stocks with high liquidity. High liquidity is more likely to attract a large number of potential investors to the market. Target firms with high liquidity increase shareholder value and are therefore more appealing to acquiring firms, even to the extent of being willing to pay a premium for such firms. Aybar & Ficici's [7] study further demonstrated that acquiring a firm with higher liquidity enhances the acquiring firm's stock liquidity. Massa & Moqi's [8] study also revealed that acquiring firms are willing to pay a higher price for a target firm with higher stock liquidity.

Although the importance of stock liquidity for the development of both M&A markets and capital markets has been recognized, the current literature has not yet addressed the research gap on the impact of policy uncertainty on stock liquidity in the M&A market.

In the past decade, the Vietnamese M&A market has experienced significant growth and has become a crucial channel for FDI inflows into Vietnam. To provide valuable insights for this market, our study examines the relationship between policy uncertainty and stock liquidity. Our findings reveal that policy uncertainty has a negative effect on stock liquidity in the Vietnamese M&A market. This is particularly significant given the high levels of asymmetric information, transaction costs, and the associated impacts on cost of capital from the firm's lenses, as well as risks from the investor's perspective in Vietnam's capital market.

Our study is distinct from recent research as we focus on the potential creation of synergistic value for shareholders of the target firm in both successful and unsuccessful M&A transactions, in relation to stock liquidity. The findings indicate a significant difference in cumulative abnormal returns between the two types of deals, with failed transactions showing a considerably lower level of synergistic value than completed ones. In addition, we conducted a regression analysis to assess the impact of policy uncertainty on the target firm's price reaction in the period surrounding M&A

announcements. The results show that high policy uncertainty corresponds with lower market valuations of target firms, reflecting increased market skepticism regarding the completion of the deal and the associated synergistic benefits. We stress the importance of policy uncertainty in predicting unsuccessful M&A transactions.

2. Hypothesis development

According to the theory of asymmetric information, differences in information environments among firms result in varying degrees of information transparency. Hence, firms participating in M&A transactions may possess different levels of asymmetric information. This can result in significant increases in stock prices before the announcement of a deal, which is consistent with the pre-bid stock price run-up hypothesis [7]. Moreover, the current literature finds that the bidding behavior of acquiring firms follows the stock price run-up of target firms prior to the deal. As a result, the stock liquidity of each firm involved in the transaction may be impacted, which in turn could affect the portfolios of individual investors. Stocks with good liquidity promote trading activity, particularly for information-based trading, thus enhancing the information content of stock prices and increasing the synergistic value for each deal. In addition, a merger and acquisition market with high liquidity could create pressure to implement strong corporate governance mechanisms [2].

The imperfect markets theory suggests that the driving force behind acquisitions is to establish competitive advantages for the acquiring company [3]. However, uncertainty surrounding government economic and political policies can influence the incentive for information gathering, information-based trading activities, and disclosure choices made by firms, potentially affecting the stock prices of both the acquiring and target firms. As a result, this could impact stock liquidity and the decision-making process of the acquiring firm regarding the M&A deal.

Policy uncertainty may prompt investors to seek information through private channels and engage in profitable trading activities based on that information, thereby contributing to asymmetric information in the market [9]. Meanwhile, firms may delay the disclosure of important information when facing high policy uncertainty due to the potential cost outweighing the benefits or because management believes the policy uncertainty will be resolved promptly [10]. It is important to note that stock liquidity and the M&A planning process rely heavily on the amount of information reflected in stock prices, leading to the hypothesis that policy uncertainty has an impact on stock liquidity and M&A decision-making.

[11] suggest that countries with better institutional and shareholder protection environments and higher information transparency witness larger volumes and values of M&A transactions. [12] find that policy uncertainty has an impact on the investment decisions of acquiring firms. Specifically, Bhagwat et al.'s [13] study indicates that acquisition deals tend to be postponed when policy uncertainty is high. Recent research shows that policy uncertainty increases stock price risk [1], affects the intrinsic value of target firms [13], increases the time and transaction costs of completing the deal, decreases the synergistic value of the transaction [14], and also affects the M&A planning process through the choice of payment methods [15]. However, current research does not provide evidence on the direct impact of policy uncertainty on stock liquidity. Given that these studies focus on developed capital markets and high economic freedom environments, there is a need for evidence on the impact of policy uncertainty on developing markets. Therefore, we propose the following hypothesis:

Hypothesis: *Policy uncertainty has a negative correlation with stock liquidity in Vietnam's M&A market*.

3. Research design

3.1. Sample

The sample comprises 674 accomplished M&A deals of listed firms in Vietnam over 2005-2020. The research period starts from 2005 as prior to that era, M&A transactions pertaining to listed firms were not documented in the SDC Platinum database. The financial and stock price data come from standard databases like FiinPro and Datastream. The data pertaining to economic or political policy risks and measuring national institutional traits were obtained from World Development Indicators, World Uncertainty, and the World Bank Database of Political Institutions. Moreover, the transactions to be studied must meet certain criteria, such as (i) acquirers owning less than 50% of the shares before the transactions, and placing a minimum bid of 5% of the target firm's shares. Besides, to prevent bias in the chosen sample, observations will be excluded if multiple companies acquire the same target company on the same day. Moreover, the sample would include only transactions with a minimum value of USD 0.1 million.

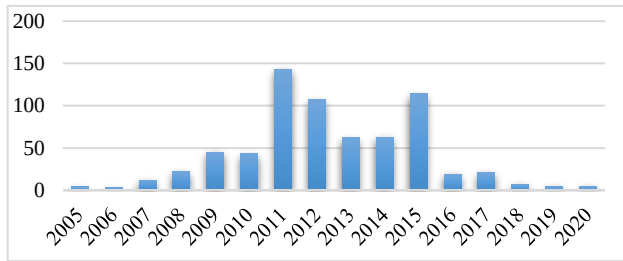

Figure 1. *M&A completed deals in Vietnam over 2005-2020*

Source: SDC Platinum

M&A activities in Vietnam have been in place since 2000, but it was not until 2005 that they started gaining momentum and, in recent years, have shown remarkable growth, becoming a significant part of foreign direct investment capital flow. Figure 1 depicts the surge of M&A deals from foreign partners investing in Vietnam, with an increasing number and scale of transactions. According to data from the SDC Platinum database, which is owned by Thomson Reuters, the total value of M&A deals in all forms in Vietnam from 2007 to 2018 was US$48.8 billion. In the first half of 2018 alone, foreign investors spent a whopping $4.1 billion, marking an 82.4% surge compared to the same period in 2017, to invest and buy shares in Vietnamese firms.

Table 1 reports the descriptive statistics of the transaction features and financial characteristics of target

firms in minority (less than 50%) and majority (over 50%) acquisition deals. The results show that acquiring firms in minority acquisition deals predominantly opt for cash payment method (*CASH*) and hold a higher proportion of shares before the acquisition period than in majority of deals (*TOEHOLD*). Moreover, the results do not demonstrate any disparity in illiquidity between minority and majority share acquisition deals.

Table 1. *Deal-specific and target firm-level characteristics*

Variables	Minority acquisitions (1)				Majority acquisitions (2)				Difference testing (1)-(2)	
	N	Mean	Med	SD	N	Mean	Med	SD	t-test (t)	*Wilcoxon* Rank-Sum test (*z*)
RELATED	606	0.200	0.000	0.400	68	0.197	0.000	0.384	0.455	0.455
CASH	606	0.490	0.000	0.500	68	0.294	0.000	0.459	3.087***	3.068***
CROSS-BORDER	606	0.132	0.000	0.338	68	0.132	0.000	0.341	-0.008	-0.008
TOEHOLD	604	0.098	0.000	0.171	68	0.109	0.000	0.256	-0.494	2.285**
SIZE ($US Mil)	593	3469	478	16627	59	3274	466	8968	0.089	-0.262
ILLIQUID	17	-2.592	-2.197	0.765	277	-2.792	-1.889	0.192	0.25	-0.76

*Superscripts *, **, and *** denote significance levels of 10%, 5%, and 1%, respectively.*

We measure Vietnam's policy uncertainty (PU) using the Country Uncertainty Index, which was collected from https://www.policyuncertainty.com/. This index is calculated by counting the frequency of the word "uncertainty" in the Economist Intelligence Unit's national reports. A higher index indicates greater policy risk. Figure 2 reveals that Vietnam's policy risk index exhibits unusual fluctuations, particularly peaking in the first and second quarters of 2014 when the government made significant policy adjustments in the stock, gold, and foreign exchange markets.

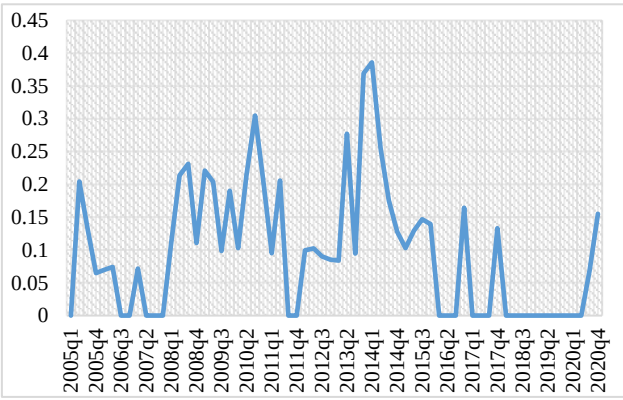

Figure 2. *Policy uncertainty in Vietnam over 2005-2020*
Source: World Uncertainty Index

3.2. Modelling

Our empirical equation for cross-sectional data is given as follows:

$$\left(ILLIQUID_{i,t}\right) = \alpha + \beta PU_t + \sum \gamma\, Controls_{i,t} + \theta_k + \delta_t + \varepsilon_{i,j,t} \quad (1)$$

where, $ILLIQUID_{i,t}$ reflects the liquidity of stock *i* in year *t*. We estimate stock liquidity based on the impact on price through the measure of illiquidity developed by [4]. The illiquidity of a stock tends to be sensitive to market liquidity [16], reflecting liquidity risk. Illiquidity not only affects the current stock price, but also the future profit distribution process. Lower illiquidity reflects higher stock liquidity, implying a more transparent information environment that the company discloses externally.

PU_t is a variable measuring quarterly policy uncertainty in year *t* of the transaction. $Controls_{i,t}$ is a set of transaction characteristics and firm-level variables [4], [7-8]. The annual return rate (*RET*) is calculated by taking the difference in the stock price on the last day of two consecutive years divided by the stock price on the last day of the previous year; the stock price (*PRICE*) is determined by the logarithm of the stock price in USD units; Institutional Ownership (*IO*) is defined as the percentage of institutional ownership in the total outstanding shares of the target firm. Deal characteristics include *RELATED*, a binary variable that takes a value of 1 if the target co firm mpany and acquirer are in the same industry; *CASH*, a binary variable that takes a value of 1 if the acquisition deal is paid in cash and 0 if paid in the acquirer's stock or a mixed form of cash and stock; *CROSS-BORDER*, a binary variable that takes a value of 1 if the acquirer and target firm are not from the same country and 0 if they are from the same country. *TOEHOLD* is the percentage of the target firm's ownership held by the acquirer before offering the transaction. *DEALVALUE* is the value of the transaction and is taken in natural logarithm. Equation (1) also includes industry fixed effects (θ_k) and year fixed effects (δ_t) to control for the influence of industry and year on the relationship between stock liquidity and policy uncertainty.

4. Empirical results

Table 2 presents the results of the regression analysis on the association between policy uncertainty and stock illiquidity. The positive regression coefficients of the policy uncertainty variable (*PU*) across all three models indicate an inverse relationship between policy uncertainty and stock liquidity. Specifically, when using only the *PU* variable in the regression analysis, the coefficient of *PU* in column (1) is 0.008, which is statistically significant at the 5% level. When controlling for deal and firm characteristics, the coefficient of *PU* is 0.011, also significant at the 5% level. These findings support our hypothesis and highlight the crucial role of stabilizing policy for achieving market efficiency. While the regression results confirm the inverse relationship between policy uncertainty and stock liquidity, we have conducted several sustainability tests to further validate our findings.

Table 2. *Policy uncertainty and stock liquidity*

Variables	(1)	(2)	(3)
PU	**0.008****	**0.011****	**0.011****
	(2.07)	**(2.16)**	**(2.18)**
RELATED		0.004	0.004
		(0.98)	(0.98)
CASH		0.015*	0.021*
		(1.86)	(1.92)
TOEHOLD		0.002	0.002
		(1.11)	(1.14)
lnDEALVALUE		0.001	0.001
		(0.34)	(0.34)
SIZE		-0.118***	-0.204***
		(-3.16)	(-3.31)
RELSIZE		-0.015*	-0.015*
		(-1.67)	(-1.68)
RET			-0.211**
			(-2.34)
PRICE			-0.169**
			(-2.48)
IO			-0.028**
			(-2.11)
Year effect	Yes	Yes	Yes
Industry effect	Yes	Yes	Yes
Const	0.224**	0.253**	0.255***
	(2.11)	(2.38)	(2.62)
Obs	294	294	294
Adj R^2	27.15%	29.33%	30.25%

*Superscripts *, **, and *** denote significance levels of 10%, 5%, and 1%, respectively.*

Table 3. *Robustness tests*

Variables	Majority deals	Domestic deals
PU	**0.015****	**0.016****
	(2.19)	**(2.32)**
Year effect	Yes	Yes
Ind effect	Yes	Yes
Const	0.255***	0.269**
	(2.62)	(2.21)
Obs	213	205
Adj R^2	23.18%	28.41%

*Superscripts *, **, and *** denote significance levels of 10%, 5%, and 1%, respectively.*

Although we have controlled for deal and firm characteristics, industry and year effects in the model, there is a possibility that the inverse relationship between policy uncertainty and stock liquidity can vary depending on acquisition locations. To address this, we rerun equation (1) for domestic deals only and presented the results in Table 3. The regression coefficient of the *PU* variable remained positive and statistically significant, consistent with the results in Table 2 and supporting the research hypothesis. We continue to test the robustness of the results by examining the relationship between policy uncertainty and stock liquidity of the target firm based on the proportion of equity ownership in the M&A deal. Previous studies find that stock price reactions differ significantly between majority and minority ownership acquisitions. Therefore, we investigate whether the inverse relationship between policy uncertainty and stock liquidity persists when there is a difference in the desired equity ownership of the acquirer. The results presented in Table 3 demonstrate consistency in the research findings, with the regression coefficient of the *PU* variable remaining positive and statistically significant. In summary, the research findings consistently indicate an inverse relationship between policy uncertainty and stock liquidity across the entire sample and various subgroups.

We continue to investigate the impact of policy uncertainty on value creation in M&As. Accordingly, we examine whether policy uncertainty affects the stock price fluctuations of target firms prior to the announcement of M&A transactions. Policy uncertainty can lead to higher volatility in cash flows and future earnings potential, which may result in managers manipulating information and earnings to cope with performance evaluation pressures. Additionally, policy uncertainty can increase information asymmetry between inside and outside investors of the company. [17] find that firms tend to experience stock price declines as policy uncertainty increases, which can make corporate valuation more ambiguous during the periods of high policy uncertainty.

To examine the impact of policy uncertainty on M&A transactions, we use a sample that includes both completed and withdrawn deals. We conduct a t-test to determine the statistical significance of the difference in target firm stock prices on 1 day, 1 week, and 4 weeks prior to the announcement date for both groups. We also examine the cumulative value of target firm stocks in 3 days ($CAR_{-1,+1}$), 7 days ($CAR_{-3,+3}$), and 11 days ($CAR_{-5,+5}$) windows around the announcement date. Our descriptive statistical results in Table 4 reveal a difference in cumulative returns between the two types of deals. Specifically, the CAR for withdrawn deals is significantly lower than that for completed deals, which could be due to the lower expected conversion benefits of the bidding price but also related to a higher environment of policy uncertainty.

Table 4. *Stock price and synergistic value*

Stock price	Completed deals (1)			Uncompleted deals (2)			(2)-(1)
	N	Mean	Med	N	Mean	Med	*t*-ratio
1D	674	1.60	0.83	132	1.61	0.75	0.53
1W	674	1.59	0.85	132	1.607	0.749	0.96
4W	661	1.56	0.87	132	1.599	0.716	0.99
$CAR_{-1,+1}$	602	0.08	0.12	115	0.006	0.010	-1.83*
$CAR_{-3,+3}$	601	0.09	0.13	115	0.004	0.009	-1.94*
$CAR_{-5,+5}$	598	0.10	0.14	115	0.012	0.014	-2.17**

*Superscripts *, **, and *** denote significance levels of 10%, 5%, and 1%, respectively.*

We further perform an OLS regression to examine the impact of policy uncertainty on the target firm's price response around the announcement date of M&A. The model is specified as follows:

$$TAR\_CAR_{i,(-d,+d)} = \beta_0 + \beta_1 PU_t + \beta_2 CONTROLS_{i,t-1} + \gamma_s + \delta_t + \zeta_{i,t} \quad (2)$$

Where, the dependent variable is CAR of the target firm's stock over 3 days, 7 days, and 11 days around the

announcement date of the M&A. The control variables include both transaction and financial characteristics of the target firm [2-3]. The findings, presented in Table 5, show a negative and statistically significant coefficient for policy uncertainty (PU). This suggests that higher levels of policy uncertainty lead to lower market valuations of target firms, reflecting greater market skepticism about the completion of the transaction and related synergy benefits. The study highlights the importance of policy uncertainty as a key factor for predicting M&A deals that ultimately get cancelled [18].

Table 5. *Policy uncertainty and price reaction prior to the M&A announcement*

Variables	$CAR_{-1,+1}$ **(1)**	$CAR_{-3,+3}$ **(2)**	$CAR_{-5,+5}$ **(3)**
PU	**-0.008****	**-0.008****	**-0.012****
	(-2.16)	**(-2.07)**	**(-2.31)**
RELATED	0.001	0.002	0.001
	(0.15)	(0.17)	(0.14)
CASH	0.014*	0.014*	0.014*
	(1.76)	(1.76)	(1.76)
TOEHOLD	0.002	0.001	0.002
	(0.33)	(0.32)	(0.33)
lnDEALVALUE	0.012	0.011	0.011
	(1.54)	(1.51)	(1.51)
Target SIZE	0.012*	0.011	0.012*
	(1.69)	(1.63)	(1.68)
Target MB	0.000	0.002	0.002
	(0.01)	(0.01)	(0.01)
Fixed-effects	YI	YI	YI
Obs	602	601	598
Adj R^2	0.2031	0.1853	0.1966

*Superscripts *, **, and *** denote significance levels of 10%, 5%, and 1%, respectively.*

5. Conclusion

In this study, two questions were addressed regarding the M&A market in Vietnam: 1) What is the impact of policy uncertainty on stock liquidity, and 2) How does policy uncertainty affect synergy value in M&A deals? The findings reveal that policy stability is crucial for stock liquidity as well as the behavior of acquiring firms, and has a positive synergistic effect on shareholder value. Importantly, policy uncertainty has an inverse relationship with stock liquidity, emphasizing the importance of firms taking measures to manage their stock liquidity before engaging in M&A transactions. Furthermore, policy scapital market, requiring managers to disclose more information to meet greater information needs.

These findings have important implications for Vietnam's capital market, where there are more investors with low levels of financial literacy compared to institutional traders. Listed firms must increase information disclosure to enhance their information environment during periods of increased asymmetric information due to policy uncertainty. In this context, the impact of increased information disclosure on stock liquidity is more prominent for firms with positive information disclosure than for those with negative disclosure. We recommend that firm managers increase transparency by improving the quality of information disclosure. Moreover, the board of directors needs to persuade managers to provide timely and quality information to the public. Sanctions on information disclosure also need to be strictly enforced, such as in the FLC case at the beginning of 2022. Further, firms seeking to expand internationally during uncertain times should be cautious of global fluctuations when evaluating potential target firms and their country positions. Conversely, potential target firms may consider acquisitions a favorable option as global instability can bring about beneficial outcomes.

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