"Factors affecting the development of the Vietnamese derivative securities market"

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NUMBER OF REFERENCES	NUMBER OF FIGURES	NUMBER OF TABLES
27	0	6

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FACTORS AFFECTING THE DEVELOPMENT OF THE VIETNAMESE DERIVATIVE SECURITIES MARKET

Abstract

In the context of integration, the capital market has important implications for strengthening economic resources for development. This becomes even more important as the derivative securities market has recently emerged in some countries. It is an opportunity for countries to approach many capital sources, especially foreign capital. The objective of this paper is to identify factors affecting the development of Vietnamese derivative financial markets. The paper uses exploratory factor analysis and ordinary least squares to test the model. A survey sample includes 152 managers and experts of Vietnamese derivative securities companies in 2019. The results show that the International integration factor has the same direction, while the Legal environment factor has an adverse impact on the development of the Vietnamese derivative securities market. Therefore, Vietnamese regulatory bodies should amend some laws to create stability in the legal corridor, and state management agencies in the country need the orientation and the international integration strategy to attract financial resources for the development of Vietnam's economy.

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INTRODUCTION

Raising capital is an important problem for countries in the process of economic development. Developing countries need capital resources to serve financial development, infrastructure, education, training, health, etc. This is one of the core elements of financial development and growth. Cyuzuzo (2018) argued that the mobilization of capital from financial markets has contributed to the growth of the national economy. Therefore, countries need to develop their securities markets to attract capital from investors. Gupta and Mokshmar (2018b) believed that there was a relationship between capital mobilization and derivative markets. Developing a derivative market will attract economic resources from investors. This is an opportunity to increase the capital source for the nation's economic development.

Regarding regional and international integration trends in Vietnam, this has opened up many opportunities in seeking financial resources and developing economy through attracting capital from domestic and foreign organizations, as well as investors. Vietnam has formed a derivative financial market since the beginning of 2017 with the goal of attracting capital for economic development. Vietnam has many supporting activities to develop the derivative securities market such as improving the legal environment, adjusting flexible mechanisms and policies, as well as supporting financial resources for derivative securities companies (Tran & Nguyen, 2018). In 2018, the derivative trading

account increased by 3.4 times compared to the end of 2017, but this mainly applies to domestic individual investors, while foreign investors account for only about 1%. This stems from the fact that numerous legal regulations, state policies and mechanisms, and the economic environment for servicing the derivative securities market are not perfect (State Securities Commission of Vietnam, 2019). This is a derivative market in the early stages of development, so there are many problems that need to be resolved. One of the issues being concerned is the need to properly recognize the factors affecting the development of the derivative market. The development of derivative securities market depends on many micro and macro factors, as well as subjective and objective ones. This helps Vietnamese regulatory bodies and state management agencies of Vietnam to have appropriate policies and strategic directions to attract financial resources.

1. LITERATURE REVIEW

1.1. Related concepts

A derivative is derived from another establishment and financial activity. It is a transaction contract whose price originates from an underlying asset. A derivative is a form of an asset that is guaranteed or not guaranteed and is derived from the price or price index of underlying securities (Vashishtha & Kumar, 2010). Derivative securities are perceived differently. Financial Stability Board (2016) argued that derivative securities were a financial instrument based on the value of underlying entities such as assets and interest rates. Hull (1989) considered derivative securities as a form of securities whose value depends on the value of underlying securities. Whaley (2007) considered that derivative securities were agreements through economic contracts made in the future. Derivative securities were financial instruments whose value depended on the price of an underlying asset. Derivative securities stipulated the rights and obligations of contract parties for the payment and transfer of underlying assets at a given time in the future.

Market is also meant in different ways, but in general, this is where buyers and sellers interact (directly or through intermediaries) in relation to goods, services, or contracts by money or exchange. Therefore, the derivative securities market is understood as a place for exchanging and trading contracts between parties on the basis of financial institutions. The derivative securities market is the financial market traded and exchanged through contracts on financial institutions. This market can be categorized into an Exchange traded and an Over the counter (OTC), and the legal-

ity will also differ in each segment of the market (Chance & Brooks, 2016).

1.2. Theoretical perspective

Economic development is a process of growth through many activities of the economy, including economic growth. According to Keynes (1936), economic development is an increase in the quantity and quality of economic resources. Thus, economic development is a process of economic growth through an increase in capital resources. Based on Keynes's growth theory (1936), Harrod and Domar (1946) proposed the theory of the relationship between economic growth and demand for capital, especially the role of investment capital for the economic development of countries. Harrod and Domar (1946) concerned with the impact of capital. The capital value needed for economic development, according to Harrod and Domar, is savings. Later, Solow (1956) introduced a new theory of economic growth on the basis of Harrod and Domar's model. According to this theory, capital resources are the basic elements of economic growth.

The legal theory of finance was proposed by Pistor (2013). According to the theory, the financial market is legally built for development. Therefore, the connection between the state, the market, the public and the private sector should ensure harmony. Financial markets are built in accordance with the financial law, and it is emphasized that finance does not matter outside the law. To ensure the development, it is necessary to coordinate them synchronously and uniformly. This theory aimed to explain the variables in the model related to the economic, legal, and state policies to create the development of the economy.

1.3. Derivative securities market framework

The content of this framework is considered based on the international regulation. International Organization of Securities Commissions (IOSCO) is an international organization that issues regulations related to derivative securities. One of the first documents related to derivatives was an IOSCO Principle for monitoring derivative trading systems (IOSCO, 1990). This document consists of ten principles and was added with four more principles in 2000 (IOSCO, 2000). However, the legal framework for derivatives, which was issued by IOSCO in June 1996, is a standardized international legal framework. Accordingly, there is widespread agreement that market integrity and efficiency, financial security and integrity, as well as customer protection (fair treatment of customers) are critical to success of the derivative securities market (IOSCO, 1996). Moreover, IOSCO also regulates some issues related to an OTC market. Content includes standardizing and considering liquidity, improving transparency, minimizing systemic risks and protecting against market abuse in the OTC derivative market, taking measures to strengthen oversight of the OTC market (IOSCO, 2011).

Derivative securities and derivative securities market activities, rights and obligations of organizations and individuals in the field of derivative securities, derivative securities market organizations, and state management of derivative securities and derivative securities market must comply with the regulations. Derivative securities are a financial instrument in the form of a contract, including options contracts, futures contracts, and forward contracts, which confirm the rights and obligations of parties to the payment of money for a specified future period or date (National Assembly of Vietnam, 2019). Participants in the derivative securities market include many participating institutions. Regulatory agencies include the Ministry of Finance and the State Securities Commission of Vietnam to oversee the derivative securities market in an extensive and effective manner. This ensures a sustainable development of the derivative securities market. The Securities Exchange is the market operator responsible for administrating and managing all trading-related

activities. The derivative securities clearing organization aims to ensure the smooth process of clearing and settlement of derivative securities, ensuring safety and fairness for the participating parties. The settlement bank performs the settlement and transfer of derivative products trading accounts. Licensed financial institutions clear derivative products. A market maker plays a role in providing liquidity for new derivative products and helps increase liquidity. Investors, including retail investors or institutional investors, are components that invest in the derivative securities market (State Securities Commission of Vietnam, 2018).

1.4. Previous studies

The review studies related to the factors that affected the development of the derivative securities market. This attracted the attention of some previous authors. Njoroge et al. (2013) analyzed the development of the financial derivatives market in Kenya. The data included 138 subjects of Kenya, capital market agencies and financial market intermediaries in 2013. The authors used quantitative methods and applied the SPSS software. The study found that the use of financial derivative instruments by companies in Kenya was primarily influenced by the legal and regulatory framework, market environment, operational efficiency and the role of financial market intermediaries. Gupta and Mokshmar (2018a) considered the factors affecting the development of the capital and derivative market in Indore. The authors used a quantitative method to test a sample of 300 investors who had derivative transactions in 2017. The results indicate that social, economic and human factors have the same direction to the development of the capital and derivative market in Indore. Vo et al. (2019a) checked the derivatives market and economic growth nexus, and Vo et al. (2019b) considered the importance of the financial derivatives markets for economic development in the world's four major economies. The papers focused on testing the relationship between the derivative market and economic growth taking place on an international scale. The model considers a dependent variable on the basis of GDP (gross domestic product) and some independent variables such as the consumer price

index (CPI), the real interest rate, inflation rate, and the ratio of total exports and imports to GDP. Bhattrai (2020) studied the factors influencing investment decisions in Nepal's derivatives markets. The author used a predictive sampling method to select the sampling unit. Moreover, the study focused on structured questionnaires to assist in examining the relationship between variables. The results show that factors influencing decisive investment in derivative investors are international politics, international economics, national regulatory environment, and knowledge of derivative instruments. In Vietnam, there are no quantitative studies to consider factors affecting the derivative securities market. Tran and Nguyen (2018), in their study on the securities market, focus on testing the factors affecting the development of the Vietnamese securities market. The authors used a quantitative method with a survey sample of 71 brokers in 2018. The results show that the international integration factors have the same direction, while the regulatory environment had a negative impact on the development of the Vietnamese securities market. In general, most foreign studies recognize some key factors such as legal, economic, political, international integration, etc., but there has not yet been research in Vietnam on the derivative securities market.

2. METHODOLOGY

2.1. Research method

To test a model, a qualitative method with ordinary least squares (OLS) is used. This method is widely employed in research. A 7-point Likert scale was used: 1 – Strongly disagree, 2 – Disagree,

3 – More or less disagree, 4 – Undecided, 5 – More or less agree, 6 – Agree, and 7 – Strongly agree.

2.2. Data collection

To create high reliability for the paper, 152 managers and experts working for the Vietnamese derivative securities companies in 2019 were investigated. The questionnaire included 31 observed elements of issues related to the variables in the research model.

2.3. Research model

Based on a synthesis of previous studies and a combination of interviews of experts from Vietnamese derivative securities companies, the following research model is proposed:

$$DS = \beta_0 + \beta_1 \cdot ECO + \beta_2 \cdot REG +$$
$$+ \beta_3 \cdot POL + \beta_4 \cdot STA + \beta_5 \cdot INT + \varepsilon.$$

3. RESEARCH RESULTS

3.1. KMO and Bartlett's test

Kaiser (1974) suggested that the value of KMO is greater than 0.50, and the more statistically significant it is, the higher its level. Furthermore, the significance of Bartlett's test is less than 0.05, which provides statistical conditions.

According to Table 2, KMO test is 0.876, which ensures statistical significance. Besides, Bartlett's test has significance less than 0.05, so this means all variables mutually.

Table 1. Variable names and previous studies in the model

Source: Authors summary.

Variable names	Symbol	Previous studies
Dependent variable		
Development of the Vietnamese derivative securities market	DS	
Independent variables		
Economic environment	ECO	Njoroge et al. (2013); Gupta & Mokshmar (2018a); Tran & Nguyen (2018)
Legal environment	LEG	Njoroge et al. (2013); Gupta & Mokshmar (2018a); Tran & Nguyen (2018); Bhattrai (2020)
Political environment	POL	Gupta & Mokshmar (2018a); Tran & Nguyen (2018)
State management policy mechanism	STA	Njoroge et al. (2013); Gupta & Mokshmar (2018a)
International integration	INT	Njoroge et al. (2013); Tran & Nguyen (2018); Bhattrai (2020)

Table 2. KMO and Bartlett's test

Kaiser-Meyer-Olkin measure of sampling adequacy		.876
Bartlett's test of sphericity	Approx. Chi-square	682.076
	Df	465
	Sig.	.000

3.2. Rotated component matrix

Hair et al. (2009) considered that a loading factor was an indicator ensuring the practical significance of EFA. The loading factor of EFA with the minimum level must be greater than 0.3, and if it is greater than 0.5, it is more statistically significant.

Table 3. Rotated component matrix

Variables	Component				
	1	2	3	4	5
ECO1			.569		
ECO2			.721		
ECO3			.812		
ECO4			.843		
ECO5			.856		
ECO6					
LEG1		.783			
LEG2		.657			
LEG3	.	.702			
LEG4		.809			
LEG5		.713			
POL1				.727	
POL2				.641	
POL3				.702	
POL4				.734	
POL5				.729	
STA1					.741
STA2					.708
STA3					.537
STA4					.632
STA5					.575
INT1	.745				
INT2	.602				
INT3	.781				
INT4	.759				
INT5	.694				

The loading factors in Table 3 are higher than 0.5, so they are considered practical. As to the Rotated component matrix above, there are five columns corresponding to five variables from 31 observed elements.

3.3. Model summary

Horn and Johnson (1994) considered the adjusted R-square to be the basis of a stronger correlation between the independent and dependent variables.

Table 4. Model summary

Model	R	R-square	Adjusted R-square	Std. error of the estimate
1	.610	.516	.408	.27636

Table 4 shows that the adjusted R-square corresponding to the model is 0.408. This means that the independent variable explains 40.8% of the variation of the dependent variable (DS). In general, the degree of explanation of these variables is relative.

3.4. Model suitability evaluation

The *F*-test in variance analysis was a hypothesis for the suitability of the overall linear regression model. This test aimed to consider a linear relationship between the dependent variable and all independent variables (Horn & Johnson, 1994).

Hypothesis H_0: $\beta i = 0$: The variables included in the model do not affect DS.

Hypothesis H_1: $\beta i \# 0$: The variables included in the model affect DS.

Table 5. ANOVA

Model		Sum of squares	df	Mean square	F	Sig.
1	Regression	1122.294	5	342.059	4.769	.000
	Residual	521.150	146	315.076		
	Total	1643.444	151			

Table 5 shows the significance is 0.000, less than 0.05. This shows that the hypothesis H_0 is rejected.

Table 6. Coefficients

Model		Unstandardized coefficients		Standardized coefficients	t	Sig.
	B	Std. Error	Beta			
1	(Constant)	1.228	.885		2.909	.000
	ECO	.055	.081	.056	.673	.502
	LEG	−.131	.186	−.198	−2.171	.000
	POL	−.092	.080	−.095	−1.144	.255
	STA	−.015	.092	−.013	−1.159	.874
	INT	.149	.175	.178	1.926	.000

So, the model fits the data and ensures the information reliability.

3.5. Regression

Based on ensuring the relevance of the model, regression analysis with five independent variables was performed (Table 6).

According to Table 6, there were two variables, including the Legal environment and International integration, which had an impact on the development of the Vietnamese derivative securities market, in which International integration impacted the same way, while the Legal environment had the opposite effect. Therefore, the regression model was defined as follows:

$$DS = -0.198 \cdot LEG + 0.178 \cdot INT.$$

4. DISCUSSION AND POLICY RECOMMENDATIONS

The results of this study are quite similar to those of some overseas studies such as Njoroge et al. (2013), Tran and Nguyen (2018), and Bhattrai (2020). This means that the Vietnamese derivative securities market is at the early stage of its development, so the legal corridor is important and crucial. When the current regulatory framework is not consistent and synchronized, there are certain obstacles to development. Due to the new derivative securities market in Vietnam, caution is always concerned with strict binding regulations. This negatively affects the development of the derivative securities market. Moreover, for a developing country like Vietnam, the international integration is essential. This is an important channel to attract capital from foreign investors.

For Legal environment (LEG), the legal framework negatively affects the development of the Vietnamese derivative securities market (DS). Strict regulations have become a barrier to the growth of this financial market. Some inconsistent and incomplete regulations affect the development of derivative securities, such as limiting the scope of operations, limiting types of derivative products, etc. This result is similar to the results of some previous studies such as Njoroge et al. (2013), Gupta and Mokshmar (2018a), Tran and Nguyen (2018), and Bhattrai (2020).

For International integration (INT), this shows a relationship between this variable and the development of the Vietnamese derivative securities market (DS). This suggests that as the level of the international integration increases, it will develop the derivatives market. An increase in international integration will help foreign investors better understand the Vietnamese derivative market, and this is an opportunity to attract investment to develop derivative securities. This is in line with Njoroge et al. (2013), Tran and Nguyen (2018), and Bhattrai (2020).

To facilitate the application of the existing legal environment in Vietnam, Vietnamese regulatory bodies, in particular the National Assembly and the State Securities Commission of Vietnam, should adjust legal policies to create a stable legal framework. It is also necessary to consider compliance with international principles to create standards in regulations. This is an essential condition to ensure fairness and protect legitimate rights and interests of domestic and foreign investors. In addition, Vietnamese derivative securities companies must comply with the regulations, so the transactions are consistent and synchronized. This helps to raise capital to make financial mar-

ket, in particular the Vietnamese derivative securities market, stable and developed.

With regard to international integration, Vietnamese state management agencies must have appropriate long-term international integration strategies. Recently, Vietnam has actively participated in organizations such as the ASEAN Economic Community (AEC), the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP) and the European-Vietnam Free Trade Agreement (EVFTA). This has shown positive points in the process of linking with countries and creating a bridge for development. However, it is important to participate in regional and international organizations, but more than to attract foreign investment, large financial resources from countries through financial markets, namely Vietnamese derivative securities market. This is an opportunity to develop strong economic resources and thereby contribute to national growth.

CONCLUSION

A derivative securities market formed a few years ago has created a capital market for Vietnam. This helps to increase financial resources to create momentum for economic growth of the country, and this is important for developing countries such as Vietnam. The article uses exploratory factor analysis and Ordinary least squares to test the model with data including 152 managers and experts of Vietnamese derivative securities companies in 2019. The research results show that both International integration and Legal environment affected the development of the Vietnamese derivative securities market, in which International integration has the same direction, while the Legal environment the opposite. On that basis, Vietnamese regulatory bodies should pay attention to legal regulations and comply with international principles to create standards in regulations. At the same time, state management agencies in Vietnam also need appropriate long-term and strategic international integration directions with AEC, CPTPP and EVFTA to attract financial resources from foreign investors. This contributes to the strong development and economic growth of Vietnam in the future.

AUTHOR CONTRIBUTIONS

Conceptualization: Ly Hoang Anh.
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