MACRO-FACTORS AFFECTING THE STOCK INVESTORS (SI) AND STOCK MARKET (SM) IN HO CHI MINH CITY

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ABSTRACT: *The objective of this study is to explore the macro-determinants affecting stock investors and stock market. The research results provide the basic information for investors to make optimal investment decisions on stock market in Ho Chi Minh city (HCMC), Vietnam. Besides, the researchers surveyed 650 investors who answered 20 questions. The primary sources of data collected from January 2018 to July 2018 and simple random sampling technique. The Data analyzed Cronbach's Alpha and the exploratory factor analysis (EFA) which used for Structural Equation Modelling (SEM) technique and using partial least squares method. Investors' responses measured through an adapted questionnaire on a 5-point Likert scale. Hard copy distributed among 2.000 investors in HCMC. Finally, the findings of the study have three factors affecting stock investors and stock market with significance level 0.01.*

KEYWORDS: Stock; Market; Macroeconomic; Stock investors and Tay Do University

INTRODUCTION

The stock market is a very important part of the economy of each country. This is a channel to provide capital and a tool to reflect the health of the economy through stock price volatility. The effective market theory is that the prices of securities in the financial market, especially the stock market. It reflects all the information that investors know. However, the results of many recent studies have proved to be largely ineffective. This means that the price of stock market has not really reflected the reality of the market due to the influence of many other factors on stock prices. Besides, there are many various factors that affecting the price change of securities include: Endogenous factors (factors determining the existence of securities commodities are the advantages of exploiting the company's resources such as: Earnings per Share (EPS), capitalization...) and external factors (macroeconomic factors such as GDP grow, inflation, exchange rate and expanded monetary policy, money supply...). Moreover, many studies have been conducted in recent years to identify factors affecting stock price volatility in many countries. In Vietnam, a number of studies on factors affecting stock investors and stock market have not been conducted in Vietnam. This study uses both quality and quantitative methods to determine the factors affecting stock investors and stock market. The results will be empirical evidence to help investors to make more appropriate investment directions in Vietnam stock market. So, the researchers want to test the relationship between three macro-factors including Gross Domestic Product (GDP), Consumer Price Index (CPI), Exchange rates and expanded monetary policy (ERMP) for the stock investors and stock market in Ho Chi Minh city, Vietnam. Above mentioned things, the researchers chosen topic **"*Macro-factors affecting the stock investors (SI) and stock market (SM) in Ho Chi Minh City*"** as a paper.

LITERATURE REVIEW

Stock Market

The stock market is a market in which people buy, sell or transfer securities for the purpose of profit. However, it may be concentrated or decentralized on stock market. The focus here is on the transaction focused on a physical location. The typical focus of the stock market is the stock exchange (Adjasi, C. K., 2009). At the stock exchange, transactions are concentrated at one location; commissions are transferred to the trading location and involved in the coupling process to form the transaction price. The decentralized stock market is also known as the Over-The-Counter (OTC) market (Yartey,C.A., 2010). In the OTC market, transactions are conducted through a network of securities companies scattered all over the country and interconnected by electronic means. Prices in this market are formed by agreement (Agrawal, Dr. Gaurav., Srivastav, Aniruddh Kumar., & Srivastava, Ankita, 2010).

Stock Investors

Investors are involved in one or more investments in various forms. An investor can be an individual or an enterprise or an organization. Most investors invest money to invest in economic benefits such as business investment, production (Ratanapakorn, O., Sharma, S.C., 2007). A few investors often state-owned entities, make public investments to benefit the society such as the construction of welfare facilities (Ali, R., Ahmad, Z., & Anusakumar, S. V., 2011). The term of investor is also used in the financial industry to describe a group of people or companies who regularly buy securities, stocks or bonds to obtain a financially distressed financial return for financing a company (Walid, C., Chaker, A., Masood, O., & Fry, F., 2011). This phrase also applies to individuals or organizations that buy and hold assets over a long period of time with the analysis and judgment that they will receive capital gains (Ali, R., Ahmad, Z., & Anusakumar, S. V., 2011).

Gross Domestic Product

Gross domestic product (GDP) is the monetary value of all the finished goods and services produced within a country's borders in a specific time period (Ahmed, S., 2008). Though GDP is usually calculated on an annual basis, it can be calculated on a quarterly basis as well (in the United States, for example, the government releases an annualized GDP estimate for each quarter and also for an entire year) (Ashaolu, T. O., & Ogunmuyiwa, M. S., 2011). GDP includes all private and public consumption, government outlays, investments, private inventories, paid-in construction costs and the foreign balance of trade (exports are added, imports are subtracted) (Hsing, Y., 2011). GDP is a broad measurement of a nation's overall economic activity - the godfather of the indicator world (Baker, M., & Wurgler, J., 2007). Besides, the relationship between exchange rates and stock price indices is an empirical question. Experimental studies in different markets will produce different results (whether they are in the same direction, vice versa, or even without any correlation between the stock market and the exchange rate). The relationship between exchange rates and stock price indices is an empirical question (Baker, M., & Wurgler, J., 2007). The stock market was affected by gross domestic product (GDP) primarily by influencing financial conditions and consumer confidence. When stocks are in a bull market, there tends to be a great deal of optimism surrounding the economy and the prospects of various stocks (Owusu-Nantwi, V. and Kuwornu, J.K.M., 2011). High valuations allow companies to borrow more money at cheaper rates, allowing them to expand operations, investing in new projects and hiring more workers.

All of these activities boost GDP (Batten, J. A., Ciner, C., & Lucey, B. M., 2011). The inverse happens when GDP falls lower than consensus or expectations of GDP decline (Batten, J. A., Ciner, C., & Lucey, B. M., 2011).

The above mentioned Gross Domestic Product (GDP), the researchers have hypotheses 1 and 2 following:

Hypothesis 1 (H1): Gross Domestic Product (GDP) had positive relation to the stock investors (SI) in Ho Chi Minh city.

Hypothesis 2 (H2): Gross Domestic Product (GDP) had positive relation to the stock market (SM) in Ho Chi Minh city.

Consumer Price Index (Inflation)

The Consumer Price Index (CPI) is a measure that examines the weighted average of prices of a basket of consumer goods and services such as transportation, food and medical care. It is calculated by taking price changes for each item in the predetermined basket of goods and averaging them (Owusu-Nantwi, V. and Kuwornu, J.K.M., 2011). Changes in the CPI are used to assess price changes associated with the cost of living. The CPI is one of the most frequently used statistics for identifying periods of inflation (Batten, J. A., Ciner, C., & Lucey, B. M., 2011).

Inflation is the devaluation of the currency that changes the consumer behavior and investment of the population. Inflation is usually measured by the consumer price index. Experiences from developed countries show that inflation and the stock market have a negative relationship because the trend of inflation determines growth (Ryu, D., Kim, H., & Yang, H., 2016). High inflation is always a sign that the economy is hot, signaling the growth of unsustainable while the stock market as the thermometer measuring the health of the economy (Beetsma, R., & Giuliodori, M., 2012).

High inflation has a direct impact on enterprises, investors and stock market although the business is still profitable, high dividend but hard to call dividend is attractive when inflation is high. This makes securities investment is no longer a lucrative channel (Beetsma, R., & Giuliodori, M., 2012). High inflation has reported that there are at least three theories that predict a positive relation between volatility and volume. First, if investors have heterogeneous beliefs, new information causes both the price changes and the trading. Second, if some investors use price movements as information on which to make trading decisions, large price movements cause large trading volume (Büyüksalvarci, A., & Abdioglu, H., 2010). Finally, if there is short-term "price pressure" due to illiquidity in secondary trading markets; large trading volume that is predominantly either buy or sell orders cause price movements (Karam. P.& Mittal R., 2011).

The above mentioned Consumer Price Index (CPI), the researchers have hypotheses 3 and 4 following:

Hypothesis 3 (H3): Consumer Price Index (CPI) had positive relation to the stock investors (SI) in Ho Chi Minh city.

Hypothesis 4 (H4): Consumer Price Index (CPI) had positive relation to the stock market (SM) in Ho Chi Minh city.

Exchange rate and expanded monetary policy

Exchange rate: the relationship between exchange rates and income from securities is explained by many researchers, however, the results of these studies still can agree the impact of the exchange rate on securities prices (Czapkiewicz, A., & Stachowicz, M., 2017). There are three approaches to the relationship between exchange rates and stock prices: First, the relationship between stock prices and exchange rates is the same (Morelli, D., 2002). Exchange rate showed that once the domestic currency is undervalued it will make domestic firms more competitive, resulting in increased exports. This makes the stock prices increase (Ray, D. S., 2012).

The rise in prices of domestic assets makes investors increasingly demand their money which in turn causes interest rates to rise. Another activity that makes the relationship between stock prices and the opposite rate is when there is an increase in foreign investment in domestic assets also increases the price of securities (Kurov, A., 2010). This is also the reason for the appreciation of the domestic currency. When approaching the exchange rate as an asset (the price of a unit of foreign currency) in the asset market. The rise in prices in the currency model has confirmed that the exchange rate and stock price are weak or completely weak (Basu, P. & Morey, M. R., 2005) (Oseni, I. O., & Nwosa, P. I., 2011).

Expanded monetary policy: If the supply of money expands, it will lead to an increase in consumption of goods as well as an increase in the use of financial assets in which the stock is one. As the money supply increases, the excess liquidity will affect the stock market quite strong due to the impact of monetary policy relatively fast and direct (Owusu-Nantwi, V. and Kuwornu, J.K.M., 2011). The above mentioned exchange rates and expanded monetary policy (ERMP), the researchers have hypotheses 5 and 6 following:

Hypothesis 5 (H5): Exchange rates and expanded monetary policy (ERMP) had positive relation to the stock investors (SI) in Ho Chi Minh city.

Hypothesis 6 (H6): Exchange rates and expanded monetary policy (ERMP) had positive relation to the stock market (SM) in Ho Chi Minh city.

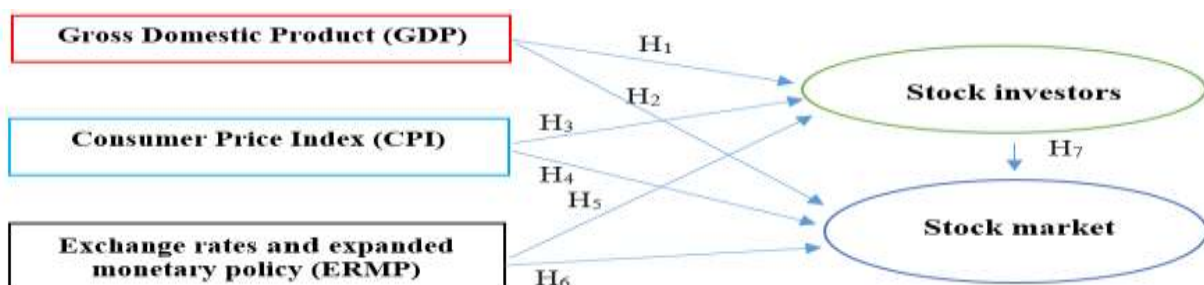*Hypothesis 7 (H7): The stock investors (SI) had positive relation to the stock market (SM) in Ho Chi Minh city.*

Figure 1: Research model for macro-factors affecting the stock investors (SI) and stock market (SM) in Ho Chi Minh City

Table 1: Coding of the observed variables

Code	Gross Domestic Product (GDP)
GDP1	GDP growth will positively impact on the investors and the stock market in terms of quantity and quality (Ashaolu, T. O., & Ogunmuyiwa, M. S., 2011).
GDP2	GDP growth rate increases, the number of enterprises, especially joint-stock companies will create jobs for the economy positively impact on the investors and the stock market (Baker, M., & Wurgler, J., 2007).
GDP3	The economy grows well, it will attract more foreign direct investment (FDI) and indirect investment. When more foreign investors are involved, it helps to improve market efficiency and transparency, driving dynamism and developing markets impacting on the investors and the stock market (Batten, J. A., Ciner, C., & Lucey, B. M., 2011).
GDP4	Economic growth creates the demand for different types of financial services, thus developing financial systems that will benefit the company in need of capital to grow. This positively impacts on the investors and the stock market (Owusu-Nantwi, V. and Kuwornu, J.K.M., 2011).
GDP5	GDP increases strong and pushes the stock market to a high level. This leads to the opportunity of economic develpoment and positively impact on the investors and the stock market (Tangjitprom, N., 2011).
Code	**Consumer Price Index (CPI)**
CPI1	The decrease in CPI is associated with decreased input costs. This increases the business profitability of businesses, corporate finance is optimistic. Therefore, businesses are attractive to investors in the stock market and positively impact on the investors and the stock market (Beetsma, R., & Giuliodori, M., 2012).
CPI2	CPI stability will be the pressure for the government to implement tightening credit policies that make securities investors more difficult to access credit, thus reducing investment in the stock market (Büyüksalvarci, A., & Abdioglu, H., 2010).
CPI3	CPI stability will lead to stability bank interest rates, making bank interest rates more attractive than securities trading, boosting savings or buying gold to protect investors' money. This also makes the flow of investment on the stock market (Owusu-Nantwi, V. and Kuwornu, J.K.M., 2011).
CPI4	Increasing CPI could also have two opposite effects: increase the sale of "bad" securities to withdraw capital from the stock market, and increase the purchase of the "good" securities to "hiding" inflation (Tangjitprom, N., 2011).
Code	**Exchange rates and expanded monetary policy (ERMP)**
ERMP1	The exchange rate will impact the enterprises with foreign debts when they have to make provision for exchange rate risk at the end of the year, including public utilities, cement, shipping and oil and gas (Morelli, D., 2002).
ERMP2	Enterprises have foreign currency loans, enterprises have to export most of the products abroad which is also affected by exchange rate changes stability and positively impact on the investors and the stock market (Owusu-Nantwi, V. and Kuwornu, J.K.M., 2011).
ERMP3	If the supply of money expands, it will lead to an increase in consumption of goods as well as an increase in the use of financial assets in which the stock is one and positively impact on the investors and the stock market (Owusu-Nantwi, V. and Kuwornu, J.K.M., 2011).
ERMP4	The monetary expansion policy reduces the interest rate of the economy, decreases the discount rate of the securities thereby increasing the expected price and increasing

(Source: researchers collecting and basing above literature)

	the income. This makes positively to impact on the investors and the stock market (Luo, J., Gan, C., Hu, B., & Kao, T. K., 2009).
Code	**Stock investors (SI)**
SI1	The Gross Domestic Product (GDP) affecting the stock investors in HCMC, Vietnam.
SI2	The Consumer Price Index (CPI) affecting the stock investors in HCMC, Vietnam.
SI3	The exchange rates and expanded monetary policy (ERMP) affecting the stock investors in HCMC, Vietnam.
Code	**Stock market (SM)**
SM1	The Gross Domestic Product (GDP) affecting the stock market (SM) in HCMC, Vietnam.
SM2	The Consumer Price Index (CPI) affecting the stock market (SM) in HCMC, Vietnam.
SM3	The exchange rates and expanded monetary policy (ERMP) affecting the stock market (SM) in HCMC, Vietnam.
SM4	The stock investors' mentality affecting the stock market (SMP) in HCMC, Vietnam.

The table 1 showed that research model for macro-factors affecting the stock investors (SI) and stock market (SM) in Ho Chi Minh city, Vietnam. The researchers have the suggestion: Gross Domestic Product (GDP) has 5 observed variables, Consumer Price Index (CPI) has 4 observed variables, Exchange rates and expanded monetary policy (ERMP) have 4 observed variables, Stock investors (SI) has 3 observed variables and Stock market (SM) has 4 observed variables.

Table 1 showed that there are 20 the observed variables: Gross Domestic Product (GDP: GDP1, GDP2, GDP3, GDP4 and GDP5) has 5 observed variables, Consumer Price Index (CPI: CPI1, CPI2, CPI3 and CPI4) has 4 observed variables, Exchange rates and expanded monetary policy (ERMP: ERMP1, ERMP2, ERMP3 and ERMP4) have 4 observed variables, Stock investors (SI: SI1, SI2 and SI3) has 3 observed variables and Stock market (SM: SM1, SM2, SM3 and SM4) has 4 observed variables.

METHODS OF RESEARCH

In this study, the researchers used both the qualitative and quantitative methods.

Qualitative research is concerned with human behavior and why people act the way that they do. These methods used for qualitative research included interviews and focus groups and group interviews. Both these methods allow researchers to explore a topic in depth with one or two people at a time. The researchers can also collect qualitative Data from interactions, this research recognizes that the researchers are a key part of the situation, rather than an outside observer (Pal, K., & Mittal, R., 2011).

Quantitative research always collects numerical data. The researchers collected Data numbers, then the research is qualitative. Quantitative research used to get views from large numbers of investors. The first step in quantitative research is to determine the sampling and sample design (Tangjitprom, N., 2011). And then researchers need to gather data. Suitable methods include surveys stock investors in Ho Chi Minh city.

This research should pay attention to all these factors but much depends upon the ability and experience of the researcher. The research process for factors affecting the stock investors (SI) and stock market (SM) in Ho Chi Minh city conducted in three phases following.
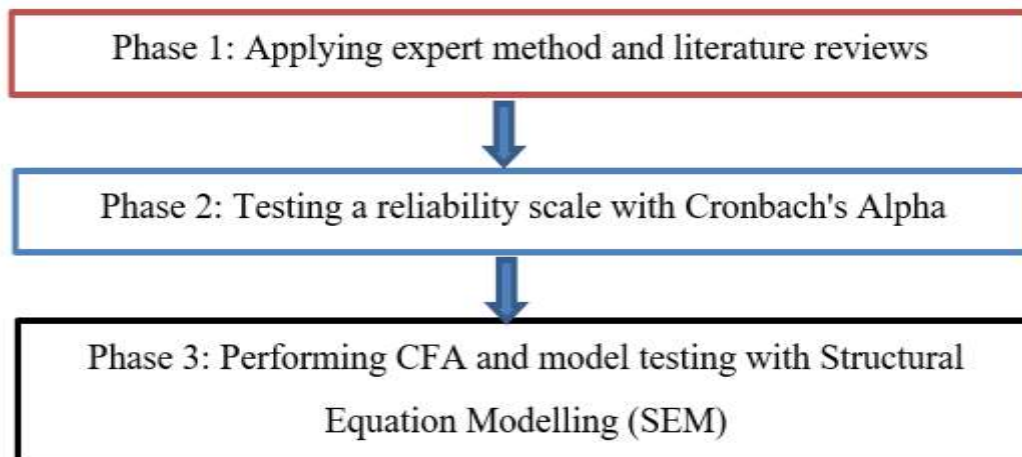
Figure 2: Research process for macro-factors affecting the stock investors (SI) and stock market (SM) in Ho Chi Minh City

Figure 2 showed that this study conducted in three phases following:

Phase 1: The researchers applied the expert methodology and based on 30 experts' consultation related to stock market and based 30 lecturers who are teaching stock market subjects as group discussions are to improve the scale and design of the questionnaire (Uddin, M. G. S. and Alam, M. M., 2007). The results of surveying 30 experts and 30 lecturers showed that macro-factors affecting the stock investors (SI) and stock market (SM) in Ho Chi Minh city. If macroeconomic-policies improve, the stock investors will be confident to increase capitals in stock market. This helps the stock market in sustainable development. This study was conducted in the first phase, we created a list of possible factors gathered from the literature reviews as mentioned in the above studies.

Phase 2: The researchers tested a reliability scale with Cronbach's Alpha coefficient and exploratory factor analysis. This phase surveys samples 60 stock investors in order to check the content and the information of questionnaire. Hard copies of the revised questionnaires were directly delivered to on-site stock investors in Ho Chi Minh city. The final questionnaires were directly collected from the surveyed stock investors because it took them less than 20 minutes to complete the survey (Ray, D. S., 2012). There are 650 stock investors surveyed by hard copy distributed among more than 50.000 stock investors in Ho Chi Minh, Vietnam. All data collected from the questionnaire are coded, processed by SPSS 20.0 and AMOS. Any observational variables with a total correlation coefficient greater than 0.3 and Cronbach's Alpha coefficient greater than 0.6 would ensure reliability of the scale. This method is based on the eigenvalue, the appropriate factorial analysis and the observed variables in the whole which are correlated when Average Variance Extracted is > 50%, the KMO coefficient is within 0.5 to 1, Sig coefficient ≤ 5%, the loading factors of all observed variables are > 0.5 (Hair, J.F., Jr.; Black, W.C.; Babin, B.J.; Anderson, R.E., 2014). In addition, the researchers testing scale reliability with Cronbach's alpha coefficient and exploratory factor analyses (EFA) were performed. The questionnaires collected from the official survey provided primary data, which were coded, screened and analyzed with SPSS and AMOS software. Literally, a scale was considered reliable if its observed variables had a corrected item-total correlation greater than 0.3 and a Cronbach's alpha coefficient greater than 0.7. Besides, the criteria required in the EFA include: (1) Eigenvalue ≥ 1; (2) total variance explained ≥ 50%; (3) KMO

≥ 0.5; (4) Significance (Sig.) coefficient of the KMO test ≤ 0.05; (5) factor loadings of all observed variables are ≥ 0.5; and (6) weight difference between the loadings of two factors > 0.3 (Hair, J.F., Jr.; Black, W.C.; Babin, B.J.; Anderson, R.E., 2014).

Phase 3: The researchers performed CFA and model testing with Structural Equation Modelling (SEM) analysis. The purpose of CFA helps to clarify: (1) Unilaterality, (2) Reliability of scale, (3) Convergence value, and (4) Difference value. A research model is considered relevant to market data if Chi-quare testing is P-value $> 5\%$; CMIN/df ≤ 2, some cases CMIN/df may be ≤ 3 or < 5; GFI, TLI, CFI ≥ 0.9. However, according to recent researchers' opinion, GFI is still acceptable when it is greater than 0.8; RMSEA ≤ 0.08. Apart from the above criteria, the test results must also ensure the synthetic reliability > 0.6; average variance extracted must be greater than 0.5 (Hair, J.F., Jr.; Black, W.C.; Babin, B.J.; Anderson, R.E., 2014).

RESEARCH RESULTS

Introduction to Vietnam Stock Market

Vietnam Stock Market currently has two Stock Exchanges: Ho Chi Minh Stock Exchange (HOSE) and Hanoi Stock Exchange (HNX and Upcom). We have the information following:

Ho Chi Minh city Stock Exchange (HOSE): HOSE has 15 years of operation divided into 6 phases, each with its own mark associated with the ups and downs of the stock market as well as the economy of Vietnam, specifically: (1) 2000-2004 period. Vietnam stock market officially was born with the birth of Ho Chi Minh city Securities Trading Center. (2) period of 2005-2006 The stock market witnessed a wave of listing on the Vietnam stock market (Saigon Thuong Tin Commercial Joint Stock Bank - Sacombank listed on July 12, 2006). This period recorded the breakthrough of HOSE in proposing the sale of shares of equitized SOEs through the STC and successfully held the first auction for Vietnam Dairy Products Joint Stock Company (Vinamilk) in 2005. STC has gradually affirmed its position on the stock market and in the economy expressed by the visit of former US President, George W. Bush and US Secretary of State Condoleezza Rice and was awarded the Government emulation flag in 2006. (3) The period of 2007-2008. This period has recorded a milestone in the formation and development of HOSE which is the transformation of operation model from Ho Chi Minh City Securities Trading Center. HCM City Stock Exchange Ho Chi Minh City according to Decision No. 599/QĐ dated 11/5/2007 of the Prime Minister. (4) The period of 2009-2011. The online trading system was implemented on HOSE in 2009, an advanced trading method marked a breakthrough in improving liquidity in the market. In addition, HOSE granted the ISO 9001: 2008 Quality Management System Certificate in 2009 has helped all activities of HOSE including auction, transaction, listing and monitoring... operated and controlled with a unified process. (5) The period 2012-2013. Marking the birth of VN30 in February 2012, the first time the index was calculated by the new method adjusted the proportion of free stocks to reflect more accurately market developments. In addition, HOSE became a full member with strict conditions of the World Federation of Stock Exchanges (WFE) in 2013 has confirmed the increasing status of HOSE in the market. gender. It is the deep international integration that gives HOSE the opportunity to gain experience in how to organize and manage the market in accordance with international standards. (6) Period 2014-2015 and now. The Exchange Tower was officially opened on July 26, 2014. This is a modern building with an area of over 26,000

square meters, which satisfies the technical criteria for installing TIA-942 Data Center at TIER 3. Besides, HOSE provisioned at Quang Trung Software Park is also underway. With these two projects, infrastructure of the Vietnam stock market has been raised to new heights, comparable to the stock exchanges in the ASEAN region. This stage also marked the birth of a series of new products on the market, following the success of the VN30, to provide investors with more market segments.

The scale reliability tests for factors

Table 2: The scale reliability tests for macro-factors affecting the stock investors (SI) and stock market (SM)

Items	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
GDP1	10.6048	6.486	0.666	0.817
GDP2	11.2528	6.067	0.747	0.794
GDP3	10.5936	6.456	0.582	0.842
GDP4	11.3648	6.963	0.629	0.828
GDP5	11.3264	6.387	0.688	0.811
Cronbach's Alpha for Gross Domestic Product (GDP)				0.949
CPI1	9.5504	7.995	0.889	0.938
CPI2	9.5984	7.773	0.913	0.930
CPI3	9.6832	7.755	0.851	0.949
CPI4	9.6640	7.582	0.892	0.936
Cronbach's Alpha for Consumer Price Index (CPI)				0.953
ERMP1	10.2480	5.850	0.637	0.811
ERMP2	10.2624	5.784	0.656	0.804
ERMP3	10.1184	5.435	0.795	0.746
ERMP4	10.3824	5.329	0.622	0.825
Cronbach's Alpha for Exchange rates and expanded monetary policy				0.839
SI1	6.0896	3.328	0.868	0.787
SI2	6.1824	3.387	0.753	0.889
SI3	6.1024	3.586	0.767	0.874
Cronbach's Alpha for Stock investors (SI)				0.895
SM1	7.3216	3.228	0.707	0.834
SM2	7.2320	2.768	0.738	0.823
SM3	7.2976	3.312	0.658	0.852
SM4	7.2416	2.873	0.776	0.804
Cronbach's Alpha for Stock market (SM)				0.866

(Source: researchers processing by SPSS 20.0)

Table 2 showed that all of 20 variables surveyed Corrected Item-Total Correlation greater than 0.3 and Cronbach's Alpha if Item deleted greater than 0.6 and Cronbach's Alpha is very reliability. Such observations make it eligible for the survey variables after testing scale. This showed that data was suitable and reliability for researching.

Table 2 showed that KMO is an index used to examine the appropriateness of factor analysis. KMO value significantly larger factor analysis is appropriate. KMO coefficient is 0.800 and the level of significance (Sig) is 0.000. Exploratory Factor Analysis (EFA) is consistent with survey data of 650 investors surveyed by hard copy distributed among more than 2.000 investors in HCMC but only 625 investors processed by SPSS 20.0. Besides, table 2 showed that three factors affecting the stock investors included: Consumer Price Index (CPI), Gross Domestic Product (GDP) and Exchange rates and expanded monetary policy (ERMP).

Confirmatory factor analysis

Table 3: Confirmatory factor analysis

Term	Scale	No. of observed variables	Reliability Test		Average Variance Extracted
			Cronbach's Alpha	Composite	
Macro-factors affecting the stock investors (SI) and stock market (SM) in HCMC	Gross Domestic Product (GDP)	5	0.949	0.900	0.664
	Consumer Price Index (CPI)	4	0.953	0.949	0.823
	Exchange rates and expanded monetary policy (ERMP)	4	0.839	0.818	0.532
Stock investors (SI)		3	0.895	0.901	0.754
Stock market (SM)		4	0.866	0.867	0.622

(Source: researchers processing by SPSS 20.0 and Amos)

Table 3 showed that column "Cronbach's Alpha" > 0.6 with significance level 0.01 and column "Composite and Average Variance Extracted" > 0.5 with significance level 0.01 in the confirmatory factor analysis.

Chi-square = 656.731; df = 150; p = 0.000; Chi-square/df = 4.378; GFI = 0.902; TLI = 0.924; CFI = 0.940; RMSEA = 0.074.
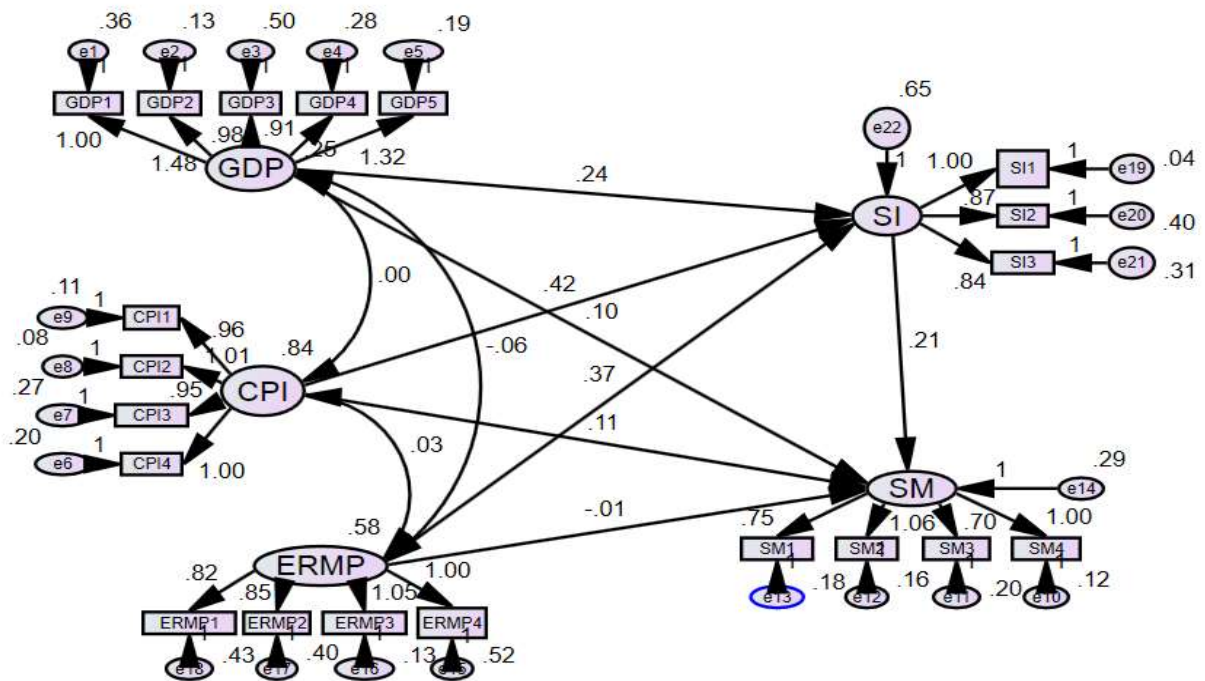
Figure 3: The structural model showing the structural linkage between GDP, CPI, ERMP, SI and SM

Testing relationships for coefficients from the SEM model

Table 4: Coefficients get from the SEM model

Relationships			Coefficient	Standardized Coefficient	S.E.	C.R.	P	Conclusion
SI	<---	GDP	0.186	0.129	0.041	4.600	***	H1: Supported
SI	<---	CPI	0.406	0.386	0.039	10.306	***	H3: Supported
SI	<---	ERMP	0.519	0.337	0.070	7.405	***	H5: Supported
SM	<---	SI	0.214	0.334	0.031	6.832	***	H7: Supported
SM	<---	GDP	0.107	0.115	0.027	3.935	***	H2: Supported
SM	<---	CPI	0.118	0.175	0.030	3.971	***	H4: Supported
SM	<---	ERMP	-0.038	-0.039	0.047	-0.816	0.414	**H6: Rejected**

*Note: ***Significant at 1 percent (All t-tests are one-tailed)*

(Source: researchers processing by SPSS 20.0 and Amos)

Table 4 showed that column "P" < 0.01 with significance level 0.01 and column "Conclusion" H1: supported, H2: supported, H3: supported H4: supported, H5: supported and H7: supported. This showed that three factors of Consumer Price Index (CPI), Gross Domestic Product (GDP) and Exchange rates and expanded monetary policy (ERMP) affecting the stock investors with significance level 0.01. Besides, Consumer Price Index (CPI), Gross Domestic Product (GDP) and the stock investors that affecting the stock market (SM) with significance level 0.01. However, H6: rejected with significance level 0.01. This showed that the expanded monetary policy did not affect the stock market with significance level 0.01.

CONCLUSIONS AND MANAGERIAL IMPLICATIONS

Conclusions

This study found that three factors of Gross Domestic Product (β = 0.129), Consumer Price Index (β = 0.386) and Exchange rates and expanded monetary policy (β = 0.337) affected the stock investors with significance level 0.01. Besides, the stock investors (β = 0.334) affected the stock market with significance level 0.01. In addition, two factors of Gross Domestic Product (β = 0.115), Consumer Price Index (β = 0.175) affected the stock market with significance level 0.01. The expanded monetary policy did not affect the stock market with significance level 0.01. This study is to find out the stock investors (β = 0.334) affected the stock market with significance level 0.01 in Ho Chi Minh city.

Managerial implications

The study results showed that the macroeconomic factors are moving in a positive and positive direction, Therefore, the researchers have managerial implications bellowed.

Consumer Price Index (β = 0.386) has the strongest impact on the stock investors with significance level 0.01. The researchers have recommendations following: From now until the end of the year, the State Bank of Vietnam (SBV) should continue to run monetary policy to ensure the implementation of basic inflation control objectives coupled with reasonable credit growth, supporting economic growth and stock market development. Besides, SBV should continue to strengthen macroeconomic stability, control inflation, ensure the major balances of the economy, improve the business investment environment, promote economic growth fast and sustainable. Specifically, SBV should continue the synchronous operation of macro policies, combining monetary policy actively, flexible and prudent with tight fiscal policy, discipline, discipline and other policies; GDP growth rate reached 6.7%.

Exchange rates and expanded monetary policy (β = 0.337) have the second impact on the stock investors with significance level 0.01. The researchers have recommendations following: SBV should continue to flexibly and prudently monetary policy in close coordination with fiscal policy. SBV should continue to raise the effectiveness of analysis, to forecast and timely response to domestic and international fluctuations in order to ensure the macro stability and major balances of the economy, especially in terms of labor, employment and budget. SBV should continue to state investment, development investment, import-export, balance of payments, food security and energy.

Gross Domestic Product (β = 0.129) has the less impact on the stock investors with significance level 0.01. The researchers have recommendations following: Government should continue to enhance macroeconomic stability, make clear changes in the implementation of strategic breakthroughs, restructure the economy in combination with renewing the growth model. Government should continue to raise productivity, quality and efficiency and competitiveness. Government should continue to encourage innovation, start-ups, develop businesses, promote economic growth. Government should continue to drastically reform the administration; to increase discipline, discipline, raise the effectiveness and efficiency of law enforcement and the leadership, direction and administration in all branches and levels. Government should continue to promote anti-corruption, waste and to attach importance to the tasks of cultural and social development. Government should continue to the exercise of democracy and social justice, improvement of the people's life; environmental protection, natural disaster prevention and response, climate change response; ensuring national defense and security; improving efficiency of foreign affairs and international integration. The next research should survey more than 650 stock investors in Ha Noi capital, Vietnam. The next research should survey more than more than 20 variables. This helps the data that is more significant. The next research should survey more than 20 items in components of the other countries such as Thailand, Singapore, Malaysia...

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