

# The Impact of Macroeconomic Factors on Stock Price Index, VN-Index

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## **Abstract:**

The paper aims to find out the impact of macroeconomic factors on the price index of Vietnam's stock market (in particular on the price index VN - Index), in order to assess the impact of these factors which can help investors have a clearer view on the impact of macroeconomic factors, to help them make investment decisions more rational, more timely when there is a variation of the macroeconomic factors in the economy. Decoration and orientation to investors work properly will greatly affect the stock market. So this study would like to contribute a part to investors with additional tools to further improve, to serve the investment needs in a professional manner of him.

Keywords: Macroeconomic, Stock Price, VN-Index, Investors

## **1. Introduction**

Most people agree that the stock price index was influenced by the fundamental macroeconomic factors such as inflation, exchange rates and interest rates. But it is noteworthy that, the result of that impact in research in this country can be the same or not the same with other countries. Even in the same country, but the results will be different when researchers at different stages. Therefore, the use of the foreign research results to apply for Vietnam stock market is impossible. Thus, the experimental study of the effects of macroeconomic variables to the stock market using time-series data in Vietnam is extremely necessary. For policy makers, the study results are a guide to help them get the most optimal choice when you want to impact on the economy in accordance with the purpose; but for investors, to understand the relationship between stock prices and macroeconomic variables enable them to predict the market and make rational decisions. Because of this reason, we chose the research topic: "Analysis of the impact of macroeconomic factors on stock price index, VN-Index".

Impact on the stock market in general and the stock price index in particular include endogenous factors, exogenous factors and the other factors. However, in this study, we only care about the impact of macroeconomic factors (exogenous factors) to the stock price index, VN-Index.

## **2. Rationale and Research Methods**

### **2.1 Rationale**

#### ***2.1.1 Concept about the stock market***

The stock market is an important part of the capital market, its activities in order to mobilize the small savings funds in social centralize into large capital financing for businesses, economic organizations and government to develop production, economic growth or investment projects.

The stock market is the place where trading stocks. The sale was conducted in the primary and the secondary market, so the stock market is where the stocks are issued and exchanged.

#### ***2.1.2 The function of the stock market***

- Mobilizing investment capital for the economy: when investors buy stocks issued by the company, their idle money is put into production and business activities, and thereby contributing to expand social production. By supporting the investment activities of the company, the stock market has important implications for the development of the national economy. Through the stock market, the government and local authorities mobilize capital resources for the purpose of use and development of infrastructure economic, catering for the needs of society.

- Providing investment environment to the public: the stock market offers the public a healthy investment environment with the opportunity to choose the rich. The stocks in the market are very different in nature, duration and risk, allowing investors to choose commodities matching capabilities, goals and your preferences. Therefore, the stock market significant contributed a increase national savings.

- Create liquidity for the stock: thanks to the stock market investors can convert their securities into cash property, or other securities when they want. Liquidity is one of the attractive features of the securities to investors. These are factors that show the versatility and safety of capital. The more dynamic and effective stock market is, the more likely enhance the liquidity of the stock traded on the market.

- Assessment of business activity: through the stock price, the operation of the business is reflected in an integrated manner and accurately, helping to assess and compare the operation of the business to be quickly and conveniently, thereby also create a healthy competitive environment in order to improve capital efficiency, stimulate to apply new technologies, improve products.

- Create an environment where the government implement macroeconomic policy: the indicators of the stock market reflect the dynamics of the economy sensitively and accurately. The increasing of stock prices will show that investment is expanding, economy is growing, and the decrease of stock prices will show negative signs of the economy. So the stock market is called barometer of the economy and is an important tool to help the government implement macroeconomic policies. Through the stock market, the government can buy and sell government bonds in order to generate revenues to offset the budget deficit and inflation management. In addition, the government can also use a number of policies and measures impact on the stock market for investment-oriented to ensure the balanced development of the economy.

## **2.2 Stock price index and the impact of a number of macroeconomic factors on stock price index**

### ***2.2.1. Overview of the stock price index***

Stock price index is an index reflecting the average price of stocks in a given day than the original date. It reflects the growing trend of the market, the stock price, trading conditions on the stock market, thereby assess perceived by investors about the state of the economy.

A market index is built well will provide an objective indication of the cost of the overall study, in contrast, a poorly constructed index will only give what it does not have the representation of the overall. To construct an index of stock prices people have different methods of determining depending on the characteristics of market conditions and management's objectives.

### ***2.2.2 Overview of the VN-Index***

Under the provisions of the HCM City Stock Exchange, the VN-Index is calculated by comparing the current market value with the facility market value at the original date, the first day of the official stock market went into operation. The market value basis in the index formula is adjusted in cases such as new listing, de-listing and the circumstances have changed for listed equity.

The VN-Index is calculated by the formula Passcher:

$$VN - Index = \frac{\sum P_t \times Q_t}{P_0 \times Q_t}$$

Inside:  $P_t$  and  $P_0$  is the price at t time and the original time.

$Q_t$  is the mass (weight) at the time of calculation t.

### ***2.2.3 The theoretical basis and the previous studies***

The foundation of the valuation of the stock is based on the expected discounted cash flows. Therefore, the decisive factor is the stock price return ratio and expected cash flow (Elton & Gruber, 1991). Macroeconomic variables will affect the rate of profit and expected cash flow in the future of the business, which will affect the stock price.

Fama & Gibbon (1982) studied the relationship between inflation, the rate of profit and capital. These results support the studies of Mundell (1963) and Tobin (1965) suggests that expected returns and inflation rates negatively correlated.

Chen, Roll and Ross (1986) with the famous study about multi-factor model to assess the impact of macroeconomic variables on the US stock market. Macroeconomic variables that researchers consider including: index of industrial production, inflation, the risk premium, the term structure, market indices, actual spending and oil prices period from January 1953 to November 1984. The results show that there are a few variables proved to be significant in explaining expected yielding stocks, especially industrial output variables, fluctuations in the risk premium and the interest rate curve ; the remaining variables have a weaker effect. The authors also tested the effects of the changes in real per capita consumption and changes in oil prices in the valuation of stocks, but the results showed no overall impact yet.

### ***2.2.4 The impact of a number of macroeconomic factors on stock price index***

Previous studies have found interactions between macroeconomic variables to stock price index. There are studies showing the relationship between inflation, interest rates, exchange rates and stock prices, the research also shows that macroeconomic variables such as interest rates, the industrial index, money supply, ... also certain impact on the stock price.

#### ***a) Interest rates***

The interest rate is the cost of capital of the enterprise, as interest rates fall, the cost of business capital use also fell, and vice versa. When that business will increase investments at low costs, as corporate profits tend to go up, thereby increasing corporate value. When business works stability and good development trend, it will be well reviewed by the market , and the stock price will tend to rise, thus impact on the overall market.

When interest rates fall, the other investment channels become less attractive. The interest rate reduction will not encourage investors to deposit in a bank, or invest in these investments fixed nature, such as bonds defense.... Instead investors can deposit dynamic low-cost capital, and cash flow will flow into investment channels have high profitability ratios as securities, real estate..., it will promote the rise of the stock market.

#### *b) Inflation*

Inflation affects the stock market through the impact on production and business situation of enterprises. Inflation represents the increase in the cost of the elements in the economy. Raw materials, production input costs increase, making the production and business situation of enterprises become more difficult before the fluctuations of the economy. As production costs rise, corporate profits may likely decline due to rising product costs and consumers could rein in spending or find alternative products. Consequently, the share prices of listed companies was reduced due to fears about the growth prospects of the business in the future.

Besides, the inflation is very likely will lead to the implementation of government policies to cut spending, monetary tightening to curb inflation, stabilize the macro economy. This would make the market interest rates tend to rise, and enterprises are difficult to access low-cost capital for production and business activities of his.

#### *c) Money supply*

Increased money supply will stimulate economic growth and create jobs leading to increase people's income, thereby making the total demand rise. Increased aggregate demand will boost production development, thus creating a positive impact on the stock market.

However, money supply increases making inflation, affecting investor sentiment. Fearing inflation, the central bank will tighten the money supply affect capital inflows to the stock market, so investors increase to sell, reduce purchasing lead to falling stock prices.

#### *d) Exchange rate*

The impact of exchange rate on stock prices has been a lot of different research projects, however, there is still no consensus on the direction of the impact. Some studies believe that the exchange rate is related to the share price in the same way as research by Aggarwal (1981), Solnik (1987) and Smith (2002). Meanwhile a number of

other studies have demonstrated that the exchange rate is related inversely to the stock price as of Ajayi and Mougoue study (1996). In conclusion the relationship between exchange rates and stock prices is not really clear.

### 2.3 Research Methods

Through previous studies on the impact of macroeconomic factors on the price index of stock markets in those countries and the relevant research in Vietnam's stock market, which option the macroeconomic factors that impact on the price index stock market, modeling studies topics. Simultaneous application of quantitative research methods, statistics, using the data on the volatility of macroeconomic factors including consumer price index, industrial production indices, interest rates, the rate prices, price of gas, the price of gold in the period 2005 - 2014 to analyze the influence of macroeconomic factors on the price index – VN-index.

Research using VECM model to assess long-term relationship between these factors with the volatility of the VN-Index to develop appropriate models, catering to investment activities on the stock market.

## 3. Research and discussion

### 3.1 Stationary test

To stationary test and determine the degree of integration of the time serial data, the writer uses the Dickey Fuller expand (ADF) and Phillip-Person (PP).

Table 3.1: The result of stationary test time serial

Variables	ADFs test	PP test	Result
VNI	-2.67*	-2.41*	Stop at the once
D(VNI)	-7.63***	-7.66***	different degree
IIP	1.11	-1.23	Stop at the once
D(IIP)	-4.68***	-44.89***	different degree
SIR	-1.30	-1.28	Stop at the once
D(SIR)	-12.50***	-12.46***	different degree
EX	-0.27	-0,23	Stop at the once
D(EX)	-11.03***	-11.03***	different degree
M2	-1,41	-1.50	Stop at the once
D(M2)	-8.02***	-7.86***	different degree
ROLL	-1.63	-1.63	Stop at the once
D(ROLL)	-9.61***	-9.56***	different degree
GP	-1.83	-1,78	Stop at the once

D(GP)	-13,80***	-13.75***	different degree
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Notes:-D is the different level 1

- The symbol \* show the meaning statistical data at the 10% meaning
- The symbol \*\*\* show the meaning statistical data at the 1% meaning.

From the above table, we can see that both methods is almost identical to the results with high reliability. In eight studied variables, all of which are supposed to stop at the once different degree. This difference was initially shows the suitability for use VECM model for eight variables, reflecting the impact of economic factors macro to the price index, VN-index. This result is also consistent with the results of previous research in the country and abroad have found that macroeconomic variables in the original data does not stop at the first data that stop at the once different degree.

### 3.2 The result Johansen Cointegration test

After checking the stationary of the research data serial the results showed that the time serial does not stop at the level but stop at the once different level. This makes us doubt about the possibility of cointegration between the research variables in the model. To get a reliable conclusions study conducted testing of the eight cointegration variables in the model of the Johansen method Var to answer the question: of whether there exists a relationship in the long-term balance between variables or not. However, this is a very sensitive method selected should delay before testing, we need to determine the optimal latency model.

The determination of the optimal latency based on five criteria commonly used: LR, PFE, AIC, SC, HQ. Accordingly, we will choose what is more latency criteria identified as the most optimal latency for an examination on the link for the variable pair. The results showed that, the criteria LR, FPE, AIC and HQ are recommended for optimal latency model is 12; SC only criteria that optimal latency is 1. Therefore, the author uses the optimal latency is 12 to perform an examination on the link for eight variables studied Johansen.

When performing the verification link Johansen contract for eight variables in the model with the support of software Eview 8 with a lag of 12 we get the message: "Near singular matrix", ie the columns of the matrix independent variables associated with each linear (matrix degradation). Therefore, we have doubts about the possibility of the phenomenon of multicollinearity between the independent variables in the model, which makes the calculation failed. To test this possibility, we consider the correlation matrix between the independent variables in the model. The results showed a



correlation between macroeconomic variables together. In it, the pair turned correlation coefficient was highest CPI and M2 (98.54%). To reduce the level of multicollinearity between the independent variables we can remove independent variables from the model, especially the two CPI and M2.

After making the removal of each of the seven variables independent variables and test the model, the best results when removing the variable M2. Meanwhile, the calculations are done, and models with the highest level of explanation of the model. Besides, the post-regression testing also obtained good results, the pattern is consistent. Also, in some previous studies on Vietnam market also shows the relationship between M2 with VNI is not significant in terms of statistics, such as: research & Son Nest (2013), Nguyen Huu Tuan (2012). Moreover, in the Vietnam economy, the cash transactions are common and largely accounted for so the impact of stock market money supply M2 is unclear. For reasons that should be in the next, researchers will carry out the construction of the model with six independent variables: CPI, IIP, SIR, EX, ROIL and GP after removing the variable M2.

### 3.3 The result Vector Error Correction Model (VECM)

$$VNI = -206,23 - 7,24 \text{ CPI} + 1,87 \text{ IIP} - 0,95 \text{ SIR} - 28,39 \text{ EX} + 7,75 \text{ ROIL} - 5,48 \text{ GP} + \epsilon_t$$

$$[6,73] \quad [-0,78] \quad [2,88] \quad [12,70] \quad [-5,70] \quad [-9,16]$$

Table 3.2 Summary VECM model results

Variables	Value
Adjusted Coefficient	-0,580034 (0,17891) [-3,24202]
R <sup>2</sup> coefficient	0,930290 F-Statistic: 2,87
Adjusted R <sup>2</sup> coefficient	0,601103

Notes: [ ] : the value of statistics ( ) : error

Through these results we see, the coefficients of this model are similar to the expectations of the set of macroeconomic variables as the impact on the VN-Index index. These coefficients are statistically significant at 1%; except coefficients express the same direction correlation between the index of industrial production (IIP) and the VN-Index index is not reliable enough statistically significant at 1%. Besides, the coefficient of determination R<sup>2</sup> is 93.03% of the model and calibration coefficient R<sup>2</sup> is 60.11%. This means that the model is 60.11% explained the change of the VN-Index



index by only six macroeconomic variables selected. In addition, the adjusted CoIntEq1coefficient of model have absolute value less than 1, is negative and statistically significant at 1%.

### 3.4 The test results fit of the model

Firstly, to ensure macroeconomic variables in the model actually correlated with the VN-Index index, we conducted test cause and effect as proposed by Granger with the latency of the pattern is 12. Results see, all the macroeconomic variables exist causal relationship with variable index at 1% level of significance; This is the direct impact from the macro factors to delay the VNI at 12 except the relationship between variables are bidirectional GP with VNI. In addition, macro variables can also interact with each other. Mainly the direct impact of other variables on the variable GP: IIP and ROIL variable Granger cause of the GP with 1% significance level, SIR variables also impact one way to the gold price index GP at the ie 5%.

Next, in order to better ensure the appropriateness of the model we conduct unit root tests of the residue obtained from the model. Results showed that all the remainder of the seven string variables in the model were stopped at the 1% level. Besides, with a lag of 12 we tested the stability of the model by considering the characteristic polynomial test is within the unit circle. The results showed that the optimal model to achieve stability and when all treatments are smaller than 1 and is entered in the unit circle

Finally, the results of testing of residual autocorrelation in the model as well for optimal results with a lag of 12 when there occurs any autocorrelation of residuals because of all the delays are the statistical p-value greater than 5%. So from all of the above results we can draw conclusions just regression model is a suitable model to explain the impact of macroeconomic variables including CPI, IIP, SIR, EX, ROIL and GP to VNI.

### 3.5 Analyzing the results of the research model

$$\text{VNI} = -206,23 - 7,24 \text{ CPI} + 1,87 \text{ IIP} - 0,95 \text{ SIR} - 28,39 \text{ EX} + 7,75 \text{ ROIL} - 5,48 \text{ GP} + \epsilon t$$

Consumer price index (CPI) rose by 1% makes VNI fell 7.24%. This result is justified in Vietnam, because in times of inflation, the expectations of economic growth in the future will deteriorate, inflation reduces the real amount of money circulating in the economy caused demand for goods general and in particular the demand for securities dropped, leading to the decline of the VNI.

This reverse correlation completely consistent with economic theory and parallels with the findings of Fama (1981), Khil & Lee (2000) in the United States and ten countries of Asia Pacific in stages 1990-1997, Francis and Tewari (2011) research on the market in the period 1998-2007 or Ghana study by Yen & Son (2013).

The index of industrial production (IIP) increased by 1% leads to the VNI increased 1.87%. When industrial production index increased to create an expectation of economic growth in the future in the psychology of investors, so they will increase investment in securities and the stock price index pulled VNI also increased. However, this correlation has no statistical significance at 5% should not accurately reflect the real impact of factors of industrial production index to index. One of the reasons may be mentioned that due to the industrial production value of Vietnam accounted for less than 50% of total domestic product (GDP) this indicator is not high representative for GDP. Besides, the share of industrial production in the total gross domestic product each year has changed and likely increases from 2005 to present. Therefore, the use of the index instead of GDP exist many shortcomings.

This result coincides with several previous studies, the index of industrial production had a positive impact on the VN-Index as: Fama (1981, 1990); Schwert (1990); Chen, Roll & Ross (1986); Levine & Zervos (1996); Khan & Senhadji (2000); Adjasi & Biekpe (2006); Bilson & et al (2001), Humpe & Macmillan (2009), Nguyet & Thao (2013).

Interest rates (SIRs) increased by 1% as effective in reducing the VNI 0.95%. In Vietnam's economy, rising interest rates are also a recognizable signal of macroeconomic instability. Then the opportunity cost will rise, investors will demand a higher rate of return when investing in stock, if not their cash flow will turn bank deposits to ensure safety, this mentality makes it VNI declined. However, this effect is not strong when 1% increase in interest rates of 0.95% only reduce the VNI, this impact is the weakest compared to the effects of other variables in latency VNI 12 months.

The opposite effect is entirely consistent with economic theory and empirical research results as Menike ago (2006) in Sri Lankan market, Sohail & Hussain (2011) in the Pakistani market, Mashayekh et al (2011) on the Iranian stock market, Moon & Thao (2013) and Yen & Son (2013) on the Vietnam market.

VND / USD (EX) rose 1% as the VNI dropped 28.39%, when the VND / USD rose (Vietnam dong against the dollar prices) will result in a negative impact on businesses using imported raw materials abroad. Vietnam is a net importer, so the rate

increase as causing a strong reaction to the economy. These commodities and raw materials are imported from abroad rose makes input costs of enterprises increased, profits decreased and therefore the price of the stock on the market also fell. Furthermore, the USD is a base currency used for pricing products or other currencies, it is also a way of keeping people money because they believe this is a strong currency. Because of that reason, fluctuations in exchange rates always leads to these reactions are very sensitive in Vietnam's economy. And this result was also found in the study by Bilson, Braisford & Hooper (2001) in the emerging markets.

Retail oil prices (ROIL) rose 1% as the VNI rose 7.75%: in theory, the correlation between oil prices with the VN-Index may be positive or negative. That is a positive correlation if the country is oil-exporting countries, whereas in an oil importing country, the correlation is negative. Vietnam is not an oil-exporting country, but showing a positive correlation between oil prices with the VN-Index. This can be explained by the oil price in the Vietnam market has suffered further intervention from the state, so the signals coming from this factor has been distorted.

This result contrasts with the results of Chen, Roll and Ross (1986) in the US market but is similar to the result of Gan, Lee, Yong and Zhang (2006) in New Zealand.

Gold price index (GP) rose 1% impact as VNI fell 5.48%. In recent years, gold has become a more attractive investment channel the interest of investors, especially for the people of all strata of society have idle capital. In the period 2011- 2013, gold continued to set new records in prices has created many business opportunities for investors. The rise in gold prices has sucked the money invested in it strongly, thus reducing the amount of investment in securities, the stock price dropped to drag. This relationship is the same as the results of research by Pooja Singh (2014), Bhunia & Mukhuti (2013), Yahyazadehfar & Babaie (2012) and Bhunia (2013) in the Indian stock market.

VECM model model obtained bias adjustment coefficient is -0.58. The value received is negative, less than 1 and statistically significant at the 1%. Negative values of coefficients ensure a positive relation link found in the previous section and the short-term imbalances in the previous period will be adjusted in the current period. The adjustment coefficient model received from less than 1 and the absolute value is 0.58; this means that if there is an imbalance in this period, then in the next period the average 58% imbalance that will be adjusted.

#### **4. Conclusions and Recommendations**

## **4.1 Conclusions**

### ***4.1.1 The impact of the consumer price index to the VN-Index***

According to the analysis in the period 2005-2014, if the CPI rose but remained under control, it will impact positively on the stock market makes the VNI increased (2005, 2006, 2007, 2010, 2013, 09 / 2014). Conversely, if the CPI rose Chiso of control, this negative impact on the stock market dropped as VNI (2008, 2009, 2011, 2012)

### ***4.1.2 Influence of the industrial production index to the VN-Index***

Through the analysis of the research phase, we see the impact of IIP for the period 2005-2014 to VNI is right with the theoretical model and the results obtained with the exception of 2008, 2009, 2011 and 2012. However, , this relationship at the time of 2006 and 2007 show a lot of uncertainty when the IIP index increased slightly, but the stock market reacted too strongly. This result may explain why the regression coefficients of the variables in the model IIP unreliable.

### ***4.1.3 The impact of interest rates on the VN-Index***

Through the evolution of interest rates and the VNI could see that the relationship between these two variables in the period 2005-2014 is the opposite. This relationship is shown in specific periods of the year the stock market proved quite sensitive to interest rates. When interest rates are low or high but the bearish stock market rally, and vice versa when the high interest rates the stock market decline.

### ***4.1.4 The effect of exchange rate VND / USD to VN-Index***

In the period 2005-2014 to the impact of exchange rate VNI is negative if the volatility of the exchange rate is strong and sudden (2008, 2009, 2011, 2012). Conversely, if the rate increased only slightly and can predict the VNI nearly unaffected (2005, 2006, 2007, 2010) or even it can be a positive impact on the VNI (2013 , 2014).

### ***4.1.5 The impact of the retail price of gasoline to the VN-Index***

Through the analysis of the research phase, we can draw a few comments on the impact of gas prices to the VNI period 2005- 2014 as follows: when gas prices rose sharply and abruptly will cause many negative effects beneficial to the stock market as the VNI. Conversely, if the price of gasoline increased only slightly and was anticipated oriented Government, the VNI increased (2005, 2006, 2007, 2009, 2010, 2013 and 2014). This result is consistent with the model, however, domestic gas prices do not really reflect the rule of supply and demand so much state intervention, thus the price of

gasoline has not been considered a credible signal reliable to predict the evolution of Vietnam's stock market

#### ***4.1.6 The effect of gold price index to the VN-Index***

Through the analysis of the period 2005-2014 on the effects of the stock market price of gold was found that when gold prices rise (or fall) are stable for a long time, it will impact negatively on Stock market decrease (or increase) the VNI. In contrast, before the sudden changes and reversals continuous increase or decrease in the price of gold would cause negative sentiment for investors, they do not dare to invest in gold and hence the VNI rose.

#### **4.2 Some recommendations**

Research has proven and analyze the impact of macroeconomic variables including real economic activity (represented by industrial output variables), M2, and oil prices will have an impact in the long term VN-index to the stock market in Vietnam. With such results, the authors have some specific recommendations are as follows:

- For investment activities of investors:

From the consideration of these issues often exist for the majority of individual investors in the market, limited in the method of calculating the VN - Index, and the results from the study along with the consideration of the study previously, the authors suggest some directions, to assist investors to invest in securities: Due to limitations of the VN - index, investors should consider adding more stock price index other securities: investors can consider the stock price index such as the VN30, HOSE Mid / Small Cap index, which may look and a more accurate assessment of the volatility of the market and make decisions more rational investment decisions.

Investors should have a reasonable investment strategy, investors focus on the medium and long term: investments in these types of stocks, long time, yielding requires, as well as risk tolerance levels must be clearly defined. How much profit is acceptable or reduce how much to cut losses, depending on the level of risk. An investor should consider the factors that may affect the share price, the market, as identified in the study of industrial output variables (or variables of GDP), money supply, oil prices or other factors such as inflation, interest rates ... (according to previous studies) will have an impact on Vietnam stock market in the long term, and track the changes of these factors in order to make rational decisions. In addition,

investors should focus on medium and long-term investment rather than surfing for profit in a short time.

**Diversifying the portfolio:** Investors should diversify portfolio their investments are reasonable, considering the correlation between stocks to choose suitable investment portfolio to minimize risk due to fluctuations in the price of individual stocks.

Should consider the elements of the business that investors intend to invest, avoid the herd mentality: before investing in a particular business, investors should consider these factors intrinsic itself of the business, production and business activities, growth prospects, driven business investment, enthusiastic leadership, information, report clear and transparent .... Besides, the investor should also consider macro factors will impact on the production and business of enterprises, such as increasing money supply, increasing oil prices lead to increased cost of inputs in some manufacturing sector. Should not invest when there is no clear analysis and not chasing rumors without consideration, to avoid being influenced by crowd psychology, please autonomy in their investment decisions on the basis of the thorough analysis with advice from consulting firms or professional stockbrokers.

Tracking information volatility of macroeconomic policies of government for the economy and the information on the situation of the enterprise: to react promptly to changes in stock prices may have. Long-term impact of macro factors have been identified as research, so investors need to monitor these fluctuations, which decided not to join, buy, hold, or sell a portion, sold out, or the island of his portfolio or have contingency plans in a reasonable manner, reducing the portfolio when the economy show signs of turn for the worse, when GDP fell, oil prices rose, .... Although macroeconomic policies may need a certain lag when the effects on the economy, but to act as a thermometer, the stock market is quite sensitive, and often react before impact policies actually absorbed into the economy.

- For policy management, market management

Based on the above analysis results and lessons drawn from the theory and research in the world, the author proposed some ideas for the development and improvement of regulatory policy and management macroeconomic:

+ In terms of share price indices on the stock market: The operator policy and market management should consider modifying and creating the index is more suitable for the market, should remove the effects of of shares in circulation is restricted, limiting the proportion of stocks with large proportion of index calculation VN - index,



simultaneously building the market index, the sector indicators to assess accurate and comprehensive than the share price movements in the market, according to industry wide event serving the Vietnam stock market.

+ On operating macroeconomic policies: macroeconomic policy should aim to create stability and sustainability for the stock market. The stock market is a thermometer of the economy, ie it reflects what is expected to happen in the economy. The analytical results of the study showed that the macroeconomic factors including money supply, industrial production, oil prices, or some other macro factors such as inflation, interest rates, exchange rates ... a some earlier research, really have an impact on the stock market. Therefore, the issuance and management of macroeconomic policy of the Government is not only geared towards general operating economy but also need to pay attention to the sustainable development of the stock market. Besides, the stock market reacted very strongly before the information. In fact, there are groups of information coincides with latency identifiable information, but also information, predictability. This information will be the investors received, analyzed and evaluated for inclusion in the stock price forecast construction market and investment strategy. Therefore, policy executives should ingenious in making the macro data ti the right time, on target to influence the market in accordance with the policy. In addition, the disclosure should be done professionally and is controlled by a legal framework to prevent insider trading, interest groups distort and market disruption

+ Executive monetary policy in relation to the stock market: Monetary policy is the process of managing the money supply by the State Bank rate towards a desire to achieve the purpose of stability and growth economy. Monetary policy in Vietnam must choose to target specific user, matching specific development stages, to avoid causing shocks to investor sentiment, causing negative effects for growth growth of the stock market. The decline of the stock market - in turn - will back down to affect capital flows into the economy, contribute to difficulties in promoting the effects of policy.

+ About the operation of the securities business organizations and listed companies: restructuring of securities companies, to further improve the capacity of the company, ensuring the financial indicators, the management activities risks in order to limit the risks for securities firms and investors in such securities company. Enhance openness, transparency of information for securities firms and institutions listed, avoid distorting the market. Capacity of production and business of enterprises, determine the right business strategy, consistent, avoid spreading investment, aims to develop a stable, sustainable and contribute to the development of stock market.



+ In terms of management, market supervision: Improving management role, supervising and enforceability of legal systems relating to securities investment activities, improve the quality of infrastructure systems, shorten the time of payment in line with international practice, controlled listing standards to increase safety for investors, protect investors, especially small investors. Develop plans to diversify the product on the stock market in order to serve the investment activity in the market.

+ Build an efficient stock market information: In addition to attention to the factors and macro-economic policies aimed at developing the commodity market, the stock market itself towards Vietnam also needs effectiveness in terms of information. There is such a new stock price and timely reflect upon the changing news about macroeconomic policy. This multi-dimensional expression of the relationship: the macroeconomic policy of the Government of interest to developed stock markets, the stock market in the form of efficiency to be able to reflect those expectations from bring policies, while policy outcomes expressed properly through the stock market, the internal resources to increase economies facilitate policy as shown better operating results.

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