THEORY OF "REFEXIVITY" AND IMPLICATIONS FOR VIETNAMESE FINANCE MARKET

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After the 2008 financial crisis, the theory of reflexivity introduced by George Soros in 1987 was generally accepted to explain causes of the crisis. He applied this theory when speculating on the Thai baht causing the 1997 financial crisis. That is why it's necessary to look back on the Vietnamese stock market with a view to avoiding a future crisis.

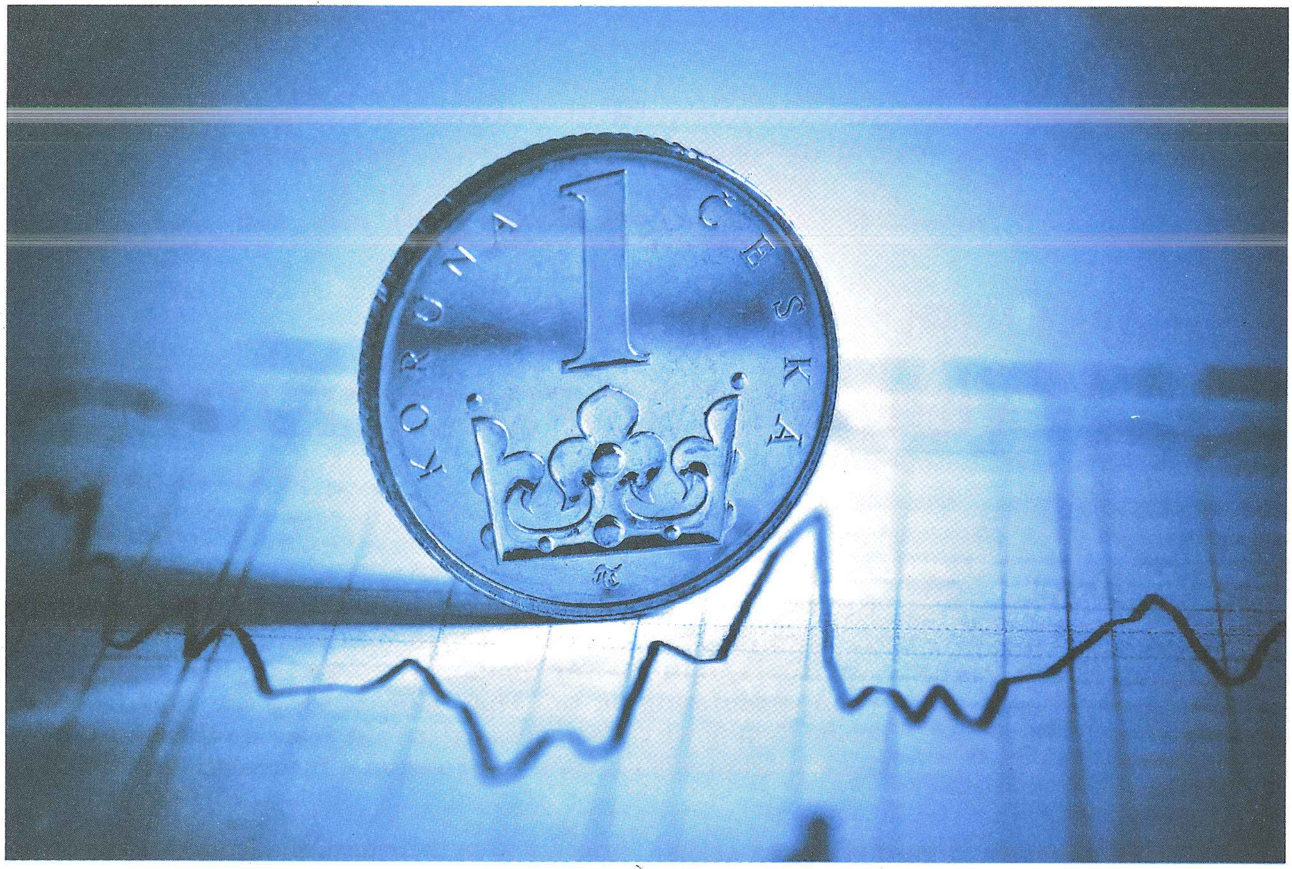
1. Reflexivity: Changes in market prices cause changes in market prices!

Present financial theories still maintain that the market tend to move towards a state of equilibrium. All fluctuations in market prices will be brought back to the equilibrium by the market itself. When an investor achieves a high profitability ratio by discovering a share that is sold at a price lower than the market one, others will rush to buy that share. Arbitrage takes place, investment opportunities will disappear and the price returns to its previous equilibrium. This argument is based on an assumption that all participants in the market secure perfect information and act rationally based on such information. In other words, investors always have rational expectations.

The theory of equilibrium market price (determined by fundamentals) causes us to think that fundamentals are unchangeable and market prices can't affect fundamentals, and moreover, prices tend to change to reflect the underlying fundamentals. George Soros, however, takes a different view. He argues that economists omit one feature of the finance market called reflexivity.

On the finance market, decisions to buy or sell by investors are based on expectations of future prices, and in their turn, the future prices are dependent on present decisions on trade. Soros maintains that problems make their appearance when investors have no perfect information as assumed by economists. Asymmetric or imperfect information causes investors to have excessive expectations and apply their wrong thoughts (that they consider as right) to prices of shares, which makes the prices change irrationally. Furthermore, bias in share prices may affect the fundamentals, and these changed fundamentals cause the market prices to keep changing. Soros calls it a reflexive process. His argument is that "the prevailing bias affects market prices, the prevailing bias can in certain circumstances also affect the so-called fundamentals and changes in market prices cause changes in market prices."

The theory of reflexivity came as a shock to modern economists because it destroys values of theories they have built for years. Their theories assume that there are enough sellers and buyers to prevent anybody from affecting the market prices. Supply and demand come first and they are causes that shape the market prices. When the price moves away from the equilibrium, market participants will sell or buy to bring it back to the state of equilibrium. This assumption hides a fact that the market prices can affect both supply and



demand curves. The idea that facts on the market may affect shapes of the demand and supply curves is dismissed by classical economists as irrational. Demand and supply curves are considered as determinants of market prices. If they are affected by the market prices, the price can't vary around an only fixed level. then we will have and changeable frame of prices instead of an equilibrium. It is a destroyed reality. economists try to protect their theories by assuming that supply and demand are preset.

Ideas of liberation arise from this premise. It's generally accepted that the market itself can repair mistakes and be an effective way to allocate social resources. All participants in the market for profit motive can bring about benefits for society *because of effects caused by the "invisible hand."* Some economist don't totally agree with this opinion and in fact, the market sometimes fails. The idea of liberation was promoted during the Reagan presidency. Collapse of the Socialist bloc and its centrally-planned model made people feel surer about efficiency of the market mechanism and government interventions are usually disregarded.

In the past three decades, the liberation spread over the finance market. In the U.S., regulations on risk management have been loosened to promote financial liberation. The Glass-Steagall Acts were repealed in 1999 by the Gramm-Leach-Bliley Act and commercial banks were allowed to take part in riskier businesses such as securities services and trade in instruments such as mortgage-backed securities and collateralized debt obligations. On an international aspect, regulatory barriers were lifted in order to promote flows of money between countries. Countries today become closely linked by the financial liberation. American spending has become sources of Chinese economic growth in recent decades and China become American biggest creditor when it invested in American T-bills. The wider the finance market the more American financial commodities are in hands of European and Asian financial institutions. The liberation at high level makes links between countries stronger and any trouble with any section of the links can affect any country or economy. Bubbles in the realty market produce bubbles of gold price (over US$1,000 per oz) and oil price (over US$143 a barrel), which is called a super bubble by some economists. Participants in the market, hoever, didn't realize this fact. Before the realty crisis started spreading, many analysts, including Alan Greenspan still believed that it was only a particular crisis in the realty market. This shows that not only participants in the market but also high-ranking officials have no perfect information as assumed by theories.

While derivatives and securitized commodities create a connection between the realty market and stock and credit markets, accounting criteria fail to develop to a higher level to control them with the result that financial statements stop reflecting the realities. Investors couldn't know whether the companies they put money in engaged in sub-standard lending because such items were not included in the balance sheet. Investments in such derivatives as CDO and MBS were included in SIVs and considered as accounts outside the balance sheet. Opacity and certain fraud on markets for CDS and ABS lead to the supply of unclear information to participants.

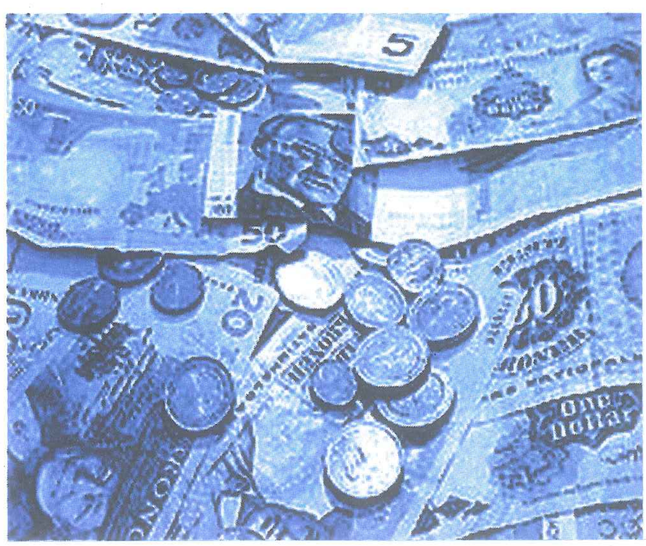
Imperfect information is a precondition for growth of the reflexivity. When the realty market fell into the crisis, values of realty-related securities decreased drastically. Collapse of such financial institutions as Bear Stearns and Lehman Brothers helped investors realize true information. The stock exchange broke down when all investors sold out their shares. Market trends caused the share prices to change. Effects of these trends, however, were not limited to the finance market but they were felt in real economies where fundamentals existed. Banks, after receiving trillions of dollars from the FED, dared not promote their credit supply because they had to hold cash in preparation for the crisis. Contracted credit supply led to reduction in production and increases in the unemployment rate and many economies fell into recession. Apparently, the market prices had changed economic fundamentals. Stock exchanges kept falling to reflect this change. The market didn't return to the equilibrium as assumed by theories.

2. Vietnamese stock market and Soros' Boom-Bust model

From the theory of reflexivity, Soros worked out the Boom- Bust model to describe how effects of the reflexive process might cause the crisis. A typical boom-bust cycle has eight stages. It starts with a prevailing bias and a prevailing trend, kicking off a reflexive process. In the stage (1), the trend is not yet recognized. It accumulates in the stage (2) when the trend is recognized and reinforced by the prevailing bias. The process makes the share prices approach far-from-equilibrium territory. In the stage (3) a period of testing intervenes when prices suffer a setback. If the bias and trend survive the testing, both emerge stronger and the far-from-equilibrium condition is firmly established. In the stage (4) common principles don't work. Moment of truth comes in the stage (5), when reality can no longer sustain the exaggerated expectations. The stage (6) is a twilight period when people continue to play the game although they no longer believe in it. In the stage (7) the trend turns down and the bias is reversed; and prices keep falling, and may come back to the equilibrium. In the stage (8), catastrophic downward acceleration, commonly known as a crash, breaks out. The Boom- Bust Model presented by Soros is a symmetrical one.

Studying this model, I'm surprised at how exactly it reflects what have taken place on the Vietnamese stock market. Changes in the VN-Index in the past three years formed a symmetrical model in size and time. The VN-Index started at 300-point mark in early 2006 and came back to this level in late 2008. The peak of 1,170 point in early June 2007 formed a symmetrical axis as shown in Figure 1.

The theory reflexivity may apply to Vietnam because local investors had no perfect information. In late 2006 and early 2007, the stock market developed quickly because of excessive expectations. Such facts as Vietnam's accession to the WTO, and



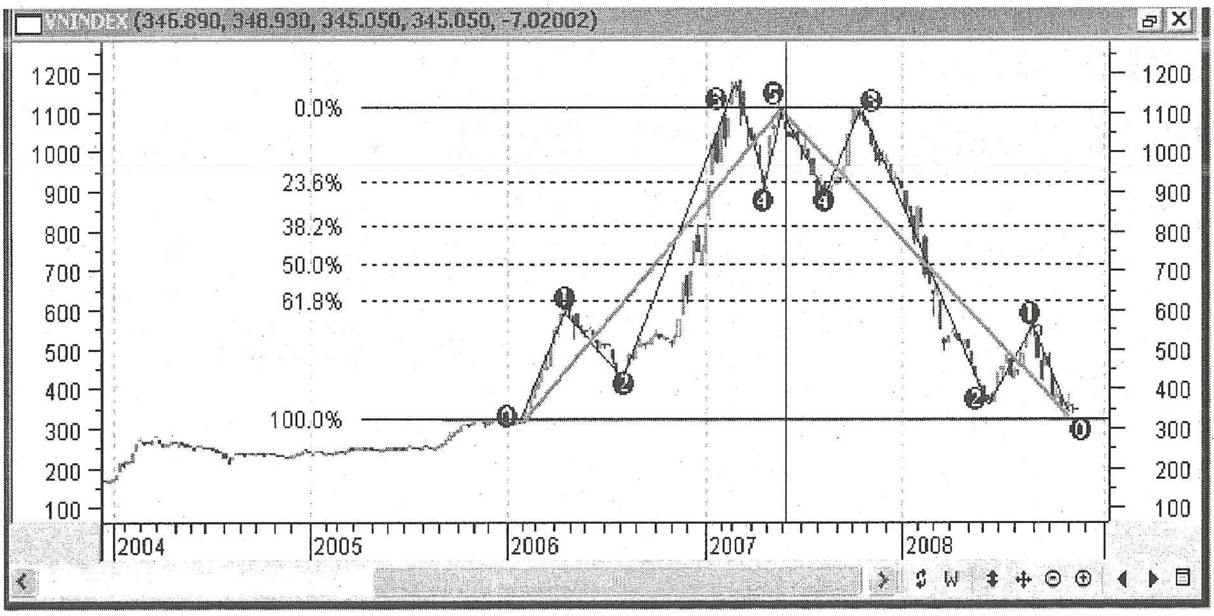


Figure 1: VN-Index: an example of the Boom-Bust model

praises from foreign organization for Vietnamese economy as a rising star with high growth rates filled investors with so high hopes that they failed to note information about deficit in the balance of payments on current account, export of unprocessed goods from Vietnam and ineffective public investment. Either such information could not surface because it had been hidden (like information about reserve in foreign exchange) or it was disregarded by investors. The stock market started shaking in 2007 when some pieces of information of such kind was revealed. IPO was carried out with very high offered prices but the Dutch auction didn't allow investors to adjust to such price levels. Bubbles appeared on the stock market and led to similar ones on the realty market when Directive 03 came into effect. Apparently, decisions by investors in the stock market were not reasonable enough and based on common trend instead of their knowledge.

Bubbles burst in early 2008 when Vietnam fell into a cul-de-sac called an unfeasible trio. Spending VND112,000 billion on US$7 billion by the SBV in July 2007 that aimed at maintaining a fixed exchange rate led to high inflationary pressure in the first half of 2008. Information about inefficiency of public investment and financial investment by state-owned corporations, and about budget deficit (over 6.5% according to the IMF) made its appearance. Investors started realizing instability of the economy and selling out their shares. This trend spread over the whole economy and changed the fundamentals. Commercial banks suffered shortage of domestic currency after a year of high growth rate of the credit supply (53%). They engaged in the interest-rate race when the ceiling of 12% for the interest rate was lifted. Many investment projects were revoked, many others didn't reimbursed in time, and eight groups of measures were introduced in an effort to curb the inflation. The base rate raised and companies found it difficult to get access to sources of loans. Consequences of this process led to deflation and recession in the last quarter of the year. Macroeconomic elements changed and the stock exchange will also change to reflect such changes.

3. Conclusion

The theory of reflexivity and Boom-Bust model by Soros show how bias judgments by participants in the market cause economic recession. To Vietnam, what should be done now is to improve the supply of information to the market. This is not simply the supply of raw information. The information must be accurate and come from authorities and companies. In addition, accounting standards must be reformed■

Reference

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