THE LITHUANIAN EQUITY MARKET IN 1993–2008: REASONS FOR ITS DECLINE

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Abstract. *This paper is an attempt to investigate the causes of the recurrent decline in the equity market in the period of the last fifteen years in Lithuania. Empirical methods are used to establish a correlation between such factors as inflation, interest rates, etc. and the equity market decline as well as to determine the most decisive factor that may produce the said result. Major findings of this article are as follows: (1) the Lithuanian equity market decline coincides with the increase in the interest rates and the current account deficit; (2) they can be triggered by financial crises in other countries which maintain close trade relations with Lithuania; (3) movements of the Lithuanian equity market can depend on psychological factors.*

Key words: behavioral finance, bubble, capital flows, currency, current account deficit, equity markets, financial crisis, inflation, interest rates.

Introduction

Over the last two decades the decline of the equity markets had a tendency to reccur increasingly frequently. The modern era of big crashes started with the Mexican default in 1982. Immediately thereafter, some developing countries faced a withdrawal of funds, which led to numerous crises (Wyplosz, 1998). The next wave of the decline started with difficulties in Wall Street in 1987. Problems in Wall Street affected the European markets, but the crisis was promptly dealt with through a large scale injection of cash by the Federal Reserve and other central banks (King and Wadhwani, 1990). A few years later, in 1992–93, Europe faced a new cash default, although it happened outside the European Monetary System area (in Sweden and Finland). Next, in 1994–95 the Mexican crisis was followed by all Latin America by the tequila effect. Financial markets in Mexico suffered two years of high recession. Finally, the 20th century ended with a crisis in East Asia, also affecting the Czech Republic, Brazil, Poland, Russia (Wyplosz, 1998) and Lithuania.

Empirical work on the reasons and characteristics of bear markets has quickly developed over the last few years. A number of conclusions emerge from the studies of Guillermo A.Calvo (1995), Stanley Fisher

and Robert C. Merton (1985), Jean Tirole (2002), Eduardo Fernandez-Arias (1999), Charles Wyplosz (1998) and others. The case of Lithuania is usually analyzed by various financial institutions (The Bank of Lithuania, SEB, DnB Nord, Finasta, etc.).

Some economists conclude that a fall of equity markets is usually triggered by the capital outflows (Tirole, 2002). These capital outflows result from the weakness of the currency. The problem becomes especially pressing in the emerging markets when the equity market liberalization is in progress (Calvo,1996; Mishkin,1996; Nanto, 1998; Wyplosz, 1998; Fernandez-Arias and Hausmann, 2000; Rajan, 2005; Cappielo, 2006). Others suppose that countries with underdeveloped domestic equity markets experience costlier and more frequent crises (Nanto, 1998; Caballero, 2000; Bonfiglioli, 2005). S.Gilchrist, for example proceeding from the recent developments in the behavioral asset pricing, developed a model, in which an increase in the dispersion of investor beliefs under short-selling constrains predicts a "bubble", or a rise in a stock's price above its fundamental value (Gilchrist, Himmelberg, Huberman, 2004). The burst of the "bubble" is one of the reasons for the decline of equity markets.. There is an opinion that international illiquidity of the domestic stock market is at the center of the problem (Chang, Velasco, 1998; Wyplosz, 1998). Moreover, crises can be triggered by other countries (Nanto, 1998). A decline is typically preceded by a fast growth in the domestic credit and current account deficits. Crises are usually followed by inflation and high interest rates (Wyplosz, 1998; El-Mefleh, 2002).

The purpose of this paper is to identify the main reasons for the Lithuanian equity market decline and to investigate, which factor produces the most damaging effect.

Methodology. In this research, empirical methods will be used. Firstly, data related to the Lithuanian equity market development will be collected to analyze the capital flows. Secondly, such macro-economical indicators, as the current account deficit, inflation, interest rates and exchange rates will be tested. Finally, attention will be focused on the correlation between the Lithuanian equity market decline and financial crises in other countries (Russia in 1998 and the USA in 2000; the case of 2007 will be investigated too).

The Lithuanian Equity Market and Capital Flows

During the first stage of the privatization (1991–1995) in Lithuania, the National Stock Exchange, the Lithuanian Securities Commission, the Central Securities Depository of Lithuania were established to regulate and do business with numerous financial intermediaries who have been just founded. This process of liberalization, which started in 1993 continues to this day. In this period there were two serious falls of the market, namely, in March 1997, January 2003 and in November 2007, which is still in progress (see Fig.1, 2).

The first variable, which should be examined, is capital flows. If capital flows are decreasing during the fall of the capital market, theories inspired by Tirole J., Chang R., Velasco A. can be approved. In the case of Lithuania, it is difficult to evaluate capital flows, especially those of local investors, because the account is the same

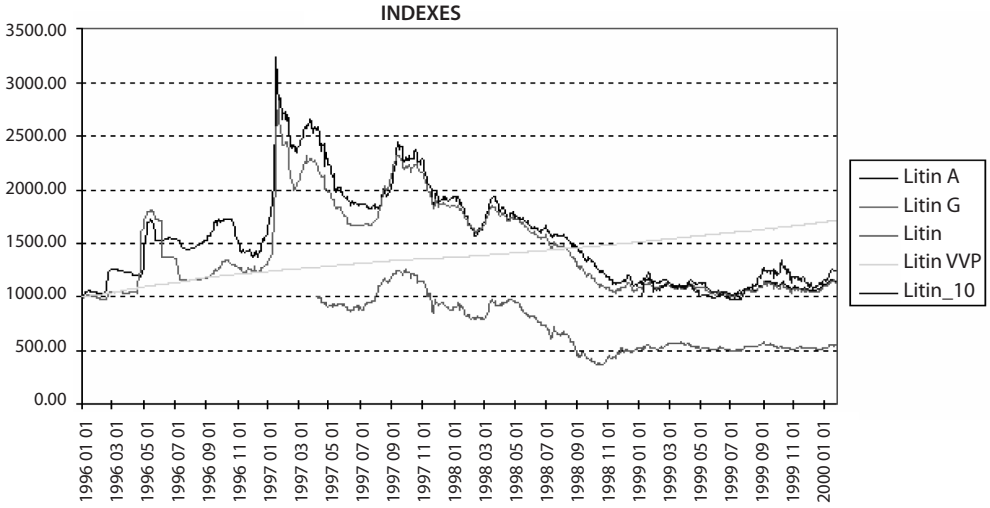

Fig. 1: ***Lithuanian stock market indexes from 1996 to 2000.***
Source: Spekonis & Gastonas, *www.sg.lt*

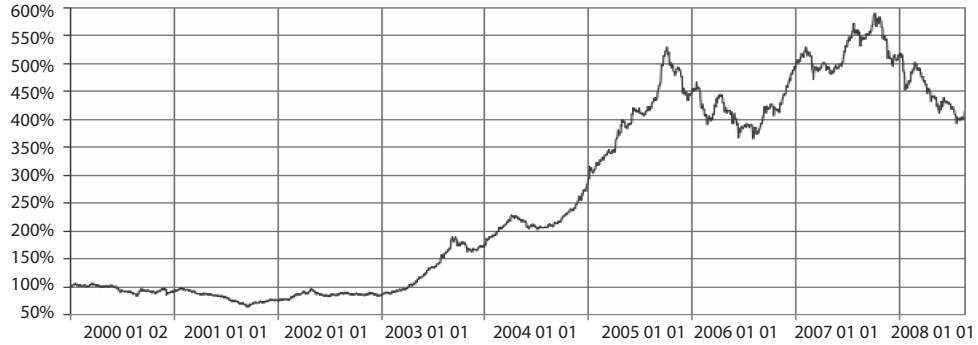

Fig. 2: ***Lithuanian stock market index OMX Vilnius from 2000 to 2008.***
Source: OMX Nordic Exchange, *www.baltic.omxnordicexchange.com*

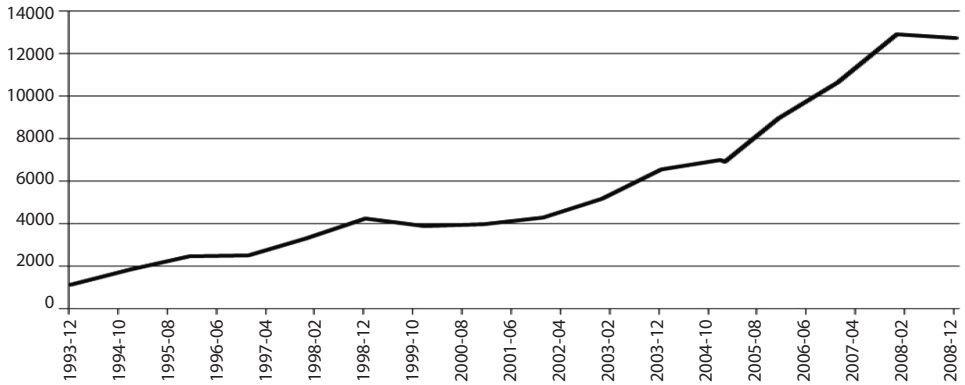

Fig. 3: ***The Lithuanian money base, LTL m***
Source: The Bank of Lithuania, *www.lbank.lt*

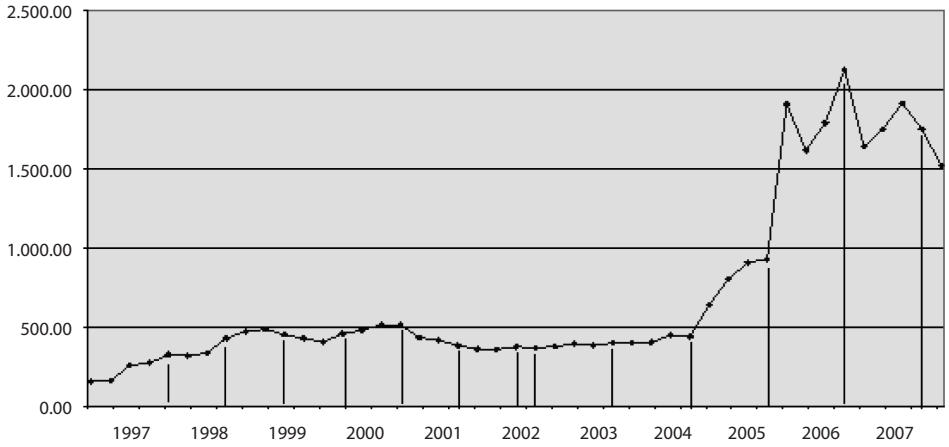

Fig. 4: ***International investments in Lithuania: investment portfolio of equities, LTL m***
Source: The Bank of Lithuania

and it is only products that are different. In this case, the money base is chosen, and this base is always increasing irrespective of the decline in the stock market (see Fig. 3). Therefore, there is no relationship between the financial market decline and the amount of money in the market.

Portfolio investment into equity securities was rapidly decreasing in 2006 and at the end of 2007 (Fig. 4). It should be noted that in the first Lithuanian equity market decline (1997–2003) the invested amounts (or capital flows) were not decreasing, on the contrary, they were increasing. The capital outflow starts only with the second wave of the decline (2007 – currently). It is possible that in both cases the decline was triggered by local investors.

Current account deficit, inflation, interest rates, exchange rates

Further, additional macro-economical indicators will be researched starting with the current account deficit, inflation, interest rates and ending with the exchange rates. The current account deficit started to increase in 1994, i.e. before the market decline in 1997, and reversed this trend in 1999, before the market rise (Fig. 5). Therefore, movements of the current account deficit can be a good indicator of the changes in the market. The current account deficit and the equity market go in the same direction, but the current account deficit is usually ahead. This can be demonstrated by the example of the changes, which started in 2003, when the current account deficit increased from LTL 2.6 bn to 13.8 bn in 2007. Growth in the current account deficit began 4 years before the beginning of the second wave of the Lithuanian equity market decline and still continues. Currently, there is no sign that the current account deficit will drop in the near future. As a decrease in the current account deficit should be ahead of an increase in the equity market, it is hardly probable that a rise of the Lithuanian equity market will begin in 2–3 years.

It is difficult to find a relationship between the movements of the equity market

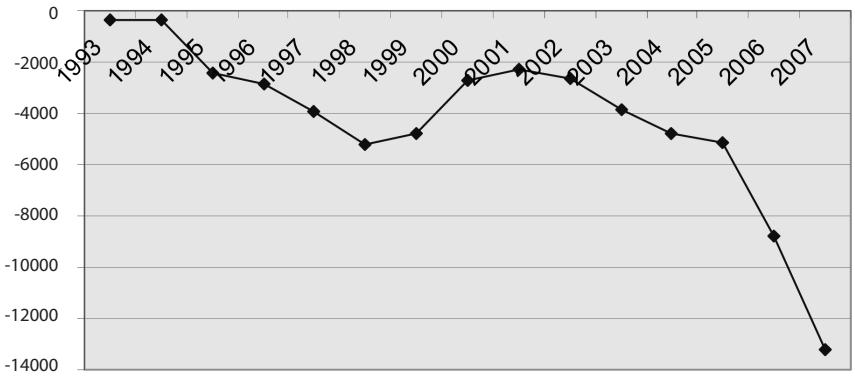

Fig. 5: ***Lithuanian current account deficit 1993–2007, LTL m.***
Source: The Bank of Lithuania

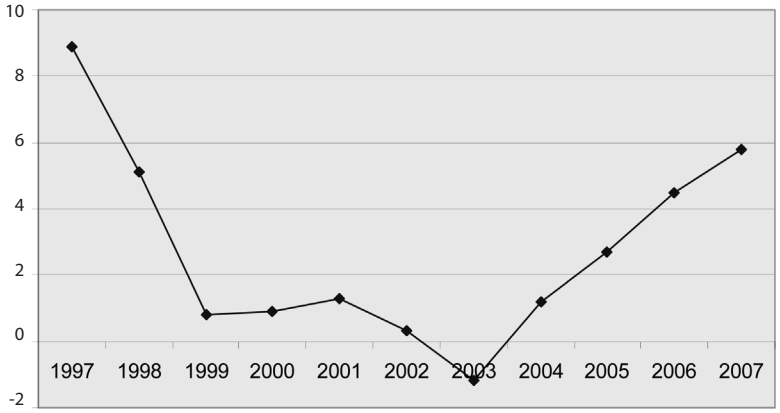

Fig. 6: ***Inflation in Lithuania in 1997–2007, %.***
Source: Department of Statistics

and inflation. In the 1997–2003 market decline, the level of inflation was going down (from 8.9% to (-1.2)%, but on the second wave of the decline (2007) the inflation is growing and now it is over 8% (Fig. 6). It seems that the Lithuanian equity market has no deep correlation with the inflation.

Another variable is interest rates. It should be noted that usually bear markets go with an increase in the interest rates. For example, the biggest t growth of EUR LIBOR was in 1999–2000 and 2005–2008 (Fig. 7), i.e. during the period when the Lithuanian equity market was falling. A relationship between the interest rates and the equity market can be proven by means of the analysis of the credit portfolio of Lithuanian commercial banks. When the first wave of the equity market decline ended, the credit portfolio growth rate was about 20% per year. After that, a rapid increase in the credit portfolio growth rate was noted, up to 70% in March 2004. On the second

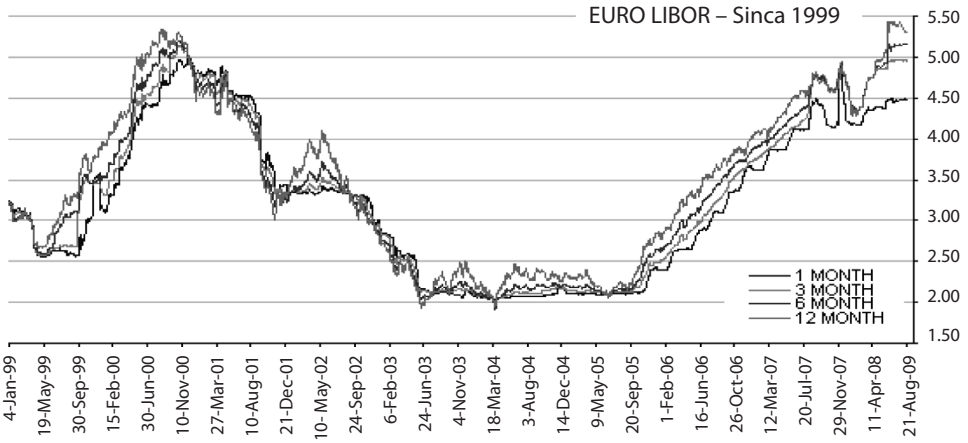

Fig. 7: EUR LIBOR 1999–2008

Source: www.fxthoughts.com

Year	Market growth per year (%)	6 m. LIBOR (EUR), %	Credit portfolio of Lithuanian banks, Δ%
2000	-5.86	4.8344	-0.89
2001	-19.21	3.2544	17.81
2002	13.07	2.8011	22.00
2003	118.31	2.1635	52.51
2004	68.20	2.2125	39.65
2005	35.24	2.6396	53.61
2006	18.64	3.8535	48.86
2007	-11.62	4.7063	46.85
2008	-60.79	2.9775	25.93

Fig. 8. ***The Lithuanian equity market growth per year and credit portfolio changes of Lithuanian banks.***

Source: prepared by the authors

wave (2007) the credit portfolio continued to increase as a consequence of low interest rates, but its growth rate dropped to 40% and in August 2008 the credit portfolio growth rate in Lithuania was as low as 5.5%. Therefore, the credit portfolio growth rate fluctuates with the equity market: low interest rates encourage investors to take credits to finance stock purchases. Usually, during low interest rate periods gains from stock trading are higher than the costs of borrowing (see Fig. 8).

According to Calvo G., Mishkin F., Nanto D.K., Wyplosz C. and others, equity markets are usually influenced by the currency. Weak currency makes the equity market weak too. If investors have no confidence in the currency they leave the financial market. A large part of the capital flows abroad. This theory cannot be examined in

the case of Lithuania, because the national currency Litas is pegged to euro and the exchange rate floats insignificantly.

Financial Crises in Other Countries

In order to discuss the effect of foreign financial crises on the Lithuanian equity market, the Russian financial crisis in 1998, the U.S.A. financial market decline in 2000 and the real estate crisis in 2007–2008 can serve as good cases for analysis.

In 1997 Russia was one of the largest trade partners of Lithuania. Export to Russia accounted for 24.5% of all export of Lithuania. In 1998 this percentage dropped to 16.5% and to 7% in 1999. Export to Russia started to recover only in 2000. Therefore, Russian markets were lost in 1998. Lithuanian companies demonstrated disappointing financial results. It was a sign to investors to leave Lithuanian equity market. Stock prices and trade turnovers started to decrease. In 2000 all main financial markets "burst" in the U.S. This process was triggered by the so-called "IT bubble" (see Fig. 9). A large part of Lithuanian investors had concerns about Lithuanian companies being overvalued too, and the events in the U.S. had a domino effect on the equity market in Lithuania. After the burst of this "bubble" many U.S. investors decided to invest in something more tangible. It was real estate. They hoped that assets like real estate would not reduce in value in the long perspective and found them as very rational investment at the time when money was losing its value. Investors were mistaken in their theories, which maintain that the value of real estate, like the value of stock, always increases in the long run. When interest rates started to go up, prices of the real estate stopped to rise. Some borrowers and banks went bankrupt. Rating agencies started to change ratings of real estate loans. Many investors left the funds,which were related to the real estate. The U.S. real estate market lost its liquidity taking the stock prices of real estate companies and banks down. Lithuanian investors experienced a similar situation. When interest rates were low, they began to invest in real estate. In 2007, the European Central Bank repeated the decision of the Federal Reserve to increase

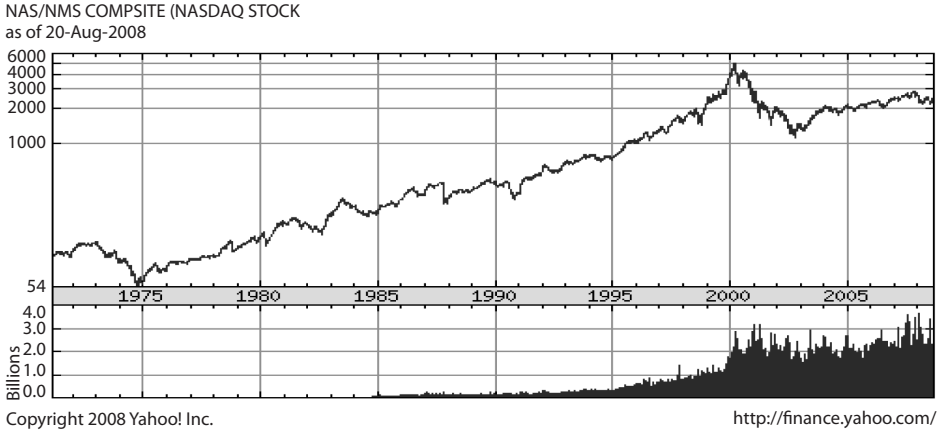

Fig. 9

interest rates in an attempt to stop inflation. High interest rates stopped borrowing and trading in real estate. This situation had a psychological effect on investors who started to leave the equity market in fear of suffering losses as the U.S. investors. It was the beginning of the second wave of the Lithuanian equity market decline.

Conclusion

The main reasons of the fall in the Lithuanian equity market are: (a) an increase in interest rates; (b) the current account deficit and (c) financial crises in the foreign countries, with which Lithuania maintains close trade contacts. High interest rates slow down the investment in the stock market. Investors prefer to save money and/or put it into the less risky money market. The level of the current account deficit and the situation on the main foreign equity markets can be good indicators of the potential market movements in the future. Lithuanian current account deficit usually takes the same direction as the Lithuanian equity market, but moves 3–4 years ahead. Moreover, Lithuanian equity market reacts to the financial crises in other countries. The reaction may occur due to various reasons, for instance, due to close ties in import and export (Russia), psychological factors (the U.S. "IT bubble" in 2000, the U.S. real estate crisis in 2007–2008) or unfavourable decisions made by the governing financial institutions (e.g. decisions of the FED and/or ECB to increase interest rates). The local currency, litas, has no impact on the equity market decline because it is pegged to euro. Research into the relationship between inflation and the equity market movements in Lithuania showed that this correlation is irrelevant. It is evident that inflation and the market do not always go in the same direction. As to the capital flows, it is difficult to check their effect on the equity market decline because there are no instruments to calculate these flows and determine their movement under the conditions of crisis. The analysis of foreign direct investment, the investment portfolio of foreign investors or the money basis fails to reflect the actual situation, because the behavior of local investors remains vague.

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