The attitude of the Czech companies towards speculative bubbles

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Abstract. This article deals with the market anomalies of speculative bubbles. The last large speculative bubble occurred on the real estate market, which after bursting brought the financial crisis affecting virtually every country in the world. The main challenge and objective of this article is to define the attitude of the management of Czech companies, namely joint stock companies and limited liability companies, towards speculative bubbles.

Introduction

Almost everyone, whether consciously or not, becomes a participant of the capital market and makes investment decisions from time to time. Investment and speculation are mainly about making decisions. A market participant makes decisions under feelings of uncertainty and alternating emotions of fear and greed. In most cases, the market is dominated by rational investors who are willing to pay the price of the given asset, which is based on a sober expectation of future value. However, from time to time during the life of the free market, a market anomaly known as speculative bubbles appears on the market for a given security or other asset, which is driven by euphoria and a growing buying or selling fever. This is quickly followed by a sell-off and a total collapse of the market. History has taught us that speculative bubbles are an integral part of financial markets. The more the markets are interconnected, the more damage is done. They appear with a certain level of regularity and affect a variety of asset classes. The implications for the economy and the financial sector are often disastrous and very costly. The last global financial crisis began by the American real estate bubble, which caused profound implications worldwide, including in the Czech Republic. The aim of this article and the issue it addresses is to define the attitude of Czech management towards these bubbles.

Theoretical basis

Definition of the term speculative bubble

There are currently several definitions of the term speculative bubble, mainly due to differences of opinion between academic, economic and investment professionals. However, a very concise definition of the term speculative bubble is given by [4, p. 281], who defines a speculative bubble as being a "*sharp rise in price of an asset or a range of assets in a continuous process, with the initial rise generating expectations of further rises and attracting new buyers – generally speculators interested in profits from trading in the asset rather than its use of earning capacity. The rise is usually followed by reverse expectations and a sharp decline in price often resulting in a financial crisis*".

Another way of defining a speculative bubble is the violation of the principle of efficient market theory and working with so-called intrinsic value. The author [2] defines a bubble as a situation where the price of an asset significantly deviates from its intrinsic value, also known as the fair price. This is determined by each market participant based on their own criteria, and therefore intrinsic values may differ among groups of investors.

In its regular reports on financial stability, the Czech National Bank [1] talks of speculative bubbles as being an explosive and asymmetrical deviation from the market price, from fundamental values and the possibility of sudden significant correction.

Ways of explaining the occurrence of speculative bubbles

The history of the development of financial markets shows that the occurrence of speculative bubbles on markets is very often an unpleasant reality, which economists try to explain with the help of various theoretical concepts. The author [10] presents three possible ways of explaining the occurrence of speculative bubbles, i.e. crowd psychology, the theory of noisy trading and market inefficiency. Another possibility is the theory of behavioral finance represented by e.g. [3]. The author [7] attempts to clarify the role of psychology on the financial markets and contribute to an explanation of exchange rate movements, which cannot be explained in a rational, fundamental way. The author [6] created an interesting model for analyzing financial crises, which are often preceded by speculative bubbles and excessive speculation.

What makes the issue of speculative bubbles more complex is the fact that it is a social phenomenon. One person thinking an asset is undervalued does not cause a speculative bubble. It is a crowd and its psychology that move the price. Decisions of the individual are then very difficult because one must break free from the crowd only to be left standing all alone at the mercy of one's own rational expectations, judgment and common sense. According to [5] the extreme feelings and moods of the crowd are rapidly contagious, and therefore a wave of optimism or pessimism spreads through the crowd until the entire crowd of investors is literally gripped and dominated by optimistic or pessimistic hysteria.

The authors [9] explain that the extreme volatility and deviations from proper fundamental values are due to the existence of two different groups of investors. The first group consists of sophisticated investors who have access to adequate information and they are able to rationally assess and evaluate this information. The second group of investors, on the other hand, has no accurate or truthful information and may also lack the experience, knowledge and skills to properly evaluate the information. It is the activities of this second group of investors that causes deviations in asset prices from their proper fundamental values.

Another major factor causing the occurrence of speculative bubbles is monetary policy, which serves as the main tool of any central bank. Speculative bubbles can cause central banks to have a relaxed expansionary monetary policy, which floods the capital market and the financial system with excess liquidity. Low interest rates mean that cheap loans can be used to finance investments that were previously not profitable. Low rates also lead banking institutions to offer low valuations and therefore investors are forced to move their funds from bank accounts to securities. The hunt for a return leads to an increase in demand for investment assets and an increase in their price. High demand can result in a high overvaluation of assets, which lasts until the bubble bursts. This situation implies that central banks should carefully control their monetary policies [8].

Another cause for speculative bubbles can be the institutional framework. Incorrect or insufficient capital market legislation, inconsistent supervision and inadequate regulation by the delegated authority as well as the issue of moral hazard can cause the occurrence of speculative bubbles. Moral hazard and a lack of regulation were the main causes of the recent speculative bubble in the mortgage market, which, thanks to the globalization of financial markets, spilled over into a global financial crisis and economic recession.

Research methodology

The research was conducted by applying an exploration method using a questionnaire. A questionnaire survey was conducted between the 1st of November 2014 and the 30th of September

2015 and was divided into two rounds. The first round was conducted in the period from the 1st of November 2014 to the 28th of February 2015 and the second round took place from the 1st of March to the 30th of September 2015. The results of the questionnaire survey were then combined and analyzed as a single research group. The questionnaire asked four closed questions. From the point of view of probable statistics the sample set was chosen at random. The target group for the questionnaire survey was the management of Czech companies in the Czech Republic. Two legal forms of companies were selected for the research i.e. joint stock and limited liability companies. In terms of the number of respondents, the authors strived to ensure sufficient representativeness of the sample. In total, 153 completed questionnaires were used for the evaluation. The aim of the research was to map the attitude of Czech management towards speculative bubbles.

A chi-square test was performed to compare the differences in attitudes of management between the different legal forms. This non-parametric statistical method is used to determine whether there is a demonstrably significant differences between the two attributes. Contingency tables were elaborated to test the hypotheses about the independence and homogeneity of the surveyed attributes.

Results of the research

The first question in the questionnaire was devoted to the impact of the bursting of the housing bubble on the respondent companies. Respondents were offered three alternative answers, i.e. the crisis did not affect their company, the crisis slightly affected their company and the crisis significantly affected the company. The results of the survey are shown in the following Table 1.

Table 1, Impact of the crisis on the companies

	Answers from limited liability companies	Answers from joint-stock companies
The crisis did not affect the company	19	14
The crisis slightly affected the company	39	38
The crisis significantly affected the company	20	23
Pearson's chi-square test 0.921, $p = 0.63$, $\alpha = 0.05$		

Source: own work

Table 1 shows that 78% of the respondents stated they were slightly or significantly affected by the crisis. Conversely, the financial crisis did not affect 22% of the respondents. The survey examined whether there is a correlation between the degree of impact of the crisis and the legal form of the company. For this purpose, we tested the null hypothesis: The extent of the impact of the financial crisis does not depend on the legal form of the company compared to the alternative hypothesis: The extent of the impact of the financial crisis depends on the legal form of the company. The chi-square test of independence was used to verify the validity of the hypotheses. After comparing the level of significance α with the p-value 0.63 of the chi-square test, the null hypothesis was not rejected because $p > \alpha$ and thus the existence of the impact of the crisis on the company does not depend on the legal form of the company.

The second question explored the respondents' attitude towards the possibility of further speculative bubbles in the future. The respondents were given three alternative answers. None of the respondents answered that no speculative bubble will occur in the future. All of the surveyed respondents therefore expect further speculative bubbles in the future. The level of responses differs only in the extent of the impact. The results of the answers to this question are provided in the following Table 2.

Table 2, Occurrence of bubbles in the future and their impact

	Answers from limited liability companies	Answers from joint-stock companies
Yes, they will cause a stock market crash and will have a global impact	65	58

Yes, but without a stock market crash or global impact	13	17
No	0	0
Pearson's chi-square test 0.873, p=0.35, α =0.05		

Source: own work

A homogeneity test was used to assess the distribution of responses between the various legal forms. The following null hypothesis was tested: The attitude of respondents to the possibility of further speculative bubbles is the same for both legal forms of companies compared to the alternative hypothesis: The attitude of respondents to the possibility of further speculative bubbles is the same for both legal forms of companies. The achieved level of significance p=0.35 is 0.05; therefore we can reject the null hypothesis and accept the alternative.

The third question asked in what timeframe the respondents assume that there will be a new speculative bubble. The results of the survey are shown in the following Table 3.

Table 3, Timeframe of further speculative bubbles

	Answers from limited liability companies	Answers from joint-stock companies
Within 5 years	23	15
Within 10 years	42	39
After 10 years or more	13	21
None will occur	0	0
Pearson's chi-square test 3.62, p=0.164, α =0.05		

Source: own work

Table 4 shows that the highest proportion of respondents (almost 53%) expects the occurrence of a new speculative bubble within 10 years. The occurrence of a bubble after 10 years or more is expected by 22% of the respondents. Conversely, the occurrence of a new speculative bubble within 5 years is expected by almost 25% of the respondents.

A homogeneity test was used to assess the distribution of responses between the various legal forms. The following null hypothesis was tested: The attitude of respondents to the time horizon of the appearance of new speculative bubbles is the same for both legal forms of companies compared to the alternative hypothesis that the attitude is not the same. After comparing the level of significance α with the p-value the null hypothesis was not rejected, there is no difference in the attitude of the management between the individual legal forms.

One of the ways of limiting the occurrence of speculative bubbles is through the institutional framework. In the fourth question, the respondents stated whether the newly established institution of the European Systemic Risk Board may prevent new crises. The results of the survey are shown in the following Table 4.

Table 4, Benefit of the newly established European Systemic Risk Board

	Answers from limited liability companies	Answers from joint-stock companies
Yes, this institution is able to prevent the emergence of entirely new crises	1	2
Yes, but only to a limited extent	49	53
No, it is an unnecessary institution that will not prevent the emergence of new crises	28	20
Pearson's chi-square test 1.765 p = 0.413, α =0.05		

Source: own work

Table 4 shows that 67% of respondents believe that to a limited extent the newly established institution may be able to prevent the emergence of new crises in the future. In total 31% of respondents consider it an unnecessary institution. Again the null hypothesis that the opinions of the management of the individual legal forms are the same was tested. After comparing the level of significance α with the p-value the null hypothesis was not rejected, there is no difference in the attitude of the management between the individual legal forms.

Conclusion

Speculative bubbles are generally portrayed as negative market anomalies, which transfer numerous negative consequences to the economy. Each bubble can also bring certain benefits and lessons, which over time can surpass the initial negative implications. Speculation can provide enough capital to develop industrial sectors that would not occur at all during “normal” times. This article examined the attitude of Czech management towards speculative bubbles. The research confirmed that the recent economic crisis, which resulted from the bursting of the speculative bubble in the real estate market, had a negative impact on Czech companies. The hypothesis did not confirm a correlation between the size of the impact of the crisis on the companies and their legal form. It is clear that bubbles inherently belong to markets and speculation and will continue to belong as long as there is the desire for wealth, success and advancement. This hypothesis was also confirmed by the management of Czech companies, who expect the occurrence of further speculative bubbles in the future. In this context, the hypothesis was tested as to whether opinion on the possible occurrence of speculative bubbles in the future is the same in both legal forms of companies. This hypothesis was confirmed. If we accept the assumption that speculative bubbles are detrimental then the question arises as to whether they can be avoided or at least limited. The research shows that Czech management is rather skeptical on the subject, with 48% of the respondents stating that speculative bubbles can only be limited and more can be expected in the future. One way of preventing speculative bubbles and minimizing their consequences is through regulation of the financial sector. Czech management is of the opinion that institutions to a limited extent are able to prevent speculative bubbles. This view is consistent across both the legal forms of the companies surveyed.

References

[1] ČNB. Zpráva o finanční stabilitě 2009-2010. Praha, Česká národní banka, 2011. Available at: <http://www.cnb.cz/miranda2/export/sites/www.cnb.cz/cs/financni_stabilita/zpravy_fs/FS_2009-2010/FS_2009-2010.pdf>.

[2] D. Gladiš, Naučte se investovat, Praha, Grada. (2005)

[3] D. Kahneman, A. Tversky, Prospect Theory: An Analysis of Decision under Risk, Econometrica, 1979, pp. 263-291.

[4] C. P. Kindleberger, Bubbles. In: J. Eatwell ,M. Milgate, P. Newman. (eds.), The New Palgrave. A Dictionary of Economics, London, Palgrave Macmillan, 1987, pp. 281-282.

[5] G. Le Bon, Psychologie davu, Praha, Kra. (1994)

[6] H. P. Minsky, Financial Factors in the Economics of Capitalism, Journal of Financial Services Research, 1995, pp. 197-208.

[7] J. Montier, Behavioural Finance: Insight into Irrational Minds and Markets, New York, Wiley. (2002)

[8] M. R. Babaei Semiromi, Literatures about asset price bubbles and monetary policies, ICOAE 2010 - International Conference On Applied Economics, 2010, pp. 695-703.

[9] A. Shleifer, L. H. Summers, The Noise Trader Approach to Finance, Journal of Economic Perspectives, 1990, pp. 19-33.

[10] J. Veselá, Investování na kapitálových trzích. Praha, Wolters Kluwer. (2007)