PRICE BUBBLES ON THE FINANCIAL MARKET:
SIGNS OF FORMATION AND ALGORITHM OF DETECTION

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Summary. The article summarizes the signs (indicators) of price bubbles development, reveals the general conditions that contribute to the formation of price bubbles; conducted empirical studies using historical data to determine the signs of asset prices trend change in the financial market; statistical methods and algorithm of detection of existing price bubbles in stock markets are proposed.

Scientific and methodological approaches to the analysis of bubbles suggested in the article make it possible to analyze the current market situation, to determine (with a certain degree of probability) the presence of bubbles in the market for investment decisions.

Keywords: asset price, price bubble, signs of price bubbles, financial market, investment decisions.

The object of this research is pricing in global financial markets and the subject – factors, characteristics and predictors of price bubbles in financial markets. The aim of the research – to distinguish typical symptoms, indicators of presence and algorithm of price bubbles exposure on financial markets, which can help to analyze the current market situation in order to make investment decisions.

After analyzing historical data on price bubbles, we identified signs somehow inherent to every bubble:

1. Sharp (non-linear) increase in prices in the short term or acceleration of rates of asset prices increase.
2. The mass involvement amateur investors in the process of “investment”.
3. Abandonment from traditional methods of market estimation during the boom.
4. Market ignores bad news or interprets them as good, ignoring danger signals.
5. The funds flow from the real sector to the financial market, as it becomes more profitable to speculate than to engage in real production.
6. Distribution of various investment funds and companies.
7. Widespread use of credit funds to trade.
8. Increase of volumes of trading in derivatives.

Having considered the views of different economists about the reasons of bubbles inflation and methods of their detection, we have concluded that the main reason for the formation of speculative bubbles lies in emotions and irrational behavior of market participants, and all this is reflected in the volume of loans for speculative operations in the use of derivatives, media activity, the volume of transactions, the dynamics of prices and so on. Accordingly, the real reasons lie not in concrete events and conditions specific to a certain period, but all price bubbles have a common nature.

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decisions. The described tools can help investors (investment banks, hedge funds, private investors) to protect themselves from large losses: identification of price bubbles on the stage of nucleation and growth allows to exit the position (to take profits).

References


Bubbles happen when the price is not justified by the asset itself but rather by the over-exuberant behavior of investors. When there are no more investors willing to pay the overinflated price, people panic and sell and the bubble bursts. Peter Kugis of Stanford University defines bubbles more simply: Economic bubbles rely on the greater fool theory. The people who enter the bubble early may not necessarily believe what they’re buying is useful but what they do think is someone in the future will pay them more for it than what they paid themselves. The market was rising, and people thought it would continue to do so despite signs that the economy was starting to slow. The Fed warned of excessive speculation which caused investors to start selling. Bubbles and crashes in financial markets are of global significance because of their effects on the lives and livelihoods of a majority of the world’s population. While pundits and experts alike line up after the fact to claim that a particular bubble was obvious in hindsight, the real time development of the bubble is often characterized by either a deafening silence or a cacophony of contradictory opinions. of the market, leaving only optimistic investors and thus inflated asset price levels. However, when short sales restrictions no longer bind investors, then prices fall back down. This provides a possible account of the bursting of the Internet bubble that developed in 1998-2000. An economic bubble or asset bubble (sometimes also referred to as a speculative bubble, a market bubble, a price bubble, a financial bubble, a speculative mania, or a balloon) is a situation in which asset prices appear to be based on implausible or inconsistent views about the future. It could also be described as trade in an asset at a price or price range that strongly exceeds the asset’s intrinsic value. The behavior of market prices and trading volumes of assets during historical episodes of price bubbles presents a challenge to asset pricing theories. A common feature of these episodes, including the recent. This paper was previously circulated under the title “Overconfidence, Short-Sale Con-straints and Bubbles.”. overconfidence. 1187. have a limited effect on the size of the bubble or on price volatility. Since a Tobin tax will no doubt also deter trading generated by fundamental causes that are absent from our model, the limited impact of the tax on the size of the bubble and on price volatility cannot serve as an endorsement of the Tobin tax. in Financial Times [April 22, 2002]). The results in this paper suggest otherwise. 1188. Understanding financial bubbles, asset bubbles, stock bubbles and the impact of demand-pull inflation. What is a bubble? The definition of a bubble refers to when the price of a commodity, security, or other financial instrument increases to a point where it is cannot be reasonably supported by its underlying fundamentals. Market trends and statistics for asset bubbles. Since the economic recession in the late-2000s, the U.S. economy has entered into an extended bull market. There are several types of bubbles which have different effects on the economy when they burst. Economists have been researching bubbles for hundreds of years to study the signs and lessons that can be applied in modern markets. Some of the common financial bubbles include the following