

“Financial Bubbles” and Monetary Policy

Yuriy A. Tikhonov^a, Olga E. Pudovkina^a and Juliana V. Permjakova^b

^aSyzran branch of Samara State University of Economics, Syzran, RUSSIA; ^bRussian State Vocational Pedagogical University, Ekaterinburg, RUSSIA

ABSTRACT

The relevance of this research is caused by the need of strengthening a role of monetary regulators to prevent financial bubbles in the financial markets. The aim of the article is the analysis of a problem of crisis phenomena in the markets of financial assets owing to an inadequate growth of their cost, owing to subjective reasons. The leading approach to mechanism research of crisis phenomena in the market of financial assets is the approach based on a balance effect. Results: authors developed offers to prevent the crisis phenomena in the financial markets due to credit expansion. There is proved the necessity to develop a risk assessment system on existing and new financial instruments, with their obligatory application by commercial banks and rating agencies. The materials of the article can be useful at further studying the reasons for financial bubbles, development of actions for their prevention, and also in an educational process when studying certain subjects.

KEYWORDS

"A financial bubble", central bank, innovative financial instruments

ARTICLE HISTORY

Received 21 May 2016
Revised 28 June 2016
Accepted 12 July 2016

Introduction

Establishing a context

Problem of "financial bubbles" is not new in the history of mankind. The term "economy of a financial bubble" appeared in Asahi publishing house, originally it meant the processes in the Japanese economy in the late eighties (Moiseyev, 2005). "The financial bubble" is characterized by three components: price increase in financial assets, expansion of economic activity and continuous increase of money supply and credit. However, "financial bubbles" have a long

CORRESPONDENCE Olga E. Pudovkina ✉ olechkasgeu@mail.ru

history. One of the first known "financial bubbles" was organized in France in 1716 - 1720 (Moiseyev, 2005). The experience of 1716 - 1720 is remarkable that it was not just first "financial bubble", and for the first time it was a financial boom and monetary policy at the same time.

Table 1. "Financial bubbles" in industrialized countries in 1980 - 2010.

Country	«Financial bubble»
Australia (1989)	Problems in the banking sector because of hopeless loans
Great Britain (1990 - 1991)	The boom in the market of mortgage loans resulted in economic recession and crisis of small and medium-sized banks
The USA (1987 - 1991)	Crisis of loan-and-savings institutions and collapse of "a financial bubble" in the stock market
The USA (1999 - 2001)	"Financial bubble" in the stock market of high technology Internet companies
The USA (2007 - 2008)	"Financial bubble" in the market of mortgage bonds
The USA, all world (1979 - 1982)	Problems in the banking sector due to hopeless syndicated loans to the countries of "the third world"
Sweden, Finland and Norway (1990 - 1992)	The credit boom came to the end with bank crisis and decrease of real estate prices
Japan (1989 - 1991)	The boom in the stock market that is caused by price increase came to the end by the crisis of a financial system and it continues to the present moment
The USA (2007 - 2008)	"Financial bubble" in the market of mortgage bonds

Source: Tikhonov Yu. A., Pudovkina O. E. & Bratukhina E. A. (2014). Economic research: condition analysis and prospects for development. Chapter VII. The problem of "financial bubbles" in the context of monetary policy. Book 33. Voronezh: VSPU, 174-191.

In modern economy globalization and development of the financial markets resulted in the fact that "financial bubbles" became an ordinary phenomenon. In 1980 – 2010 there were financial booms in all leading industrialized countries, and in some countries there were some financial booms (tab. 1). Every time a "financial bubble", that blew up, had the most depressing consequences for a real production sector and a banking system.

Literature review

As the central bank is responsible for a bank system and many of these assets types, there is a question if it has to interfere and stop a financial boom in time. The traditional view of a problem is that monetary authorities should not react directly to the change in price on financial assets. There are several arguments:

— prices on financial assets for a short-term period are too volatile, and they cannot serve as determinants of the monetary policy that is focused on a long-term result;

— on the practical level it is almost impossible to find out whether the improvement of a situation in real production sector reflects increase in prices on financial assets, or it is just speculative mania;

— even if the central bank will systematically react to prices fluctuation on financial assets, its actions will result in economic destabilization.

Followers of the regulation give two simple arguments in favor of an opposition policy to "financial bubbles". The first argument is based on the classical "Pool's analysis" (called by the name of U. Poole (1988), the former president of Federal Reserve Bank of St. Louis) that the central bank should "row against wind" at the revaluation of financial assets if the price increase has no basis. To the contrary, if the financial boom has origins in a real production sector, the central bank has to allow it to develop independently. U. Poole's (1988) recommendations represent a typical example of the countercyclical economic policy that is designed to smooth fluctuations of market conditions.

The second argument concerns time of intervention of monetary authorities in the market. It is known that the most destructive consequences of "a financial bubble" fall already on the post-peak period. When "the financial bubble" passed long ago, the government has problems with inflation and economic growth. To prevent such course of events, the central bank has to keep to countercyclical policy beforehand. In other words, it should interfere at an initial stage of growth of "a financial bubble". Then the subsequent correction in the financial market will be rather small, and losses of economy from the point of view of inflation and GDP are minimum.

Opponents of the central bank worry that such policy will cause unfair behavior of investors. If the monetary authorities undertake to regulate "a financial bubble", then speculators will inflate it even more, hoping that their potential losses will be compensated by the authorities, now they are responsible for a financial boom. The problem of unfair behavior arises because of incoordinate actions of the central bank. It doesn't usually react to quotations' growth but to their falling. Partly such authorities' behavior is justified by the fact that the market prices change asymmetrically: "bubble" is inflated slowly, and bursts quickly. However, if the central bank begins to react to rise and to fall in a similar way, then market dynamics can also change. Knowing that the monetary authorities will not allow excessive revaluation of assets and sharp fall in prices, quotations will change more smoothly, and investors will stop following a crowd blindly. Thus, the problem of unfair behavior of investors can be avoided if the central bank reacts symmetrically both to price growth, and to price falling. The main problem of countercyclical policy is the adequate assessment of price increase on financial assets (Davnism Kasatkin & Ardakov, 2012; Davnis & Tinyakova, 2006), that is if the financial boom corresponds to the improvement of fundamental macroeconomic indicators or not. Many people, including G. Soros (2008), believe that investors are always biased, and in the boom period they assess a situation incorrectly.

Establishing a research gap

So far the theory and practice accumulated enough knowledge and experience to reconsider the point of view on "financial bubble". First of all, it is necessary to understand the nature of a financial boom.

Increase in prices for financial assets can be both adequate, and irrational (Endovitsky & Bocharova, 2004). It is adequate when there is an improvement of a situation in a real production sector: increase in labor productivity, discoveries, excellent financial results, etc. If nothing similar happens, and the prices grow, the financial boom turns into "a financial bubble". The reasons for that can be a little: herd bias of investors (effect of crowd), imperfect regulation of the market,

financial liberalization, etc. However, the revaluation of financial assets is so dangerous for the economy. "The financial bubble" creates distortions in investments and consumption that at first leads to an economic boom and expansion of business activity, and then to recession and inflation. The intervention of monetary authorities can smooth these cycle fluctuations and reduce economy losses.

How does the mechanism of "a financial bubble" work and why does it influence economic growth? Many economists believe that the financial boom increases households welfare and by that stimulates consumer expenses. For example, the growth of stock quotations in the USA stock market makes Americans richer therefore they begin to spend more. However, elementary econometric assessments revealed low correlation between share indexes and consumer expenses (Moiseyev, 2005). This fact is explained like this: income of households that is gained on share speculation goes to the pension savings which don't influence operating costs in any way.

More plausible explanation of "a financial bubble" is based on a balance effect. The change in price on financial assets is directly reflected on the balances of households, firms and financial intermediaries. Inflation of "a financial bubble" results in increase, and its collapse results in cost decrease of credits security. At the peak of a financial boom speculators use the credits for security speculation. When the trend changes the direction, leverage coefficients sharply jump up. From borrowers additional security is demanded, and increase in capitalization for compliance with the standards of capital sufficiency is demanded from banks (Egorov, Merkurjev & Chekmareva, 2009). Falling of quotations in the stock market worsens financial results and balances of all speculators that force them to reduce current costs. Expenses cover consumption not debts services. Redistribution of the income causes the reduction of aggregate demand and rates of economic growth. There is a spiral of debt deflation for the first time it was described by I. Fischer (1932, 1933) on the example of the Great depression.

Financial instability causes financial bubbles which is immanent property of the financial system, according to some macroeconomists and financiers. Hypothesis sources that the economic system will not always be in an equilibrium condition, and can be shaken as a swing, are described in works of economists who were engaged in business cycles, in particular J. Schumpeter (1934) ("The theory of economic development") and J.M. Keynes (1936) ("The theory of employment, percent and money"). Among modern macroeconomists the most radical supporter of this idea is H.P. Minsky (1982), the author of a hypothesis of the financial instability that is developed in line with the ideas of famous above-mentioned economists of the past.

H.P. Minsky (1982) defines a hypothesis of financial instability as the theory of debt influence and how it is generated, on behavior of an economic system. A key role in instability creation belongs to banks which, as well as any other economic agents, are interested in earning profit. Banks understand that best of all it is possible to earn on innovations and therefore try to introduce new products and regarding the obligations and assets which they get. As a result, dependence between quantity of money in economy and price level can be nonlinear.

We consider an operating credit mechanism in more detail as a formation factor of financial bubbles to define possible directions of positive state intervention.

Despite etymology of the concept "credit" as "trust" and excessive distribution of blank credits, the theory and practice of finance defines collateralization as a necessary element of crediting. Thus, the cost of pledge is a very important parameter for subsequent volume of crediting. Really, the higher the cost of potential security, the bigger volume of credit the businessman can count on. Cost ensuring (pledge) is particularly important at lombard crediting where the ratio between the credit sum and cost security is considered as a major factor at making decision on issuing a credit.

In this principle of "security" of the credit there is the trigger mechanism of self-amplifying communication contour "asset cost – credit – asset cost" which leads to formation of "a financial bubble" (Baiding & Baydina, 2009; Endovitsky & Bocharova, 2004).

For banks growth of security cost is a signal to crediting expansion and as a framework of operating credit lines under current pledges (their cost increased), and at the expense of new assets and their subsequent pledge. In turn, banks, using instruments of securitization, "pack" granted loans into securities to expand financing. Therefore secondary self-amplifying interrelation contour is formed: increase in credits - increase in volumes of securitization - increase in credits (Rachkevich & Alekseeva, 2008).

Thus, the speed of formation of a financial bubble directly depends on the speed of credit expansion that is directed on certain assets acquisition. In turn, scales of credit expansion depend on the accepted ratio between security cost and credit size.

We consider the role of the state in detail in bubble inflating or control through monetary management or policy of "investors support". Concerning the policy of bubble inflation control by means of monetary tools, the opinions of economists-theorists and experts regulators are the same. They agree that regulation of an interest rate will not help (Egorov, Merkurjev & Chekmareva, 2009; Kindlberger & Aliber, 2010; Chirkova, 2010). However, the speed of formation of a financial bubble directly depends on the speed of the credit expansion directed to acquisition of certain assets. In turn, scales of credit expansion depend on the accepted ratio between security cost and credit size.

Earlier credit crises led to toughening of regulation in relation to violators not to repeat it again. However, market fundamentalism that was dominating in Reagan times resulted in boomerang effect: banks in the USA have much freedom to decide who to give money. Practically all restrictions imposed on banks since the Great depression were gradually removed. It was allowed to banks to expand a branch network, to merge with banks from other states and to start new business directions. The distinction between investment and commercial banks became less noticeable, did not disappear absolutely yet. Sophisticated financial instruments and new ways not to show assets on balance accounts were invented. Exactly here there are the reasons of periodic emergence of "financial bubbles".

New financial tools and technologies of trading and financing had one fatal shortcoming: they were based on the assumption that financial markets were

looking forward to balance. It was considered that temporary deviations have casual character, and values eventually reach a certain average. Securitization and other innovative tools enabled to redistribute risks. The more risks are distributed, the bigger risks can be accepted. New methods and tools were so sophisticated that regulating boards were not able to assess related risks. They had to use risk assessment methods developed by the organizations which created these tools. The existing international agreement on bank supervision Basel 2 allows large banks to rely only on their own systems of risks assessment (Soros, 2008). Similar thing happened also to the rating agencies designed to estimate reliability of financial instruments. They had to rely on the calculations of authors of these tools.

So, regulators refused to fulfill their obligations. Having relied on the calculations of risks that were made by market participants, regulators actually made a start and initiated uncontrollable credit expansion. In particular, the indicator of portfolio risks is calculated on the basis of the analysis of the past. In case of uncontrolled credit expansion the past cannot serve as an instruction to present assessment any more.

Methods

Research methods

In the course of the research the following methods were used: theoretical (abstractions, analysis, synthesis, induction and deduction, and also methods of classification and generalization); methods of mathematical statistics and economic analysis.

Scientific research base

Scientific research base are works of domestic and foreign scientists theorists and practitioners on this subject.

Investigation stages

The research of a problem was carried out in 2 steps. At the first stage existing scientific material by the nature of financial bubbles was collected and analyzed. The reasons are established causing their permanent emergence in developed economies of the world. The role of monetary regulators and monetary policy on the process of origin of financial bubbles and their development is defined. At the second stage recommendations on prevention of financial bubbles by means of measures of monetary policy and operations of monetary regulators were developed.

Results and Discussions

It is possible to formulate the following offers on prevention of "financial bubbles" due to credit expansion (Tikhonov, 2012):

— introduction of legislatively established minimum discount to security regardless the quality at the level of 20% for a crisis stage and for an economy revival stage and of 95% in the "boom" period; concrete discount values in the "boom" period are defined by the regulator; at the same time there are current provisions connecting security cost and quality with the size of actual reserves on possible loan losses;

— it is expedient to determine the extreme sum of the blank loan granted to a borrower. The size of the specified sum has to depend on the legal status of a borrower;

— at the subsequent pledge the loan is granted only on a difference between current security cost and a rest of a principal amount of a loan on earlier issued credits under this security;

— development of a risk assessment system by the regulator on proposed financial instruments, with their obligatory application by commercial banks and rating agencies.

It is the simplest way to limit credit expansion at the stage of active growth. Usually central banks react to the inflation connected with increase in prices or earnings, but do not try to prevent the inflation caused by assets growth, it is caused by uncontrollable credit expansion.

Authorized institutions have to control not only the volume of money supply, but also processes of credit market formation, crediting terms. Money supply and credit do not track closely. It is necessary to care not only for an inflationary component of salaries, but also for the prevention of bubbles emergence connected with assets: the prices of assets depend not only on money availability, but also on a desire to credit. There is also a question: if it's possible to use discount mechanism to security as one of the elements of credit activity regulation to prevent financial bubbles. Bank's refusal from initial contribution of a borrower who is getting accommodation became one of the reasons of rapid growth of the real estate in the USA.

Now the systems of bank regulation do not provide direct establishment of minimum discount to security when crediting both physical, and legal entities; moreover, so-called blank credits are not forbidden. It is possible to assume that lack of such direct regulating restrictions is connected with the principle of "rationality" of economic entities: a stable commercial bank cannot give unsecured loans, it is unjustified risk. However, modern economic reality displays that fierce competition, ambition to use a situation to get an excess profit, hidden or obvious signals of authorities, and securitization which is transferring risks to an investor – the buyer of securities, - all these things can result in a radical change of market behavior.

It is impossible to claim that this aspect of bank activity is not regulated or controlled at all. In the Russian banking system security existence and quality is considered when forming reserves on possible loan losses. The relevant Provision of the Bank of Russia encourages banks to give secured credits, and quality of security directly influences formed reserve by establishing special correction coefficients. However, as the experience of developed countries and recent Russian experience of a mortgage boom, demonstrate, these instruments of positive stimulation (bigger and best security – smaller reserves, higher profit) are insufficient.

Conclusion

Thus "financial bubbles", especially of macroeconomic origin, are a huge danger. First, they seriously influence real sector, promote overheating in a real economy in a boom period. It results in distortions (branch imbalances) in the development of a real sector that inevitably leads to welfare loss in the long term (an example: "the dug investments"). Negative consequences of bubbles are also

that the real economy in the period of bubble crash shrinks even more, than in case of lack of a bubble, it occurs due to destabilization of a financial sector (more expensive borrowing, liquidity crisis, negative expectations). As an example, a dispersion of revaluation assessments of shares in the USA in August, 1929 vary from 0 to 50% whereas the collapse of the stock market in 1929 - 1932 made 89% of peak share value. (Kindlberger & Aliber, 2010). The development of the situation went by the principle of the self-untwisted spiral: initial, rather small fall of shares caused reduction of real production, and, in turn, – further fall of shares, etc. The depression was overcome only from the beginning of World War II.

At last, shrinking a bubble results in mass bankruptcies of the companies of real sector, banks, brokers, investors and speculators, both bulls, and bears. Accumulation is lost not only by speculators, but also unprotected segments of the population which didn't take part in hysteria (for example investors of the pension funds).

Disclosure statement

No potential conflict of interest was reported by the authors.

Notes on contributors

Yuri A. Tikhonov is associate professor Syzran branch of Samara State University of Economics, Syzran, Russia.

Olga E. Pudovkina is associate professor Syzran branch of Samara State University of Economics, Syzran, Russia.

Juliana V. Permjakova is Professor of Russian state vocational pedagogical University, Ekaterinburg, Russia.

References

- Baiding, E. V. & Baydina, O. C. (2009). About a prevention problem of "financial bubbles". *Money and credit*, 6, 31-33.
- Chirkova, E. V. (2010). *Anatomy of a financial bubble*. Moscow: LLC Keys, 416 p.
- Davnis, V. V. & Tinyakova, V. I. (2006). Adaptive models of multitrend processes and cost forecast of financial assets. *Vestnik of Voronezh State University. Series: Economy and management*, 1, 143-147.
- Davnis, V. V., Kasatkin, P. E. & Ardakov, A. A. (2012). The main components and their application in models of portfolio investment. *Modern economy: problems and decisions*, 7(31), 150-157.
- Egorov, A. V., Merkuruyev, I. L. & Chekmareva, E. N. (2009). Adaptation of the Russian financial sector to a crisis situation in the world financial market. *Money and credit*, 8, 25-30.
- Endovitsky, D. A. & Bocharova, I. V. (2004). Analysis of observance the requirements by a borrower to secure a credit. *Economic analysis: theory and practice*, 14, 2-11.
- Fischer, I. (1932). *Booms and Depressions*. New York: Adelphi, 115-174.
- Fischer, I. (1933). The Debt-Deflation Theory of Great Depressions. *Econometrica*, 1, 337-57.
- Keynes, J. M. (1936). *The General Theory of Employment, Interest and Money*. Macmillan: Cambridge University Press, for Royal Economic Society, 263 p.
- Kindlberger, Ch. & Aliber, R. (2010). *Global financial crises. Manias, panic and crashes*. Saint Petersburg: Peter, 544 p.
- Minsky, H. P. (1982). *The financial-instability hypothesis: capitalist processes and the behavior of the economy*. Cambridge: Cambridge University Press, 222 p.
- Moiseyev, S. R. (2005). *Monetary policy*. Moscow: Economist, 652 p.
- Poole, W. (1988). Monetary Policy Lessons of Recent Inflation and Disinflation. *Journal of Economic Perspectives*, 2(3), 73-100.

- Rachkevich, A. Y. & Alekseeva, I. A. (2008). Securitization: characteristic signs and definition. *Money and credit*, 8, 22-31.
- Schumpeter, J. (1934). *The Theory of Economic Development*. Cambridge: Harvard University Press, 255 p.
- Soros, G. (2008). *The New Paradigm for Financial Markets: The Credit Crisis of 2008 and What it Means*. San Marcos: PublicAffairs, 208 p.
- Tikhonov, Y. A. (2012). Emergence mechanism "financial bubbles. *Publishing house "State University of management"*, 10, 254-259.
- Tikhonov, Y. A., Pudovkina, O. E. & Bratukhina, E. A. (2014). Economic research: analysis of conditions and prospect for development. *Chapter VII. A problem of "financial bubbles" in the context of monetary policy*, 33, 174-191.