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Financialization as one of the sources of contemporary economic crises

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Abstract

Motivation: Financialization is a multidimensional, complex process, which is currently developing very strongly and which can affect the economy in a positive or negative way. A positive impact usually materializes in the form of an increase in the level of GDP, and a negative one in the form of supremacy of the financial area over the real sphere, an increase in the role of financial activity of non-financial entities, and even the autonomy of the financial sphere in relation to the real sphere.
Aim: The purpose of this article is to identify and assess the impact of the financialization process on the modern economy and to look at this process as one of the potential sources of financial crises. This article focuses on the negative effects of financialization and uses the example of the American crisis of 2008.
Materials and methods: review and critical review of the literature and reports from the financial sector, with particular emphasis on the negative impact of financialization on the US financial sector in 2008.
Results: The first part presents the essence and characteristics of financialization and attempts to systematize this process. In the second part, financialization was looked at through the prism of the risk it brings, the materialization of the effects of which may lead to serious economic turbulence, and even to financial crises. The level of these effects was presented and assessed, as well as the methods of action of the American government, which contributed to minimizing the effects of the 2008 crisis, but which at the same time cannot be considered effective in the fight against financialization.

Keywords: *financialization; financial crisis; financial market; risk; securitization*
JEL: *G12; G14; G21*

1. Introduction

The global economic crisis of 2008 was an event that caused publications on the problem of financialization to appear more and more often in the economic literature. It should be noted that we are dealing here with a negative approach to the category of "financialization", which is only one of the possible approaches to its definition, which will be discussed later in this article. The aforementioned phenomenon has been known in truth at least since the early 1980s, but this category initially referred only to the process of excessive and rapid growth of the financial sector and the slow detachment of the financial sphere from the economic sphere, and only later did its more complex, multidimensional nature begin to be discovered. In terms of lexical, the category "financialization" is the Polish equivalent of the English word financialization, and in the literature on the subject there are also such synonyms as: "financialization", "financialization", "financing" or "financial capitalism" (Gostomski, 2014, p. 300).

Further considerations should be preceded by an attempt to clarify this concept, which has evolved in recent years and has taken on a new meaning. Originally, it referred to the increasing influence of the financial sphere on the political, economic and social sphere of Western countries (Epstein, 2005, p. 3), the supremacy of the financial area over the real sphere[1], increasing the role of financial activity of non-financial entities, and now we can talk about the autonomy of the financial sphere in relation to the real sphere. The discussed concept is also considered in terms of (Ratajczak, 2012, pp. 287–290):

- historical (the role of money, distinguishing between economics and chrematistics);
- geographical and cultural (it "affects" different countries to an uneven degree and society);
- doctrinal (financialization as proof of the weakness of capitalism);
- socio-economic.

Financialization is a multidimensional concept, basically three ways of approaching this category can be distinguished:

- positive, treating it as the growing influence of the financial sector on the functioning of the economy, which approach is both realistic and modern, as it reflects one of the main contemporary trends in the global economy. For many countries, financialization is a necessary process to adapt their economies, and especially financial systems, to a state that will enable full participation in the global market;
- neutral, in which this process is perceived as the growing importance of financial activity in the functioning of non-financial enterprises, the consequence of which is an increasing share in the total income of these entities — income derived from financial activity;
- negative, where it is perceived as an overproportional growth of the financial sphere.

Recognizing the complexity and ambiguity of the concept of financialization, in this article the authors will focus on the last of the approaches mentioned above and look at financialization through the prism of its potential negative consequences.

In general, following Ratajczak (2012, pp. 282–283), we can distinguish a narrow and a broad approach to the financialization process, in the first it means an increase in the level of non-financial income of enterprises, often exceeding the income from traditional, basic activities of enterprises (production, sales or services), while

[1] This megatrend is well illustrated by the example of Porsche, which in the fiscal year (up to August 2008) earned an additional EUR 1 billion thanks to the increase in the value of its stake in Volkswagen, which allowed it to increase its pre-tax profit to EUR 8.6 billion, and therefore higher compared to the one that would be achieved by acting solely in the production sphere (Żyżyński, 2009, p. 173).

in the second is perceived as a process of autonomization of the financial sphere in relation to the real sphere and gaining a superior position over it. It should also be added that financialization is sometimes perceived as a new stage of development of capitalism, called "financial capitalism".

2. Literature review

The financial sector plays a very important role in the process of stimulating economic growth, enabling the allocation of savings in various types of business ventures, moreover, a properly functioning financial sector also allows for the reduction of transaction costs and the risk of information asymmetry, so it should be considered one of the elements contributing to economic growth. A healthy, proportionate development of the financial sector, regardless of whether it is moving towards the European model, with a strong role of banks, or the Anglo-Saxon model, in which non-bank financial intermediaries (e.g. investment funds) play a significant role, is an element contributing to the long-term development of the country. Of course, in developing countries, the financial sector is smaller, less developed, and capital markets have a marginal share in its structure, and these countries usually suffer from a lack of capital, so the development of the financial sector is a remedy for many of these problems. In the case of developed countries, the impact of the financial sector on the real economy is more complex and multidimensional, but it also translates into GDP growth. The development of the financial sector is an issue of paramount importance for the economy, and attention to shaping the appropriate framework and pace of this process should be of interest not only to financiers and entrepreneurs, but also to politicians who participate in the process of developing legal solutions regulating the rules of its functioning. In general, financialization is therefore a desirable process that brings huge benefits to the economy, but when it reaches disproportionate sizes and concerns highly structured, well-developed financial sectors of the largest countries in the world, such as the United States, it can cause negative effects. This is the perspective of the approach to financialization adopted in this article and focuses on the negative effects of this process in the United States in 2008.

The main sources of financing include primarily (Gostomski, 2014, pp. 303–304; Palley, 2007, p. 11):

- deregulation, hyper-globalization or at least internationalization and change structures of financial markets;
- turbulent development of new financial instruments[2];
- the growing number of institutional investors (posing a threat to traditional banks) and individual investors;
- increase in public debt;
- macroeconomic policy of the state (both fiscal and monetary), which increasingly guided solely by the logic of capital;
- a decrease in the transparency of transactions and a general increase in the level of risk;
- low taxation of people and companies with the highest income resulting in the possibility investing unconsumed surpluses in financial instruments;
- the cult of managerial capitalism and stock value.

It should be noted that the list of potential sources of financing could be much longer, but due to the subject matter of this study, it is limited to those listed above, which were considered the most important.

New intermediaries who are not subject to state financial supervision appear on the markets, and the globalization process reduces transparency and the ability to determine who is the ultimate beneficiary of a financial investment, while new derivatives and structured instruments are very advanced in terms of IT, and their nature is often difficult to understand, especially for individual investors. The economic policy of the state, e.g. low interest rates, results in i.a. cheap

[2] It is increasingly difficult for government financial institutions to keep up with the development of these entities, leaving them de facto, at least temporarily, unsupervised.

credits, which in turn may lead to excessive indebtedness and the occurrence of speculative bubbles, on the other hand, the growing borrowing needs of the state are an incentive for financial markets to create financial instruments related to the assessment of the level of public debt risk, moreover, the public sphere uses the services of the public sphere financial institutions on commercial rather than preferential terms and constantly incur excessive debt, we are dealing here with a disproportion, because the potential financial benefits are consumed precisely by this sphere, while the risk is unevenly distributed, because in the event of materialization of its negative effects, financial institutions expect state aid and they usually get help. However, the transfer of investments to the financial sphere is conditioned not only by the rate of return, but above all by the much shorter payback time of IT-supported short-term financial investments, which cannot compete with investments from the area of traditional activity. The large-scale use of financial leverage is also of great importance, which is undoubtedly beneficial in terms of taxation, but at the same time involves high risk. For managers, however, it becomes much more important to obtain a high dividend in the short term than to care for the stable development of the company in the long term, because both the goals set for them and the shape of the incentive system make them prefer the operational and tactical perspective and reach for innovative financial instruments, which allow to achieve high profits, but at the same time are a source of various types of risks, the symptoms and adverse effects of which may materialize in various areas of the organization's functioning. Particularly dangerous is the fact that the negative effects of the discussed risk may have the character of "long tails", and therefore be very distant in time, and at the same time bring catastrophic consequences.

However, financialization brings with it such negative effects that can be easily seen in the modern economy, such as:

- the financial sector taking up a disproportionate share of the surplus arising in the real sphere, compared to its real value and to the fact that what the investor receives, what degenerates the investment chain and reduces GDP;
- the need to reorient the economy to various forms of involvement in financial system;
- degeneration of the structure of profitability and its distribution between enterprises and within the entire national economy (Duménil & Lévy, 2004, p. 134);
- increasing the degree of difficulty in assessing the risk of a given project;
- a pathological change in the relationship between the lender and the borrower, the peak of which phase is the possibility of the lender playing against the borrower's bankruptcy (e.g. CDS);
- unfavorable change in the role of the state in the economy;
- governments are forced to act in accordance with the "too big to fail" doctrine, which generates a temptation on the part of financial institutions abuses and stimulates the phenomenon of financialization (Marszałek, 2012, pp. 226–227);
- a threat to individual households (growing debt in relation to income);
- derealization of the economy[3];
- growing willingness to make short-term capital allocations in financial assets that they are characterized by higher rate of return than investments in tangible assets;
- increase in the severity and frequency of crises;
- transfer by the state to citizens of at least part of social benefits, e.g. through pension funds, which is also associated with high risk (Żyżyński, 2009, pp. 175–176);
- the risk of degeneration of a given capital market through improper use sovereign funds;
- limiting the role of banks in the financial system in favor of the securities market securities and other intermediaries.

[3] It is estimated that around 75–80% of financial turnover on a global scale concerns transactions that are not accompanied by any movement of goods or non-financial services.

In general, from a macroeconomic perspective, the negative effects of financialization boil down to the increase in the importance of financial institutions and the decrease in the status of countries which, on the one hand, succumb to the dictates of financial markets, get excessively indebted and have huge problems in enforcing prudential requirements, and, on the other hand, are expected to provide They provide public aid to financial institutions that have run into trouble in order to spread a protective umbrella over citizens and minimize the level of political risk. In turn, from the microeconomic perspective, financialization makes it difficult, or at least complicates, running a business, indirectly forces economic entities to undertake increasingly risky ventures, is a source of uncertainty, complicates the choice of forms of financing and makes the condition of economic entities dependent on financial markets. Companies are forced to reach for more risky, external sources of financing, as internal sources are rapidly dwindling due to the need for high returns to investors.

3. Materials and methods

The research method used in this research is the analysis of scientific sources: literature study based on national and foreign scientific publications describing American crisis in 2008 and financialization as one of its most important sources.

4. Results

Financialization is a process that affects the financial sectors of all countries in the world to varying degrees and nature. In this article, the authors focused on the negative approach to financialization and tried to examine to what extent this process contributed to the destabilization of the financial market in the United States in 2007–2008.

It should be clearly emphasized that financialization is becoming an increasingly important source of economic problems and crises, while the activity of governments of many countries, especially in the area of implementing social goals, contributes to increasing the level of intensity and scale of the discussed process. The global financial crisis caused by the destabilization of the financial market in 2007 was caused by the boom in the American housing loan market. Through the inappropriate approach of investment banks to granting mortgage loans to people with insufficient creditworthiness, and at the same time securitization of receivables by means of created bonds secured in debt, the financial sector led to the creation of a speculative bubble on the real estate market. Securitization led to the transfer of risk, which took place between the bank and the investor investing his capital in bonds secured by debt. It was based on an erroneous belief that the value of collateral (real estate) was constantly increasing, the increase in the value of real estate for a mortgage loan also increased its collateral and, at the same time, the security of issued bonds, as illustrated in Chart 1. The continuous increase in real estate prices (Chart 1) is an example of the arguments of representatives of financial institutions in reports for control authorities, in which it was argued that their situation is stable and the risk of such actions is adequately compensated. In 2007, however, the valuation of the real estate market began to fall, and the risk mentioned above materialized. This very moment should be considered as the bursting of the speculative bubble on the real estate market and the beginning of the great financial crisis, which manifested itself in the collapse of the labor market (Chart 2), economic recession in the US (Chart 3) and a major slump on the American stock market (Chart 4). A significant increase in the unemployment rate in 2008–2010 was caused by bankruptcies and restructuring of companies and financial institutions, such as:

- Lehman Brothers Bank;
- OWNIT;
- New Century Financial Corporation;
- Fannie Mae;

- Freddie Mac;
- Merrill Lynch.

It was mainly as a result of the deterioration in the condition of financial institutions that the US economy fell into recession from the third quarter of 2008 and lasted until the second quarter of 2009, and the improvement took place several months after the introduction of aid packages. It should be added that the discussed processes were accompanied by a slump on the American stock market, caused mainly by the declaration of bankruptcy by Lehman Brothers. This led to a serious destabilization of the financial sector in the US, as well as a decline in mutual trust among financial institutions, which further deepened the crisis.

At this point, it is necessary to discuss the impact of the financialization process on the emergence of a bubble in the US real estate market. For many years, the United States, as a country, tried to realize the American Dream, one of the main pillars of which was having a home for every citizen. The first attempts to stimulate the real estate market, which can be considered one of the most important sources of the global financial crisis of 2008, can be seen as early as the 1940s, when, under the New Deal program, the Fannie Mae institution was established, whose main task was to provide capital to the market mortgage loans by issuing bonds based on purchased loans (Nazarczuk, 2013, p. 86). In later years, to meet the needs of society in the housing financing system, a competing entity Freddie Mac was created, and then the entity Ginnie Mae was created from the structures of Fannie Mae. As a result of these actions, three companies specializing in increasing the availability of capital needed to finance mortgage loans operated in parallel on the American market.

At this point, it should be recalled that one of the main factors stimulating the financialization process is the development of financial markets and the creation of increasingly complex derivatives. Securitization, initiated by the first issue of MBS by the institution Ginnie Mae, was the most important source of new financial instruments. It is most often defined as a process based on isolating and merging receivables from the balance sheet together with generated cash flows, and then transforming them into better quality securities that will be sold to investors (Scheme 1). This solution allows you to receive the most liquid asset — cash, which expands lending, in exchange for illiquid assets. Miscellaneous Asset Backed Securities (ABS), or in the case of mortgage collateral known as the aforementioned MBS, were the main product of the securitization process. It should be added that a single package of primary instruments could be the basis for multiple issues, causing the created securities to be collateral for subsequent issues, and such a connection was conducive to a dynamic increase in the number and value of ABS on financial markets. Increasing the complexity of the issues, and thus reducing the transparency and the ability to assess the risk of derivatives, ABS as products of the securitization process could be the base instrument for more complex products based on debt or bonds (CDO). In the literature on the subject, there are at least several types of CDO in parallel, e.g. (Huterska, 2010, p. 97):

- CBOs — bond-based securities;
- CLOs — securities based on bank loans;
- synthetic CDO — securities based on credit derivatives, e.g. credit swaps;
- SFCDO — securities based mainly on structured products, e.g. ABS and MBS;
- CDO2 — CDO based on tranches of other CDOs (also the possibility of creating higher levels, e.g. CDO3, CDO4, etc.).

In order to visualize the scale of the problem, Table 1 presents the growth process in the value of issued and outstanding securitized instruments on the US market in the analyzed period.

At this point, the problems faced by investors during the purchase of these financial instruments should be presented. Products, such as e.g. SFCDO or embedded CDO2, were characterized by lower and lower transparency, thus it was impossible to determine the underlying instruments and the risk associated with the instruction for a given instrument. It

should also be mentioned that the risk assessment process was also significantly hindered due to high ratings issued by rating institutions. With regard to derivatives, a particularly problematic product was CDS, i.e. debt service cessation swap transactions, which act as an insurance policy that grants the right to obtain compensation for the issuer's insolvency. Since 2000, the US government has excluded from financial control a large part of the derivatives market, including CDS, which has contributed to a sharp increase in interest in such products (Roubini & Mihm, 2011, p. 105). Unfortunately, the purchase of CDS for speculative purposes, rather than for risk diversification, became one of the sources of later problems. A serious mistake was also the fact that the financial institutions offering the products in question did not create appropriate capital reserves to cover possible payments, it was, among others, that's why the insurance company AIG ran into financial problems (Sławiński, 2011, p. 64). To better reflect the nature of the discussed problem, it is worth using a simple example, because credit default swaps could lead to such pathological situations in which the lender could be a party to a transaction that profited from the insolvency of its own borrowers.

One should be aware that the intensification of the phenomenon of financialization may be fostered by the activity of the state in the legal and legislative area. Legal and organizational solutions related to the regulatory function of the state may create favorable conditions for a strong expansion of the financial zone. One should also pay attention to the adoption of the Community Reinvestment Act (CRA) in 1977, which was another stimulus stimulating the mortgage loan market, and thus stimulating the entire financial market. It was through this act, among other things, that the US Congress took the position that banks had an obligation to provide assistance in meeting the credit needs of the local community, which meant that banks were especially obliged to extend loans in low-income neighborhoods. One of the main objectives of this law was to reverse the effects of the so-called redlining, a discriminatory practice by the federal government and lenders that was seen when a loan was denied based on the insolvency of the area you lived in, rather than your creditworthiness. Complete deregulation of the financial sector followed the Gramm–Leach–Bliley Act in 1999, which lifted the ban on consolidation of commercial banks, investment banks, insurance companies and securities firms. The number of mergers and acquisitions has formed many powerful financial institutions that, bypassing the prudential and supervisory aspects, have the ability to take greater risks (Żywiecka, 2013, p. 84).

The Basel Accords were another legal framework that contributed to the increase in risk in the financial sector, although their main goal was obviously to standardize market practices in the field of risk management. The Basel Committee on Banking Supervision, responsible for drafting these standards, was created to create new international regulations after the collapse of the Bretton Woods agreement. Basel I is the first agreement that was introduced in 1992 in the G-10 countries (Balin, 2008, p. 142). The agreement introduced the concept of capital adequacy, which consisted in the requirement of availability of a minimum level of equity. The capital adequacy ratio was based on the relationship between equity and the structure of assets taking into account risk weights, which was supposed to lead to greater stability and greater security of funds entrusted to banks. The minimum level of the ratio was set at 8%, but the risk weights for assets, which were divided into several categories, were a controversial issue. For example, for the safest parts of assets, e.g. for cash, a 0% weight was assigned, for the MBS products described above, a weight of 20%, while mortgage loans were given a weight of 50%, while products with the highest risk received a weight of 100%. With such values of risk weights, there was a possibility of risk manipulation, and this practice was based on the frequent creation of MBS products with a risk weight of 20% from mortgage loans with a risk weight of 50%. Assets obtained from

the sale of MBS increased the level of reserves maintained, which at the same time contributed to obtaining the official risk at a low level, although the real risk increased sharply.

Loud criticism of the first agreement related to its inadequacy for developing countries resulted in the creation of a new capital agreement, the so-called Basel II. The amendment to the agreement extended the powers of supervisory institutions, which was supposed to ensure greater transparency of the financial sector and introduced the possibility of choosing the method of risk assessment and calculation of provisions. In principle, financial institutions had two methods of risk valuation at their disposal, the first of which consisted in dividing assets into risk groups as was the case when enforcing the first capital agreement. The difference was that the risk assessment was done by rating agencies and not assigned top-down. This mechanism allowed for further interference in the mortgage loan market, for example, individual mortgage loans received 35% of the risk, while the same corporate loans received 100% of the risk (the higher the risk, the lower the rating). Unfortunately, the new capital agreement did not take into account the situation in which the risk related to the issue of financial instruments based on securitization was underestimated by rating agencies, which translated into inflated ratings affecting the size of capital reserves of institutions holding given assets. There have been pathological situations in which rating agencies were pressured by financial institutions to assign the highest possible ratings (Sławiński, 2007, p. 46).

At the turn of the 21st century, due to the development of the Internet, the financial market took over a large part of the market capital surplus. The fashion for investing in technological companies (in practice, most of these companies had nothing to do with Internet technology) was initiated by the commercialization of the Internet with the Initial Public Offering (IPO) of Netscape, whose share price during the IPO was USD 28, while in the first session, the share price reached as much as USD 75, where it then normalized at USD 58. The main reason for the development of such companies on the American stock exchange was the act regulating the principles of IPOs, which was amended several times, for example, in the 1980s, a company applying for listing on the stock exchange was obliged to generate profit for at least three years, while already 10 years later this period was reduced to 3 months. During the growth of the dot-com bubble, financial regulators did not pay much attention to the condition and there were entities on the stock exchange that never made a profit. However, the situation on the capital market reached a point where the capitalization of the newly established technology company was higher than that of the largest non-IT companies. The bursting of the Internet bubble was heralded by the first financial statements that, contrary to investors' hopes for huge profits, presented multi-million losses. Ultimately, Microstrategy's share price dropped from around $3,500 to $4. The American currency reserve system, wanting to reduce the effects of the crisis, interfered in the financial market through monetary policy, e.g. by reducing interest rates, and as a consequence, the crisis situation was resolved quite quickly, which contributed to the belief that the central bank's action on the example of lowering interest rates would avoid crisis situations in the future (Grocholski, 2016, p. 218). However, low interest rates translated into low costs of obtaining a loan, which in a relatively short time led to the migration of capital from the capital market to the real estate market.

Anti-risk measures implemented by the FED and the administration of President Barack Obama.

The previous considerations should be supplemented with an approximation of corrective actions implemented by the American authorities in the face of the crisis, which consisted primarily of:

- changing the conditions of concluding transactions on the financial market;
- conducting long-term operations in open market structures;
- changes in credit operations;

- changes in directories constituting acceptable security features;
- a significant increase in the volume of loans secured by securities.

At the beginning of the crisis, still in 2007, the FED started preventive measures after the appearance of its first symptoms, which were mainly aimed at increasing the stability of the financial system in the US by regulating the demand for money in the commercial banking sector while maintaining the monetary policy target FED regarding money market rates, as well as ensuring liquidity in the overnight lending market and guaranteeing the availability of money should commercial banks require additional loans (Papadia, 2008). Unfortunately, despite all systemic concessions, the crisis continued to deepen, which resulted in the creation of the first Term Auction Facility (TAF) aid program in December 2007, which consisted in granting loans secured by the borrower's assets and whose starting package amounted to USD 20 billion. This program had an interest rate of 4.65% (Federal Reserve, 2007), and the standard interest rate of the federal funds operation was 50 basis points lower, indicating the huge market demand for money. Auctions related to the operation of the TAF aid program were held frequently (twice a month) and amounted to approximately USD 60 billion (the last auction was held on 8 March 2010).

At the beginning of March 2008, additional steps were taken with regard to restructuring and recovery aid packages. The FED launched another 28-day repo called Single-Tranche OMO. In this aid programme, all securities qualified for standard open market operations could be used as collateral, and in the next programme, Term Securities Lending Facilities (TSLF), introduced at the beginning of 2008, it was possible to exchange sets of securities for State Treasury securities and it was an extension another program already operating before the crisis (SOMA), where securities could be borrowed, but only on the basis of overnight transactions. Through the activities of the TSLF program, the monetary authorities wanted to some extent to clear the market of very risky, low-liquid securities and replace them with highly liquid Treasury securities, thanks to which there was no depreciation of the dollar and fluctuations of real interest rates in the banking system.

The next area in which corrective actions were taken by the authorities were ABS (Asset Backed Securities) instruments, which had their roots mainly in consumer loans. The TALF (Asset Backed Securities Lending Facility) program was dedicated to these activities, under which the US Federal Reserve planned to grant USD 200 billion in loans to entities involved in the ABS market. This activity was intended to stimulate the ABS market, which was in a stagnant phase during the financial crisis, which of course translated into a drastic reduction in the number of loans granted, especially mortgage loans, which in the long run could lead to a collapse on the development market and, as a result, a significant deepening of crisis.

With the revival of the ABS instruments market, the US Federal Reserve decided to purchase bonds of entities that suffered the most from the stagnation on the ABS instruments market, i.e. Fannie Mae, Freddie Mac and Federal Home Loan Banks, and the value of the purchased bonds amounted to PLN 100 billion USD, while the value of derivatives issued by these institutions amounts to USD 500 billion. These actions were aimed at further stabilizing the financial market sector and preventing the collapse of these institutions.

The last of the significant activities of the US Federal Reserve to stabilize the financial market, carried out as part of the aid packages, was the purchase of treasury securities from financial institutions in March 2009 for the amount of USD 300 billion. These activities were of a liquidity nature, and their interest rate was rapidly decreasing, which was supposed to encourage banks to sell them. Changes in the interest rate on treasury securities are presented in Chart 5.

In the first report issued during the crisis on June 10, 2009, the FED informed about

the actions of the authorities aimed at obtaining an appropriate level of liquidity in the financial market, the course of which is presented in Chart 6. The analysis of the data presented in the Chart 6 allows to conclude that the volume of "liquidity" loans exceeded USD 1.5 billion per week, and the implemented liquidity and refinancing programs conducted during the crisis brought the expected effect, at the same time contributing to the reduction of credit risk aversion and initiating the return of investors to the markets previously affected by the crisis.

In addition to the aid packages implemented by the FED, the state administration also introduced many changes regarding the market, but the biggest of them took place when Barack Obama became president. The new president led to a reduction in salaries in administrative structures, as well as in the remuneration of presidents and managers in companies that actively benefited from state funding from the stimulus program. They were mainly located in sectors that should limit the rising unemployment level and contributed to the decline of the unemployment level to around 1% in the two years after its introduction. In addition, the president announced that in order to receive government support, banks must relax their restrictive approach to repayment of mortgage loans, which was often associated with evictions, which only deepened the crisis and human tragedies.

The next administrative step was to help General Motors, which declared bankruptcy in June 2009, but the American government was prepared for this, so it presented to the company's authorities a restructuring plan, which included the purchase by the state of 60% of shares in GM motors for 50 billion USD and the replacement of the board and the entire management team (Żelazny, 2015).

The last of the anti-crisis changes implemented by the government of President Barack Obama was the revision of military spending and its reduction by nearly USD 2 billion.

5. Conclusion

Financialization may be considered as an unfavorable process that, occurring in the modern economy, may increasingly contribute to the emergence of negative phenomena, not only in the financial sector, but also in most of its other areas. Although the scale and scope of these phenomena may vary, e.g. depending on the state of development and structure of the financial sector, the number and degree of advancement of available financial instruments, etc., in the most serious cases they may be the nucleus of local crises. One should be aware that as the size and importance of the financial sector in a given country increases, the threat from this process may also increase. In the era of globalization and increasingly strong interdependencies between the financial sectors of the largest countries in the world, financialization can be considered as one of the potential sources of future economic crises.

It should be postulated that in the risk management process of the financial sector of a given country, as well as in economic analyses, this unfavorable phenomenon should be taken into account, attempts should be made to estimate and evaluate its level, and to identify its main sources and symptoms. Continuous monitoring is of key importance here, because with the technical and technological development, and especially the progressing computerization of the financial industry, the degree of sophistication and complexity of financial instruments that appear on the market increases, and thus it is difficult to doubts as to what risk is associated with their widespread use. Particular attention should be paid in the financial sector to the possibility of the so-called long risk tails, i.e. events whose negative effects will materialize only after years, without any previous symptoms, signs or warnings. Another important issue that should be paid attention to in the coming years is the progressive autonomy of the financial sphere and its gradual "detachment" from the real sphere, as this process

may lead to the emergence of completely new types of risk.

References

Balin, B.J. (2008). *Basel I, Basel II, and emerging markets: a nontechnical analysis*. The Johns Hopkins University School of Advanced International Studies. https://dx.doi.org/10.2139/ssrn.1477712.

Bosek, D. (2012). Przyczyny i mechanizm kryzysu a innowacje finansowe. In K. Piech, & K. Wierus (Eds.), *Ostatni światowy kryzys finansowy: przyczyny, przebieg, polityka, przedsiębiorstwa* (pp. 65–83). Instytut Wiedzy i Innowacji.

Duménil, G., & Lévy, D. (2004). *Capital resurgent: roots of the neoliberal revolution*. Harvard University Press.

Epstein, G. (2005). Introduction: financialization and the world economy. In G. Epstein (Ed.), *Financialization and the world economy* (pp. 3–16). Edward Elgar.

Federal Reserve. (2007). *Federal Reserve announces results of auction of $20 billion in 28-day credit held on December 17, 2007*. Retrieved 12.01.2023 from http://www.federalreserve.gov/newsevents/press/monetary/20071219c.htm.

Federal Reserve. (2009). *Annual Report 2009*. Retrieved 23.01.2023 from https://www.federalreserve.gov/boarddocs/rptcongress/annual09/pdf/ar09.pdf.

Federal Reserve. (2010). *Monetary Policy report to Congress: part 2: recent financial and economic developments*. Retrieved 12.01.2023 from http://www.federalreserve.gov/monetarypolicy/mpr_20100224_part2.htm.

Gostomski, E. (2014). Finansyzacja w gospodarce światowej. *International Business and Global Economy*, 33, 299–311. http://dx.doi.org/10.4467/23539496IB.13.021.2406.

Grocholski, Z. (2016). *Banki i rynki finansowe od zaufania publicznego do kasyna*. Poltext.

Huterska, A. (2010). *Kredytowe instrumenty pochodne w zarządzaniu ryzykiem kredytowym*. CeDeWu.

Investing.com. (2023a). *Stany Zjednoczone: produkt krajowy brutto (PKB)*. Retrieved 17.01.2023 from https://pl.investing.com/economic-calendar/gdp-375.

Investing.com. (2023b). *Stany Zjednoczone: stopa bezrobocia*. Retrieved 21.01.2023 from https://pl.investing.com/economic-calendar/unemployment-rate-300.

Marszałek, P. (2012). Finansyzacja: problemy i kontrowersje. *Prace Naukowe Uniwersytetu Ekonomicznego we Wrocławiu*, 247, 220–230.

Nazarczuk, J.M. (2013). Wpływ światowego kryzysu finansowego na gospodarkę Polski i jej regionów. In R. Kisiel, & M. Wojarska (Eds.), *Wybrane aspekty rozwoju regionalnego* (pp. 75–89). Fundacja „Wspieranie i Promocja Przedsiębiorczości na Warmii i Mazurach".

Palley, T.I. (2007). Financialisation: what it is and why it matters. *Levy Economics Institute Working Paper*, 525, 1–31. https://dx.doi.org/10.2139/ssrn.1077923.

Papadia, F. (Ed.). (2008). Central bank operations in response to the financial turmoil. *CGFS Papers*, 31, 1–43.

Ratajczak, M. (2012). Finansyzacja gospodarki. *Ekonomista*, 3, 281–302.

Roubini, N., & Mihm, S. (2011). *Ekonomia kryzysu*. Wolters Kluwer.

Short, D. (2016). *The S&P 500, Dow and Nasdaq since their 2000 highs*. Retrieved 27.01.2023 from https://www.investing.com/analysis/the-s-p-500,-dow-and-nasdaq-since-their-2000-highs-200134615.

Sifma. (2011). *Global securitization update 2010*. Retrieved 27.01.2023 from https://www.sifma.org/wp-content/uploads/2017/05/global-securitization-update-2010.pdf.

Sławiński, A. (2007). Przyczyny i konsekwencje kryzysu na rynku papierów wartościowych emitowanych przez fundusze sekurytyzacji. *Bank i Kredyt*, 8–9, 12–17.

Sławiński, A. (2011). Stabilność finansowa. In A. Sławiński (Ed.), *Polityka pieniężna* (pp. 51–64). C.H. Beck.

Statista. (2023). *S&P/Case Shiller U.S. National Home Price Index from 2000 to 2022*. Retrieved 27.01.2023 from https://www.statista.com/statistics/199360/case-shiller-national-home-price-index-for-the-us-since-2000.

Żelazny, R. (2015). „Umarł General Motors (GM) niech żyje Governmental Motors (GM)": decyzja koncernu General Motors o złożeniu wniosku w sprawie ochrony przed wierzycielami i restrukturyzacji poprzez upadłość. *Prace Naukowe Uniwersytetu Ekonomicznego w Katowicach: Ekonomia menedżerska: problemy decyzyjne w studiach przypadków*, 116–121.

Żywiecka, H. (2013). *Niestandardowe działania banków centralnych w warunkach globalnego kryzysu finansowego*. CeDeWu.

Żyżyński, J. (2009). Neoliberalizm jako strukturalna przyczyna kryzysu a poszukiwanie dróg naprawy. *Ekonomista*, 2, 163–188.

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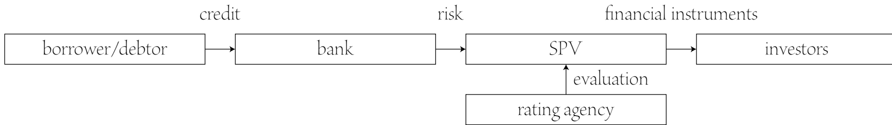
Appendix

Table 1.
Approximate size of the US securitized instruments market (in USD million)

Year	Emited			In circulation		
	ABS	CDO	MBS	ABS	CDO	MBS
2000	281 050,9	46 267,20	685 020,6	909 047,4	148 986,2	3 532 019,9
2001	326 205,6	48 395,90	1 465 102,4	1 010 128,5	184 951,1	4 106 004,9
2002	373 902,6	56 335,60	2 310 962,6	1 124 583,1	218 951,4	4 769 918,2
2003	461 542,3	60 778,30	3 186 776,5	1 210 897,8	255 660,9	5 223 153,3
2004	651 531,3	125 784,10	1 907 110,9	1 428 781,2	343 451,5	5 387 905,8
2005	753 515,4	186 223,40	2 243 754,7	1 608 737,1	461 206	6 160 922,8
2006	753 875,9	379 874	2 149 110,4	1 895 264,4	768 029,4	7 084 856,1
2007	509 732,3	300 673,10	2 237 179	1 905 105,4	1 004 391,3	8 162 308,7
2008	139 491,7	35 838,80	1 384 311,8	1 642 086,5	925 067,2	8 381 322,1
2009	150 913,4	14 048,20	2 060 990,7	1 454 059,7	842 985,6	8 501 751,8
2010	107 494,2	6 834,70	1 932 499,8	1 265 257	743 342,3	8 485 133,8

Source: Own preparation based on Sifma (2011).

Scheme 1.
Securitization process

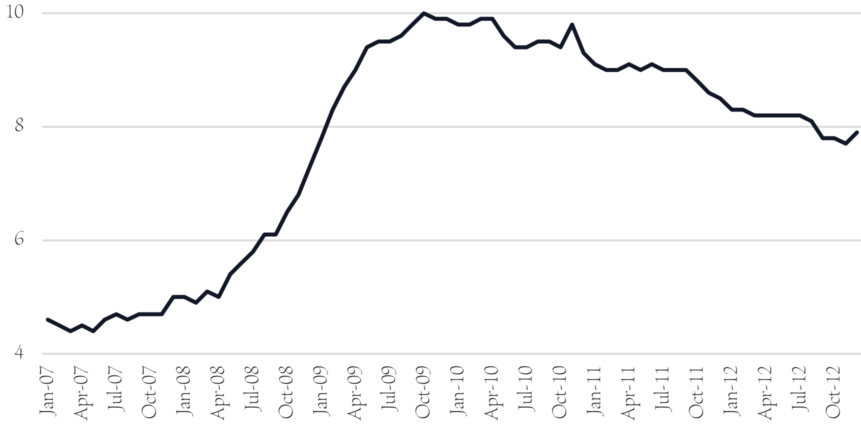


Source: Own preparation based on Bosek (2012, p. 75).

Chart 1.
US real estate prices in 2000–2016 in relation to the base price in 2000

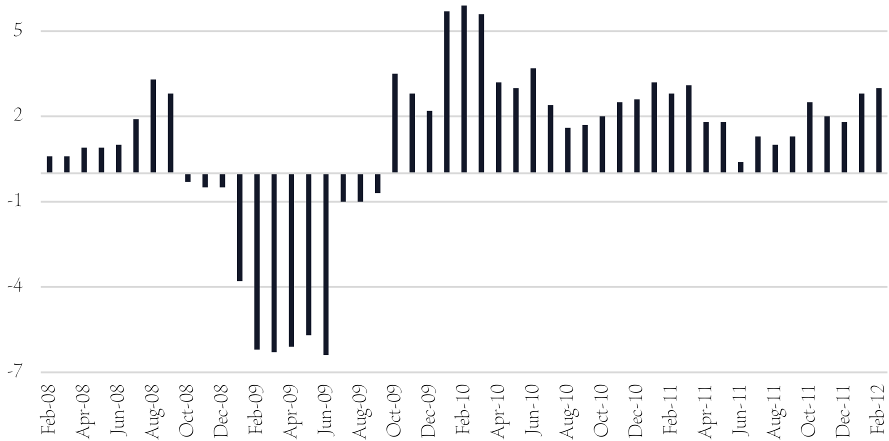
Source: Own preparation based on Statista (2023).

Chart 2.
Unemployment rate in the US in 2007–2012 (%)



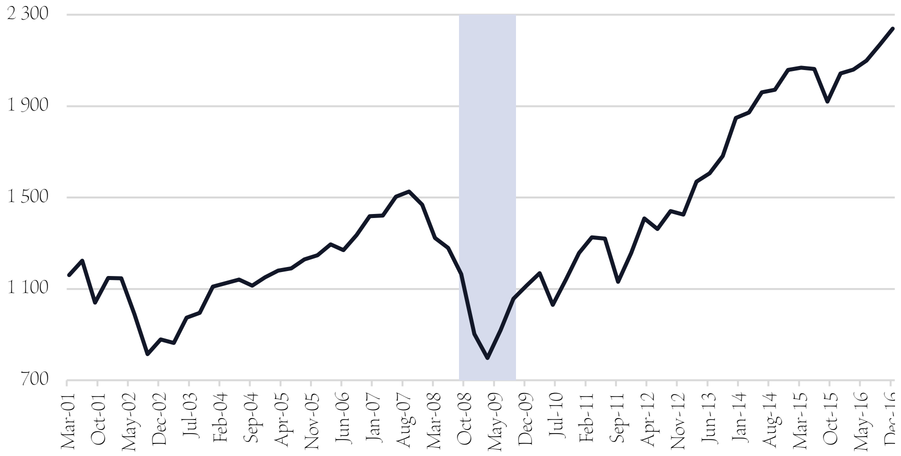
Source: Investing.com (2023b).

Chart 3.
US gross domestic product (%)



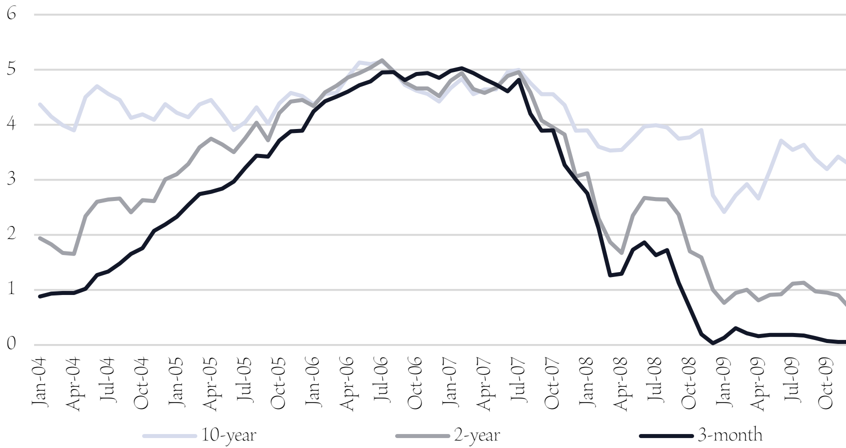
Source: Investing.com (2023a).

Chart 4.
S&P 500 index value in 2001–2017



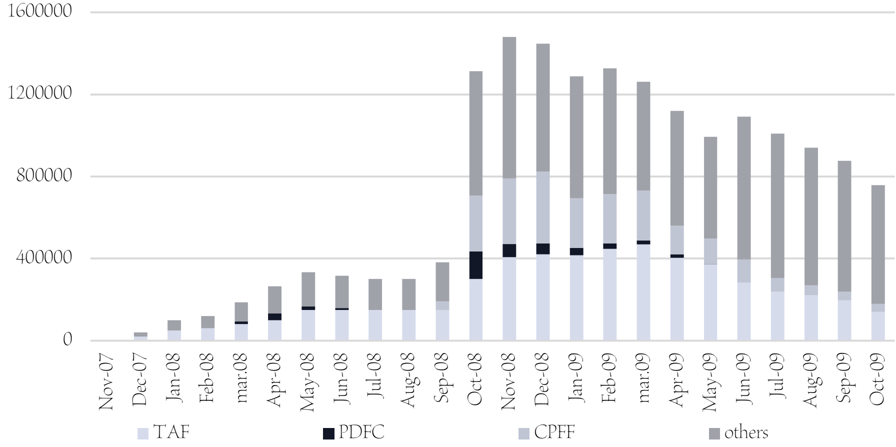
Source: Short (2016).

Chart 5.
Interest rate on selected treasury securities in the USA 2004–2009 (%)



Source: Federal Reserve (2010).

Chart 6.
The value of loans granted by the FED as part of liquidity operations on a quarter basis in 2007–2009 (bln USD)



Source: Federal Reserve (2009).