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THE ROLE OF DERIVATIVE INSTRUMENTS IN THE INITIATION OF THE FINANCIAL CRISIS AND ITS PROGRESS

Introduction

The contemporary financial market can be characterized by dynamic changes, prompt introduction of innovative financial products and modern, increasingly complex, instruments of financial engineering. Such changes are the consequence of new needs as regards the acquisition of capital, investing, risk management, as well as the search for effective methods of gaining profits. However, in the recent years it was the market of OTC derivatives that was the most significant and the fastest growing segment of the financial market. The emergence of derivatives on the world financial market generated a new quality in the field of investment risk management. The derivatives, which make it possible to divide and transfer different types of risk, lead to the growth of the capital allocation efficiency, the improvement of its global movement and the increase of the possibilities to diversify the investment portfolio. The factor that significantly popularized, and consequently supported the development of derivatives worldwide, is the mechanism of financial leverage due to which derivatives are popular as regards investing.

The outbreak of the financial crisis stopped the development of the derivative market. This was caused by the increase of the aversion of investors to take risks and by the growth of the requirements concerning the collateral of derivate transactions on the OTC market. The crisis showed several weaknesses of the widely applied mechanisms of risk transfer, particularly of the transfer of the credit portfolio risks directly to final investors. The complexity of the structured securitization products resulted in the underestimation of the risk taken by investors. Credit derivatives, which developed dynamically in the years preceding the crisis of 2008, made it possible to take the investment risk with a high financial leverage. In the case of some major financial institutions, it turned out that the risk they had taken exceeded their financial capacity and resulted in bankruptcy.

The aim of the article is to define the role of derivatives in the initiation of the crisis and its further progress. The article discusses the conditions for the application of derivatives and the securitization mechanism; it shows how the innovative financial instruments intensified the turbulence on the financial markets and presents the functioning of derivatives in the context of challenges related to the regulation and supervision of the financial market. The goal of the research is to find the answer to the question whether, and to what degree, the securitization mechanism and the widespread of credit derivative instruments were the cause of the escalation of the disturbance on the financial markets that finally transformed into a worldwide economic crisis.

1. Real estate financing as the prerequisite for the outbreak of the financial crisis

The financial crisis that started on the American market of subprime mortgage credits in 2007 has been the biggest world crisis since the Great Depression of 1930s. Although the first symptoms of the current financial crisis were visible already in 2006, its origins date back to a much earlier period.

After the burst of the speculative bubble of dot com companies in 2001, the US government lowered the income tax rates in order to stimulate the economy. Moreover, the Federal Reserve – with the aim to stimulate the economy and increase the employment – lowered interest rates to 1%, which was the lowest level in the last 40 years. The lenient monetary policy and the accompanying low level of interest rates[1] resulted directly in low mortgage interest rates, which resulted in a substantial increase of the demand for credits from all business entities.

The method of financing mortgage loans had a sort of internal mechanism which – in the cases of minor turbulences – triggered an avalanche of events that led to a serious crisis on financial markets. Traditionally, banks based their credit operations on the deposits that were acquired from their clients and the value of the credits that was granted to clients depended on the value of deposits. The deregulation of the financial markets in the US in the mid-1990s

[1] The too low level of interest rates in the years before the crisis increased artificially the demand for credits. The state's decision on the interest rate of 1% destabilized the financial market. In the years before the crisis, money policy was based on the Taylor rule, according to which the level of interest rates depended on the change of such macroeconomic aggregates as inflation and GDP. Such policy, which was implemented consistently in the 1980s, proved to be effective and resulted in good economic results at that time. The derogation from that policy and the resulting loose money policy led to an excessive credit expansion and a boom on the real estate market which in time turned to a speculative bubble. Even though the derogation from the Taylor rule could be justified by the fear of deflation (as it happened in Japan in the 1990s), it led to an excessively loose money policy and to a significant deviation of real interest rates from the „alternative" level that was determined by the Taylor rule. More on the subject in: J. B. Taylor, *Zrozumieć kryzys finansowy*, Wydawnictwo Naukowe PWN, Warszawa 2010, pp. 24-25.

facilitated the issue of bonds collateralized by mortgaged credits and it did not force the banks to keep credits in their portfolios to the date of full repayment. Securitization enabled banks to decrease the asset-related risks by the sales of the assets and the transfer of the risk related to them[2].

Thus, banks lost the capacity to assess precisely and reliably the financial standing and credit capacity of individuals who were granted mortgage credits. As the interest in mortgage credits increased, banks lowered their credit requirements and, consequently, mortgage credits were obtained by clients without a positive credit record or permanent income (the so called NINJA loans – no income, no jobs, no assets). Banks compensated the growing risks by the increase of interest rates. As a result, a market of lower-quality mortgage was generated, which was referred to as subprime market.

An easy availability of cheap credits and the optimism regarding the future prosperity supported business investment operations, which were expected to bring higher return to the investors in the future. Thus, an interest grew in the purchase of securities issued by business, which lead to the increase of their prices[3].

The increased interest in bank loans and the credit expansion of banks resulted in a significant increase of demand for flats and, consequently in the increase of their prices. As a result, the market value of mortgage collaterals went up, which made it possible for the banks to increase the value of particular credits. Mortgage credits enabled the financing of the increasingly more expensive flats, which led to the increase of inflation. In order to decrease the inflation, the Federal Reserve increased interest rates several times. High interest rates resulted in the increase of installments and the problems with taking further credits especially by highly indebted households. Thus, the borrowers from the subprime group started having problems with paying back the loans. Moreover, due to the restrictions regarding the number of new credits and because of the sell-out of indebted properties, the prices of flats started to go down. The institutions that financed real estates ceased to have means to repay their liabilities[4]. In order to avoid the loss of financial liquidity, banks were forced to take multibillion credits in other banks.

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[2] P. Bożyk (red.), *Światowy kryzys finansowy: przyczyny i skutki,* Wyższa Szkoła Ekonomiczno-Informatyczna, Warszawa 2009, p. 17.

[3] W. Nawrot, *Globalny kryzys finansowy XXI wieku. Przyczyny, przebieg, skutki, prognozy*, Centrum Doradztwa i Wydawnictw Multi Press, Warszawa 2009, p. 42.

[4] W. Przybylska-Kapuścińska (ed.), *Instrumenty pochodne w globalnej gospodarce od A do Z,* Wydawnictwo Narodowego Banku Polskiego, Warszawa 2012, p. 34.

The problems to pay back credits and the bankruptcy of numerous small mortgage banks in the US led to a sharp decline in the market value of bonds collateralized by mortgage credits. The difficult situation did not only affect banks granting credits but also the banks and investment funds that had previously bought a significant volume of mortgage financial instruments.

In March 207, after the bankruptcy of one of the greatest credit institutions - the New Century Financial Corporation – a wave of bankruptcies started and problems appeared with the sales of properties. Banks were forced to sell the seized properties and had to accept considerable losses. At the turn of June and July, the investment funds of the Bear Stearns that had previously invested substantial means in securities collateralized by credits, run into serious financial problems and, consequently, suspended the payments. That caused panic on the stock exchange and major drops in stock exchange indexes[5].

The crisis spread quickly beyond the US[6]. Due to the mechanism of securitization, all over the world, the banks that invested in American securities collateralized by subprime credits, made losses. Because of the decline in the market value of bonds collateralized by mortgage, major banks had to create substantial target reserves. The banks with free financial means stooped lending them to other banks that badly needed liquid assets due to the growing uncertainty and the lack of trust. The uncertainty about the condition of the counterparty resulted in the paralysis of the interbank market, which made it necessary for central banks to pump resources into the financial market in order to avoid a more serious financial crisis. The Federal Reserve Board, the European Central Bank, the Bank of Japan and other central banks granted multibillion loans to commercial banks that were threatened by the loss of liquidity. Such measures resulted only in a temporary alleviation of the situation on financial markets. In the majority of countries the first symptoms of the economic slowdown appeared and some of the most developed countries experienced a negative growth dynamics. [7]

[5] A. Matysek-Jędrych (ed.), *Instytucje i rynki wobec kryzysu finansowego – źródła i konsekwencje kryzysu*, CeDeWu, Warszawa 2011, p. 173.
[6] The financial crisis spread over international markets through various transmission channels, among which the most significant ones are: the flow of capital, foreign trade channel, securitization as well as the diminishing demand for ABS securities and CDO structured products. In the globalized economy, where problems of one country transfer to other countries, the economic downturn in the US resulted in the economic and financial recession in many countries across the world.
[7] Obviously, there are more reasons of the financial crisis than the presented conditions of financing on real estate markets, including new financial instruments and securitization. The reasons of the disturbances on the world financial markets and the resulting turmoil in economies includes phenomena that are both macro- and microeconomic in character. Among the macroeconomic reasons, the attention should be paid to the increasing scale of global imbalances in the last decade and a long period of low level real interest rates. The microeconomic reasons concern mainly the functioning of the financial system and the existing institutional

2. The role of derivatives in the current financial crisis

During prosperity, households and business are optimistic about their future and the capacity to generate cash flow. However, the excessive optimism and self-confidence result in the fact that they stop assessing their financial position in a rational way, which leads to underestimating the risk of the change of positive trends and economic conditions in the future. In the course of the previous boom, business and households expected the multiplication of their capital and started large scale investing on the property market being certain that the boom was going to last. As a result, their demand for external credit financing increased, which led to a substantial increase in demand for business investment credits, consumption credits and mortgage credits for households[8].

The favorable economic conditions in the US, and particularly a stable high employment rate, which resulted in the increase of personal income, caused the increase in the demand for credits. The significant growth of GDP per capita in 1999-2006 improved the economic condition of numerous households , which had an impact on the decisions to buy flats. Moreover, the dynamic increase in property prices contributed to the common belief that investing in that sector was extremely profitable, which did not only make American citizens buy houses for their own use but also for a resale. Thus, their behavior was purely speculative. Additionally, a relatively low cost of mortgage, whose interest rate in 2000 dropped from 8% to 5.8%, influenced the growth in the demand for mortgage loans[9].

Together with the improvement on the American real estate market and the low interest rates, the availability of mortgage credits increased, which resulted in the growth in household indebtedness. The growing indebtedness was the cause of the problems with credit processing when the interest rates in 2005-2007 went up significantly due to the US government's action.

The increase of the demand for mortgage credits resulted in the expansion of credit operations. The growth of the credit supply was caused by several factors. Firstly, business financed increasingly its investments by short-term credits, which were a less costly way of capital acquisition than long-term credits. Banks accepted more frequently the fact that their credits could be repaid by refinancing/rolling them over[10]. Secondly, an important reason for

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conditions. However, there is no doubt that the crisis was caused to a large degree by the application of financial innovations, including credit instruments as well as the securitization of mortgage credits, with the accompanying weaknesses of the regulatory system.

[8] A. Szyszka, *Behawioralne aspekty kryzysu finansowego*, „Bank i kredyt" 2009, No. 4, p. 11.

[9] P. Bożyk (ed.), *Światowy*…, op. cit., p. 21.

[10] W. Nawrot, *Globalny*…, op. cit., p. 59.

the growth of the mortgage credit volume was the fact that credits were collateralized by the borrowers' assets. Thus, the banks were given a feeling of security which was deceptive as it is well known that the market value of assets was not constant in the long term. Another significant cause of the growth in credit supply was securitization, which made it possible to transfer credit risk to the insurance sector or the securities market. By taking advantage of securitization, banks gained funds for further credit operations.

By their endeavor to increase the share on the credit market and to raise the profits, financial institutions contributed to the growth of competition between the players on that market. They ignored the risk and gave mortgage credits to as many borrowers as possible since the growing volume generated profits. The rivalry led to an increasing willingness to take risks. The property market rush that was stimulated by lower interest rates and easy credit availability reached a vast niche of potential subprime borrowers with the lowest income and who had not been eligible for credits before. The effective demand on their part contributed to the additional increase of property prices and, consequently, to the growth of the speculation bubble. The dynamic development of the property market and the increasing number of its participants resulted in the increase of property prices and the value of mortgage credits. Such circumstances led to the expansion of the mortgage credit market, which resulted in greater opportunities for the financial institutions to generate income. Thanks to the prosperity on the property market, banks had higher income and, what is more, there was a growing number of people interested in the participation in the increasing market of mortgage credits[11].

Due to the globalization of financial markets, the crisis in one market segment moves quickly to other segments. In the case of the American subprime credit crisis, the expansion and the subsequent recession on the property market led first to the development and then to the crash on the financial market. The current crisis on the mortgage credit market spread beyond credit institutions mainly through securitization[12]. As financing was easily available, the capitals of banks constituted the basic restriction to credit operations. According to the prudential rules, banks were required to maintain capital whose value depended on the risk taken. However, the possession of high bank capital during the economic growth was not beneficial to the shareholders as it decreased the financial lever applied by banks, which resulted in the limitation of the return on invested capital. The remuneration of the board

[11] M. Kalinowski (ed.), *Rynki finansowe w warunkach kryzysu*, CeDeWu, Warszawa 2009, p. 202.
[12] J. Czech-Rogosz, J. Pietrucha, R. Żelazny (ed.), *Koniunktura gospodarcza: od bańki internetowej do kryzysu subprime*, Wydawnictwo C. H. Beck, Warszawa 2009, p. 145.

members of the banks depended on the financial results so they were motivated to search solutions that would decrease bank capital burdens. The sales of mortgage receivables by issuing securities backed by them was the solution that made it possible to avoid the restrictive capital requirements. The issue of mortgage backed securities (MBS) led to the transfer of credit risks from banks' balance sheets, which made granting credits less risky. In such circumstances, an active trade market of such instruments was created, which facilitated effective credit risk management by banks[13].

In the period of prosperity, the banks that gave credits, sold their receivables to government agencies to gain capital necessary for further credit operations. Credits that were integrated and packed into pools, constituted a basis for the issue of mortgage bonds which in turn served as the basis for more complex financial structures. The dynamic development of subprime credits among the total number of the granted credits was accompanied by the loosening of the requirements regarding the purchase of receivables. As a result, a significant share of the securities that were issued, was based on risky credits. Excessive expectations regarding the return on investment made banks continue the use of secondary instruments based on collateralized obligations (CDO) that were constructed on increasingly risky credits. Due to a high arranger's credit rating, they were considered secure. The issues were collateralized by other portfolios of bonds which were often much more hazardous. However, the estimated risk rating was not high as it was based on previous insolvency records. This type of instruments was quickly taken in possession by major and renowned financial institutions[14]. When the volume of mortgage credit repayment was high, the level of profits for the investors was impressive. However, 2000-2005 was the period of the growing number of insolvent subprime borrowers. It is estimated that at that time the number of properties seized by banks doubled. In 2006, due to a sudden increase of interest rates, the index of such properties reached 5.5%, considering the period of 6 months after credit granting.

The incapacity to pay back the liabilities resulted in banks seizing the credited properties. That led to the increase in their supply, which resulted in the decrease of the prices of properties and, consequently caused the collapse on the market of structured debt instruments. The increase in the number of credits that were not repaid had a substantial impact on financial institutions whose portfolios included instruments based on mortgage interest

[13] A. Waszkiewicz, *Ryzyko sekurytyzacji a kryzys finansowy*, Oficyna Wydawnicza Szkoły Głównej Handlowej, Warszawa 2011, p. 156.
[14] W. Nawrot, *Globalny*…, op. cit., p. 77.

payments. As a result, there was a sudden downturn in the demand for such type of securities and the decrease in the liquidity on the market of the structured financial instruments. In a short period of time the drop in their prices was so significant that they became practically worthless. The decrease in the prices of structured debt instruments caused a liquidity crisis in banks and, consequently, a wave of bankruptcies among financial institutions and a burst of the bubble on the American property market[15].

The mechanism of securitization allowed for an almost unlimited credit expansion of financial institutions. In the late 1990s the securitization was so widespread that in the USA in 2007 nearly half of mortgage credits, commercial bonds and other liabilities were securitized. In the period of economic prosperity not only the credits but also practically all possible debts were securitized. Securitization was beneficial mainly for banks, which did not have to dispose of significant equity capital as they sold effectively their liabilities. Thus, financial markets could expand as the new innovative instruments were considered liquid, low risk and highly profitable. In the search for profits, banks resorted excessively to securitization, which resulted in the lack of control over the risks and exposed them to substantial losses[16]. Due to securitization, the situation that seemed to be only a downturn on the American property market, turned into a worldwide crisis. The financial crisis, through the global market of derivative credit instruments, did not only affect the banks that granted subprime mortgage credits but also investment fund companies, investment banks, insurance companies, rating companies[17] and other entities that participated in subprime refinancing. Moreover, the crisis spread to international financial markets and consequently the effects of the American credit crisis affected , to a greater or lesser extent, the financial markets in many countries throughout the world.

The development of securitization led to the development of the market of mortgage credit financial instruments and made it possible to create MBS derivates. MBS (Mortgage –

[15] W. Przybylska-Kapuścińska (red.), *Instrumenty*…, op. cit., p. 90.
[16] K. Piech, K. Wierus (ed.), *Ostatni światowy kryzys finansowy. Przyczyny, przebieg, polityka, przedsiębiorstwa*, Instytut Wiedzy i Innowacji, Warszawa 2012, p. 99.
[17] At this point it is worth pointing at the role of the rating institutions in initiating the crisis. Due to the increasing supply of the structured products and the necessity to give them a rating, the profits of the agencies went up quickly. High ratings were commonly identified with secure and profitable investments. However, the fact was neglected that the agencies were paid by the issuers whose securities were subject to rating. Moreover, the investors were not aware of the risk that they were taking over as the ratings granted by the agencies were not adequate to the cumulated risk. What is more, the assessment of the securitization risk was often based on theoretical models that did not consider several variables of the external environment, which resulted in the increase of the probability of faulty rating. The rating agencies became one of the elements of the procyclicality of financial markets.

Backed Securities) are share certificates or bonds that testify the right to obtain payments related to the repayment of mortgage credits that were securitized. The first MBS were issued in 1970 by the Government National Mortgage Association (GNMA), referred to as Ginnie Mae. Soon afterwards Federal National Mortgage Association (Fannie Mae) and Federal Home Loan Mortgage Corporation (Freddie Mac) started further MBS issues. Their basic objective was to buy mortgage credit portfolios from banks and then to issue MBS for secondary trading[18].

In 1983, Freddie Mac, the US government agency, issued for the first time the Collateralized Mortgage Obligation (CMO) - a type of more complex instruments. The financial world was so impressed by the securitization that the MBS market became the biggest market segment of debt instruments in the US. MBS were sold throughout the world as they really were a profitable, flexible and safe product. At first the belief in their profitability and the trust to the rating agencies was significant. As long as the process concerned mainly prime borrowers, the MBS market functioned properly and it more than doubled in eight years. However, the unbroken upward trend of the MBS stopped when the financial crisis appeared.

In the period of economic prosperity, the American mortgage banks, which believed that the growth trend would continue, decreased their requirements and limitations as regards potential new borrowers. The liberalization of the credit policy together with the securitization mechanism were supposed to be a method to ensure the prosperity of American economy. In 2006, as a result of the high dynamics of the subprime market development, over 20% of mortgage credits came from the subprime segment and the securitization rate amounted to over 80%. At that time, there was a common belief that the problem of "bad" credits could be easily solved by their resale through securitization. In 2007, when the first symptoms of the crisis emerged, the subprime credit market was reduced to 8% of the total value of the granted mortgage credits and their securitization rate reached almost 100%[19].

Mortgage financial instruments were highly popular among institutional investors. The main reason for buying the MBS was the common conviction that they were safe as regards the investment risk since were collateralized by mortgage credits and were highly rated by renown rating agencies. Moreover, an important role in the increasing credibility of the flows generated by such instruments was played by the guarantee institutions that guaranteed MBS products. The application of CDS (Credit Default Swap) derivatives made it possible for the rating

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[18] W. Przybylska-Kapuścińska (ed.), *Instrumenty*…, op. cit., p. 92.
[19] A. Huterska, *Kredytowe instrumenty pochodne w zarządzaniu ryzykiem kredytowym*, CeDeWu, Warszawa 2010, p. 59.

agencies to give the highest AAA – AA ratings to MBS and then to "disseminate" MBS to the international financial markets through the issuers. As highly reputable and the biggest financial institutions were engaged in trading MBS, such operations gained an adequate investment significance. Consequently, the market of securitized securities developed dynamically and in mid-21st century the total value of MBS in the portfolios of US banks amounted to over 1 billion dollars[20].

Due to the increase of interest rates in 2006, some borrowers stopped paying back their credits. Banks were forced to seize the pledged properties. The number of properties seized by banks almost doubled. The increase in the supply of properties and the drop in demand that was caused by the rising credit costs resulted in the decrease in the prices of property. It was an obvious symptom for the MBS market which was totally dependent on mortgage credits that there was a need for the correction of their value. Shortly afterwards, rating agencies started lowering their ratings for MBS on a large scale, which challenged the rationality of the way they were determined. As a result, there was a downturn on the MBS market which led to a significant decrease in the value of MBS. The institutions which kept them in their portfolios incurred losses totaling billions of dollars. Moreover, the losses affected the insurance institutions that collateralized the issues of MBS and CDO[21].

In September 2008, the US government decided to nationalize two government agencies: Fannie Mae and Freddie Mac. As mortgage credits were not repaid, the MBS instruments were not repurchased by their issuers. To avoid a total market crash, the government took the responsibility for the credits, guarantees and the repurchase of bonds. In a short period of time, the instruments that had been considered safe, became useless, which resulted in a sudden decline in demand for them. In 2008, the value of the securitized mortgage financial instruments decreased by almost 90%. Together with the sale of CBS, the investors' fears increased as regards CDO, which included CDS in their structure. Consequently, the investment funds whose portfolios included the risky CDO, started selling shares, which resulted in the decrease in share indexes. The market slump on the NYSE was an impulse for the drops on the world stock exchange markets.

In terms of the wider perspective, it can be stated that the financial crisis in the US was the result of the erroneous assumption that financial markets can function without any external control. The crash on the American property market was the effect of the ideas of the

[20] W. Nawrot, *Globalny*…, op. cit., p. 77.
[21] W. Przybylska-Kapuścińska (red.), *Instrumenty*…, op. cit., pp. 102-103.

liberalization and deregulation of the financial sector that were based on the belief in free market[22]. The new challenges to contemporary economies, mainly the globalization and the development of ICT channels, resulted in the development of financial markets, the increase in capital flow, as well as the increase in the volume of financial operations[23]. New, innovative and increasingly complex financial instruments emerged that were detached from real economic processes; new markets appeared where such instruments were traded with insufficient control on the part of authorities. The financial markets' capacity to self-regulate appeared to be deceptive[24]. The anomalies in the functioning of banks and institutions that granted mortgage credits had not been verified by free market. The results of the wrong decisions became visible only when they cumulated in the form of disruptions in the liquidity of banks and financial institutions[25].

The financial crisis caused significant disturbances on the market of derivate instruments. At the end of 2008, the total trade in derivatives dropped as much as by 25%. That was caused by the loss of liquidity on the CDO and CDS market, mainly in its part that was exposed to the American subprime market. After the outbreak of the crisis, banks and financial institutions which wanted to dispense with their financial instruments, had serious problems to find buyers. Several institutions were forced to sell out the elements of their portfolios irrespectively of their market prices and, consequently, made substantial losses. After the crash of the most hazardous segment of mortgage credits in the US and the collapse of the Lehman Brothers, which was the most important player on the market of innovative derivatives, particularly of CDS, the investment risk increased and the market value of these instruments declined. Consequently, the demand for asset-backed securities (ABS) and the structured financial products, particularly CDO, ceased to exist. The lack of demand for the securities in

[22] J. Kutyła (ed.), *Kryzys: przewodnik krytyki politycznej*, Wydawnictwo „Krytyki politycznej", Warszawa 2009, p. 287.

[23] It should be pointed out that many of such operations were conducted by financial institutions other than banks, and consequently they were not subject to relevant bank regulations. Their operations were based on other principles and legal provisions applicable to banks; they did not possess real capital and their portfolios could not be controlled.

[24] K. Maciak, P. Kawa, *Przyczyny, mechanizm i skutki obecnego kryzysu finansowego*, „Zeszyt naukowy 23", Oficyna Wydawnicza Text, Kraków 2011, p. 96.

[25] Within one year after the outbreak of the global financial crisis, many financial institutions were at the verge of bankruptcy due to the loss of liquidity. First of all, one of the biggest US banks, the Lehman Brothers, went bankrupt, which became the symbol of the 2008 crisis. Moreover, till the November 2008, 22 banks of different sizes bankrupted in the US. Bear Stern, which was threatened by bankruptcy, was taken over by JPMorgan Chase. Several other financial institutions avoided bankruptcy thanks to nationalization. US authorities took over the debts of some banks and nationalized failing financial institutions – the US government took over the control over Fannie Mae and Freddie Mac; it also took over the debts of AIG, the greatest insurance company in the USA. Within the intervention programs, the US government implemented programs that supported the failing institutions by recapitalization.

question was one of the main transmission channels of the American mortgage market crisis onto the financial markets of highly developed countries.

The financial crisis put into question a further development and the future of the derivative credit market, as well as the existence of some type of complex financial instruments that were created during the prosperity. The market of derivatives is not a regulated market but a non-stock exchange one. Due to its lack of transparency that results from the problems to estimate the volume and the structure of the market, the liquidity of the market will probably be limited when the trust of the market participants decreases. That may impede risk management by financial institutions. Thus, it may be expected that the institutions that regulate the financial market will strive to concentrate the trade of at least some credit derivatives on the stock exchange market.

It may be expected that the supervisory institutions will want to increase the transparency of the derivative market and to tighten capital regulations, whose hitherto leniency contributed significantly to the development of some of its segments. The Basel Committee recommends banks to accept several good practices that should be implemented in the transfer of the credit risk. Such guideline aim at the elimination, or at least reduction, of all the weaknesses of the risk transfer model that was in force before the crisis. The main emphasis was laid on the risk management of the liquidity of structured credit products, the development of internal risk models, the perception of credit risk and the decrease in significance of the ratings of rating agencies.

Supervisory institutions and regulators are facing new, difficult challenges, and one of them is a further development of complicated instruments of credit risk transfer. It is obvious that this long-term process will require the elimination of various shortcomings in several areas. However, considering the significance of credit derivatives and securitization in the evolution of financial markets and the benefits they provide, necessary measures must be taken.

Cconclusion

The crisis of subprime mortgage credits that took place in the first decade of the 21st century became one of the crucial reasons of the global financial crisis whose effects are visible in various forms throughout the world. It started in the US on the market of securities that were issued by securitization. The use of derivative financial instruments as such is not considered the cause of the crisis. However, the abrupt development of the derivative market, and particularly of the market of credit derivative instruments, influenced significantly the course and degree of the disturbances in the financial sector in 2007-2008.

The lack of a standardized trade in non-stock market derivative instruments and the lack of data on the volume and structure of the transactions impeded significantly the analysis of the trends in risk distribution The additional difficulty was caused by a substantial increase of the operations of financial institutions on the derivative market which is not subject to prudential supervision. Moreover, the frequent practice of financial institutions to use CDS operations as collaterals against the credit risk of the counterparty, contributed to the size of the crisis. Thus, a chain of credit exposures was generated, which substantially impeded the determination as regards who and to what degree takes particular risks. Consequently, a high degree of uncertainty concerning the positions of particular financial institutions in credit derivatives and their general exposure to credit risk led to the crash on the money market. The uncertainty of banks as regards the counterparty's condition sufficiently blocked the interbank market as banks became aware of the fact that they were unable to assess reliably the credit risk of the counterparty.

The globalization of financial markets and a violent increase in the volume of derivative operations force the market participants and supervisors to analyze thoroughly and supervise continuously the scale and type of the risks taken in particular sectors of the financial market. They should have appropriate IT systems, specialized software, highly qualified staff and adequate procedures in order to be able to understand properly the functioning of risk and to assess correctly and manage efficiently all the types of risks that are involved with the complex derivative instruments. The planned changes in the financial system should facilitate the fulfillment of these tasks and contribute to the increase of the transparency and stability of the financial markets.

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Abstract

The aim of the article is to determine the role of derivatives in the initiation and development of the financial crisis. The research consisted in the presentation of the financing mechanism on the property market (which is supposed to be the direct cause of the financial crisis), the reasons for the application of derivatives and securitization, and the way in which the innovative financial instruments led to the increase of the turndown on financial markets that finally resulted in the global economic crisis.