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INFLUENCE OF STRUCTURED FINANCIAL INSTRUMENTS ON THE WORLD ECONOMIC CRISIS

Resume *The relevance of the material stated in article, is caused by urgent needs of society to overcome the global economic crisis, to find ways to further development of economic and financial systems of the world, including Ukraine. The analysis of structured financial instruments on the global economic crisis opens opportunities for further understanding the progress of international economic relations, creates conditions for prevention global shocks. Considered in the article the newest financial instruments can be a powerful factor in the development of modern financial system of the world in their proper use.*

Keywords: securitization, rate of interest, borrower, originator.

Анотація *Актуальність матеріалу, викладеного у статті, обумовлена нагальними потребами суспільства подолати світову економічну кризу, знайти шляхи подальшого розвитку економічної та фінансової систем світу, в тому числі і України. Аналіз впливу структурованих фінансових інструментів на світову економічну кризу відкриває можливості розуміння подальшого ходу міжнародних економічних відносин, створює передумови для попередження світових потрясінь. Розглянуті у статті новітні фінансові інструменти можуть стати потужним чинником в розвитку сучасної фінансової системи світу при правильному їх використанні.*

Ключові слова: сек'юритизація, процентна ставка, позичальник, оригінатор.

Actuality of the topic of the research is incompleteness theoretical development of structured financial instruments in the world and their influence on global economic crisis.

Recent turmoil in the global economy began in August 2007. The first signs of crisis manifested by a wave of defaults on mortgages that turn leads to higher rates and to difficult accessibility to credits. However, before understanding and analyzing the development of the financial crisis in the world, including Ukraine, we should identify the key factors that influenced the present situation of world economy.

The main subject of research is new structured financial instruments and their attitude to global economic processes.

The main object of research is the relations between economic subjects during usage of structured financial instruments in the world economy.

The purpose of research is to show the influence of structured financial instruments on the recent world economic crisis and find the best way out for it's overcome.

The main tasks of this article are:

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- to find the crucial reasons of the beginning of economic crisis in the historical context;
- to analyze the spillover of refinancing rate on the bank credit activity;
- to define the main motives for banks to use securitization in the risk management;
- to describe the mechanism of usage of the most crucial types of structured financial instruments;
- to show the recent consequences of application of mentioned above instruments in the world economy;
- to analyze the crisis situation in the world and in Ukraine as well;
- to suggest some tips for way out of global economic crisis.

The new history of international economic relations, which begins after the Second World War, was marked by holding the Bretton Woods conference in 1944. As it's known in the history, resulting Bretton Woods agreement was the definition of the role of world money, which assumed the U.S. dollar. This currency was referenced to a gold equivalent ratio and amounted to U.S. $35 per ounce of gold. [11]

Strong and relatively stable compared with Europe the U.S. economy required increasing pace of industrial development, which in turn led to a gradual reduction of the state's gold reserves. Since 1971 the value of ounce of gold rose to 77 dollars. And in 1987 it amounted to almost 478 dollars. Rapid uncontrolled growth of gold prices caused the U.S. government to appeal to traditional ways of equilibration the balance of payments: printing the required number of dollars and raising the economy by issuing government securities. Control over these processes was imposed on the Federal Reserve System.

Due to efforts of leading economists in the early 90's balance of payments deficit was aligned, investment climate was improved. U.S. Treasury bonds have gained an impeccable reputation in the world markets and were in a great demand, becoming the most reliable tool for investment.

This fact allowed to keep the refinancing rate, excluding the 1998 crisis, at the level of 5-7% since 1995. 10-year Treasury bond yield rate correlated with before mentioned one, and in early 2001 for the third time since 1980's exceeded it (see Fig. 1). [12]

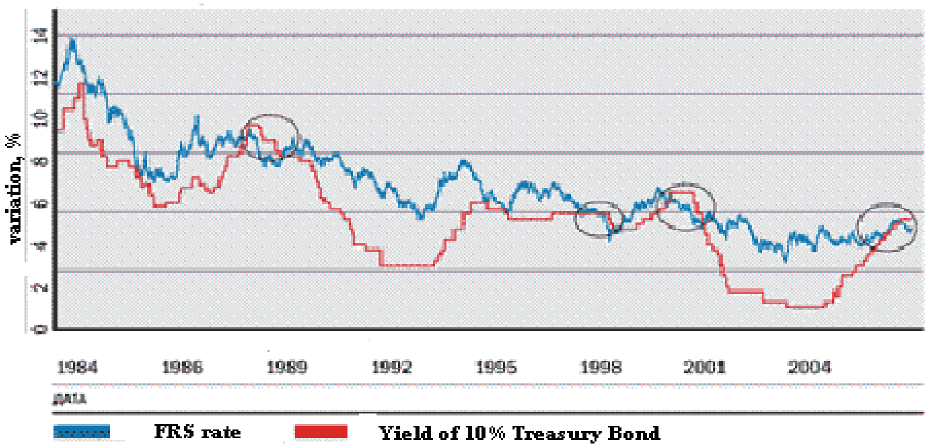

Fig. 1. Dynamics of movement refinancing USA and historic yield of 10% treasury bonds [12]

However, due to the onset of unstable political situations and rash decisions, such as terrorist attacks in 2001, the U.S. war in Afghanistan and Iraq the confidence in the long-term investment in the U.S. economy was largely shattered. Slump of Treasury bonds' yield and significant increase of the budget deficit due to the exorbitant cost for the military campaign has forced the FRS to reduce the refinancing rate, not exceeding the limits of 2-5% until 2004.

On the one hand, lower corporate tax and the refinancing rates for the companies contributed to the development of the banking system, which provided both corporations and consumers with cheap loans. This facilitated the gradual accumulation of savings. On the other hand, the gradual formation the consumer society together with uncontrolled providing loans to customers with various credit histories began to disrupt the stability of the U.S. economy.

No wonder that the global financial crisis begins with a crisis in the mortgage market. In the loan portfolio of the banks since 2005 are increasingly beginning to appear types of Subprime and Alt-A loans.

Subprime means loans issued to borrowers with not just bad, but with very bad credit history. In such a borrower:

- loan amount exceeds 55% of income for the period of borrowing;
- loan amount exceeds 85% of the collateral value;
- total monthly debt payments exceed 35% of the borrower's monthly income.

The type Alt-A is a loan to the best borrower among the worst, who receives bank’s loan without full documentation, often without confirmation of the borrower’s income.

During the period from 2005 to 2006 Subprime mortgages were given with considerable privileges. For example:

- 37% of such loans in the first 2-3 years borrowers pay only interests;
- 43% of them were issued without verification of income information;
- 38% of this category of loans granted for the full value with no down payment.

At the end of 2007 from $10 trillion issued and outstanding mortgages in the U.S. share of high-risk Subprime loans was 12% and Alt-A - 10%. [9]

As a result, at the initial stage of crisis occurred the following situation:

- reducing the amount of money supply in circulation;
- delays in payments on mortgages;
- increase of interest rates, that has made credits difficult available;
- reducing liquidity.

However, the magnitude of financial crisis effect was not only the fact, that banks neglected selecting their credit risk portfolios for a long time. In the crisis state were not only banks but also other financial institutions, corporations, various types of enterprises, and ultimately the most important – ordinary citizens. What could really affect the development and proliferation of such phenomena in the modern international economy?

We can call several major factors that gave rise to the current collapse of financial markets, but their concept is based on risk averse. Risk as an integral part of any economic process in general vision is the ability of an event or events in the future, that may worsen or improve the state in which the economy is in a fixed time. Presence of risk itself calls in any subject of the economic relations the natural reluctance to such events, that would worsen his present condition. That is why finding ways to protect against the risks significantly affect the relationship between economic actors, because in the process of their relationships appears conflict of interests. However, the choice of a method of risk management sometimes can not fully meet the requirements for risk mitigation. This is not surprising, since any economic entity face more and more complex and diverse system of risks that make a direct impact on its activities.

So, there are needs to generate new ways to opposite risks inherent challenges in the economy. So become recently widespread application of new instruments of financial engineering among major economic institutions such as banks, investment funds, large corporations.

Creating a new financial instrument against the specific risks should include not only benefit from reducing potential losses, but also the severity of consequences that may occur as a result of mass application.

One of the most famous derivative groups of financial instruments, caused by transnationalization of capital market and by risk assets management, are structured financial instruments. [1, c.25-26]

The concept of structured financial instruments is quite broad and complicated. They are similar to the original construction, in which the basic details are various types of financial instruments, beginning from the simple foreign exchange transactions, and ending with a set of derivatives of a given risk.

Structured financial products provide return of invested capital, keeping high profitability; they may generate higher profits even in conditions of falling stock market, offer opportunities to participate in the establishment of stock markets in other countries. [5, c.22-24]

Structured financial instruments are financial investment contracts, which consist of portfolio of simple and/or derivative financial instruments, credit products, etc., submitted as one product.

Structured financial instruments include the following products:

- asset-backed securities;
- hybrid financial products;
- credit-linked products.

More detailed classification of structured financial instruments provides the following specific types:

- CDO (collaterized debt obligation);
- ABS (asset-backed securities);
- MBS (mortage-backed securities);
- RMBS (residential mortage-backed securities);
- CDS (credit default swap).

Of course, it is incomplete, but the most common list of structured financial instruments. But the greatest impact on the current economic state affect the securitization instruments, such as ABS (and MBS as a special case) and also CDS.

In the core of mechanism of their usage underlies the intention to attract financial resources and get rid of the risk of nonpayment.

In broad sense securitization is the process of replacing traditional forms of financing, mainly bank lending, by financing, based on the securities issue. In a narrow sense securitization means withdrawal of assets from the balance of enterprise, bank, etc., and their refinancing through issuing securities in the capital market. [6, c.265-269]

In general a process of securitization is the transformation of assets into more liquid form. Currently the constant classification securitization of assets is vacant, but most financiers distinguish two main types: traditional and synthetic.

Securitization originated in the 70-ies, and its mechanism was originally designed for Mortgage Backed Securities. The idea of securitization was to transform low liquid assets in the securities backed by cash inflows from these assets. The essence of cash inflows are requirements, particularly receivable accounts of company or bank in accordance with signed agreements. Since this is a mortgage lending, which function derives primarily from the banks, then under the concept "lender" we'll understand bank. In the financial engineering lender also has another name – "originator", there means who first gives credit.

Securitization takes place in several stages (see Fig. 2). [14]

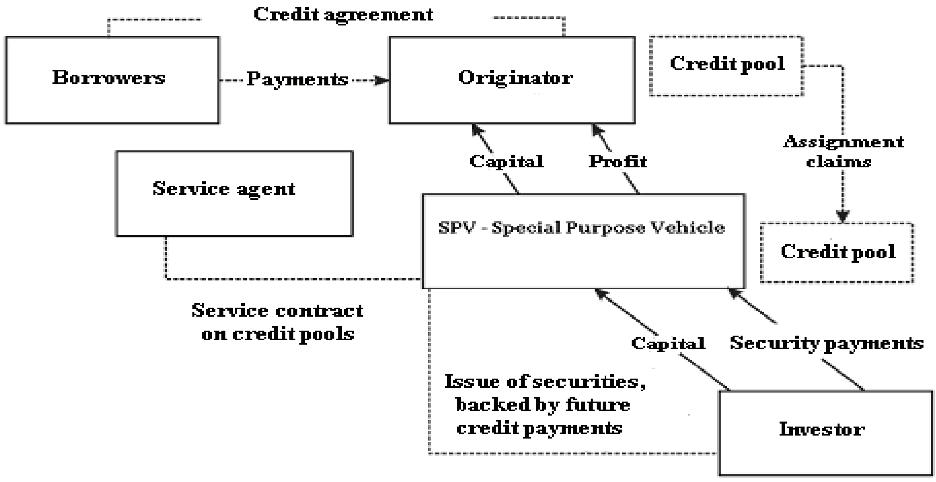

Fig. 2. Classical scheme of mortgage assets securitization [14].

At the first stage, the originator enters into an agreement with the borrower. There must be stipulated all the parameters and conditions, and assessed the solvency of the borrower.

The second stage – the transformation of low liquidity and high risk assets in new, more reliable financial instrument – starts with the selection and structuring of homogeneous bank loans. Homogeneity is defined by indicators, such as rate of interest, term, credit risk and liquidity. Selected homogeneous credits create so-called pools, each of which corresponds to the degree of homogeneity. This process is called differentiation. The basic rule of the securitization process is carefully selected assets and prevention the problematic loans from getting into the pool.

At the third stage a special purpose company (SPV - Special Purpose Vehicle) is created, which originator transmits securitized in the second stage assets – in this case law requirements for mortgages, secured by real estate collateral. This company is not legally connected with the bank and its subsidiaries are, on which balance bank's credit pools has been transferred.

The sense of creation of such a company is that its rating is much higher than the rating of the bank, because it recently created and filled with quality assets. To minimize the tax burden such a companies are often created in offshore zones.

Once the SPV has received ownership of the bank loan asset and got a high rating, it starts the fourth stage of securitization - the primary distribution of debt (usually bonds) among institutional investors. Proceeds from bank assets the company uses for repayment on loans.

Difference of revenues from acquired assets and payments on loans SPV transfers to the bank.

Thus, the economic benefit of securitization is that the primary owner receives funding from investors, providing as collateral assets that he owned. The bank continues to monitor receipt of such assets, but transfers the non-payment risk on assets to investors. [14]

Such a funding mechanism on the one hand arranges all participants in securitization provided proper execution by each party of its obligations, whereby requires strict control, because failure of one of the links in this process leads to irreparable consequences.

Lower interest rates on mortgages and reducing unemployment in the 1990's played an important role in the growth of residential real estate market. At the same time structural changes in the process of issuing and servicing mortgage loans took place, and securitization acquired a mass distribution. Unfortunately, on the other hand, the complexity of this financial mechanism, the need for all new legal regulations, the process of securitization has little control.

In addition, the banks were violating the principles of borrowers' risk selection, the market has emerged a large number of intermediaries, which hampered the flow of money from one party to another. For example, the process of issuance of special purpose company long-term debt securities must accompanied with underwriter, rating company, guarantee (insurance company), legal company and auditing organization. Each participant received their commissions. Thus, the transparency of securitization transactions was lost, as the result real revenues were often replaced by securities. Without filling in a real economic sense, mortgage securities began to lose its appeal in the market. Such large-company investors, as Bear Stearns, Goldman Sachs, BNP Paribas, who have invested money in mortgage bonds, suffered losses. Total losses of investors, analysts estimated, totaled 75 billion dollars.

Moreover, unreliable Subprime borrowers began to delay payments on loans, resulting special purpose company delayed, and sometimes not returned to investors not only interests but also the body of the debt. After receiving the claim for payments on loans, if their absence - for mortgage collateral, special purpose companies could not cope with the implementation of unfinished housing projects. This inevitably led to the collapse of prices for real estate market.

Another structured financial instrument, which influenced the emergence of the global financial crisis are default swaps (CDS).

Default swap is a contract under which the seller of protection agrees to pay the buyer a certain amount (usually restored value minus cost of debt) if some case of a credit event occurs. Buyer, in return, conveys to the seller a basic obligation or pays the appropriate amount of compensation. As a derivative financial instrument default swap came 15 years ago and was designed to protect bondholders from the risks of insolvency.

Credit default swaps market is over-the-counter, so these contracts are not standardized, they do not have collateral or other rules that Exchange requires its participants. Today, for example, banks can resell each other issued credit by sharing paid interest thereon unlimited number of times, and at the same time as many hedge these debt financial instruments. However, these endless possibilities dramatically reduce stability of the entire system if even a 0.5% debt something happens. Again, as with MBS, there are opaque, few controlled relationships that have a significant impact on the banking system.

The current CDS market is mostly in its shadow, and ranks third among the derivative instruments. Even minor violations of this multifaceted, confusing system of relations large number of participants may cause so-called effect of "dominoes" that significantly deepen the liquidity crunch. No wonder, that the American famous billionaire Warren Buffet has called this market weapons of mass destruction.

Indeed, since in 1995 one of the largest investment banks J. P. Morgan released the first default swap its application acquired a mass character. They were actively used by such big banks like Deutsche Bank, UBS, Barclays, Royal Bank of Scotland and Societé Generale. However, when interest rates began to rise, which felt drawn by a rise in mortgage defaults, the effusive flow of requirements for CDS holders had happened. In May 2008 one of the largest American investment bank Bear Sterns, being unable to endure the onslaught of mass foreclosures of default swaps, went bankrupt.

In the first half of 2008 CDS market for the first time after prolonged growth was reduced by 12%. That bankruptcy of Lehman Brothers Holdings, the nationalization of insurer American International Group (AIG), which produced such contracts for 400 billion dollars, are related to speculation by default Swaps.

Thus, quite complex and intricate schemes of structured financial instruments not only led to a crisis the world banking system, but also reduced macroeconomic indicators in many countries: first in the U.S. later in Europe, Russia and eventually in Ukraine. Banks’ crashes and bankruptcy many of them led to massive loss of savings, which in turn affected the consumption and investment. The leading industries of developed countries began to reduce sharply the output because of sharp reduction in demand for products.

So, stoppage or significantly suspension of building market hit the U.S. economy. Based on the 2007 mortgage debt in the U.S. reached 100% of GDP. It is 12-13 trillion dollars. In the UK - 135% of GDP. [10]

Currently the volume of commercial property in the U.S. estimated at 6.7 trillion. dollars., and low-quality mortgage loans accounted for $1.4 trillion. According to the U.S. Control Commission forecasts, the real estate sector could lose another 300 billion dollars.

In Europe, the beginning of the financial crisis marked by scandal connected with the bank Société Générale, which as a result of it's fraudulent trader lost 5 billion on stock trades. More crisis affects Iceland, which, as being unable to pay off external debts, took a loan from the International Monetary Fund. Significantly reduced automobile market, falling real estate prices declining GDP in almost all European countries.

In 2009 Greek budget deficit reached 12.9%. In the end of 2010 the budget deficit of Ireland threatens to grow by 11.7%, Portugal - 8.3% Spain - 10%. The core euro zone document allows a maximum level of EU state budget deficit at 3 percent. The failure of EU governments to fulfill their own impracticable decisions in key economic sector is a strong destabilizing factor for the whole euro zone.

Today the European economy is going through hard times. The euro collapse, connected with budget deficit in Greece, Spain and Portugal. These countries have spent too much for social obligations and now wait for help from the European Union (EU) and International Monetary Fund (IMF). The first country is Greece, which will become 110 billion dollars: $80 from the EU and $30 from IMF at 5% annum . The terms are comfortable for this country, many financiers assume, that this credit helps to rise the Greece economy from ashes of crisis.

In Russia, financial crisis manifested in the form of falling oil prices below 70 dollars per barrel, sharp decrease stock indexes, increased share of government debt. The last one at the end of 2009 exceeded 650 billion dollars.

The first wave of the global financial crisis in 2007 in Ukraine affected by significant borrowing of $ 24.3 bn., inflation sometimes to 15-17%, falling stock indexes.

However, the most striking effect caused a second wave of crisis in 2008.

Its consequences were:

1. The deterioration of macroeconomic indicators:

- increasing the overall inflationary background (for example, prices for industrial products increased on average by 36.5%, total inflation for 2008 was 22.3%);
- slow GDP growth (2.1% of the planned 6.8%);
- increase national debt to $ 24.121 billion.

2. Crisis in economics:

- decline in housing;
- stagnation in the steel industry;
- falling car market (an estimated 70% to 85%).

3. Currency depreciation, which amounted to 38% by 2008.

4. Increasing unemployment to 6,5%.

5. The crisis of the banking sector is related to bankruptcy and actions of the authorities. Some banks were nationalized: "UGB", Bank "Rodovid", Bank "Kyiv", some banks were ruled by temporary administration: "Stolytsya", "Transbank", "Nadra", "Dnestr", "Energiya" and others; some banks suffer process of elimination: "Ukrprombank" and "Odessa-Bank". As of early 2009, 40 Ukrainian banks suffered losses, credit conditions deteriorated. External debt of Ukraine for 2010 predicted by some $ 30 billion. [15]

Thus, the global financial crisis as a phenomenon in the world economy has deep roots in the history of the financial system. The market development for derivatives has led to emerging of new innovative products as a result of search by financial institutions the ways of struggle against risks and finding relatively cheap form of capital raising. Opacity of structured financial instruments, complicated by lack of clear rules, increasing large number of participants and by unfair performance obligations of securitization participants, frank abuse of securities transactions led to a drop in banking sector. The last one greatly influenced the first U.S economy, then – economies other developed countries, then Ukrainian economic system too.

Large scale effects has been explained by unbalance of the real and nominal money supply in circulation, depreciation of securities, decline in demand for financial products. At the same time, successful use of structured financial instruments can correct the situation in the financial world and reduce their impact on the global economic crisis.

For this, we should make several successive steps, that will be able to overcome the present crisis in many economics of the world:

- improve the mechanism of securitization and management;
- increase the transparency requirements for transactions with ABS, CDS and other structured instruments;
- find the mechanism of application of structured products in a real economy;
- promote international projects and apply the mechanism of securitization as a tool for risk management;
- create state targeted investment programs for development of priority economic sectors most capable will soon effectively attract foreign investment.
- follow the last political changes and claims of politicians and take into consideration the taken decisions before investing in economy one or another country.

These practical tips may allow to overcome some negative consequences of the present crisis and to find the right ways of development in today's unstable and versatile world of economic relations between different countries.

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