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У збірнику представлені матеріали першої міжнародної наукової конференції «Глобальна фінансова криза: уроки для України», яка відбулась 27-28 травня 2010 року в Інституті міжнародних відносин Київського національного університету імені Тараса Шевченка.

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THE MAIN REASONS OF THE GLOBAL FINANCIAL CRISIS

Financial globalization started to dominate in the system of the international economic relations from the last quarter of the XX – beginning of the XXI century. Starting from 1970s, global financial markets developed at an unprecedented pace. It was caused by general liberalization of economic processes, especially capital flow and currency exchange regulation. As a result, the world economy received additional incentives for development and, as in the previous post-war years, continued to grow. However, against a background of general growth of a real sector of economy, its financial constituent started to acquire hypertrophied forms. The so-called financial bubble was formed that burst from excessive inflation in 2007 – 2008. The world financial crisis broke out, that affected, though to different extent, practically all the world countries.

Overall evaluation of such complicated global economic phenomena and processes as the current world financial crisis will be possible, apparently, only some time later. The information about the full cycle will allow to analyse all its constituent parts, reveal deep-rooted reasons, social and economic consequences and improve preventive anti-cyclic mechanisms and instruments of “quick reaction”[1].

At the same time economic and financial statistics indicates that during the last 30 years the economies of 17 leading world states felt negative influences of 113 financial crises: 37 – in 1980s, 42 – in 1990s, and 34 financial crises, including the current one, at the beginning of 2000s. Stock market crises accounted for 45% of their total number, crises in the bank systems made up 38%, currency crises – 17%[2].

Broadly speaking, it is possible to single out three groups of factors that in total affected the character, defined the scope, path and devastating power of the first world financial crisis of the XXI century[3]. The first group of factors is conditional on deep and universal civilization, geo-economic changes, global transformation processes. The second group of factors is connected with macroeconomic and microeconomic disproportions and turbulences, institutional traps that

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[1] However, it’s worth mentioning that the main reasons and factors of the world economic crisis and the Great Depression of 1929-1933 still remain the subject of serious discussions among the experts (Friedman M., Schwartz A. A Monetary History of the United States, 1867-1960. Transl. from English, Kyiv, 2007, pp. 306-307); James H. The Creation and Destruction of Value. The Globalization Cycle. – Cambridge, Massachusetts and London,2009.
[2] Vasiliev V.S., Rogovskiy E.A. World Financial Crisis. Phase 2 (Recession). USA-Canada. Economy, politics, culture, 2009, #3, p.24 (russ.). Swiss economist W. Wittmann in his book makes a short review of the trade crisis of 1847-48, the first world financial crisis of 1857-59, depression of 1873, the Great Depression of 1930s (Wittmann W. Finanzkrisen. Woher sie kommen, wohin sie fuehren, wie sie zu vermeiden sind. – Zuerich, 2009, s.18-25).
[3] Many experts agree that theoretical grounds and explanation of the current financial crisis are most fully covered in the works of H.Minsky (Minsky H.P. The financial instability hypothesis: capitalist processes and the behavior of the economy. In: Financial Crises. Theory, History, and Policy. – Cambridge University Press, London, 2008).

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showed themselves first of all among the key actors of the world economy. The third component of the world financial crisis correlates directly with starting mechanism, with the main source (core) that caused its wavy procession that is difficult to predict from the economic point of view.

In its turn, the first group of geo-economic factors include the following five main constituents:

- exhaustion of the traditional industrial model of economic development in the context of supply of resources, environment degradation, growing inequality of economic and social development of the countries of the world;
- presence lag of restructuring of the world economy, its regional and national subdivisions in accordance with demands of modern scientific and technological revolution;
- deepening of structural disproportions and global imbalances between the main world economic subjects, synchronization of economic cycles under the influence of globalization;
- inability of international financial system in its present shape, its regulatory and supervisory functions to react adequately on globalization challenges;
- lack of proper theoretical, methodological and applied concepts and models of optimal functioning and anti-cyclic regulation of the global economic systems.

Surplus liquidity in the economy of the USA became the key macroeconomic factor, conditioned by, firstly, general decline of confidence in the countries with new markets after the crisis of 1997-1998; secondly, investments into American securities made by the countries which accumulated currency reserves (China) and oil funds (the Persian Gulf countries); thirdly, the policy of low interest rates pursued by the Federal Reserve System, especially in the period of 2001-2003, trying to escape cyclic decline.

The main driving forces of the financial crisis of microeconomic level are new financial instruments – credit and default swaps. Their use resulted in camouflage of risks connected with low quality of substandard mortgages, on the one hand, and their non-transparent distribution among the wide circle of investors on the other hand. Institutional measures of the world financial crisis manifested themselves in insufficient level of risk assessment both by regulators and rating agencies, as well as in asymmetry of information[4].

Reasoning about the world financial crisis in the narrow sense as a rule comes to the analysis of its starting mechanism, and therefore, to revelation of its primary source. Moreover, there is a consensus in the assessments that initially the present crisis was caused by the problems on the US housing market.

Among the key reasons of crisis processes in the economy of Ukraine one may mention the following: high degree of integration of financial sector into the world structures as compared with the year 1998; outdated structure of the economy, its hypertrophied orientation on foreign markets (fuel-energy complex, chemical industry and so on); vulnerable, non-integrated, unbalanced fragmented domestic market; unfinished reforming of the economy (institutional sphere, agrarian sector, municipal economy, public health, pension reform etc.); inadequate economic policy of the government and the National bank of the challenges of the world and domestic situation.

Let’s pay closer attention to the system of factors of the first group, one of the main components of which indicates historical limitation of the industrial model of development that needs to be transformed into postindustrial, informational, noosphere and space model of human development. Industrial type of production led to unprecedented pace of economic growth on the basis of large-scale attraction of natural and human resources. Thus, in the period from 1715 till

[4] Kudrin A. World financial crisis and its influence on Russia. – Voprosy economiki, 2009, #1, pp.9-10 (russ.).

1971 the volume of the world industrial production increased 1730 times, and more than a half of this increase fell on the period after 1948. Such "aggressive" development leads to destruction of the environment, exhaustion of biosphere, sharp decline of ecological parameters of vital activity. Further raising and widening of the industrial type of production based on imperfect financial mechanisms and instruments would have disastrous consequences. At the same time modernized economic instruments including their financial constituent that have passed a singularity point in the post-crisis period have to be directed at total restructuring of both the world economy in general and its regional and national subdivisions, introduction of a new model of development – the economy of knowledge, high technologies, creative economy. The latter refers to the second geo-economic constituent indicating the fact that delay in solution of structural problems, conservation in the world economy of archaic pre-industrial and early-industrial economies creates preconditions for repetition of similar crises in more acute forms. Data from Table 1 indicate the prospects of structural changes of the world economy.

Table 1. Shares of sector in 2001 and 2030 (in gross economic output (%)

	OECD		**BRIC***		**ROW**	
	2001	2030	2001	2030	2001	2030
Agriculture	2	1	9	6	8	6
Forestry and fishing	0	0	1	1	1	2
Energy and mining	3	2	6	4	9	7
Non-durable man.	10		12	8	14	10
Durable manufacturing	23	17	32	29	24	21
Trade and transport	18	18	15	16	16	16
Services	44	54	25	37	28	38

Source: OECD Environmental Outlook to 2030. Paris, 2008, p.85.

Aggregated data given in the table show that presently there are considerable differences in structures of the economies of developed and developing countries. The key criterion is a ratio in production of goods and services. In perspective till 2030 there is a tendency to narrow the existing gap, though striking structural contrasts between separate countries will remain.

The third geo-economic constituent of the world financial crisis is connected with global disproportions and imbalances, with synchronization of economic cycles under the influence of globalization[5]. On the one hand, discrepancy between the global demand and global supply deepens and results in formation of disequilibrium of the world economy. On the other hand, the relations between the key players of the world economy in the trade and investment spheres is worsening. In this connection interrelations between the USA and China become of great importance. One pole (the USA) has enormous balance of payment deficit; the other (China) has almost adequate surplus. Besides, globalization involves the main world economic actors into the maelstrom of the world business cycle. For the postcrisis period was accepted a plan of reducing global imbalance that stipulated its reduction from 6% of the world GDP to 1-1,75%

[*]BRIC – Brazil, Russia, India, China

[5] M. Zombanakis, organizer of Athens seminar, in his speech before the Russian Parliament members, graduate students and students of Moscow State University mentioned that the main problem of the world financial crisis "became enormous imbalances in the world economy that allowed rich countries, and first of all, the USA to live at the expense of savings of poor countries" (Zombanakis M.A. Reasons and consequences of the world financial crisis. Transl. from English. – Moscow, 2009, pp.18-19 (russ.).

within the four years. In particular, economic means and instruments were defined for the five main subjects to exert decisive influence on the formation of global imbalances. In China it was planned to reduce external imbalances, increase domestic consumption, especially personal, change the ratio of accumulation to consumption, speed up financial reform, improve exchange rate regime.

Further reforms of the commodity, financial and labour markets are to be carried out in the Eurozone. There at least two main tasks for it. Firstly, Greek economic and financial situation and it"s consequences needs of Support of the common currency. Secondly, the cutting of budget deficit from recently 7% of GDP to measures of Maastricht criteria. Japan will effect labour market reform, create conditions to attract direct foreign investments, develop competitiveness in the key sectors of economy, ensure progress in financial consolidation. Saudi Arabia as a member of G-20 should increase investments into the social sphere and infrastructure development, as well as increase capacities of oil-producing industry. Finally, the USA as the country with the greatest external and internal imbalances according to IMF recommendations should carry out further fiscal consolidation in the medium-term perspective, reform budget process aimed at rise of expenses, reform the system of benefits payment in order to strengthen long-term fiscal stability, improve tax legislation, stimulating personal savings, increase energy efficiency, provide incentives for economic growth, open investment policy, improve competition on the capital market[6].

The main reason of global imbalance is that global supply exceeds global demand. This problem has become acute recently as a result of over-crediting production. Thus, it is necessary to look for the ways and mechanisms of increasing aggregate demand. Experts suggest radical and rather contradictory from economical point of view variant, namely increase of salaries in developing countries where the majority of the world population live[7]. Contradiction of this concept lies in the fact that the level of salary is determined not by international agreements, as being proposed, but by its intensity, productivity and other important determinants. Nevertheless, it may be considered among other ideas in the general context of formation of a postcrisis economic architecture of the world. Solution of the problem of external imbalances lies in their leveling by reevaluation of national currencies (devaluation or revaluation). Besides, other macroeconomic regulators should be used on the basis of fiscal consolidation, increase of the rate of savings and investments. For the countries with external surplus the pressing task is to increase internal demand (absorption) on the basis of active monetary and fiscal policy, while the countries with external deficit have to curb internal demand and encourage export. For instance, according to the standard econometric model, in the USA in order to reduce ratio of checking account to GDP by 1% in the long-term period it is necessary to devalue dollar by 10-20%[8]. Within the system of measures directed at stirring up of internal demand it is proposed, on the one hand, to change correlation between state and private expenditures in favour of the latter, taking into account the fact that during aggravation of the crisis in many countries previously adhering to neo-liberal market positions the state took upon itself expenses aimed at improvement of banking and financial system, neutralization of consequences of crisis processes. On the other hand, it is a matter of stimulating aggregate demand (consumer and investment) by using instruments of credit and monetary policy, in particular, by changing discount rate of the Central bank[9].

[6] IMFC welcomes plans to curb global imbalances. – IMF SURVEY, April 23, 2007, p. 103.

[7] Duncan R. The Dollar Crisis: Causes, Consequences, Cures. Transl. from English. Moscow, 2008, pp. 261-263.

[8] World Economic Outlook. April, 2007.Spillovers and Cycles in the Global Economy. IMF, Wash., 2007, p.105.

[9] In September 2009 discount rate of the Federal Reserve System of the USA was 0%, and forecasted annual inflation rate was 2% (Finance and Development, September, 2009, p.11).

One of the important trait of the postcrisis World Economy is a deepening synchronization of economic cycles, which according to calculations exerts various influence on the course of economic events in different countries. Four determinants are being singled out that facilitate synchronization of economic cycles: global, regional, national and specific. Global factors largely synchronize economic cycles of the developed industrial countries, encompassing more than 15% of their GDP, and in the biggest countries – up to 20%. Countries with new markets and developing countries feel the global influence to a smaller extent – less than 10% of GDP fluctuation. Regional factors reveal themselves more powerfully in North America, Europe and Asia, causing up to 20% of fluctuations in the production volume. National and specific factors dominate in the Middle East, Northern Africa, Sub-Saharan Africa and determine alterations of more than 80% of the gross output[10].

The world financial crisis has revealed a weaknesses of functioning of the Bretton Woods system, its monetary management and its leading subdivision – the International Monetary Fund. This system in its present shape has three main drawbacks. Firstly, it allows to a number of countries to maintain surplus of checking or financial accounts and capital movement for a long time (Japan, China etc.), that results in hypertrophied accumulation of international reserves. Thus, international reserves of Japan (general reserve minus gold) grew by 1146% from 1968 till 1978, while money supply – by 356%. At the present time large gold and currency reserves are concentrated in China (2033,00 billion US dollars, 1557 US dollars per capita), in Russia (435,40 and 3055 respectively), in India (274,20 and 235), in Brazil (197,40 and 1029)[11]. Secondly, this system makes economic growth of many leading countries dependent on the USA – the largest importer and debtor in the world. Thirdly, over-crediting, investment boom of the recent years at the expense of recirculation of US dollars through state securities resulted in violation of global proportion between production and consumption, that may cause irreversible deflation processes with serious social and economic consequences. Therefore in framework of the postcrisis World Economy it has to change a present international finance architecture. The global nature of the financial industry and the current crisis underlines the necessity both national regulatory structures and coordinating mechanisms at the global level. The simplest way to get this would be to have a single global financial authority. But this is not realistic option for the nearest future. So, in practice, coordination of regulation will have to be achieved through international organizations, like IMF, the Bank for International Settlements, the Financial Stability Board. Besides a different sides of financial regulation are supporting the various sectoral standard setters (the Basel Committee on Banking Supervision, the International Organization of Securities Commissions, the International Association of Insurance Supervisors, and the International Accounting Standards Board)[12]. The second element of the postcrisis financial architecture is a global liquidity.

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[10] World Economic Outlook. April, 2007.Spillovers and Cycles in the Global Economy. IMF, Wash., 2007, p.139-140.

[11] Folgen der Finanzkrise fuer die globalen Wirtschaftsbeziehungen. - Wirtschaftsdienst 2009, Nr.3. S.170.

[12] Finance and Development, September, 2009, p.19.

Shevchuk V.*

WORLD ECONOMIC CRISIS AS A MONETARY PHENOMENON

An expansionary monetary stance since the middle of 1990s is considered as the fundamental factor behind a series of consequent bubbles ─ on the stocks of a group of new Internet-based companies (1995─2000), real estate (2003─2004) and commodities markets (2006─2007). Specific transmission channels of the Fed monetary policy which led to the real estate market boom-bust cycle and ultimately to the 2008 world financial crisis are analyzed. Other factors, as the lack of proper regulation or the widespread use of innovative financial instruments, have been of much less importance.

Key words: monetary policy, speculative bubble, real estate market

Збільшення пропозиції грошової маси із середини 1990-х років розглядається засадничим чинником низки послідовних "бульбашок" ─ на ринках технологічних компаній (1995─2000 рр.), нерухомості (2003─2004 рр.) та сировинних товарів (2006─2007 рр.). Проаналізовано конкретні механізми монетарної політики ФРС, що призвели до "перегріву" ринку нерухомості та його наступного "обвалу", а в підсумку ─ до виникнення світової фінансової кризи. Інші чинники, як брак надійних регуляторів чи поширення інноваційних фінансових інструментів, мали порівняно другорядне значення.

Ключові слова: монетарна політика, спекулятивна "бульбашка", ринок нерухомості

1. Introduction

While there is consensus on the proximate immediate causes of the 2008 world financial crisis, as the lack of proper regulation under financial globalization [3, p. 225─238], misallocation of resources to real estate, financed through the issuance of exotic new instruments [14, p. 606─610], widespread securitization of assets [28, p. 600─605; 16, p. 239─255; 23, p. 51─70], the burst of the real estate bubble due to an increase in the interest rate, a collapse of trust in credit markets caused by housing prices failed to rise [17, p. 567─572], formal and informal weakening oversight and outright deregulation of financial markets [23], favorable taxation treatment of mortgages [25], or excessive government consumption, the policy of pre-crisis low interest rate and high credit growth is worth of attention as the single most important (or "fundamental") factor behind the world financial crisis. It is customary to state that on the eve of the crisis the world economy was "awash with liquidity" [28, p. 600─605].

John Taylor, an author of the well-know monetary policy rule[1], emphasizes that the US real estate crisis fits well to a classical explanation of a financial crisis as a natural outcome of mon-

[1] A Taylor rule stipulates changes in the nominal interest rate in response to divergences of inflation rates from target inflation rates and of the GDP gap. As it is widely considered, a systematic use of such a rule brings about price stability and full employment through reducing uncertainty and increasing credibility of future actions by the central bank.

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etary excesses [27, p. 2]. Although other references to the expansionary monetary policy as a single pre-crisis most important factor are not lacking, quite often neoliberal monetary policy stance is blamed for the single objective of price stability to be pursued by manipulating the rate of interest [3, p. 225]. Such an interpretation shifts an interest towards a more traditional discussion on the merits of monetary policy as an anti-inflationary tool, and could easily miss the point as well, but nevertheless it places the monetary policy issues at the central stage of the current discussion on pre-crisis developments, though with a clear anti-monetarist flavor.

All said, it is worth to consider monetary interpretation of the crisis in a wider framework, regarding connections between excessive money supply, on the other hand, and regulatory framework and excessive risk taking, on the other hand, as determinants of asset price bubbles. This paper presents an informal analysis of several transmission channels through which the Fed monetary policy might have contributed to the boom-bust cycle on the U.S. real estate market in particular and the 2008 financial crisis in general. Interactions with other factors are taken into account as well. The structure of the paper proceeds as follows. Following the introduction, Section 2 provides with a concise description of the pre-crisis monetary developments. Section 3 presents an analysis of the likely monetary policy effects in the short- and long run. Contradictory assessments of the monetary policy are outlined in Section 4. The monetary policy correction of the 2004—2006 period is considered in more detail along the lines of pre-crisis developments in Section 5.

2. Pre-crisis monetary developments

As of the end of 1990s, the US economy looked in an enviable shape, with the budget surplus, high GDP growth rate, low unemployment, high productivity growth, strong dollar and unchallenged technological leadership to top off the list of macroeconomic fundamentals. To some extent, such a situation had been an outcome of an expansionary monetary stance since the middle of the decade. The money supply growth rate had declined from 11% in 1993 to just 2% at the beginning of 1996, but since then a steep increase of the money supply occurred (Fig. 1). By the end of 1996 the money supply growth rate was at 4%, but next year this indicator increased to 6.2%, and on to almost 7% by the end of 2008. On the eve of the 2000—2001 recession, the money supply growth rate hiked to 15.9% in the 1999Q4, which implied a switch to a restrictionary monetary stance.

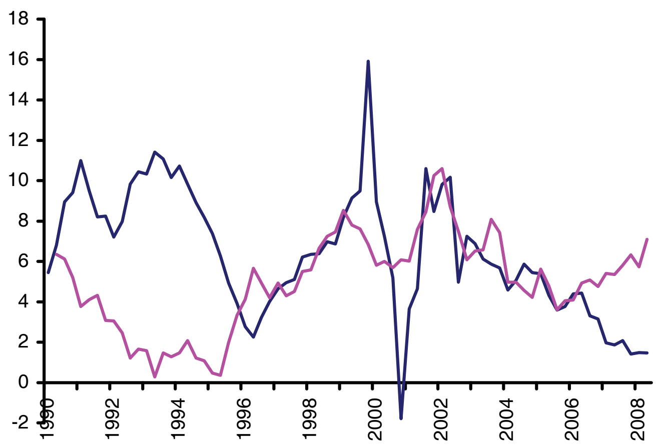


Fig. 1. The U.S money supply growth (%), 1990—2008

Source: IMF International Financial Statistics

The dot-com bubble of the end of the 1990s could be considered as a result of the investor's over-optimistic view of the U.S. new economy based on modern technological achievements, but to the same extent it looks like a natural consequence of an expansionary monetary policy. Low interest rates in particular and "easy" money monetary policy in general, including a less restrictive regulatory framework, contributed to a higher demand for financial assets. Investors borrowed money to buy into stocks of the dot-com companies, being unable to assess corresponding risks in a proper way.

A counter-cyclical weakening of the monetary policy stance had helped to wind up with the 2000—2001 recession, but at cost of the next bubble — on the real estate market, as investors looked for other 'safe havens' for their money. Traditionally housing is one of the safest investments and much of the dot-com money found its way into the U.S. real estate market since 2000 [23]. Redirection of money flows from the stock market towards the housing market had triggered an upward price tendency on the latter, which had only strengthened the attractiveness of the real estate as an investment asset. In turn, higher prices prompted more investments in the housing market and tapped foreign savings. On the other hand, intense capital inflows had created a downward pressure on the current account. Combining with a stronger consumption growth, it had widened the external imbalance (Fig. 2) and implied further increase in the bank's foreign borrowing in order to finance the saving-investment gap.

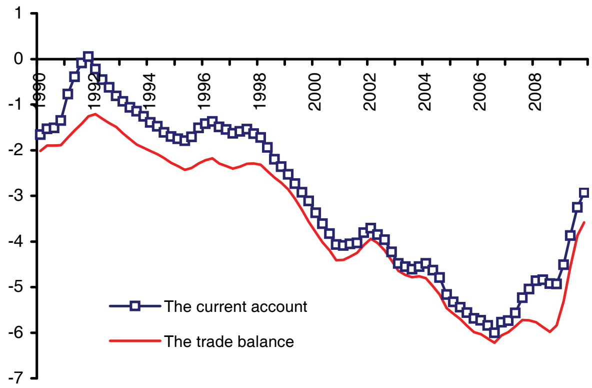


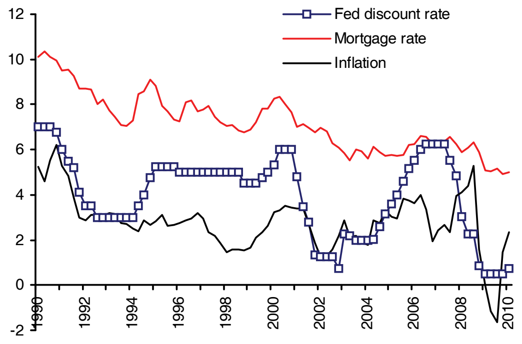
Fig. 2. The U.S. current account and trade balances (% of GDP), 1990—2009

Source: IMF International Financial Statistics

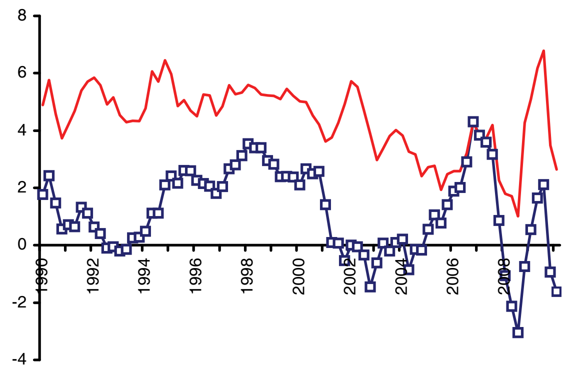
During the 2003—2005 period, the real estate market and remarkable consumer credit growth did play a role of an impressive growth "engine", but the situation has dramatically changed since the middle of the decade. As housing prices failed to rise, it created not only a decrease in the aggregate demand, but a collapse of trust in credit markets as well [17, p. 567]. Then a disruption of the U.S. financial market as a whole took its toll, leading to the deepest economic crisis since the Great Depression of 1929—1933 and imposing delayed costs of fiscal adjustment.

3. Short- and long-term mechanisms of monetary policy

First of all, the Federal Reserve had followed the policy of an artificially low interest rate for too long (Fig. 3). The Fed discount rate had fallen below 1% over the 2000—2002 period, presumably to prevent a sliding into the Japanese-style deflationary spiral. Since the middle of 2001 and till the end of 2004 the Fed discount rate was negative in real terms. Policy of extremely low interest rates could have helped as a counter-cyclical tool, but it ignited a higher demand for housing [14, p. 606—610].



a) nominal;



b) real;

Fig. 3. The U.S. interest rates (%), 1990—2010

Source: IMF International Financial Statistics

It is interesting to note that in the second half of 1990s interest rates were rather high in real terms, but nevertheless it had not averted an accelerating upward trend in the money supply (Fig. 1). Such a situation could have reflected either numerous effects of financial innovations, or the popularity of leverage as a way to finance investments. Assuming high expected returns on the stock exchange or other asset markets, even historically high interest rates were not able to curb strong demand for money. In other words, investors were eager to borrow money at high interest rates, as expected returns looked even higher.

Regardless of particular transmission channels, a policy of easy money had created an over-optimistic vision of the future and contributed to a series of the bubbles on asset markets. The U.S. real estate bubble has been identified as early as in 2002, with possible losses estimated at as high as 1.3 to 2.6 billion dollars [4], but nothing had been done do dismantle it. The annual rate of real housing price growth was zero in 1996, but it had increased to 5.5% during the 1997 — mid-2002 period and to 9.6% for the mid-2002 — 2006Q1 period; the peak of 12.1% growth rate was achieved in 2005Q2 [16, p. 248].

Second, there has been a spectacular increase in the amount of credit in general and the so-called subprime loans in particular[2]. Although the increase of U.S. real estate prices had not been extremely high by international comparisons, the widespread use of financial innovations allowed to pull into the market much more of low income home buyers [14, p. 606—610]. Subprime loans in 2005 amounted to 625bn dollars or 20% of all mortgages. As of 2006, subprime loans constituted 32% of all mortgage originations, while ARMs accounted for 45%, with the share of conventional fixed rate loans being decreased to 23% only [16, p. 249—250]. All the more of mortgage loans were absorbed not by mortgage-backed securities (MBS) funds[3], but by the structural investment vehicles (SIV)[4]. Such developments were stimulated by steadily declining nominal short-term interest rates between 2001 and 2005. Coverage of SIV assets had

[2] Officially, a subprime lender has a FICO credit rating of less than 680, but in practice a subprime lender is considered to be someone who is spending more than a third of their post-tax income on personal debt [24, p. 55].

[3] A mortgage-backed security (MBS) is an asset-backed or debt obligation that represents a claim on the cash flows from mortgage loans, most commonly on residential property. In the U.S., most MBS's are issued by the Fannie Mae and Freddie Mac, which are U.S. government-sponsored enterprises (GSEs).

[4] A structured investment vehicle (SIV) is an operating company that invests in eligible securities purchased long-term assets and fund these purchases by selling short-term commercial paper or notes. Thus, the strategy of SIVs is to gain return on a credit spread between investments in the asset portfolio and shorter term funding.

become more complex, with an increasing involvement of private-equity funds, hedge funds, money markets. On the hand, SIVs boomed because they allowed banks to reap profits from investments in exotic securities, but without setting aside enough capital to mitigate risk.

For many economists, the world financial crisis is the outcome of deliberate U.S. government policies aimed at increasing mortgages for middle-class and low-income Americans [30; 23; 25]. Extra difficulties had been created by the activities on the real estate market by the largest mortgage insurance institutions, Fannie Mae and Freddie Mac, which were government-owned at the moment of their creation in the 1930s, but after their privatization in the 1960s were considered as financial institutions which enjoyed the privilege of implicit government guarantees. Initially their aim was to maintain a liquid secondary market in residential mortgages, but since 1992 they were obliged to promote affordable housing to middle- and low-income groups of population. In one of the interpretations, these were U.S. GSEs that deliberately led to the real estate bubble and its crash. As argued by Peter Wallison from the influential Council of Foreign Affairs [30], Fannie Mae and Freddie Mac were the main vehicles for creating astonishing growth of the subprime loans. Since 1998, Fannie Mae was offering a mortgage with a 3% down payment, and in 2001 the down payments were abolished at all. By September 2008, the portfolio of Fannie Mae and Freddie Mac reached $5.3 trillion of own mortgages and MBSs.

GSEs artificially reduced the cost of mortgage debt, being able to borrow at below-market rates and in virtually unlimited amounts [25]. Banks that originated mortgages were encouraged by regulatory capital adequacy requirements to sell them off to GSEs, which did not bear such capital costs.

Financial institutions engaged into securitization of mortgages gradually overtaken banks as a source of the credit supply[5]. As of 2007, the assets of banking system were worth of $12.8 accounted for two third of $11 mld of mortgages. Since the end 2008 the share of non-banking institutions has been on a decline, while banks started to regain their importance.

Complexity of financial instruments on the mortgage market and their relationship with subprime loans had become an important part of crisis developments, which distinguish the U.S. from other high-income countries that experienced the real estate bubble of much higher amptitude. Nevertherless in Ireland, Netherlands, Spain or Australia the burst of the real estate bubble has not led to a serious economic crisis of the U.S. scale [24, p. 55]. The U.S financial institutions had created so much complicated instruments that banks and non-bank institutions considered to be of good quality, but in reality any possibilities to assess their risk were lacking.

An increase in the real estate price in 2001 had taken place against the backdrop of a recession, which was running counter to a conventional wisdom of pro-cyclicality in house prices. Many borrowers had not enough income to support the so-called ‘plain vanilla’ mortgages – no 20% of down-payments and had to use more than 30% of their income for mortgage debt servicing [16, p. 248].

Financial companies bought subprime loans-backed securities, as they trust two historical facts of (i) Americans never defaulting on their mortgages and (ii) real estate prices always being on an upward trend. Such a situation is normal for standard mortgages with a fixed interest rate and substantial own payment, which were given to persons with credible employment prospects, but these were standards not to be met by subprime lenders.

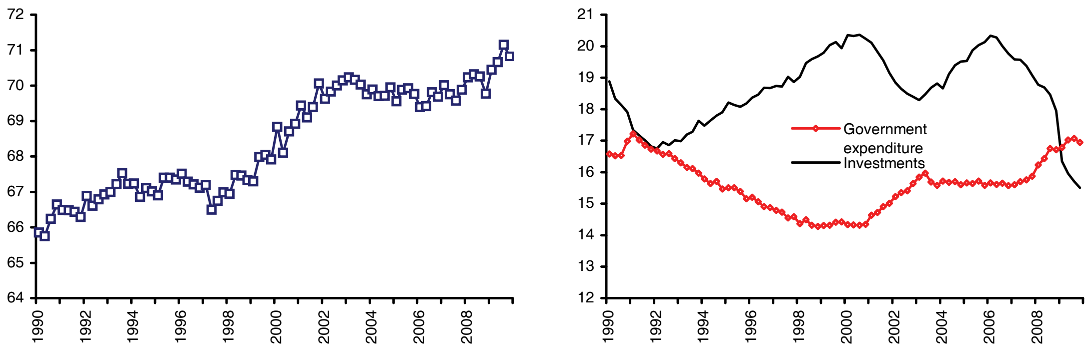
Third, low interest rates fuelled demand for stock, which in turn reinforced private consumption through the wealth effect. A very high rate of home building contributed directly and indirectly to growth through either residential investment and accompanying purchases of fur-

[5] Securitization of assets had been encouraged since the beginning of the 1980s with the aim of increasing the amount on new credit, attracting new investors to the real estate market, and tapping foreign investors [24, p. 60].

niture, appliances, carpets and other household goods, adding to aggregate demand [6, p. 6). In addition, the rapid rise in home prices inclined to increase spending on new cars, boats and vacations. Over-consumption led to dissaving and worsening of the U.S. current account. Research findings indicate relatively large housing wealth effects for the U.S., with financial wealth effect being smaller in magnitude [12, p. 79–89].

During the 1995–2003 period the share of private consumption in the U.S. GDP increased from 67 to 70% (Fig. 4a). The U.S. accounts for a third of the global increases in household income. The dynamics of private consumption was well above the GDP growth rate, being dependent upon the value of assets owned by households. In expectations of further real estate and other assets appreciation, consumers went on an intense borrowing spree. The "debt/disposable income" relationship increased from 103 to 139% of GDP over the 2000–2007 period.

Investments had been on the rise in the 1990s, but declined in 2000–2003 (Fig. 4b). Then the real estate bubble had helped to increase investment rate again, but it drastically dropped to a record low level with the beginning of the real estate crisis. At the same time there has been a steady increase of the government expenditure.



a) private consumption; b) investments and government expenditures;

Fig. 4. The structure of U.S. GDP (%), 1990–2009
Source: IMF International Financial Statistics

Private borrowing was stimulated not only via record low interest rates, but due to a low inflation as well. However, credit booms are not always accompanied by the acceleration of inflation, as it happened during numerous financial crises in the Latin American and East Asian countries in the 1990s, an in the U.S. in the 1920s [25]. For a particular U.S. situation in 2002–2003, the so-called "China factor" was one of the most frequently-cited forces behind the changing nature of the inflationary process[6].

A low cost of funding had been creating incentives for speculative investments on the real estate market. As of 2005 as much as 28%, and in 2006 up to 22% of housing purchases were aimed at "flipping" them for profit, not for personal residence [23]. There were a number of popular reality TV programs, as "Flipping Out", "Property Ladder", "Flip This House" etc.

Excessive absorption had led to a decrease in the saving rate and worsening of the U.S. current account (Fig. 2). Personal saving rate of the U.S. households declined from 12.2% in 1981 to just 2.3% in 2000 (0,7%) (Fig. 5). Private savings recovered during the 2004–2005 period due to a reverse in the monetary policy stance, but since the middle of 2006 the saving rate was on a downward trend again. With the beginning of the 2008 world financial crisis, savings increased, but this trend has been reversed over the last few years.

[6] Empirical studies suggest that the impact of Chinese exports on global prices had been fairly modest, but non-negligible [11; 22].

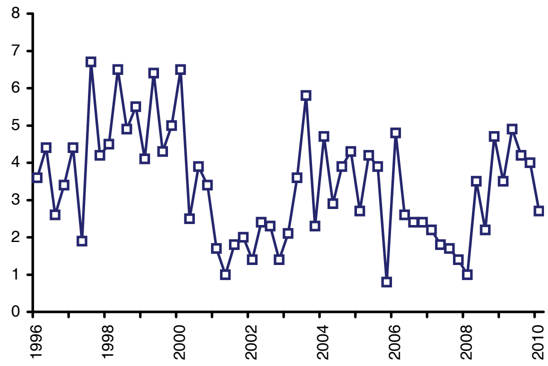


Fig. 5. U.S personal saving rate (%), 1996—2010

Source: U.S. Department of Commerce: Bureau of Economic Analysis

From the peak through the end of 2008, the U.S. households lost $13 trillion of wealth, coming mostly from equities and home prices [6, p. 6—7]. Even though much of this wealth was illusory, as it was based on highly-inflated asset values, it felt like real wealth and could be converted into cash by those to sell at the right time. Having fallen by as much as 20%, the value of U.S. assets has returned to the level of mid-1990s. It is natural that the lost of such a big chunk of wealth cannot but set obstacles to an increase in the private consumption, even if adjust for the famous American optimism.

Fourth, the overheating of the U.S. economy in general and excess money supply in particular had been the most important tools of a steep increase in the commodities prices, of crude oil and metal in the first place, which had created the next bubble in 2006—2007. It is proved that global liquidity is useful indicator of commodity prices inflationary pressure at the U.S. and global level [7, p. 227—242; 13].

Similar to the real estate market, a commodities market bubble of 2006—2007 was stimulated by speculative instruments implying future liabilities and rights. Following the collapse in the housing bubble, investors switched to buying crude oil and metals. The price of oil increased from $50 to $147 per barrel from early 2007 to 2008, before plunging with the beginning of the world financial crisis. As in the previous bubbles, there was "too much money chasing a few goods".

4. Contradictory assessments of the Fed monetary policy

Chairman of the Federal Reserve Ben Bernanke does not agree that monetary policy played a central role in the crisis [9], as much as former Fed governor Alan Greenspan does it [20]. Their arguments are plain enough. During the February 2009 hearings in the U.S. Congress Ben Bernanke singled out the real estate market crash as a main determinant of the 2008—2009 financial crisis, although admitting that important differences with Japan and other countries were created by a large-scale securitization of mortgages [29, p. 118]. According to Alan Greenspan, between 2002 and 2005 the correlation between the Fed-funds rate and the mortgage rate diminished to insignificance [20]. If so, any changes in the discount rate were unable to induce favourable developments on the real estate market.

As suggested by the FRS experts [15], monetary policy was accommodative following the 2001 recession, but is was not the primary contributing factor to the extraordinary strength in housing market. However, empirical evidence are obtained that the monetary policy had significant effects on housing investment and house prices and that easy monetary policy designed to stave off perceived risks of deflation in the 2002—2004 period had contributed to the boom in the housing market in 2004 and 2005 [21, p. 339–366]. Similarly, it is established for the European countries that real house prices are pro-cyclical and typically are preceded by a period of easing monetary policy [1]. During the 2002–2005 period, the lower short-term interest rate may have been a cause of the boom and bust in housing and inflation in 2006 and 2007, as well as poor credit assessments on subprime mortgages [26].

Another argument holds it that a steep decrease in the interest rate since the beginning of the decade had been caused by significant capital inflows. In March of 2005, Ben Bernanke argued that persistent low short-term interest rates had been resulted from a remarkable reversal in the flows of credit to developing and emerging-market economies [8][7]. The explanation looked credible, but it should be taken into account that the capital inflows could have been caused by the U.S. consumption boom, which appreciated either stock exchange assets, or houses through its positive effect upon GDP growth. At the same time, the wealth effect and capital inflows only worsened the U.S. current account deficit, thus contributing to a future reverse in the expectations.

As argued by Benn Steil [25], low interest rates were initially established by the Fed and then sustained by massive capital inflows. Since the end of 1990s, a third of debt issues were placed abroad [24, p. 63]. In fact, China sponsored American home-buyers through low mortgage rates, as it was interested in keeping an undervalued exchange rate of the yuan in attempts to boost exports.

A widespread borrowing by the U.S. households and financial institutions provoked a global surge in asset prices (real estate, commodities, stocks, bonds and art). It was not downplayed that capital inflows predominantly financed the mortgage issues and purchases of stocks and bonds. In the case of a synchronous decrease in prices for both asset markets, exactly as it happened since the end of 2008, the reverse of capital flows is a natural outcome, with a further decline in credibility to follow. An accelerating rate of private and public debt accumulation had been working in the same direction since the beginning of the decade, resulting from profligate fiscal policies, among other things. As the economic recovery had coincided with military campaigns in Iraq and Aphganistan, and against the backdrop of a tax cuts package of the Bush Administration, pro-cyclical improvement in the budget balance did not happened. A higher U.S. indebtness had not served as a reliable cushion in the case of any unfavorable crisis developments.

As in 2002–2003 the U.S. economy was in recession, an expansionary monetary stance was in tune with macroeconomic conditions, but it was necessary to account for possible long-run consequences. It was quite obvious that an increasing wedge between the real estate prices and GDP and wage dynamics would lead to a future decline in prices, as it happened on the IT stock market a few years earlier, with the destabilization of the financial system and decline in private consumption being likely outcomes. Assuming a dominating role of the U.S. in the world economy (its share has been oscillating around 25% of global GDP over last two decades), a slower U.S. demand growth cannot but cause a global recession. In turn, it is only worsening the prospects of U.S. recovery through narrowing demand for its exports. It is worth noting that the annual U.S. consumption stays at $9 trillion, being nine times larger of the China's consumption, and fifteen times of that in India, two largest emerging markets.

Fed ignored numerous early "warning signals". A steep increase in the real estate prices was explained by insufficient productivity in the construction industry, while spectacular foreign

[7] In the aftermath of the 1997–1998 Asian crisis, many LDCs became more cautious and turned into net savers. Initially their savings were absorbed by IT companies on the U.S. market, but a subsequent crash of the dot.com market had led this process to a stop [14, p. 606–610].

borrowing and the current account deficit were blamed for the saving glut in China, South-Eastern Asian, Western European and Gulf countries. It did not contradict with a previous position of neglecting a relationship between the money supply and asset prices. In his speech at the American Enterprise Institute on December 5th, 1996, Alan Greenspan characterized the behavior of investors as "irrational exuberance". To some extent he was correct, because investors quite often ignore the price-earnings ratio, with structural, cultural and psychological factors being of exaggerated importance[8], but all these determinants are less influential under the policy of tight money and high interest rates.

Lack of inflation could not be considered a convincing evidence in favor of the 2002—2004 Fed monetary policy, as inflation not always emerges during credit boom busts [25]. For example, it was a case for many such episodes in the Latin American countries in the 1990s, as well as in the U.S. in the 1920s. It is important that the debt buildup is encouraged during a cheap money period under favorable taxation treatment — exactly what had happened in the U.S. Mortgage interest rate deductability encouraged either leverage, or home ownership, regardless of higher risk.

Prevailing assumptions of an "indefinite" external financing of even extremely high U.S. current account proved to be too optimistic. It was not envisaged that an abrupt decline in the stock exchange indexes and real estate market would cause a reverse in the investors' mood and thus put a significant constraint on capital inflows, especially under conditions of a serious private and public debt accumulation.

Important lessons of the 1997—1998 Asian crisis had been underestimated. According to Jacqueline Best [10, p. 30], in both cases — of the Asian and U.S. real estate crisis — underlying reasons are the same, such as excessive leverage, moral ha¬zard, poor risk management. The only difference is that inefficient government policies had been considered as the main reason behind the Asian crisis, while the U.S. private sector is blamed for the current financial malaise. In 1998, Alan Greenspan heralded the emergence of "the new advanced technology-based international financial system", and claimed that the Asian crisis had been caused by excessive reliance on state and under-developed regulatory systems and lack of fit with the global financial system [19].

It is worth noting that since the end of 1990s a third of real estate debt issues had been bought by foreigners [24, p. 63]. About $2 trillion of MBS issues had been proceeded through the Cayman Islands. At this point some analogies with the Enron case cannot but emerge. The failure to detect risk in a timely manner does not refer only to a lack of government regulation, as rating agencies, mortgage brokers and self-regulating banks all failed to manage risk [23]. The Enron case demonstrated how it was possible to hidden information about real financial conditions for quite a long period of time with the help of formally independent accounting firms. The same could had happened with opaque investment instruments on the real estate market, with innovative nature of these instruments being only a pretext for serious flaws in the risk management under conditions of an expansionary monetary stance.

5. A belated monetary policy tightening in 2004—2006

A long-awaited gradual increase in the Fed discount rate since the middle of 2004 almost immediately put a brake on the real estate prices, which led to a stagnation and then to a bust of

[8] Explanations are not lacking that the IT boom of the second half of 1990s had been inspired by a widespread notion that Internet was the key for future growth. Such feeling had been actively supported by media. Following the 1997 Asian crisis, demand for the stocks of U.S. technological companies was strengthened by the sense of excitement after the crash of potential competitors in the technology sector.

the real estate market. As a result, systemic problems in the banking sector have emerged. The beginning of the U.S. real estate crisis is traced to the fall of 2006, when the delinquency rate on subprime loans had increased from 5 to 10%, and then to 18% by the end of 2008 [24, p. 63–64]. Institutions that originated mortgages reacted to a changing situation on the real estate market with a delay. Although U.S. real estate prices had ceased to grow in 2005 and were on a decline since August 2006, there were new subprime loans issues of $1.2 billion in 2006–2007, of which 80% loans were securitized. As of 2008, about 50% of the stock of U.S. mortgages were subprime loans [30, p. 199].

The burst of the real estate bubble has brought about a serious decline in the construction industry, which used to be considered one of the most important engines of the U.S. growth. If in the pre-crisis 2005 year a quantity of new homes increased by 6.5%, this quantity has decreased since then: by 14.6% in 2006, by 28.6% in 2007, by 40.5% in 2008, and by 28.5% in 2009.

John Taylor argues that the real estate market overheating could have been avoided if the Fed increased its discount rate earlier [26][9]. During the 2002–2005 period the lower short-term interest may have been a cause of the boom and bust in housing and inflation in 2006 and 2007 as well poor credit assessments on subprime mortgages. Excessive risk taking and the low interest rate are connected [27]. Incentives for payments are stronger in line with an increase in real estate prices, while the opposite does happen at the downturn. If the house price falls below the value of the mortgage, negative incentives for delinquencies and foreclosures are mounting. In John Taylor's view, it is likely that risks of MBS were underestimated due to a lack of competition and poor accountability, but the most credible reason is an inherent difficulty in assessing risk due to complexity of these financial instruments.

Investments into MBS had become a component of the culture of excessive risk taking [14, p. 606–610]. However it was very difficult, especially in the case of new innovative financial products, to assess whether a manager creates true excess returns, or these returns are a compensation for future risk, which is to be materialized very soon. Willingness to take illiquidity risk could had been strengthened by the abovementioned saving glut and perceived Fed determination to provide market with extra liquidity in the emergency case (the so-called "Greenspan Put"). Following the 1987 stock market crash, the 1990–1991 Gulf War, the 1994 Mexican crisis, the 1997–1998 Asian crisis, the burst of the dot-com, and the 9/11 attacks, the Fed responded by significantly lowering the Fed Funds rate, often resulting in a negative real yield. In general, in good times capital is cheaper and the cost of illiquidity remote. It was a serious mistake that the risk assessment was given to rating agencies, which were paid by the financial companies [25, p. 8]. Expansion of the MBS was further fuelled by financial sector compensation policies, which rewarded bets on rising asset markets using cheap borrowed money.

Without downplaying the impact of such specific factors, as complexity of investment instruments, insufficient regulation of capital flows or mistakes in risk management, monetary effects seems to be dominant. A Fed policy of easy money had triggered an upward price tendency on the real estate market, which had only strengthened the consumption and investment demand. A low short-term interest rate encouraged excessive risk-taking, resulting in that more mortgage loans were absorbed not by MBS funds, but by much riskier SIVs [16, p. 249]. As in summer of 2007 Chuck Prince, an executive director of Citigroup, put it, "If music stops, in terms of liquidity, things will be complicated. But as long as the music is playing, you've got to get up and dance. We're still dancing" [Financial Times, July 9, 2007]. In plain language, excessive bor-

[9] For the European countries, the highest increase in the real estate price was found in the countries, where the interest rate deviation from the Taylor rule was the largest, as Ireland, Spain, Portugal [2].

rowing and risky investments are not to be avoided, if the policy of easy money continues. Just in a year, the "music" would stop, as the credit crunch takes its hold, and many of the financial market "dancers" would go bankrupt.

It was neglected that in the upturn of business-cycle dynamics optimistic and even euphoric assessments of earnings potential and asset prices lead firms and households to take on more debt and hence financial fragility [16, p. 242]. According to the well-known cycle theory by Hyman Minsky, an American economist, banks do accelerate the expansion process by lending to units whose spending depends on access to intermediate credit. But in the downturn banks reduce their own liquidity, as provision of fresh funds to non-bank financial institutions becomes of higher priority thus 'crowding out' conventional lending. As uncertainty grows, banks become reluctant to take on more default risk, amount of lending decreases, and pessimism starts to prevail, thus causing a deep economic slump. In order to prevent bank runs and a debt-deflation spiral, the central bank has to supply cheap liquidity. However, it has a long-run risk of its own, with an inflationary build-up might be expected. Policy implication is rather clear, i.e. better not to allow 'the bubble' to mount, in order not to be at risk of future stabilization actions.

Real estate prices used to be pro-cyclical, i.e. they have a tendency to increase during an economic boom, and following a long enough period of expansionary monetary policy. If so, an expansionary monetary policy of 2002─2004 aimed at dealing with the danger of deflation led in the longer run to a real estate boom of 2004─2005.

6. Policy implications

Among numerous explanations of the U.S. real estate bubble and 2008 world financial crisis, as weak government regulations, high risk due to the complexity of new financial instruments, widespread securitization of assets, a collapse of trust in credit markets caused by hou¬sing prices failed to rise, taxation system flaws etc., monetary determinants of the crisis are much more credible as its root causes. Stylized features of the pre-crisis developments do not violate the classical explanation of a financial crisis as a natural outcome of monetary excesses, as argued by John Taylor. The policy of 'easy' money contributed to the crisis through numerous channels, with the real estate bubble being one of the most important factors but not the single one. Low interest rates in particular and "easy" money monetary policy in general, including a less restrictive regulatory framework, contributed to a higher demand for financial assets. In the second half of 1990s, a combination of higher money growth rate, investment leverage and over-optimistic expectations had contributed to the dot-com bubble, which burst in 2000. Then a counter-cyclical weakening of the monetary policy stance had helped to overcome the 2000─2001 recession, but at cost of the next bubble ─ on the real estate market. As housing prices failed to rise, investors switched to a commodity market in 2007─2008, thus creating the next bubble in a row over the last decade.

Although it might have been difficult to contain capital inflows in a liberalized global setting as a pre-requisite for tightening monetary policy [5, p. 6], nevertheless it was possible to start increases in the Fed discount rate much earlier or tighten banking requirements for mortgages. This kind of pre-emptive monetary tightening would have helped to stave off the real estate bubble and thus keep the economy from sliding into the worst financial crisis since the Great Depression of 1929─1933. Similarly, it was possible to tighten financial regulations in a similar fashion, as it is being done in recent months.

Recent global financial crisis should not be considered as a fall of monetarism out of grace. Just the opposite, it is an another argument in its favor. A series of large-scale U.S. bubbles argues with strength in favor for a cautious monetary policy, without any merits of the short-term monetary easing which should be weighted against the long-term losses. If the simple Taylor rule-based monetary policy were implemented in 2002–2004, it would have been possible to stave off the danger of the future financial turmoil.

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GENEALOGY OF THE GLOBAL FINANCIAL-ECONOMIC CRISIS: THEORETICAL POSTULATES, PRACTICAL REMEDIES AND WAYS OF RECOVERY

Resume

Examining dominant imbalances in the development of the world economy as a factor underlying the global financial crisis; exploring recommendations and macroeconomic remedies and ways of recovery.

Methods. *The work builds on comparative-analytical methods of scientific research.*

Key words. Global financial-economic crisis, global economy imbalances, Keynesianism, monetarism.

Results. *The global financial-economic crisis, rooted in the mortgage market collapse in the United States back in 2007, soon spread to other countries and eventually reached Ukraine. The general reasons of the crisis lie in the cyclical movement of the national and global economies. In view of the fact that the development cycle in recent decades has constituted 8-10 years, the present rampant financial crisis serves as a certain precursor of the active phase of the global economy and actually embodies the crisis in the real production sector. That is to say, crisis grew out of the financial and banking sphere and penetrated the entire economy.*

The fact that the crisis took its start from the finance sector of the world economy sustains a totally logical explanation, which has to do with multiple causes, the major ones being the pricing sphere, precisely the pricing of hydrocarbons that, in the last few decades, have played an exceptional role in the deformation of the economic development cycle as well as in the general circulation of global financial flows and the development of national economies, which calls for special attention on out part.

Due to dynamic economic growth in the main centers of the developed segment of the global economy (South America – Western Europe – Japan) as well as in China, India and some other regions, the demand for oil has been on the constant rise. This has become a perpetual factor for the speculative growth of liquid fuel prices. Different motives were employed to justify the increase of oil prices (constant instability in the Middle East, through which international oil supply channels run to different regions; cyclones in the U.S. South and in the Gulf of Mexico etc.)

Therefore, the prime cost of a barrel of oil "lost touch" with oil pricing. And the profits of oil companies added up to 250-450% [1], as estimated by experts. At the same time, complete detachment of free pricing and the competitive basis occurred in this economic domain. "Easy money" flowed from the sector into other profitable spheres of economy, including individual housing development, thus forming increased demand at the cost of low credit interest rates

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within the growth phase of the cycle dynamics, and, vice versa, bringing a negative impact in the stagnation stage.

Outstanding foreign and domestic scholars presently agree that the fundamental cause of the global financial crisis embraces the following dominant imbalances in the world economic development that had accumulated over the past decades:

excessive consumption levels of developed countries which occurred, in the first place, at the expense of the increase of production not only in the developed states, but also due to a speedy growth in the developing countries;

the global-scale inconsistency of asset value with the volumes of financial operations which were conducted in capital markets and created the so-called "financial bubbles";

prevailing growth of capitalization of companies and profitableness of investments into the financial sector (that is, in the so-called "virtual economy") in isolation from the profitableness of investments into real economy sectors.

As regards the domestic economy, it should be noted here frankly and objectively that it appeared to be unprepared for functioning in open-economy conditions, incapable of taking preventive measures and of providing an adequate response to global crisis challenges.

Economy remained unprepared and, thus, such a downfall occurred due to the fact that the following failed to be achieved in the years of economic transformations in Ukraine:

no transition to an innovative model of national economic development has been secured;

no effective mechanisms of private property protection have been enabled;

no strategy of the social-economic and scientific-technical development of the state in the conditions of world economy globalization has been developed;

the social sector of economy and the housing sphere have not been reformed and, in fact, continue to operate on non-market principles.

Judging from the materials of the World Economic Forum (held in January 2009, in Davos), as well as from the conclusions of the G20 Summit (which took place in London in early May), no single template recipe has been established with regard to the recovery from the global economic crisis.

On the basis of decisions and recommendations offered in the course of the G20 Summit, each state is making efforts to develop its own way out of the claws of crisis. Great Britain, in particular, embarked on a course of actions being totally opposite to the policy of thatcherism which based itself upon the principles of free entrepreneurship embedded in monetarism and the "supply-side economics". The United States of America went along the line of direct pouring of money into the economy, having invested over 1 billion US dollars in it already.

Measures are taken, within the scope of possibilities on hand, to hamper the crisis' influence, ranging from protectionist to subsidiary ones, by each state depending on its abilities and the level of authority with influential world finance and banking institutions.

The domestic banking regulatory bodies have yielded the hand of help not so much to the sectors of real economy as to banking institutions by way of refinancing and recapitalization of the latter and resorting to various loans from different sources.

The crediting scheme presently in use by the banks to receive refinancing with the National Bank of Ukraine against the so-called Internal State Loan Obligations redeemed from the Ministry of Finances, is budget financing in disguise. And this is the fact which the IMF has always opposed perseveringly and abruptly. And all of a sudden, the IMF has taken some unprecedented moves in its cooperation with Ukraine. In fact, it has opened the second loan installment of $2.8 billion for Ukraine not backing it up with guarantees necessary for such cases, that is without proper actions on the Government's part. We do not accept the thought that IMF is unaware of the concealed budget financing scheme (the mechanism of NBU redeeming internal state loan obligations) employed in Ukraine; however, the money has been loaned.

How are we to evaluate the fact? Is it good? And for whom is it good? Or is it not quite positive? Or perhaps it is even totally unfavorable in view not only of the current situation, but also of the future medium-term perspective? It is rather difficult to provide a definite and flat answer to these questions. Everything depends on how the borrowed funds are used. Will they be made the tool of reanimating, restructuring and renovation of leading sectors and branches of domestic economy; or will they just be applied as haste budget hole-patching, i.e. for current consumer expenses, replenishment of the salary and the pension funds, and for the restoration of about 15 commercial banks that went bankrupt and are now under the management of temporary state administrations?

Along with that, one ought to remember that any debts (and they are rather significant – over $120 billion) will have to be paid back together with loan interest amounts. And the imminent credit repayment is destined not for those who are presently in power and borrow them, but for their successors. How, then, should we react to the issue?

Therefore, everything is contingent upon where the authorities direct and how they will use the funds allocated by the IMF for Ukraine. As regards the unprecedented action on the part of the IMF, we believe that the dominant idea in this respect is not a move of charity in favor of Ukraine's requests concerning the allocation of a loan; rather, it is the situation in which the IMF itself is being placed. For withholding a credit from Ukraine obscures consequences still bitterer than providing one for the country. Since in such case, the IMF will face the incrimination and liability in respect of unpredicted results that can occur not only within Ukraine itself. And that is where the authority and international reputation of the International Monetary Fund itself may be at stake.

It is a known fact that the significant part of the allocated tranche amount is directed at the restructuring of banks. Obviously, financial crisis brought about a complicated situation in the banking system at large, and, all in all, such measure is a forced one, since due to panic and total distrust, over UAH 70 billion [2] was withdrawn from banks back in the first quarter of 2009. At present, the state of things is aggravated by debtor defaults and a serious increase in currency loan costs, the servicing of which, due to an abrupt increase of the U.S. dollar exchange rate, is all too difficult for many banks.

Also in this context, one should clearly understand that recapitalization can have a positive impact upon the financial market only on condition that such procedure is furnished with proper transparency and strict control of the funds use. If the case is such, the state pouring of funds could somewhat calm bank clients down, at least in the short-term perspective.

Along with that, a reasonable question arises at the moment concerning what the National Bank of Ukraine and the Cabinet of Ministers of Ukraine intend to undertake with respect to the recapitalized banks; how are they actually going to "cure" the banks if the "remedy" provided in the form of money allocated to them proves ineffective? There is no answer to the posed question so far, and no one dares to come up with one. Meanwhile, there exists a necessity to clearly realize that even the effect on economy which recapitalization may cause seems rather doubtful on the whole. For, despite the fact that the state will gain into its property at least 7-8, or perhaps 11 or more banks from among the biggest ones, this will not likely let the state direct money flows towards the crediting of the top-priority branches of economy. Since the funds directed into the banks' capital will apparently be used for the return of depositors' money. Thus, as a result of recapitalization, the state will receive more liabilities than opportunities, which will increase its debt burden, and the debt burden, as has been stated above, totals to over $120 billion [3].

This year already, 25%, i.e. $30 billion – the amount that practically constitutes the servicing of the external debt – will be due to repayment. One should also keep it in mind that if these $30 billion equaled to UAH 150-180 billion only six months ago, now they are worth UAH 250-260 billion.

The store of ways of recovery from past crisis situations that occurred in Ukraine, developed by economic practice and theory, unfortunately, cannot be stencil-applied to the present worldwide financial-economic crisis.

Even though, in particular, Keynes macroeconomic ideas have had a great influence on the formation of regulatory levers of economic development, as it turned out to be in practice, Keynesian recipes of cumulative demand stimulation not always yield the desired result. And endeavors to overcome economic downfall by way of cumulative demand increase not always result in the production volumes increase, but only aggravate inflation and can cause the so-called stagflation – the combination of production shrinkage and inflation, which fact has again been undoubtedly confirmed when the present crisis emerged in global economy and particularly in the Ukrainian one.

The above has definitely shaken the position of Keynesian theory and prodded the development of other domains of the neoclassic theory – monetarism, the rational expectations theory, the supply-side economics, all of which substantiate the advantages of the market mechanism over the state regulation of economy.

In view of the peculiarities of the present-day financial-economic crisis, being global by nature, the fundamental principles and approaches of the Keynesianism theory (based on the necessity of state regulation of economic processes and professing fiscalism) and the M. Friedman theory in the classical form of monetarism (based on the quantitative money theory) with the supply-side economics theory replenishing it, as well as the rational expectations theory (new classical macroeconomics), which inherited separate tenets of monetarism, all present to be incapable (according to the generally acknowledged EVALUATION of international and national authoritative experts) to play the role of a preventive and restoring prescription for the depressive and damaging effects of the crisis, also to be used to secure the return of economy onto the track of effective development dynamics.

The so-called "tax wedge" theory, proposed by one of the "supply-side economics" proponents, A. Laffer, which introduces a tax wedge which the state "thrusts" in between economy subjects and the production process, has enjoyed some real and tangible confirmations in practice. Its essence lies in that the reduction of tax rates does not cause the decrease of the total budget income and only brings about the increase in production and revenues, thus considerably expanding the general taxation base and, due to this, budget income shall not incur a decrease [4].

However, in the context of this approach, complete balancing of the state budget still calls for the reduction of the number and costs of "non-effective" social programs that account for a significant share in the body of state expenses. Yet the fulfillment of such steps is rather problematic in the present-day times of predicament, in any state, and all the more in a state like Ukraine (where the social-economic and political situation is critically intense, especially in the time of the presidential election campaign). However, the fuss around this idea is picking pace enormously with the bodies of power.

Meanwhile, as is known, it is undeniably stipulated, by virtue of well-grounded regularities determined by the so-called Laffer curve, that budget deductions cannot exceed 30-35% of income, this being a certain fiscal optimum, since cases of excess of the optimal taxation level give birth to negative economic processes that manifest themselves in the form of:

laxing of business activities;

lowering of interest in savings and investments, bankruptcy of subjects of economic activity; tax evasion;

functioning of a significant number of subjects of business activities in the "shadow" sector of economy.

In Ukraine, which, throughout the entire period of its sovereignty, has failed to adopt a Tax Code, cumulative taxes exceed the face value determined by the Laffer curve by two times or more, the result of which is the respective bevy of above-stated destructive symptoms in domestic economic activities.

In the current recession-crisis condition, whereas the prudent managers of the West avoid any pressure and resort to the loosening of fiscal levers, the Ukrainian chiefs of executive, and legislative, bodies, from the Cabinet of Ministers of Ukraine to local authorities, strive to intensify fiscal pressing either by way of inventing and introducing new taxes and tariffs or by increasing the existing ones.

Without disclaiming the attractiveness of idea-based and theoretical as well as methodological principles of institutionalism, which lie at the core of the driving force of economic development, along with material factors, one ought to take into account spiritual, moral, legal and other factors in the historical aspect (i.e. they considerably expand the subject of analysis, incorporating in it both economic and non-economic issues of the social-economic development); however, in crisis conditions they also become impossible for use due to the complicated financial and political-legal instability in the world in general and in the country in particular.

In general, one ought to state that macroeconomic theory has not become whole yet; many questions are still the subject of acute disputes.

There exist various financial-economic theories which form the methodological basis of this science. The major ones include [4] the deficit financing concept; the built-in budget stabilizer theory; the compensation theory of finances; the "mutual product", "public good" and "public choice" theory; R. Goldsmith [5] financial development and economic growth interconnection theory; E. Fama's effective market theory [6].

However, the modern leading, and thus, determinant, tendency of the development of the world financial and economic thought is that of mutual permeation and improvement – a peculiar convergence of Keynesianism and monetarism theories. Today, scholars and financial experts consider dominant the position that the financial-economic regulation policy should contain, in one way or another, the use of elements and the set of instruments of Keynesianism, especially in the context of the emergence and spread of the global financial crisis. Since Keynes's theory appeared as a countermeasure for the Great Depression phenomena in the previous century, the use of a set of measures it offers, both in the past and in the present, when Keynesian instruments are properly handled, facilitates the recovery from crisis and the renewal of effective functioning of economy.

Our standpoint in this domain is that both scientists and practitioners should grow aware of the fact that the current global financial and economic crisis is the offspring and natural result of the historic evolution of our civilization (including its development cycles throughout the last century); therefore, no quick and free of dramatic shifts (both in the outlook concerning the relationships between the countries and the structure of economy on the whole) way of recovery from the conscious-recessive state is envisaged at present (despite the opposite prophecies by heralds of all kinds).

The after-crisis world economy is to undergo structural changes. And, actually this is the quintessence of the place and role that Ukraine can and should take up in the international division of labor. Yet, what role and place is one entitled to talk about in this respect, taking into account the present third – fourth at most – level of technological state of domestic production base, characteristic of that existing in the century before the previous one, as well as in view of the lagging-behind level of requirements towards professionalism within the system of education at the backdrop of the present nanoeconomics epoch; this is added by the disregard and defiance of education, chaos and destructive state of practically all infrastructures of human activity.

Thus, up to this day, the major role in the country's economy has been played by the export sphere, inherited from the past, that was prevailingly determined by the produce of energy-consuming metallurgic, chemical industries, the agro-industrial complex, and, however bitter it may sound, the labor migration. Isn't it high time that the oligarch masters controlling the industrial fields of economy and respective bodies of state power regain their senses and finally realize that such completely selfish pragmatism, which is detrimental for the country and for 80-90% of the nation, is destined to lead nowhere else but to complete economic decline and a marginal, out-of-context Ukraine? That is, if Ukraine still manages to preserve the status of one and indivisible nation.

Conclusions. The present global financial-economic crisis is in fact a vivid result of the synergetic manifestation of deficit of the stated effective humanism phenomena, and the crisis of trust, above all.

It is necessary to particularly emphasize here that recovery from financial-economic crisis, especially in Ukraine, must be undertaken in the conditions of political stability and, most importantly, consolidation of the Ukrainian society, renewal and securing of its faith and trust both towards individuals and towards social and state institutions.

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GLOBAL BUSINESS CYCLE: SYNCHRONIZATION IN THE CURRENT RECESSION

Анотація. *У 2008-2009 роках світова економіка зіткнулась з найсильнішим фінансовим потрясінням з часів Великої депресії. В умовах скорочення частки позикових коштів глобальної фінансової системи і перебування економіки США в умовах серйозної кризи, світова економіка демонструє швидке падіння темпів зростання після кількох років бурхливого підйому. Незважаючи на підвищення інтенсивності торговельних і фінансових зв'язків у всьому світі, глобальний економічний цикл становить тільки близько 50% – 60% варіації зростання реального ВВП серед основних розвинених країн, і країн з ринком, що формується. Решта є результатом конкретних регіональних і країнових факторів. Економіка США як і раніше є основним прискорювачем зростання світової економіки, хоча економіки країн БРІК стали ще одним важливим гравцем.*

Summary. *In 2008-2009 global economy was grappling with the most severe financial shock since the Great Depression. With the global financial system deleveraging and the U.S. economy in the midst of a severe recession, the global economy was decelerating quickly after years of heady growth. Despite more integrated trade and financial linkages around the world, the global business cycle accounts for only approximately 50%–60% of the variation in real GDP growth across the major developed and emerging market economies. The remaining economic volatility is a result of region-specific and country-specific factors. The U.S. economy remains the primary accelerator of world economic growth, even though the BRIC economies have clearly emerged as another important engine.*

Keywords: global business cycle; globalization; business cycle synchronization; Markov switching models.

World Economy in 2008-2009 experienced the deepest recession over the last 50 years. Many observers argue that this decline has all the signs of global recession. What is the global business cycle? In the 1960's for answers to this question was enough to consider the cyclical fluctuations in countries with developed economies, particularly the U.S. These countries produced the lion's share of world output, almost 70 percent of purchasing power parity (PPP), in addition, cyclic activity in much of the rest of the world is largely dependent on conditions in countries with developed economies. Today, as the share of countries with advanced economies in the global production volume decreased to approximately 55 percent of PPP, coincidence of the business cycles in time in these countries and global business cycles can no longer be taken for granted. Indeed, in 2007, when economic activity began to decline in the U.S. and other

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countries with developed economies, there was a hope that the emerging markets and developing countries to some extent insulated from these events by the size and strength of domestic demand in their economies and by the increased importance of intraregional trade in Asia. At the same time countries in the world today are more integrated through trade and financial flows than in 1960, creating greater potential for secondary effects and spillover. As a result of enhanced feedback, in both directions, between the course of business cycles in countries with developed economies and in emerging markets, emerging and developing countries, which increases the probability of synchronous change and global business cycles.

While the gyrations were most evident in financial markets, global production and trade were also severely buffeted. For the first ten months following the start of the crisis (in April 2008), industrial production fell at the same rate as in the Great Depression and global trade fell much faster. Since then there has been some recovery, but 20 months into the crisis, industrial production and trade were, respectively, 6 percent and 20 percent below their previous peaks[1]. The economic contraction experienced by some countries could scarcely have been imagined. For example, the German economy, which grew at an average rate of 1½ percent a year in the last two decades (with a standard deviation of 1¼ percent), contracted by 5 percent in 2009, a contraction not experienced in the last 70 years. Forecasters have been repeatedly humbled as new data releases have been associated with sizeable real time revisions of growth projections. The unusually high volatility since mid-2008 came as a complete surprise. It followed an extended period of declining output volatility—the so-called "Great Moderation"—that had embraced a large number of advanced industrialized nations.

The sense of the Great Moderation's durability was reinforced by the investigation of its determinants. The possibility that "good luck" (milder "shocks" to the economic system) played a role has generally been discounted, with the moderation increasingly attributed to advances in the design and implementation of monetary policy, better inventory management, and financial have argued that the changing age distribution of the workforce has helped: the labor input of young workers tends to be particularly volatile and the declining share of young workers in the workforce has accounted for one-fifth to one-third of the decline in GDP volatility. An important feature of studies of the Great Moderation is that, even when considering multiple countries, they have typically dealt with individual country experiences. In contrast, the international dimension of the reduction in volatility received less attention. This is surprising in view of the rapid globalization in recent decades.

"Common international" shocks are defined as those experienced contemporaneously across countries and "spillovers" as country-specific idiosyncratic shocks that are transmitted to other countries with a lag. Their procedure allows the decomposition of a country's GDP growth volatility into domestic, common international, and spillover components. And they trace the source of the great moderation to a fall in international shocks.

Despite its frequent use, however, synchronization as a formal concept has only recently been formally introduced into the business cycle literature, where comovements among cyclical time series have been the dominant object of analysis for many decades. Harding and Pagan (Harding, D. and A. Pagan (2003). A Comparison of Two Business Cycle Dating Methods. Journal of Economic Dynamics and Control 27 (3): 1681-90.) proposed a definition of cross-country cycle synchronization that is an offspring of the traditional concepts developed by the National Bureau of Economic Research (NBER) starting in the early 1920s. Specifically, they consider national business cycles to be synchronized if turning points in the corresponding ref-

[1] Eichengreen B., O'Rourke K. A tale of two depressions: What do the new data tell us? 8 March 2010, http://www.voxeu.org/index.php?q=node/3421

erence cycles occur roughly at the same points in time. On this basis, they have derived a statistical measure, the concordance correlation, that allows one to test whether national cycles are significantly synchronized or not. This approach to measuring synchronization boils down to national business cycles being in the same phase—expansions and recessions—at about the same time [2, 5].

In 1997-1998, many countries with the emerging market, especially in Asia, suffered a sharp decline in economic activity, but in countries with developed economies growth rates were not declining. In 2001, on the contrary, many countries from developed economies have experienced a small decline, while in the main countries with the emerging market, including China and India, the growth rate remained stable.

Recession in 1975 was caused mainly by lower activity in developed countries, but countries with emerging market and developing countries played a significant role in three other episodes. In 1982, a recession in many countries of Latin America reduced global activity, whereas in 1991 an important factor was decline in countries with economies in transition. Recession in 1991 lasted several years: the U.S. recession in 1990-1991 followed by recessions in European countries during the European exchange rate mechanism (ERM) crisis of 1992–93. Period 2006-2007 is notable for a record low number of countries experiencing a recession. But then the situation changed dramatically. The 2009 recession affected almost all countries with developed economies. The current recession differs by the highest level of synchronization over the last 50 years. While it happened obviously due to lower activity in countries with developed economies, a recession in some emerging markets and developing countries contributes to its strengthening and improves synchronization degree.

The standard story of the present global recession and financial crisis emphasizes the centrality of developments in the United States—especially the expansion and subsequent collapse of the real estate and real estate financing bubble and its impact on an overleveraged US and global financial system. Others point more broadly to persistently easy monetary policies, very low interest rates and interest rate spreads, and general disregard of growing risks in the financial system as key causes. Some point to the "global savings glut," particularly the part emanating from China's massive current account surpluses and reserve accumulation, as a key underlying cause of present travails.

All of these explanations harbor a degree of truth, especially the first two. However, to understand both the sudden sharp deepening of the global recession and financial crisis last autumn and the reasons to anticipate recovery, it is important to look to a broader set of causes of present difficulties. While it seems like a distant memory, it is important to recall that from mid-2003 through early 2008, the world economy enjoyed a boom of broad scope and exceptional vigor, with average annual growth of global GDP ap-

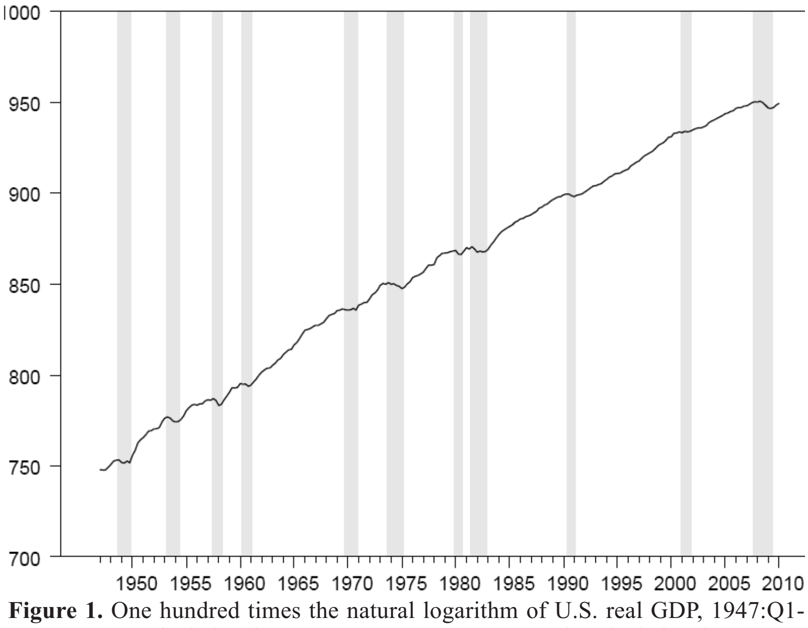

Figure 1. One hundred times the natural logarithm of U.S. real GDP, 1947:Q1-2010:Q1. Last shaded region covers 2007:Q4-2009:Q2; other shaded regions correspond to NBER recession dates [Hamilton J. Calling Recessions in Real Time. NBER Working Paper 16162, July 2010. http://www.nber.org/papers/w16162, p.33].

proaching 5 percent and with virtually all countries participating in the boom. As reflected in a deteriorating balance of real net exports, through the end of 2005, growth of domestic demand in the US economy in excess of US real GDP growth (Figure 1) contributed to the boom in output in the rest of the world. The upsurge in residential investment in the United States and the impact of increasing household net worth from rising home and equity prices on US consumption contributed to this phenomenon. In 2006 residential investment turned downward, and growth of US domestic demand slowed. With the aid of a weakened dollar, US real net exports began to improve.

Indeed, from the end of 2005 through mid-2008, the improvement in US real net exports slightly more than offset a very large decline in real residential investment. This kept US real GDP growing, albeit at a reduced pace, despite a considerable slowdown in real domestic demand growth. Thus, the rest of the world helped to cushion the slowdown in the United States.

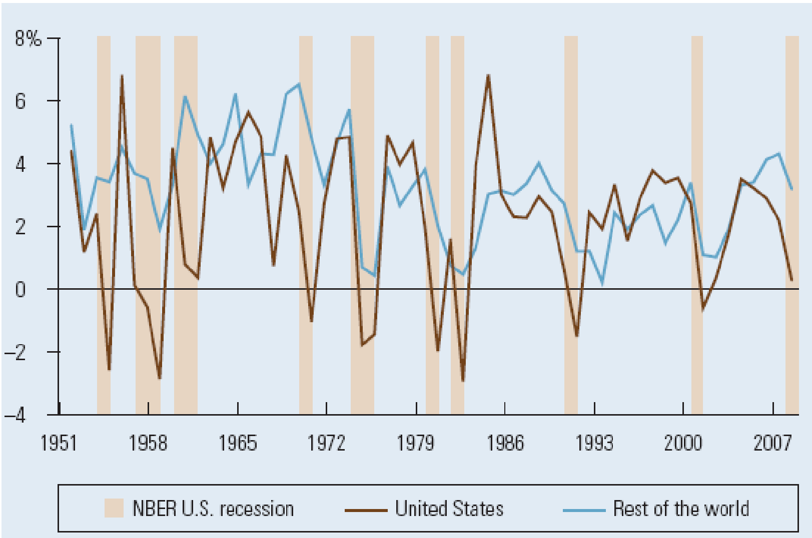

Figure 2. Real GDP per capita growth rates for the United States and the rest of the world, 1951–2008 [6, p. 4].

This was fortunate from the perspective of the rest of the world as well. Rising inflation, not weak output growth, was the key macroeconomic problem for the rest of the world. This is evident both in the actual rise of inflation and in the fact that many countries were tightening their policies in order to combat rising inflation. Indeed policy tightening was undertaken in virtually all industrial countries, except the United States, until the summer of 2008, and many emerging-market countries (notably China, India, and Brazil) were also tightening their policies. From their perspective, the slowdown of demand growth in the United States and the improving US real trade balance were helping in the battle against inflation. Most obviously, how sensitive is the global economy to the U.S. business cycle? As shown in Figure 2, past U.S. recessions have either coincided with— or led to—global slowdowns because the rest of the world's trade and financial markets are linked with those of the United States. Should investors expect the U.S. economy to continue to act as the proverbial "locomotive" for world growth in the years ahead?

The stress and turbulence that began to develop in world financial markets in early 2007—linked to worries about US subprime mortgages and complex financial instruments based on such mortgages—was not such a mutually beneficial development. The deepening of these troubles in August 2007 was similarly unwelcome. The United States was clearly a key source of these difficulties, but it was not the exclusive source. The United Kingdom had its own problems related to mortgages as reflected in the need to nationalize Northern Rock. Difficulties with mortgage finance in Ireland and Spain also had domestic origins. And, for those financial institutions whose problems stemmed largely from assets based on US mortgages, it is noteworthy that they purchased these assets of their own free will.

During 2008, stress in world financial markets deepened and broadened, led by developments in the United States. The near failure and emergency rescue of Bear Stearns in mid-March increased concerns about wider classes of assets and financial institutions. Deteriorating conditions in markets for mortgages and related financial instruments induced the US government to take over Fannie Mae and Freddie Mac. In mid-September, the outright failure of Lehman Brothers and emergency rescue of AIG (or, more accurately, of AIG's counterparties) began an unprecedented disruption of world credit markets.

This extreme disruption of key credit markets in the United States and worldwide continued through October and into November and only partially abated by year-end. The negative impact on economic activity and on trade was severe and virtually immediate. This explains at least an important part of the sudden economic collapse in the final quarter of 2008 and the first quarter of 2009.

The source of the extreme stress in financial markets was not exclusively in the United States. Severe problems in the banks of Britain (especially the Royal Bank of Scotland and Lloyds), Ireland, Belgium, the Netherlands, and tiny Iceland were primarily of their own making. Despite their generally sound management, Spanish banks faced difficulties linked to the inevitable collapse of the domestic housing boom. Other Western European banks were vulnerable because of overleveraging and due to their excessive exposure to affiliates in Central and Eastern Europe.

Beyond the stress in financial markets, the world economy also suffered important negative shocks late last year from several other sources. The upsurge in world commodity prices, especially in world oil prices to $147 per barrel in July 2008, was a significant negative shock to users of these commodities. This shock was clearly not the consequence of financial stress, in the United States or elsewhere; but allowing for a slight lag, its economic impact hit at the same time as extreme credit market turbulence. More recently, the collapse of many commodity prices has clearly begun to undermine growth in exporting countries. Policies to combat rising inflation undertaken through mid-2008 probably also operated with somewhat of a lag, reinforcing the downturn in the world economy in late 2008 and early 2009. The slowdown in China's growth late last year probably owes more to the earlier tightening of Chinese policies and the wind-down from the Beijing Olympics than to global financial turmoil, and the Chinese economic slowdown has affected its trading partners especially in Asia. Other emerging-market countries that earlier had tightened their policies, including India and Brazil, found the effects inconvenient by year-end. The slowdown in the euro area during the second and third quarters of last year was at least partly the consequence of policy tightening to combat inflation. By the fourth quarter, this effect was adding unexpectedly and undesirably to a precipitous decline in output. In the United States, the 2008 tax cuts provided a modest boost to demand in the second and third quarters, but the wearing off of this effect added to the pace of decline in the fourth quarter. In sum, the extremely sharp declines in global economic activity and world trade in late 2008 and early this year reflect several important negative shocks, with the stress and turbulence in world financial markets playing the leading role.

The relationship between economic integration and business cycle synchronization dates back to the study of Mundell (Mundell, R. (1961), \ A Theory of Optimum Currency Areas, " American Economic Review, 51(4): 509-517.) on the desirability of the optimal currency area, where the focus has been on trade. The main argument is that countries will be more willing to give up their autonomous monetary policy if their business cycles are more correlated with each other. Frankel and Rose (Frankel, J. and Rose, A. (1998), \ The Endogeneity of the Optimum Currency Area Criterion," Economic Journal, 108(6): 1009-1025.) point out that even if countries with asynchronous business cycles form a currency union, then the union may become endogenously optimal if trade increases output co-movement through demand spillovers. Theoretically however the impact of trade on output patterns can go either way. If lower barriers to trade induce countries to specialize then output fluctuations will become less, not more, symmetric as argued by Krugman (Krugman P. (1991) \ Geography and Trade," MIT Press, Cambridge, MA.). On the other hand, if most trade stays within sectors (intra-industry trade) in spite of specialization at the sectoral level then the cycle will become more synchronized. Starting with Frankel and Rose (1998) many studies, such as, Clark and van Wincoop (Clark, T. E. and van Wincoop, E. (2001), \ Borders and Business Cycles," Journal of International Economics, 55(1): 59-85.), Otto, Voss, and Willard (Otto, G., Voss, G. and Willard, L. (2001), \Understanding OECD Output Correlations," Reserve Bank of Australia Research Discussion Paper No 2001/05.), Baxter and Kouparitsas (Baxter, M. and Kouparitsas, M. (2005), \ Determinants of Business Cycle Comovement: A Robust Analysis," Journal of Monetary Economics 52(1): 113-157.), and Calderon, Chong and Stein (Calderon, C., Chong, A. and Stein, E. (2007), \Trade Intensity and Business Cycle Synchronization: Are Developing Countries Any Different?," Journal of International Economics 71(1): 2-21.) show that trade integration leads to more correlated business cycles. Yet recent work finds a much weaker link between trade intensity and output co-movement (e.g. Inklaar, R., Jong-A-Pin, R. and de Haan, J. (2008), \Trade and Business Cycle Synchronization in OECD Countries - A Re-examination," European Economic Review, 52(2): 646-665.).

The collapse of the financial and real-estate bubbles in the US rapidly triggered a global drop in production comparable to the economic crisis of 1929. Nearly all observers underestimated its future severity because of assumption that economic turmoil in the US would not spread into a global conflagration. Many economists thought that much of the emerging world would not be affected by America's homegrown problems—it was often claimed, for example, that emerging economies were undergoing a robust and independent form of development.

As a consequence, economists also assumed that a continued demand for imports in such developing nations would help to bolster the economies of industrialized nations and mitigate the effects of reduced demand from the US. Studies analyzing the increasing integration of trade and financial markets with a view to business cycles in industrialized and developing countries have suggested that globalization does not lead to significantly greater business-cycle synchronization (Kose, M.A., E.S. Prasad, M.E. Terrones: How Does Globalization Affect the Synchronization of Business Cycles? American Economic Review 93(2), 57–62).

The broadly synchronized recent downturn in the industrial countries has generally reinforced the notion of international business cycle synchronization. Paradoxically, however, the empirical evidence for the past three decades is so mixed that it remains difficult to make a strong case for the notion of increased or increasing business cycle linkages among industrial countries. Depending on the sample period, output correlations have even decreased in recent decades, largely on account of a remarkable cycle desynchronization among the major industrial countries in the late 1980s and early 1990s (Helbling and Bayoumi, 2003)[2]. The empirical case against increased synchronization is made forcefully by Doyle and Faust (2002)[3], who analyze

[2] Helbling, Thomas and Bayoumi, Tamim, Are They All in the Same Boat? The 2000-2001 Growth Slowdown and the G-7 Business Cycle Linkages (March 2003). IMF Working Paper, Vol. , pp. 1-42, 2003. Available at SSRN: http://ssrn.com/abstract=879121

[3] Brian M. Doyle & Jon Faust, 2002. "An investigation of co-movements among the growth rates of the G-7 countries," Federal Reserve Bulletin, Board of Governors of the Federal Reserve System (U.S.), issue Oct, pages 427-437.

changes in the comovements among the growth rates of G-7 countries since 1971 and found no evidence for significant increases in output correlations over time, even for Canada and the United States or for the euro area member countries. On the other hand, studies using dynamic factor models find evidence of increased international business cycle linkages. For example, Kose, Otrok and Whiteman (Kose, M. A., C. Otrok, and C. Whiteman, 2003, International business cycles: World, region, and country specific factors, American Economic Review) report that a global factor explains larger shares of output variances in the G-7 countries during 1986-2001 than it does during the Bretton Woods period (1960-1972).

In another empirical study of interdependencies in international business cycles between 1960 and 2005 the results show that business cycles in industrialized nations have been convergent over the last twenty years (1985-2005). The same applies to developing nations. However, the divergence between industrialized and developing nations has tended to grown larger. Because of studies like this, the rapid global spread of the crisis was not expected (Kose, M.A., C. Otrok, E.S. Prasad: Global Business Cycles: Convergence or Decoupling? NBER Working Paper No. 14292). Because of studies like this, the rapid global spread of the crisis was not expected.

So, 2009 was the year of deepest recession for the world's postwar period. Most indexes fell more sharply than in previous episodes of global recession. In addition to severity, this global recession also qualifies as the most synchronized, as virtually all the advanced economies and many emerging and developing economies are in recession.

The financial crisis that first erupted in the U.S. subprime mortgage market in August 2007 has evolved into the largest financial shock since the Great Depression, inflicting heavy damage on markets and institutions around the world. Indicative of the magnitude of the shock, equity market volatility is at or near unprecedented levels, corporate bond yields are extremely high relative to U.S. Treasury yields, and commodity prices have plummeted. With the global financial system deleveraging and the U.S. economy in the midst of a severe recession, the global economy was decelerating quickly after years of heady growth.

As shown in Figure 3, past U.S. recessions have either coincided with — or led to — global slowdowns because the rest of the world's trade and financial markets are linked with those of the United States.

Some analysts believe that the world economy has become less sensitive to U.S. developments as a result of rapid growth in emerging markets. Indeed, Figure 4 highlights the growing and outsized contribution of emerging market economies to recent worldwide economic growth. In light of explosive growth in the so-called BRIC economies (Brazil, Russia, India, and China), many analysts wonder whether the emerging markets have "decoupled" from the rest of the world.

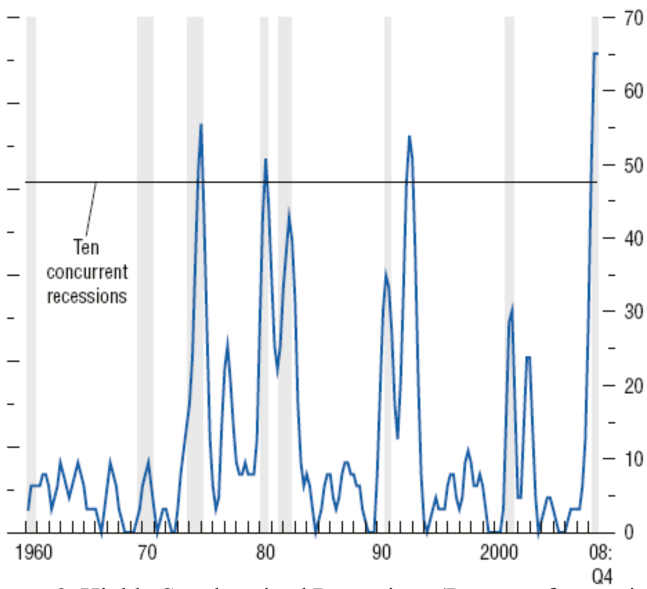

Figure 3. Highly Synchronized Recessions (Percent of countries in recession; shaded areas denote U.S. recession. The sample includes the following 21 country: Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Japan, Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, United Kingdom, and United States.) [11, 119].

Over the past five decades, the average correlation among the world's major economic blocks has been positive, but far from perfect. On average, the global business cycle has accounted for approximately 50%–60% of the variation in real GDP growth across the major developed and emerging market economies since 1950 [6, p. 5]. The remaining 40%–50% of the economic variation observed across the four major economic regions has been associated with region specific and country-specific factors, such as whether a country is a commodity exporter or importer and its level of reliance on international capital flows.

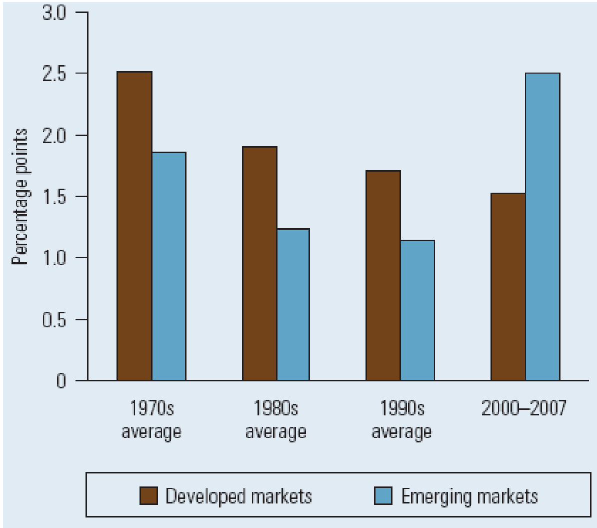

Figure 4. The emerging markets as a rising global economic force. Contribution to world real GDP growth (Note: GDP data in this figure are defined on a purchasing power parity basis) [6, p. 4].

Business cycles in the developed markets have historically been the most highly correlated with the global business cycle by definition, since developed markets represent a large share of the world's total economic output. Between 1950 and 2007, the contemporaneous correlation in annual real GDP growth between the developed markets and the world economy has been 74%. Over that same time period, the collective emerging market economy has had a 39% contemporaneous correlation with the world economy. Generally speaking, the economic correlations between emerging markets and developed markets have tended to be lower than business-cycle correlations among industrialized countries.

Economies around the world have generally become more integrated through the linkages of trade, finance, and banking. Statistics from the International Monetary Fund (IMF) show that the ratio of world trade to world GDP has nearly doubled over the past three decades, while the gross external assets of developed and emerging markets have risen exponentially over the same period.

At the same time, the process of globalization has been accompanied by several structural changes in the world economy that have contributed to a less U.S.-centric global economy. Most importantly, intraregional trade has grown relative to traditional trade links between emerging economies and the developed world. The impressive performance of some emerging countries has led to a greater diversification of trade destinations, as emerging economies have begun to trade more often with each other.

Some analysts argue that the developments in the emerging markets have been so drastic that the emerging markets have decoupled from the rest of the world. According to the decoupling hypothesis, the emerging market business cycle is now unaffected by U.S. economic growth. However, Table 1 delineates a number of arguments that would run counter to the emerging-market decoupling hypothesis. The relative decline in trade linkages of emerging markets with the United States, for instance, must be weighed against increased financial linkages with developed markets.

Mentioning the role of emerging markets nowadays, most visibly, Mexico, China, and emerging Europe became key nodal points in the global supply chain in the 1990s. Given their bilateral export and import relationships with key advanced industrialized economies, they served to transmit and amplify international shocks. Moreover, most emerging economies have not yet achieved the structural maturity necessary for dampening domestic volatility. Included in countries with continuing high levels of volatility are Ireland and Iceland, both of which have also long been part of the global vertical specialization process. All of these countries thus contribute to the pool of international spillovers through their own national shocks and the transmission of external shocks to which they are subject.

Table 1 Are emerging markets coupled to developed markets? [6, p.5]

Arguments in favor of decoupling	Arguments against decoupling
Decline in relative reliance on U.S. export market.	Increase in total trade with developed markets.
Increased share of trade within regions.	Emerging markets are very export-oriented.
High BRIC economic growth rates.	United States remains the largest import market.
Emerging markets financial market depth less than that of developed markets.	Reliance on foreign investment and capital flows.
General improvement in fiscal balances.	Global financial integration.
	Financial market spillovers/contagion.
	High commodity-price exposure or dependence.

Correlations among global business cycles also rise significantly when financial shocks severely impair the world's largest economies through the secondary "spillover" channel. Past U.S. recessions have most adversely affected the broader global economy through two primary links:

- trade (the United States is the largest importer of foreign goods in the world) and
- finance (U.S. financial markets are the core of the global financial system).

The degree of business cycle synchronization can provide information on the necessity of independent fiscal and monetary policy, on the impact of regional union and the benefits of agreements. Among association agreement between countries the business cycles become more similar and internal and external shocks are common. On the other hand, if shocks are country-specific, then the ability to conduct independent monetary and fiscal policy is usually seen as important in helping an economy adjust to a new equilibrium.

Various studies have been presented in the literature concerning the issue of business cycle synchronization in different regions in the world, especially for the developing countries. Different conclusions were obtained. Part of these differences can be related to differences in variables used, diverging business cycle measures and methods to assess synchronization. For example, Artis M., Kontolemis Z. G. and Osborn D. R. ("Business cycles for G7 and European countries", Journal of Business, 1997, #70, pp. 249-270) found that the degree of concordance between business cycle dates for industrial production for the G7 and some European countries is high (near one) implying that the cycles are synchronous and that the evidence of the existence of regional cycles is found to be the strongest amongst North American and European economies.

Concordance index

Concordance index is the fraction of time that both countries in the comparison were in the same cycle phase (contraction or expansion). This index is clearly between 0 and 1. A high degree of concordance (value close to 1) indicates that business cycles of both countries are synchronized, while a value near 0 indicates non synchronous cycles. According to Harding and Pagan (Harding D. and A. Pagan, "Synchronisation of cycles", Journal of Econometrics, 2006, Vol 132 (1), pp. 59-79.) we use the following formula to calculate the concordance index between two countries i and j:

$$C_{ij} = \frac{1}{T}\sum_{t=1}^{T} S_{it}S_{jt} + (1-S_{it})(1-S_{jt}) \quad (1)$$

Where,
S_t = 0 when the economy is in recession phase and 1 when it is in expansion phase.
S_t is a binary latent method which can be determined following several methods. In the literature review we can use parametric or non parametric methods to construct the variable S_t.

As the correlations are related to the so-called concordance statistic (the sum of the products of the binary cycle indicators), which determines the number of periods during which national cycles are in the same phase (as a fraction of the total number of periods in the sample), we will refer to them as concordance correlations. If two cycles are perfectly synchronized, in the sense of being in the same state in every period, the concordance correlation coefficient ñS is 1. If the two cycles are exactly in the opposite state in every period (Sit=1-Sjt, t=1...T), the correlation is -1. Finally, if the two cycles are uncorrelated, the correlation is 0.

Figure 5 shows the binary business cycle state indicator variable Sit for a panel of 16 industrial countries, for which GDP data are available from 1880. Real GDP is a measure of aggregate economic activity. With annual data, the determination of expansions and recessions is straightforward. A recession is defined as one or more consecutive years of negative real GDP growth, while an expansion consists of a year or more of positive growth. The resulting business cycle turning points broadly match the dates in the National Bureau of Economic Research (NBER) chronologies for the United States, the United Kingdom, France, and Germany. The differences reflect the use by the NBER of higher frequency (monthly) data and a broader variety of indicators, such as employment and department store sales. On this basis, correlation coefficients between all country pairs and their significance were estimated.

Figure 5 shows the concordance correlation coefficients by percentile for the four eras. The distribution of the correlation coefficients differs substantially from era to era. In particular, there has been a tendency toward higher, positive output correlations, not just a one-time level increase in synchronization. During the Gold Standard, about one half of all country pairs were characterized by negative output correlations and the average output correlation coefficient is about 0. A first important step toward synchronization occurred during the interwar period, when the share of negative correlations fell below 30 percent while the average correlation increased to about 0.15. A subsequent reversal during the Bretton Woods era was small, and correlations remained, on average, above those found for the Gold Standard era. A second important increase then occurred during 1973-2008, when less than 10 percent of all correlations were negative and the average correlation was 0.33.

Comparing the distribution of the correlation coefficients by era suggests the following.

- In the Gold Standard era, the average of the correlation coefficients was just about zero, as about half of all the pairs of national business cycles were negatively related to each other while the other half was positively related to each other. Hence, on average, business cycles were not synchronized according to this measure.

- In the interwar and the post-Bretton Wood periods, more than half of all pairs of national business cycles were positively related to each other. On average, the correlation is about 0.2, suggesting generally synchronized business cycles during these eras. Nevertheless, more than one fourth of all cycles remained negatively related, which explains why the average "synchronization" remains relatively weak.

Comparing the distributions of the two periods suggests no significant difference.

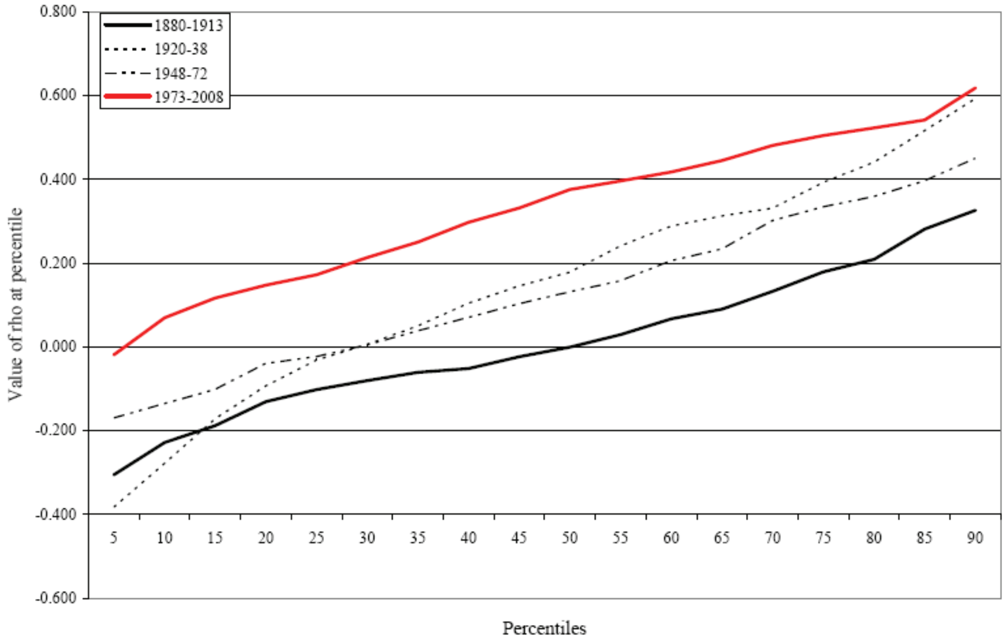

Figure 5. Bilateral Output Concordance Correlations By Percentiles [2, 9]

Overall, synchronization was most pronounced in the Bretton Woods era, when many economies enjoyed uninterrupted expansions. As shown below, the finding is misleading because output comovements were not stronger in that era than in either the preceding or the subsequent era. The relevant key finding is that synchronization patterns appear to have systematically changed once the world went off the classical Gold Standard. During the latter era, cycles were, on average, uncorrelated while, beginning with the interwar period, they started to become synchronized on average.

Output correlations have been the perhaps most frequently used measures of business cycle synchronization. According to this measure, national cycles are synchronized if they are positively and significantly correlated with each other. The higher are the positive correlations, the more synchronized are the cycles. Compared with concordance correlations, measuring synchronization with standard contemporaneous correlations is more stringent, as the latter require similarities in both the direction and magnitudes of output changes.

So far, we have looked at business cycle synchronization through a global lens, noting the increased synchronization without consideration for other factors. However, one would expect that synchronization patterns differ considerably across groups of countries, depending on factors such as "gravity" or country size. The extent to which gravity has shaped the synchronization trends depends on the region. For core European countries (the old "EEC") and Continental European countries, the increase in business cycle synchronization was clearly much sharper than the general increase. At the other end of gravitas, business cycle synchronization between Japan and the other countries in the panel has increased by less.

The fact that the increase for all Continental European countries was smaller than that for the Core European countries suggests that the forces of gravity are affected by common policies, preferential trading agreements, and specific currency arrangements. The increase in correlations among the Anglo-Saxon countries is also remarkable even though it seems more difficult to attribute this to forces of gravity. While we do not believe that common institutions and heritage among the Anglo-Saxon countries account directly for the increased synchronization, they likely have fostered similar patterns.

While the regional perspective reinforces the notion of a trend increase, it should be noted that stark regional differences have only really emerged during the modern floating rate period. Forces of gravity were not a factor behind business cycle synchronization during the classical Gold Standard, as differences in correlations among regions were minor, with the high correlation between Canada and the United States and, to a much lesser extent, among the Scandinavian countries, being the main exceptions. During the Bretton Woods period, increased regional synchronization began to emerge in the core European countries. Interestingly, the increased synchronization during the interwar period was primarily on account of an increased synchronization between the cycles in the United States and other countries, which in turn seems to reflect the equity boom bust cycle and its effects from the mid-1920s to the mid-1930s.

Another measure of business cycle synchronization is related to the notion of common factors. Many macroeconomists would probably agree that international business cycle linkages are best understood as a small set of factors that are common to all countries and that explain a substantial fraction of fluctuations in major macroeconomic aggregates. The common factors themselves reflect a combination of global shocks affecting all countries and country-specific disturbances with significant spillover effects.

For the non parametric method we can consider the algorithm which tent to localize the different phases of the series and then we determine the variable S_t . We can also use the Markov switching models, which is considered as parametric method, to construct the variable S_t.

Markov switching models

A great panoply of techniques concerning the non linear time series have been used for the modelisation of the different economic cycle characteristics as the linear models cannot capture the cyclical asymmetries. A great stress has recently been attached to the non linear specifications in which we have introduced a significant distinction between the expansion and the recession phases. These models are so flexible that they allow to take into consideration the different specifications and relations corresponding to each phase and many extensions have been proposed in the literature. Among these non-linear models, there exists the autoregressive threshold models[4], the SETAR models[5] and the regime switching models[6]. We will devote the focus of our study just to the Markov switching models. However, Markov switching models have been applied in many domains (economics, finance, biology, medicine, forecasting …). It have been applied in economics and finance for analyzing the business cycle of United States, the business cycle characteristics of the Euro-zone, explaining the different features of the foreign exchange rates, stock market volatility, etc.

Hamilton (1989) was first to develop the Markov switching model in order to capture business cycles in real GNP. He was considered that the mean GNP growth rate switches between two states: the recession phase and the expansion phase.

In a Markov switching model, it is assumed that the process generating the observed data—in our case, growth in real GDP—is dependant on a qualitatively unobservable variable. In its

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[4] Usefulness of Linear Transformations in Multivariate Time-Series Analysis. George C. Tiao, Ruey S. Tsay and Taychang Wang; Empirical Economics, 1993, 18(4), pp. 567-93.
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behavior, this variable is subject to certain systematic rules—in the literature known as "Markov chains." The concrete values that this variable takes on are described as "states." In the investigation of business-cycle fluctuations, the Markov chain has two states: "expansion" and "contraction." The state of "expansion" is generally associated with positive real GDP growth, and "contraction" with negative growth. In a statistical estimation procedure, the goal is to link assumptions about these states with the actually existing dynamic structure in the real GDP time series and to provide an estimation of probabilities for the states of "expansion" or "contraction" at each point in time. An example for an empirical application of the model is performed based on real GDP growth in the US: We take growth rates from Q1 of 1947 to Q1 of 2009 and calculate a Markov switching model with two states based on this data. For the purpose of illustration the estimated recession probabilities are displayed for the US at left. The recession probabilities clearly correspond with the official NBER dates for recessionary periods. K stands for the number of different states and p for the number of autoregressive lags that go into the formula. For all countries, only two states are possible—"expansion" or "contraction." However, the number of autoregressive lags is determined by the dynamic characteristics of each times-series. Formally, the formula is expressed as

$$xt = \alpha(st) + \varphi 1xt–1 + ... + \varphi pxt–p + ut, (2)$$

where φixt–i represents the lags with the corresponding parameters—the autoregressive element (AR)—and ut unsystematic white noise. stands for the unobserved Markov chain and takes the values of "expansion" or "contraction." In the "expansion" state, the parameter $\alpha(\cdot)$ has a positive value. This value is negative, by contrast, in the "contraction" state. In this way, $\alpha(\cdot)$ is the only state-dependent parameter, and is decisive for the characterization of the business cycle. If one ignores the fact that $\alpha(\cdot)$ is dependent on a unobserved discrete process, then the formula corresponds with the calculation of a linear autoregressive process of the order p. This fact is exploited in the data-driven selection of the lag order p, which is first determined based on a linear autoregressive process with the Schwarz

Information Criteria (SIC) and then used in the estimation of the Markov switching model.

If one has estimated the model by the maximum likelihood method, it is necessary in the next step to obtain information about the (unobserved) states of st. Two algorithms which represent the actual core of the method are used for this purpose: A filter algorithm, and a smoothing algorithm. With the filter algorithm it is possible to calculate the probability of a specific state based on the estimated model and depending on the data provided up to a given point in time t—for example, the probability of "contraction."

$$P (st = \text{“Contraction”} \mid x1, x2, ..., xt) \quad (3).$$

By contrast, the smoothing algorithm determines the probability of a given state based on all available data (up to the last point in time T), thus providing more precise inference

$$P (st = \text{“Contraction”} \mid x1, x2, \ldots, xT) \quad (4).$$

If one views the last available data point T, the results of the filter and smoothing algorithms correspond. Probabilities calculated using the smoothing algorithm are often described as "smoothed" probabilities. They represent time series that correspond with the dimension of the original GDP time-series data. These time series can then be interpreted in several ways—for example, by comparing them with official dates concerning recessionary periods.

Clements and Krolzig (2003), has proved that the two regime switching model cannot capture the steepness business cycle asymmetry. For this reason, the three regime switching model was developed.

The economic interpretation of these three regimes is as follows:

• A low growth regime: this regime is characterized by a negative growth rate, and is therefore associated to the classic recession phases.

• An intermediate growth regime or a regime of moderate expansion: for this phase, we suppose that the economic growth rate is below the trend associated to the growth rate (a growth cycle weak phase) without recession.

• A high growth or high expansion regime: for this regime, we suppose that the economic growth rate is above the trend associated to the growth rate (a strong phase of the growth cycles).

A method to determine the degree of business cycle synchronization between individual countries and within economic blocks is based on Markov switching models. In the investigation of business-cycle fluctuations, the Markov chain has two states: "expansion" and "contraction." The state of "expansion" is generally associated with positive real GDP growth, and "contraction" with negative growth. In a statistical estimation procedure, the goal is to link assumptions about these states with the actually existing dynamic structure in the real GDP time series and to provide an estimation of probabilities for the states of "expansion" or "contraction" at each point in time.

The analysis presented evaluates the degree of business cycle synchronization in the most important industrialized nations (the G7, consisting of the US, Germany, Japan, Britain, France, Canada, and Italy). In order to measure the synchronization of business cycle fluctuations, the probability that each country is in a recession is first calculated for each quarter. This probability can have a value between 0 (expansion) and 1 (contraction). Next, the mean probability of recession for all countries is determined for each quarter. If the mean is near 0 or 1, this means that the majority of countries are in an expansionary or recessionary phase.

In the current crisis, the weighted mean probability of recession for the G7 is nearly 1. Since Q1 of 1956 this value has never been as high in any other recession. The highest previous values during the first (1973) and second (1979) oil crises and the recessions that followed are under 0.8. A much higher degree of dispersion between the business cycles of the G7 is also apparent in comparison to the current recession. Based on this it can be concluded that the oil crises had a much more varied impact from country to country than the current recession.

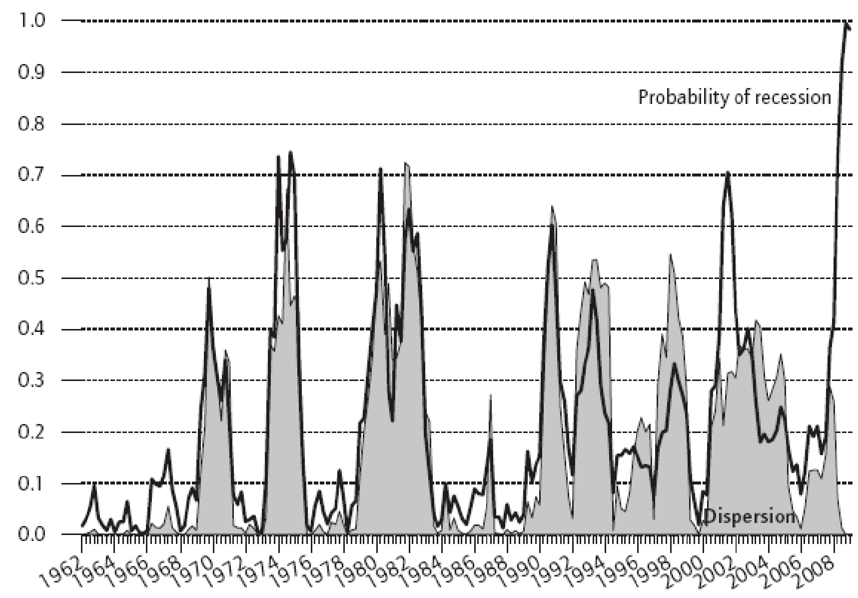

Figure 6. Average Recession Probabilities in the G7 Nations ("Expansion"= 0 to "Contraction" = 1) [10, p. 189].

In past expansionary periods things looked a bit different, however. The countries underwent expansionary phases largely in parallel, with very little divergence between business cycles, as demonstrated by the very low dispersion. This is likely attributable to the very close integration of Western Europe's national economies.

While the extreme volatility that the world has recently witnessed could not have been anticipated, it should not have come as a complete surprise. The Great Moderation was a robustly-established trend. The factors identified as underlying the Great Moderation, in turn, were durable. Domestic volatility was declining as a consequence of improved policy management and innovations in the private sector. But these analyses did not factor into the ongoing integration of the global economy. The international transmission of a country's volatility was emerging as a latent source of volatility amplification. In a benign global environment, the international transmission also worked in a relatively benign manner. However, with the convergence of several large shocks—to the financial sectors and to the real economies of several countries—the transmission process added to the rapidity with which the crisis crossed borders and the sense of panic it generated in the past couple of years.

Improved domestic policies and structural changes drove down the size of domestic shocks and hence aggregate volatility. But potent though these forces were, the increasingly-interconnected nature of the global economy introduced countervailing tendencies. As the global economy became more integrated, shocks from one country were transmitted more rapidly and to more countries. In the long expansion between 2001 and 2007, these linkages reinforced global growth. However, the intensity of the recent crisis was in no small measure due to the speed at which domestic shocks traveled across borders, amplifying the original shocks. Countries most reliant on global financial and trade links were hardest hit.

The policy lessons are simple in principle but complex to implement. Imbalances in or shocks experienced by one country have increasingly important implications for other countries. While this observation is widely accepted, the magnitude of the effects underlying global integration is increasing and large. Vertical specialization is a benign force for global growth and welfare but can turn rapidly to amplify downturns. Countries responded ex post to the urgency of the recent crisis by coordinating (to varying degrees) financial, monetary, and fiscal policies. Looking ahead, all countries have a stake in the policy stance and approaches of other countries. Recent efforts to achieve greater transparency and coordination of policy on a much larger scale than in the past under the auspices of the G-7 and within the European Union augur well in this regard. But ultimately, the best ex ante coordination is likely to be sensible economic policies followed in a country's self interest. On the outcome of these efforts may depend whether the next crisis threatens another upheaval.

Conclusions. The business cycles of industrialized nations have exhibited an unprecedented degree of synchronization since the start of the crisis. In the worst economic downturn since the end of the Second World War, the most important national economies have been drawn one after another into the maelstrom of global recession.

Despite more integrated trade and financial linkages around the world, the global business cycle accounts for only approximately 50%–60% of the variation in real GDP growth across the major developed and emerging market economies. The remaining economic volatility is a result of region-specific and country-specific factors. Of course, the correlation among international business cycles varies over time, by country, and by the source and magnitude of financial shocks. Broadly speaking, cross-country correlations in real GDP growth rise whenever (1) asset-price shocks are systemic (e.g., the 1970s oil-price shock) and (2) the world's largest economies are severely impaired in the process (e.g., the situation in the United States today).

The U.S. economy remains the primary accelerator of world economic growth, even though the BRIC economies (Brazil, Russia, India, and China) have clearly emerged as another important engine. Based on this and other factors, emerging market economies remain fully coupled to severe U.S. recessions and global financial crises. In more normalized conditions, the economic correlations between emerging markets and developed markets tend to be lower than business cycle correlations among industrialized countries.

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INVESTMENT STRATEGY ANALYSIS OF DEVELOPING COUNTRIES ON THE EXAMPLE OF BRAZIL, RUSSIA, INDIA AND CHINA

Keywords: foreign direct investment, global financial crisis, the developing countries, investment strategies; regression patterns.

Relevance of the topic. One of the major signs of progressive globalization of economy is a large-scale expansion of foreign direct investment. The value of foreign direct investment (FDI) to the economies of all countries, especially to developing countries, is increasing dramatically due to the need of structural and technological upgrading of its transition to post-industrial stage and it is sharply important during the crisis. The extensive use of foreign capital for these purposes, however, creates for a national economies several issues that require theoretical understanding and practical solutions that would ensure the harmonization of global and national economic interests. The most obvious and promising developing country representatives, according to many researchers, are so-called BRIC countries - fixed abbreviation of the names of four rapidly developing countries: Brazil, Russia, China and India (Brazil, Russia, India, China). According to Goldman Sachs, by 2050 the total economy of these four countries by the size will exceed the total size of the economies of the richest countries (the Group of Seven). Members of BRIC are characterized as the most rapidly developing countries. Advantageous position of these countries ensured by the availability of a large number of important resources for the global economy:

Brazil - is rich in agriculture;

Russia - the world's largest exporter of mineral resources;

India - cheap intellectual resources;

China - cheap labor.

Interest to the BRIC countries arise due to the fact that in post-crisis conditions their markets on a par with the U.S. have shown the most rapid recovery and interest in investing in these countries has increased significantly.

Researchers. Western theories of internationalization of the economy (the theoretical evaluation of the role of multinational corporations in foreign direct investment in the early stages of the global economy) are largely associated with the theoretical conclusions P. E. Torentino (comprehensive research of the historical process of creating a "multinational" enterprises, including developed countries - USA, Sweden, Great Britain, Germany, Japan and Taiwan, S. Korea, Brazil, Hong Kong, Singapore). Questions of the modern aspects of foreign direct investment from developed countries is analyzed by J. Dunning, who was involved in study of 50-ies of XX century. and analyzed the trends in the movement of international capital flows since the end of XIX century to the present day, as well as the reasons of attracting foreign investment

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and deployment of foreign proceedings, he also made a significant contribution to the development of the theory of international production). In his writings, "Foreign Direct Investment and the State. The catalyst of economic restructuring" and "Multinational corporations are gaining ground", he considers a competitive advantage not only of companies exporting capital and the country - the recipient of investment, that is explained in what countries choose to invest large multinational companies. The theory of investment development path of nations J. Dunning and Narula examines the dependence of exports and imports of capital on the level of economic development and shows that the path to the export of capital is through its initial import, ie demonstrates the important role of foreign investment in developing countries. Also, research in this region in V. Bandera, R. Dzhungnikel, A. Schroeder, C. Morley, R. Schwartz, J. Agawan, J. Roemer, P. Kindleberger, P. Alibert and others.

Significant contribution to the study of FDI in developing countries have also made the work of H.Amirahmadi and by B.Wuu.

D.Kumar, referring to recent empirical studies found that FDI may constrain growth, crowding out domestic investment. In addition, he determined that the objectives of multinational corporations may differ from the interests of the host country with the strategy of maximizing profits of multinational corporations.

S. Lall has placed emphasis on technology and innovation advantages, highlighted specific advantages that explain investment abroad: company size, vertical integration, differentiation. Such problems was also studied by: U. Haymentsa, J. Morisset and a number of other Western scholars.

Questions of the role of FDI in the structural transformation of the economies of host countries were analyzed by M. Radzharatne, R. Narura, B. Rapp, K. Kojima, and others. Public policy of attraction of FDI studied by C. Braynard. In his paper "Financial intermediaries and the effectiveness of exchange controls," he describes the measures to be taken by the State to attract foreign direct investment and the tools that can help.

The problems of estimating the effect of foreign direct investment in sufficient detail developed by researchers such as G. Ietto-Dzhilles, R. Keoheyn, H. Milner, D. Kentwell etc.

However, in all my studies reviewed was not used regression method for the construction of macroeconomic models for the BRIC countries, in which one of the dependent variables were the FDI in the light of the data during the crisis. The value of macroeconomic models with data from countries in the global financial crisis especially interesting because it allows to check the validity of previously established relationships of indicators, as well as identify new empirical regularities that are characteristic of developing countries.

China

Determination whether there is relationship between foreign direct investment in the country, exchange rate and the volume of industrial production.

A regression model based on data from period 1982 to 2009 (generally 18 years) [1].

As dependent variable we take the ratio of volumes of industry to GDP, and as independent - the exchange rate and foreign direct investment in the country.

Now generate the equation for the studied parameters:

$$IND\_ = 0{,}577\ DI\_IN + 0{,}334\ EXCHANGE;$$

where:

IND_ - the ratio of output to GDP;

EXHANGE - exchange rate;
DI_IN - foreign direct investment;
t (EXHANGE) = 2,204
t (DI_IN) = 3,802
t = 2,1

Since Student's coefficients in this model more t, we could argue that with 95% probability the model is significant.

Fisher ratio:
F = 29,415
F = 3,68
Fisher ratio is above F. The model is correct.

From these data, we can draw the following conclusions:

- There is a direct correlation between the amount of foreign direct investment in China with favorable exchange rates and production volumes relative to GDP.

Indeed, attracting foreign investment is an important method of China's participation in the globalizing world economy. China has for many years to maintain a leading position in the volume of attracted foreign direct investment (FDI) among developing countries. Today with the rapid and healthy development of Chinese economy the continuous deepening of reforms and increased openness and accelerating globalization of world economy and in attracting foreign investment in China, there are many new developments and features, while at the same time there were new opportunities and advantages.

Foreign investment continues to favor China. According to the report of the UN Conference on Trade and Development, "World Investment 2009" [2], the most attractive for FDI countries are China and India and has also been growing attractiveness of East Asia, South Asia and Southeast Asia.

China is the most attractive country for foreign investment, because on the one hand, a leader in the fastest growing economy, on the other hand, the continuously improving investment climate in China.

The recently published world-renowned accounting firm Ernst & Young report [3] also noted that because of the huge and yet untapped market potential for economic growth and high innovation ability the first time China has become the most attractive investment country in the eyes of the managers of transnational corporations in the world.

In the area of attracting foreign investment, China was facing new opportunities and challenges as a result of the changing international environment. According to experts, first, as never improved China's position in the global economy. In the course of investment, China has firmly entered into a global manufacturing network and was one of important and indispensable member of the global production system. In volume terms, China ranks third in the world, in terms of exports 774 items of goods - the first in the long run, China may become a leader in terms of trade [4].

Secondly, in the field of transnational investment, new opportunities. Internationalization of research and development, outsourcing services and the transition of high-tech industrial projects of transnational corporations in China are the three major chances to improve to attract foreign investment by China in the future.

Currently in China, employs almost 1,000 research organizations established by foreign investment, there is a rapid increase in the level of scientific research and development of these structures [4].

- Foreign direct investments are more influential factor on the volume of production relative to GDP than the exchange rate.

Following a similar study for the performance SERVICES / GDP (SERV_) and CX / GDP (AGR_) found that the rate of foreign direct investment does not correlate with these parameters. This indicates that the greatest impact of foreign direct investment have precisely on the manufacturing sector in China. This assertion is confirmed by statistics on the basis of which is evident in the growth rate IND_ 1982 - 2009, the corresponding dynamics of foreign direct investment in China. Indeed, according to the Institute of International Studies at the Foreign Ministry of Ukraine 54,7% of FDI was directed to the manufacturing sector, 22,9% - in real estate, and only 9% - in commerce [5].

Figures for 2009 show that the growth rate of China's economy are the lowest in 19 years [5].

The growth rate of China's economy began to decline almost simultaneously with the beginning of the global crisis in 2007. If in 2007 China's GDP grew by 13 per cent, in 2008, the growth of 9 percent (figure 1).

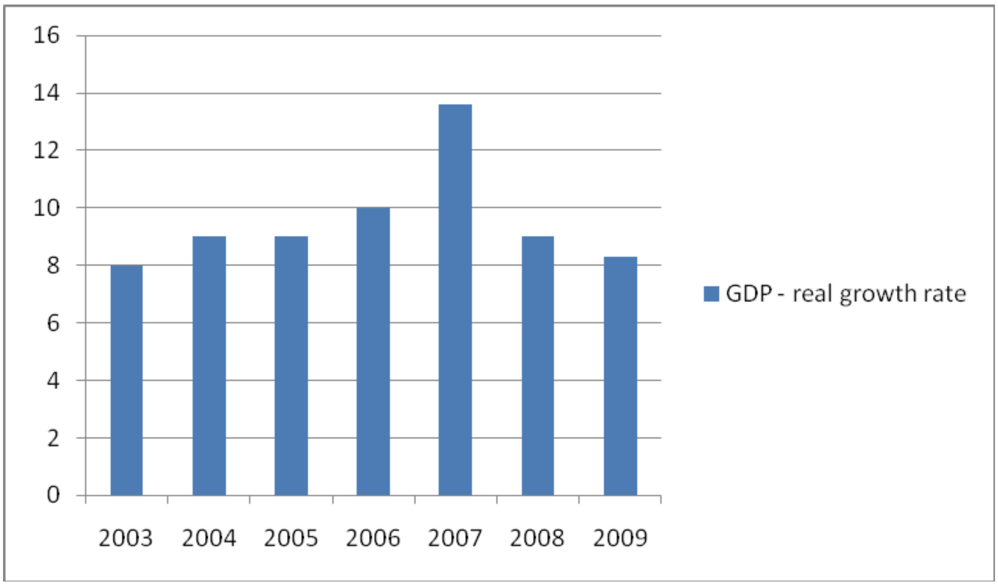

Figure 1 GDP, real growth rate, %

National Bureau of Statistics of China also has other evidence of the downturn in the economy. For example, industrial production in the country grew in the first quarter to 5.1 percent. In 2008, the growth of this index in China was 12.9 per cent [6].

At the same time in China began the first deflation since 2002. Consumer price index of China dropped in the first quarter to 0.6 per cent over the same period in 2008. In 2008, China's consumer price index rose by 5,9 percent.

Major sources of FDI in 2006 remained unchanged. Headed the list - Hong Kong, followed by British Virgin Islands, Japan, South Korea and the U.S.. Closed to the top ten - Taiwan, Singapore, Cayman Islands, Germany and Western Samoa.

Increased investment from Japan, South Korea and the United States slowed in 2006, but the total amount of FDI flows rose by who came through Hong Kong and the Virgin Islands and raised in a year at 13 and 25% respectively. Moreover, Hong Kong and the Virgin Islands together have brought China more than 42% of all FDI. This fact became the object of attention of the Ministry of Commerce, State Administration of Foreign Exchange and the State Tax Department, who worried that two-thirds of official FDI are the result of "money circulation" - the phenomenon in which the money derived from China and returned in the guise of FDI enterprises to could count on the preferences given by the only foreign investors. Reduced preference for FDI, along with tighter control over the offshore companies, may lead to a decrease in investment flows from these regions.

According to studies, more than 80% of investors say that the operation of their companies in China make a profit. Since the 1990s aggregate profits of enterprises of foreign capital after taxes amounted to more than 200 billion dollars.

In 2009, the international financial crisis has had a profound impact on attracting foreign investment by China. Earlier this year, significantly reduced the volume of foreign investments compared to the same period in 2008 [6] (figure 2).

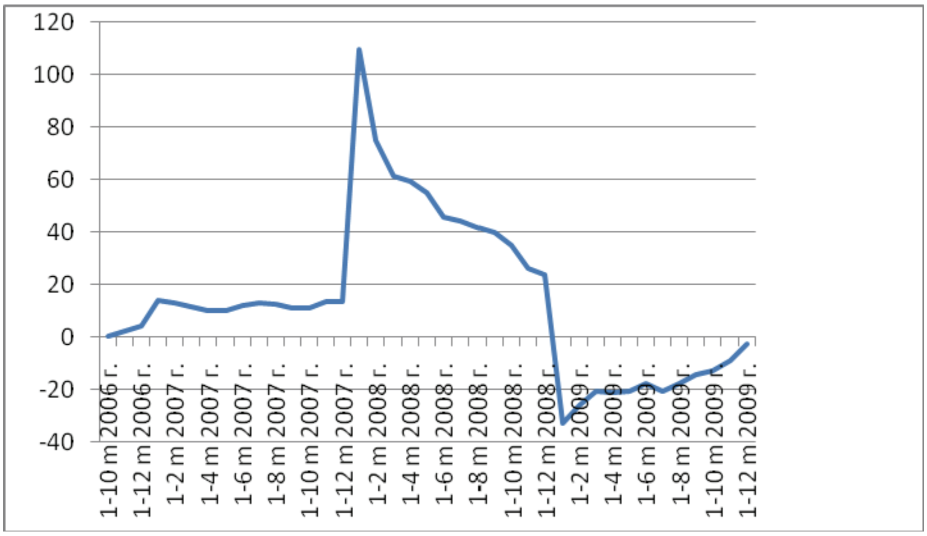

Figure 2 FDI in China, real change, % (2006 – 2009)

According to report of Moscow School of Management "The Global Financial Crisis Affects Foreign Direct Investment (FDI) into Russia and China" in China, for instance, the government instituted FDI-enhancing measures on both local and regional level. In addition, in November, 2008 the government unveiled a $ 586 billion stimulus package meant to stimulate the economy and adjusted policies to attract foreign investment, which included relaxing and decentralizing the regulations on foreign investment. (Eg Local governments are now authorized to approve foreign investment projects worth up to $ 100 million without seeking ministry-level approval) [7]. As the steady recovery of the Chinese economy continues to grow and maintain a stable growth of foreign investment in China.

Consider the dynamics of change in the structure of China's exports.

After analyzing the structure of exports in 1992 and 2009 [8] (figure 3) - we came to the conclusion that its structure has changed significantly in the direction of high technology. In the export structure are the following changes: significantly reduced the share of agriculture, the textile industry in favor of high technology. According to the above-constructed regression models depending on the share of exports in GDP and FDI, we can confidently assert that such changes are associated with the active involvement of China's foreign direct investment, followed by intensive development of industrial production. Thus, according to Eurostat [9] (figure 2), since 2006, China is the world leader in the share of high technology in the export structure. Closely followed by this indicator should be the U.S. and the EU.

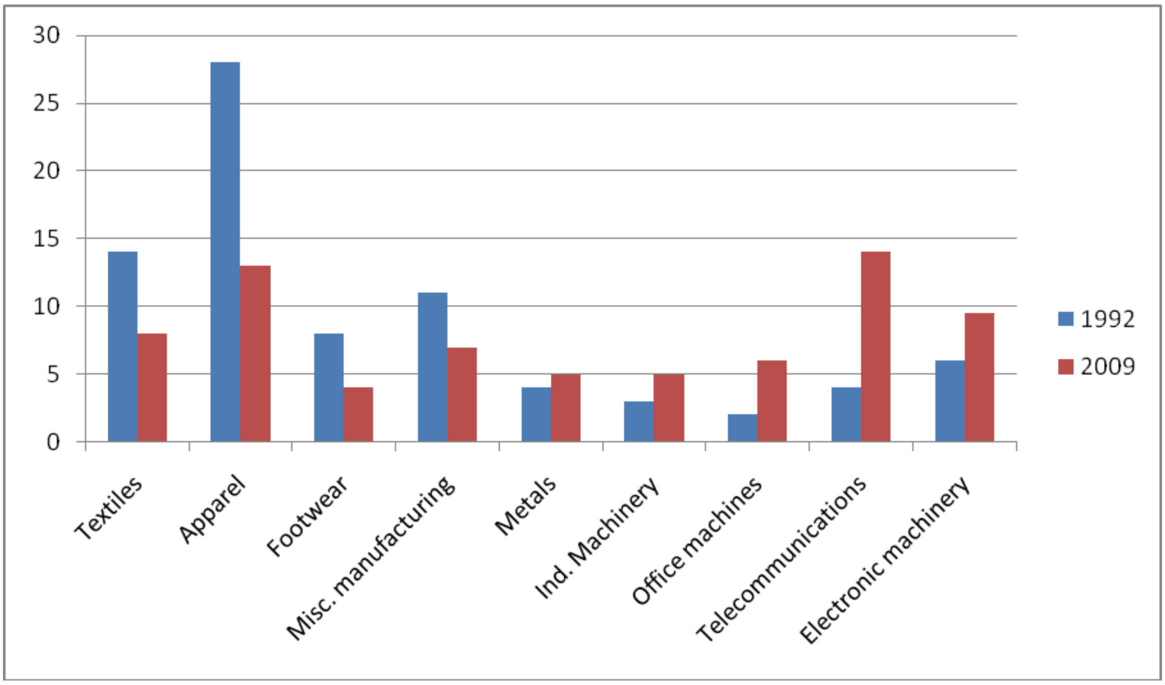

Figure 3 Sectoral changes of exports structure of China

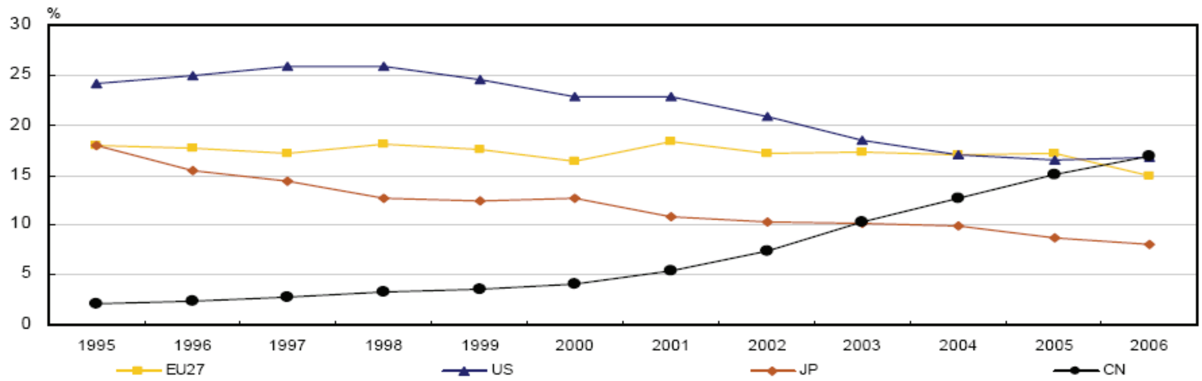

Figure 4 World market shares of high – tech exports (1995-2006)

EU – European Union countries;
US – United states of America;
JP – Japan;
CN – China.

Brazil

Analyze the impact of FDI on the Brazilian economy.

As an independent variable we take profits of foreign investors, as well as dependent - exports and foreign direct investment in the country.

In this model, the Student's coefficients higher 2,2, indicating the materiality and relevance of the model.

Given that performance DI_IN and G_EXP are negative, will form equation for the studied parameters:

$$INC\_DB = 0{,}263\ DI\_IN + 0{,}765\ G\_EXP$$

where:
G_EXP - export of goods;
IDI - Foreign direct investment in the country;
IN_DB - income of foreign investors.
t (IDI) =- 6,079
t (G_EXP) =- 13,099
t = 2,1

Since Student's coefficients in this model more t, one could argue that with 95% probability, the model is significant.

Fisher ratio:
F = 376,285
F = 3,68
Fisher ratio above F. The model is correct.

From the equation it is obvious that the impact of foreign direct investment - income from foreign investments and, consequently on the export of goods.

This conclusion can be described as follows: non-residents investing in the country, open up export-oriented companies for profits. Because of low labor costs in Brazil - this strategy is quite logical. One particular example of such a strategy may serve as a venture manufacturing outsourcing.

According to “Investorinsight” review [10], Brazil will undoubtedly be affected by the Global Economic crisis. Signs of a decelerating economy have already started to surface, as industrial output and retail sales figures have begun to trend downwards. The ongoing financial crisis will continue to push confidence levels down (both consumer and economic), suggesting that the borrowing appetite in Brazil this year will be kept to a minimum. Disappearing investor appetite and the lack of global liquidity will have severe implications for fixed investment and capital flows in 2009. Overall, Brazil has braced itself for one of its biggest economic slowdown since the Russian default and the Asia financial crisis of 1998, when Brazilian GDP growth fell to 0,1%. Brazil will have to face difficult challenges in 2009, it is actually better positioned to weather the storm than the majority of nations around the globe. While a change in GDP growth from 5,7% in 2008 to an estimated 0,8% in 2009 is a significant setback to the economy, it is not as bad as what other countries are experiencing. In fact, Brazil is expected to rank among the top 5 highest growth economies in the world in 2009, coming in fourth place behind China, India, and Indonesia.

Data in the tables shows that the main product of export is the basic production and it is in this sector of the economy, according to the Working Group on Development in the Americas [11] (around 38,5%), the biggest share of investments is in Brazil. Thus, the apparent correlation between the amount of attracted investment into the country and export of manufactured goods. Consequently, we can assert with confidence that the analysis of statistical data confirms the essentiality of a regression model drawn above, in which the alleged relationship between FDI in Brazil, investors' income from activities in the country and export their products.

Table 1 Brazil, export structure by product group, 2009

Cluster	Current imports from Brazil	Current structure %	Simulated structure %
Fresh food and raw agricultural-based products	6,181	15%	21%
Processed agricutural-based products	6,834	17%	7%
Wood wood products and paper	3,548	9%	1%
Yarn, fabrics and textiles	869	2%	6%
Chemicals	3,61	9%	21%
Leather and leather products	2 261	6%	1%
Basic manufacturing	7,258	**18%**	20%
Non – electric machinery	3,953	10%	4%
Computers, telecom; cons electronics	557	1%	2%
Electronic components	885	2%	3%
Transport equipment	3,038	7%	1%
Clothing	260	1%	2%
Misc manufacturing	1,182	3%	9%
Petroleum products (non-crude)	277	1%	0%
Total trade (excluding crude oil and ores)	40.712	100%	100%

Table 2 FDI inflows structure to Brazil

Economic Sector	Stock				Flows	
	1995		2000		2001-2008	
	USS millions	%	US$ millions	%	US$ millions	%
Agriculture and mining	925	2,2	2,401	2-мар	8,249	7-янв
Manufacturing	27,907	66,9	34,726	33.7	44,917	**38.5**
Food and beverage	2,828	6-авг	4,619	4-май	11,004	9-апр
Chemicals	5,331	12-авг	6,043	5-сен	7,295	6-фев
Automotive	4,838	11,6	6,351	6-фев	6,335	5-апр
Metallurgy	3,005	7-фев	2,513	2-апр	3,759	3-фев
Electronic and telecoms. equipment	785	1-сен	2,169	2-янв	3,023	2-июн
Pulp and paper	1,634	3-сен	1,573	1-май	2,642	2-мар
Machinery	2,345	5-июн	3,324	3-фев	1,989	1-июл
Electrical equipment	1,101	2-июн	990	1.0	1,5	1-мар
Rubber and plastic	1,539	3-июл	1,782	1-июл	1,402	1-фев
Others	4,502	10-авг	5,361	5-фев	5,966	5-янв
Services	12,864	30,9	65,888	64.0	63,575	54.5
Telecommunications	399	1.0	18,762	18-фев	17,216	14-июл
Electricity, water and gas	0	0.0	7,116	6-сен	8,708	7-май
Finance services	1,638	3-сен	10,671	10-апр	7,916	6-авг
Business services	4,953	11-сен	11,019	10-июл	7,248	6-фев
Retail trade	669	1-июн	3,893	3-авг	5,353	4-июн
Wholesale trade	2,132	5-янв	5,918	5-июл	3,773	3-фев
Others	3,072	7-апр	8,509	8-мар	13,362	11-апр
Total	41,696	100	103,015	100.0	116,741	100.0

India

Determine whether there is relationship between foreign direct investment into the country's GDP and tax revenues. Based on this hypothesis, we construct a regression model based on data from 1982-2009 period.

As dependent variable we take the GDP, but as independent - Foreign direct investment into the country and tax revenues.

Create the new equation for the studied parameters:

$$GDP = 0{,}822\ TAXES + 0{,}198\ DI\_IN$$

where:
DI_IN - Foreign direct investment in the country;
TAXES - Tax revenues;
GDP - GDP.
Odds Student:
t (TAXES) = 12,749
t (DI_IN) = 3,042
t = 2,1

Since Student's coefficients in this model more tkrone could argue that with 95% probability, the model is significant.

Fisher ratio:
F = 389,622
F = 3,68
Fisher ratio above F. The model is correct.

Consequently, in a macroeconomic model of India there are links in tax revenues and foreign direct investment in the country, as well as GDP. With that, foreign direct investment cause the growth of tax revenues and GDP.

Current state of the Indian economy is in stable and has a positive dynamics. In 2008/09, according to data of Central Statistical Organization of India (Central Statistical Organization) [12], the volume of GDP at current prices has reached 3,625.764 billion.

According to "Weekly economic bulletin" [13] India's GDP crossed the trillion-dollar mark for the first time and with this India has joined the elite club of 12 countries with a trillion dollar economy. Countries that have breached trillion-dollar GDP level in the past are he US, Japan, Germany, China, UK, France, Italy, Spain, Canada, Brazil and Russia. India's GDP grew at an impressive 9,2 per cent. The share of different sectors of the economy in India's GDP is as follows: Agriculture - 18,5 per cent, Industry - 26,4 per cent, and Services - 55,1 per cent. The fact that the service sector now accounts for more than half the GDP is a milestone in India's economic history and takes it closer to the fundamentals of a developed economy.

Growth in agriculture in 2007 amounted to 4.857% (in 2005 FY, g, - 5,84%), manufacturing - 8,2% (9%) and services sector -10.9% (10,6%).

The Indian Government in recent years as a whole provides the financial stability of the country.

Table 3 Sectors attracting highest FDI inflows in India (2006-2009)

Sector	% age to total inflows (in terms of rupees)
Services sector (financial & non-financial)	22%
Computer software & hardware	9%
Telecommunications	8%
Housing & real estate	8%
Construction activities	7%
Power	4%
Automobile industry	4%
Metallurgical industries	3%
Petroleum & natural gas	2%
Chemicals	2%

In 2008 Foreign direct investment (FDI) in India's economy amounted to U.S. $ 41 billion (an increase of 164% compared with 2007). Main areas of investment - the service sector, the production of electrical equipment and automobiles, telecommunications, metallurgy, chemical industry and pharmaceuticals.

It should be noted that the global financial crisis has had a significant impact on the economy, namely the growth of industrial production amounted to 6,3%, agriculture (-0.6%) and services - 8,5%. With this level of FDI in 2009 decreased by 8,4%, and GDP growth slowed down to 6,5% (in 2006 - 9,7%) [1].

Russia

Determine whether there is relationship between foreign direct investment in the country, changing the capacity of the economy and the productivity of factors of production. Based on this hypothesis, we construct a regression model based on data from 1982-2009 period.

Potential output is the maximum level of output an economy can obtain without placing pressure on prices. Growth in potential output is estimated by a combination of growth in the labor force, the stock capital and total factor productivity (efficiency).

Total factor productivity (TFP or multifactor productivity) is the part of economic output growth not accounted for by the growth in inputs (labor and capital). As a dependent variable, we assume an increase of the potential impact of the economy, as well as independent - an increase of productivity of factors of production and the volume of direct foreign investment in the country.

Create the new equation for the studied parameters:

$$POTENT\_C = 0,92\ FACT\_P\_C + 0,157\ DI\_IN$$

Explanations:

DI_IN - Inward direct investment

POTENT_C - Growth of real potential output (%)

FACT_P_C - Total factor productivity growth (%)

Odds Student:

t (TAXES) = 2,491

t (DI_IN) = 14,615

t = 2,1 Since Student's coefficients in this model more t, one could argue that with 95% probability, the model is significant.

Fisher ratio:
F = 131,978
F = 3,68
Fisher ratio above F. The model is correct.

From the equation it is obvious the influence of foreign direct investment to change the productivity of factors of production and the capacity of the economy. This relationship is direct, ie FDI, followed by an increase in growth factor productivity leads to increased growth potential impact of the economy.

For reasons to which investors place their investments in Russia is above all necessary to include the size of the Russian market, is also very important reason for foreign companies is the presence in Russia of cheap labor, skilled and, most importantly, to overcome trade barriers, that until recently there were relatively high compared with other countries.

The structure of foreign direct investments over the past three years has been a shift in the direction of the extractive industries. In 2008 in the extractive sector received 50% of total foreign direct investment, while manufacturing only 15%.

Conclusions

The study determined the relationship between FDI and productivity of factors of production, the potential productivity of the economy, the volumes of production of goods and services and their share in exports, the volume of tax revenue. We studied statistical relationships between FDI and various indicators of economy in the dynamics of 1982 - 2009 years of the four most advanced developing countries - Brazil, Russia, India and China, have been identified investment strategies inherent in these countries and the conditions on which they are formed, as well as explored possible solutions to problems that put them in front of world financial crisis. Thus, Brazil - on the basis of an enabling environment for investment in simple manufacturing, extractive industries (steel, coffee) and export it abroad, and Russia - by investing in energy and mining; India - in the services sector, China - the development of complex technologies.

Common to all countries of BRIC is that their governments are striving to create favorable conditions for investment in fixed assets, primarily in industry. Thus, realized two very important goals for these countries, it is - the development of export-oriented production, to compete on the world market and the establishment of competitive market conditions within the state. Given the fact that the relative industrial backwardness of these countries have attracted FDI exert a very positive impact on their economies.

Based on the study, we can conclude that FDI is an important factor and a link between the sets of factors in the economic systems of these countries. Thus, correctly shaping investment policies and consistently realizing it, the state can successfully solve many problems such as: the budget deficit, the absence or insufficient development of market mechanisms, competition, inadequate resources and factors of production to meet domestic demand and to minimize the external dependence and others. The problem of solving these issues has gained urgency in the global financial crisis, which has had a significant negative impact on developed countries and has huge opportunities for breakthrough of the BRIC countries.

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GLOBAL CRISIS AND NATIONAL ECONOMIES: MORE HASTE, LESS SPEED?

Annotation

The article is devoted to the estimation of the current situation in the national economies which suffer from the global financial crisis as well as to causes of such their problems. Developing as well as transition economies, especially those which opened their financial markets sharply, suffer from global financial countries much more then others. Global financial crisis entails both great problems and unique opportunities. In the second part of article it was analyzed what should be done after crisis as well as perspectives of international financial system reforming. Both the possible future configuration of the global financial system and consequences of this transformation were determined.

Key words: global financial crisis, globalization, global financial system

Анотація

Стаття присвячена оцінці поточної ситуації в країнах, що постраждали від глобальної фінансової кризи найбільше, а також аналізу причин такого стану. Країни, що розвиваються, та країни з перехідною економікою, особливо ті, що швидко відкрили свої фінансові ринки, більше інших постраждали від поточної кризи. Глобальна фінансова криза з одного боку тягне за собою великі проблеми, а з іншого – відкриває унікальні можливості. Також у статті розглядаються можливі посткризові заходи та перспективи реформування міжнародної фінансової системи. Визначені ймовірна конфігурація глобальної фінансової системи та наслідки такої трансформації.

Ключові слова: глобальна фінансова криза, глобалізація, глобальна фінансова система

Аннотация

Статья посвящена оценке текущей ситуации в странах, которые пострадали от глобального финансового кризиса в наибольшей степени, а также анализу причин этого. Развивающиеся страны и страны с переходной экономикой, особенно те, которые быстро открыли свои финансовые рынки, больше других пострадали от текущего кризиса. Глобальный финансовый кризис с одной стороны влечет за собой большие проблемы, а с другой – открывает уникальные возможности. Также в статье рассматриваются возможные посткризисные мероприятия и перспективы реформирования международной финансовой системы. Определены вероятная конфигурация глобальной финансовой системы и последствия данной трансформации.

Ключевые слова: глобальный финансовый кризис, глобализация, глобальная финансовая система

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Now world economy is emerging from one of the worst financial crisis in the last 100 years – global financial crisis. Experts analyze the causes of such a crisis, its current disadvantages and advantages, estimate the losses, advice how to recover from it, make prognoses how long we'll suffer from it. But the most actual and important questions for now are "What's further?" and "What should be done on national and international levels in order not to have such crisis in the future?" The answers to these questions will show if we are going to suffer from permanent financial crisis from time to time or we are going to have strategic sustainable development of the world and countries economies.

Many economists, financiers, politicians devoted their theoretical and practical investigations to current global financial crisis. The most significant and resonance research works on the mentioned topic were done by Paul Krugman [1], Ben S. Bernanke [2], Joseph Stiglitz [3], Alan Greenspan [4], Roger C. Altman [5], George Soros [6], Catherine Rampell [7] and others.

Aim of the research – to estimate which national economies suffer from the global financial crisis more then others and why, to analyze what should be done after crisis as well as perspectives of international financial system reforming, to determine both the possible future configuration of the global financial system and consequences of this transformation for countries of the world, particularly for Ukraine.

Research methods: analysis and synthesis, systemic generalization, factor analysis, hypothesis.

Weak Spots on the World Economy Map

Answering the question "What should be done in order not to have such crisis in the future?", first of all, the weak spots should be analyzed. What countries and why have the worst global crisis after-effects?

Nowadays many international organizations, famous analytical agencies and influential magazines vie with each other in countries ranging according their damage from global crisis.

So, American magazine "Forbes" created rating based on «poverty index» [8], which includes such showings as Gross Domestic Product (GDP), inflation and purchasing capacity. Top ten countries suffering damage include Latvia, Estonia, Ireland, Iceland, Lithuania, Venezuela, Ukraine. According to International Monetary Fund (IMF) data Gross Domestic Product (GDP) of these countries decreased sharply, inflation speeded up, external debts as well as unemployment increased (table 1).

There are some other competent ratings (table 2). First of all, it's worth to pay attention to research of German experts who compared maximal quarterly GDP increase before recession with maximal quarterly GDP decrease during recession in 30 countries [9]. According to this index the worst situation was in Turkey (-14,2%), Russiaї (-11%), Singapore (-9,9%), Mexico (-8,8%) and Japan (-8,3%). German occupies the 8th position in this rating (-6,9%), Italy – the 10th (-6,5%), the USA – the 20th (-3,9%). Only two countries among 30 which were analyzed demonstrated increase of this index – Poland (+2,2%) and India (+7,6%).

World Bank representatives name Ukraine as the country which suffer from crisis much. It happened because of raw materials and import goods prices volatility as well as because of foreign capitals dependence [10].

It's also worth to pay attention to EU problems in global financial crisis conditions. Nowadays EU economy is recovering from crisis little by little, but the speed of this process differs from country to country. European economists became anxious about financial situation in so called PIGS-countries (Portugal, Italy, Greece, Spain) as well as in Baltic countries. At the end of 2009 situation became so difficult that even prognoses of Greece and Ireland exit from euro zone appeared [11].

Table 1 Forbes rating of countries which suffer from the crisis more then others

Country	Population	GDP rise, %	Infla-tion, %	Purchasing capacity, %	Notes
Latvia	2263000	-17,8	5	-13,8	Demand decrease, credit dependence
Seychelles	83000	-7,2	31,4	-6	Problem of external debt, devaluation, inflation, tourism decrease
Estonia	1343000	-14,2	3,3	-11,3	The same problems as for Latvia
Iceland	319000	-10,5	8,5	-10	Financial bubble, credit dependence
Ireland	4435000	-12,8	1,17	-11,9	Real estate bubble, banking system crisis, economic decrease
Venezuela	28611000	2	36,8	-0,4	Oil money caused serious inflation
Singapore	4750000	-9,6	2,5	-10,6	Position of world financial and trade center
Lithuania	3338000	-10,7	5,6	-5,2	The same problems as for Latvia
Ukraine	45505000	-5,1	17,3	0,5	The highest inflation in Europe
Jamaica	2711000	-4	13,5	-2	The biggest external debt

Currently crisis influenced almost all spheres of Greece economy, government debt is more then 300 billions of Euros (113% of GDP), budget deficit is 12,7% (four times more then critical threshold according to Maastricht criteria – 3% of GDP) [12]. By the way, almost all EU countries broke Maastricht criteria in global financial crisis conditions (for example, in 2009 budget deficit in Ireland was 12,5% of GDP, in Spain – 11,5%, in France – 8,3%, in Portugal – 8%). Now Greece is called as «EU powder keg», «sick man of Europe» and «euro's drowned stone». What are the causes of such a situation?

Table 2 Ratings of countries which suffered from global financial crisis

Issue	The most suffering countries	Notes
Paul Krugman [15], famous economist, Nobel Prize Laureate	Iceland, Ireland, Austria	Austria actively credited East European countries that may cause its financial instability
Tomas Mirov [16], European Bank of Reconstruction and Developments Head	Russia, Romania, Turkey, Ukraine	GDP decrease, problem credits increase, corporative defaults risks, currency rates volatility, regional dependence
International Monetary Fund [17]	Russia, Ukraine, and 10 more countries of the former Soviet Union	Corporative defaults risks increase
Les Echos [18], periodical edition	Ukraine, Russia, Iceland, Baltic countries	
Uri Dadush, Carnegie Fund International Economic Program Director [19]	East European countries, Russia, Ukraine	
Forbes [8], periodical edition	Latvia, Seychelles, Iceland, Lithuania, Estonia, Singapore, Ireland, Venezuela, Ukraine, Jamaica	Rating is based on poverty index and includes GDP level, inflation and purchasing power
World Bank [9]	Ukraine, Baltic countries, other new members of EU	Demand crisis caused 40% sales decrease in Latvia and Lithuania which are the poorest in the EU
DekaBank[20], German bank	Turkey, Russia, Singapore, Mexico, Japan	30 countries rating based on comparison of maximal GDP quarterly increase before recession and maximal GDP quarterly decrease during recession

Inflated governmental sector, depressed Greece economy, weak budget discipline, irresponsible fiscal and social policy are among main causes. Besides political factors (corruption, constant political competition, political elite change, permanent trade unions strikes and demonstrations), Greek mentality, absence of tough Maastricht criteria control, constant EU budget subsidiaries for Greece aggravated the situation. Regardless European Central Bank position that European countries are not responsible for other EU members' debts, Ministers of Finance of euro zone countries approved EU and IMF financial aid to Greece of 110 billions of Euros. Greek government committed itself to introduce strict economy regime, to freeze government sector salaries for three years, to increase value-added-tax, to increase pension age. But such a decision caused mass strikes in Greece. In its turn disintegration public mood increased in Europe. For example, most of Germans support the idea of Greece expulsion from euro zone [13].

Iceland also faced the worst effects of global crisis, its national currency devaluated tree times. The main cause is money outflow [14]. Before crisis prosperity of Iceland as European offshore banking center with preferential taxation based on constant foreign capitals inflow.

Ukraine appears almost in all ratings. Financial system of Ukraine has definite experience of functioning in crisis conditions (1998, 2004, 2008). Ukrainian banking system went through crisis of 1998 as well as of 2004 without serious problems, but the current crisis brought much more problems. Besides it appeared to be not enough experience to deal with the global financial crisis. A lot of experts consider financial globalization and external events as the main factors caused Ukrainian current problems. Our analysis showed that the main reasons are the following.

Currency credits (Ineffective banking regulation and management). Ukrainian banks actively borrowed US dollars abroad (short-term credits with low interest rates) on the refinancing basis and lent them to Ukrainian consumers (who mostly didn't have currency incomes! and sometimes even couldn't prove their solvency) as middle- and long-term credits to purchase cars and overestimated real estate. This scheme worked until 2008 when there was a shortage of foreign capital inflows.

People mentality. People remember financial problems they faced in 90th years of the previous century. As soon as people fill the dangerous of financial crisis, national currency devaluation, banking instability they start to panic and take off all their money from banking system and change them for US dollars and Euros.

Political instability. The conflict of the President, the Prime-Minister and the Supreme Council (Parliament) of Ukraine aggravated the difficult economic situation instead of anti crisis and recovery policy development and implementing.

Swift liberalization of developing financial system of Ukraine (inconsecutive government financial policy). Integrative financial globalization index - IFGI (developed and calculated by author) increased sharply in Ukraine last years (2002 – 0,125; 2007 – 0,245). (By the way, Iceland had the sharpest increase of IFGI during the same period: 2003 – 0,262, 2007-0,755. China has one of the lowest IFGI: 2003-0,05, 2007 – 0,08. More haste, less speed?). The financial system of Ukraine was not ready enough to function in global conditions. In order to soften shocks of financial liberalization it needs time and step-by-step, supported by government concept/program of adoption of country financial system to global conditions of functioning.

So, we can see that there were mainly internal (exceptionally Ukrainian) factors which caused financial crisis in Ukraine. Of course, we can't disregard global imperatives but foreign experience shows that the more developed and stabile financial system the less negative aftereffects of the crisis influence its functioning.

As a result, we can see that developing as well as transition economies, especially those who opened their financial markets sharply and integrated into the world financial system rapidly, suffer from global financial countries much more then others.

What's further?

It's becoming rather obvious that existing global financial system should be reformed. Taking into account that every crisis has dual nature, from the one hand it brings a lot of problems for national economies, but from the other hand – it uncovers existing disadvantages, clears the way to reforms, opens a lot of unique opportunities for positive changes.

Nowadays experts try to estimate what the global economy will look like after the crisis. There are some principal ideas of global financial system reforming. Let's divide them into two groups: proposals of international organizations (IMF proposals; World Economic Forum (WEF) scenarios; UNCTAD plan) and proposals of countries / groups of countries (currency monopolization, currency multi-polarity, currency regionalization etc.).

IMF experts [21] determine four key areas where reforms are needed in order to change current global financial architecture after crisis. Firstly, the surveillance of systemic risk needs to be reoriented to insure warnings are clear, to successfully connect the dots, to provide practical advice to policy makers. Secondly, an effective forum for policy makers with the ability and mandate to take leadership in responding to systemic concerns about the international economy is a key. Thirdly, ground rules for cross-border finance need to be strengthened and made more automatic to avoid a repetition of the "go-it-alone" responses seen in this crisis. Fourthly, given the growing size of international transactions, resources available for liquidity support and easing external adjustment should be augmented and processes for using them better defined so they are more readily available when needed. There are also some IMF experts advices as for a number of priorities for post-crisis policy [22]:

- to exit from the national anti-crisis policies in a way that is credible, orderly, and cooperative;
- to lay a foundation for a resilient global architecture, starting with a review of the IMF mandate in surveillance and lending, and looking into ways of improving the stability of the international monetary system;
- to continue to strengthen our macro-financial and cross-country work, and to deliver new ways of analyzing risks and vulnerabilities, including through our early warning exercise and our analysis of common policy challenges countries are faced with;
- to determine how best to assist the G-20 with their mutual assessment process;
- to examine ways to make policy frameworks more resilient to crises;
- to deliver, by January 2011, on the call from IMF governors for a shift in country representation at the IMF of at least 5 percent toward dynamic emerging market and developing countries.

World Economic Forum issued the report «The Future of the Global Financial System» [23], which presents four possible scenarios of events moving in 2008 – 2020: financial regionalism (a world in which post-crisis blame-shifting and the threat of further economic contagion create three major blocs on trade and financial policy, forcing global companies to construct tripartite strategies to operate globally), re-engineered Western-centrism (a highly coordinated and financially homogenous world that has yet to face up to the realities of shifting power and the dangers of regulating for the last crisis rather than the next), fragmented protectionism (a world characterized by division, conflict, currency controls and a race-to-the bottom dynamic that only serves to deepen the long-term effects of the financial crisis), rebalanced multilateralism (a world in which initial barriers to coordination and disagreement over effective risk management approaches are overcome in the context of rapidly shifting geo-economic power).

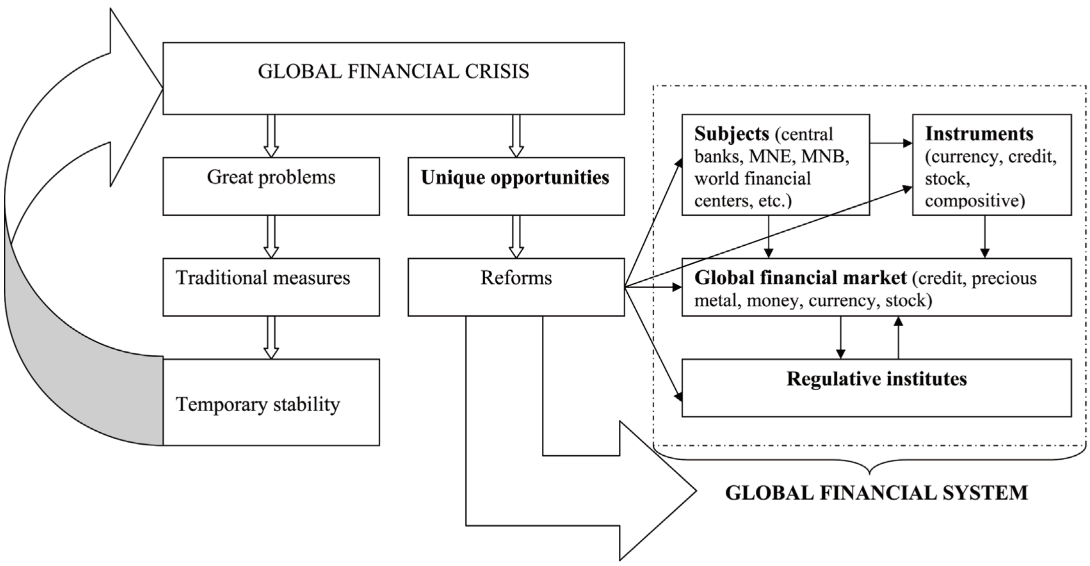
Financial regionalism and rebalanced multilateralism are the most efficient scenarios for emerging markets including Ukraine.

UNCTAD plan supports the idea of US dollar role decrease and proposes new model of regulated flexible currency rates. It's supposed that central banks will have to do currency interventions according to the situation in the world economy and world financial system will function according to international agreement of currency rates regulation. UNCTAD plan also takes into account UN Stiglitz Commission proposals of "replace accounts" in SDR where Central Banks can deposit US dollars reserves and proposal of new artificial reserve currency issued by "global reserve bank".

There are some principal ideas of currency system functioning: currency monopolization (US dollar monopolization), currency multi-polarity (USD, EUR, JPY, GBP competition), currency regionalization, the common world currency (for example, SDR), gold-oriented system (increase of gold role in international finance).

Currency regionalization develops in some directions according to geographical regions and regional currencies (European Currency Union (regional currency - Euro), "10+3" (ASEAN + China + Japan + Korea), Yen or Yuan block, Asian and Pacific Ocean Region (ACU), 6 countries of Persian Gulf (Gulf dinar), Bolivarian initiative (ACB Sucre), ideas of currency unions in South Africa and Russia).

We can conclude that proposals of international organizations mainly concern the financial regulative institutes and mechanisms, and ideas of national governments mainly focus on creation of new currency as a main global financial instrument. So, the main problem which world faces in the process of international financial system reforming is absence of complex, systemic reforms which should lead to development of global financial system with its global financial institutes, global financial instruments and global financial markets. Instead of it we still have practical and scientific discussions if global financial system exists, and what are the differences between global and international financial systems. In such conditions it's obvious that the moment should not be missed and national governments as well as international organizations should bend every effort to use this chance to develop improved and stabile global financial system.



Scheme 1. Global financial crisis effects and global financial system forming

Conclusions

So, it's obvious that modern international financial system based on US dollars has a lot of disadvantages; it doesn't meet the constantly growing requirements of all groups of countries and leads to excessive dollarization, speculative pressure on national currencies rates, capital outflow. The current global financial crisis showed that traditional anti-crisis measures don't work efficiently any more and crisis assumes permanent character.

Global financial crisis has dual nature of after-effects: from the one side – great problems, but from the other side – unique opportunities which should be realized. If national governments as well as international organizations will bend every effort to reforming the existing international financial system and as a result forming global financial system, the world will manage to resolve many of global problems, firstly, global financial instability.

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SOURCES OF INVESTMENT OF INTERNATIONAL INNOVATIVE PROJECTS OF UKRAINE IN THE CIRCUMSTANCES OF WORLD FINANCIAL CRISES

This article argues the issue research of mechanism of realization of economic interests of Ukraine on the global market of innovative services. The problems and priorities of development innovative in conditions of globalization are analyzed.

Raising of problem. National economic interests unite economic interests of different socio-economic groups of population, regions and states. On the whole they are taken to the attempt of every country to provide the high standard of life of population, steady economic increase, quality of life in accordance with the standards of highly developed countries. The decision of this task needs considerable efforts from the side of the states. Effective realization of economic interests becomes possible at the terms of using the achievements of scientific and technical revolution and advantages of international division of labor, drawing to the development of economy both national resources and international investments, knowledge and experience, forming the national market as the component of global market, realization of successive and self-weighted economic policy which answers national interests. An important role in this aspect belongs to effective development of innovative service business. Internationalization of world economy, expansion of productive activity of companies of different countries in accordance with the purpose of completest realization of economic interests requires the search and introduction of new innovative methods of organization and management of their activity in the global market. On the other hand, technological development of society, improvement of forms and methods of international trade in commodities must be accompanied by granting the new types of hi-tech services, and intensive development of scientific potential of world states - by appearance of new directions, openings, inventions. All them assists appearance of the newest forms of transmission, accumulation and realization of information, knowledge, experience which is impossible without the close co-operation with innovative service business. The actuality of the theme of research consists in the necessity of development of clear mechanism of forming of interests and priorities of development of Ukraine as a subject of global market of innovative services.

Analysis of last publications. The problem of essence, forming and realization of economic interests of the world countries in the global market of innovative services is the article of research of many domestic and foreign scientific workers. Among the last researchings about features and dynamics of development of global market of innovative services it is necessary to distinguish Александрову В. П., Бажана Ю. М., Балабанова І.Т., Буднікевич І.М., Власову А.М., Волкова О., Гринькова В., Данько М. С., Денисенка М. П., Журавського В.С., Краснокутську Н.В., Круглову Н.Ю., Лапко О. О., Одотюка І.В., Покропивного С.Ф., Стеченка Д.М., Шовкуна І.А., Яковлєва В. А. and others. In these works the problems of

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essence of innovations in the development of different countries are investigated, the update tendences of innovative sphere development in Ukrain are analysed, leading principles of development of innovative economy and methods of its management are determined.

However some questions need more detailed consideration. It is worth refering to them the intercommunication between economic interests of the state and degree of development of her innovative activity, priority directions of national market of innovative services development at the terms of integration of our country in global innovative space.

The purpose of research is to analyze the mechanism of realization of economic interests of Ukraine in the global market of innovative services. It foresees the availability of next tasks: determination of essence and specific of forming of national interests, research of priorities and retentive factors of effective development of innovative activity on macro- and microlevels of functioning of national market of innovative services.

Exposition of basic material. The modern stage of functioning of world economy is characterized by close intercommunication of all spheres of economic life of the world countries. It allows to talk about a gradual scope by the processes of globalization of all elements and levels of functioning of world market. In this aspect globalization can be examined as the combination of phenomena, approaches, measures, methods of transformation of separate markets and countries in the integral economic, social, political system, which effective functioning can be provided only at the terms of determination and concordance of general interests of the states of the world in accordance with general norms, rules, priorities of world development. It needs analysis and ground of priorities of forming and directions of concordance of economic interests of the states of the world as basis of development of effective collaboration between them.

Effective realization of economic interests of world countries association becomes possible, first of all, at the terms of the self-weighted use of advantages of innovative development of world economy and combined innovative experience of countries of the world, strengthening of their role at the market of innovative services. The last must be examined as the combination of mutual relations between producers and consumers of innovative services, which are based on development and use of new technologies, methods, instruments which allow to optimize different types of activity on macro- and microlevels. On the macrolevel a leading role in the use of innovative models of manage belongs to the state, its possibilities to support theinnovations in the different spheres of economy, assistance to functioning of basic segments of innovative market. Its effective development depends, first of all, from development of infrastructure; from activity of developers of innovations, accordance of level of innovative developments to the world standards. Combination of these factors enables to define the sufficiency of innovative activity of country in the noted market for providing of its effective development and realization of economic interests. In addition, these factors determine dynamics and other quantitative and high-quality descriptions of innovative potential which can be examined as one of important parameters of innovative process. At the level of separate enterprises the use of innovative advantages is carried out through expansion of supporting of services which own innovative signs, development of competitive relations, which assists optimization of activity, searching the hitech decisions.

It must be noted, that today the world countries enter on the way of greater openness in the sphere of economic and political, cultural, technological, informative relations. It must be determined as pre-condition of interlacing of national economies of the world countries. In particular, the decision of tasks of technological development compels the states to unite the efforts in a general process within the framework of which their co-operation becomes inevitable. Among the technical aspects of passing on globalization it follows to distinguish market of telecommunication services, increase of speed of information transfer development.

The new degree of development of Ukraine society requires the corresponding overvalue of her interests. Economic relations with the world countries require clear determination of factors which predetermine the actions of economic forces also. In this aspect it is important for Ukraine to realise its role in geoeconomic space and in the context of development of world civilization. Determination of geoeconomic interests of Ukraine needs account of the difficult system of interests of different countries, curriculum of forces, first of all, economic in each of regions of the world. Especially it touches the next-door neighbours of Ukraine and other states-partners which aim to realize own interests in Ukraine or have an important value for her.

The obligatory condition of realization of the real and socially effective market reforms achievement of the economic stabilizing is, first of all, in a country. It means, at first, stabilizing of legislation and governmental normative base in the field of economic relations on constitutional principles; secondly, stabilizing of intergovernmental economic connections and direct economic connections of domestic enterprises with partners in those countries which play the leading role in traditional markets of sale or supply of Ukrainian producers; thirdly, grant of state guarantees and real mode of assistance to development of private sector and domestic enterprise; fourthly, stimulation of economy of material and technical (especially power) resources and orientation of financial resources on renewal and development of productive sphere; fifthly, overcoming of consequences of world financial crisis. The optimal scenario of economic development for Ukraine to the end of 2010 year is possible, first of all, at the terms of receipt of IMF and World bans credits, financial help from other countries of the world; restructuring of credits is under the state guarantees; granting the favourable taxes for enterprises-exporters; expansion of currency corridor; realization of the innovative programs is under the guarantees of government. It will result in stabilizing of the sovereign rating, decline of negative trade balance, increase of export, increase of liquidity of the Ukrainian bonds, increase of demand on domestic commodity in the internal market.

One of major tasks of overcoming of economic crisis and following development of Ukraine is the integration into the system of international division of labor. It is expedient for our country to obtain "new economic niches" in the world markets. One of such niches for Ukraine can become the market of innovative services. Taking into account present potential of Ukraine, it has sufficient pre-conditions for development and expansion of this market. The policy of effective development of national market of innovative services foresees intensification of activity in next directions. At first, the decision of tasks of creation of the effective system of support of development of innovative activity and its monitoring it is expedient to concentrate in the state center which would concentrate activity on srategic problems, such as increase of competitiveness of Ukraine and adjusting of connections between science, education and business. Secondly, encouragement of innovative activity, organizational modernization of scientifically-technological sphere and forming of motivation of subjects of menage to the innovations, in particular, by making alteration in normatively-legal acts which regulate development of innovative activity in Ukraine, in particular, to Law of Ukraine "On government control of activity in the field of transfer of technologies", which positions do not give free access to patent information which does impossible creative labour of inventors. The reasonable changes need also the questions of special subsidizing of transfer of technologies; determination of minimum rates of reward to the authors of technologies at the temporal unusing and maintenance of technology as confidential information. Thirdly, creating the conditions for effective development of innovative infrastructure and infrastructure of transfer of technologies, assistance in the questions of commercialization of results of scientific and technical research-and-developments.

Fourthly, searching the ways of decision of problems of information-analitical providing of realization of public innovative policy and monitoring of innovative development of economy status, in particular, due to introduction of new technology on the base of mushroom growth of technique and rapid expansion of software which folds the base of new technology in the informative systems. Fifthly, effective introduction of measures of the Government economic program "Creation the innovative infrastructure in Ukraine in 2008 - 2012 years", which must become one of decision factors of assistance to development of national market of innovative services.

In the policy of integration of our state in the global market of innovative services it is necessary to lean against conception of technological dynamism. The important index of this market development are volumes and pattern of foreign trade and part of national enterprises which inculcate innovations. The part of domestic scientific products in the world market presents about 0,01 %, that does not answer both scientific and technical potential of regions of Ukraine and leading progress of modern world economy trends, and specific gravity of enterprises which inculcate innovations is only 11,5%. The leading purpose of innovative policy must be to increase the intercommunications between science, technique, market, state administrations on all levels, ungovernmental organizations and education. Determination of priorities of functioning of market of innovative services must be leaned against positive experience of countries with the high level of innovative development (Japan, USA, countries of EU, China). Technological development and strong competition positions of country can be provided in the global market of innovations, first of all, due to maintenance and recreation of scientifically-technological potential; integration and mobilization of private and public capital; investments in the fixed assets; high level of the scientifically-educational system; to the transition from labour intensive to the scientific productions.

The important direction of integration of Ukraine in European scientifically-research space is international innovative cooperation with EU-countries. It is expedient to enter the innovative model of transfrontal collaboration with the purpose of creation of the proper institutional providing and rationalization of scientific and technical collaboration with the noted countries. Development of such collaboration foresees bringing in at regional level the mutually beneficial collaboration of the specialized market institutes; strengthening of regulative influence of organs of power of different levels, which will accelerate circulating of capital, activate innovative processes and promote the level of motivation of workers to innovative activity.

Among retentive factors of innovative development it is expedient to distinguish the low level of the state financing of innovative development and insufficiency of the personal funds of enterprises; low investment activity of domestic, foreign investors; imperfection of tax law; absence of motivation of domestic enterprises to introduce innovations. The activation of innovative development of enterprises must be constrained, at first, with updating of capital productive assets which must become the main source of increase of production and conditioning volumes for making of domestic products at the level of the best world standards. Secondly, innovative development must have a social orientation, where exactly a human, quality and safety of his life, must provided priorities of innovative development. The priority interests of Ukraine in the market of innovative services consist in the increase of socio-economic efficiency of productive sphere on the base of system improvement of all elements and materialization of scientific knowledge and increase of public welfare.

Modern stage of development of domestic economy, first of all, the innovative activity of enterprises oriented to the internal market which sharply promotes the competitiveness of their products comparatively with imported. Enterprises which work at the international market use innovative possibilities an insignificant measure. For this reason it is expedient to carry out technological innovations enterprises with the purpose of increase of competitiveness of the products in the world market. Most innovative activity is characteristic for the enterprises of foreign and mixed patterns of ownership. However, state enterprises are better protected in the conditions of political and socio-economic instability, and, thus, can determine more long-term aims of the development, which can be realized due to innovative activity. In addition, state enterprises, comparatively with new non-state, keep a large reserve of the completed scientific developments. Thus, the pattern of ownership of enterprise it can not examine separately from other his descriptions, such as branch belonging and specific of mine-out products.

Small innovative enterprises are oriented mainly to the internal market. Only about 30 percents of small innovative enterprises invest considerable resources in scientific and project-designer activity. The important condition of effective national market of innovative services development is diversification of sourcings due to money of venture, investment and ration funds. It will allow to reduce the high risk of innovative activity due to his distribution between all participants. The willingness of the state to take part of risk of investing in a scientific and technical sphere will create the proper terms for development of scientific and technical, innovative enterprise and will assist bringing in the off-budget money in innovative projects. In this aspect development of intellectual capital is one of key factors of forming of effective strategy of competitiveness of Ukraine at the global market of innovative services. Unfortunately, a substantial problem is diminishing of amount of subjects of market of intellectual labour due to departures of specialists outside Ukraine. In a few years our country can lose greater part of scientific and technical elite which can prevent the increasing of national economy. Therefore the construction of modern innovative economy, where human and intellectual capital become the major factors of competitiveness, must include not only reform of education increase of investments in this sector, but also reformation of management and realization of long-term investments in the system of health protection and guard of environment.

The decisive importance for national market of innovative services and integration of Ukraine in global innovative space has the statement in June, 2009 the Conception of development of national innovative system. Its primary purpose is to increase the competitiveness of domestic commodity producers productivity for the improvement of welfare and providing the stable economic increase. This purpose can be attained by next ways:

- technological modernization of national economy,
- increase of level of their innovative activity,
- production of innovative goods,
- application of front-rank technologies and methods of organization and management economic activity.

In a document basic principles of forming and realization of the balanced public policy are certain on questions providing of development of the national innovative system of the competitiveness of national economy sent to the increase. Conception must be realized to 2025 year. It must become the basis of realization of national economic interests and creation in Ukraine the competitive in the world market commodity due to introduction of system innovations.

The constituents of the national innovative system are subsystems of government control, education, generation of new knowledge, innovative infrastructure, and also production of foods and services. The self acceptance of this Conception will allow to accelerate forming of terms for effective activity of subjects which assist creation and distribution of new knowledge and technologies, and also carry out them commercial realization. It, in turn, will result in realization of purposeful structurally-functional changes in an economy and increase of part of innovative factor in the increase of GDP, which must attain not less than as 30 % general volume of increase of GDP.

So for intensive innovative presentation of economic sphere it is important to account next signs : presence of public policy and legislation, sent to stimulation of innovative processes; presence in priority industries of large national companies which carry out the scale programs of production and advancement to the markets of competitive products; development of modern network of innovative infrastructure.

Conclusion. Ukraine has the real pre-conditions for creation and claim of innovative model of economy development. It means, first of all, about high scientific and technical, skilled and intellectual potentials, developed educational-scientific system, high educational level of population, availability of skilled labour force. Introduction of achievements of scitech in the real life will result in modernization of economy, which consists in replacement of one elements of the productive system other, more modern. To them it is possible to take new technologies which are the results of the completed scientific research-and-developments, and also such which are improved on the base of the use of new knowledge.

An analysis of modern economic situation in testify that it is necessary to strengthen state influence on development of innovative activity due to the increase of financing and to assist to development of small and middle innovative enterprises; to create the policy of structural transformations, that will allowed to send basic efforts of the state to changing the pattern of all economic mechanism.

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Kryvenko N.*

ON UKRAINE'S POSITION IN SOLVING THE GLOBAL PROBLEMS

Abstract

Globalization's unfolding is ministerial to the substantial changes in the economic, political and cultural spheres of the society. Almost every country depends upon intensity and depth of globalization processes. Analyzing and forecasting advantages and disadvantages of the globalization, the states develop the proper strategic programs for the further development. Possible prior directions of Ukraine's development in the modern terms of globalization with consideration of its potential are given in this article. Taking a dignified position in the international division of labor, using the presence of comparative advantages, developing such factor as knowledge, Ukraine will be able to aid the solving of global problems of the mankind and the growth of the population's welfare.

Keywords: globalization, international economic integration, innovations, agrarian sector, export.

The scale of globalization processes is increasing and they are already characteristic of almost all the spheres of human life – economy, politics, culture, religion, innovations, science etc. The development of world's economy and the international economic integration, creation of transnational companies, supranational managerial bodies, world finances, international information systems and a number of other factors redound to countries' interdependence increase and the globalization's deepening. The problems of the world economic crisis have recently become relevant and the search for the ways to overcome the crisis is now essential. The majority of problems reaches global scale and requires efforts from all the mankind to solve them. Among large number of them, we find it important to highlight the following: the problem of ecology, supply, energy and the spiritual problem that are all bound tight with each other. If the satisfaction of society's needs (notably – global needs) becomes a prerogative of country's home and foreign politics, it will secure the country's valuable place in the international division of labor, effective development of foreign economic contacts and redound to national economy's development.

Globalization's ponderable influence on development of the countries, growth of their interdependence, the necessity of unification (in order to solve the global problems) has conditioned the intense studying of this phenomenon by many economists, financiers, philosophers, sociologists, political scientists. The scientists, who study the globalization, expose its positive sides as well as its negative influence, therefore some of them support this process, the others – deprecate it. Although the notion of "globalization" is comparatively new, works of many foreign and home scientists are devoted to the studying of this phenomenon; particularly the works by Byelorus O, Veber A., Vlasov V., Delyagin M., Inozemtsev V., Kochetov E., Levit T., Luk'yanenko D., Sokolenko S., Filipenko A., Chumakov A., Shyshkov Y., Shnyrkov O, and the others. Researchers explore the globalization's influence on socio-economic processes of the devel-

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oped and the developing countries, analyze the consequences of the state management in weakening the challenges of the globalization, changes on the world market etc. It is reasonable to discover the prior directions of Ukraine's economy's development (taking its potential into account) with the purpose of participation in the solving of global problems.

So it is necessary to rationalize Ukraine's position on the world level in the conditions of globalization, taking the present potential and the existing prospects into account, in order to define Ukraine's domestic and external economic policy.

It is expedient to unite and direct the efforts of the scientists, the governments to the global ecological problem to avert the ecological crisis. The question of ecology is extraordinarily important in the conditions of industrial and postindustrial society.

It is interesting to notice that in the 60-th years of the XX century, according to the research by professor V.A.Kovda showed that humanity produces 2000 times more wastes of organic origin than all the rest of the nature. Nowadays, the biosphere is unable to contest with activity of man, and the irretrievable changes in it have already begun.

An intergovernmental panel on climate change (IPCC) has stated that if the volume of carbon dioxide produced on the planet is not immediately reduced by 60%, nature will not be able to adjust to the changes and the man will not be able to control them. Forecast that the rise of the average temperature by 2,5 degrees will result with additional 215 thousand of deaths per a year, 200 million deaths because of malaria, and famines, indirectly related to the climate change, will cause 900 million deaths during 2010–2030. Mass usage of the freon gas in production and household also ruins the Earth's ozone layer. The increase of the cancer disease is being geared to the destruction of the ozone layer. Supplies of fresh water on a planet diminish catastrophically. According to the UNO data 1,3 billion people have no access to the high-quality drinking water. 20% of the urban and 75% of the rural population have their need for water dissatisfied. Mankind annually uses 5% of average annual water supplies, but another 40% get unusable because of contamination [1, c.60, 62-63]. Therefore, together with the other countries and directly Ukraine is to co-create the terms of saving and protecting the environment. Presence of the curative waters of Carpathians, Ukraine's recreation zones, especially in Crimea, which are attractive for tourists, should be considered. Arrival of foreigners is equal to the export of home products, as it brings the foreign capital inside the state.

The state management is to be aimed at protection of the natural environment, as it assists to development of healthy nation and at production of the ecologically clean goods, competitive on the world market. This will create the internal demand for high-quality products, and will also assist the diversification of Ukraine's foreign trade connections, as the demand for the high-quality products is growing in the world, especially in the developed countries. The food safety problem will be to some extent solved by the foreign investments involvement.

The acknowledged economist, I.I.Lukinov stated, that "Ukraine has the best chances of getting out of the food crisis, satisfying its own needs in food, exporting… Skillful apportion of the areas of the eco-clean food production, this product's processing and proper commodity packing by means of the modern technology, will make our products competitive even in the highly replete European market"[2, c.86]. We fully share the scientist's opinion, considering that the state is to promote and accelerate apportion of the ecologically clean areas and to stimulate the raw material processing.

The ponderability of the listed problems will grow, which is explained by the world population growth, reduction of the forests and exhausting of natural resources.

For example, from 1961 to 2006 the world population grew more than twice, mostly in the countries of Africa, Southern and Central America, Asia, and such a tendency is preserved. The largest numbers are representative of the United Arab Emirates, Qatar, Djibouti, Kuwait, Jordan, Saudi Arabia, Andorra, Cote d'Ivoire, Bahrain and others. At that, the population growth of practically all of the European countries is insignificant (About 1,1 – 1,2 times).

At that, the majority of the population lives in Asia, about 60% (the overwhelming part of it is the population of China and India), and also in America and Africa.

The population grows rapidly in the countries, which are unable, due to their natural and climatic conditions, to produce the sufficient amount of provision. At that, the population grew over the given period more than trice in dozens of the countries. And while the Asian states do have the satiable demand, the African countries experience the contrary situation. That's why it is needed to secure such production that would satisfy the existing demand.

It is known, that quantity the starving people varies within the limits of one billion.

The society's alert on the present problem is also recognizable by the large number of the conferences on food security, especially the high level conference on the world food security, which was held by FAO in Rome in June 2008, international conference "Joint food security of the CIS: problems and the ways of solving them" in Alma-Ata (July, 19-20, 2008), International Conference "The problems of the food supply security:: national and international aspects" in Moscow (October 28-29, 2008) and others.

Alongside with that, the amount of production and trade in agricultural goods in the world is growing substantially. The predominant producers and the exporters of these goods are the developed countries.

Let us highlight the major suppliers of the agricultural product on the world market according to the volumes of export of special types of product (cereals, wheat, corn, rice, sunflower seed, sunflower butter, potato, dried milk, chicken meat etc) on the table 1.

Table 1. Major exporters of particular types of agricultural product (2007)

	Cereals	**Wheat**	**Maize**	**Rice**	**Sunflower seed**	**Sunflower oil**	**Potatoes**	**Milk Dry**	**Total Meat**	**Chicken meat**
1	USA	USA	USA	Thailand	Hungary	Ukraine	France	New Zealand	Brazil	USA
2	Argentina	Canada	Argentina	India	France	Argentina	Nether-lands	USA	USA	Brazil
3	France	Australia	Brazil	Vietnam	Romania	Russian Federation	Germany	Australia	Nether-lands	Nether-lands
4	Canada	Russian Federation	Hungary	Pakistan	Ukraine	Nether-lands	Belgium	Germany	Germany	China, Hong Kong SAR
5	Australia	France	China	USA	Bulgaria	France	Canada	France	Australia	France
6	Russian Federation	Argentina	France	China	USA	Hungary	Israel	Nether-lands	Denmark	Belgium
7	Brazil	Kaza-khstan	India	Egypt	Canada	Belgium	Egypt	Belgium	Canada	United Kingdom
8	China	Germany	Paraguay	Uruguay	China	USA	China	Ireland	France	Germany
9	India	China	Ukraine	Italy	Russian Federation	Germany	USA	Argentina	Belgium	Argentina
10	Germany	United Kingdom	Germany	Argentina	Slovakia	Bolivia	United Kingdom	United Kingdom	Spain	Poland

Source: FAO (www.fao.org)

So, the major exporters on the listed types of goods are mainly the developed countries – European countries, Canada, the USA, Australia and also Brazil, China, India and comparatively new countries in this market – Kazakhstan, Russia, Ukraine (in wheat, sunflower seed and sunflower oil)

At the same time, more than the half of the world export of the agricultural goods is done by the countries which are in the ten of its biggest suppliers. For example, in 2007 (1997), their share of cereals was 77% (75%), wheat in particular – 89% (91%), corn – 95% (94%); rice – 93% (89%); sunflower seed - 82% (89%); sunflower oil – 84% (76%), potatoes – 78% (65%); dried milk – 72% (74%), total meat – 72% (61%), chicken meat – more than 90% (a little more than 78%). Tendency of preserving the first positions in a world market is characteristic of these countries from 1997 till 2007. This also regards the goods production.

The solving of the above mentioned problems should in a great extent assist the development of the agricultural complex, which is especially important for Ukraine with its considerable potential. So, for example, Ukraine is one of the major suppliers in the world market of wheat, corn, and the sunflower seed.

Conducted computations of the RCA index show that Ukraine takes some advantages in trade in wheat, corn and sunflower seed. There is the opposite situation in relation to milk. In addition, the calculation of the indexes of the competitiveness makes it visible, that the competitive ability of home wheat and corn rises. The development of the foreign trade in agrarian products in general and in particular (in the special kinds of goods) is shown by the value of the balance and the coefficient of coverage of export by the import, and the index of pure trade and the others.

Up to this day, raw materials supply predominates in the commodity pattern of Ukrainian foreign trade. It needs to be reoriented to the after-processing products. This will save the added value inside the country, redound to growth state budget revenue, decrease unemployment and increase the competitive ability of the home product. It is important to keep in mind, that Ukraine has the needed capabilities and scope. For example, Ukrainian sunflower oil is imported by dozens of countries with such developed countries among them as Great Britain, Switzerland, France, Italy, Spain, Canada, the USA and others.

Therewith, the trade in particular kinds of agrarian production is done with the countries of all the continents. In spite of this, due to the current conditions, not only increase of the production, but also the increase of its quality is the essential precondition for the export increase.

Similar research is executed regarding the agricultural production import (table 2).

It is visible out of the shown data (tabl.2), that the considerable part of import of products of plant-growing falls on the countries of Asia and Africa. Therewith, Ukraine is its considerable producer oriented mainly on the countries of Asia. For example, in 2006 more than a half of the exported corn was fell exactly on these countries. It should be considered that the region is characterized by the growth of population and, therefore, cheap labor. The region attracts the transnational companies by the presence of considerable supplies of oil. All this items assist the growth of solvent demand for the agricultural product. But Ukraine is to be both East- and West-oriented, aimed at the countries which are the basic importers.

The energy problem should be in great extent solved with the usage of untraditional energy sources, bio-fuel production. It is known that Ukraine is one of the world's biggest producers of corn and turnip, therefore it is reasonable to increase the quantity of refineries to satisfy the home demand, to become energetically a less dependent country and to diversify geographic and goods structure of the trade, supplying the world market with the finished product. It is known that the developed countries, being in a position to import petroleum, pay special attention on the bio-fuel development and production.

For achievement of the put purpose the special value should be given to the development and application of the innovations and the high-effective technologies, which will be instrumental for the agricultural production increase, the ecological safety, and the solving of the energy problem.

Table 2. Major importers of particular types of agricultural product (2007)

	Cereals	Wheat	Maize	Rice	Sunflower seed	Sunflower oil	Potatoes	Milk Dry	Total Meat	Chicken meat
1	Japan	Brazil	Japan	Philippines	Turkey	Germany	Belgium	Algeria	Russian Federation	Russian Federation
2	Mexico	Italy	Korea, Republic	Indonesia	Spain	United Kingdom	Netherlands	Indonesia	Japan	China
3	Spain	Egypt	Mexico	Senegal	Netherlands	France	Spain	Netherlands	United Kingdom	China, Hong Kong SAR
4	Korea, Republic	Japan	Spain	Saudi Arabia	Pakistan	Netherlands	Italy	Mexico	Germany	Saudi Arabia
5	Netherlands	Algeria	China	South Africa	Italy	Belgium	France	China	U S A	Mexico
6	Egypt	Netherlands	Egypt	Benin	Germany	Spain	Germany	Philippines	Italy	Japan
7	Italy	Morocco	Netherlands	Iran, Islamic Republic	U S A	Italy	U S A	Malaysia	France	United Kingdom
8	Saudi Arabia	Belgium	Iran, Islamic Republic	Cote d'Ivoire	Austria	South Africa	United Kingdom	Saudi Arabia	Mexico	Germany
9	Brazil	Spain	Colombia	Malaysia	Romania	Turkey	Portugal	Singapore	Netherlands	United Arab Emirates
10	China	Mexico	Malaysia	Korea, Democratic People's Republic	Kazakhstan	Egypt	Russian Federation	Germany	China	Netherlands

Source: FAO

It is reasonable to mention that innovations become the major factor of the developed countries' economic growth. 25% of production additions in these countries are the result of direct exterior investments of capital, approximately 35% - labor qualification upgrades and more than 40% falls to the usage of scientific achievements and inventions – the engagement of innovations. [3, c.5]. Also, according to the experts' calculations in the 90-th more than 70% of postindustrial countries' national product was conditioned by the spread of new information technologies, labor's education buildup and other factors that regard to the intellect knowledge and information [4, c.20]. That's why Ukraine needs to encourage the development and the deepening of scientific, experimental and construction projects, promote cooperation with foreign international institutions, involve investments where necessary, create special economic zones, innovation poles etc. It should be kept in mind, that the transnational companies are considered to be the major motive power of the global innovation process [3, c.55]. It is necessary to stimulate scientific work and innovations using different methods and instruments. There are two major groups of such instruments pointed out in the world - the financial motivations (which include different forms of direct state financing of the scientific projects via subsidies and privilege credits) and the tax fillips (accelerated amortization, tax exemption, tax credit, tax vacations, personal income tax exemption, import rate exemption) [3, c.84-85]. It is reasonable to apply the proper instruments for the innovative process development in Ukraine.

It is important that the main instruments of the EU's mutual scientific and technical policy are the framework programs that cover all the directions of the Commonwealth's activities. Over the last 25 years the analysis of the framework programs development showed that the constant upward trend in the financing, the increase of the framework programs expenditures is accompanied with the decrease of the national state help on sector goals, and the traditional spheres in particular, which shows the structural changes in the European Union's economic policy in favor of the up-to-date ways of production; the priority trends change in the framework programs financing from the power economy, information technologies, telecommunication to the health protection, production technology etc. It is an interesting fact, that the last framework program 7 (2007-2013) defines ten basic research trends: healthcare; food, agricultural and bio-technologies, information and communication technologies; nano-sciences, nanotechnology, new materials and new production technologies; power economy; environment and the climate change; the transport and the aeronautics; the social economic sciences and the humanities; the Space and the researches in the scientific sphere. This program offers the increase and deepening of the cooperation with the third countries [3, c.122-125]. Thus, on May 13-14, 2010 the Information day "The EU Seventh Framework Program (FP) on Research & Technology Development: Opportunities for Ukraine's Research Communities" and the Consultation day "How to prepare a successful proposal in FAB ('Food, Agriculture and Fisheries, and Biotechnology') and Environment priorities" took place. JSO-ERA project, aimed at assisting the 7th framework program of the cooperation of the Ukrainian and European scientists and the scientists from the other countries, highlights the importance of the scientific researches and the human capital nowadays.

It is not for nothing that N.Ivanov states, that as the global informational, financial and production networks is forming the global market of the specialists and scientists. In the last years the expenditures on the education (and on the high school especially) has increased in all of the developed countries. That's why a new notion appeared in the researches on the economy – "the intellectual capital of the firm". The importance of the social capital, related to the social networks, norms and trust, is growing, which creates the conditions for the coordination and co-operation for the mutual benefit. The depth of the social income differentiation and the mutual trust factor substantially influence the investment activity inside the country and, as the result, on its socio-economical development. Besides, the World Bank researches on the problems of the conversion from the "grey" economy to the market economy states, that the redundant income differentiation breaks the socio-political stability, lowers the investments level and the temps of the economy growth. It is also important, that the social-oriented distribution of the income in the state is one of the decisive conditions that guarantees the competitive ability of the economy on the world level [5, c.21-30]. So, this confirms the importance and the necessity of the science development and the rising of the spiritual level of the society, which should be in many ways supported by the state.

International economic integration is a typical phenomenon for the second half of the XX century and the globalization. Creation of the integration groups is seen between almost all of the countries on all the continents – EU, NAFTA, MERCOSUR.

The economies of the EU countries are the most competitive in the world. One third of the world's scientific potential and 21% of all the GDP (2006) falls to this group, which is conditioned by the high level of the innovation activity development and the economy of knowledge. Alongside with that, European innovation system spreads its open character, involves the elements of national innovational systems of the other countries into the general process of creation and engagement of knowledge [3, c.6].

With the purpose of Ukraine's economic potential development and Ukraine's integration in the world economy, it is necessary to concentrate the efforts of the scientists, governments and enterprises on the solving of the existing problems through the Ukraine's agricultural food product export increase, the development and application of the innovations with the help of the up-to-date production technologies (their application and development of will assist the cooperation of enterprises, bringing in the foreign investments), participation in the international programs, collaboration with the integration groups.

With consideration of the pointed conditions of Ukraine's geographic position, the level of foreign trade with the EU, entry in the WTO, the following items are to be encouraged: creation of the free trade zone with the EU, involvement of the foreign investments, grouping and cooperation of the enterprises, development of the inner-branch trade as one of the pre-conditions for the integration etc. In this respect, special attention should me paid on deepening and development of national scientific research projects, engagement of innovations, high technologies, keeping and development of the agricultural sector to become a country, which is not only interested in the EU, but which other countries can be interested in. Entering the EU should redound to further development of national innovations and the engagement of the new innovations, which in great extent is a result of group development programs. Therewith, significance must be attached to the problem of global spiritual, for all the efforts to build better society not to inherit the example of the Babylon Tower. Ukraine must pay special attention not only on adoption of the laws, but their execution with preservation of everyone's rights and freedoms, as pre-conditions for the entry into the world community on equal terms with the other states. Otherwise, King Solomon's words will be on the front burner: "Except the LORD build the house, they labour in vain that build it: except the LORD keep the city, the watchman waketh but in vain" [6, Ps.126:1], which are always fulfilled regarding the countries, which do not abide the laws. In our view, powerful producers and exporters of the agricultural goods must necessarily assist the African countries that do not possess enough resources for satisfaction of the home demand for food.

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Zhulynska C. [*]

ROLE OF THE MONETARY TRANSMISSION MECHANISM EFFICIENCY IN THE PROCESS OF FIGHTING AGAINST CRISES IN ECONOMY

Анотація: *досліджено структуру монетарного трансмісійного механізму, основний внесок в розробку якого здійснили кейнсіанці. У статті доповнено теоретичні напрацювання щодо сутності, особливостей дії трансмісійного механізму в Україні та побудовано модель векторної авторегресії для аналізу його ефективності в процесі подолання кризових явищ в нашій державі.*

Resume: *this article is devoted to the research of the monetary transmission mechanism structure, formulated by Keynesians. There was supplemented some theoretical material about that mechanism essence and the peculiarities of its action in Ukraine. The vector autoregressive model was constructed to analyze the monetary transmission mechanism efficiency in fighting against the crisis in our country.*

Key words: monetary policy, the efficiency of monetary transmission mechanism, transmission channels.

The relevance of investigation. During the global crisis, erupted in the USA in summer 2007, the governments of many countries returned to applying Keynes' principles of macroeconomic regulation, intensified to use the fiscal and monetary measures. Monetary policy is a flexible instrument of indirect economic regulation, whose efficiency depends on the accuracy and velocity of monetary impulses conveyance through the transmission mechanism. Therefore, it is important to analyze the effectiveness of monetary transmission mechanism in Ukraine in the process of fighting the world financial crisis.

The analysis of previous studies. The researches by J. M. Keynes [1], F. Modigliani [2], B. Bernanke, M. Gerlter [3], J. Tobin [4], J. Stiglitz [5], F. Mishkin [6] have tried to shed light on the complex interactions underlying the monetary transmission mechanism. Other scientists (T. Unkovska, N. Pohorelenko, T. Slipchenko, S. Moisyeyev) focus their attention on its theoretical aspects and functioning peculiarities in advanced and emerging countries.The representatives of the National Bank of Ukraine – V. Stelmach, V. Mishchenko, A. Somik, A. Petryk – are more interested in practical research of the monetary transmission mechanism action in Ukraine, but these investigations belong to the period before the global financial crisis.

Goals of research: the generalization of scientists' points of view on the structure of transmission monetary mechanism; research its peculiarities in Ukraine and make an econometric analysis of this mechanism efficiency in our country in the period of the world financial crisis.

Economy is a complex dynamic system, in which from time to time crises erupt. R. Harrod, the representative of neo-Keynesian theory, considered that economy was characterized with internal instability and it balanced on a "knife-blade". His like-minded person, A. N. Hansen

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also underlined that a cyclic development of economy was not pathology. That was a peculiarity of dynamic system [7, p.14]. Therefore, the analysis of antirecession regulation becomes a very important and urgent problem. In the period of Great Depression, J. M. Keynes proposed to apply monetary measures in the system of antirecession policy. However, the economist paid much attention to fiscal instruments for fighting against crises.

Nowadays, monetary policy is a significant instrument for achieving macroeconomic stabilization in advanced and many emerging countries. This fact causes a considerable interest to research the transmission of monetary impulses to the real economy.

The first conception of the monetary transmission mechanism was formulated by J. M. Keynes. He explained that mechanism as the system of variables, through which money supply influenced on an economic activity. The fundamental contribution to research the theoretical basis of the monetary transmission mechanism was made by Keynesians.

J. Tobin underlined that the study of transmission mechanism was a substantial task of monetary policy. The exploration of this mechanism and its channels contributes to make a perfect macroeconomic forecast and raise the monetary decisions effectiveness.

Nowadays, the interpretation of the monetary transmission mechanism is differ from the classical Keynesian definition. So, up-to-date explication of this mechanism is defined as the complex of channels, which provides the transmission of monetary policy impulses from the central bank to the economy. [8, p.205], [9, p.38], [10], [11], [12, p.6]. The main goal of the monetary transmission mechanism, according to O. Ovchinnikova, is the cash saturation of domestic demand [13, p. 6]. In our opinion, the key function of this mechanism is to transmit rapidly and correctly monetary impulses to the real sector of economy through the financial market. So, monetary policy indirectly regulates the aggregate demand, in accordance with the phase of business cycle.

In view of the fact, that monetary mechanism is a system of monetary regulation, the monetary transmission mechanism can be explained as a system of monetary impulses transmission through some channels. We assume that the monetary transmission mechanism is a subsystem in the structure of monetary mechanism. It expresses influence of managing system (central bank) to managed one (financial market). The presentation of the monetary transmission mechanism role in structure of the monetary mechanism is in Chart 1.

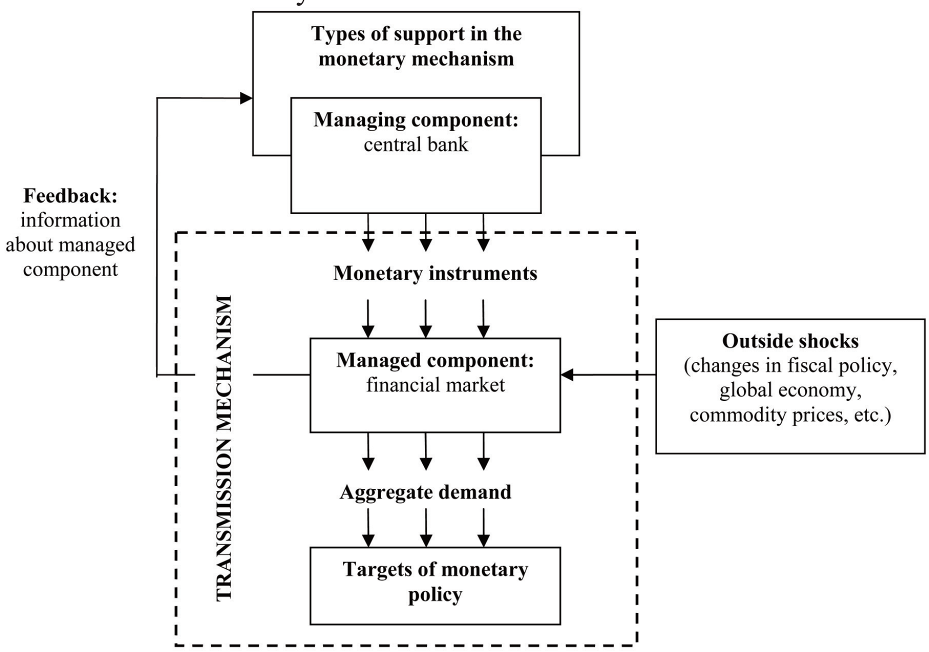

Chart 1 Role of the transmission mechanism in the structure of the monetary one

Monetary policy is always dependent on the nature, size and duration of the shocks hitting the economy. It is a permanent challenge for the central bank to understand which factors are driving price trends in order to find the appropriate monetary policy reaction.

The transmission mechanism is the link between the financial and real sectors of economy. Financial market, the object of direct influence of monetary policy, is characterized by level of interest rates. It is an important factor of investment and consumption process that forms the aggregate demand - the central point in Keynesian theory.

Indirect monetary policy influence on the real sector of economy determines some stages of monetary impulses transmission (chart 2).

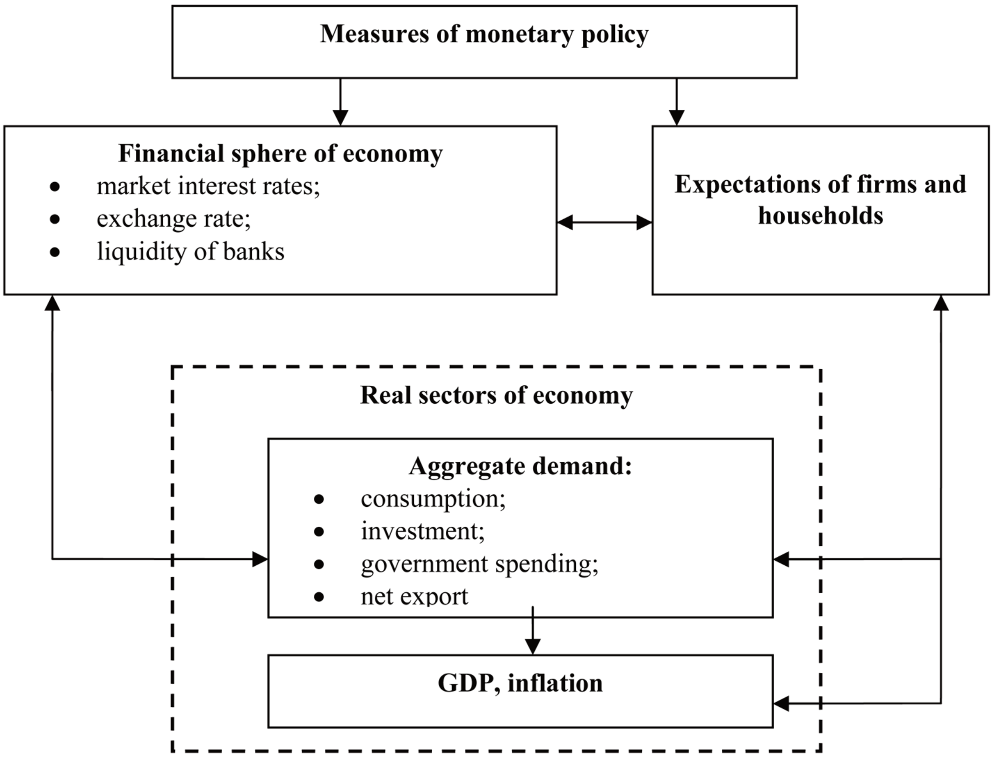

Chart 2 Stages of monetary impulses transmission to the real sector of economy

Analyzing the influence of monetary regulation, we can observe the active role of expectations of the future evolution which impact on the effectiveness of fiscal and monetary policy, in general. Furthermore, J. M. Keynes said that in a dynamic economic system the changing expectations of firms and households could affect the current economic situation [1]. Needless to say, that dynamic state of economy with fluctuated expectations is very dangerous for macroeconomic equilibrium and prevention economic shocks [14, 21]. Thus, expectations of economic entities are essential in investigation of the transmission mechanism action.

Summarizing scientists' points of view the on the nature of the monetary transmission mechanism, we marked out the main channels in its structure. There is interest rate channel (substitution-effect-in consumption channel, income channel), equity price channel (wealth channel, stock price channel, house price channel), lending channel (narrow lending channel, balance-sheet channel or broad lending channel, cash flow channel), exchange rate channel and expectations channel.

It is worth pointing out that imaginary splitting the channels in the structure of transmission mechanism is used for analysis and economic simulation. All channels are interrelated. For instance, interest rate channel influences on equity price and lending channels. Two previous ones are deeply interlaced in countries with high developed financial market. This point can be considered using US data. In the USA after the period of securitization's expansion and issue of derivatives, slump of securities' prices caused the global crisis in 2007.

In emerging countries undeveloped financial market weakens monetary policy impulses and, sometimes, blocks their transmission to the real sector of economy. The situation in 1996-1998 years in the countries-members of the CIS (Commonwealth of Independent States) is the example of the monetary signals' ineffectiveness. That was the period of wide gap of interest rates in financial market and real sector of economy, where non-payments and barter prevailed.

During the global crisis, erupted in the USA in summer 2007, the governments of many countries returned to applying Keynes' principles of economic regulation.

The frequency of discount rate changes shows the topical character of monetary policy. Since July 2007 the Fed has changed the discount rate 12 times. It was reduced by 5,75 percentage points (p.p.) to 0,75%. Since August 2007 the discount rate of the European Central Bank has been lowered 7 times from 4,25% to 1%. Since August 2007 the Bank of England has diminished its discount rate 10 times to 0,5%.

In order to analyze the efficiency of the interest rate channel action, it is necessary to research inflation, which has been kept at low levels, and growth rate of GDP. Since the end of 2007 GDP has been increasing in the USA. Since the last quarter of 2009 GDP has increased in the euro area and Great Britain. That connected with the "long-term unsteady" lag of monetary influence on the real economy. As M. Friedman and A. Schwartz noticed, that lag was equal to 16 months, in average. In addition, J. Stiglitz and P. R. Krugman prediction means the following lowering of GDP growth rate in the USA. According to the European Commission forecast the similar tendency is expected in the European Union.

The discount rate of the National Bank of Ukraine was reduced on 1 p. p. only in a half-year after the beginning of the crisis in our country. Nowadays it amounts to 10,25%. On the other hand, exchange rate regulation and refinancing operations were implemented intensively. So, the structure of transmission mechanism in Ukraine is set out in simplified, schematic form in Chart 3.

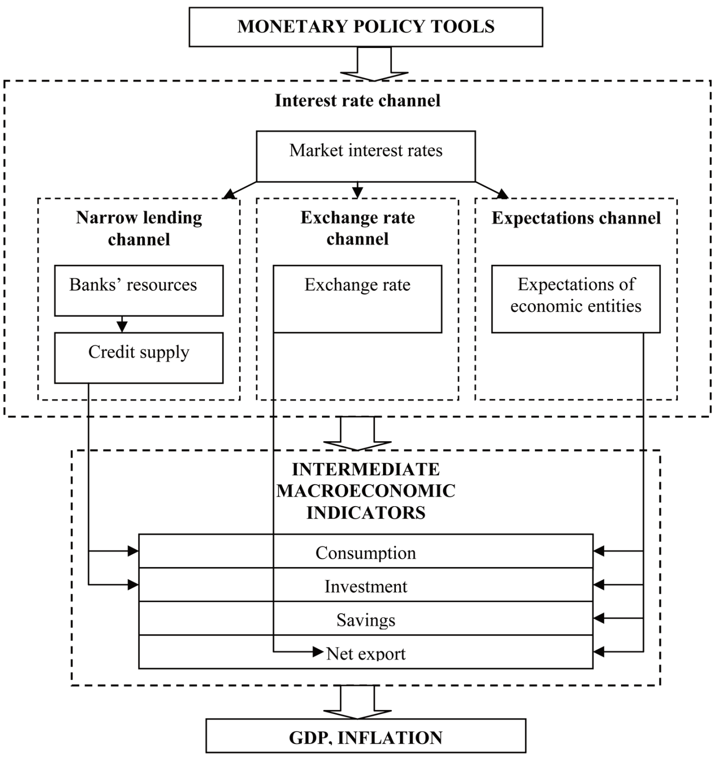

Chart 3 Structure of the monetary transmission mechanism in Ukraine

In our opinion, in Ukraine and other countries the interest rate channel is the fundamental in the monetary transmission mechanism, because the official interest rates of the central bank influence on market interest rates. This impulse applies to other transmission channels. Besides, J. M. Keynes equalized the monetary transmission mechanism with the interest rate channel. Indeed, all transmission channels are the detailing of the interest rate channel.

We propose to analyze the effectiveness of the monetary transmission mechanism through the estimation the accuracy and speed of the monetary impulses' transmission across the interest rate channel. To this end, the vector autoregressive (VAR) model was constructed as a research tool. It allows to estimate the impact of own previous values and other variables' lags on each variable dynamics.

Thus, the following variables were selected to the analyses:

- discount rate as a guide of money resources value;
- average refinancing rate, which is used by the NBU to carry out real operations;
- overnight interest rate, set by banks on short-term loans, at which the largest volume of transactions of interbank market are executed;
- deposit rate, which affects the cost of lending as the price of bank resources attraction;
- interest rate on credits to the real sector of economy as an important factor in regulation of the level of business.

Chart 4 shows the time series of interest rates.

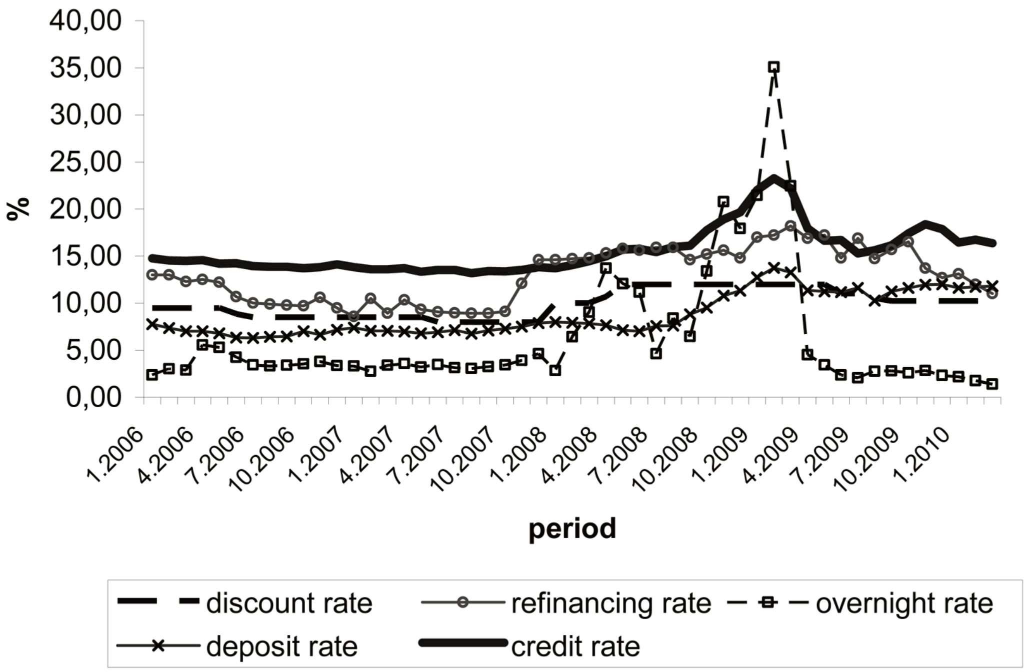

Chart 4 The dynamics of interest rates series in Ukraine from January 2006 to March 2010

The basic requirement to the formation of VAR-models is time series stationarity. According to results of Foster-Stuart test, we make the conclusion about the series stationarity against trend and absence of trend variance, which means permanent dynamics of series.

After that we determine the specification of VAR-model. Because of limited length of the time series, we can construct a VAR-model with maximum lag, which is equal to 7. We analyzed the model quality with different lags and estimated it according to Akaike, Schwarz, Hannan-Quinn information criterions, Final prediction error) (see Table 1).

Table 1 Estimation of VAR-model using different criterias

Lag	Final prediction error	Akaike	Schwarz	Hannan-Quinn
0	188,03	19,43	19,63	19,5
1	0,35	13,14	14,36	13,59
2	0,31	12,96	15,19	13,78
3	0,36	12,99	16,23	14,19
4	0,24	12,33	16,59	13,91
5	0,08	10,8	16,07	12,76
6	0,05	9,54	15,82	11,87
7	0,01*	6,51*	13,81*	9,21*

*Note: the best value of criterias are marked **

Under the information, presented in the Table 1, the model with lag in 7 months is the most adequate. Its structure is below:

$$\begin{cases} Y_{1t} = f\,(Y_{1t-l}, Y_{2t-l}, Y_{3t-l}, Y_{4t-l}, Y_{5t-l}; u_{1t}) \\ \ldots \\ Y_{5t} = f\,(Y_{5t-l}, Y_{1t-l}, Y_{2t-l}, Y_{3t-l}, Y_{4t-l}; u_{5t}) \end{cases} \qquad (1)$$

$l \in [1;7]$ - lag;

Y_1 - discount rate;

Y_2 - average refinancing rate;

Y_3 - overnight interest rate;

Y_4 - deposit rate;

Y_5 - credit rate;

$u_{1t} \ldots u_{5t}$ - random variables.

In this research we made the analysis of impulse response of the variables to some shocks. So, using the data of the period covered by the global financial crisis, the response of interest rates to discount rate reducing by 1 p.p. is in Chart 5.

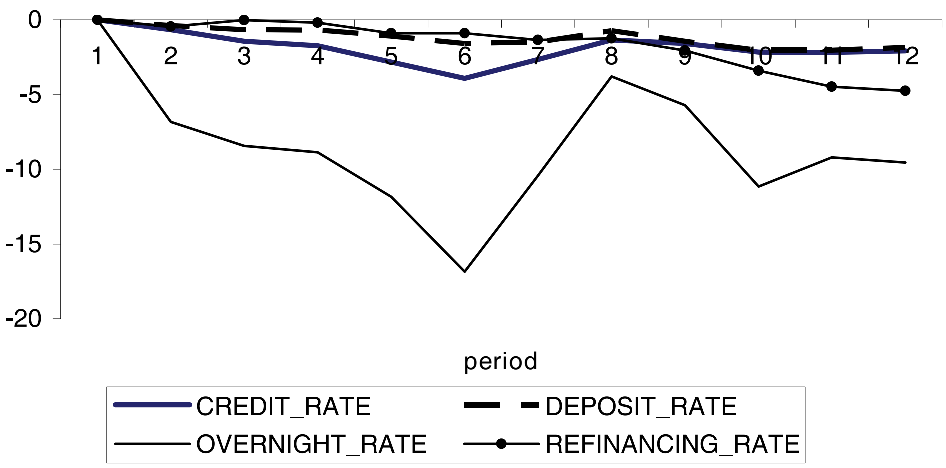

Chart 5 Response of interest rates to discount rate shock

According to the previous chart, we can see that discount rates affect to a large extent the overnight interest rates. During six months the impact of discount rate changing on refinancing rates is weaker than on psychological reaction of credit rates.

In this case, it is also important to analyze, how interest rates depend on the changing of the refinancing rates, used by the National Bank of Ukraine to carry out real operations (see Chart 6).

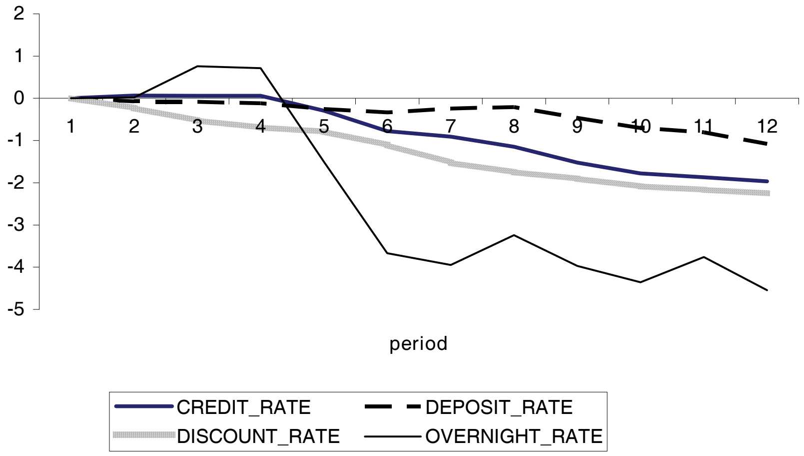

Chart 6 Response of interest rates to refinancing rate shock

Based on data for the period, covered by the financial crisis, the overnight interest rates are the most sensitive to the lowering of refinancing rates by 1 p.p. However, the shock of refinancing rate has small impact on other interest rates. This fact can be explained with some reasons:

- the cost of attracting resources via refinancing operations is significantly higher than resources in the interbank market (see Chart 4);
- the global crisis aggravated the financial situation of economic entities and some borrowers couldn't pay back their loans. That caused overstated credit rates, which became inflexible to the refinancing rates lowering;
- we assume, that substantial share of bank resources, attracted from refinancing operations, was circulated in interbank exchange market. Analizing the finance results of banks in the fourth quarter of 2008, we faced with the fact, that the banks, called "Prominvestbank" and "Nadra", the leaders of attracting resources from the NBU, were the leaders in receiving trade profits in that period too [15]. This profits sizable portion is formed with purchase and sale of foreign currency.

In such situation we decided to assay the impact of overnight interest rates on the other variables (see Chart 7).

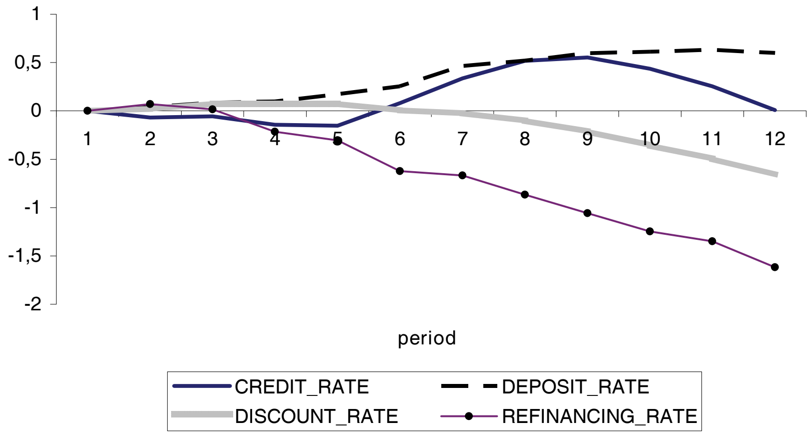

Chart 7 Response of interest rates to overnight rate shock

According to the chart of impulse response, we can say, that during three months the reducing of overnight interest rate by 1 p.p. exerts a minimal influence on the other interest rates.

While impulse response functions trace the effects of a shock of one variable to the other variables in VAR, the variance decomposition provides information about the relative importance of each variable in affecting the others (Chart 8).

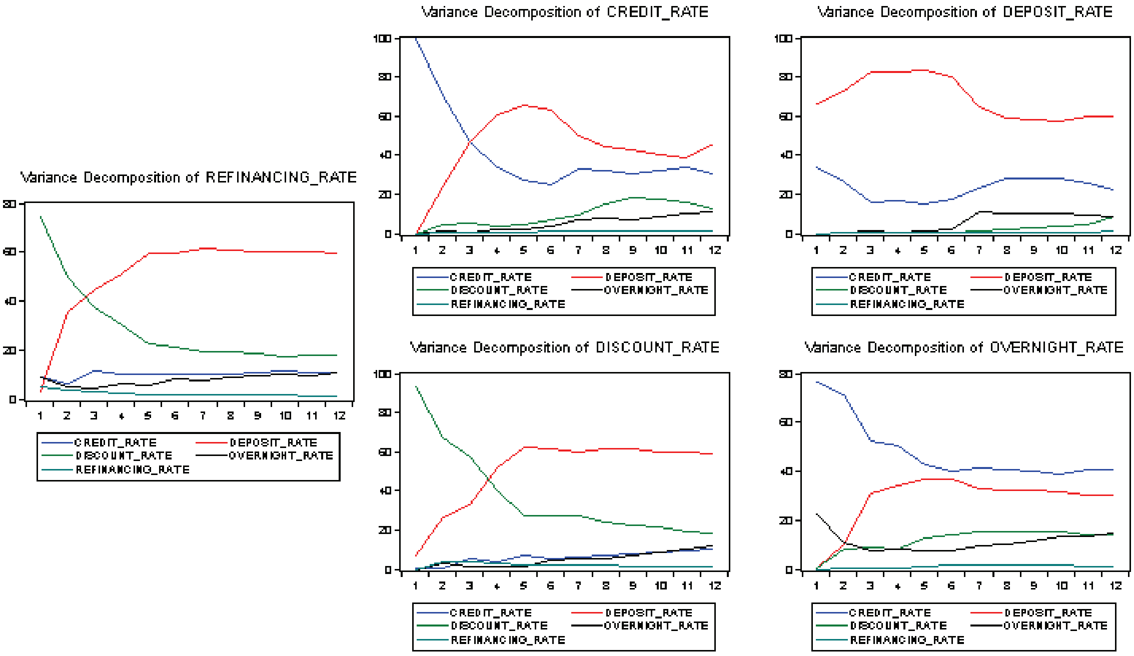

Chart 8 Variance decomposition of the variables

Analyzing the relative indicator - variance decomposition - we notice, that the credit rates values of two previous periods explain more than 90 % of this series dynamics. Among the previous values of other variables, the most significant are the lags of deposit rates, which explain nearly 50% of the fluctuations of credit rates.

The prior values of deposit rates are the most important in their formation. The contribution of credit rates' lags amounts, on average, 30% in dynamics of deposit rates.

According to the variance decomposition, we can say about the feedback between interest rates of real and financial sectors of economy, because the overnight rates mostly depend on the credit and deposit rates.

Speaking about discount and refinancing rates, we can see, that their values of two previous periods declare their dynamics. Besides, the role of deposit rates is essential too. It means that the National Bank of Ukraine takes into account the resources cost for banks from firms and households. In addition, the NBU, establishing their official rates, focuses on the inflation level, the substantial factor of deposit rates determining.

The weakness of interest rate channel in transmission monetary signals can be also explained by the NBU's administrative impact on maintenance of deposit volumes. The real deposit situation in banking system of Ukraine is characterized with unstable dynamics of slow growth. As M. Rothbard said that compulsion in monetary or other fields of human activity provoked conflicts and chaos. Besides, monetary impulses action is neutralized and deformed with expectations of firms and households, especially in Ukraine [16].

Conclusions. During the global crisis, Keynesian conception of active government regulation of economy becomes very important. Monetary policy, combined with fiscal one, is the irreplaceable measure. Monetary instruments make smooth impact on the real economy though transmission mechanism, developed by Keynesians. The research of its mechanism is clearly needed, because it influences on the effectiveness of monetary regulation.

Using the VAR-model, constructed with data from January 2006 to March 2010, we make a conclusion, that the interest rate channel is weakly effective in transmission the monetary signals from the official rates of the NBU to the interest rates on credits to the real sector of economy. It can be caused with high level of refinancing rates, high probability of borrows insolvency. Heavy value of credits and their limited supply slows economic growth in our country. It is worth pointing out that GDP of Ukraine has not yet achieved its before-crisis level.

The analyses of Impulse Response and Variance Decomposition functions show that the dynamics of deposit and credit rates are mostly explained with their previous values. Their variation weakly depends on changing in discount, refinancing rates and overnight interest rates of interbank credit market. These results tell us about the severance of interest rates' ties in economic and financial sectors of our country.

Ukrainian executive power should find the ways to form favorable expectations in our society. It is absolutely necessary to stabilize and develop financial sector of economy, which determines the transmission path of monetary impulses. These measures will raise the efficiency of the monetary transmission mechanism and the state policy, in general.

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Chugaiev O.*

ECONOMIC GROWTH AND CHANGE IN INCOME DISTRIBUTION

Traditional method using growth in real GDP per capita as a measure of improvement of welfare does not consider the effect of changes in income distribution between people. The article provides means in order to adjust for this effect. The author calculates the value of such an adjustment in recent years and analyzes possible factors that may affect it.

Традиционный метод, использующий прирост реального ВВП как меру улучшения благосостояния, не учитывает эффект изменений в распределении дохода между людьми. В статье показан способ поправки на действие такого эффекта. Автор оценивает величину такой поправки и анализирует факторы, которые могли на нее повлиять.

Key words: economic growth, income distribution, inequality.

Economic crisis in 2008-2009 contrasts with previous years of continuous economic growths. During 1995-2009 real GDP per capita grew in Azerbaijan by 312%, in China – by 249%. The lowest real GDP per capita growth was in Bahrain (-7%), Saudi Arabia (5%), and Italy (7%). This indicator grew by 33% in Ukraine. But do all people benefit from economic growth?

Income inequality dynamics has been analyzed in several studies. For example, Giannini M. (1997) claims that differences in accumulated human capital may affect income distribution. Also under absence of a redistributive policy the growth process causes increasing inequality. But inequalities may be reduced by means of redistribution policies without altering the growth process.

Li H., Xie D., Zou H-f (1999) show that as an economy grows, income distribution does improve. This holds even under control for government spending (on education, welfare, social security, health and infrastructure) that are supposed to lower income inequality.

Turnovsky S., Garcia-Peñalosa C. (2006) analyze several factors affecting income distribution dynamics. In particular, under certain conditions the accumulation of capital and increase in productivity may reduce the degree of wealth inequality. If the initial stock of capital is below the steady state level, then wealth inequality will decrease during the transition. Under aging of population the reduction in the labor supply and the increase in the capital-labor ratio reduce the relative reward to capital and increase that to labor, which results in a more equal distribution of income. The increase in wage inequality since the late 1970s was accompanied by the increase in the difference between the hours worked by high-wage and by low-wage individuals.

But the existing research lacks a measuring inequality dynamics, adequate for adjusting indicators of economic growth. Growth of real GDP per capita does not consider its distribution, thus it should be adjusted by a certain coefficient in order to reflect growth in welfare of the

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general public. In this paper we aim at estimating this effect and determining factors that may influence it.

Let's suppose that economy consists of two persons. Person A earns \$100, person B – \$200. If next year person A earns \$120 and person B – \$300, we may say, that their total income will grow by 40% ((120+300)/(100+200) = 1.4). But the average growth of their income is 35% only ((120/100)/2+(300/200)/2 = 1.35). The latter is a better indicator to consider increase in income of the general public. That is why we may apply an adjustment coefficient (AC) 1.35/1.4 = 0.965 to growth in real GDP.

If AC is smaller than 1, then upper income population benefits more from economic growth, which causes concentration of wealth. A better option is AC slightly more than 1 (it means that income of lower income population grows more than income of upper income population). But it is better to consider adjusted by AC economic growth indicator in long-term period, since excessive redistribution of income by state to help the poor may curb economic growth by deterioration of motivation to earn income.

Let's calculate the AC in countries by using statistical data of average household annual disposable income by decile during 1995-2009 in 74 countries and territories (we used www.euromonitor.com statistical database to get the necessary time series for our analysis). These countries represent all the regions of the world. Unfortunately, considering availability of the data, Sub-Sahara Africa is represented in our sample only by two countries.

The average (among countries) long-term (i.e. during 15 years) AC (unweighted by population of countries) was 0.98. I.e. average annual AC was almost 0.9987. Thus, we should decrease annual economic growth in an average country by 0.13% in order to adjust for income distribution effect. Thus, we could say that, economic growth was only slightly more beneficial for upper income population.

But long-term AC weighted by population was lower – 0.94 (mainly due to the impact of low AC in China and India – countries with the biggest population). This means that the average annual AC weighted by population was 0.9959. I.e. we should decrease annual economic growth in the world by 0.41%. This means that economic growth was even more beneficial for upper income population (not slightly, but still not dramatically).

As for particular countries, in the following table countries are sorted by real GDP per capita growth, adjusted real GDP per capita growth, and long term AC.

Table 1 Country rankings by economic growth during 1995-2009,
considering adjustment for changes in income distribution, times

Country	Real GDP per capita growth	Country	Adjusted real GDP per capita growth	Country	Long-term AC
Azerbaijan	4.121	Azerbaijan	3.681	Chile	1.187
China (mainland)	3.494	China (mainland)	2.919	Brazil	1.175
Belarus	2.374	Kazakhstan	2.293	Turkey	1.155
Vietnam	2.352	Belarus	2.271	Colombia	1.127
Estonia	2.212	Estonia	2.264	Kazakhstan	1.078
Kazakhstan	2.128	Vietnam	2.149	Mexico	1.074
Lithuania	2.099	Lithuania	2.100	Thailand	1.056
India	2.097	India	1.945	Greece	1.038
Latvia	2.072	Slovakia	1.906	Spain	1.034
Poland	1.978	Latvia	1.897	Argentina	1.032
Slovakia	1.902	Chile	1.859	Tunisia	1.025
Ireland	1.815	Poland	1.822	Estonia	1.023

Country	Real GDP per capita growth	Country	Adjusted real GDP per capita growth	Country	Long-term AC
South Korea	1.762	Tunisia	1.784	Indonesia	1.022
Croatia	1.754	Ireland	1.759	Italy	1.010
Tunisia	1.741	Croatia	1.758	Venezuela	1.009
Turkmenistan	1.733	Turkey	1.658	Portugal	1.007
Nigeria	1.706	Serbia	1.654	Croatia	1.002
Serbia	1.683	South Korea	1.646	Slovakia	1.002
Taiwan, China	1.665	Bulgaria	1.632	Hungary	1.002
Russia	1.647	Taiwan, China	1.614	Netherlands	1.002
Bulgaria	1.636	Slovenia	1.613	Belgium	1.001
Slovenia	1.635	Greece	1.573	Lithuania	1.001
Egypt	1.598	Russia	1.564	France	1.000
Romania	1.587	Hungary	1.553	Australia	1.000
Singapore	1.584	Egypt	1.529	Bulgaria	0.998
Chile	1.566	Peru	1.520	Morocco	0.994
Peru	1.560	Romania	1.520	Germany	0.994
Hungary	1.550	Czech Republic	1.516	Ecuador	0.994
Czech Republic	1.526	Singapore	1.497	Czech Republic	0.993
Greece	1.515	Brazil	1.490	Austria	0.992
Jordan	1.474	Indonesia	1.488	Bahrain	0.990
Morocco	1.469	Turkmenistan	1.481	Slovenia	0.987
Malaysia	1.460	Thailand	1.468	Philippines	0.986
Finland	1.457	Morocco	1.460	Algeria	0.985
Indonesia	1.455	Jordan	1.449	USA	0.984
Turkey	1.436	Spain	1.398	Jordan	0.983
Hong Kong, China	1.391	Colombia	1.397	Serbia	0.983
Thailand	1.390	Finland	1.371	Switzerland	0.981
Philippines	1.365	Nigeria	1.367	United Kingdom	0.981
Algeria	1.357	Argentina	1.366	Ukraine	0.977
Spain	1.353	Malaysia	1.362	Peru	0.975
Sweden	1.348	Australia	1.347	United Arab Emirates	0.971
Australia	1.347	Philippines	1.345	Saudi Arabia	0.971
Israel	1.340	Algeria	1.337	Taiwan, China	0.970
Ukraine	1.330	Netherlands	1.320	Ireland	0.969
South Africa	1.328	Ukraine	1.300	Bolivia	0.967
Argentina	1.323	Sweden	1.289	Qatar	0.966
Netherlands	1.318	Israel	1.288	Israel	0.961
Norway	1.317	Ecuador	1.282	Japan	0.958
United Kingdom	1.306	United Kingdom	1.281	Romania	0.958
Pakistan	1.295	Austria	1.270	Egypt	0.957
Ecuador	1.290	Portugal	1.260	Belarus	0.957
Bolivia	1.288	Belgium	1.252	Sweden	0.956
Austria	1.281	Bolivia	1.246	Denmark	0.955
Canada	1.268	USA	1.241	Russia	0.950
Brazil	1.268	Norway	1.239	Singapore	0.946
USA	1.261	Mexico	1.237	Canada	0.944
New Zealand	1.253	South Africa	1.236	Kuwait	0.944

Country	Real GDP per capita growth	Country	Adjusted real GDP per capita growth	Country	Long-term AC
Belgium	1.251	Hong Kong, China	1.217	Norway	0.941
Portugal	1.250	France	1.203	Finland	0.941
Qatar	1.242	Qatar	1.200	South Korea	0.934
Colombia	1.240	United Arab Emirates	1.199	Malaysia	0.932
United Arab Emirates	1.235	Canada	1.197	South Africa	0.931
France	1.203	Pakistan	1.177	India	0.927
Denmark	1.181	Germany	1.166	Poland	0.921
Switzerland	1.179	Switzerland	1.157	Latvia	0.916
Germany	1.173	Venezuela	1.143	Vietnam	0.914
Kuwait	1.170	Denmark	1.127	Pakistan	0.909
Mexico	1.152	New Zealand	1.114	Azerbaijan	0.893
Venezuela	1.132	Kuwait	1.104	New Zealand	0.889
Japan	1.103	Italy	1.089	Hong Kong, China	0.875
Italy	1.079	Japan	1.056	Turkmenistan	0.854
Saudi Arabia	1.052	Saudi Arabia	1.021	China (mainland)	0.835
Bahrain	0.928	Bahrain	0.919	Nigeria	0.802

In most cases adjustment does not change rank of a country significantly. For example Azerbaijan and China (mainland) remain the fastest growing economies even after adjustment, while Bahrain and Saudi Arabia took the lowest places. But there are exceptions. Long-term AC was the highest in Chile, Brazil, Turkey, Colombia, Kazakhstan, Mexico, Thailand, Greece, Spain, and Argentina. In these countries the lower income people benefited more from the economic growth in comparison with the upper income people. It is logical that half of these countries represent Latin America, which is the region with high income inequality. Thus, we may observe the inequality convergence effect.

Long-term AC was the lowest in Nigeria, China (mainland), Turkmenistan, Hong Kong, New Zealand, Azerbaijan, Pakistan, Vietnam, Latvia, Poland, India, South Africa, Malaysia, South Korea, Finland, Norway, Kuwait, Canada, Singapore, Russia. These countries include fast growing economies (in this case growth of inequality in income is usually inevitable) and countries, where inequality in income is traditionally low, such as Scandinavian countries (thus, we may observe the inequality convergence effect again). Ukraine was in the middle of the ranking, with its long-term AC being almost equal to the global average unweighted long-term AC.

If we consider particular years, the highest average unweighted annual AC was in 2001 and 2003 (1.001), while the lowest figure was is 1997, 2000, and 2005 (0.997).

The highest annual AC was registered in Serbia-2002 (1.078), Venezuela-2006 (1.078), Argentina-2004 (1.067), New Zealand-2002 (1.062), Thailand-2001 (1.061), China (mainland)-1995 (1.055), Turkey-2003 (1.051), Brazil-2001 (1.050), Chile-2001 (1.048), Argentina-1999 (1.049), Columbia-1995 (1.046), Turkey-2004 (1.045), Ecuador-1997 (1.043), Mexico-2000 (1.043), Bolivia-1998 (1.041).

The lowest annual AC was registered in Serbia-2000 (0.928), Nigeria-1995 (0.929), Nigeria-1996 (0.945), Nigeria-1997 (0.947), China (mainland)-2002 (0.948), Venezuela-2002 (0.949), New Zealand-2001 (0.957), Bulgaria-2002 (0.960).

The highest variation of annual AC was observed in Venezuela, Argentina, China (mainland), and Nigeria, while the lowest variation was in Pakistan, Morocco, Ukraine, and Slovakia. In Ukraine the annual AC fluctuated within the narrow margins 0.997-1.000. The highest figure

(1.000) was in 2009 during the economic crisis. It is interesting, that there was a general decrease of variation of average annual AC in recent years. The average (during 14 years) standard deviation of the average (among countries) annual AC was 0.012. And in 2008 and 2009 the standard deviation was only 0.004 and 0.002, respectively.

As for factors affecting AC, we do not find evidence of influence, caused by the majority of factors considered. Correlation between average annual indicators during 1995-2009 and long-term AC was the following:

- real lending rates (0.24);
- change in GDP from agriculture, hunting, forestry and fishing / GDP (0.23);
- gross income from investments / GDP (0.23);
- life expectancy at birth (0.22);
- gross income from benefits / GDP (0.19);
- average working week in non-agricultural activities (0.16);
- change in life expectancy at birth (0.16);
- change in savings / GDP (0.15);
- change in government expenditure on education / GDP (0.14);
- Gini idex (0.12);
- government expenditure on social security and welfare / GDP (0.12);
- energy intensity (0.11);
- change in government expenditure on defense / GDP (0.11);
- GDP from financial intermediation, real estate, renting and business activities / GDP (0.09);
- GDP from education, health, social work and other community, social, personal service activities / GDP (0.09);
- change in death rate (0.09);
- government expenditure on health / GDP (0.08);
- GDP from manufacturing / GDP (0.07);
- change in GDP from manufacturing / GDP (0.07);
- government expenditure on education / GDP (0.06);
- change in foreign debt / GDP (0.06);
- ease of Doing Business Index (0.06);
- change in gross income from investments / GDP (0.05);
- change in average working week in non-agricultural activities (0.05);
- mean age of population (0.05);
- change in foreign direct investment inflows / GDP (0.05);
- change in government expenditure on housing and community amenities / GDP (0.05);
- change in exports of goods and services / GDP (0.04);
- change in net migration / population (0.04);

- foreign debt / GDP (0.03);
- depreciation of national currency against US dollar (0.03);
- change in birth rate (0.03);
- change in possession of personal computer (0.02);
- foreign debt / GDP (0.01);
- change in government expenditure on health / GDP (0.01);
- possession of passenger car (0.00);
- change in inflation (0.00);
- inflation (-0.01);
- corruption perceptions index (-0.01);
- change in corruption perceptions index (-0.01);
- change in mean age of population (-0.01);
- change in gross income from benefits / GDP (-0.01);
- government expenditure on housing and community amenities / GDP (-0.01);
- change in possession of passenger car (-0.02);
- change in government expenditure on social security and welfare / GDP (-0.03);
- change in public debt / GDP (-0.04);
- government expenditure on defense / GDP (-0.06);
- change in GDP from mining and quarrying / GDP (-0.06);
- government budget balance / GDP (-0.07);
- change in gross fixed capital formation / GDP (-0.07);
- possession of personal computer (-0.08);
- net migration / population (-0.09);
- birth rate (-0.09);
- offences (-0.09);
- change in GDP from financial intermediation, real estate, renting and business activities / GDP (-0.10);
- foreign direct investment inflows / GDP (-0.10);
- change in GDP from education, health, social work and other community, social, personal service activities / GDP (-0.11);
- change in offences (-0.11);
- GDP deflator growth (-0.12);
- global competitiveness index (-0.12);
- change in bank claims on the private sector / GDP (-0.12);
- gross fixed capital formation / GDP (-0.14);
- death rate (-0.14);

- bank claims on the private sector / GDP (-0.15);
- change in government budget balance / GDP (-0.15);
- energy intensity growth (-0.16);
- GDP from mining and quarrying / GDP (-0.17);
- change in market capitalization / GDP (-0.17);
- agricultural output growth (-0.18);
- current account balance / GDP (-0.18);
- total expenditure on R&D / GDP (-0.20);
- market capitalization / GDP (-0.20);
- change in current account balance / GDP (-0.22);
- exports of goods and services / GDP (-0.23);
- GDP from agriculture, hunting, forestry and fishing / GDP (-0.24);
- real GDP per capita growth (-0.29);
- change in Gini Index (-0.63).

Let's consider now those indicators that correlate the most.

Correlation between average annual real lending rate and long-term AC is 0.24, but correlation between annual data on lending rate and annual AC is close to zero (0.03). Such difference can be explained both by difference in the amount of observations and possibly longer lag of influence. Another obstacle to recommendation to use higher real lending rate is the fact that it correlates slightly negatively with the average adjusted real GDP growth (-0.12). Moreover, according to correlation of lagged data, the relationship could be reverse. Lower growth of income of upper-income population could lead to lack of savings, and, thus, higher real interest rates.

A similar problem exists, if we consider change in GDP from agriculture, hunting, forestry and fishing / GDP. Correlation of annual data is close to zero as well (-0.02). Also this indicator correlates negatively with the adjusted real GDP growth (-0.63). Moreover, as we see, correlations with the absolute value and change in GDP from agriculture, hunting, forestry and fishing / GDP have opposite signs. As for GDP from agriculture, hunting, forestry and fishing / GDP, correlation of annual data is -0.078, while its correlation with adjusted real GDP growth is 0.35.

As for gross income from investments / GDP, correlation of annual data is 0.07. Its correlation with adjusted real GDP growth is -0.23. As for life expectancy at birth, correlation of annual data is 0.07, and its correlation with adjusted real GDP growth is -0.25. As for total expenditure on R&D / GDP, correlation of annual data is -0.08, while its correlation with adjusted real GDP growth is -0.30. As for market capitalization / GDP, correlation of annual data is -0.09, and its correlation with adjusted real GDP growth is -0.32.

As for change in current account balance / GDP, correlation of annual data is -0.004, while its correlation with adjusted real GDP growth is -0.01. As for exports of goods and services / GDP, correlation of annual data is -0.06, and its correlation with adjusted real GDP growth is 0.02.

As for real GDP per capita growth, correlation of annual data is 0.01, while its correlation with adjusted real GDP growth is 0.96. The latter shows that adjusted real GDP depends mostly on unadjusted real GDP growth, and depends less on the AC itself.

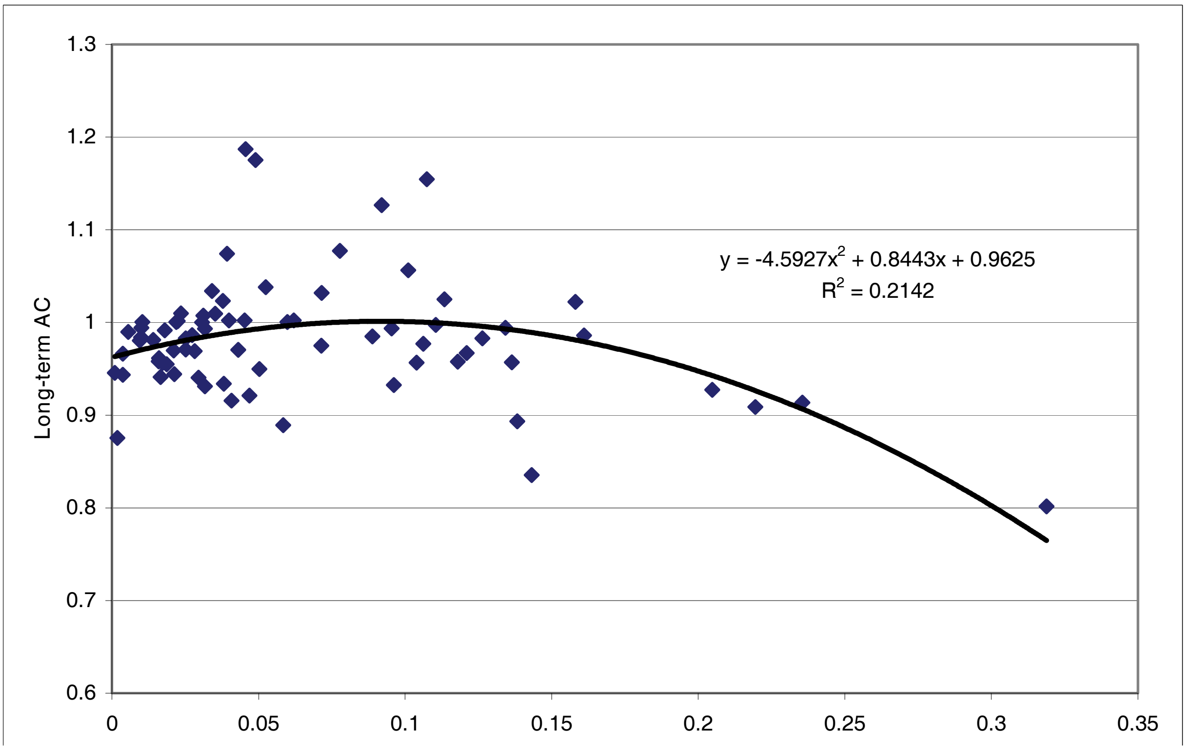

Diagram 1. Non-linear dependence between GDP from agriculture, hunting, forestry and fishing / GDP and AC.

As for change in Gini index, correlation of annual data is -0.12 (but -0.91 with 1 year lag, which may be a result of the effect of statistics methodology), while its correlation with adjusted real GDP growth is 0.30. Obviously, high correlation between change in Gini index and AC is natural, since they reflect the same phenomenon in different ways.

Despite considerable correlation in several cases, according to the first method (using average data during the whole period of 1995-2009), another method (using annual data) does not provide enough evidence to support the preliminary conclusions about relatively strong linear links between AC and the main economic and demographic indicators. Interaction of several factors could take place. Also the links could be nonlinear. For example, the following diagram shows such a link.

Thus, from methodological point of view, adjustment for changes in income distribution in several cases may be very important in order to estimate increase in welfare of the population better. The future research may consider also the effect of changes in prices and difference in structure of goods and services consumed by people with different income. Another problem is shadow economy. That is why, officially published income distribution data may be biases. Solving this problem may be subject of further research as well.

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Boyko A.*

DEVELOPING COUNTRIES AND THE GLOBAL FINANCIAL CRISIS

Анотація. *Світова економічна та фінансова система мають бути реформовані відповідно до сучасних реалій. Світова фінансова криза ще раз довела існування глобальних проблем. Початок XXI століття є саме тим періодом, коли у світовій економічній та політичній системі мають відбутися неминучі зміни. Країни, що розвиваються, мають можливість інтенсифікувати міжнародні відносини та переглянути своє становище на міжнародній арені. Ефективність змін для країн, що розвиваються, буде залежати від якості та креативності ідей, що будуть покладені в основу їх зовнішньої та внутрішньої політики.*

Annotation. *The world economic and financial system should be rebuild based on new conception. World financial crisis once again proved the global problems existing. Beginning of XXI century is a right time for made the imminent changes in world economic and political system. Developing countries have a chance to intensify international relations and revise their stand in international scene. Effectiveness of changes for developing countries will depend on the quality and creativeness on the ideas, which will put on their foreign and domestic policy.*

Key Words: economic and financial crisis, developing countries, transformations, openness of economy

Introduction. The world financial crisis of 2008 is the result of shortcomings as well as the global problems, which exist in the international financial system. At any level from local to global crisis should be seen as a precondition for the progressive movement, and for the update from ineffective management principles and mobilization of internal reserves. The financial crisis is a sign of the need for changes in the global economy. Experts note that the international financial system recovers from the crisis. However, the need in reform of world financial system still exists. Developing countries have the opportunity to reduce dependence on the rich countries, including the United States and international financial institutions, which are belonged to U.S. At the beginning of the XXI century world financial system is changing. The influence of the developed countries, first of all G7, upon the world economy is changing. G7 countries are still dominant ones in global space. Nevertheless, the main role in this context is passing from G7 into G20. It was glaring shown by world financial crisis of 2008. G20 include new industrial counties, which is going to have serious influence not only in their region but also into world economy in a whole. Traditionally world leaders are the United States and Western European countries, which are facing with domestic problems of national spiritual bankruptcy on the present stage. And vice versa, developing countries have kept natural national identity and domestic untapped potential of growing.

International relations are developing in the new world coordinates after the well-known events of the end of XX century. In general, the XX century is described as a century of the

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largest military conflicts and international disputes in the history, and characterized by the rise and escalation of global problems. After the collapse of Soviet Union the United States became the sole superpower country. No other power, or combinations of powers, could challenge its supremacy [11]. One country as well as one person couldn't know what exactly need others. The extent of the rebound is expected by experts. Eventually the uni-polar world and one country's supremacy is a main reason, which creates and intensifies global problems, conflicts between states. The extent of the rebound will not be just in case of creating multi-polar world and a new multilateral system. Modeling the prospects of the world economy as well as the opportunities for the young democracies in the XXI century in the geopolitical context is not possible without answer to the question – how the new world system should be organized? This moment in history is comparable to the end of the Second World War [11]. The margin of safety of world economic and political stability is running out of. Other question is about the role of developing countries in world economy. How to create the world mechanism with the developing countries interests take into account? Such kinds of questions have not only theoretical meaning on current stage, but also an important practical meaning, inasmuch as answers will determine the prospects of world economy development.

This article's author doesn't pretend for the fundamental analysis in this article. The main idea is to present the author's point of view about these problems. **The aims of the research** are determining and analyzing the topic problems of developing countries in context of world financial crisis and assessment of governments' actions during the crisis, as well as identifying of needed reforms in economic and social spheres in these countries. Also, this research's aim is to find out what can become the key to economic stability and security of developing countries in period of turmoil in the world economy.

Methodology. The research is based on theoretical analysis of the fundamental theories and concepts about the modern international financial system and economic policy, for example, "The Modern World-System" (Immanuel Wallerstein), "A Study of History" (Arnold Toynbee), and George Soros's theory of reflexivity and its application to financial markets. The issue has been explored by using the methods of theoretical generalizations, analyses practice by using statistical methods to investigate the structural proportions within the economic and social sphere in developing countries. For the country classification was used the UN methodology, which is based on the classification of country in compliance with market economy's principles.

Results. The developing countries were considered according to UN standards: "States are unable to meet their economic growth and relatively high living standards. In addition, national economies are heavily dependent on external factors and natural disasters. These countries have received economic assistance for their integration into the global economy". However, the programs, which taken to this end at the first (1981) and second (1990) United Nations conferences on the problems of developing countries, have not brought almost no results. Today there are three main economic centers: U.S., Europe and Asia. Russia is going to be a world leader also, at least as a significant owner of energy resources. First of all, the main present-day changes in United States economy should be defined. Strengthening of global influence of the Allies and United States have existed after the First World War. United States became a world economic and political leader as well as main financial center after the Second World War. As a result of Cold War, world communist system was collapsed and the new geopolitical systems were established (for example, European Union in Europe and Asia-Pacific Economic Cooperation (APEC) in the South-Eastern Asia and the Pacific region). These new geopolitical formations have become a real counterbalance to United States on the world economic and political arena. In was one of the main reasons, which made for system-defined global financial and economic crises (for example, the international banking crisis of 1982, of 1997, and financial crisis of 2008). Economy of United States cannot be a world economic engine more than two decades with the same effectiveness. As a consequence of this, US economy was converted from the donor of goods into acceptor of goods from all over the world. Finally, United States has become the largest exporter of services, including financial services. In spite of this, United States has a prodigious balance of payments deficit in foreign trade. U.S. national debt was doubled in last two decades and was amounted almost 11 trillion of US dollars or 75% of GDP. On the whole, United States National Debt increased from almost 50 billion of U.S. dollars in 1942 to almost 11 trillion of U.S. dollars in 2009 [13]. Obviously, Federal Reserve System jointly with IMF and World Bank cannot play the role of the International Central Bank strongly and in workmanlike manner as well as U.S. dollar play the role of main international currency of payment and reserve currency.

Different countries have different interests which drive them towards different solutions [11]. This can be seen in Europe. During the crisis of 2008, Europe could not reach a Europe-wide agreement on guaranteeing its financial system. Each country had to guarantee its own. Leading Western European countries are not homogeneous. The reason for this is the United Kingdom is not in the euro area, as well as heterogeneity in the euro area. Common currency failed to trigger the process of structural convergence. As things stand now, the Euro is an incomplete currency. Some European countries used the American way of developing. In countries where the American model is dominant, there are a high level of household debt and a significant part of the banking sector in lending to real estate. It reasons that cause vulnerability to mortgage crises similar to the American crisis. Long time, Germany was the leading economy in Europe. Today's Germany is very different. It is at odds with the rest of the world in fearing inflation rather than recession and, above all, it does not want to serve as the deep pocket for the rest of Europe [11]. Without a driving force, European integration has ground to a halt. There is no doubt, that the euro zone is experiencing significant economic disruption in the coming years, even if the recession here is not as prolonged as in the U.S.

Against a background of substantial problems of U.S economy and also European countries, the newly industrialized countries (NIC) have achieved much success in their economic development. Newly industrialized economies are a group of developing countries, in which socio-economic indicators have appreciably rose in recent decades. In this context, the newly industrialized country's experience in world economic and financial crisis' consequences overcoming is interested. NICs usually share some other common features, including:

- Increased social freedoms and civil rights.
- Strong political leaders.
- A switch from agricultural to industrial economies, especially in the manufacturing sector.
- An increasingly open-market economy, allowing free trade with other nations in the world.
- Large national corporations operating in several continents.
- Strong capital investment from foreign countries.
- Political leadership in their area of influence.
- Lowered poverty rates.

There are two main models of NIC, namely Asian and Latin American model. The development of national economy is mainly oriented for foreign markets in Asian model. Orientation toward the import substitution is used to Latin American model. The newly industrialized countries were being created during four waves. The NIC of "first wave" are Taiwan, South Korea, Singapore, and Hong Kong. These countries have also called the Asian tigers. The NIC of "second wave" are Argentina, Brazil, Mexico, Chile, and Uruguay. The NIC of "third wave" are Malaysia, Thailand, India, Cyprus, Tunisia, Turkey, and Indonesia. The NIC of "forth wave" are the Philippines and China.

Anti-crisis polity of NIC (Malaysia, Taiwan, South Korea, and Singapore, Brunei) was based on their national recourses – natural, financial, labour, and intellectual ones. Main branches for these countries were industrial ones in crisis period. Industrial branches were supported by government, especially export oriented productions. It should be noticed, that before world crisis of 2008 these countries exported mainly raw materials – agricultural and dry goods. The small-scale and middle-scale business received the powerful backing from the governments of newly industrial countries. This strategy could be called a key factor of effectiveness economic policy of these countries. The main support was offered for reprocessors of national and import raw materials as well as for industrial and textile branches, for construction and non-manufacturing business. Indeed, the small-scale business and middle-scale business drew out the present-day Asian tigers' productive economy from the deep crisis in the late 1940's to the middle 1950's. At the same time, in the newly industrial countries was created the system of productive and financial partnership, including concessive partnership, with the local and foreign business in the main branches (for example, energy, engineering industry, metallurgy, transportation, refining, petrochemicals), and the banking sector. Also, every possible preference for the development of small- and medium-scale business, service industries (including transit services) and for the growth of industrial exports (including food and textiles) were introduced into practice.

Consequently, these measures became the organizational and economic basis for the second phase of industrial development in the 1970's to 1980's. In that period, government pursued a policy of state incentive in the field of high technologies (namely, production of computers, household appliances, automobiles, synthetic fibers, energy and resource saving technologies, shipbuilding). In that way, these countries have become "newly industrialized countries" or Asian tigers. Simultaneously, the special (free) economic zones have begun to develop. It means that for foreign and local capital were set up the most favorable conditions. The first such zone was established in 1965 near the Taiwanese port of Kaohsiung. There are over 80 such zones in the world now, but Taiwan was the first. Then the FEZ was founded in South Korea and Singapore. China was the first country, which in a large-scale borrowed experience in FEZ establish in 1970's to 1980's. As is well known, China succeeded in doing this. In the same years a similar line of general economic policy consistently was pursued in Singapore, South Korea, Malaysia, and Brunei. It should be noticed that, concurrently, state control of banks and adjacent to them structures was a very strict. However, economic policy was based also on the large natural resources, for example, oil and gas (Brunei, Malaysia), tin (Malaysia), and tungsten (South Korea). In these countries, they have relied on the deep processing of raw materials, as opposed to growth its exports. By the end of 1970's these countries were presented on the world market also as producers-exporters of various products of processing their own raw materials – especially liquefied natural gas, products of metallurgy, oil refining, and products oil-gas-chemistry. As a result of this policy, their export earnings are safer and depend on fluctuations in world commodity prices much fewer.

Consequently, the skilful combination of private industrial initiatives with the development of the industrial economy, which is regulated by the state, has allowed these countries to relatively rapidly meet the crisis. The similar policy was adopted in China in the 1970's to 1980's. In this regard, these countries continue to occupy the world's leading places according to the development of industrial sectors, industrial exports, the growth of international reserves as well as the stability of their currency, and, consequently, the growth of living standards. Indeed, the share of finished industrial products, including science intensive and technology intensive products, in the export value of Taiwan, Malaysia, South Korea, Singapore and Brunei exceeds 70 % now, in China this index is a minimum of 55 %. Therefore, the economies of Asian tigers are well-diversified and self-sustaining, including the presence of their own specialists and technologies. In contrast to Russia or Ukraine, it allows these countries in a lesser extent depend on the rise and fall in world prices for oil and gas. Another important point is that these countries, including China, have used and now use the experience of the USSR 1930-1960-s state support for the industrial, more precisely – an integrated economic development. Democratization on post-soviet space caused the need in an additional analysis of geopolitical processes. The reduction in the production of consumer goods will perpetuate the dependence of the Ukrainian market from foreign imports. Structure of Ukrainian economy remains imperfect (tabl. 1).

Table 1 GDP of some countries in sectoral composition, 2009 [7, 8]

		Agriculture	*Industry*	*Services*
1.	World	6	30,6	63,4
2.	USA	1,2	21,9	76,9
3.	Japan	1,6	23,1	75,4
4.	European Union	2,1	25,9	71,9
5.	Byelorussia	9,3	39,7	51
6.	Russian Federation	5,2	37	57,9
7.	Ukraine	10	31,2	58,8
8.	Poland	4,6	28,1	67,3
9.	The Czech Republic	2,8	35	62,3
10.	Slovakia	7,8	79,6	12,6
11.	Hungary	3,4	34,2	62,4
12.	Latvia	3,6	24	72,4
13.	Lithuania	5,3	33,2	61,5
14.	Estonia	3	24,4	72,6
15.	Chine	10,9	48,6	40,5
16.	Malaysia	10,1	42,3	47,6
17.	Singapore	0	26,8	73,2
18.	South Korea	3	39,4	57,6
19.	Taiwan	1,6	29,2	69,2

Country cannot be an independent, democratic, social, and legal country without a strong economy. The measures of the Washington consensus were implemented in Ukraine at the beginning of 90’s. In general, Washington consensus means privatization, reduction of restrictions on direct foreign investment, liberalization of financial markets, free exchange rates, and lower limit tax rates. It should be noticed, that although the rules laid down by the Washington Consensus were supposed to apply to all countries equally, the United States – as the issuer of the main international currency – was more equal than others [11]. Effectively the international financial system had a two-tier structure: Countries that could borrow in their own currency constituted the center, and those, whose borrowings were denominated in one of the hard currencies, constituted the periphery. If individual countries got into difficulties they received assistance but only on strict conditions. That held true whether they were from the center or from the periphery. According to this situation, the implementation was not successful almost at all countries. As well as Ukrainian society was not ready to perception the laws of market and market principles of life. As a consequence of these reasons, the implementation of the economic and social measures of the Washington consensus was not contributed to effectiveness and needed rate of socio-economic transformations in the 90's last century.

Between 1991 and 1998 Ukraine's economy was in a state of stagnation. The field of non-consumer sector has dominated in the structure of the economy, which consolidated the increased demand for investment resources, raw materials and energy resources. The redistribution of resources had done in favor of heavy industry to the prejudice of development of light and food industries, and the service sector. The heavy industry was not able to provide by modern equipment and latest technological equipment the industry, which produces consumer products. The vast majority of its products were set aside for military-industrial complex. In the early 90's of the last century, this branch produced about 1/4 volume of industrial production in Ukraine.

Existing dependence of the Ukrainian economy on imported consumer goods was not overcome by national production growth during 1999-2008 [9, 12]. In particular, in the structure of imports to Ukraine dominated the energy materials (39.64%), mechanical equipment (15.07%), chemical industry (7.14%), base metals and articles thereof (5.20%), transport (4.73%), polymeric materials (4.42%), textiles (4.10%) in 2001. In fact, in the 2008-2009 to the Ukrainian market was imported similar list of goods, which was in trade structure 2001. Increasing the share of imported animal products from 1.16% to 2.0% (due to growth of meat and food by-products), footwear from 0.26% to 0.6%, chemical products (due to growth of pharmaceuticals), and transport means from 4.73% to 14.1% (due to growth of vehicles, except rail). In such circumstances, an important task for economic policy should be the concentration of resources in areas that satisfy consumer needs and cover the domestic market demand. Thus, national producers do not use the advantages of market capacity of Ukraine, which are about 46 million people. During 1999-2008 in Ukraine were set up the possibilities of economic recovery and business activity, which were accompanied by increased lending real economy. Mainly foreign investors and importers used these possibilities for their own benefit. This conclusion is confirmed by the dynamics of import quota for the corresponding period (table 2).

Table 2 Openness of Ukrainian economy, 2001-2009

Year / Index	2001	2002	2003	2004	2005	2006	2007	2008	2009
GDP, million hryvnia	204190	225810	267344	345113	441452	544153	712945	949864	914720
Export, million U.S. dollar	19809,1	22012,4	27314,8	37974	40363,1	45873,5	58335	78695,7	49223,7
Import, million U.S. dollar	16922,6	18168,4	24478,1	31055,4	39071,3	48758	65598,6	92003,3	50604,4
Export covering import factor	1,17	1,21	1,12	1,22	1,03	0,94	0,89	0,86	0,97
Export quote, %	52,12	51,92	54,48	58,53	46,86	42,57	41,32	43,64	41,93
Import quota, %	44,52	42,86	48,83	47,87	45,36	45,25	46,47	51,02	43,1
Quota of foreign trade turnover, %	96,64	94,78	103,31	106,39	92,21	87,82	87,79	94,66	85,03
Factor of elasticity of demand for imports	1,72	1,54	0,57	1,08	1,23	1,01	0,91	0,73	0,73

Thus, during the economic growth in Ukraine were the case backlog volume consumer products to the needs of domestic market, which led to increased imports of agricultural products, light industry and mechanical engineering. Dynamic of export covering import factor during 2001-2009 shows that the predominant effect of the distribution of economic growth in Ukraine was used by the benefit of foreign contractors and countries of their origin (table 2). Such trends are negative signs of the development of foreign economic relations of Ukraine. For the normal functioning of the economy import share of domestic consumption should be within 30% and not exceed in 50% of GDP, which is the maximum allowable value index of economic security. One reason for the negative dynamics of export covering import factor is to maintain the low diversification of national exports. In key commodity exports during the 2001-2009 remain ferrous metals and articles thereof (30.6% and 30.7% in 2001 and 2009 respectively), mineral products (9.8% in 2009), chemicals (9.09% and 6.3%) mechanical equipment (10.54% and 12.6%). Among the products of plant origin – cereal crops (2.97% and 9.0%). Share of crops, mechanical and electrical machinery, fats and oils increased in total exports of goods in 2009 compared with the previous period. Instead, the share of ferrous metals, energy materials, petroleum refining and products, products from ferrous metals, fertilizers, railway or tramway locomotives, and road equipment was reduced. Thus, the income of export currency earnings to the Ukraine actually depends on global market conditions in key export position – metals, grain, chemicals.

Also hampering the implementation and strengthening Ukraine's export potential high national energy industry, including export-oriented industries. As a result of higher energy prices during 1990-2010 he was dropping the price competitiveness of Ukrainian goods on foreign markets. Thus, the average price per barrel of oil in 1990 amounted to 22.05 U.S. dollars and in 2000 – 28.01 U.S. dollars [1, p. 45]. In January-April 2010 price of oil on the New York exchange NYMEX per barrel within the range 80-90 U.S. dollars according to the data of Reuters [10].

Dynamics coefficient of elasticity of demand for imports decrease reflects the openness of Ukrainian economy in force competitive in foreign markets. The scale relations of the national economy from the world market as a result of the 2008-2009 financial turmoil reduced. Analysis of coefficient of elasticity of demand for imports shows a high correlation between growth of imported products and Ukraine's GDP. How strong the global economic processes influence on the national economy depends on mutual points of convergence as well as from interaction force in the world economic coordinates (tabl. 3)

Table 3 Openness of some economies in 2009

№	Index	Openness factor, %			Share in a world value, %		
	Country	**Export quota**	**Import quota**	**FDI in GDP**	**Export**	**Import**	**FDI**
1.	USA	6,97	11,24	16,05	7,98	12,68	13,33
2.	Canada	22,63	23,14	41,9	2,4	2,41	3,52
3.	Great Britain	15,98	21,84	53,26	2,82	3,8	8,46
4.	France	17,34	25,07	43,25	3,67	4,36	7,41
5.	Germany	34,65	28,78	25,31	8,99	7,36	5,55
6.	Italy	17,66	19,6	16,35	2,96	3,24	2,25
7.	Japan	10,23	10,91	2,85	4,14	4,36	0,84
8.	Russian Federation	23,55	24,06	30,55	2,37	2,39	2,95
9.	Ukraine	35,86	71,32	24,44	0,33	0,65	0,26
10.	Byelorussia	36,79	74,71	-	0,14	0,29	-
11.	Poland	31,84	50,58	37,21	1,08	1,69	1,18
12.	The Czech Republic	56,09	74,54	49,7	0,85	1,12	0,65
13.	Slovakia	51,02	90,33	50,21	0,36	0,63	0,29
14.	Hungary	67,1	86,55	101,49	0,67	0,85	0,92
15.	Latvia	27,77	58,64	33,18	0,05	0,11	0,07
16.	Lithuania	40,82	84,15	34,71	0,12	0,24	0,1
17.	Estonia	51,15	89,92	82,03	0,07	0,13	0,11

Before the world financial crisis in 2008, in world economy was a long period of sustained economic growth with a low inflation and low interest rates internationally. Leading financial and credit institutions extended loans and competed among themselves in an effort to obtain enormous profits. From the beginning in crisis governments and central banks of leading countries used the specific measures separately from each other and then more coordinated, to overcome the crisis through large infusions of capital. In developing countries export still have continuing negative trends. In general, export is extremely ineffective due to its low diversification, and predominance of commodity and low-tech goods. According to the Édouard Balladur's theory of "concentric circles", the decisions are made in a center and countries at periphery should be the satellites of rich countries [8]. Otherwise countries at periphery will be broken. Further integration of Ukraine into world economic space reduces the level of national economic security. The same inference is relevant for other developing countries. Increasing of "openness of the economy" is cause the new macroeconomic risk, because further integrating to the world economy means that the national economy are getting more and easily vulnerable to various external difficulties.

Conclusions. Consequently, world financial system should be rebuilt. Current world financial crisis is a mainly western economic and financial recession. Impact of crisis on the economies of East Asia is quite a soft. World growth will occur due to China and India. Basically it is a crisis of economic model that was inculcated by means of "conservative revolutions" from 1980. This crisis of world economic set-up called globalization, which is a fundamental project of U.S. and Great Britain. In current situation the important place is belong to G20 and developing countries. Using the national identity and national potential will be ones of the main guarantees of economic stability. The depth of the crisis in the Eastern Europe depends not on economic or financial reasons in the first place. They are derived from the social transformations taking place in these countries. The main task is to consolidate the society and resolve conceptual problems in the state. National identity and identification is a key to overcoming the crisis, the formation of stable economic pillars of society as well as to the successfully overcome the challenges facing developing countries in the context of current global imperatives. Preconditions to establish and development an internal market in developing countries have created by the world crisis of 2008. A basis of economic stability of the developing countries in a whole should become the capacity of domestic market in a period of economic or financial "failure" of world market. Post-crisis economic policy should be focused on the intensification of domestic sources of financing economic restructuring. The formation of stable economic pillars of society should precede the further integration of developing countries into the world economy. Certainly, U.S. dollar existed, exists and will exist. But gold and foreign currency reserves of developing countries should be diversified. Inasmuch as the U.S. economy and Euro zone are in deep imbalances. From the position of whole world interests it could be overcome based on rebuild of current world financial system.

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GLOBAL FINANCIAL CRISIS AND NEW QUALITY REQUIREMENTS OF POSTCRISIS ECONOMIC GROWTH IN UKRAINE

Анотація *В статті визначено особливості антикризових заходів урядів різних країн та їх результативність; здійснено аналіз соціально-економічного розвитку України, розкрито джерела економічного зростання періоду 2000 – 2008 рр. та обґрунтовано їх обмеженість в контексті глобальних викликів; визначено основні завдання економічної політики при формуванні посткризової моделі розвитку національної економіки.*

Annotation *This article studies the features of anticrisis measures of different countries' governments and their effectiveness; analysis of socio-economic development of Ukraine is carried out, sources of economic growth within 2000 – 2008 period are exposed and their limitedness in the context of global challenges are grounded; basic tasks of economic policy at forming of postcrisis model of national economy development are defined.*

Keywords quality of economic growth, post-crisis economic policy, global financial-economic crisis, factors of the economic growth

1. Problem setting Global financial-economic crisis sharpens not only the internal problems of the national states, regional integration formations, but in a far more threatening scale – problems of some countries with economies that are developing, primarily with those having no system policy of transformation and development. Under modern conditions of deepening of socio-economic crisis displays different standpoints are heard, even desperately helpless, when on the agenda the existence of Ukraine as a sovereign state and its prospects as an effective national economy is put. Reasons finding, depth and consequences of Ukrainian economy crisis, its interdependence with global processes and, mainly, – possibilities of high-quality improvement in a prospect has implicit urgency both in research and study of economic policy measures.

Losses of Ukraine in a global crisis are extraordinary judging the depth of economic recession and social effectiveness. However, but for objective global reasons, the failure determinatives in a fight against crisis was uneffective state economic policy. Systematic character problems accumulated in Ukraine and its economy during all of the time of market transformation. Besides, competitive positions of the country were essentially worsened in outer geoeconomic and geopolitical area. Considering sharpness and urgency of the above mentioned problems, it is necessary to develop theoretical principles and practical recommendations for economic policy of Ukraine that will enable to provide long-term economic growth, to improve population living standards and to recognize Ukraine in world economy.

Latest researches and publications analysis Global and Ukrainian crisis realities caused the splash of scientific publications and researches studying reasons and consequences of the

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global economic crisis, anticrisis strategies of the world countries, prospects of Ukraine, considering postcrisis challenges [1-6]. Generally accepted is an idea about the objective causation of present global crisis by the existing globalization level (Bilorus O.G., 2008).

Leading domestic researchers offer different models of postcrisis development – liberal economic model rejection in favor of increased government control (Pakhomov Y.M., 2010), institutional transformations activation directing state planning of social-economic development using modern information technologies (Novickiy V.E., 2010); use of selective methods of economic stabilizing to provide innovative breach (Budkin V.S., 2010); returning to practical introduction of innovative steady development model (Shevchuk V.Y., 2010); realization of social smoothing policy as a necessary condition of a new economic model of development (Chernyak V.K., 2010). At the same time, the task of strategic economic growth study in Ukraine remains vital considering an experience of not only developed countries, but of those with transformation economies. Cardinal changes in geoeconomic area, change of geopolitical role of separate countries and regional formations form new imperatives of post-crisis development of Ukraine; all of these questions are defined in this article.

Basic material study It is necessary to study crisis phenomena, even global ones, as objective reality, typical for market type economic systems, their regional associations and world economy for already about two hundred years. Every crisis has both common features and its own unique ones conditioned by logic of economic and public progress, growing global processes and their consequences. Moreover, every crisis is not only the peculiar finale of the previous stage of world economy development but introduction of high-quality new stage of society development and its economy. Besides, rapid reformatting of economic activity conditions is carried out; fast implantation of STP achievements and original breach of economy on the next level of development are taking place.

A global crisis starts spreading on a larger amount of national economies, acquiring a global character. Its difference from the previous periods of economic instability lies in a few features. At first, scale of its distribution. Involved, mainly those having a negative dynamics of GDP, beginning exactly with 2008 are most of the world countries. Secondly, depth and system of crisis. Up to now it is quiet difficult to prove the fact of achievement of cyclic bottom in the national, regional or world measurings. Thirdly, internal reasons of global fanancial-economic crisis remain completely unclear and consequently effective methods of positive economic dynamics renewal.

National strategies of overcoming of global economic crisis consequences are based on withstand methodological approaches in relation to its reasons and possibilities of minimization of negative displays by the measures of incentive state policy. The analysis of anticrisis policy of the world countries testifies the active use of classic mechanisms of fiscal stimulation of the combined demand. Thus, according to IMF monitoring, countries' governments of group-20 (G-20) carried out budgetary stimuli in a volume of 2% GDP in 2009 and 1,5% in 2010; however there is little confidence in high effectiveness of mentioned measures. Intensity of government control differs much in the intergovernmental dimension. Thus, speaking about developed countries group, programs of fiscal stimulation made 1,1% of GDP volume in Great Britain, 1,3% – in France, up to 5,7% in the USA and 11,7% in Japan. Considerably higher are the mentioned indexes in other countries, in particular, with the forming markets: 16,2% in China, 12,0% in Russia, 14,0% in Brazil, 11% in Hungary.

Experience of the USA, leading European countries proved their devotion to classic postulates of anticyclic regulation following Keynesian tradition – mass increase of fiscal stimulation measures of economic growth, increase of state budgets deficits, mass state support of solvent demand. High effectiveness of consequences minimization of global fanancial-economic crisis was shown by China. Priorities of state anticrisis policy of Chinese government simultaneously with consumption diversion of export-orientated products to the internal market, extensive infrastructural projects were measures directed on the breach of technological development. Anticrisis program includes measures of tax stimulation (decline of taxation level and subsidy for diasadvantaged population), stimulanting credit policy. Special attention is paid to measures assisting in internal demand expansion, however having a strategic sagnificance for long-term development – rural infrastructural building up, constructing of reasonable housing, health care and education improvement, etc. Considerable amount of attracted direct foreign investments to the real sector of economy about 1 trillion USA dollars in the period of rapid economic growth is the guarantee of competitive benefits increase as well as in a fight against crisis.

In Russia the systematic threats of global crisis as to growing national economies are fully realized that are embodied in state strategy of its overcoming with the purpose "to become the economy of real values, fundamental cost of assets", according to Russian prime minister. There was the reduction of tax loading on economy (profits tax reduced from 24 to 20%), substantial support was given to financial system (about 150 billion USA dollars), special-purpose support is guaranteed to basic industries of Russian economy, including (with the aim to intensify national security) machine-building complex, agriculture. Consequences and efficiency of anticrisis measures differ greatly that can be represented both by GDP dynamics of definite countries as well as by gradual change of their role in international labour division. Considerable influence is also done by the countries' economic development quality and the effective governmental economic policy. Thus, according to rating agency Standard & Poor's, the list of countries that have proved to be the most stable to crisis include China, Brazil, Chile, Poland, Peru, Czekh Republic, Slovakia and Tunisia. Key factors of this approach became: increase of exchange reserves, reduction of government debt and increase of foreign economic competitiveness. By that we can underline the position of world economic elite in its understanding of the modern crisis phenomena as "market mechanism weapons", conditioned by groundless optimism and nonconsidering growing system risks of financial and mortgage markets. Consequently, success of countries in crisis overcoming is evaluated by their speed to gain previous place in the system of world labour division. In other words, more success in minimization of crisis consequences is reached by countries with large internal potential of development, particularly having capacious internal market, those carrying out the policy of limited external economic openness and mainly those that had considered policy of economic growth. Influence of global economic crisis on countries with transformation economies and forming markets became especially considerable taking into account the uncompleteness of institutional transformations in some of these countries and insufficient effictiveness of the chosen development strategies. Nevertheless, processes of economic systems transformation in countries, for example, of post-soviet time braked only, but not halted. There are a few reasons of slowdown of reform process in crisis period. Except obvious ones marked by researchers of EBRD economic department – priority of short-term measures of anticrisis regulation in crisis period and structural reforms limitation; impossibility to take socially feeble reform measures in the area of economic decline; weak interest of investors in long-term projects [7], there are, in our opinion, deep reasons whose actions are not limited by the start of economic growth.

The high integrating level of transformation economies with foreign, in particular European, economic area had undoubtedly considerable positive consequences for regional countries in crisis period. It is substantial sponsorship of developed countries that helped to decrease negative effects of currency fluctuations, banking systems and inflation processes instability.

However, close economic ties and financial dependence on western countries simultaneously intensified crisis phenomena in transformation economies, prearranged considerable outflow of speculative capital and created additional challenges to restore their stability. On account of significant reduction of external financing, falling of demand on export commodities and their price reductions we can observe considerable (more than 5%) decline of domestic production (figure 1).

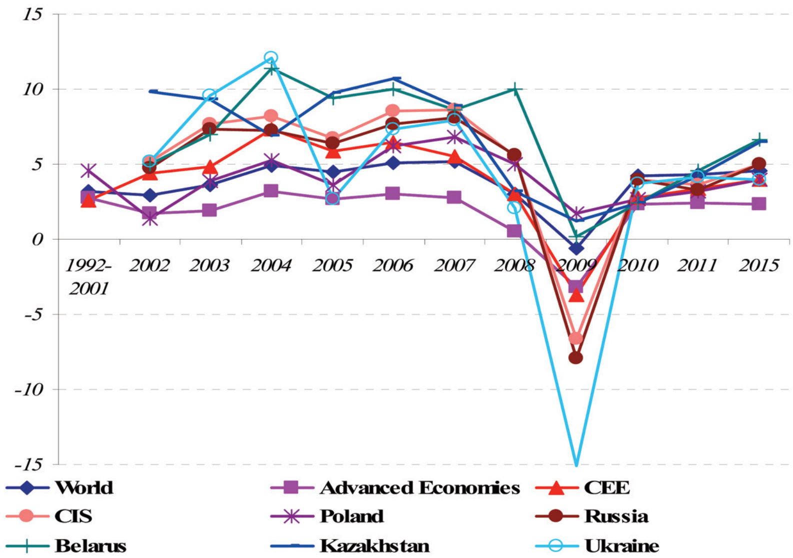

Figure 1. Real GDP, %

Besides, obviously prolonged period of crisis recession in the world and new problems of EU countries that actualize the reformatting problem of world economic and financial architecture, mechanisms of intergovernmental and global regulation, naturally put to governments of countries with transformation economies the question about their own strategic priorities. To prove prospects and opportunities of postcrisis economic development of Ukraine, post-soviet and post-socialist countries we'd like to study the results of their economic reformation and crisis consequences overcoming.

By 2009 results economic decline in the countries of Central and East Europe was stronger than in the whole world – 3,7 % and – 0,6 % correspondently. Among regional countries most reduction of GDP was noted in Latvia (– 18 %), Lithuania (– 15 %) and Estonia (– 14,1 %). At the same time these countries became leaders in unemployment rate. In the first half in 2009 its level was 16,1% in Latvia, 15,5% in Lithuania and 11% in Estonia. Main reasons of such a decline in these countries, recent leaders of EU according to economic growth indexes, were uncontrolled increase of credit debt greater part of which was used for speculations at real estate market and increase of consumption level. Record-breaking growth in real estate crediting in Latvia and Lithuania came up to 90% of GDP volume and defined substantial disproportion between consumption level and production potential of countries. The displays of economy "overheat" were level inflation rise, real estate market crisis, balance of payments deficit growth that after all led to production decline. Measures of strict fiscal policy simultaneously with EU sponsorship determine anticrisis strategy of the Baltic countries at present stage.

The analysis of global crisis consequences for the whole group of countries with forming markets shows close connection of its financial and economic constituents. Real sector reduction provoked by falling of financial markets caused growth of unemployment. This factor sharpens the crisis of failure to return consumer credits. Thus, in the period of the second half of

2008 – first half of 2009 general growth of unemployment within the group of countries was 2,3%. At the same time officially registered delay in credit payment multiply increased – from a few percents to 7% on the average over countries of Central and East Europe, 10% in Ukraine, 12% in Latvia, more than 30% in Kazakhstan. Depreciation of national currencies within studied period became 25%, exchange reserves decreased sharply in Bulgaria, Latvia, Russia and Ukraine [7].

Governmental policies directed to restore financial sector stability included a number of instruments – bank holdings guarantees, pouring in liquidity, banks recapitalisation (table 1). Considerable efforts were done to limit withdrawal of bank deposits both by economic methods – through expansion of insurance holdings charts as well as by administrative only – through banning of long-term closing of savings accounts. Russia and Ukraine raised a guarantee in individual holdings to approximately 20 thousand euro, other countries – to EU requirements level (50 thousands euro) or even 100 thousands euro (Lithuania); Slovakia, Slovenia and Montenegro, obliged to insure holdings absolutely.

Table 1 Anticrisis measures are in a financial sphere *

	Expansion of insurance of holdings	**Strengthening of liquidity**	**Grant of guarantees**
Hungary	+	+	+
Slovenia	+	+	+
Serbia	+	+	+
Russia	+	+	+
Romania	+	+	+
Belarus	+	+	+
Poland	+	+	+
Lithuania	+	+	+
Ukraine	+	+	+
Czech republic	+	+	+
Bulgaria	+	+	
Croatia	+	+	
Bosnia and Gerzegovina	+	+	
Slovakia	+	+	
Albania	+	+	
Latvia		+	+
Kazakhstan	+		+
Turkey		+	+
Estonia		+	

* Source: Доклад о процессе перехода // Европейский банк реконструкции и развития [Электронный ресурс] // http://ebrd.com

Considering fiscal policy features of crisis period most of the countries didn't have sufficient accumulated budgetary funds to stimulate economic growth. In the area of sharp reduction of foreign crediting and decrease of domestic consumer demand budget economy had no alternatives. Only two countries Kazakhstan and Russia having considerable export capacity of raw material and formed stabilizing funds could accept large packages of stimulating measures. Unless financial sector, state stimulation measures in Russia were 5% of GDP (social payments, financing of local government, industrial subsidy). In Kazakhstan the policy of address budgetary stimulation was performed with the amount of 9,5% GDP, mainly with the purpose to support industry and to carry out infrastructural projects. Thus, the list of anticrisis measures and effectiveness of overcoming of global crisis consequences in countries with forming markets were fully proportional with measures taken by developed countries.

According to World Bank forecast the economic growth of countries of East Europe and central Asia in 2010-2013 will go much slower than in the whole world. Regional countries have serious budget disbalance, on the average 6% of GDP in 2008-2009, that complicates governmental policy of economic growth. Governments of countries in East Europe and Central Asia, irrespective of their income level, spend more than developing countries of other world regions. Total level of government spending in Poland, Russia, Ukraine and Turkey exceeds 40% of GDP compared with 30% in other developing countries. By forecasts in 2010 budget deficit in countries of East Europe and Central Asia will exceed 4,5% of GDP [8].

Considering the limited effect of the pre-crisis economic development factors in the countries of the region – foreign investments, export income, home consumer demand, fiscal anti-crisis instruments remain of major importance. Fiscal regulation efficiency in 2010 must increase to provide competitiveness of developing countries, activating inner factors of their development. That is why reforming social security, improving educational system and health service, infrastructural projects turn out to be of major importance today.

Anti-crisis economic policy efficiency in 57 countries of the world was determined on the basis of a stress-test, which was worked out by IMD Business School of Switzerland and carried out in 2009. The results obtained showed considerable differentiation in national strategies. The research was conducted according to 20 different indicators, belonging to four groups: economic perspective, business stability, state stability and ability of the society to overcome crisis. Besides, some other indicators were added: GDP growth rates, level of business ethics, legal system development and social solidarity. The leaders of the rating were Denmark, Singapore, Qatar, Norway, Hong Kong, Switzerland, Sweden, Australia, Finland and Malaysia. The USA were the 28th in the rating. Rating of some other countries were better: India (the 13th place), Canada (the 16th), China (the 18th). Among post-Soviet countries the following ones turned out to be most crisis-resistant: Kazakhstan (the 27th place in the rating), Lithuania (the 41st), Estonia (the 43d), Russia (the 51st), Ukraine (only the 55th). According to the groups of indicators Ukraine won the following positions: business stability (42), ability of the society to overcome crisis (51), economic perspective (57) and state stability (55).

Post-crisis development prospects of Ukrainian economics are mostly determined by its outdated branch and technology structure and by the consequences of prolonged inconsistent public policy. The period of reconstruction and economic advance in Ukraine in 1999-2008 did not lay any foundation for a long-term social and economic progress, moreover, it intensified the basic structural proportions. A sharply polarized structure of allocating economic resources was formed, unacceptable for the majority of the population changes were applied. All that consolidated a deep economic and social differentiation in the country.

Branch structure of the national economy was simplified, and it caused cutting down a number of high-tech and middle-tech branches in favour of the low-tech ones, with low added value of their product. More than 2\3 of the total industrial output in Ukraine are raw materials and energy resources. The share of machine-building in the industrial structure accounts for 10%, and this is 3 or even 4 times less than in the highly developed countries. During the mentioned period building and services sphere expanded considerably. But as far as development of the above-mentioned branches depends much on the favourable economic situation, negative consequences multiplied during the recession period. The proportions of sequenced macro-economic dynamics were upset together with increase in work payment and social payments, and that made extended social recreation impossible.

The level of national economy openness became extremely high. The ratio of export/import coverage dropped from 1.13 in 2004 to 0.8 in 2008; high-tech products constitute the major part of import structure. The large stock of external debt set the long-term economic growth a limit – the total Ukrainian foreign debt made up 120% of the country's GDP in 2008.

Ukraine is one of the countries that suffered most from the global economic crisis. As well as most emergent economies in the Central and Eastern Europe, Ukrainian economy became critically dependent on the foreign capital that was reflected in the negative balance of payment. The period of reconstruction and economic growth in Ukraine was characterized by aggravating reproductive, macro-economic and regional disproportions. Investments into the fixed capital were characterized by extremely changing dynamics, beginning with 1998: from 0.4% in 1999 up to 31.3% in 2003. Besides, their structure reflected certain branch and sector priorities of an accelerated development – mainly the service sphere. In 2007, that became the last year of the economic growth period, investments in the fixed assets were distributed as follows: industry –34.1%, agriculture – 5.1%, financial operations with real estate and building – 23.7%, transportation and communication – 16.8%, trade – 9.4%. However, investments into the real sector of economy did not provide any substantial modernizing of production or raising their innovativeness.

Ukrainian economic growth was mainly achieved by expanding consumer demand, supported with powerful credit inflowing. The total of Ukrainian banks' debt on the foreign market grew to $42134 mln as of October 2008 against $1746 mln as of January 2004, at the same time the consumer crediting during 2005-2008 increased about fifteen times, the private persons' share in the credit portfolio made up 40%. Another factor that enhanced the economic growth in Ukraine was the favourable situation for low-tech Ukrainian export on the foreign market. That was why market shrinking, caused by the world crisis, damaged the home exporters and producers – primarily chemical and petrochemical enterprises, machine-building and metallurgy.

Analyzing economic growth factors during 2003-2008 gave me an opportunity to define its key constituents. Positive Ukraine's GDP dynamics were determined to a certain extent by home and foreign demand factors, characterized by diversified financing at the expense of the state budget, as well as of the private sector. Exceeding economically grounded amount of crediting volume caused a complicated situation in crediting the private economic sector, so this situation will demand efficient measures to optimize it. The factor model of GDP dynamics is as follows:

$$Y = 0{,}9 \cdot X_1^{0{,}41} \cdot X_2^{0{,}49} \cdot X_3^{0{,}22} \cdot X_4^{0{,}38} \cdot X_5^{-0{,}05}$$

In this model Ó is GDP dynamics, %; X_1 – export volume, % of GDP; X_2 – import volume, % of GDP; X_3 – budget donations and transfers rate, % of GDP; X_4 – the share of capital investment, % of GDP; X_5 – home private sector crediting volume, % of GDP.

The situation concerning applying the declared innovative investment model of economic development remains critical. State financing share in the total bearing of technological innovation charges grew to only 2.8% in 2008 against 0.44% in 2000. The lion's share of financing technological innovations is provided by the enterprises (60.6 % against 70.2% during the mentioned period). Every year the number of enterprises engaged in innovations decreases: 13.0%

in 2008 against 18.0% in 2000. During the indicated period the proportion of scientific and technological works decreased one and a half time: 0.9% against 1.36%. The share of realized innovative production in industry remains practically unchanged (7.0% against 5.6%). According to the World Economic Forum rating of innovative level, Ukraine gained the 62nd place among 133 compared countries. After that no substantial improvement of the rating situation took place. A high rate of shadow economy is among the major factors restricting socially directed national development and stable economic growth. According to the experts' estimation, the share of the shadow economy in Ukraine makes up to 50-60% of GDP.

Taking into account the deepening global financial and economic crisis and its increasing negative effect on Ukrainian economy, I can say that European integration prospects for Ukraine are becoming more remote in time. The policy of speeded-up entering the world economic space, which was being pursued during all the independence period, was not substantially grounded from the point of view of defending the national interests or effective usage of the national economy's advantages. The share of low-tech brunches of the second and third technological types was unjustifiably high in the country's production and export. Meanwhile, the stable connection between the middle productivity level in the national export sector and middle-term rate of economic growth has been substantially proved [10]. The greater is the amount of highly productive goods a country exports, the higher is the average productivity of its export sector as a whole. The productivity, which is defined in this way, is not only the reflection of the qualitative structure of the national export, but also a factor of accelerated economic growth.

In spite of the unfavourable conditions for Ukrainian scientific and technological development during the last twenty years, the state still owns some facilities for a technological breach, which is able to secure a high rank in the international work distribution: aerospace technologies; nanotechnologies; radio-physics of millimetre and submillimetre range; immuno-biotechnology; bio-sensorics and molecular diagnostics; plant bio-technology and bio-physics, bio-degradation; cryo-biology and cryo-medicine; neurophysiology; informatics; micro- and optical electronics; materials study [11].

Today technological differentiation of countries does not depend only on the technical innovations. It is also conditioned by an effective official strategy, aiming at generating innovations to technologically modernize economic development. The key constituents of supporting the national economy innovative potential are an efficient system of education and favourable conditions for innovative progress, and this is only possible due to a well-grounded strategy of national development and an adequate public policy.

Ukrainian system of education was mainly degrading during the years of social transformation. The increasing number of higher educational establishments did not provide their appropriate scientific or educational level. Expanding the contract principle of studies resulted in lower demands for university entrants as well as for students of the higher educational establishments in all the regions of Ukraine. One of the consequences of the lowering level of professional training is a growing tension on the labour market. During the period of cyclic national economy expansion, the potential workers' insufficient professional level was partly compensated with their unspecialized employment. With deepening economic recession, this category of employees is under the risk of losing their jobs and stable income.

Favourable conditions for innovative changes includes: first, inner creativity of the society; second, legal and economic conditions for making use of innovative opportunities. I agree with the opinion that there are more people with outstanding ideas and unique intuition in a society, which is characterized by ideological and discipline diversity [12]. It is obvious that Ukraine has these characteristics due to its national and mental peculiarities, historical traditions of scientific cognition, and educational traditions that are not yet completely forgotten. Only on condition of an adequately directed public policy it is possible to achieve an innovative orientation of the economic development. This policy should be of a systematic character, that is, it should include state expenditure on scientific and technical work, besides, it should have structural, monetary, fiscal policy, sequenced and directed at long-term aims of qualitative economic growth. A government's policy efficiency in overcoming the crisis consequences, as it can be seen from the world's experience, depends much on the support it gets from the society. During periods of economic instability one of the main government's priorities is to gain public support. The complicated situation for anti-crisis policy in Ukraine was caused by deep public distrust to politics as such and economic policy in particular.

Conclusion. Unsatisfactory results of classical methods for overcoming a crisis in developed countries suggest an idea of its deeper analysis and analysis of its initial cause. The present-day global crisis includes a definitely appointed financial component and it is naturally determined considering the course of the modern "civilized" world development: the descending phase of the next long-term K-cycle, value orientations of the Western consumer society are exhausted, the existing system of world organization and its governing represented its inefficiency and injustice in the intergovernmental scope. It means that the necessary prerequisites have been created for entering a new stage of the global development based on radically different principles of its organisation.

The key constituent that caused today's world crisis is obviously institutional imperfection of the present-day market model, when any activity that is profitable is considered to be a "productive" one, in such a way a quick GDP growth is provided by rising formal values, but not the real ones. From the point of view of developed countries, an effective way of overcoming the crisis is an accelerated export of the factors stimulating the crisis to the countries where the correlation between the formal and real values is not so precarious. In fact, it took place in the Ukrainian economy by means of "credit expansion".

The modern financial and economic crisis is the crisis of trust. It makes the leading countries revise their view as for the direction of civilization development, dominating position of post-industrial technologies in the strategies of national development. The presidents of the leading liberal world economies – the USA, Germany, Great Britain, and France – support the plans of overcoming the crisis, which are aimed at strengthening the system of governmental control over the financial sectors of national economies, as well as the international financial market and its operation practices.

Summarizing the foreign experience of overcoming the world financial and economic crisis consequences, taking into account the need in a new quality of the national economic development, we should realise that social and economic prospects of Ukraine depend on the level of conscience and professional efficiency in strategic governmental decisions. The national advance towards European integration has to be planned according to the reality of today and according to the newest tendencies of civilization development. Thus, the national development strategy should be based on: defending national interests of Ukraine; building effective market economy with an adequate institutional background; rapid creating highly-competitive national production, based on the advanced technological systems, considering and stimulating competitive advantages; social economic development activation, what will make possible to reduce social stratification.

The strategy of the economic crisis overcoming should be long-term, but current measures of operative regulation often come into conflict with the long-term goals of economic development. For instance, supporting export branches, that is metallurgy and chemical industry may cause only temporary positive effect. The consequences of today's economic recession show the urgent need of technological modernizing of these branches, rising their competitiveness on the world market under the conditions of growing international competition, rising prices for energy resources. Reducing energy and material consuming in production, rising the work productivity, producing output with high added value, orientation at the home market remain of major importance today.

Supporting Ukrainian export, as a key factor of the economic growth, is still basic for anti-crisis governmental measures, in spite of the political and economic changes of 2010. Meanwhile, considering today's geopolitical and geo-economic reality, mechanical overcoming the crisis in Ukraine will not achieve its former effectiveness, but it will aggravate the country's critical backwardness in relation to the leading countries of the world. Saving the competitiveness of the traditional Ukrainian export branches – mining and smelting complex, chemical industry – can only be possible on condition of a radical technological restructuring. Directing the major part of the production to the home market and creating closed production cycles must become an important trend in the anti-crisis policy. Taking into account the global tendencies, developing specialization in the ecological agricultural production and food industry seems to be promising. The potential of the sphere of services (transport, tourist) is not yet made use of.

The above-mentioned constituents of the country's economic development strategies should ensure qualitative structural changes in the national economy. The necessary prerequisites for such changes are created by the economic crisis – through reducing production costs, stimulating effect of devaluation process on the currency market. Entering a new stage of the long-term cycle of economic growth and directing the national economy towards the ahead development demands a qualitative scientific and technological breach, and it means that it need a conscientious public policy. Ukraine needs urgent institutional and structural changes that aim at activating its inner potential of the innovative economic development. The main goal of the long-term social and economic public policy is a new quality of economic growth.

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THE IMPACT OF THE GLOBAL ECONOMIC AND FINANCIAL CRISIS ON THE PENSION REFORMS

Resume *The relevance of the article is caused by the crisis in government pension system in many developed countries, due to not only the demographic factors, but to the challenges of the global economic and financial crisis. The financial crisis has significantly impacted traditional as well as the most modern pension systems all over the world. The analysis of the impact of the global crisis will provide the opportunity to determine further prospects of pension system's development. The objective of this paper is to definite actions to be taken to support private and public pension systems reforms in the post financial crisis period.*
Key words: pension reforms, pension assets, pension crisis.

Анотація *Актуальність статті, зумовлена тим, що у багатьох розвинутих країнах державне пенсійне забезпечення перебуває у кризі, зумовленій, не лише демографічними чинниками але й викликами світової фінансової-економічної кризи. Фінансова криза стала жорстким випробуванням як для традиційних пенсійних систем, так і для найбільш модернізованих всього світу. Аналіз впливу глобальної кризи надасть можливість визначити перспективи подальшого розвитку пенсійних систем. Мета даної роботи полягає в визначенні дій, що сприятимуть реформам системи приватного та державного пенсійного забезпечення в після кризових період та виходу пенсійної системи з кризи.*
Ключові слова: пенсійна реформа, пенсійна криза, пенсійні активи.

The financial crisis has quickly turned into an economic crisis with major implications for all public programs, including pension systems. Pensions have long been the subject of fierce controversy. Although few would argue against the need for pensions, a debate has raged for more than a century over the most appropriate way to provide them. This is because pensions can be provided through a variety of mechanisms which differ in their advantages and disadvantages. The debate is not just about the pros and cons of one approach to pension provision compared with another, but about whether, and how, different approaches can be combined to produce an optimal retirement income system. Whether to rely on pay-as-you-go financed public pensions or funded private pensions for the provision of retirement income is a central question in debates about pension reforms during the crisis [1, p.2].

Some of the reasons for current study about the financing sources with the relation to the effect of population ageing on pension costs. Little attention has been given to the effects of the pension reforms during the post financial crisis period in recent research: A. Asimakopulos and J. C. Weldon, On Private Plans In The Theory Of Pensions; On the Theory of Government Pen-

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The main objective of the paper is to describe recent pension reforms and analyze their consequences for now and long-term future. The paper aims to explain the impact of the financial and economic crisis on private and public pension systems and assets allocation. In order to make a comprehensive analysis of different national pension systems the changes in pension assets, policy actions legislated in response to the crisis were evaluated.

The financial crisis has significantly impacted pension systems all over the world tempting governments to make policy changes in response to the increased pension deficits they are facing. The crisis exacerbates the existing financial imbalance in the public pension systems by reducing contribution revenues sharply while leaving expenditures constant or even higher. The crisis also resulted in a sharp drop in financial asset values which affects pensions provided by funded pillars.

The current financial crisis has had a major impact on global pension assets, with the OECD estimating declines of $5.4tn (over 20%) at the end of 2008. This is putting pressure on funding levels for defined benefit pension plans, and has served a severe blow to members of defined contribution (DC) plans close to retirement, denting confidence in many DC systems [2].

Table 1 Global pension assets (P13)

Markets	Assets (USD bn)	%GDP (in local currency)
US	13,196	93
Japan	3,152	61
UK	1,791	80
Canada	1,213	84
Australia	996	93
Netherlands	990	120
Switzerland	583	113
Germany	411	12
Brazil	392	22
South Africa	201	63
France	178	6
Ireland	102	43
Hong Kong	85	41
Total assets	**23,29**	**70**

Source : Towers Watson «2010 Global Pension Asset Study»

Global institutional pension fund assets in the 13 major markets increased by 15% during 2009, from US$20 trillion to over US$23 trillion, according to Towers Watson's Global Pension Assets Study (see table 1). The P13 refers to the 13 largest pension markets included in the study which are Australia, Canada, Brazil, France, Germany, Hong Kong, Ireland, Japan, Netherlands, South Africa, Switzerland, the UK and the US. The P13 accounts for more than 85% of global pension assets. The growth is in sharp contrast to a 20% fall in asset values during 2008 and brought assets back to 2006 levels. The study also reveals that the global pensions balance sheet strengthened by around 10% in 2009, compared to a 25% fall in 2008. According to the study, pension assets now amount to 70% of the average global GDP, down from 76% a decade earlier, but substantially higher than the equivalent figure in 2008 of 58%.

The global financial crisis was a huge wake-up call and problems of poor systemic design in the industry point to increased likelihoods of further periods of financial distress in future. While the recovery of markets will be welcomed, it is hoped that it will not stifle recognition of these as major issues for national governments and companies to address.

Table 2 Global pension assets growth rates

Market	**1-year** 31.12.07–31.12.08 actual	**Growth rates to 2009e (Local Currency)**		
		1-year 31.12.08- 31.12.09	**5-year** 31.12.04- 31.12.09	**10-year** 31.12.99-31.12.09
US	-23,30%	12,20%	2,50%	2,60%
Japan	-12%	6,10%	-0,90%	0,80%
UK	-26,50%	13,60%	4,30%	2,80%
Netherlands	-16%	14,20%	4,90%	5,60%
Canada	1,50%	12,70%	8%	3,10%
Australia	-17,20%	8,50%	9,40%	10.4.4%
Switzerland	-11,60%	12,80%	0,20%	2%
Germany	1,10%	6,80%	6,70%	4,30%
France	-6%	13,80%	2,60%	5,90%
Ireland	-26,50%	12,20%	2,70%	3,80%
Hong Kong	-8,70%	23,30%	12,9.1%	14%
Total assets	**-10,60%**	**15,60%**	**6,60%**	**6,60%**

Source: Watson Wyatt "2010 Global Pension Asset Study"

1. Global asset data for the P13:

– On average global pension assets (measured in local currency) grew by over 16% in 2009, compared with an 11% fall in 2008, improving the ten-year average growth rate to almost 7%;
– Despite losing market share in the past ten years the US, Japan and the UK remained the largest pension markets in the world, accounting for 57%, 14% and 8% respectively of total pension global fund assets;
– All countries saw significant growth in pension assets in 2009 (measured in local currency), except Japan which still has a negative five-year growth rate;
– In terms of ten-year CAGR (in local currency terms), these are mostly positive, with Brazil (18%), Hong Kong (14%), the Netherlands (12%) and Australia (10%) having the highest and Japan (1%), Switzerland (2%), US (3%) and the UK (3%) having the lowest (see table 2);
– The Netherlands now has the largest proportion of pension assets to GDP (120%), followed by Switzerland (113%) and Australia (93%).

2. Asset Allocation for the P7 (The P7 refers to the 7 largest pension markets, over 94% of total assets in the study, and excludes Brazil, Germany, France, Ireland, Hong Kong and South Africa):

– Bond allocations for the P7 countries increased from 25% in 2005 to 32% in 2008, but fell back to 27% in 2009. Allocation to equities rose significantly during 2009 to reach 54%;

– Other assets, especially real estate and to a lesser extent hedge funds, private equity and commodities, have grown from 12% to 17% in the last five years.

The gyrations of markets during the past few years have presented pension funds with very difficult strategic asset allocation choices. During the crisis, some funds sold out of equities to address solvency issues, some drifted out of equities and into bonds by not rebalancing, while others maintained their strategic mix and rebalanced to prior equity percentages. The result overall was a phase of de-risking, but not in a measured way and this has largely been reversed as equity markets have rebounded and risk allocations rebuilt.

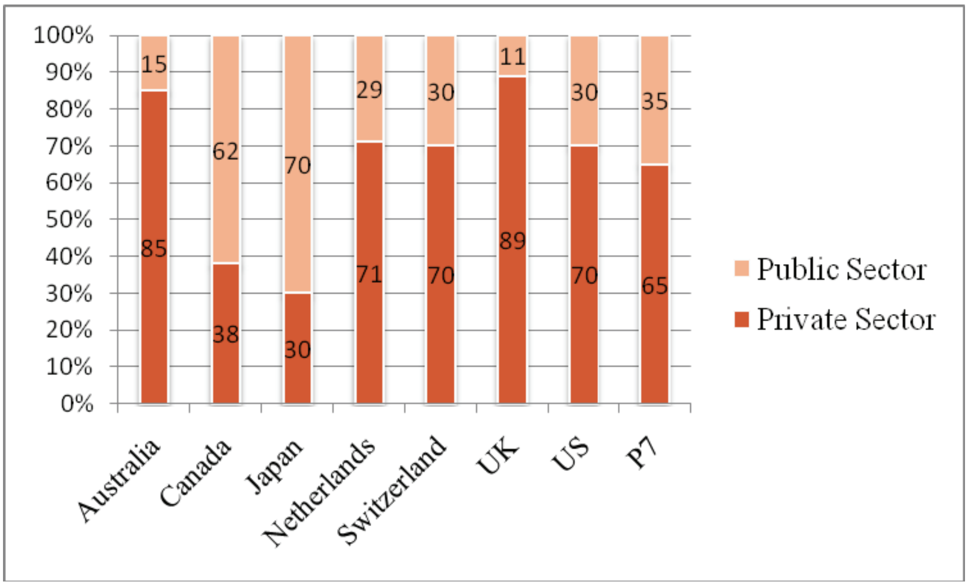

Chart 1. Public vs. Private sector
Source: Watson Wyatt «2010 Global Pension Asset Study»

Let us look at some figures, which represent the pension assets for public and private sectors (see chart 1). 70% of pension assets in Japan and 62% of Canadian assets are hold by public sector. In the UK and Australia the private sector holds respectively 89% and 85% of total assets.

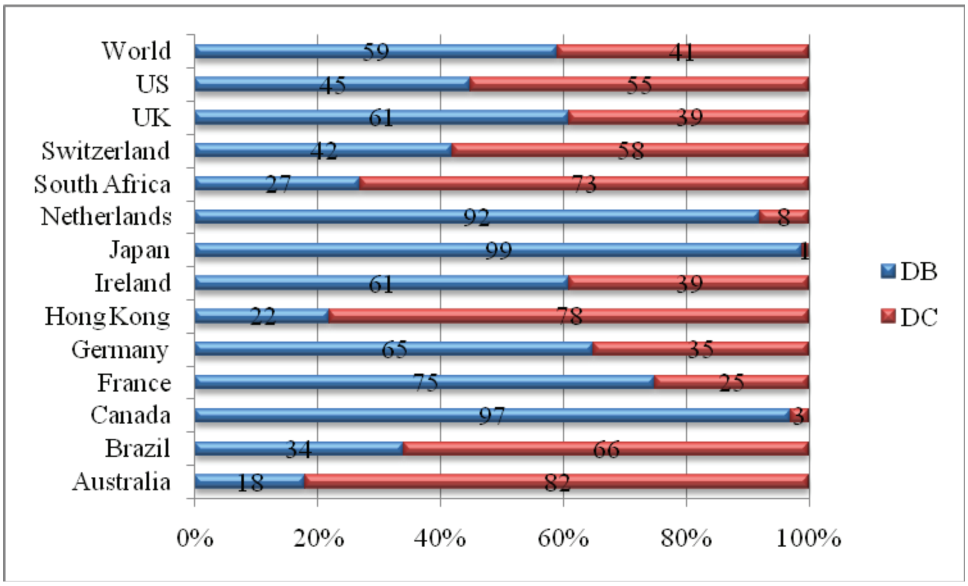

Chart 2. DB/DC plans split, 2009 (%)
Source: Watson Wyatt «2010 Global Pension Asset Study»

3. Defined Benefit (DB) vs. Defined Contribution (DC) for the P7 (see chart 2):
– During the ten-year period from 1999 to 2009, the CAGR of DC assets was 6% against a rate of 2% for DB assets;
– DC assets now comprise 42% of global pension assets compared with 32% in 1999;
– Australia has the highest proportion of DC pension assets, having increased them from 78% to 82% of overall assets between 1999 and 2009;
– The countries that show a larger proportion of DC assets than DB assets are the US, Australia and Switzerland while Japan and Canada are close to 100% DB.

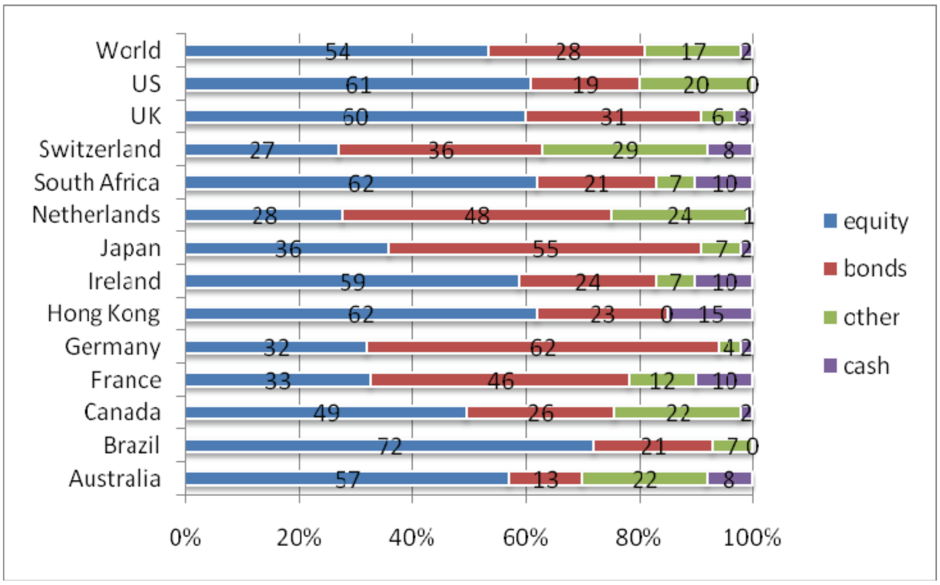

Chart 3. Asset allocation, 2009 (%)
Source: Watson Wyatt «2010 Global Pension Asset Study»

At the end of 2009 the average global asser allocation of the 7 largest markets was 54,4% equities, 29,9% bonds, 1,3% cash and 17,4% other assets (inludes property and other alternatives). The largest allocation to “risky” assets occur in the US, the UK and Australia. More conservative investment strategies – more bonds and less equities – occur in the Netherlands, Switzerland and Japan (see chart 3).

Highly changeable market conditions in short periods of time will have caused serious disruptions for pension funds. In order to get back on track, they will be reviewing all options, including extra contributions from sponsors, contingent funding arrangements, investment strategy reviews, hedging strategies and pension insurance buy-ins, not to mention changes to benefits structures including fund closures.

As a result of the crisis there is a heightened awareness of the need to be better prepared in future and to think differently about how markets can be buffeted by extreme events. An important characteristic of this new environment is the acknowledgement by asset owners of much increased complexity and the recognition that the appropriate governance for a chosen investment strategy is critical. This will increasingly lead investors to either prioritizing higher governance and allocate proportionate resources or simplifying their investment strategies to minimize cost and avoid value destruction. This will become all the more important as pensions and financial services regulators seek to spell out what governance standards funds should adhere to and their broader responsibilities. Funds in the past have had a very light touch applied on these issues, but the massive size and sphere of their influence make pension funds ripe for greater regulatory influence.

Consequently, no pension system, however structured, has been immune to the crisis. Funded pension arrangements are recovering gradually from the financial crisis. Despite this good news, some of the structural challenges faced by private pension systems are yet to be addressed. In particular, the ongoing shift towards defined contribution arrangements calls for an overhaul of regulatory approaches, with default investment options that deliver risk mitigation as members approach retirement. There is also a need to strengthen disclosure requirements and to implement effective financial education programs.

In addition, the main issues that the largest pension fund markets faced during the financial crisis include:

– liquidity;
– the management of credit/collateral risk;
– asset manger underperformance;
– new challenges in strategic asset allocation.

The major objectives of pension systems are poverty relief, consumption smoothing (i.e. redistribution from ones young to ones older self), insurance, and redistribution. That's why policy should address the multiple objectives of pensions.

First of all to avoid elderly poverty with the help of non-contributory basic pensions.

This policy pays a tax-financed pension at a flat rate, on the basis of age and residence rather than contributions. The contributory principle assumed workers with long, stable employment, so that coverage would grow. History has not sustained this argument. To explain why, consider the way the world has changed over the past 60 years [4]. Social policy in 1950 was based on a series of assumptions:

– The world was made up of independent nation states;
– International mobility was limited;
– The stable nuclear family with male breadwinner and female caregiver was the norm;
– Skills once acquired were lifelong;
– Employment was generally full time and long term.

Though not true even then, these assumptions held well enough to be a realistic basis for social policy.

The world today is very different:

– There is increasing international competition;
– The nature of work is changing, with more fluid labour markets;
– International mobility is increasing, and likely to continue to do so;
– The nature of the family is changing, with more fluid family structures, and with rising labour-market activity by women.

Secondly, there is a need for a redefining retirement: later and more flexible retirement. Longer healthy life combined with a constant or declining retirement age creates problems of pension finance. An important part of the solution is that pensionable age should rise in a rational way as life expectancy increases. This is all the more the case since work is generally less physically demanding than in the past.

Retirement should not only be later on average, but should also give individuals greater choice over how and how fast they move from full-time work to complete retirement. Mandatory full retirement was introduced in the nineteenth century to move out of the labour force older workers who were reducing the productivity of younger workers. That argument made sense historically, but no longer. Thus mandatory retirement is no longer necessary. In addition, increased choice about when to retire, and whether fully or partially is desirable, both to promote output growth (by encouraging older workers to continue to be active), and as a response to individual preferences. Thus greater flexibility is desirable for its own sake, irrespective of problems of pension finance [4].

The next is consumption smoothing. Simple economics argues that policy should allow people to choose their own pension provider in a competitive market, such choice, it is argued, benefiting the individual in the same way as choice and competition for clothes, cars, restaurants and iPods. In the case of pensions, the analytical error is mistaken use of first-best analysis.

The economics of information explains why the model of the well-informed consumer does not hold in many areas of social policy. In the context of pensions, there is evidence that consumers are badly informed. A survey revealed that 50% of Americans did not know the difference between a stock and a bond. Most people with an individual account do not understand the need to shift from equities to bonds as they age. And virtually nobody realises the significance of administrative charges for pensions.

Recent lessons from behavioural economics also yield powerful lessons, explaining such phenomena as procrastination (people delay saving, do not save, or do not save enough), inertia (people stay where they are), and immobilisation (where conflicts and confusion lead people to behave passively).

The report on five years of savings behavior across Britain has shown an overall increase in the amount Britons have managed to save from 2005 to 2009. In 2005 the average monthly amount saved per capita was 70.23 pounds, whereas in 2009 this amount increased to 83.87 pounds and represents the highest level since the Savings Survey began (Launched in December 2004, the National Savings and Investments (NS&I) Savings Survey monitors trends in people's savings habits on a regular basis, at a national and regional level and is published quarterly) [5]. Despite being increasingly squeezed by economic conditions income, the amount put aside by Britons as a percentage of income remained stable in 2008 and 2009 at 6.06% (see table 3).

Table 3 Amount saved as a percentage of income in the UK in 2005-2009 (%)

2005	***2006***	***2007***	***2008***	***2009***
6.02%	6.25%	5.86%	6.06%	6.06%

According to the mentioned above, guidelines for the design of individual accounts are suggested:

– Use automatic enrolment;

– Keep choices simple: for most people, highly constrained choice is a deliberate and welfare-enhancing feature of good pension design (though one of the options could be to allow individual choice);

– Design a good default option for people who make no choice;

– Decouple fund administration from fund management, with centralised administration and fund management organised on a wholesale, competitive basis.

There is no single best pension system. Thus what is optimal will differ across countries and over time. Pension systems look different across countries; this is as it should be. That said, the policies just discussed are potentially relevant to a wide range of countries.

The analysis makes it clear that however severe the impact of the financial crisis, this pales with respect to the coming demographic crisis and that countries need to make sure that whatever actions they take now do not impose bigger financial burdens when they will be even more constrained than they are today.

Benjamin Franklin once famously remarked that there were two certainties in life, death and taxes. When Franklin made this observation, in the eighteenth century, most people died young. We should not be surprised, then, that he did not include living to a ripe old age in his list of life's certainties. Living to a great age is not a certainty today. For growing numbers of people, though, it is a distinct possibility [1]. Children born in the year 2000 in France, Germany, the UK and the USA can, on average, expect to live for more than 77 years. Their Japanese counterparts have an average life expectancy of over 80 years. The problem is not that people are living too long, but that they are retiring too soon.

Table 4 Demographic trends (population in 1995=100%)

Countries	**1995**	**2000**	**2010**	**2020**	**2030**	**2050**
The US						
Population	100	104,8	113	119,8	124,7	172,2
The share of pensioners	19,2	19	20,4	27,6	36,8	38,4
Germany						
Population	100	100	97,2	94,2	90,6	81,2
The share of pensioners	22,3	23,8	30,3	35,4	49,2	51,9
France						
Population	100	102,2	104,9	106,9	107,8	106,1
The share of pensioners	22,1	23,6	24,6	32,3	39,1	43,5
Italy						
Population	100	100,1	98,2	95,3	91,9	82,6
The share of pensioners	23,8	26,5	31,2	37,5	48,3	60
The UK						
Population	100	101	102,2	103,5	103,9	102
The share of pensioners	24,3	24,4	25,8	31,2	38,7	41,2
Canada						
Population	100	105	113,2	119,7	123,1	122,7
The share of pensioners	17,5	18,2	20,4	28,4	39,1	41,8
Sweden						
Population	100	101,8	103,8	105,7	107	107
The share of pensioners	17,4	26,9	29,1	35,6	39,4	38,6

In many developed countries the share of people over 60 years in 2007 was 20% of all the population. By the 2050 every third person will have been over 60 years old.

The main problem of Ukrainian demographic situation is also aging. According to the forecast of the Institute of Demography and Social Research of the National Academy of Science, in 2010-2025 the ratio of pensioners to working population will have reached 50%, and by year 2050 – 76%. Nowadays this ratio is 30% out of all population (see table 4).

The pension crisis in Ukraine influences all state finances and threatens the economical growth. High pension contributions reduce net earnings which are encouraged to shadow profits, to search for work abroad. The Pension Fund cannot cover the expenditures on pensions. This leads to the growth of budget subsidies for pensions, budget cuts on education, health, roads, etc. The expenditures on pensions in Ukraine are the highest in Europe – 18% of GDP in 2009, compared to 7% of GDP in OECD countries [3]. The average pension in 2009 was 40% of average wage. It is clear that the changes in the proportion of lifespan of the work conducted and lifespan conducted on pensions are necessary.

The following steps to overcome the crisis of pension system in Ukraine are:

1. Raising retirement age and the minimum length of service retirement;
2. Stimulating retirement delays;
3. Limiting the size of high pensions and early retirement benefits list;
4. Developing state compulsory funded pension system model on the principle of quasi-government bonds and creating individual accounts.

All these steps should take maximum of the positive and considering negative experience of other countries.

The most interesting pension reforms are currently being held in Greece. The Greek government announced a pension reform as part of the austerity plan meant to help the state out of its debt crisis. At 12.7% of GDP it has the largest budget deficit in Europe. The main feature of the reform is to postpone actual retirement age by two years, on average, to 63 years by eliminating all incentives to retire early and bringing women's retirement age in line with men's. At present, men retire at 65 years maximum and women at 60 years, a gap that has been condemned by EU courts.

This time, there was no other option but to impose a reform, the Government is trying to cut down the state social budget expenses after years of mismanagement of social funds. Civil servants have organized mass strikes against the reform. The pension reform will also include clean-up measures by introducing a strict separation of healthcare and pension funds, and an independent entity to manage funds after a swirl of accusations of mismanagement of social funds [7, p.1].

On the other hand, In Spain the government Supports Increase of Retirement Age. The government had approved a plan to raise retirement age from 65 to 67 years gradually from 2013 to help the social security system cope with an aging population. According to Spain's National Statistics Institute in 2059 there would be one pensioner for every working age person, making the solidarity pension system unsustainable and reform inevitable.

The proposal will still be subjected to harsh debate, judging by the reaction of two major labor unions who have rejected the idea, and the country's employers' union arguing instead for an increase to 70 years.

Finally, the Bulgarian Government is set on extending the work period to be eligible for a full pension. Currently, Bulgarian workers need to contribute for a minimum of 37 years for men and 34 years for women to be eligible for a full pension at age 60 [7, p.2]. According to one proposal, the minimum retirement age would be raised to 63 years for both men and women with at least 40 years of contributions for men and 37 for women. Another idea is to increase retirement age gradually to 65 years by 2022 with a minimum of 37 years of contributions.

To sum up, the effect of the financial and economic crisis on pension systems depends on category of pension schemes people belong to (defined contribution, defined benefit, PAYG or fully funded) and if they are already retirees, close to retirement or still have many years of contributing ahead of them.

The impact of the crisis on investment returns has been greatest among pension funds in the countries where equities represent over a third of total assets invested. These countries have also experienced the sharpest drops in equity allocations. With rising unemployment and falling tax revenues squeezing public finances, the governments face budget deficits of nearly 9% of national income on average in 2010. This leaves little room for more generous public pensions. Some countries have already had to cut back on future public spending on pensions. But private pension schemes have also been badly hit by plunging stock markets, and the way they operate needs to change. We must take into account the fact that global pension assets are still below their

2007 levels. In terms of the pension assets to GDP ratio, it is back to 2003 levels. Definite contribution (DC) plans become the dominant global model.

It is clear that reforms should include better regulation, more efficient administration, clearer information about risks and rewards of different options and an automatic switch to less risky investments as people near retirement.

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Lebed I.*

OBJECTIVES OF THE INTERNATIONAL FINANCIAL INSTITUTIONS IN REFORMINGING OF THE GLOBAL FINANCIAL SYSTEM REGULATION

Annotation *Relevance of the material contained in the article is conditioned by solving of the problems associated with recovery from the global financial crisis. The Group of Twenty's development of recommendations for international financial institutions on the reforming of the global financial system management will give an opportunity to reduce the level of the financial risks, which can lead to a crisis, improve the financial management at the global and regional levels, as well as approach to the problem of creating a new global currency system.*

Key words. Group of Twenty (G20), international financial institutions, reforming, management, global financial system.

General representation of the problem. Relevance of the research subject depends on the fact that the global economic crisis, which started in the U.S. financial sector in 2007, is currently spread to almost all economic activities and has affected the countries of the world community. Clearly, the major reason of the international financial collapse was uncontrolled, excessive risks taking by the financial institutions worldwide, which combined with unprecedented growth of the debt of financial institutions led to the compression of market liquidity, huge losses, and actual termination of credit activities of a real economy. Institutes of the international financial regulation were not ready to solve the problems of risk concentration and incorrect references, which stood behind the boom of the financial innovations. Therefore, it is important from the theoretical and practical point of view to analyze the mechanisms by means of which the international financial institutions (IFI) can fulfill their powers and functions laid by the international community.

The analysis of the recent sources and publications. The works of such scholars as O. Bilorus, A. Galchinsky, V. Geets, A. Poruchnik, A. Filipenko, Oshnyrkov, V.D. Adrianov, M.V. Yershov, E. Brigham, S. Valdez, J. Keynes, P. Krugman, F. Modigliani, J. Stieglitz, S. Fischer, J.K. Van Horn, J. Hosler, A. Shapiro and others play an important role for the theoretical understanding of problematics of global financial system transformation and role of the international financial institutions in this process.

However, we believe that there are still not enough fundamental researches on the functioning of the global financial environment and the formation of the global financial architecture in the conditions of the global financial crisis and post-crisis situation in domestic and foreign financial and economic literature.

It also should be noted that the majority of works neglect the problem of global imbalance growth on the global financial market, the criteria for selecting of methods and instruments of its regulation, the reasons and mechanisms of the global financial crisis spreading, development

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of the recommendations on stabilization of the global financial market, as well as the parameters of applicability of methods and instruments of the international financial management in the new realities. The global financial crisis, which broke out in 2008 was not fully investigated. For the first time it is of a global nature and requires new approaches of reforming of the international financial system management, especially taking into account the activities and recommendations of the Group of Twenty (G20). The need for the further investigation of the tasks of the international financial institutions (IFI) in the reforming of the global financial system is obvious.

The aim of the research is to determine the new challenges of the international financial institutions associated with the reforming of the global financial regulation system.

The research is based on the fundamental postulates of the economic theory, modern concepts of the functioning of the global financial system and macroeconomic regulation models.

Information base of the research was made by materials of the G20 Summits, reports of IMF and the World Bank, works of domestic and foreign scientists-economists.

Presentation of the basic material. The international financial institutions play an active role in forming of the new financial knowledge. The role of the Financial Stability Board – an international institution created by the G20 countries at the London Summit in April 2009 is growing. Now the Board is the concentration of the global financial opinion in the field of applied knowledge.

An active process in generating of applied knowledge is also carried out within G20: the crisis reasons, the role of the international financial institutions, risk management problems, transparency of the financial market work, and false motives of financial management development of others are being discussed. The expert networks and media become the platforms for the scientific discussions. Often it is where new financial ideas are formulated that should be studied further as a fundamental research.

The fact that the existing financial knowledge appeared insufficient to predict the crisis leads to the question of the need to change the financial paradigm. Today the international expert community in choosing between the new instruments that can be used in the existing formats and new ideology makes a choice in favor of the first.

The global financial system was ineffective in the face of the contemporary crises and it will mutate and evolve in future years. In particular, issues on the formation of a new monetary system have been debated.

In order to meet the continuing risks, the activities of the international financial institutions (IFI) should be focused on the international coordination of economic policy measures taken by the individual countries. The key objects of the international economic coordination will become national "strategies of recovery from the crisis" and the financial regulation and supervision systems.

Key role in the coordination part of "recovery strategies" belongs to the IMF. Since 2010 the Foundation will collect information about anticipated changes in fiscal and monetary policy and in supporting of the financial sector of the Group of Twenty, analyze the compliance of certain measures with objective of sustainable and balanced growth of the world economy, and make recommendations for the G20 leaders.

One of the most important factors influencing on the choice of issues on the agenda within G20 is the globalism of the problem. It is determined by the interest to this problem from the large number of countries involved in the process, and therefore truly global problem affects interests of the largest number of countries.

Anti-crisis measures of the G20 countries have some results: dangerous sharp decline of the global economic activity was stopped, financial markets started to stabilize. The increase of annual economic growth is expected in 2010 at 1.3%. after its fall in the developed countries. The GDP growth will reach 5.1% in 2010 compared to 1.7% in 2009 in countries with emerging markets [5].

However, the restoring of economic growth is still at an early stage, so a rapid collapse of the state anti-crisis support is premature. The unemployment rate is registered at the unacceptably high level in many countries. The conditions for recovery of a private demand have not been provided yet.

One of the major consequences of the international community reaction to the global financial and economic crisis was the conclusion about the necessity to form the elements of regulation and supervision at the supranational level. Such a necessity is conditioned by the sharp increase in number and volume of cross-border operations, cardinal increase in the role of the transnational financial institutions, which collectively lead to fundamentally different level of interdependence of the countries on the capital global market. The globalization of the financial markets naturally requires the globalization of regulation and supervision.

The essential part of decisions of the G20 Pittsburgh and London Summit (2009) is based on the proposals of the Financial Stability Forum (FSF). It is directly specified in some cases (in particular in Annex 1 to the communiqué of the London Summit dated April 2nd Statement on Strengthening of Financial Systems it says about the approval of the FSF developed principles relating to payments and compensation in the large financial institutions), there is no such instructions in other cases but virtually unchanged FSF recommends were used.

A large amount of groundwork considered in the preparation of the G20 decisions, was formed by other international institutions and associations, among which the International Organization of Securities Commissions (IOSCO), Bank for International Settlements (BIS), and the Organization for Economic Cooperation and Development (OECD) should be pointed out. Thus, IOSCO has developed a Code of Credit-Rating Agencies Conduct, according to which, according to the decisions of the London Summit, norms of the regulation and control relating credit-rating agencies should be built.

Another important source of the G20 decisions is materials of the working groups organized during the G20 process according to the decisions of the Washington Summit dated November 15th, 2008. In turn, the working group actively used the developments of the FSF and other international financial institutions and associations.

According to the decisions of the G20 Washington Summit (November 2008) the following G20 working groups were created, each of which submitted its report:

- working group on the improvement of regulation and transparency (Working Group 1);
- working group on international cooperation improvement and financial markets integrity (Working Group 2);
- working group on reforming of the International Monetary Fund (Working Group 3);
- working group on the World Bank and other multilateral banks of development (Working Group 4).

The report of Working Group 1 is based on the reference that a proper regulation of the financial sector in all countries based on the common international standards is vital important to maintain the stability of the global financial system. It is emphasized in the report that the current crisis had its basis in the accumulation of system defects and imbalances of the financial system associated with the excess liquidity, leverage level, unfounded taking and concentration of risks in the financial system.

Summarizing the recommendations of the report of Working Group 1, action on reforming of the financial system regulation should be concentrated in the following key areas:

1. National systems of the micro prudential regulation and supervision should be amended with the effective system of the micro prudential supervision. An effective mechanism for system risks assessing of the global financial system at the international level and developments of coordinated regulatory action on reduction of such risks should be created as well.

2. Regulatory and supervision limits should be expanded so as to cover all systemically important financial institutions, markets, and instruments.

3. With the improvement in the world financial structure it will be necessary to take measures aimed at the implementation of the international standards, which include rising of the requirements for liquidity and the availability of capital buffers in the financial institutions. Regulatory requirements should include an increase in capital buffers in favorable periods of the economic development for the further smoothing of the negative effects in stress periods.

4. A coordinated, coherent and effective system of the international standards of the financial system regulation should be implemented. It is necessary to assess the regulatory and supervisory systems on a regular basis that operate in all G20 countries on their compliance with the international standards and disclose the results of such evaluation in public.

5. Organization of a proper micro prudential regulation combined with the micro prudential supervision system requires the expansion of now applicable principles and instruments of regulatory policy.

The Report of Working Group 2 presented the review of the work done up to April 2009 relating the implementation of the provisions of the Plan of Actions in the areas above and formulated recommendations on the further steps that should be made to improve the international cooperation and integrity of the financial markets. The positions of the Working Group 2 were formulated in the following issues:

1. Organization of cooperation in the regulation and supervision.

- Collegial supervisory bodies (supervisory boards).
- Cooperation in the field of regulation and mechanisms on information exchange.
- Strengthening of the cross-border mechanisms for fighting against the crises.
- Modes of dispute settlement and bankruptcy legislation.
- Common approaches to regulation of accounting, auditing, deposit guarantee.
- Impact of the emergency measures on fight against the crisis on the further development of market relations.

2. The role of the international institutions involved in the development of the regulatory standards.

- Expanding FSF.
- Issues of management of IASB and other organizations.
- The interaction between the FSF and IMF.
- Lessons of the crisis.
- Susceptibility of regulating systems to the financial innovations.
- Valuation of assets.

3. Ensuring the integrity of the market.

- Preventing manipulation and fraud on the financial market.
- Non-transparent jurisdictions and associated risks of illicit activities, FATF, the exchange of tax information.

This Report seems to have no independent value. Basically, it expresses the support of those positions and recommendations that were previously developed by the international institutions and associations, primarily IOSCO and BIS.

The Report of Working Group 3 contains proposed measures on reforming the International Monetary Fund.

Activities of an immediate nature include cooperation with FSF, authority and influence of which should be expanded; the expansion of the fund credit potential with the help of additional investments; ratification of the package of measures on change of quotas and the distribution of votes, aimed at increasing the resources of the fund; an urgent introduction of more effective measures on prevention of the crisis and resolution instruments.

The medium-term activities include the implementation of multi-feature supervision (especially for those member countries which have the major financial centers and countries with a high level of debt, as well as all major cross-border flows of capital), especially focusing such supervision on risks that threaten the financial stability; reforming of the Financial Sector Assessment Program aimed to enhance its practical benefits and restoration of regular results renewal, increase in the number of votes of developing countries in fund management.

In addition, Working Group 3 formulated "Additional Recommendations", which consist in the proposals to review the management mandate of IMF and presented as a supplement to a vision of the key areas of IMF reforming saying that this vision is not shared by all members of Working Group 3. There are four key areas of IMF reforming:

1. Supervision of a system risk. The vulnerability of the financial systems can be caused by plenty of reasons, including the unforeseen events, bad policy, deregulated exchange rates, boom of the securities based on credit payments, external imbalances, and lack of data in predicting of the trends.

2. Coordination of macro prudential related measures on manifestations of a system risk. Group decisions, such as the decision of the Group of Twenty level, and assessment of the system risk manifestations in the international scale should be addressed to those who develop policy and have the authority to act.

3. Cross-border agreements on financial regulation. Efforts of member countries are required to avoid disagreements in regulatory actions, as well as distribute the areas of responsibility of the international financial institutions.

4. Liquidity support. IMF performs a key role in the support of a short-term liquidity. It is important to understand that this process is effective when the fund has sufficient resources and the procedures of assistance themselves are clearly defined.

The Report of Working Group 4 notes that multi-feature banks of development (IDB) and other international financial institutions should strengthen their efforts on recovery of capital outflow and creating demand for capital through trade financing, bank recapitalization, expansion of infrastructure investments in countries with low-income population. This Report identified the basic principles and instruments of reforming in this area, which were divided into four groups:

Group 1 – General Principles of Reforming

Group 2 – Anti-crisis instruments

Group 3 – Adequacy of resources and capital

Group 4 – Management Reform

Important sources of the G20 decisions became, in addition, the decision of the G20 Finance Ministers, designed at the meeting of the Finance Ministers in Horsham on March 14th and Larose's Report prepared on the request of the European Commission President J.M. Barroso.

The last two sources of the G20 decisions can be regarded as preliminary draft decisions proposed, on the one hand, by a group of the G20 Finance Ministers, on the other hand, by the European Community. Thus, the draft decisions discussed at the meeting of the G20 Finance Ministers and the countries of the European Community were prepared to the Summit on April

2, 2009. They accumulated the offers of the individual countries and international financial institutions, combined them. In a sense, these projects of the group decisions can be considered the ground on which a direct discussion on the London Summit was based.

Based on the above statement of the decision making process by the G20 the role of certain international financial institutions and associations in the G20 decision-making can be defined.

The Financial Stability Forum (FSF) completely dominates in this relation. Its active collaboration with leaders of the major countries on prevention and then on overcoming the crisis began in early 2008. In April, 2008 FSF presented to the Finance Ministers of the Group of Seven and central banks managers a comprehensive package of recommendations on approval of weaknesses identified by the crisis and strengthening of the financial systems in the future – FSF Report on Improvement of Market and Institutional Stability [5]. A full and balanced range of measures to counter the crisis was first proposed in this report on the basis of analysis of the major reasons of the global credit crisis. This set of recommendations is the result of hard work on achievement of the international consensus at the level of national and supranational regulatory authorities and organizations of the financial industry.

In October 2008 FSF presented a report on progress of the implementation of recommendations contained in the April (2008) report and in April 2009 – a review of the actions relating the implementation of the recommendations formulated during the period from October 2008 to April 2nd, 2009 [7].

The FSF carried out an active work on concretization and optimization of the proposed recommendations on the basis of the directions outlined in April (2008) Reports. The work with some directions outlined in April 2008 led to the development of special reports on the relevant key issues of fight against the crisis. In April 2009, directly for the London Summit, FSF prepared several documents, among which the Financial Stability Forum Principles on International Cooperation and Interact in Crisis Management, Report on Measures Aimed at Reducing of Procyclicality Factors in the Financial System and the Principles of Good Compensation Policy of Financial Stability Forum should be pointed out. The basic provisions of all three documents were reflected in the G20 Summit Declaration in London [4].

IOSCO (International Organization of Securities Commissions) should be put on the second place among the international institutions and associations in terms of its role in the G20 decision making. Dealing with application specific issues on securities regulation, this organization and its members accumulated an extensive experience in prevention and overcoming of the financial market failures, which was actively used in the preparation of the G20 decisions.

Immediately after the Washington Summit, when the preparations for London Summit started, IOSCO issued a special statement addressed to the G20 participants, which offered its assistance in developing of common decisions aimed at improving of the financial market regulation. The statement indicates that IOSCO is actively working in several areas selected as main points of discussion and has the significant developments (or waiting for them in short term) in these areas. Among such areas the following were identified: [10]

- international financial reporting, standards of accounting and corporate governance;
- strengthening of the investors' confidence, including by means of strengthening of the cross-border cooperation in supervision;
- setting of the global standards for credit agency regulators;
- transparency of the markets and financial products.

IOSCO developments in the sector of the development of the standards of credit rating agency activity, as well as regulation norms of credit-rating agencies and their supervision were in great demand. Except for the main document in this field prepared by IOSCO – Code of Professional Conduct of Credit Rating Agencies – other IOSCO documents (Committee reports) were used, in which special attention was paid to such complex issue as assigning of credit ratings to structured products and other complex financial instruments. The IOSCO offers on the international cooperation in credit-rating agency supervision were successfully used as well.

IOSCO developments in supervision of hedge funds and private funds were also used as well as providing of the private banking services, which became the basis of the content of the G20 decisions on increase in the regulation field on the financial markets. IOSCO has made a significant contribution to understanding the nature of the crisis, offering the report on the reasons of the loan crisis, which became the trigger of the global financial crisis.

The Bank for International Settlements (primarily represented by the Committee of Banking Supervision and partly by the Committee on the Global Financial System) dealt with separate issues on changes in regulation concerning the problems of the bank capital adequacy, adequacy of risk assessment of complex instruments, prudential supervision of the financial institutions, which can be characterized in general as separate technical issues on the regulation of the banking sector. It should be noted that the FSF in its recommendations separated a very important place to the efforts of the Bank for International Settlements and BIS was really involved in the process of the G20 decision making due to the load "planned" for him by the FSF.

The Organization for Economic Cooperation and Development prepared a document entitled "Strategic Response to OECD on Financial and Economic Crisis. Contribution to the Global Efforts", which contained the OECD Plan of Actions that contributes to overcoming of the crisis. The actions were divided into the short-term and long-term measures in this plan.

The OECD offers targeted at building a new, more powerful global economy. These offers cover two major areas from the strategic point of view: the optimization of finance, competition, and management and recovery of sustainable long-term growth. In the first direction OECD provides a viable institutional ground for a regular dialogue between different communities, focusing on the tasks in the following areas: transparency, corporate management, competition, taxation, pensions, financial education, policy of interaction of the institutional and market structures, ensuring of the subsequence and adequacy of the reforming. In purpose of the second direction OECD sees the main contribution in the forecast analysis, finding a reasonable balance between the interference of governments and markets and identification of ways of government refusal of active interventions on private capital market, when the world economy reaches the post-crisis stage.

OECD believes that it is necessary to develop along with relatively short-term measures a comprehensive long-term strategy on breaking the current recession and return to a steady growth after short-term stabilization measures. Thus, this institution is focused, unlike other members of the preparatory process of the G20 decisions, more on the development of economic policy in general, than on problems of own financial sector. However, the analysis of these measures suggests their non-compliance to the new realities of the global economy – being the most common traditional recipes from the university books. The OECD staff did not notice any fundamental problem of the global economy.

In addition, this institution has made some contribution to the development of the issue on the future system of regulation of the credit rating agencies (the report Proposals for the European Parliament on the Regulation of the Credit Rating Agencies).

The International Monetary Fund did not deal with issues of the development of the G20 decisions – the research of the financial crisis and proposals on its overcoming were limited with the standard periodical Report on the Global Financial Stability, published every six months, and analysis of the crisis in the study of the current global development and a number of articles of the IMF responsible workers in the departmental publication Finance and Development.

In the Report on Global Financial Stability (April, 2009) IMF underlined the immediate steps in realizing priorities specified by G20 and longer-term measures, described as the Consensus and Strengthening of Macroeconomic Policies.

The IMF sees the following tasks as the immediate measures:

- assess the viability of banks and recapitalize them;
- work systematically with bad assets, using the management company and guarantees;
- complete the process of bank restructuring by providing a sufficient liquidity;
- ensure that countries with emerging markets have instruments of protection against excessive leverage and risks that come from the developed countries;
- coordinate the credit policies, used by different countries. In the longer term the following tasks are defined:
- encourage the fiscal and financial policies and ensure their interaction;
- use special powers of central banks for renewal of credit market and capital attraction;
- build a platform for more powerful financial system.

According to IMF the last task considerably comes to the need of reforming of the financial sector regulation. The IMF sees five directions of reforming of the financial regulation:

- expand the area of regulation due to cover of all systemically important institutions and activities;
- prevent excessive leverage and hold a business cycle;
- improve the market discipline and eliminate the lack of information;
- strengthen the cross-border and cross-function regulation;
- improve the systemic liquidity management.

Associations of the professional participants of the financial market took a very small part in the development of the G20 decisions, limited to preparations on the very last stage of the joint document of six associations which represents the results of members' discussion of draft recommendations prepared by the international institutions and associations. The role of these associations was deliberately subordinate – they did not put forward their own proposals, but only discussed the proposals of the other G20 participants of the process.

Among the measures on which the observations and amendments were suggested the issues on the interaction of supervision bodies with regulated organizations, improving of the international accounting standards and improving of the derivatives markets occupied a special place.

It should be noted that some observations of the professional participants of the market were taken into account when preparing the final solutions. Thus, the thesis on the need of creating the central clearing houses and organization of trade using the central counterparty on this segment of the financial markets was included into the final version of the decisions instead of initially implicit thesis that all credit derivatives should rotate only on the organized markets.

In addition, the association of professional participants of the financial market was offered with a version of the main tasks on renewal of the financial stability:

1. Renewal of the strength of the financial system and systematically important institutions.
2. Prompt renewal of the markets functioning without state support.
3. Expansion of the means of communication and infrastructure for the timely interaction of regulators and policy makers worldwide.
4. Achieving of consistent results of solving these problems, obtained in different countries.
5. Early detection of problems on the financial market combined with the flexibility of adaptation of the solutions to the new market trends.
6. Certification that the regulators "play squarely" and have enough resources for supervision of the complex products and markets.

The World Bank took little part in the development of measures on overcoming the crisis, at best only creating visibility of such work. *** Thus, on the Russian website of the World Bank under the rubric "Financial Crisis. What does the World Bank do" hosted a document titled "On the Eve of Annual Meetings of the World Bank Group Concludes the Preparation of the Report on Development Problems and Climate Change". This is the obvious example of presentation of "a dummy" in public instead of any real result. Perhaps the only one real step towards resolving accumulated contradictions is the decision to provide Africa with an additional place in Board of Directors of the World Bank Group in order to strengthen the influence of developing countries within the World Bank Group.

As it is seen from the material above the bodies that professionally dealt with the specific problems of the financial market regulation appeared to be the most useful. The global development institutions that have large financial reserves were considerably less effective they carried out quite shallow and simplified analysis of the processes taking place, on the basis of which it was impossible to formulate any useful, practical applicable recommendations on overcoming the reasons of the crisis.

The consequence of this situation was a different degree of success of the international community in solution of the problems of financial market itself, many of which are quite technical, and in overcoming deeper and more fundamental reasons of financial and economic crisis. The success at the first level was achieved due to the availability of professional judgments of those international bodies and associations, which actually dealing with applied problems of the financial market. The absence of any definite proposals on overcoming of the root reasons of the crisis is almost entirely associated with extremely low efficiency of analysis and forecasting of the relevant international financial institutions in this direction. Mankind appeared to be deprived of knowledge about the fundamental reasons of the crisis, and, accordingly, the leaders of the majority of countries did not have instrumental proposals on overcoming of these reasons.

The conclusion about the necessity of forming of the elements of regulation and supervision at the supranational level was one of the most important consequences of the reaction of the international community to the global financial and economic crisis. Such necessity is conditioned by the sharp increase in number and volume of cross-border operations, cardinal increase in the role of transnational financial organizations, which collectively lead to a fundamentally different level of interdependence of the countries on the global capital market.

In these circumstances, even in case of availability of the optimal national regime of regulation and supervision on the financial markets any country cannot feel safe because of the large number of external risks molded beyond national jurisdiction. Therefore, the protection from the crisis only at the level of the national regulation and supervision is quite insufficient in the modern world. The globalization of the financial markets naturally requires the globalization of the regulation and supervision.

However, it is impossible to create the global financial regulation, being entirely adequate to the level of globalization nowadays because of conflicting national interests of different countries. The global regulation without world government is possible only on terms of consensus, at least, between the leading countries. That is why the implementation of only certain elements of the global regulation and supervision of the financial markets became possible in modern terms.

It is necessary to distinguish two levels at which these elements are implemented: a worldwide level itself and the level of individual regional grouping of countries, which differs with a high degree of integration of the national economies and national financial markets.

At absolutely global level, i.e. at the level of the entire world, the possibility of implementation of the elements of the global regulation and supervision appeared to be extremely limited.

The complex of agreements on enhancing of the role of the international financial institutions and strengthening of their cooperation has become the most significant achievement at this level.

In addition, in the London Summit Declaration on Strengthening of the Financial System in the Direction of International Cooperation one of the points of the decision was as follows: based on 28 already existing supervisory collegial bodies to establish similar bodies for large cross-border companies not later than June 2009.

Decisions on the establishment of other supranational bodies at the world level were not taken at the London summit.

There are more prerequisites for implementation of the elements of the supranational regulation and supervision at the level of regional integration associations. Thus two main factors that determine the degree of progress towards the formation of supranational regulation and supervision are the degree of integration of national social and economic systems within the regional association and accumulated to date achievements in building the supranational regulation and supervision.

The European Union advanced more than others in the construction of the supranational regulation and supervision on the financial markets, including, the supranational bodies of regulation and supervision. The European countries agreed about the substantial progress in this direction on their summits that preceded the G20 London Summit.

The Plan of Actions on recovery from the global financial crisis adopted at the London Summit proposes the establishment of a new international body – the Financial Stability Board (FSB) with an enlarged mandate to serve as successor to the Financial Stability Forum (FSF).

The new authority is put on the greatest place in the post-crisis global financial architecture by the main decision of the London Summit.

The Declaration on Strengthening of the Financial System provides the following FSB's functions:

- analyze the vulnerability factors that are engaged with the financial system, identify and control activities required in this connection;
- promote the coordination and exchange of information between authorities responsible for ensuring of the financial stability;
- monitor the changes on markets and their consequences for the regulation policy and provide the appropriate recommendations;
- provide recommendations relating best practice of compliance of the regulation standards and carry out the relevant work on monitoring;
- carry out joint strategic reviews of the activity of the international bodies for standardization in policy development to ensure that their work was timely, coordinated, and aimed at implementation of priorities and elimination of the existing shortcomings;
- establish the guidelines regarding the creation of the supervision collegial bodies and support measures for establishing such bodies and participation in them, including through the continuing work on identification of the most important backbone cross-border companies;
- support planning of the emergency measures to resolve the cross-border crises, particularly relating backbone companies; and
- cooperate with IMF in activities on early warning in order to detect emerging macroeconomic and financial risks and inform IMF and Finance Ministers and heads of central banks of the Group of Twenty about such cases, as well as determine measure required in this regard.

The FSB members undertake to hold the line in support of the financial stability, increase openness and transparency of the financial sector, apply the international financial standards (including 12 key international standards and codes) and agree to make the periodic independent reviews using available data, including reports prepared as part of the IMF/World Bank Program on assessment of the financial sector. FSB will develop these obligations and assessment process, as well as report on these issues.

While aggregating these functions, one should pay attention to the fact that FSB will develop recommendations and principles that will be the basis for the global financial regulation. At the same time FSB is imposed with the function to control the effective national financial sectors. FSB will also actively carry out the analysis of the vulnerability factors of the global financial system and participate in activities on early warning of the global crises. One should also pay attention to the participation of FSB in measures on resolving of the cross-border crises.

Analysis of these four groups of functions enables to make the following conclusions:

1. The set of functions is too wide to establish a new body as a global “protoregulator” or global “protocontroler”.

2. The wideness of the functions assigned inevitably makes FSB a central link in the system of interaction of all international financial institutions in post-crisis world.

3. Based on some functions in the future (10-15-year term) FSB can become fully global (supranational) regulator or supranational controller. It is also possible that FSB will turn into the supranational arbitrator.

It appears that FSB’s empowerment with so big (compared to other international financial institutions) functions is directly related to the efficient activity of its predecessor – FSF – at least during the last decade, as well as with that “niche” in the division of labour among the international financial institutions which formed during this decade, that united two global financial crises.

The Financial Stability Forum was established in April 1999 by the Finance Ministers and leading central banks of the G7 countries in order to promote the international financial stability through information exchange and international cooperation in the financial supervision.

The FSF members are the ministry of finance, central banks and other financial supervision authorities of 12 countries, 5 international financial institutions (the Bank for International Settlements, European Central Bank, International Monetary Fund, Organization for International Cooperation and Development, World Bank) and 6 bodies, associations and organizations that set the international standards in financial markets (3 committees of the Bank for International Settlements, the International Association of Supervision of the Insurance Markets, the Council on International Financial Reporting and International Organization of Securities Commissions).

FSF supports 12 Key Standards for Sound Financial Systems, which is a code of the best global practices in various aspects of operation and regulation of the financial markets.

The FSF’s activity is little known to experts from Ukraine and other CIS countries, which leads to cardinal underestimate of the role of this body in the international efforts on improvement of the global financial system. However, some financial market regulators have actively used results of the FSF’s activity in the process of improvement of the regulation on the financial market. According to our estimates, FSF appeared to be the most effective body among all international institutions to some extent relating to the development of the financial markets.

The London Summit Decision on including of all G20 members to FSB is evidence that the Twenty considers FSB as the most convenient platform to continue the G20 process after the crisis, when the work of the institutions of emergency nature in this process would be no longer necessary.

The inclusion of the Spain into FSB is worth attention, which was not a member of the Group of Twenty, but played an active role in discussions and decision making at the London Summit. This example shows that FSB is not a “closed club”, but remains the club of the most enterprising members of the international process of synthesis of the best practices of the world financial markets and preparation of proposals on change of their architecture. Therefore, those countries that were not invited to the Twenty, but continued to actively participate in the international decision making process, can expect to be included into FSB in the future.

The closest cooperation should be expected between FSB and IMF. There are several areas in which these bodies will inevitably work together, naturally complementing each other, including the following areas noted in the Declaration on Strengthening of the Financial System:

- development of a framework for the international agreements on settlement of the conflicts involving the international banks;
- taking early warning measures.

There is an opinion spontaneously formed in the community of expert that the FSB-IMF connection will act at the global level as a classic tandem of the national regulator and national supervisory authority. However, the interaction of these two bodies seems to be more difficult than a classical "national" scheme. The complexity and intensity of the interaction between these two bodies will inevitably lead to the conflicts that require clarifying the functions and role of one or other body in the international regulation and supervision on the financial market at the next iteration.

Along with industries where the increase in the interaction between international financial institutions is inevitable, there are rather large "fields" on which these organizations, especially IMF, will be able to make relatively independent action. IMF is almost fully responsible for such areas as increase in the global liquidity (including overcoming the balance-of-payments crisis) and the implementation of the concessional lending for low-income countries.

According to the London Summit Decisions the volume of the financial resources, which IMF places will substantially increase. Increase in the IMF financial power combined with some ineffectiveness of its activity in previous years naturally raised the question of reforming of IMF. Such reform was declared in the working materials and decisions of G20, but in reality it came to the expansion of means of the fund financing in general. In addition, there were the sounded calls to organize the work of staff, managers and the Fund Governors Board with maximum efficiency, optimize the distribution of duties, ensure the transparency in reporting and evaluation of activities, and more intensive involvement of the Fund Governors Board in its work.

The FSB's collaboration with the Basel Committee on Banking Supervision, Bank for International Settlements will be intensive. Firstly, such collaboration in some areas is directly provided by the London Summit Decisions. Secondly, FSF traditional assigns BCBS BIS a key role in solving many key problems of the modern financial system. Thirdly, it was the committee sphere significant "market failure" happened, the petition about the overcoming of which was made in the world expert society.

According to the London Summit Decisions, the strengthening of a number of the development institutions other than IMF was made. It was decided to increase the capital of the Asian Development Bank (at 200 percent) and discussed the possibilities of capital increase of the Inter-American Development Bank, African Development Bank and European Bank for Reconstruction and Development. It appears that these institutions will continue to play the same role in the international financial architecture, as they did before.

We next consider the options of the architecture of the post-crisis global monetary system, and the problem of global reserve currency, approaches to its solution.

Sketchy history of changing of standards of the world currency systems can be represented as follows: silver standard – gold standard – gold-exchange standard – single-currency system – poly-currency system.

The first two stages were characterized by the development of the national currency (money) standards. The third stage is characteristic as for national currency systems of the developed countries, as for the global monetary order. The last two describe the development of the global currency system.

Formation of essentials of the global currency system is connected with the agreements reached at the Breton Woods in late 40ies of the twentieth century and determining the transition to the global gold-exchange standard. The U.S. refusal to exchange dollar for gold in 1971 was the end of gold-exchange standard and the transition to single-currency (dollar) global system.

The modern global currency system is a transition from single-currency to multicurrency one. This system, come instead of gold-exchange standard was originally single-currency, based on the U.S. dollars. In a sense the gold-exchange standard was also a transitional system – from a system based on gold, to a system based on dollar.

One of the most striking manifestations of the crisis has become an internal contradiction inherent in the U.S. currency, which is the basis for the modern international monetary system. Dual nature of the U.S. dollar became clear during the crisis it is the U.S. national currency and world money at the same time. The increase in contradictions between the functions of dollar as the national currency and as the international currency was noted. In this connection the question about the need of resolving this contradiction arises. Today it is clear that the global currency system can no longer live in its former form, but which form it enters in the medium and long term is an open question.

In our opinion, the main options for the future of the global monetary system are:

1. The system, which involves creating a single global reserve currency, which has the form of the Special Drawing Rights.
2. The system based on the regional currencies and regional emission centers.
3. The single-currency system based on dollar.
4. The dual-currency system based on dollar and euro.
5. The poly-currency system based on a relatively large number of main reserve currencies.
6. Gold standard.
7. The multi-product standard.

Advantages and disadvantages of the above options are not obvious – a special investigation will be required for their discovery and formulation. In this article we analyze the probability of formation in the near future of one or another standard of the world currency system without dealing with the question of their global efficiency and fairness.

It should be noted that the proposals of Russia for the London Summit contained a proposal to authorize IMF (or special authorized working group of the Twenty) to prepare the investigation of two scenarios of the development of the global currency system, which Russia considers fundamental: the creation of poly-currency system and the creation of the reserve world currency based on the Special Drawing Right.

Among the listed options two options are the return to the past – gold standard and single-currency system based on dollar; the possibility of these options seems to be very low in our opinion.

Gold standard run its course at the beginning of last century, and even 2007-2009 crisis, which contribute to a great increase in risks in the international financial system and, consequently, increase in a demand for gold, did not lead to any attempts to restore system based on gold.

Return to a system based solely on dollar is also impossible, especially in light of the events of the last years, which clearly demonstrated the risks of dollar and, accordingly, its failure as a single primary reserve currency.

The dual-currency system based on dollar and euro is the nearest goal, towards which the global currency system is moving. Taking into account the currency share in the currency structure of international bonds outstanding, one can say that today's global currency system is a dual-currency one, but other similar figures show that euro share is still significantly behind the dollar share.

Now some indicators evidently shows that the global monetary system is drifting toward poly-currency scheme, i.e. a system based on a relatively large number of the main reserve currencies, and in this respect the dual-currency system is only an intermediate point on this route.

A new world reserve currency appears in three versions of the architecture of the post-crisis global monetary system of the seven options discussed above.

Now the most possible option of forming of the global reserve currency is a system, based on the IMF Special Drawing Rights. A major advantage of this option is its support of China. The Head of the People's Bank of China Zhou Syaochuan made a stir before the G20 London Summit, saying that the IMF Special Drawing Rights should replace dollar as the world reserve currency.

Special Drawing Rights (SDR) are the international reserve asset created by the International Monetary Fund in 1969 as a supplement to existing official reserve assets of the IMF member countries. The emergence of the unique international reserve unit is closely linked with the development of the gold demonetization process in the global economy, cancel of its official price, and the elimination from the monetary system, international payments, and credit relations. In 1960ties in several industrialized countries there was a widespread opinion that the existing main international means of payment (the U.S. dollar and gold) are not enough and the increasing internationalization of the national economies requires a supranational currency. In this regard, IMF decided to issue the new international units, which were created by the international agreement for the first time in history. According to the agreement reached IMF has started issuing SDR since January 1st, 1970, which are collectively formed credit reserve assets for payments on foreign obligations at the international level and balance of payments settlement.

One of the main tasks that SDR initially had to solve was the use of a new collective payment mean as the basis of the international monetary and credit mechanism, i.e. the transition from the gold-exchange standard to the SDR standard. It was assumed that SDR will perform as an alternative to gold, dollar and other national currencies that acts as the international reserve and payment mean.

SDR is not the IMF debt, and the SDR emission by the fund does not increase its total credit resources. Instead, the SDR emission increases own international reserves of the member countries of the fund. SDR are included into the international reserves of member countries of the fund and they may at their discretion exchange SDR on their currencies in transactions with each other. In addition, the IMF members with a weak balance of payments should be able to exchange SDR on freely convertible currencies (dollar, euro, Japanese yen, pound sterling), being supplied by the countries with strong balance of payments.

SDR are distributed among the IMF member countries in proportion to their quotas. SDR also serve as the payment unit of the balance of IMF and some other international institutions. The SDR rate is calculated on the basis of basket of the key world currencies. For the period 2001-2005, the composition of the basket for the calculation of the SDR rate was determined in the following proportions: the U.S. dollar - 45%; euro - 29%; yen - 15%; pound sterling - 11%.

There were six general issues of SDR worth 21.2 billion since the creation of a new collective payment mean. Currently the SDR emission size is limited and a limited nature of their use is defined with the low values of the SDR share in the total world gold-exchange reserves, which amounted to 1.2% at the end of 2000.

George Soros supported this option among the world's most influential financiers.

The attempts on formation of the regional currencies have been repeatedly made. One of them was successful – a new freely convertible currency euro was created in Europe, which is a typical regional currency. The success of the euro introduction is based on close economic integration of the Western Europe countries, unification of their monetary, budgetary and other regulatory regimes.

Other projects of introduction of the regional currencies still remain projects with a relatively low probability of their realization in the nearest future. The composition of potential consortiums that emit one or another regional currency often changes, different countries are involved in several such consortiums. The most famous projects of introduction of the regional currencies are:

- project of introduction of the single currency of the Arabian Gulf countries;
- project of introduction of the single currency of the South-East Asia countries;
- project of introduction of the single currency of the Latin America countries;
- project of introduction of the African single currency.

Conclusions. The G20 process is a new type interaction. Leaders of the Group of Twenty, which organized the discussion for finding of the solutions to overcome the crisis, said: "A global crisis requires a global decision". Continuing the G20 opinion, it should be recognized: a global decision requires a new mechanism of decision making. The G20 process showed that direct interaction of governments is more effective than the work through the mediator represented by the international institutions of the past. Those bodies that professionally dealt with the specific problems concerning the financial markets and special "working group" of governments appeared to be the most useful. The global development institutions that have large financial reserves were considerably less effective they carried out quite shallow analysis of the processes taking place, that have not allowed to formulate any useful, practical applicable recommendations on overcoming of the crisis. G20 is an attempt to create a new decision mechanism at the global level. The Plan of Actions on recovery from the global financial crisis adopted at the London Summit envisaged the creation of a new international body – the Financial Stability Board based on the Financial Stability Forum. The new authority is put on the greatest place in the post-crisis global financial architecture.

The tasks facing IFI in improving of the financial regulation and supervision can be divided into two groups. The first is the review of the regulation parameters in order to counter the system and procycle risks. It involves the establishing of the agreed international principles for effective banking and insurance supervision and the financial markets supervision at national levels.

The second group includes the task on expanding the perimeter of the financial regulation. For this purpose IFI need to develop the international principles of regulation of financial institutions and activities that have a system value and insufficient level of regulation, including the improvement of the supervision of hedge funds, investment banks, rating and audit agencies, derivative financial instruments, as well as sovereign wealth funds.

Implementation of the IFI new targets can help to enhance their role in the international financial system. However, due to the fact that unlike the crisis period, measures to strengthen the international financial system and the IFI recommendations will be unpopular, it can be assume that the implementation of coordinated action by the countries will face certain difficulties. At the national level, it can be expressed in an aggravation of the conflict of economic interests of certain groups within each country, associated with the necessary of a tough financial policy (example - Greece). At the international level – in the aggravation of the conflict between the economic interests of individual countries, in calling for consideration of the national differences in the financial systems and dedication to financial protectionism. In addition, the principal element of a new global financial architecture must be the division of its international and national system risk supervision bodies. This mechanism on contrary of the strict regulatory requirements to the financial indicators suggests more flexible approach that allows governments selectively apply it relating certain financial instruments, institutions, and markets.

In this situation, despite the intentions voiced by the G20 leaders, there still are some concerns about the prospects of a coordinated recovery of the global economy from the crisis. In order to deal with risks brought by the process, Ukraine must improve the efficiency of management of its own international financial flows.

The most obvious fundamental decisions aimed at achieving of the global efficiency of the post-crisis global financial order, are the following:

- Making a question about the reforming of the global monetary system the agenda of the global debate in 2010.

- Making a question about the fairness and adequacy of the investment attractiveness ratings of the developing world the agenda of the global debate in 2010.

However, the question about the configuration of the future world monetary system has no answer now, because the answer must be found during the global discussion of this problem. In general, the question about the future post-crisis world monetary system as all complex of question about the inadequacy of the investment ratings of countries with the developing financial markets need an urgent, thorough, and detailed analysis in the future researches.

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Pidvysotskyi Y. [*]

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]

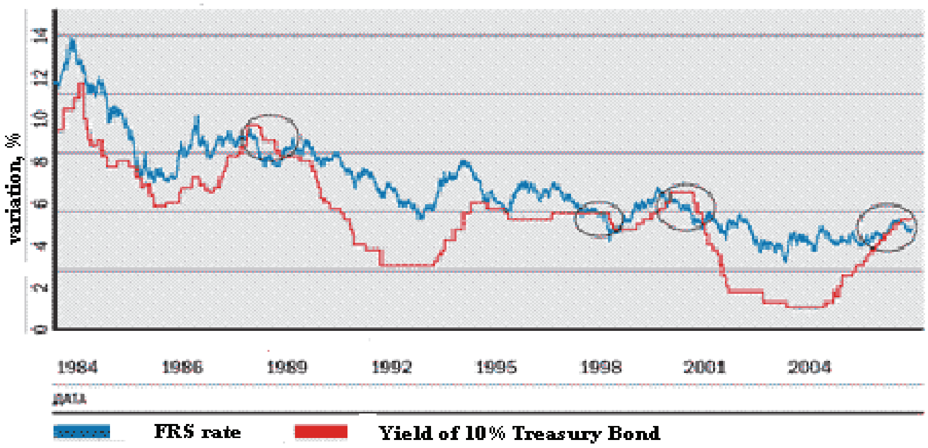

Fig. 1. Dynamics of movement refinancing USA and historic yield of 10% treasury bonds [12]

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]

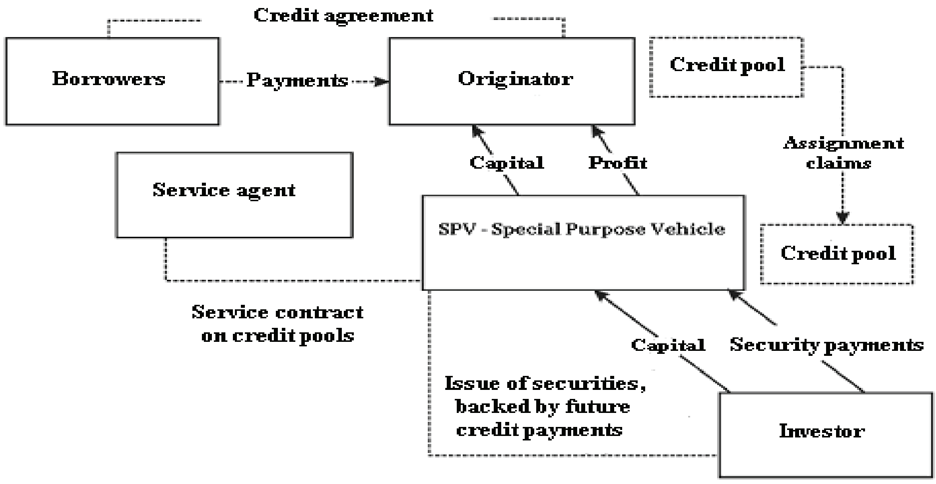

Fig. 2. Classical scheme of mortgage assets securitization [14].

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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GLOBAL FINANCIAL CRISIS AND PROBLEMS OF GOVERNMENTAL REGULATION OF INTERNAL MARKET DEVELOPMENT IN UKRAINE

Keywords: globalization, crisis, internal market, governmental regulation

The dramatic course of the world financial crisis accompanied by the deep economic recession has exposed a problem of the global factors influence on development of national economy, and in particular on domestic market. In modern scientific literature there is common understanding of globalization as a process of unique interconnected world trend, interaction and interference of different institutions, cultures and civilizations. It covers all spheres of human life but, first of all, it influences on organization of an economic life of society. Globalization of economy forms a material substance of all globalization processes, acts as an engine and sets an impulse of their development. Other spheres of public life are more inert, than economy. That is why the rates and depth of globalization in these branches are essentially lower comparing to global processes in economy [1, p.565]. Globalization of economy is based on strengthening of production and capital internationalization and is displayed in equality, unification of economic activity conditions, approximation of a price-level, removal of barriers for free movement of goods, labor, and capital.

Modern trends and contradictions of world economy, and financial markets globalization. Frequently, the financial and investment flows directions, as well as the directions of resources, technologies and finished products inside the country, are influenced by a course of global competition, its contradictions and consequences. It is important to emphasize that the global regulators lead to tectonic shifts in a competition between countries and civilizations. Depending on capital flow directions on the world financial markets the rates and the quality of economic development are differentiated for both the separate countries and the big planetary regions, which borders coincide with the world civilizations borderlines. It becomes usual that not an internal economic life on its own, but its symbiosis with world economy regulators, determines expansion or economic recession, the scale of poverty or well-being of a state [2, p.70-71].

It seemed that expansion of global processes could promote gradual liquidation of poverty, rapprochement of social and economic development levels of the rich and poor countries, mutual enrichment of cultures, and realization of wide productive dialogue between confessions of faith. However, in a real life the picture has appeared far enough from represented above idyll. According to the World Bank throughout the last thirty years a share of the third of the poorest countries in a world gross domestic product (GDP) has a strongly pronounced downdrift. Attempt to create unipolar world under the aegis of one superpower after the geopolitical accident - disintegration of the USSR, subsequent events in former Yugoslavia, Iraq, a rigid international competitiveness for resources and markets indicates what methods «of creation of the unique interconnected world» a number of the countries-ideologists of globalization are guided with. The

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religious fundamentalism, extremism and the international terrorism turn into the «plague» of the 21st century. It is clear that on such background the trust to globalization doesn't arise. On the contrary – the nutrient medium for the development of anti-global moods is formed.

At the same time it has appeared that globalization does not eliminate the national isolation of the countries and their economies. Strategy of the USA, Russia, China, and some of the most developed European countries is directed on preservation of supremacy of the national legislation over the international, as well as on strengthening of their leading positions or at least on assurance of the worthy role in the global and unified world. Almost 20-year experience of Ukraine testifies that professed universal values furthermore did not affirm practical politics, which very often contradicted national interests or reflected their absolute misunderstanding and comprehension. Identification of the national idea have not crowned success and have been changed by cyclical variation of development vectors determination – to approach to Russia and CES (Common Economic Space), or to GUAM, or to EU and the NATO. So the national interests are substituted by interests of financial and industrial groups dominating on a political Olympus. Under such conditions the main thing for Ukraine today – is to save own subjectivity in global financial and economic environment.

Noted and unexpected for national economy consequences of the global transformations of world economy testify that globalization is the process of dynamic interaction of two opposite trends – integration and decomposition. Such discrepancy of globalization appears, on one hand, in an intensification of national economies interpenetration, merge and agglomeration of economic systems as well as international markets, foundation of global financial and economic unions, creation of supernational government bodies, and on the other hand – in growth of a fragmentariness of world economic space, diversification of a trajectory and deepness of an asymmetry of national economic development, localization of economic activity, strengthening of cultural differentiation. Obviously, there are trends for weakening of interrelations between the elements of global economic system as a result of localization of economic relations in form of macroregional groups, financial and economic selfishness and nationalism of separate countries, marginalization, replacement of the poorest states to periphery of civilization development and a kind of so-called «closure» of postindustrial economies. [3, p.135].

Influence of world crisis on financial processes in national economy, internal market development. From the second half of 2008 the economy of Ukraine is characterized as gradual with steadily strengthening pressure, caused by the imbalance of trade and international balance of payment, national budget, as well as by disproportion between production and consumption. Inflationary trends grow, the balance of current payments is in sharp negative disproportion, public and corporate debt grows (in the beginning of 2009 it has reached USD 115 billion.). Abovementioned factors are the harbingers of tectonic economic shifts. Decrease in industrial production for the first quarter of 2009 is more than one third. It actually means that the economy of Ukraine is thrown back in its development for years. In key economic branches - metallurgy and chemical industry – decrease is 43-44 %, in mechanical engineering – 56 %. The construction sector reduced more than on two thirds, internal volume of freight traffic has reduced to 34 % in comparison with a previous year [4, p.1]. Undoubtedly, global financial crisis has a negative impact on the economy of Ukraine, at least because almost 50 % of a domestic bank system are supervised by foreign banks with all their problems of liquidity, deficiency of credit and investment resources, collapse of the basic world financial markets. But one of the primary factors of crisis aggravation in Ukraine is rejection from the model of renewable investment growth and accepting of the model of a political cycle in economic policy that took place in 2005. In particular, because of the expense of low interest credits, which were accessible to all world economy counteragents during the last few years, in Ukraine the artificial (monetary) growth of separate sectors of economy took place, thus, that growth of an actual income were rapidly advancing the development of labor productivity.

Modern difficulties in functioning of national economy are predetermined by inadequacy, inconsistency, and in many aspects by frank failures of economic policy, conducted throughout the last years especially in sphere of monetary, credit, and fiscal regulation of investment processes. Fast growth of monetary supply, inflation that in the end of 2008 has reached 22,5 %, has overheated economy and in tote have led to artificial growth of assets, interest rates in the currency markets and, as consequence, to reduction of access of small and average enterprises to foreign credit resources. In a context of abovementioned, experts consider probable scenarios of expansion and beginning of overcoming the financial and economic crisis in Ukraine.

Table 1 Scenarios of crisis development in Ukraine for a period till January 2010

Stages of crisis	Pessimistic prognosis	Optimistic prognosis
January-March	Decline of the sovereign and corporate rating. Refuse of basic creditors (IMF, World Bank, European Investment Bank, EBRD) to credit Ukraine. Consequences - defaults of borrowing under state guarantees. Impossibility of bank sector refunding.	Ukraine gets second tranche of IMF (about USD 4,5 milliards), credit of the World Bank - USD 500 million and financial help from other states. Refunding of banks. Restructuring of credits under the state guarantees. Decrease in funds transmitting. Stabilization of the sovereign credit rating.
May- August	USD peak exchange rate - from 10 to 15 UAH. "Hand" revision of the state budget deficit by the Ministry of Finance: increase - from UAH 31,1 billion to UAH 60 billion depending on the USD exchange rate. Probably, indemnification of budgetary deficit will be conducted by money quantity enlargement. Increase of inflation from 22,3 to 30%	A decline of negative trade balance caused by an increase of export. Tax deductions for enterprises-exporters against to reducing of social payments. Expansion of currency corridor and devaluation of national currency, which will improve trade balance.
August-October	Increase of the break between inflation and GDP dynamics. Beginning of stagflation – drop in prices for all the basic types of food against the substantial decrease of production.	Decrease of the break between inflation and GDP dynamics. USD peak exchange rating - UAH 10-12. Increase in Ukrainian bonds liquidity. Indemnification of budget deficit due to implementation of innovation programs under the governmental guarantees.
November 2009 - January 2010	Increase of national debt from USD 22 billions to USD 35 billions. Overdraft of National Bank gold-value stock by the overall state debt. Mass abandonment to trade Ukrainian bonds. Threat of sovereign default.	Ongoing devaluation will result in stimulation of export; exporters will get the devaluation profit from the depreciated currency exchange rate of UAH. Increase of demand for domestic goods on internal market. Decrease of gold-value stock consumption.

Source: According to Institute for Economy and Forecasting, NAS of Ukraine, companies Dragon Capital, Concord Capital, Astrum Investment Management // Correspondent, #5 (344), February, 14th 2009. - P.30.

Last-years expansionary monetary and fiscal policy of the Government and the National Bank resulted in so-called circle: an overwhelming part of the credits involved by Ukrainian banks from abroad were directed on consumer crediting, which increased a visible trade deficit and caused additional requirement for foreign investments, led to growth of an external debt and cost of its service. Under such circumstances it becomes obvious that possibilities of Ukraine to ensure investment process and attract foreign investments are exhausted. Course of the crisis from the beginning of 2009, an absence of the effective governmental anti-crisis program, political instability and complete imbalance of the public authority branches more again seems to go through the pessimistic scenario of event succession.

Global financial risks for the internal market of Ukraine. Under the global financial crisis and world economic recession, in combination with the deep political and transformational crisis of Ukrainian society, national economy faces variety of internal and external risks, neutralization of which becomes the prime task of internal economic policy, directed on macrofinancial stabilization, halt of setback in production as well as substantial expansion of internal market.

Among the most dangerous risks from the point of view of pressure, exerted on internal market, and trend to strengthening of an inflationary influence on economic processes, it is necessary to mention the following:

- World economic recession causes the corresponding reduction in the domestic exporters production demand;
- Domestic market competition strengthening due to the outside importers inevitably leads to sharp production decrease in food and light industries, as well as in engineering industry;
- Subsequent rise of imported natural gas prices will hits first of all the domestic industry;
- Preservation of a high-level deterioration of production assets (industry – about 60%) and inconsistency to ensure their fast modernization;
- High level of power consumption in the majority of branches;
- Low efficiency of the current mechanism of industrial exporters support;
- Underdevelopment of an industrial and logistic infrastructure;
- Backwardness of support mechanisms for innovations and technological development;
- Insufficient level of property rights protection;
- Fixing the value of a new-crop agricultural products cost on a higher level than in the previous period on score of the fuel price growth, agrochemicals, increase of labor cost;
- Increase of municipal tariffs because of the imported gas price advance;
- Influence of the devaluation expectations of households and population against the growth of negative trade balance as well as of the current account of payment balance [5, p.35-36].

The expansion of crisis processes in national economy requires urgent coordinated actions in sphere of monetary and fiscal policy, directed on financial system reorganization and modernization of real sector, namely: transition to a policy of a flexible exchange rate; selective support and strengthening of a bank system, expansion of it's resource possibilities and instruments for economic growth; strengthening of financial sector possibility to transform available assets of the households into the investment resources. From the point of view of an effective usage of limited budgetary resources it is necessary to involve the mechanisms of public contract exclusively for several priority directions of economic development, having concentrated main attention on the infrastructural projects.

The governmental regulation of the internal market in a framework of a global financial system reform. The global financial crisis has system character, influences majority of branches of economy and social sphere in each country, persuades on the structure of economy and principles of international economic relations. There is a high probability that the crisis will have long duration. In such circumstances the role of state as well as of governmental regulation of country's economic life objectively grows. It causes the actualization of polemic on eternal questions concerning the character of the state interference in economy, a parity of authoritarianism and democracy of public administration, liberal and protectionist actions in economic policy, harmonization of global and national regulators of financial and economic sphere and so forth. It is quite clear that the necessity of national economy reorientation on internal investment sources in conditions of a world financial crisis requires certain reorganization of the hole system of governmental regulation of economic processes in having regard to the external factors, and, first of all, to the long felt need of a world financial system reform. Such reform should be based on new approaches and new understanding of the market functions inversion and public regulation of economy in a context of global trends of postindustrial development of human civilization. Considering noted trends, it is necessary to clarify and determinate the scale, spheres, mechanisms and instruments of the state interference in development of national economy as a part of a global economic system of transitional type.

In Ukraine the state often interferes with those spheres, where its' presence is superfluous, and doesn't accept effective actions where it is necessary. At the same time strengthening of capacity of the state as well as of its regulating function is quite often identified with inevitable bureaucratization of economic relations, growth of authoritarianism and increase of official's authorities. The authoritarian states are not so opened; they possess methods both of economic and administrative regulation, which can not so much help to cope with crisis, as to mask) it without any instruments to identify it.

Thus, it is hardly correct to say that the state can cope with crisis because the potential of a global financial crisis considerably prevail possibilities of any state. Core question is: whether the state, or the government can prevent the crisis and what are the methods to prevent crisis process? State has possibility to interfere with compression of economy and financial sphere, which is a severe trial for the population. State can artificially overload economy with money by emission just for the period when it is necessary, and in case of proper usage of the emission mechanism it wouldn't automatically lead to inflation. The similar algorithm of behavior under the crisis undoubtedly is not ideal and comprehensive - there is a wide range of other approaches and points of view. The most important aspect is that the state, especially, such weak one as Ukraine is, has to rescue system branches and sectors of economy, and, first of all, bank system. Selective approach to the governmental aid granting should be applied in real sector in order to grantee the enterprises and the branches important from the point of view of national security, and social humanitarian sphere development.

During economic and financial crisis protectionist actions prevail in politics of leading states as a rule, despite of public rhetoric about restraint in their application. Today practically all countries implement frank protectionist actions - from import restriction to a straight line of monetary support of system banks and companies. These actions contradict both to principles of WTO and IMF, as well as to the concept of liberal economy. Under slogans about unique global strategy for overcoming crisis all leading world economies try to create their local islands of stability. There is a process opposite to globalization – it is the process of fragmentation and regionalization of the world economic space. This concerns European Union and the USA as well as the majority of other regions of the world, including the states of South Asia, Latin America, and the most developed Arabian countries.

In order to avoid traps, both ongoing liberalization and relapses of total state interventions under slogans of struggle against crisis, for the national systems of economy regulation it is necessary to find out an optimal combination of market self-regulation, global regulators and mechanisms for coordination of society economic life. These groups of methods acquire exclusive significance in the process of consolidated search for the ways to overcome the world financial crisis - interstate agreements, actions of supernational governmental bodies, programs of international financial organizations, transnational corporate governance and so forth.

In such sense the investment policy should be, first of all, directed on creation of a favorable investment climate for foreign and domestic investors, and on rising of the effectiveness of budgetary investment resources usage. Hence it follows, that state has possibilities to increase investment attraction of the country on a basis of:

1) Improvement of the investment legislation and decrease in administrative barriers for investment activity, which doesn't require capital investments from the budget;

2) Intensification of public-private partnership in different spheres of business which provides either the direct participation of the state in general projects, or its support on refundable or return basis;

3) Solution of the major state problems, which, as a rule, require budgetary investments through the quality of an investment climate and support prospects (especially at the initial stage) from external non-governmental sector of economy [6, c.92].

It is clear, that mentioned activities are far not enough to solve the issues of necessity to work out effective investment strategy for the state to overcome crisis of the world financial markets, but they allow to buff it's consequences for Ukraine and to lay the foundation for abrupt structural and investment maneuver to support social and innovational reorientation of national economy development.

Conclusions. Financial and investment possibilities for post-crisis development of the internal market of Ukraine. Despite of the negative long-term consequences and current risks, world financial crisis gives certain possibilities of development for economy of Ukraine. In particular, sharp price fluctuations on energy recourses determine the necessity of implementation of the energy-conserving programs in public and private sectors of economy. Membership in WTO and negotiations concerning the free trade agreement with European Union will induce to more sober, unseated to euphoria, estimation of Ukrainian position in the global competitive environment; it will move forward harmonization of national legislation with European one, and will make irreversible the subsequent market transformations in combination with state and global regulators of economic development. The reduction of cheap foreign credit sources will lead to the incensement of demand for the domestic sources of financing and give a stimulus for establishment of corresponding institutional possibilities. The aggravation of a trade balance and the balance of current accounts will accelerate the implementation of concrete actions directed on investment climate improvement. The long-term trend of growth of the world food prices will quite probable promote the rapid development of agrarian sector of economy, reorganization of a modern infrastructure for agricultural production. The irresponsible policy of advancing growth of actual population's income in comparison with GDP growth and impossibility of indemnification of inflationary losses for citizens will necessitate the implementation of a wide range of social reforms such as the income policy, social assistance, and provision of pensions.

It is clear that post-crisis reforming of the national economy, changeover to a new paradigm of governmental regulation of economic processes requires accumulation and redistribution of significant financial resources. Except for the limited budgetary resources, Ukraine can expect, firstly, for the resources of population in case if the bank system will be trusted again; secondly, for the interstate credits directed on the large-scale mutually advantageous programs of development; thirdly, for the financial support of international organizations (IMF, IBRD, EBRD, probably – banks of the large-scale regional organizations); fourthly, for the rest of profits of national capital, which can be invested to the prospective national programs based on public-private partnership; fifthly, for the competent measures directed on a shadow economy reduction [7, p.5-6].

In each specific case it is a question of billion dollars, borrowed funds that considerably exceeds volumes of expected overall credits, given by international financial organizations. And in each of abovementioned cases these funds can be used divergently: money of citizens– for public investment (first of all: social infrastructure, housing and communal services), external loans – for capital investment projects and stability of financial system, domestic investments of national capital – for new programs of structural reorganization of economy.

For Ukraine it is important to overanalyze the ideas, which are now discussed in Russia and EU, concerning the development of coordinated programs for overcoming crisis. Big groups of countries will form stabilizing funds to ensure stability of the regional markets by distribution of public contracts between domestic commodity producers. For Ukraine it will mean necessity to carry on serious negotiations both with European creditors, and with Russia.

However, the implementation of abovementioned, as well as the other possibilities of post-crisis improvement for Ukrainian economy to a great extent depends on whether it will be possible to avoid redundant politicization of economic processes and to overcome social populism, temptations of imperious elite to hide their personal administrative inconsistency under the consequences of the world financial crisis.

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Nasadiuk I.*

EMPIRICAL STUDY OF PREFERENTIAL ARRANGEMENTS IMPACT ON UKRAINE'S EXTERNAL TRADE

Стаття має на меті здійснити формальний кількісний аналіз двохсторонньої торгівлі України для знаходження значущості та напрямку впливу преференційних торгових режимів, у яких бере участь Україна, на її зовнішню торгівлю. Методологія вивчення взаємозв'язку полягає у використанні регресійного налізу гравітаційної моделі двохсторонньої торгівлі та фіктивних змінних, які контролюють участь України у наступних режимах преференційної торгівлі – зони вільної торгівлі, Генеральна система преференцій, Світова торговельна організація. У той час, як було знайдено позитивний вплив зон вільної торгівлі и Генеральної системи преференцій на розвиток зовнішньої торгівлі України, оцінена регресія засвідчила відсутність позитивного впливу членства України у СОТ на двосторонню торгівлі України з іншими країнами світу у 2008-2009 рр. Також стаття містить характеристику обмежень здійсненого аналізу та наслідки для економічної політики.

The article has the purpose to conduct formal quantitative analysis of Ukraine's bilateral trade to find out the significance and direction of impact of preferential trade arrangements on Ukraine's external trade. The methodology of the study comprises regression analysis of gravity model of bilateral trade with dummy variables controlling for the following preferential trade arrangements – free trade area, General System of Preferences, World Trade Organization membership. While free trade areas and GSP regimes are found to have positive impact on Ukraine's external trade development, the estimated regression showed no positive influence of WTO membership on Ukraine's bilateral trade in 2008-2009. Limitations of the conducted analysis and economic policy implications are also discussed.

Key words: Ukraine's external trade, gravity model, WTO memberships, free trade agreement

Introduction

Ukraine as the newly independent state is in the process of formulating and implementing its external economic policy which is supposed to stimulate market relations and foster economic development of the country. Since the start of transition to the market the reform of the external sector was the major success, since the liberalization of external trade which was formerly under total control of the state stimulated the market transformation of the country, facilitated transfer of technology from abroad, contributed to the increase of households' income, increased the goods variety and corresponding services in the internal market. While the liberalization of the state monopoly of the external sector is over, the issue of better integration in in-

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ternational markets is still important for the country's economic policy.

Export sector remained the main driving force of the GDP and GDP per capita growth in Ukraine since 2000. Barrier-free access of Ukrainian producers to international markets is vital for sustainable economic development. Companies selling abroad (primarily metals, agricultural products, chemical industry products, some machinery) partially use proceeds to invest into new production capacities and in new technologies. Thus, the state policy reflecting the interests of wide layer of manufacturers and consumers is aiming to facilitate access of Ukrainian commodities and services to the international markets.

Nowadays Ukraine's integration and trade policy is located between two vectors – European and Eurasian. The first one can lead Ukraine to closer trade relations with EU countries that represent a 450 million high-income market for Ukrainian goods, but also can stimulate the transformation of Ukrainian weak institutions. The Eurasian vector constitutes closer relations with the Commonwealth of Independent States, exports to this region is important for Ukraine since it is more technologically intensive then the trade with developed countries of Europe. Currently external policy is oscillating between these two directions.

Nonetheless, besides the qualitative arguments toward specific trade policy measures, the formal study of the effectiveness of Ukraine's trade arrangements is needed. The purpose of this paper is to conduct regression analysis of Ukraine's bilateral trade to find out the significance and direction of influence of preferential trade arrangements among the various other factors that affect trade – economic potential of the partners, average income, transport costs.

Preferential arrangements in Ukraine's external policies

The end of 2000's decade was marked by the intensification of Ukraine's efforts to extent the scope of the country's preferential trade arrangements. The first wave of such policies took place in the middle of 1990-s when Ukraine launched a series of free trade zone with the countries of the Commonwealth of Independent States and also with Macedonia. These preferential arrangements were a natural consequence of the long-standing cultural, economic and political ties of former USSR republics and former socialist bloc. Nonetheless, the researchers remained skeptical about the feasibility of those arrangements as during their history they have been characterized by numerous amendments and exclusions, "trade wars" and liberalization reversals which lowered the effectiveness of trade liberalization policies in the region.

Until 2004 Ukraine had free trade arrangements with three Baltic States. These trade arrangements with Latvia, Lithuania and Estonia were abolished when Baltic States entered EU common market in 2004.

After conclusion of the free trade agreements with former Soviet republics Ukraine made efforts to liberalize trade with major trade partners in the west. After the Cooperation and Partnership agreement with EU was signed in 1994, EU countries granted Ukraine access to their market through the UN Generalized System of Preferences. This trade regime covered around 74% of Ukraine's trade with EU [1] in 2008 and helped maintain large trade volumes with western neighbors. Other countries that granted Generalized System of Preferences benefits to Ukraine were Canada, Japan, Turkey and USA [2].

Further step to liberalize external trade and integrate into world economy was related to GATT/WTO membership. Negotiations between Ukraine and WTO started in November 1993 and lasted 14 years. The process of Ukraine's accession into world most important trade forum lasted became more dynamic in 2005-2008. The efforts at the state level were intensified during the presidency of Victor Yushchenko who promoted Ukraine's integration into world economic institutions. During 2005-2008 Ukraine changed over 50 national regulations to comply with WTO standards. The country introduced the requirements of WTO in the spheres of technical standards, intellectual property, export duties on agricultural products, insurance and banking, import of transport vehicles, taxation of agricultural firms, veterinary medicine, licensing, international good codification system, etc.

In 2009 approximately 52% of Ukraine's external turnover corresponded to the WTO members, while WTO members trade on average accounts for around 90% of world trade. This incompatibility of the trade structure results from the fact that large amount of trade Ukraine maintains with the Commonwealth of Independent States countries – primarily Russia, Belarus, Kazakhstan, Turkmenistan, Uzbekistan. In 2009 the Commonwealth of Independent States corresponded to 37% of Ukraine's exports and 40% of Ukraine's imports [3]. The trade partners from CIS region are not WTO members. Belarus, Russia and Kazakhstan formed customs union in 2010 maintaining the external tariff higher then Ukraine which has more liberalized trade regime. It remains the main obstacle to Ukraine's economic integration into Eurasian community, since WTO regulation prohibits increase in MFN tariff after entry into preferential trade regional organization.

The long process of WTO accession finished in 2008. On February 5 Protocol of Ukraine's accession into WTO was signed at General Council meeting. After protocol ratification in Ukraine WTO membership came in to effect on May 16, 2008. The WTO entry was expected to ease Ukraine's access to foreign markets, increase volume of Ukraine's external trade, to strengthen positions in international trade dispute settlement, attract foreign direct investment and improve internal investment climate. The significant expectation of WTO accession has been the possibility of free trade agreement with EU, Ukraine's negotiations with EU started shortly after entry to WTO in 2008. Ukraine accession into WTO paved the way to the conclusion of free trade agreement between EU and national economy which is scheduled to start in 2011. Greater integration into EU is preventing deeper integration with CIS countries many of which are not members of WTO. Thus, in case Ukraine would like to join customs union in CIS the country will have problems to comply with WTO regulations.

The actual impact of WTO accession on Ukraine's economy and development needs to be examined and forms the goal of the current study. The article will analyze the implications of WTO membership for Ukraine's trade and investment. The statistical methods will be used to follow the development of external trade and investment. They will be complemented by the regression analysis of Ukraine's trade in the framework of gravity model of trade which is widely used by researchers to analyze the factors of trade behind the transport costs and market size. The major problem of the research is the little history of Ukraine's WTO membership. Correspondingly there is still little empirical data available on foreign trade development during WTO membership to infer long-term conclusions. Yet this paper aims at studying the results of the first two year of Ukraine's membership in the World Trade Organization.

Statistics of trade and investment in 2008-2009 years

In 2006 the average most favored nation tariff in Ukraine amounted to 6.9%, including 23% on agricultural products and 4.4% on non-agricultural products. After WTO accession average MFN tariff decreased to 5.5, while the tariff on agricultural products was reduced to 13% and the tariff on industrial products remained the same [4]. Ukraine still maintains export duties on commodities that are subject to export charges today: scrap of ferrous metals and alloyed steel, sunflower seeds, live animals, skins of cattle. Ukraine also committed to liberalize cross border supply of services through mode 3 (commercial presence) in 139 out of 155 sectors. Ukraine opened the banking market allowing branches of foreign banks to operate in the country and insurance market by allowing non-resident re-insurers dealing with certain kind of risks [5].

The first year of WTO membership coincided with the beginning of the world deepest recession since the Great Depression. Yet for external trade development 2008 was successful year due partly to the ease of access to the international markets. In 2008 comparative to 2007 the volume of external trade in goods and services of Ukraine rose by 33.8%, imports of goods and services – by 38.8%. The importance of WTO membership can be proved in 2008, since the smallest dynamics of Ukraine's external trade was attributed to the region of Commonwealth of Independent States consisting predominantly of non-WTO members. The exports to the CIS region rose by 24% (to Russia – by 20%), while exports to Europe increased by 33%, Asia – by 47%, USA – by 67%, Australia – 3.8 times. The abolition of import quotas on Ukrainian metal products helped to increase the trade of manufactured goods between Ukraine and EU and other European countries. Exports of metals to Bulgaria increased 3 times and to Romania – 1.7 times.

Imports of goods and services from Russia grew by 16% (non-WTO) while purchases from Europe increased by 32%, Asia – 69%, America – 71% [6]. Due to the fall of the general world supply and export prices external trade showed a negative dynamics from which it is hard to disentangle the impact of country's WTO membership. In 2009 total exports of Ukraine decreased by 37%, imports – by 44%.

The external trade of agricultural products amounted to 18 USD bln in 2008, 1,6 times more then in 2007. Positive agricultural trade balance accounted for 4,5 USD bln. Comparative to 2007 exports of agricultural products of Ukraine rose by 66%, though import also increased by 55%. The positive development of agricultural trade was facilitated by liberalization of export duties of sunflower seeds and import quotas of grain.

Significant result was expected in the area of foreign direct investment in Ukraine, though the expectations didn't materialize. The inflow of FDI into Ukrainian economy amounted to 6.2 USD billion in 2008, by 22% less then FDI inflow in 2007 [7]. 2008 and 2009 years were not good years to attract the foreign capital on the falling or unstable international financial markets.

The general conclusion from statistics analysis after WTO entry is that the initial push to external trade generated by WTO accession wasn't maintained as Ukraine entered the recession and faced falling demand on external markets.

Yet important result of WTO membership was the start of the negotiations between Ukraine and EU concerning the deep free trade area arrangement and EU association agreement. The deep and comprehensive area is unlikely to substantially decrease amount of mutual protection between Ukraine and EU, but its most important component is the further adaptation of Ukrainian industrial and agricultural production standards to EU and international norms. Deep free trade area is a channel through which positive institutional change in business environment and business/government relationship is expected to take place. EU remains second largest trade partner of Ukraine after Commonwealth of Independent States, accounting for 24% of Ukraine's exports in 2009 (CIS-37%). EU market with 450 million population and huge economic potential represents attractive trade possibilities for Ukrainian export goods producers.

Regression model of Ukraine's trade under WTO membership

Andrew Rose in his paper "Do We Really Know that the WTO Increases Trade?" (2003) found little evidence that countries joining or belonging to the GATT/WTO have larger trade volumes than outsiders [8]. The study unutilized standard "gravity" model of bilateral merchandise trade and a large panel data set covering over fifty years and 175 countries. The gravity model of bilateral trade explains the natural logarithm of trade with the logarithms of the distance between the countries and their joint income. The papers found strong connection between trade volumes and distance, GDP, GDP per capita, regional free trade zone arrangement, common language, common colonial history, being a beneficiary of General System of Preferences, WTO membership. The author obtained statistically significant results; nearly 65% of the trade variable is explained by the chosen factors of trade. On average more distant countries trade less. Economically larger (with higher GDP) countries have larger trade volumes, while countries with higher average income have greater amount of trade between each other. Countries that are members of regional preferential trade arrangements trade more, as do countries sharing the same language or border. Shared colonial history encourages trade. Since the dependent variable is the natural logarithm of real trade, the GSP is estimated to raise trade over one hundred percent (since exp(.86) -1 »136%)! The general result if the Rose's paper is that there is no positive impact of WTO on bilateral trade volume. But since the GSP is associated with an approximate doubling of trade, only some WTO policies facilitate international trade.

Rose's paper discovered that membership in the GATT/WTO have no substantial effect on trade. The dummy variables for one or both of the countries being GATT/WTO members both have small negative coefficients (-0.04 and-0.06 correspondingly). It means that that membership in the GATT or WTO actually reduces bilateral trade. Extension of the GSP from one country to another seems to have a large positive effect on trade, the GSP variable has positive coefficient of 0.86.

The purpose of this study is to capture the influence of preferential agreements on Ukraine's external trade. The methodology used is the regression analysis of the bilateral trade gravity model employed widely to analyze external relations of countries. To study the connection between participation in preferential trade arrangements and pattern of Ukraine's external trade the gravity model includes not only economic size and distance between partners, but also other variables important for mutual trade. The gravity model of external trade which is analyzed has the following form:

$$\ln Trade_{ij} = \alpha + \beta_1 \ln GDP_j + \beta_2 \ln Dist_{ij} + \beta_3 \ln GDPpc_j + \beta_4 FTA + \beta_5 GSP + \beta_6 WTO + \varepsilon_j \quad (1.1)$$

Where lnTrade – natural logarithm of annual trade turnover (export plus import) of Ukraine in 2009 with a particular country, current prices,

lnGDPj - natural logarithm of gross domestic product of Ukraine's partner in current prices, Dist – logarithm of distance between Kyiv and capital of trade partner in km,

lnGDPpc – natural logarithm of GDP per capita of a trading partner,

FTA – dummy variable, equal to 1, if Ukraine has a free trade zone arrangement with a trade partner,

GSP – dummy variable, equal to 1, if partner grants trade preferences to Ukraine under General System of Preferences (currently Canada, EU countries, Japan, Turkey, USA),

WTO – dummy variable, equal to 1, if Ukraine and its trade partner are both members of WTO in the corresponding year.

Trade statistics is taken from official Ukraine data (State Statistics Committee of Ukraine) [7], GDP, GDP per capita data was taken from IMF World Economic Outlook Database [ ], data for dummy variables was obtained from World Trade Organization [ ], UNCTAD [2], Ministry of Economy of Ukraine. The panel data covers 144 largest trade partners of Ukraine from all parts of the world across 4 year – 2006-2007 (2 years prior of WTO accession) and symmetrically 2008-2009 (2 years of Ukraine's WTO membership). Regression analysis of the abovementioned model for Ukraine and 144 trade partners in 2006-2008 rendered the following results:

$$\ln Trade = 0.483 \ln GDP - 0.219 \ln Dist - 0{,}191 \ln GDPpc + 0.103 FTA + 0.091 GSP - 0.373 WTO$$
$$\_\_\_\_\_\_\_\_(11.809^{***})\_\_(-5.130^{***})\_(-4.357^{***})\_\_(2.833^{***}) + (1.988^{**})\_(-11.442^{***}) \quad (1.2)$$
$$R^2 = 0{,}42$$

The regression shows little degree of adequacy, about 42% of variation in trade is explained by 6 independent variables. Originally 2 more dummy variables controlling for the common border and language between trading partners were included in the regression, but the model estimation rendered very insignificant coefficients for these variables and little correlation with trade turnover.

The estimated coefficients show the amount of Ukraine's trade depends positively on the economic size and market size of a trade partner, represented by the GDP amount: the greater the income of the country, the larger amount of trade turnover Ukraine has with this country. On average increase in partners GDP by 1% increases bilateral trade by 0.483%. The obtained coefficient is highly significant with 0% probability of Type II error.

The distance between capital cities proxies the transport costs and is inversely related to the trade amount between Ukraine and particular country: increase in the distance by 1% on average corresponds to 0.22% decrease in trade. Distance is widely used in gravity model to capture the transport costs associated with delivery of goods to a particular country: the longer the distance is the more expensive it is to transportation merchandise to the destination. The regression results comply with the theory and are highly significant.

Coefficient at income per capita in the trading partner render interesting results: Ukraine on average traded with countries with lower income. If the per capita income is lower by 1%, the trade volume is on average larger by 0.1915. This result can be explained as follows. Ukraine's export has low technological intensity. On average only 17% of total merchandise trade of Ukraine is technological, thus Ukraine's trade will not follow intra-industry trade pattern, but be rather explained by the comparative advantage. Almost 60% of exports to the Commonwealth of Independent States represent machines and equipment and this region accounts for around one third of Ukraine's trade. But former Soviet republics are mostly low middle income countries, thus on average Ukraine trades with lower income countries, since intra-industry trade requires a higher level of economic and technological development that Ukraine hasn't achieved yet.

The chosen dummy variables can reveal if Ukraine has higher trade volumes already explained by GDP, GDP per capita of trading partners and distance between them with certain group of countries. The analyzed groups have been 1) the trading partners granted Ukraine benefits under Generalized System of Preferences, 2) trading partners that signed preferential trade arrangements with Ukraine, 3) countries that are ember of WTO in the years of Ukraine's WTO membership.

The coefficient at the dummy variable FTA, controlling for the fact that Ukraine and its trade partner have free trade zone agreement is statistically significant and positive showing that the free trade regime is associated with higher trade volumes for Ukraine. After 2004 only former Soviet republics and Macedonia were Ukraine's trade partner with whom Ukraine stroke free trade zone agreements yet in the 1990-s. The regression results show that these arrangements facilitated the higher export and import volumes of Ukraine: preferential trade arrangement is expected to raise trade by 11% (exp(0.101)-1). The obtained coefficient is highly significant with 0% probability of Type II error.

The dummy variable for General System of Preferences showed that Ukraine on average has 10% higher trade volume with Canada, USA, EU countries, Japan and Turkey which grant her trade preferences. The estimated coefficient has 5% probability of Type II error. The importance of GSP status for Ukraine in 2006-2009 has the same influence on trade as free trade zones. The largest GSP granter of Ukraine is the European Union corresponding to one third of Ukraine's total trade. Thus, this system facilitated significantly Ukraine's trade in Europe.

In contrast the dummy variable for the joint participation of Ukraine and its partner in WTO shows that WTO membership had negative influence on Ukraine's trade development in 2008-2009. On average the fact that Ukraine and its trading partner are members of WTO in corresponding year lowers trade by 45%, the amount that in absolute value is larger then common influence of free trade zone and General System of Preferences arrangements. This situation may be connected with the fact that the period of Ukraine's participation in WTO is too short for the changes to have effect. Also world financial crises may have disrupted the results which already lack extensive statistical coverage. Though fall in income is partially taken into account, since GDP and GDP per capita variables had correspondingly less value in 2009 year when effect of world financial crises was the deepest.

Results for 2008, 2009 and 2008-2009

The model estimation is modified to explore the impact of WTO membership of Ukraine in the concrete years of the WTO membership – 2008 and 2008-2009 years. The model specification and data sources remain the same while three more regressions are run for the set of data corresponding to different time period: 1) 2008, 2) 2009, 3) 2008-2009.

The following regression results were obtained:

1) Data for 2008:

$$\ln Trade = 0.703\ln GDP - 0.385\ln Dist - 0{,}086\ln GDPpc + 0.202FTA + 0.008GSP - 0.008WTO$$

$$\_\_\_\_\_\_\_\_(12.530^{***})\_\_(-6.276^{***})\_(-1.396^{***})\_\_(3.996^{***}) + (1.126)\_\_\_(-0.170)$$

$R^2 = 0{,}72$

2) Data for 2009:

$$\ln Trade = 0.695\ln GDP - 0.414\ln Dist - 0.089\ln GDPpc + 0.222FTA - 0.010GSP - 0.039WTO$$

$$\_\_\_\_\_\_\_\_(12.488^{***})\_\_(-6.756^{***})\_(-1.547)\_\_\_\_\_(4.397^{***})\_(-0.155)\_\_(-0.786)$$

$R^2 = 0{,}742$

3) Data 2008-2009

$$\ln Trade = 0.481\ln GDP - 0.245\ln Dist - 0{,}234\ln GDPpc + 0{,}108FTA + 0.033GSP + 0.0WTO$$

$$\_\_\_\_\_\_\_\_(7.351^{***})\_\_(-3.396^{***})\_(-3.384^{***})\_\_\_(1.817^{*})\_\_\_(0.427)\_\_\_\_(0.006)$$

$R^2 = 0{,}239$

The regressions limited to the years of Ukraine's WTO membership demonstrate the strength of the gravity model: higher trade volumes of Ukraine are associated with the larger GDP of a trading partner and less distance between Ukraine and a trading partner. The obtained coefficients for variable lnGDP and lnGDPpc have 0 probability of Type II error. The things are more complicated with the dummy variables corresponding to various forms of preferential trade arrangements. The free trade zone arrangement on average stimulated Ukraine's trade in 2008 and 2009 years. In all three modified regressions the FTA dummy variable has significant coefficients.

The influence of General System of Preferences on Ukraine's bilateral trade was not found. Low significance level of the obtained coefficients does not allow to infer any substantial impact of this preferential arrangement on Ukraine's trade in 2008 and 2009. The reason for that may be the world financial crises broke that influence that was present in 2005-2006 years.

The WTO membership didn't seem to matter for Ukraine's external trade in the first two years of Ukraine as a member of international trade forum. While the estimation of the 2006-2009 years data found negative impact of WTO membership on trade, estimation of 2008-2009 data found no significant influence of WTO membership on Ukraine's total trade.

Conclusions

Thus, the conducted analysis found positive relation of Ukraine's trade volume to the market size of its trading partners, free trade regimes between counties, and negative connection with the distance between capital of the trading partners, as well as average per capita income of Ukraine's trade partner. The estimated model found negative connection of WTO membership and trade volume of Ukraine. The importance of free trade agreements and General System of Preferences for the Ukraine's trade volume maybe a foundation for projection that free trade zone agreement between Ukraine and EU countries will positively affect the export and import relations.

The regression of the data limited to the two years of Ukraine's WTO membership also didn't reveal positive influence of WTO on Ukraine's bilateral trade. World financial crisis and little history of Ukraine's WTO membership may be held responsible for the absence of positive results of formal analysis of Ukraine's external data. But better results maybe obtained by changing the regression model or by breaking up the data into industrial countries and other countries sections.

The positive influence of free trade zone arrangement demonstrates that probably conclusion of free trade zone agreement with EU countries maybe more effective in boosting Ukraine's trade rather than single WTO membership. Actually WTO entry of Ukraine had a goal of fulfilling the EU requirements of being WTO member before deep and comprehensive free trade. Thus the results obtained in this paper may be evidence that external trade policy should proceed to more progressive preferential trade agreement with EU to catch more external trade creation effect.

The gravity model of Ukraine's trade may be used to project the future Ukraine's external trade flows in case some of the policy variables may change. For example, projections of the impact of deep and comprehensive free trade area between EU and Ukraine can be obtained by extrapolating dependent variable and controlling FTA dummy variable.

The possible extensions of research could be use of longer time period for WTO membership related to post-crisis trade development of Ukraine. Also more factors could be included in the model to raise the level of the explanatory power of the independent variable. These factors could be level of tariff protection, index of trade freedom or level of economic freedom in general etc.

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Batrimenko V.*

MICROFINANCE REGULATION INTENSIFICATION OF TRANSNATIONAL BANKS IN EMS AS THE DETERMINANT OF SYSTEM CRISIS RECOVERY

The article is devoted to research of macrofinancial mechanisms of national economy's regulation in conditions of overcoming the system crisis. In this work the theoretical and practical aspects of improving cooperation between state and interstate movement of transnational regulation of bank capital in emerging market economies are analysed.

Keywords: transnational banks; international banking; macrofinancial regulation; system of interaction with the international banking business, global financial crisis, the penetration of foreign banking capital; countries with Emerging Market Systems.

Стаття присвячена дослідженню механізмів макрофінансового регулювання національної економіки в умовах виходу з системної кризи. В роботі проаналізовані теоретичні та практичні аспекти удосконалення системи взаємодії державного та міждержавного регулювання руху транснаціонального банківського капіталу у нових ринкових економіках.

Ключові слова: транснаціональні банки; міжнародна банківська діяльність; макрофінансове регулювання; система взаємодії з міжнародним банківським бізнесом; світова фінансова криза; проникнення іноземного банківського капіталу; країни з ринками, що формуються.

The global economic crisis has caused profound changes in international markets of bank services and capital, and also had important consequences for the structure of both the global currency-financial system and the local financial markets. One of the leading tendencies of modern international economic relations consists in profound transformation of macrofinancial regulation in field of cooperation between national-economic systems with transnational banks, caused by radical influence of globalization of financial capital.

Globalization of the world's financial resources has led to the reduction of the influence of national governments in emerging market economies on national finances. Simultaneously, the influence of transnational banks, international institutional investors and international speculators on national financial markets is amplifying. In globalization the condition of national finances is increasingly dependent on the behavior of residents who actively show their presence on the national financial markets, the condition of financial markets in other countries and regions, as well as from the variability of conjuncture in international financial centers.

The negative consequences of these processes were particularly evident during the global financial instability of 2007-2009. As a result billions, accumulated in several global specula-

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tive funds, giving in to panic about the loss of assets were transferred instantly from one currency to another with only one computer keyboard pressing, demonstrating in such a way the ability to destabilize the monetary system of any country. Moreover, the implementation of new information systems and banking technologies led to an increased financial capital's ability to move quickly. The urgent need to intensify the macrofinancial regulation in field of the cooperation with transnational banking capital in emerging market economies as a factor of overcoming the system crisis has especially sharply risen after the series of regional monetary and financial collapses.

Theoretical concepts of methodological and institutional aspects of economic development macrofinancial programming in conditions of the banking business internationalization conducted in the work of such scientists as P.Allen, I.Ansoff, B.Buchwald, E.Barucci, J.Bhagwati, S.Claessens, A.Greenspan, R.Levine and others.

Among the famous scientists who have made their contribution into the development of methods and practice of interaction with transnational banking capital in emerging market economies, it is necessary to note the researches by T.Ash, F.Di Mauro, V.Dinger, D.Dwor Frecaut, K.Forster, A.Hawser, J.Keay, K.Pawar, J.Riedel and others..

Global calls of the financial crisis are basically reduced to consideration of several issues about which mechanisms should be applied to mitigate its negative effects on the development of the global financial services industry. Also, the problematic of future world banking sector s, which in post-crisis period must acquire new features and get a qualitatively new socio-economic content, requires essential scientific reflection.

It should be noted that the collapse of one of the largest transnational banks Lehman Brothers became a disaster not only for the global financial sector, but for the entire global economy. Despite such measures as government guarantees of schemes, some reduction in the use of indirect monetary policy introduced by national governments of industrialized countries suffered to rescue financial institutions, the future of many large banks remains uncertain. After all, the most visible results in the stabilization of global financial system, as well as enhancing investor in international financial markets, has been achieved through direct government intervention.

The financial markets continue to struggle with opaque capital structure, which often exceed the reasonable limits of adequacy of banks' balance sheets. Along with writing off inactive (hopeless) of assets, reducing their balance sheets as banks try to keep regulators proposed capital adequacy levels, although mobilize new financial resources at the present stage is extremely difficult. The current world financial market looks desolate, because it lost tens of trillions of dollars in the period 2007-2009 [10, p. 41].

Despite the use of all tools of action by governments of different countries for rehabilitation of national financial systems, there is still an acute problem of availability of sufficient sources of private capital that would balance the economic performance of large multinational banks. First, banking circles emphasize that at the present stage of development of world economy there is no holistic "financial landscape", and left only "financial ruin". International banking is in the situation, the dominant component of which is that some big financial institutions continue to struggle for survival, and their shares are traded at a price, which ranges from 60 to 70% of their real value [1].

In these conditions, especially great significance is increasing regulatory and supervisory role of the state as at the macro level and intergovernmental cooperation on megalevel of world economy. Before the country is first priority to minimize aggressive expansion functions of international financial capital, deep transformation in regulatory policy are expected at the global level. A number of bank control could not predict the time and assume that the size of some banks become so wide that a country simply will not be able to save them. For example, even in the UK and Swiss government circles were shocked by what some of the capitalization of financial institutions is greater than the amount of economic potential.

Regulatory authorities of many countries also failed to detect those difficulties which arise in the functioning of the structures with cross-border assets. However, the impact of international regulatory rules and regulations can be effective only if the authoritative intergovernmental supervisory body, which is in crisis can become a lender of last resort. Before the heads of central banks of different countries at the present stage there is the most important issue of forming a new global economic regulatory institution that should be provided with adequate powers and resources to prevent global shocks of 2008 in the future. It should be the main task of the International Institute will be the formation of new rules to control the level of risk that multinational banks are building portfolios of active operations [7, p. 650].

Introducing a series of regulatory measures to normalize the situation in the financial services industry in late 2009, such as stabilization packages for large banks, changes in monetary policy but also on financial incentives had some positive results. In particular, thanks to central bank intervention gradually decreased liquidity shortage, there has been renewal of various financing instruments, began trading on the bond market to cover. However, high levels of bad loans (non-performing loans - NPL), unsecured assets and credit losses banking groups in a purely quantitative assessment gives reason to consider the need for nationalization of some structures.

Therefore, the most effective means at the present stage of withdrawal from systemic crisis was massive recapitalization of banks with the mandatory state participation. In addition, banks will be quite difficult in the coming years to mobilize new capital to offset current and future losses without government assistance. Thus, large Western European banks during the crisis period of 2008-2009 could reach $ 175 billion, of which 62% - with the issue of new shares and about 57% of concentrated capital was provided by national governments [11].

However, the wave of nationalization that swept the global financial sector, financial institutions complicates the task of mobilizing capital for investors as the situation in this case remains uncertain and obscure. Banks initially go to market places to raise cheaper capital through issue of hybrid shares. But the closure of markets for hybrid instruments financial institutions were forced to produce more expensive preferred stock, and that until the market is not closed. Another area of increasing capital for banks became sovereign funds, however, after investors began to absorb the losses of banks, the cost of capital was very high. Lack of clear understanding by investors of complex capital structure of banks has made them almost impossible for equity contributions, but use the simplest and most expensive instruments entering the stock market. At the same time, investors are concerned about the nationalization of financial institutions and the massive dilution of shareholding, which also creates difficulties for banks in the mobilization of net equity. It is not wrong to compensate for losses due to the use of hybrid instruments that contain the obligation to repair the damage after 10-20 years.

Comparative analysis of modern ways of reforming government regulation mechanisms MFA in cooperation with multinational banking capital suggests that the situation in China is instructive example of reverse trends in the financial market, where, unlike Western markets during 2009 unfolded credit boom. Only the first half of 2009 Chinese banks provided loans totaling about $ 1.1 trillion. and actively continue to finance various projects in 2010 [9, p. 58].

It is important to emphasize that Chinese banks are performing and scenarios developed by the government in lending plans for the national economy. However, they have long exceeded their designed for government loan volume indicators, but continued pursuit of profits. Probably later portion of these loans will go into the category of bad debt, but the Chinese bankers have shown particular concern because government policies aimed at increasing the money supply as banks are well protected as self-supporting.

Forms and methods of stimulating business activity in the real sector of the national economy of China have been worked out yet 80-years, the twentieth century. When the government directive regulating lending banks unlimited large state enterprises. However, the policy decision on lending led to the accumulation of financial institutions y huge amounts of bad debt, borrowers who never intended to return. On 01.01.2004 their volume reached a mark 20,4% of total loan portfolio of the banking sector, which constituted 16.5% of GDP in China.

These negative processes threatened to escalate into default, the macroeconomic situation in China, but it is government measures to transform the regulatory mechanisms of macro-financial instability allowed to minimize risks. In particular, was established banking regulatory commission (SVRS) as an institute of state of crisis management, under the supervision of the national financial institutions were directed $ 100 billion of public funds, and preferences were formed to attract multinational banks, as foreign strategic partners, except cheap financial resources, the Chinese bankers provide best practices, knowledge management and business technology. By the end of 2008 the bad debt declined to 2.5% of the loan portfolio, which is also accompanied by profound changes in corporate culture: employees of financial institutions began to act as strategic managers, a not-leaders as agents of government policy.

The consequence of this reform was the way of big Chinese banks on the trajectory of self-sustaining growth, which clearly shows listed in the Hong Kong Bank of China, Industrial and Commercial Bank of China and China Construction Bank (CERs). It is important to underline that the present credit and financial institutions have shown relatively high economic results during the global economic crisis and global recession, particularly in cer tax profit 01.01.2009 increased by 26.9%, almost 120 billion yuan ($ 17.5 billion .) CER has become a leader in the field on speed increase in income from interest and commissions (22.8%). In addition, the Bank has established special branches to serve small and medium enterprises, management of cash management services and investment banking, expanding base of retail customers and increasing amounts of wholesale operations, where cer ranks first in the country in areas of infrastructure finance and insurance of mortgages. Thus, 98% CER business is concentrated in China, where there are 13.4 thousand branches and the world's largest ATM network (ATM 31.9 thousand 01.01.2009 [12, p. 72].

It is clear that the global crisis has reached China, extremely high rates of economic growth, which is still provided social stability (increasing the number of jobs at 20 million per year) in the past. Liquidity flows have already reached the maximum marks on the stock exchange, real estate market shows rapid growth in prices. In addition, Chinese exports fell sharply during 2009 - an annual decline was 23%, a foreign direct investment decreased by 35.7%. It should be noted that the state policy of China in the MFA program of economic development priorities clearly maintains macroeconomic dynamics, even ignoring the risk of braking the pace of innovation. State not only led the bankers to finance half of the package to stimulate the economy (4 trillion. RMB, or $ 586 billion), but strongly encourages them to further expansion of credit. Although the Central Bank of China is aware that so much of the credit terms would inevitably affect the money supply and inflationary expectations, the proportion of bad debt continued to decline [8].

During the first quarter of 2009 only 37% of loans were medium - and long-term, which were intended to finance infrastructure projects. Also, the Central Bank of China has spurred the credit activities of financial institutions, taking the decision to lower requirements for borrowers engaged in infrastructure development. For projects of roads, railways and metro maximum acceptable ratio of equity to total assets was reduced from 35 to 25%, a marine ports and airports - up 30% to facilitate local government access to bank loans.

However, it should be noted that although exports and ceased to decline, through a massive increase in credit spreads associated with increased risk of default and its annual decline in the first four months of 2010 reached 21% More than half of the loans (2.4 trillion. RMB) were short-term, and from about 1.5 trillion yuan - a loan granted for the payment of current accounts. Since early 2009, their volume increased by 150%. This means that money on low rates seem to save companies that have threatened bankruptcy (at least for the moment), or to finance risky speculation on the stock exchange and real estate. In addition, economic stimulus program that contained 53 thousand new infrastructure projects, increased the budget deficit in 2009 to 3% of GDP (a record for the past 30 years) compared to 0.4% in 2008.

In this context it is important to mention the Asian financial crisis of 1997-1998, when Chinese banks by the same mass rapidly expanded lending resources giving insolvent state companies. The result of this policy was the huge accumulation of bad debts, which the state bought the exit of its largest financial institutions on the IPO. It is likely that at the present stage of the Central Bank of China policy seeks to use the same scheme - to buy banks' risky debt y during the period when the economy starts to generate money to pre-crisis rate. In particular, previous recapitalization for financial institutions, China's government has earmarked $ 100 billion, representing 5% of total foreign exchange reserves, and thus became the main priority of macro-financial load banks bad debts and subsequent recapitalization as one of the mechanisms used to guide state its currency reserves in the real sector of economy [4].

It is important that the hyperactive role of government in cooperation with multinational banking capital is a negative reaction in Western economic circles, because of these schemes inevitably suffer investors (primarily foreign). First, involvement of state capital in their packages will be blurred. But more real damage to the interests of international investors a potential increase in the percentage of bad debts. After all, when they bought shares in Chinese banks during the IPO placement, he believed in the prospect that these institutions, which in the past were simply agents of service to government subsidies, reform of the subjects are able to generate profits. Moreover, for most investors is the most important was the promise of the PRC's banking on a radical reform. Effectively functioning banks, whose activities are based on commercial principles, are crucial for long-term economic progress of China. It is clear that at the present stage to overcome the economic crisis the country needed economic stimulus, but for her important and banks that allocate capital efficiently and managed in a credible regulatory regime.

Considering the contradictions of contemporary processes of transnationalization of banking capital in emerging market economies in terms of global transformational aspect out of systemic crisis, we can state that during the next 3-5 years, the global banking system becomes qualitatively new features. Major banking groups in most States, both industrialized and countries that carry out the transformation system will look completely different: some of them go bankrupt, while others will be absorbed by more successful competitors. Even the U.S. banking system at the present stage dramatically different from the one it was the end of the twentieth century. Investment banks ceased to exist and have been converted into bank holding companies, banks focus on its core divisions, and times when financiers were making money out of the air remained in the distant past.

Select models of macro-financial priorities of cooperation with multinational banking capital to Ukraine as a prerequisite out of the system crisis also requires a thorough rethinking. After the application of Western liberal model is premature, and using the Chinese model is not feasible for many reasons, including lack of significant amounts of foreign reserves, a large corporate debt, as well as smaller scale domestic market [3].

In general, analyzing the modern history of banking regulation in Ukraine should pay attention to the seemingly paradoxical existence of permanent conflict between the strategic (and, as practice shows, most positive) regulatory initiatives and current interests of the banking market. As a representative example is the efforts of National Bank for a year before the crisis against dollarization of the banking sector and restrictions on consumer lending in foreign currency. These efforts were unsuccessful due to strong resistance to the banking community. Financial terms have not agreed to lose a considerable part of the business and managed to delay this limitation, though aware of the high level of foreign exchange risks.

As a result, only in the first half of 2008 was issued to the population of foreign currency loans (including mortgage) in an amount exceeding $ 7 billion, why, this is a wrong trend dominated the peak of growth in property prices, which subsequently depreciated. As a result, a large proportion of these loans (40%) for the banking system was problematic [6, p. 45].

Given the drastic reduction of the resource base of the banking system Bank policy priority was improving the capitalization of financial institutions. Among the latest innovations in this area is worth mentioning the establishment of requirements to the minimum regulatory capital of at least 120 million. In addition, preparing for the second reading in Parliament a bill on amending the Law of Ukraine "On Banks and Banking, which proposes to increase the requirements for minimum registered capital up to 500 million hrn [5].

However, even in post-crisis period, which requires constructive engagement from the owners of commercial banks for additional capitalization, there is resistance banking community. As the crisis, when there were established standards of banking supervision, Basel II, most reputable Ukrainian bankers insist on the timing of innovations. The reluctance of shareholders to increase capital of banks is quite natural phenomenon, because economic activity is unprofitable sector, and adequate income are expected only in the long run. This reluctance is typical for large and small banks, both domestic and international subsidiaries of banking groups. However, an alternative to capitalization (as a tool for improving the reliability of banks) was not found. Increasing capital requirements of banks is not only a national feature of Ukraine, speaking at the present stage of a global trend of financial markets.

Obviously, the higher requirements and standards of control over banks is a global trend and to recognize that the rules on the world market soon will dominate the domestic financial sector regulation. This statement applies not only in establishing standards of capital adequacy but also a wide range of business practices is an example of why the introduction of the new Law of Ukraine "On Combating the legalization of criminally derived proceeds." Standards Act regulations strengthen the financial monitoring for banks, causing a negative reaction to the banks. However, the adoption of this law was in effect adaptation (approximation) norms of Ukrainian legislation to international standards in Western countries is even more stringent [2, p. 10].

In particular, at the EU directive matter laundering "dirty" money are increasingly considered in the context of the so-called compliance (compliance with regulatory requirements and rules of professional conduct). Compliance requirements are not limited to money laundering, they also include rules to prevent corruption, regulation of banking practice transactions with insiders, use of insider information when making transactions, and set standards to prevent conflicts of interest.

It is important to emphasize that the affiliated establishments of transnational banking groups that function in Ukraine, are already beginning to implement these rules, regardless of their introduction into Ukrainian legislation, because already in the short run any Ukrainian credit-financial institution is unlikely to qualify for borrowing on international financial markets, if not meet the standards of compliance. At the present stage of withdrawal from systemic banking crisis must not only meet national requirements MFA regulations, but also international standards and norms that determine the development of global regulatory environment.

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CONTENT

АКТУАЛЬНІ ПРОБЛЕМИ МІЖНАРОДНИХ ВІДНОСИН

Збірник наукових праць

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