



ІНСТИТУЦІЙНІ АСПЕКТИ ПОСТКРИЗОВОГО РОЗВИТКУ КРЕДИТНОГО РИНКУ УКРАЇНИ

Розглядаються трансформаційні процеси, що відбулися на кредитному ринку України під впливом поточної фінансово-економічної кризи. Аналізуються проблеми та фактори, що зумовили тривалу стагнацію банківського сектора кредитного ринку та припинення окремих видів банківського кредитування. Наголошується, що проблеми, які спричинили тривалу стагнацію банківського сектора кредитного ринку, зумовлені обмеженням інституційним розвитком кредитного ринку в попередні періоди. Саме брак розвинених інститутів кредитного ринку зумовив проблеми належного захисту прав кредиторів, управління проблемною заборгованістю та хеджування ринкових ризиків.

Звертається увага на виявлену тенденцію активного зростання частки кредитів, емітованих у небанківському секторі. На нинішньому етапі характер тенденції доволі активний, проте здебільшого проявляється у сегменті короткострокового споживчого кредитування та сфері, альтернативній іпотечному кредитуванню. Попри ринкову природу процесу, що відображає ця тенденція, в умовах недорозвиненої інституційної інфраструктури він також несе потенційний ризик активізації шахрайства та надмірної закредитованості домогосподарств.

На підставі проведеного аналізу стану та процесів на кредитному ринку України зроблено висновки про важливість державного сприяння розвитку нормативно-правового забезпечення з метою відновлення банківського кредитування та посилення нагляду за небанківським сектором кредитного ринку. Акцентовано, що без державної ініціативи щодо вирішення наявних на кредитному ринку України інституційних проблем відновлення кредитного ринку може тривати невизначений період часу.

Ключові слова: кредитний ринок, інституційне забезпечення кредитного ринку, банки, небанківські фінансові інститути, інвестиційне кредитування, споживчі кредити, іпотека.

Y. Bublik, Ph.D. in Economics, Senior Researcher,
Institute for Economics and Forecasting, NAS of Ukraine

TRENDS AND PROSPECTS OF THE UKRAINIAN CREDIT MARKET POST-CRISIS DEVELOPMENT

The article deals with the transformation processes that took place in the credit market of Ukraine under the influence of the modern financial and economic crisis. In the article have been analyzed problems and factors that caused the long stagnation of the credit activity in banking sector especially in certain types of bank lending. The author notes that the main reason of such a long credit contraction in the banking sector was the weak institutional development of the Ukrainian credit market in previous periods. It is the lack of developed credit market institutions that caused problems of proper protection of the creditors' rights, non-performing loans management and hedging of market risks.



In the article has been pointed out on the discovered tendency of active growth of the share of loans issued in the non-banking sector. At this stage, the trend is quite active, but mostly occurs in the segment of short-term consumer lending and in the area of instruments alternative to mortgage lending. Despite the market nature of the process reflecting this trend, due to the underdeveloped institutional infrastructure, it also poses a potential risk of increased fraud activity and over-indebtedness of the households. Based on the analysis of the characteristics and processes in the Ukrainian credit market the author has made conclusions about the importance of state assistance in the development of regulatory and legal support of the Ukrainian credit market in order to restore bank lending and strengthen supervision of the non-banking sector of the credit market. It is emphasized that without a state-initiated solution of the institutional problems present on the credit market of Ukraine, the recovery of the credit market may take an indefinite period of time.

К е у w o r d s : credit market, institutional support of credit market, banks, non-banking financial institutions, investment lending, consumer loans, mortgage.

The recovery of financial lending in the real sector is a prerequisite for farther economic growth of Ukraine. Taking into account the fact that banking remains the largest sector of Ukraine's financial market, the main task in this reason is to solve the problem of restoring investment lending in Ukrainian bank sector.

The complexity of solving this problem lies in the "deep freezing" of bank lending in Ukraine. Since 2009, mortgage lending to households is completely absent in Ukraine, and, after a brief revival in 2012-2013, new lending to enterprises and interbank lending stopped as well. Such a long-term "freeze" is difficult to explain, as far as the credit market plays an exceptionally important role in economic development. In addition to usual supply of financial resources in perspective branches and sectors of the economy, today's importance of the lending market is actualized at this stage because of the non-alternative role of credit support in the development of innovative areas critical to the post-industrial transition.

Recent scientific studies increasingly confirm the thesis that modern financial markets play a significant role in economic cycles by stimulating economic growth or deepening (and sometimes provoking) the crisis effects on national or global markets. Despite that fact that, over the long period of the current crisis, the opinion about the negative role of financial markets in the deployment and deepening of the crisis has been formed, it is still necessary to emphasize the conclusions from the second part of this dichotomy, namely the importance of having developed financial markets as a necessary condition of stable economic growth.

In this context, a very important conclusion for Ukraine is that underdeveloped financial markets in small open economies cause the ineffectiveness of the credit channel of the transmission mechanism of monetary policy. This, in turn, retains increased interest rates in a crisis and, as a consequence, limits the potential of economic growth [1]. Therefore, European regulators, especially in the emerging markets, pay particular attention to restoring bank lending. For this purpose they even create special international private-government working groups, which report quarterly on regional credit markets [2].

Taking this into account, restoration of bank lending as the main and most managed sector of the credit market is one of the priority tasks for regulators. At the same time, despite official statements and program documents of the monetary au-



thorities on the recognition of the relevance of this task¹, prolonged stagnation in the Ukrainian bank credit market continues. Official indicators of its main parameters are presented in Fig. 1:

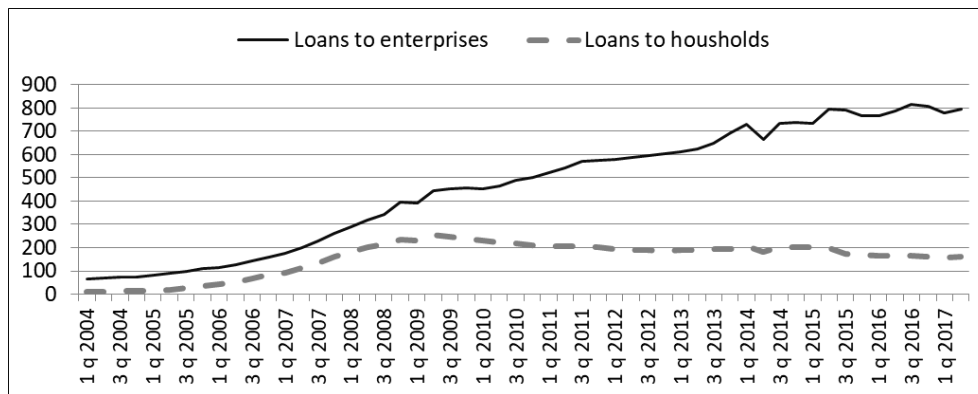


Fig. 1. Dynamics of the segments of the Ukrainian bank credit market, UAH billions

Source: National bank of Ukraine statistics [3].

Taking into account the deep interconnection between the development stages of Ukrainian credit market, it would be correct to analyze the long period beginning 2004, when credit boom started in Ukraine. As it can be seen from the figure, deployment of the crisis in 2008 stopped the credit boom in the national bank credit market. The subsequent weak growth of the bank loan portfolio t was only caused by the loans issued to enterprises. Meanwhile the loan portfolio of households has been contracting all the time after 2008. The indexes of the bank loan portfolio growth, depending on the type of borrower, are presented in Fig. 2.

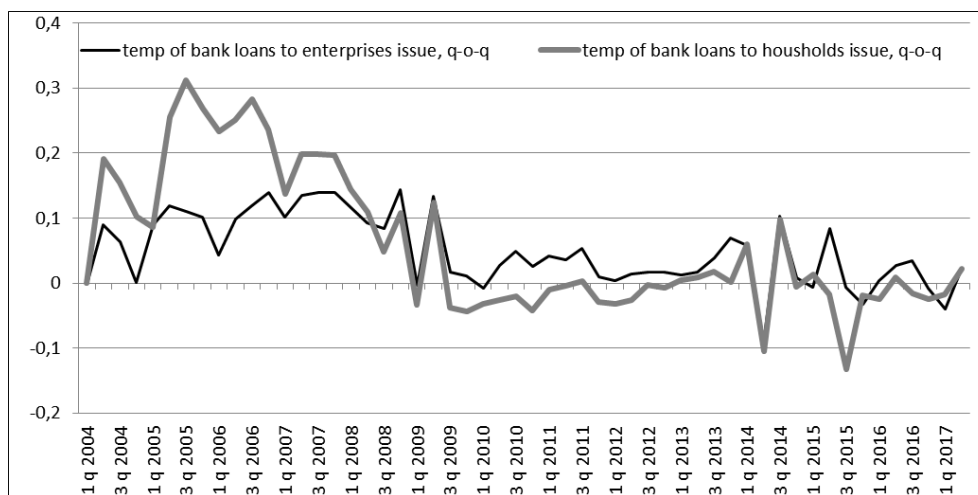


Fig. 2. Dynamics of the growth rate of bank loans issued in 2004-2017

Source: calculated on NBU statistic data [3].

¹ In particular, they are mentioned in the "Comprehensive Program for the Development of the Financial Sector of Ukraine until 2020".

As it can be seen from this figure, the growth rates of loans granted to households have been negative since 2009, while in the period of 2010-2014, there was a certain growth of loans to enterprises. But after the second wave of the crisis in 2014, new bank loan issues almost stopped. During this period, retention of the nominal level of the banks' loan portfolio was only provided by revaluation of loans nominated in foreign currency with a deep devaluation of the national currency. Without devaluation effect, the reduction of the bank loan portfolio in 2014-2017 bottomed up to 31.7% for loans to enterprises and 50% for loans to households.

The credit portfolio contraction was also caused by the significant increase in interest rates that banks established due to the decline of the banks solvency and the growth of market risks (Fig. 3).

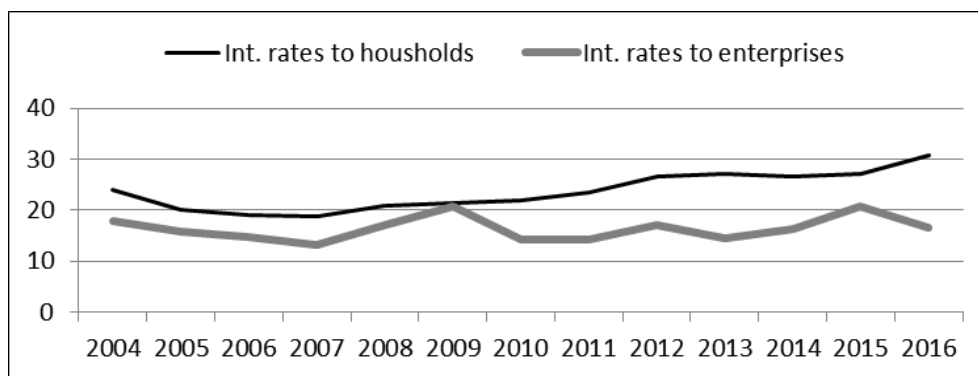


Fig. 3. Interest rates dynamics of the bank loans, %

Source: NBU statistics [3].

Compared to pre-crisis values, loans rates (excluding overdraft rates) increased by 1.5-2 times. Only in the second half of 2015, loan interest rates for enterprises started to decline and a year later that same trend started for households.

But the devaluation factor alone cannot explain the complicated situation with the bank's loan portfolio and show its real volume. It is also necessary to pay attention to the situation with its servicing. Analysis of the structure of the bank's loan portfolio by categories and provision volume gives some grounds to conclude that the bank's credit portfolio continues to decrease even in 2017 (see Fig. 4). The main reason for the reduction of the bank's loan portfolio in 2017 was its revaluation in accordance with the new methodology of the NBU calculation of credit risks (NBU Resolution No. 351²).

It is rather difficult to estimate the loan portfolio in the pre-crisis period, because the official index of that time – 10.9% – did not reflect the real level of NPL, and the real index, according to expert estimations, was close to 40%. This uncertainty lasted until 2017, when the NBU issued its Resolution No. 351, which stipulates a more tighten procedure for the classification of overdue debts and provisioning. On the one hand, this resolution established somewhat excessive requirements for loan's collateral, but on the other is allowed to approximate official and real NPL indexes.

² Resolution of the Board of the NBU of June 30, 2016 No. 351 "On Approval of the Regulation on Determining the Size of Credit Risk by Bank of Ukraine for Active Banking Transactions".

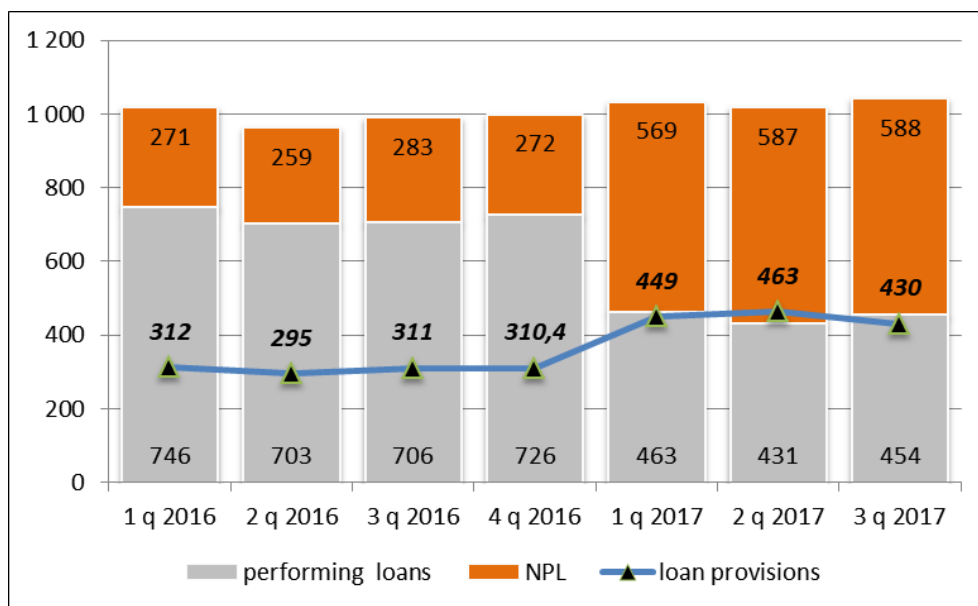


Fig. 4. Comparison of the performing and non-performing loans in bank's portfolio, UAH billions

Source: NBU statistics [3].

Thus, as can be seen from Figure 4, the active loan portfolio can now be estimated approximately as 43% of nominal. This level is also confirmed by the analysis of the volume of loan provisioning: in six of the top ten Ukrainian banks, the volume of provision is equal to the volume of performing loans. It should be added that in addition to NPL, the banks' portfolios are burdened with a significant amount of delays in service (up to 60 days) – about 21.5% (3-4 classes of households borrowers and 5-9 classes of corporate borrowers).

Thus, the level of the burden of balances in the banks with low-quality and non-performing loans exceeds UAH 600 billion, and possibly also exceeds the amount of working loan portfolio. In such circumstances, further development of both the bank credit market and Ukrainian financial sector seems almost impossible. At the same time, the available measures and tools designed to solve this problem do not completely correspond to its scale and significance.

It should be noted that negative effects of the second wave of the crisis mostly affected the segment of investment banking lending, which limited the stimulating effect of bank lending on economic growth. According to the latest data, the restoration of bank lending is observed only in the segment of short-term consumer loans, and in the financing of loan agreements with the largest, most reliable and profitable enterprises concluded in previous period.

Another painful trend is the contraction of mortgage loans due to their high risks and regulatory gaps. Taking into account that the mortgage market plays an important role in stimulating economic growth through investment incentives for construction and industry production, it has a strategic importance for the Ukrainian economy.

Also, a significant negative consequence is the stagnation of bank investment lending to enterprises, which has become particularly noticeable since the beginning of 2015. According to the latest financial reports of large banks for 2015-2016, they continued cooperation with one to two dozen of large enterprises, had a little increase in lending to enterprises of transport, food, chemical and metallurgical industry, as well as trade and energy sectors. But in general, from the beginning of 2015 to September 2017, the volume of loans to manufacturing companies decreased by 25.5%, and to those in construction industry – by 39%, and even the traditional leader in this segment – the commerce sector, – had a little contraction. Moderately positive dynamics is demonstrated only in the lending to agricultural producers, with an increase of about 13% [3].

It should be noticed that, despite the serious changes of factors (devaluation of the hryvnia, fall in commodity prices, opening of European markets, etc.), there is no significant increase in the volume of lending to main exporters (i.e. agricultural producers). Such an unchanged state of the distribution of credit resources should be characterized as a sign of a "new normality" in the domestic credit market.

Against the background of stagnation in the banking sector of the credit market, there is a logical question: is it possible to solve the problem of credit support for economic growth through non-bank lending institutions? The reason of this question is due to the natural processes of substitution, in the market economy, of inefficient mechanisms by more competitive ones to satisfy the existing demand, in particular for financial resources.

Indeed, this pattern could be confirmed by the analysis of trends in the non-banking institutions sector (NBI), which performs lending in the Ukrainian financial market: against the backdrop of reducing bank lending in 2014-2017, this sector shows a directly opposite trend. It could be well displayed by comparison between the growth of assets owned by banking and non-banking institutions (see Fig. 5).

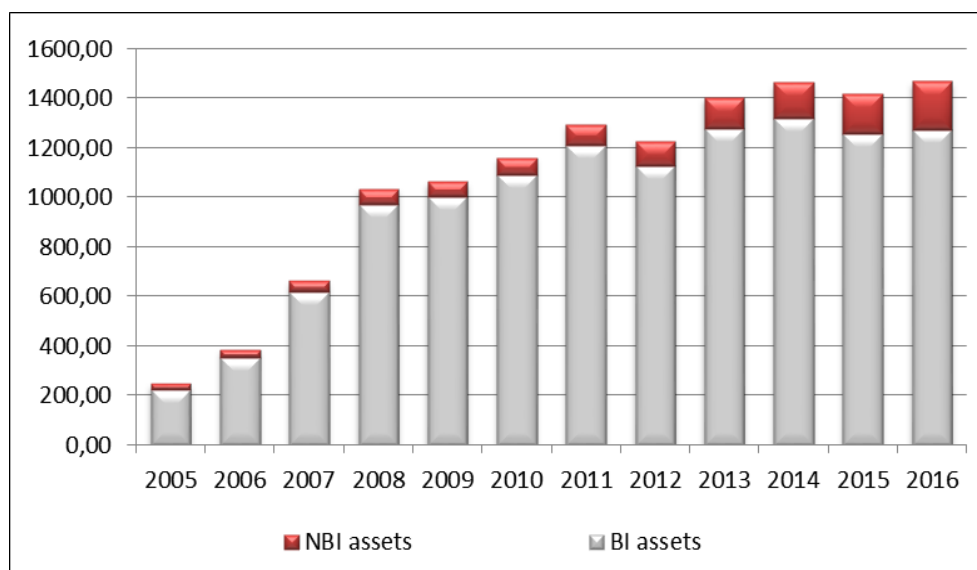


Fig. 5. Comparison of the banking and non-banking institutions' assets, UAH billion



During this period, NBI almost doubled their loan portfolios. An especially notable growth took place in the segment of short-term consumer lending, where, by the end of 2016, the volume of loans granted by the NBI exceeded that granted by the banks: UAH 44.2 billion against 34.2 billion. For example, in early 2014, the respective values were UAH 24.4 billion against 50.9 billion.

It should be added that in the segment of mortgage lending to households there was a kind of replacement of banks as creditors by developers using as installment instrument the fees of construction financing funds (FFB). In general, this trend has become noticeable since 2012, as, during this period, the banks still were unable to issue mortgage loans. Starting from 2014, this trend significantly accelerated, since real estate at that time was the only possible way to invest the rapidly depreciating households savings. As a result, by 01.07.2017, almost 22.7 thousand agreements with the FFB were concluded for the total amount of UAH 29.5 billion which is a 1.7 times rise in the number of agreements and a 3 times rise in their amount compared to 01.01.2014 [4].

Thus, there is a tendency to redistribute part of financial resources from the banking sector of the Ukrainian credit market to the NBI sector. This trend generally reflects the establishment of prerequisites for the reorientation of the domestic model of the credit market from the bank-centered to market-oriented pattern, within which the non-bank lending institutions will play a larger role on the credit market. In developed countries, a significant proportion of assets belong to the non-banking sector of the financial market. It usually helps reduce financial risks and satisfies the financial needs of market participants in a most complete way. However, there are two features in this process in Ukraine, which should be considered as very negative.

Firstly, at the current moment, such kind of a credit market model in Ukraine can only be identified as limited market-oriented, since at this stage there is only the activation of the certain types of non-bank lenders with uncertain sources of funding, presumably received from commercial banks, which puts them in direct depend on the situation in banking market and limits the prospects of diversification of the credit market at this stage.

Secondly, the activation of NBI lending takes place in the segment of short-term consumer loans at very high interest rates. This situation is the risk of borrowers coming into credit dependence. Taking into account the size of the population group using the services of pawnshops and financial companies (only in 2016, the pawnshops concluded 11.9 million contracts), this risk should be taken seriously. In addition, today there are a lot of illegal lenders in the market so the risk of brogue is pretty high.

It should also be noted that a prevailing share of consumer loans are issued by the NBI as "until-salary loans" (their repayment is made from the salary when it is received). Such loans are known abroad as "payday loans". The danger of increasing such lending in countries with a population whose income is shrinking has been mentioned in many modern scientific papers and official reports of international experts [5, 6]. The main threat of such kind of loans is come through their excessively high interest rates in conditions of the borrowers' non-increased income to offset them. In this situation the borrowers do not



repay the loans, but prolong them, getting into a credit dependence and approaching to bankruptcy.

Such kind of lending also has a negative impact on the economy, because instead of expanding the consumer demand in the market it contracts it, diverting a significant proportion of household incomes to servicing the loans. For these reasons, in many countries, regulators are limiting the maximum of interest rates for such loans.

In Ukraine, official rates on similar loans in 2016 rose to 238.3% per annum on average (up to 732% maximum). Actually the total volume of this kind of loans in Ukraine is not so large – in the non-banking sector, it is about UAH 23.7 billion (in the banking sector, the rates on card and cash loans are significantly lower – 30-50%) [4]. But the high rates of growth of this kind of lending in Ukraine (about 60% per year), a significant number of issued credits, majority of which are borrowed by low-income borrowers [7] and excessive interest rates on them, give grounds to speak about the existing risks of provoking a new boom in consumer lending, which could create preconditions for another debt crisis.

Despite the intensification of the NBI and other alternative lending institutions, the banking sector still remains the main creditor of the Ukrainian economy. It is where the main investment resources accumulate. According to the State Statistics Service, in 2016, out of 37.7 billion USD of direct investment in equity, more than 10.3 billion USD were directed to the financial sector and a large share of them is accounted for the banks. That is why the restoration of investment bank lending is currently the most promising measure for Ukraine's economic development. The main hindrances to this restoration are related to the underdeveloped institutional structure of the credit market.

The extensive development of the Ukrainian credit market during the short period of 2003-2007 prevented the creation of a full-fledged structure of institutions and infrastructure participants that could ensure a proper stability of domestic credit market to systemic risks.

The underdeveloped regulatory framework did not allow proper protection of the rights of market participants (first of all, creditors) and use of the security benefits of such important modern market mechanisms as securitization, sale-off of troubled assets, hedging of risks). This, in turn, made it impossible to perform a quick withdrawal of toxic loans off the creditors' balance sheets and slowed the resumption of investment lending, despite the high demand for it and available market liquidity.

The lack of several infrastructure institutions, such as ombudsmen, market mediators, and the limited role of market registers, credit history bureaus, and associations of market participants negatively affected the overall level of trust and the cost of loans resulting in an additional delay of the market recovery.

Other main problems hindering the restoration and further development of the credit market are excessive overload of the bank institutions with NPLs, ineffective mechanisms of the protection of creditors rights and high cost of loans. The problem of the banks' balances burdened with NPLs is extremely relevant for the EU as well. The global financial crisis and subsequent recession have led to a significant increase in the level of NPLs: from 2009 to the end of 2014, it almost doubled to



about 1 trillion euro (or more than 9% of the region's GDP). The level of NPLs is particularly high in the Southern part of the Eurozone, as well as in some eastern and south-eastern European countries [8].

The problem of NPLs in the EU have not been solved for a fairly long period of time, despite the active work in this direction since the early 2000s. Until recently, the ECB's policy in this field was rather decentralized: the central banks of the Euro zone countries had to solve the problem of the NPLs on their own; meanwhile ECB supported them when necessary. But recently, this policy has got significant changes. The ECB even created the NPLs Task Force during 2016-2017 to develop and implement a consistent supervisory approach to identify institutions with a high NPL level. Special Joint Observation Team should cooperate with the institutions having a high level of NPLs by developing personal strategies for solving the problem of excessive NPL level, which include developing approaches to detecting, write-offs, recovery of collateral, and so on [9].

European practice mainly prefers the method of selling the NPL portfolio. More than 50% of such assets are sold in EU, mainly to hedge funds. Most of these funds are registered in the USA. This method requires an adequate level of institutional and managerial development, in particular the developed and widely used securitization mechanisms, as well as a working stock market. At the same time, selling off NPLs allows to get rid of very large volumes of troubled assets.

In Ukraine, there is a lack of necessary institutions and market mechanisms that would allow carrying out a full complex of work with all kinds of problem assets, helping to solve this problem in a systematic way. The active write-off of troubled loans under the example of foreign countries in Ukraine is complicated by the long-running non-predictable court procedure and double taxation (writing off a company's bad loans, a lending institution must pay a 25% tax on the asset, and writing off a household's bad loans – a 15% tax).

Since most banks are trying to solve the problem of NPLs on their own, with a lack of infrastructure development, this negatively affects the efficiency. As a result, according to the Doing Business report from the World Bank, the level of indemnity for bad debts in Ukraine in September 2016 amounted to 7.5 cents returned from each dollar, while in the USA this figure for the same date was 78.6; in Poland 60.6; and in Hungary 43.0. Even in the CIS countries this figure is much higher than in Ukraine: Kazakhstan – 41.4 and Georgia – 39.5. Negative manifestations proving this statistics became especially noticeable in the practice of the Deposit Guarantee Fund (DGF) when it attempted to sell the assets from the bankrupt banks [10].

In addition to that, in the domestic banking sector, there is a sign of the lack of modern financial instruments for work with problem debts. In particular, in Ukraine, such instrument as NPL securitization is almost unused. But it is a very prospective measure for managing NPLs by issuing an attractive and profitable instrument, which can circulate on the stock market. Using such instruments for investing is understandable to foreign investors, because debts formed in a portfolio of uniform quality, certain profitability (are easier to analyze).

One of the most important problems limiting the investment lending on Ukrainian credit market and provoking a boom in consumer lending is the de-

fects in regulatory and legal support. This problem leads to a disruption of the functioning of the credit market mechanisms, reduces the level of trust between all the participants of the loan agreement, reduces the benefits of collateral lending, and makes it impossible to diversify the resource base by terms and currency. In this case, only consumer lending improves its attractiveness as risks of losses with this type of credit are offset by high interested rates. At the same time, the most urgent issue that needs legislative regulation and applies to all segments of the credit market is the protection of the rights of creditors and borrowers, since this link in credit relations is the weakest and is poorly regulated by law. The vast majority of creditors on the domestic market stopped lending activity because of the problem of the impossibility of debt repayment, because the current Ukrainian laws prevent the lender from getting and selling the collateral in a fast way.

As a result, bank lending, especially mortgage, which is one of the most important tools for the restoration of national industrial growth, is practically frozen. The same goes for the NBIs (first of all, leasing companies), which perform investment lending. Consequently, in order to ensure the restoration of credit market activity, the rights of the creditors should be protected through development and legislative consolidation of an adequate procedure for the recovery of collateral by creditors.

Conclusion

Ukraine's credit market in general still has a stagnation trend, which is especially noticeable in the segments of investment banking lending. The first available signs of restoration of lending activity by banking institutions, such as interest rate cuts, slower overall contraction of the loan portfolio, do not yet give a hope for a reverse of this tendency because of the remaining important institutional problems, mainly in the legal area.

The stagnation of bank lending caused the tendency of changing the structure of the credit market towards a greater share of non-bank financial institutions. The current tendency is manifested in the segment of short-term consumer lending to households and in the partial replacement of mortgage lending with other instruments from non-banking sector. Despite the low incidence, this tendency is rather dynamic.

At the same time, the banking sector performs its role of the main supplier of financial resources for credit support of economic development. Hence the further development of Ukrainian credit market requires strengthening institutional support for the restoration of lending activity in the banking sector of the credit market and reducing the risks of operations in the non-banking sector. To do this, it is necessary to take the following sequence of steps:

1) Strengthening the protection of the creditors' (and borrowers') rights by improving legal regulation of these credit processes:

- collateral recovery and realization by creditors (especially those dealing with housing and real estate), special attention should be paid to the progress of execution of court decisions;



- introduction of the institution of pre-trial dispute resolution with the necessary circle of participants (financial ombudsman, mediators, conciliation councils, etc.);
 - promotion of a standardization process and the introduction of a standard form of financial contracts issued by financial institutions, to facilitate their perception by consumers of financial services and to create appropriate conditions for the introduction of securitization mechanisms.
- 2) Clearing banks' balance sheets from NPLs, by ensuring:
- simplification of procedures for writing off and selling NPLs;
 - tax incentives for accelerating the write-off and sales of NPLs;
 - elimination of legal and regulatory obstacles to using the securitization mechanism.
- 3) Development of regulation and supervision for the non-banking sector of the credit market by:
- strengthening the monitoring and, if necessary, legislative regulation to reduce fraud risks;
 - establishing a regulatory limitation of the maximum interest rates on loans issued by NBI;
 - increasing transparency of non-banking sector activities on the Ukrainian credit market, including through improved forms of statistical and analytical reporting requirements.
- 4) Supporting a proper development of the following infrastructure institutions:
- promotion of the distribution of specialized hedge funds, compensation funds, and AMC's on the credit market serving to reduce risk and cost of lending;
 - creation of special credit registers of large credit amounts in addition to the existing bureaus of credit histories;
 - legislative regulation of the collectors' market segment, cleaning it from "black collectors";
 - supporting measures aimed at raising the trust in market and financial literacy of the population.

It is important to emphasize that the implementation of those steps mostly lays in the field of legislative regulation. In the conditions of long uncertainty, which suppresses the initiative of main participants of the Ukrainian credit market, and given the weakness of the existing self-regulatory organizations on it, the initiative to implement described above steps at this stage should belong precisely to the regulatory authorities of the financial sector: the NBU, the Ministry of Finance, and the relevant Committee of the Parliament. Otherwise, the stagnation of the Ukrainian credit market would continue for an indefinite period of time.

References

1. Gertler, M., Gilchrist, S., Natalucci, F. (2003). External Constraints on Monetary Policy and the Financial Accelerator. *NBER Working Paper*, 10128, 4. doi: <https://doi.org/10.3386/w10128>
2. The European Bank Coordination "Vienna" Initiative. Retrieved from <http://vienna-initiative.com/>
3. Monetary and financial statistic data. National bank of Ukraine. Retrieved from https://bank.gov.ua/control/uk/publish/article?art_id=27843415&cat_id=44578# [in Ukrainian].
4. Development of non-banking financial institutions in Ukraine statistic data, National Commission Carrying Out State Regulation of Financial Services. Retrieved from <https://nfp.gov.ua/content/oglyad-rinkiv.html> [in Ukrainian].
5. Problem debt. A report commissioned by the Consumer Protection Partnership. 2014. Retrieved from <http://www.financialliteracy.gov.au/media/558644/report-problem-debt-a-report-commissioned-by-the-consumer-protection-partnershipa4305510.pdf>
6. Karlan, D., Zinman, J. (2008). Expanding Credit Access: Using Randomized Supply Decisions to Estimate the Impacts. Retrieved from http://karlan.yale.edu/sites/default/files/rev_financ_stud.-2010-karlan-433-64.pdf
7. Kuliba, L., Virchenko, A. Over-indebtedness in Ukraine 2016-2017. Retrieved from https://nabu.ua/images/tinymce/file/IFC_GfK_Over_ind_ukr%20%281%29.pdf [in Ukrainian].
8. Shekhar, A.A., Bergthaler, W., Garrido, J.M., Ilyina, A., Jobst, A., Kang, K., Kovtun, D., Liu, Y., Monaghan, D., and Moretti, M. (September 2015). A Strategy for Resolving Europe's Problem Loans. *IMF Staff discussion Note*, 15/19. Retrieved from <https://www.imf.org/external/pubs/ft/sdn/2015/sdn1519.pdf>
9. Vienna Initiative 2 Full Forum, Luxembourg, March 6, 2017, Report on the Proceedings. Retrieved from <http://vienna-initiative.com/wp-content/uploads/2017/04/VI2-Full-Forum-March-2017-Report-FINAL-revised-published.pdf>
10. Resolving solvency. Doing business. The World Bank. Retrieved from <http://www.doingbusiness.org/data/exploretopics/resolving-insolvency>