

“Banking crediting of enterprises’ innovation activity in Ukraine”

AUTHORS

Olha Vovchak  <https://orcid.org/0000-0002-8858-5386>

Viktoriia Rudevskaa  <https://orcid.org/0000-0001-6697-9096>

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Olha Vovchak (Ukraine), Viktoriia Rudevskia (Ukraine)

Banking crediting of enterprises' innovation activity in Ukraine

Abstract

The basic tendencies and problems of banking crediting of enterprises' innovation activity have been researched. The main directions in enterprises' financing framework as banking crediting have been analyzed. The factors that influence the level of bank support of enterprises that overcome innovation activity and actively implement innovations have been researched. The banking crediting is proved to be meant to become one of the most important sources of financing of investment programs and projects, directly connected with improvement and development of the most important branches of economy.

Keywords: bank, innovations, innovation activity, enterprises' financial resources, crediting.

JEL Classification: G24.

Problem statement

The banks, which act as medium in temporary free costs reallocation, play special role in investment and innovation activity activization in current economic conditions that are now in Ukraine. The need to activate banks' part in the process of investment support of innovation business merges from interaction of successful development of banking system and economy in general. From the one point, the banks are interested in stabilization of economic situation, which is a necessary condition of its activity, from the other point – the stability of economic development greatly depend on the state of fixity and flexibility of banking system, its effective functioning.

The analysis of latest researches and publications

Modern world financial science has great theoretical and practical developments of scientists, who researched defined issue. In Ukraine the questions of theoretic innovations proof were the subject of researches of L. Alekseenko, O. Vasylyka, I. Vlasovoi, A. Halchinskoho, M. Dyby, N. Demchyschaka, V. Zianko, O. Kolodizieva, A. Kuznetsovoi, B. Lutsiva, I. Liutoho, S. Onyshko, S. Pashovoi, B. Pshyka, V. Syzonenka, L. Feduluvoi, O. Yurkevych and others. The scientific works by O. Amoshi, Yu. Bazhala, V. Heitsia, T. Doroshenko, S. Zakhariv, V. Zymvstia, M. Krupky, B. Kvasniuka, T. Maiorovoi, A. Peresady, A. Chukhna, M. Chumachenko and others are dedicated to researches of innovation activity banking financing problems.

The aim of research is the determination of banking crediting directions of innovation activity for today in Ukraine.

Delivery of the main material of research

Innovation activity financing is one of the most important conditions of innovation activity, as effective innovation activity implementation demands great financial investments. In most countries of the world, the basic sources of innovation activity are state costs, limited by legislative procedure (Butko, 2003) and, in Ukraine, the characteristic is absolutely different approach – with the minimal state participation (Table 1).

For the recent years, the volumes of innovation activity are shortened fast in all indexes without exception. At the same time, one of the main factor that prevents innovation activity is the lack of own costs among the economic entities. Each year (during 2010-2015), the quantity of organizations making scientific researches and developments is constantly shortening (from 1303 till 978), the quantity of scientists is shortening (from 89564 till 63864) and so on. We consider extremely low activity of innovation activity is basically connected with the lack of investments, needed for its fulfillment.

As the official statistics data witness, the main source of financial innovation in Ukraine during 2010-2015 is the own costs of enterprises, the share of which in 2015 accounted for 97.2% of overall innovation spending.

As is seen from Table 1, the financing of innovation activity from state budget for the whole period was made at the 1-4% level that reflects practically the lack of state support of enterprises indulged in innovation activity.

Subtle financial support of innovation processes by state practically does not influence the overall development of innovation activity. At the same time, as official statistics prove, foreign investments almost always were higher in size than volumes of state costs that were directed on innovation activity.

Such state of financing, without a doubt, is reflected upon the results of innovation activity in Ukraine, which remains on a very low level.

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Olha Vovchak, Dr., Prof., the Head of banking management department, State Higher establishment "University of banking management", Ukraine.

Viktoriia Rudevskia, Ph.D., Associate professor of banking management department, State Higher establishment "University of banking management", Ukraine.

Surely, the enterprises' choice of the ways of financing is not limited: from forming own capital to different forms of lending, but not every one of them is appropriate. At the same time, the scientists pay more attention to the research of

self-financing mechanisms, or the influence of state financing on the development of enterprises' innovation activity, less researched remains the use of attracted resources (Moroz, Savluk, Pukhovkina, 2002).

Table 1. The sources of innovation activity financing in Ukraine in 2010-2015, mln. hrn. [2]

| Years | Overall investment summary, mln. hrn. | Including costs: | | | | | | | |
|-------|--|--------------------|------|--------------|-----|-------------------|------|---------------|------|
| | | Enterprises' (own) | | State budget | | Foreign investors | | Other sources | |
| | | mln. hrn. | % | mln. hrn. | % | mln. hrn. | % | mln. hrn. | % |
| 2010 | 8045.5 | 4775.2 | 59.4 | 87.0 | 1.1 | 2411.4 | 30.0 | 771.9 | 9.6 |
| 2011 | 14333.9 | 7585.6 | 52.9 | 149.2 | 1.0 | 56.9 | 0.4 | 6542.2 | 45.6 |
| 2012 | 11480.6 | 7335.9 | 63.9 | 224.3 | 2.0 | 994.8 | 8.7 | 2925.6 | 25.5 |
| 2013 | 9562.6 | 6973.4 | 72.9 | 24.7 | 0.3 | 1253.2 | 13.1 | 1311.3 | 13.7 |
| 2014 | 7695.9 | 6540.3 | 85.0 | 344.1 | 4.5 | 138.7 | 1.8 | 672.8 | 8.7 |
| 2015 | 13813.7 | 13427.0 | 97.2 | 55.1 | 0.4 | 58.6 | 0.4 | 273.0 | 2.0 |

Source: <http://www.ukrstat.gov.ua/>.

At the same time, the success of enterprises' economic activity in innovation sphere is, lately, closely connected with the level of bank credit resources use into the system of financial providing of renovation processes. The banks become one of the participants of innovation process, providing not only its financing, but also the connection between all the participants – state, investment-innovation funds, science and technology establishments and consumers. Among the main prevents of creating appropriate resources of financial provision, the innovation models of economic development, as a rule, determine the troubles with effective placement of financial resources in banking system (Andros, 2011).

The general tendencies of modern development of credit operations among domestic banks witness about the subtle role of banking credit in its financial provision.

Investments in innovation process provide structural rebuilding of national economy on the new technology basis, which leads to the increase of total productiveness of resources. In this regard, the meaning of stimulants creating and normative and institutional conditions, which would activate the activity of commercial banks in terms of investment financial resources into innovation projects (Moroz, Savluk, Pukhovkina, 2002).

As the analysis of economic literature witnesses, there are no effective methods of credit risks evaluation on innovation projects, effective models of cooperation between state and private sector and so on (Funding..., 1998). The practice of banking and non-banking financing of innovation activity in Ukraine also witnesses the need of search of improvement ways of these processes. Credit interest rates remain unacceptably high for innovation of active enterprises, non-banking financial mediums place its assets on banking deposits and in undervaluated securities of domestic companies in traditional spheres.

Traditionally high income innovation activity in Ukraine feels acute lack of financial resources (Vladymyr, 2011).

It should be highlighted that the Ukrainian financial market is organized on the principals of bank-oriented model, under which conditions the banking credit plays more important role than other forms of investment financing. Credit policy of Ukrainian banks is becoming more investment oriented, which coincides with the needs of economy development in innovation investment model. Not taking into account the slowdown of long term lending growth rates (almost thrice), these rates remain twice higher comparing to the growth rates of credit portfolio in general (61.8 and 32.3%, respectively) (Biuleten Natsionalnoho Banku Ukrainy, 2016).

The ratio of credits in total financing of innovation activity during 2010-2015 has risen in 11.5%. It was due to: consequent lowering of discount rate (from 30.6% till 14%); lessening quantity of unprofitable enterprises (from 42.7% till 35.1%); the growth of appropriate resource base of long-term crediting (from 13.9% till 36.2%). It should be highlighted the banking credit plays more important role, than other forms of financing investments in Ukraine. That is why credit policy of Ukrainian banks more precisely investment-oriented that coincides the needs of development of economy for innovation investment model. In spite of slowdown of growth rates of long-term lending (almost thrice), these rates remain twice higher comparing to the rates of growth of credit portfolio in general (61.8 and 32.3%, respectively) (Biuleten Natsionalnoho Banku Ukrainy, 2016).

In its turn, the development of long-term innovation crediting in Ukraine is limited by such factors as: high level of interest rates for banking credits; great credit risks for these projects; the objects to mortgage, that may be proposed, have no or low liquidity; interest of bank in crediting of household operations with fast returns of money flows; limited possibilities of refinancing of NBU.

The largest share of short-term credits in credits structure for the last three years has the index of 2012 – 33.12% that is in 3.74 larger than the parameter of the previous year (Biuleten Natsionalnoho Banku Ukrainy, 2016). Besides, on the basis of official data of the National bank of Ukraine, it is determined that the banks' financial resources greatly exceed the pos-

sibilities of non-banking financial establishments (in 2015, banks' assets were 77.47% of GDP comparing to 7.84% of GDP for non-banking financial establishments). In this regards, the main attention was paid to the analysis of volumes of innovation direction credits structure, provided by banks (Biuleten Natsionalnoho Banku Ukrainy, 2016) (Table 2).

Table 2. The volume and structure of innovation directions credits provided by the banks of Ukraine in 2010-2015, mln. hrn.

| Year | Investment credits | | Financial leasing | | Credits on factoring operations | | Total | |
|------|--------------------|-------|-------------------|------|---------------------------------|------|-----------|-----|
| | mln. hrn. | % | mln. hrn. | % | mln. hrn. | % | mln. hrn. | % |
| 2010 | 85 255.00 | 98.21 | 664.00 | 0.76 | 886.00 | 1.02 | 86 805 | 100 |
| 2011 | 91 454.00 | 97.61 | 453.00 | 0.48 | 1 791.00 | 1.91 | 93 698.00 | 100 |
| 2012 | 91 922.00 | 97.89 | 266.00 | 0.28 | 1 713.00 | 1.82 | 93 901.00 | 100 |
| 2013 | 88 984.00 | 97.40 | 344.00 | 0.38 | 2 032.00 | 2.22 | 91 360.00 | 100 |
| 2014 | 88 037.30 | 97.45 | 406.53 | 0.45 | 1 897.16 | 2.10 | 90 341.00 | 100 |
| 2015 | 90 413.70 | 97.79 | 295.86 | 0.32 | 1 747.44 | 1.89 | 92 457.00 | 100 |

As a result of conducted analysis, it is found the priority of banking investment credits among other sources of innovation projects crediting in terms of subtle volumes of alternative financial operations in the banks, as well as low activity of non-banking financial establishments. In Ukraine, during 2010-2015, the share of bank investment credits in the general structure of credits of innovation direction exceeded 97%, operations of financial leasing and factoring were between 0.3-0.7% and 1-2% of innovation direction credits, respectively.

Thus, statistics data prove these days in Ukraine, unlike in many foreign countries, the significant advantage of short-term financing of enterprises over long-term. As the practice witnesses, especially negative outcomes, this tendency has for enterprises-innovators, as innovation activity, as it is known, differs from other kinds of enterprise activity by long terms of development, implementation and realization of innovations. Accordingly, both input money flows from innovation realization are expected for a long time. Besides, in Ukraine there was not created a proved system of support by banks of investment activity of enterprises on the legislative level, that was one of the reason of great decline in investment activity, which exceeds the decrease indexes of economic development.

Innovation projects crediting experience analysis in the countries with developed market economy will promote the acquaintance of domestic experts with the basic characteristics of programs of such crediting and parameters of choice of a lender, whose adaptation to the conditions of economy of Ukraine will let to activate this crediting direction in our country.

In developed countries, there are banks that provide credits only to innovation projects. In particular in the USA the programs of innovation development of

industrial companies provide credits to "specialized innovation banks". Sumitomo Mitsui Banking Corporation is closely connected with industrial capital in Japan. In Germany, the crediting of innovation projects is done by Credit institution for reconstruction (KfW) (Vladymyr, 2011).

At the same time, large banks of industrially developed countries act as organizers and financial initiators of great investment projects and programs execution. Banking credit as a source of financing of innovation projects got the greatest spread in the USA, Israel, Germany, France and Japan. In Ukraine, unfortunately, this form of financing hasn't got enough popularity yet.

As Huliaieva (2006) witnesses, there is a range of advantages which prove undoubtedly the important role of banks in the process of financial support of enterprise activity. First of all, bank provides the shareholders the possibility to get high level of returns for invested capital. Also, with the assistance of bank, the shareholders have the possibility to tackle problems of own science and technology development quickly and efficiently and get additional profit. With the help of bank, the shareholders may get on favorable terms not only investment credit, but also credit for current needs, for working capital financing.

It may be stated the role of banks in innovation activity financing process is limited to several functions execution: under lack of financial resources providing costs for scientific researches and recognitions fulfillment; providing consultations on innovation activity implementation and conduct control of innovation researches fulfillment according to the conditions of credit agreement; financing of innovation and investment projects; acquisition of copyrights for innovation

technologies, innovations, and so on; management of investment portfolio of clients – innovation activity subjects and so on (Oliievska, 2011).

Banks conduct crediting of works in process of scientific developments and researches scientific organizations conduct according to the agreements with interested customers, who pay the works only after its full fulfillment and acceptance of customer.

The executers of scientific and research and construct works have to use borrowings as a lack of their own capital. Crediting conditions in this case will be rather strict, which, as some researchers admit, due to such factors: potential existence probability of denial of customer to accept finished works and absence of costs in scientific institution for repayment of bank credit in this case; long term of crediting, necessary for fulfillment of innovation projects; lack of crediting experience of investment and innovation projects among larger part of the banks (Butko, 2003). Such factors remain actual also in current conditions of national economy development. They lead to high level of interest rates for determined crediting operations. The procedure of credit providing in this case is rather simple.

Bank may act as an authority empowered by the customers of the project to control the execution and quality of works and be responsible for targeted and efficient use of provided costs. The function of commercial bank in this case lies not in control on its own of the research and developments in creating difficult high-tech products, but in the organization of medium step between state (represented by entity, specialized fund or another source), financial sources of providing the project and enterprise executer. Providing costs is done according to the developed program of works, at the same time the expertise of project documentation is done by experts of the bank or specialists invited on agreement basis. The main aim of this scheme lies in getting by the bank commissions for its service, for example, as determined per cent from the financing volume. Along with this, the bank may buy back in its own account financed by technical support innovation projects, at the same

time the aim of the bank is individual implementation of completed innovation projects, organization of stock companies for research results implementation and so forth (Liuta, Bukhtiarova, 2011).

In the process of financing of innovation activity, bank may directly execute the function of investor. In this case, bank acts not only as an agent in crediting and control, which invests money of side (foreign) investor, but also as a source of financing, that is banks risk their own credit resources.

When it comes to the acquisition of copyrights on innovation technologies and management of investment portfolio of clients, then, technically the realization mechanism of these functions is rather difficult, as it comes not only about simple financing of innovation activity, but also about the project financing, that requires the execution of deep analysis of efficiency of predicted investments of capital, based on the range of assumptions and forecasts, connected with scientific and technological, political, judicial and other risks (Andros, 2011).

The main directions of banking financing of innovation activity should be related: financing of creation and implementation of progressive science and technology innovations; leasing operations; factoring operations; competitive financing; crediting of events on technical level growth and development of enterprises; taking part in venture financing on all stages of life cycle of product production.

Banks execute innovation financing driving by the general principles of “risks” funds functioning: organization of partial financing of development; implementation of perspective science and technology achievements on research enterprise, and on this basis in future - getting returns from mutual ownership of patent for development financed by the bank.

The analysis of official data of National bank of Ukraine on banks activity in this direction witnessed under financial and economic instability banks consequently lessen the financing of innovation-investment projects (Biuleten Natsionalnoho Banku Ukrainy, 2016) (Table 3).

Table 3. The dynamics of credits provided by the banks into real sector of economy of Ukraine for 2010-2015, mln. hrn.

| | 01.01.2011 | 01.01.2012 | 01.01.2013 | 01.01.2014 | 01.01.2015 | 01.01.2016 | Absolute deviation, mln. hrn. | Growth rate, 2015/2010, % |
|--|------------|------------|------------|------------|------------|------------|-------------------------------|---------------------------|
| Credits provided to economic entities | 508 288.0 | 580 907.0 | 609 202.0 | 698 777.0 | 789 540.0 | 785 918.0 | 277 630.0 | 54.6 |
| Credits for investment activity | 74 718.0 | 121 990.0 | 135 852.0 | 125 780.0 | 126 326.0 | 125 904.1 | 51 186.1 | 68.5 |
| The essential share of credits for investment activity in the general share of credit, % | 14.7 | 21.0 | 22.3 | 18.0 | 16.0 | 16.0 | 1.3 | 9.0 |

Taking into account the lack of official statistics on crediting innovation activity of enterprises the crediting dynamics of investment projects

should be evaluated, as this direction of banking activity is closely connected with innovations financing. Taking into account the lack of official

statistics on crediting of innovation activity of enterprises the dynamics of crediting of investment projects should be evaluated, as this very direction of banking activity is closely connected with innovation financing.

As it can be seen from Table 3, comparing to 2010, the volume of investment credits of domestic banks has grown over 68.5% (or over 51,186.1 mln. hrn.). However, already from 2013, the consequent lessening of credits in investment activity takes place. It is connected with first of all high cost of credit resources, lack of mortgage among potential lenders and limited possibilities according to partial financing of projects for own costs, that is negatively influenced by economic and political instability in the country, as well as devaluation of hryvna. We should admit that the essential share of credits for investment activity in the general share of credits, provided by banks of Ukraine in total is not that small – on average, 18%. However, it is rather difficult to determine in these amounts the share of credits for innovation financing.

As it was noted, an important role in unpopularity of crediting by banks innovation projects plays rather high crediting costs value. For instance, in PJSC «Privatbank», it is 27% per annum, PJSC «OTP Bank» - it is from 21% per annum, PJSC «Kredobank» - from 20%, PJSC «KREDI AGRIKOL BANK» - 19-20% (Biuletyn Natsionalnoho Banku Ukrainy, 2016). And it is not taking into account that besides payment for credit costs use in the form of interest, practically every banking institution charges commission as well (for opening of credit account, for not using the limit,

and so on). As a result, the value of credit costs increases substantially. It is one of the main prevent in use of banking credits for financing of innovation activity.

It is clear, among the wide range of different operations and services banks may provide to their clients, the special place is taken by banking crediting of innovation activity, because of use difficulty of other sources, it may provide with financial resources the realization of innovation projects. That is why banking crediting may be considered an important source of financing of investment and innovation activity of enterprises.

Findings and propositions

Thus, today in Ukraine the financing of innovation activity of enterprises by external sources is used quite little. At the same time, taking into account financial and economic instability in the state, the problems in banking system and lack of clearly on legislative level determined mechanism of financing of enterprise innovations, the potential of banking crediting as a source of financing of innovation activity of enterprises, is not yet used in full force.

The banks have to become active subjects of innovation activity, providing not only its financing, but the connection between all other participants – state, investment-innovation funds, science and technical institutions and consumers. In current conditions and for the perspective, banking crediting is meant to become one of the most important sources of financing of national investment programs and projects, directly connected with the improvement and development of real sector of national economy.

References

1. Butko, M. (2003). Rol bankivskoi systemy v aktyvizatsii innovatsiino-investytsiinoho rozvytku, *Visnyk NBU*, № 12, pp. 49-54.
2. Nauka ta innovatsii v Ukraini [Elektronnyi resurs]. Available at: <http://www.ukrstat.gov.ua/>.
3. Andros, S.V. (2011). Kredytno-investytsiina stratehiia komertsii banku v umovakh nestabilnosti marketynhovo seredovysheh, *Formuvannia rynkovo ekonomiky : zb. nauk. prats*, Spets. vyp.: Marketynhova osvita v Ukraini, vidp. red. O.O. Bieliaiev, K.: Vyd-vo KNEU, pp. 441-450.
4. Moroz, A.M., Savluk, M.I., Pukhovkina, M.F. (2002). *Bankivski operatsii: Pidruchnyk*. 2-he vyd., vypr. i dop., za red. d-ra ekon. nauk, prof. A. M. Moroza, K.: KNEU, p. 476.
5. Funding of new technology-based firm by commercial banks in Europe, Guarantee mechanisms for financing new technologies. (1998). *European Journal of Lending and Credit Risk Management*.
6. Vladymyr, O. (2011). Vzaimozviazok mizh stabilnistiu valiutnoho rynku ta innovatsiinym rozvytkom ekonomiky krainy, Innovatsiini pidkhody v upravlinni navchalno-naukovo-vyrobnychymy systemamy v umovakh suspilnykh ta instytutynnykh transformatsii: materialy reh. nauk.-prakt. konf. TNTU im. I. Puliuia, 19 travnia 2011, Ternopil: TNTU, pp. 7-8.
7. Biuletyn Natsionalnoho Banku Ukrainy. (2016). № 2.
8. Huliaieva, L.P. (2006). Rol bankiv u zabezpechenni funktsionuvannia pidpriemstv realnoho sektora ekonomiky, *Formuvannia rynkovykh vidnosyn v Ukraini* (ukr.), № 9, pp. 28-33.
9. Liuta, O.B., Bukhtiarova, A.H. (2011). Bankivske kredytuvannia yak instrument finansovoho zabezpechennia rozvytku innovatsiinoho sektoru ekonomiky [Elektronnyi resurs]. Available at: <http://www.academia.edu/3233721>.
10. Oliievska, M.H. (2011). Osnovni dzherela finansuvannia innovatsiinoi diialnosti pidpriemstv rehionu, *Zbirnyk naukovykh prats Natsionalnoho universytetu derzhavnoi podatkovoi sluzhby Ukrainy*, 1, pp. 368-375.