The Development of Bank Crediting to Trade Based on Supply Chains in Russia in the Crisis Uncertainty Context

Mariia Nikolaevna Koniagina[*1], Irina Urievna Evstafeva[2], Viktoriya Valeryevna Manuylenko[3], Alvi Adlanovich Khashaev[4], Alena Valerevna Kirillova[5]

[1] *The North-West Institute of Management of the Russian Presidential Academy of National Economy and Public Administration, 197376, 4 Pesochnaya Embankment, St. Petersburg, Russia*

[2,4,5] *Saint-Petersburg State University of Economics, 191023, 21 Sadovaya street, St. Petersburg, Russia*

[3] *North-Caucasus Federal University, 355009, 1 Pushkina street, Stavropol, Russia*

[1]*mkoniagina@yandex.ru*

Abstract. **The geopolitical background of Russian trade and banking remains pessimistic, which stresses the importance of studying the experience gained over the past decade and the relevance of the questions raised. In addition, some problems that emerge during trade bank crediting are not so obvious. Talking about them is not common due to a bank's damaged reputation or a decline in the quotation of trade or credit organization securities. This situation is facilitated by a small size of the Russian securities market, low investment activity of the population, and professional communities isolated from one another, which is typical for Russia. To identify the current challenges encountered in relation to the organization of trade bank crediting and to work out proposals to improve banking when crediting trading companies, the authors analyze the major results of the trade crediting activity of Russian commercial banks between 2009 and 2017; they explain how economic volatility and uncertainty affect the credit risk of banks, and provide an estimate of the development prospects for bank crediting for trading companies. This study uses regression analysis, systematization, generalization, visualization, and economic forecasting methods. The research has determined that the capital adequacy of a number of Russian banks that extensively lend to commercial enterprises is in jeopardy, as in unstable environments the rates of net trading margin and bank profitability are dropping. As a result, the capital expansion resources are limited. At the same time, the need for state support for certain banks under recessional conditions remains a controversial issue with ambiguous implications of such decisions.**

Keywords: *commercial bank, bank crediting, credit risk, trading company, loan portfolio, debt in arrears, supply chain.*

1. Introduction

The events of the last decade have changed the economic reality in which the Russian banking system operates. Currently, the banking market participants are still facing the urgent task of adapting to constantly changing macro- and microeconomic conditions. The international anti-Russian sanctions, the sudden devaluation of the national currency, and progressive crisis developments have become a real try-out for the Russian banks and economy as a whole. As one of the main drivers of economic growth — and an industry integral to the gross domestic product, the national income, and the formation of various level budget revenues — the trade industry today is facing real challenges. On the one hand, its development hinges on effective demand, and on the other hand, it relies on the availability of borrowed resources, particularly bank loans. In this regard, it is especially important for commercial banks to create a risk management system that would help minimize their own risks while allowing credit organizations to remain socially responsible participants in the economic system. The geopolitical background of Russian trade and banking is still pessimistic, which stresses the importance of studying the experience gained over the past decade and the relevance of the concerns raised. In addition, some of the problems encountered in relation to trade bank crediting are not so obvious, and it is not common to talk about them due to a bank's damaged reputation or a decline in the quotation of trade or credit organization securities. This is facilitated by the small size of the Russian securities market, the low investment activity of the population, and professional communities isolated from each other, which is typical for Russia. Therefore, the authors set themselves the goal to identify current problems of organizing trade bank crediting and to work out proposals to improve banking activities in the field of lending to trading companies. To achieve this

International Journal of Supply Chain Management
IJSCM, ISSN: 2050-7399 (Online), 2051-3771 (Print)

goal, the study fulfills a number of objectives: it analyzes the key Russian commercial banking performance data in trade crediting between 2009 and 2017; explores how economic instability and uncertainty affect the credit risk of banks; and estimates the development prospects of bank crediting for trading companies in modern Russia. Russian commercial banks were the object of the research and bank crediting for trading companies was the subject of the research. The authors hope that the generalized experience and recommendations elaborated as a part of the study will be applied in the banking practice in crediting of trade.

2. Literature review

Economists often refer to studying crediting and credit risk management issues. The academic papers of E. [1], [2], [3], [4], [5], as well as many other foreign authors are in good standing in this area. Russian economic researchers have often considered credit risks alongside with the management of banking capital [6]; [7]; [8]. The art of bank crediting is addressed in the works of [9] and [1]. A number of authors delve into particular factors affecting the credit risk of banks [10; 11]. At the same time, most researchers consider credit risk as one of the many factors affecting the soundness of a commercial bank [12], as well as credit activity as a tool that can give impetus to economic growth in the country [13; 14]. Despite plentiful contributions dealing with bank crediting and credit risk management, the issues of credit risk management when financing particular economic activities have been underexplored. Moreover, the problem of credit risk remains to be studied for a rather long time because of the ever-changing degree of impact of this risk level on bank profitability, the dependence of banking capital on the credit risk level, changes in banking technologies when lending to different groups of customers, and increased competition with non-bank organizations willing to lend to bank customers and with widespread crowdfunding and peer-to-peer lending platforms, among other things.

3. Materials and methods

When working on this article, the authors used analysis methods, including regression, synthesis, visualization, economic forecasting, systematization, and others. A high profile in the framework of the trade crediting quality research and credit risk of banks was given to an analysis of time series of statistical data on bank crediting for trading companies and the quality of total portfolio of loans provided to trading companies, posted to the official website of the Central Bank of the Russian Federation. Systematization, generalization, and visualization of the acquired information were additional methods to tackle the problems. All the data were collected according to a single methodology and over comparable periods, which allows for a correct comparative analysis of the data. The analysis of paired data series required confirmation of reliability of the results and correlations of values, for which purpose Pearson linear correlation coefficient was calculated for each pair, whereby the calculation results ranged from 0.9 to 0.97. Pearson correlation coefficient confirmed a high linear relationship between the statistical series, as was to be proved.

4. Results

The key indicators describing the quality of organizing bank crediting for trading companies are:

1) The dynamic pattern of the total outstanding arrears of trading companies to banks;
2) The dynamic pattern of the formed loan loss provisions (hereinafter referred to as LLP) for loans provided to trading companies.

In order to objectively assess the quality of loans, it is necessary to illustrate the currency composition of credit risk to find out the ratio of loans issued by banks to trading enterprises in rubles and in a foreign currency. Over the nine years, the share of foreign currency loans in the total amount of funds loaned to enterprises in the trading industry has decreased threefold: from 18% in 2009 to 6.1% in 2017 (Figure 1). For the researched period, it was found to be minimal in 2017. Over the period from 2009 to 2017, foreign currency loans decreased both in absolute and relative terms. The minimum was observed in the post-crisis year 2016, when wholesale and retail businesses were granted foreign currency loans totaling 521 billion rubles (the volume of foreign currency and precious metal loans granted to resident entities and self-employed individuals, by type of economic activity and application of funds. Available at < http://www.cbr.ru/statistics/UDStat.aspx?TblID=302-02&pid=sors&sid=ITM_19292 > Data extracted on March 1, 2019), which is 32.3% less than in 2009. It is understandable why commercial facilities increasingly prefer to borrow in domestic currency: first, this industry is characterized by insufficient foreign exchange earnings, and second, the 2014 crisis proved that borrowers who took loans in foreign currency were most vulnerable and extremely sensitive to changes in the economic and political situation in the country.

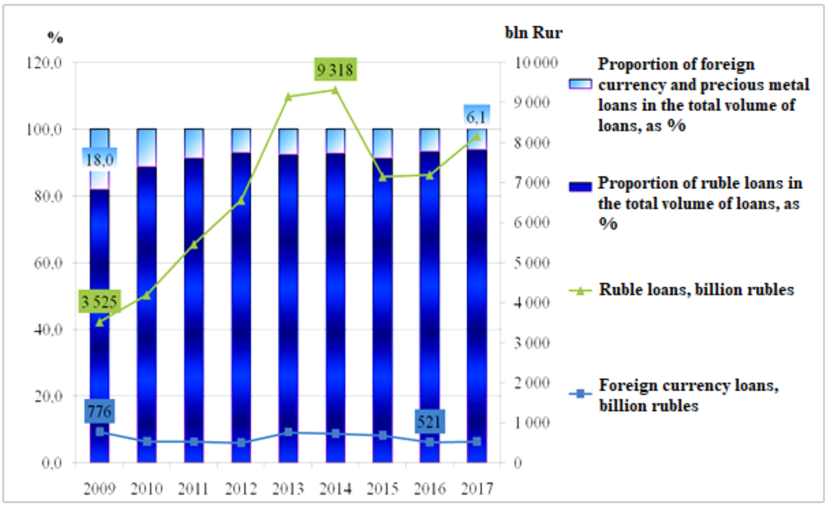

Figure 1. Bank loans issued to trading companies in 2009-2017

Source: based on the data retrieved from the official website of the Central Bank of the Russian Federation. URL: http://www.cbr.ru

The maximum volume of ruble loans in absolute terms was recorded in 2014—9,318 billion rubles (the volume of ruble loans granted to resident entities and self-employed individuals, by type of economic activity and application of funds. Available at < http://www.cbr.ru/statistics/UDStat.aspx?TblID=302-01&pid=sors&sid=ITM_27910 >Data extracted on October 1, 2018). During the post-crisis period in 2015-2016, there was a noticeable reduction in trade crediting (by 23.3%). However, according to the results of 2017, we could note a revival of commercial banks in the field of lending to trade enterprises. Having assessed the composition of foreign currency loans issued to the trade industry, it is necessary to study the changes in debt arrears. Until 2014, the share of overdue loans in national currency (Figure 2) in the total volume of loans issued by banks to trade enterprises was steadily decreasing to reach a minimum in the pre-crisis year 2013 and amount to 2.7%, remaining at the same level in 2014.

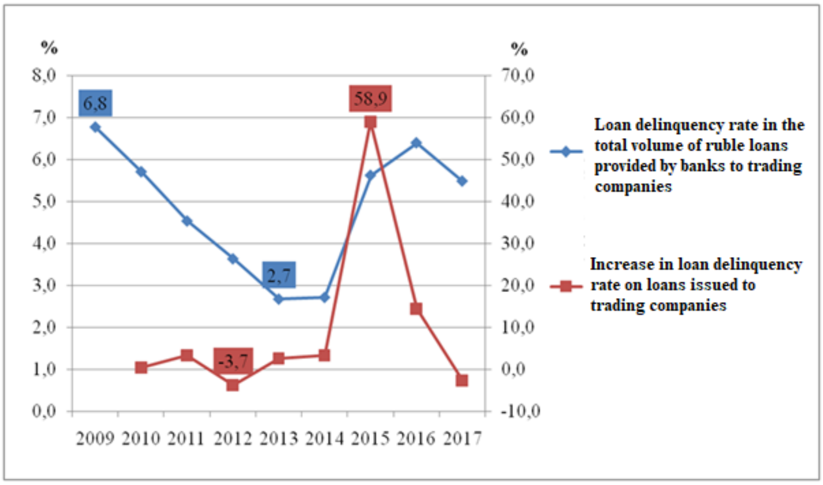

Figure 2. Change in debt arrears on ruble loans issued to trading companies

Source: based on the statistical data retrieved from the official website of the Central Bank of the Russian Federation. URL: http://www.cbr.ru

Over the next two years, the loan delinquency rate grew markedly to almost reach the level of 2009 (the year of shock after the crisis of 2008) in 2016—6.4%. In 2017, it decreased. At the same time, overdue debts almost doubled over the researched period: from 238.8 billion rubles (arrears on the ruble loans issued to resident entities and self-employed individuals, by type of economic activity and application of funds. Available at< http://www.cbr.ru/statistics/UDStat.aspx?TblID=302-09&pid=sors&sid=ITM_45484 >Data extracted on October 3, 2018) to 448.3 billion rubles. It should be also stressed that despite the slightly reduced loan delinquency rate in 2017 compared to 2016, there was no recovery to the pre-crisis level of 2013 (238.7 billion rubles) and it is unlikely to happen in the near future. The same is true for foreign currency loans (Figure 3). The lowest loan delinquency rate was observed in 2013 followed by a steep increase to reach its maximum of 5.5% in 2015, which was an extraordinary increase in the loan delinquency rate in 2015 compared to 2014.

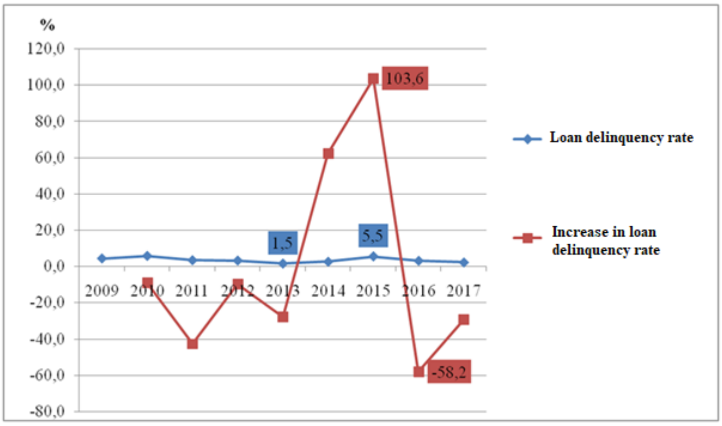

Figure 3. Pattern of debts in arrears on foreign currency and precious metal loans issued to trading companies
Source: based on the statistical data retrieved from the official website of the Central Bank of the Russian Federation. URL: http://www.cbr.ru

There is also a positive aspect. In 2016, the loan delinquency rate recovered to the pre-crisis value of 2013 (15.7 billion rubles) (arrears on the foreign currency and precious metal loans issued to resident entities and self-employed individuals, by type of economic activity and application of funds. Available at <http://www.cbr.ru/statistics/UDStat.aspx?TblID=302-10&pid=sors&sid=ITM_24996 > Data extracted on October 3, 2018) and in 2017 even turned out to be significantly lower (11.1 billion rubles).

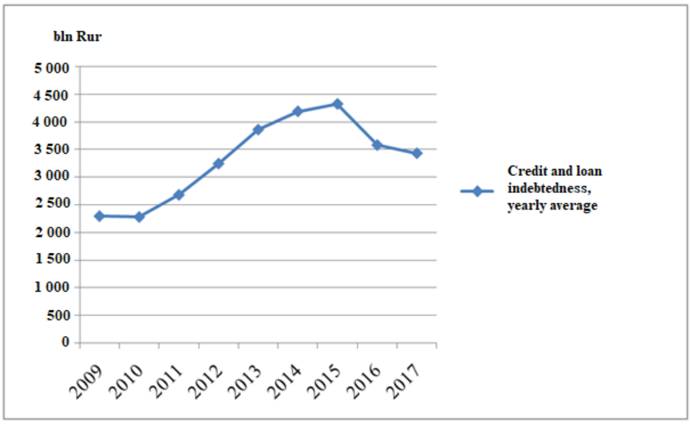

Figure 4. Borrowings of Russian trading companies in 2009-2017, yearly average
Source: based on the statistical data retrieved from the official website of the Central Bank of the Russian Federation. URL: http://www.cbr.ru

4.1. Analysis of the research results

Bank loans to trade enterprises amounted to 8.2 trillion rubles (the volume of ruble loans issued to resident entities and self-employed individuals by type of economic activity and application of funds; available at <http://www.cbr.ru/statistics/UDStat.aspx?TblID=302-01> Data extracted on September 16, 2018) at the end of 2017, having increased by 2.32 times over the nine years from 2009 through 2017. The annual average credit and loan indebtedness of these enterprises over the specified period increased one-and-a-half times to reach 3.43 trillion rubles (Figure 4) (indebtedness under the ruble credits granted to resident entities and self-employed individuals by type of economic activity and application of funds; available at <http://www.cbr.ru/statistics/UDStat.aspx?TblID=302-05> Data extracted on September 16, 2018). Borrowing by trade enterprises in 2017 amounted to 8.23% of GDP, which was 0.12% more than in 2009, when it amounted to 8.11%. During the period of corrective growth of the Russian economy, there was a fairly smooth increase in bank crediting for trading companies: 7.84% of GDP in 2010 and 8.14% of GDP in 2011. However, at the beginning of the Russian economic downturn, crediting significantly exceeded the level of the recession year 2009, when it accounted for 8.11% of GDP. The maximum trade crediting ratio to GDP occurred during 2013, when it was 11.54%. At year-end 2017, this ratio was 8.23%. An important characteristic of the evolution of trade loans is their comparable growth in contrast to business expansion. For example, as noted above, from 2009 through 2017, borrowing increased by 2.32 times, while retail turnover increased by 2.2 times (according to the official website of the Federal State Statistics Service, available at <http://www.gks.ru> Data extracted on September 20, 2018) and wholesale turnover, which amounted to 2.48 times. The period of corrective economic growth after the crisis of 2008 was characterized by slower growth in lending. During 2013 and 2014, the Russian economic slowdown, with its steep increase in trade crediting and subsequent weakening of the ruble, drove trading companies' debt burden to a high level and continued to drive it up. At the same time, some researchers [9] believe that trade refers to those industries where an expansion of crediting is associated with relatively low risk. In the opinion of such researchers, trade is characterized by a low loan servicing load (i.e., the ratio of interest on loans to trading company profits, expressed as a percentage). From this perspective, the loan servicing load was below 18% of sales profits during 2012–2014. However, we share the view of most experts [as exemplified by 14] who believe that trade is one of the highest risk industries subject to considerable fluctuation. Accordingly, the provision of loans to companies with high volatility can result in overdue debt to a commercial bank and an increase in provisioning costs, which, in turn, can lead to a decrease in the loan portfolio yield. The "window of opportunity" that opened for national manufacturers and trading companies against the background of the weakening national currency and higher import costs and/or reduction of imports determined the growth in companies' demand for credit resources [9] on which trading companies heavily rely to finance their working capital. An increase of demand for Russian goods both at the domestic and foreign markets was expected. Indeed, over the past decade, lending to the non-financial sector in Russia has steadily increased, along with its overall debt burden and loan servicing load. As a result, further expansion of crediting may be accompanied by heightened risks. Taking into account the American and European sanctions introduced in 2015-2019 and the subsequent reduction in the availability of resources for Russian enterprises in the global financial markets, the Russian banking system has become a primary source of lending to the Russian economy. At the same time, national producers and trading companies object to the increasing dependence on the national banking system, complaining about Russian banks failing to either provide credit conditions equal to non-resident banks or meet the demand for the quantity of credit resources they need. Therefore, it is necessary to evaluate the role of non-residents in the creation of trade credits. On the way to a balanced solution, this would make it possible to assess the dependence of domestic trading companies on non-resident banks and their degree of vulnerability. The problem is important in connection with the presence of debt from Russian companies to non-residents, as well as the traditionally high volume of transactions with foreign companies, which raises banks' concerns about the increased risks of loss of funds and prevention of legalization of dubious transactions. "Risks in the banking sector are rather socially responsible processes" [15]. Considering that on the one hand, credit organizations risk not only their own but also borrowed funds, on the other hand, the Russian Deposit Insurance System does not protect all banks' customers, and in addition both capital loss and money laundering transactions are punished by the Bank of Russia rather severely, this may have more dramatic consequences. In this regard, issues of prevention and risk reduction are becoming increasingly relevant. It is considered paradoxical [16] that "the imposed anti-Russian sanctions restricting the access to global capital markets did not play against the largest Russian companies but rather, on the contrary, have served as a protection against shocks in global financial markets." At the same time, the Russian economy faces the current crisis in an objectively weaker state than during the crisis of 2008–2009. First, an extremely steep drop in oil prices occurred at the precise moment when the banking and corporate sectors needed large amounts of funds to refinance current foreign debt obligations. Second, structural bottlenecks in the banking system became apparent in the form of an increasing share of distressed assets, determined by a decline in demand for the products of a large number of companies, amid cost escalation or a cost-saving lag. "Price shocks, especially in a resource-based economy, cause shifts in the financial performance indicators of economic entities, with the real sector losing first, the population second, and the banking system at last" [17]. The situation is aggravated by the fact that, while the crisis of 2008–2009 was a global event and the recovery depended on concerted action by the world's major economies, the ongoing crisis is exclusively Russian. As a result, the speed of economic recovery is largely determined by the effectiveness of regulatory methods employed by the Bank of Russia and cohesion on the part of the banking supervisor and the Government of the Russian Federation. As such, let us retrospectively consider the evolution of the recession to attempt to discern the trends characteristic of the domestic economic crisis exacerbation phase and to list the key lessons that can be derived from the attendant instability, uncertainty, and force majeure. Based on the devaluation experience of late 2014, it can be concluded that it is difficult to control inflation using only monetary methods. This is primarily determined by the high degree of the Russian economy's dependence on imports in both the food and manufacturing sectors. Thus, the increase in the key rate of the Central Bank of the Russian Federation in December 2014, which was aimed at limiting significantly heightened devaluation and inflation risks, led primarily to a noticeable decrease in the net interest margin in the banking sector. Together with a slowdown in loan growth rates and a concomitant increase in the volume of overdue amounts, this prevented most banks from making up the shortfall. In 2015 (on the results of seven months), commercial banks earned a total profit of 34 billion rubles, which is 15 times lower than the profit performance of the same period of 2014. The objective reality is that the depth of the Russian banking recession is significantly smoothed out by a positive effect of the largest bank, PJSC Sberbank of Russia. Without taking into account the profit of this credit institution, the banking sector losses from January to July 2015 amounted to 93.8 billion rubles, with 50.3 billion rubles in July alone. Of course, the key reason for the losses of most banks was the continuing asset quality deterioration, which led to a significant increase in overdue debt, including on loans issued to trading companies. The loan quality reduction is conditioned by financial hardships of most corporate borrowers, which is largely due to a reduced consumer and investment demand: the retail turnover in July 2015 decreased by 9.2% compared to the same period in 2014. The risk profile of the domestic banking sector confirms that the situation in the banking sector is quite challenging (Figure 5).

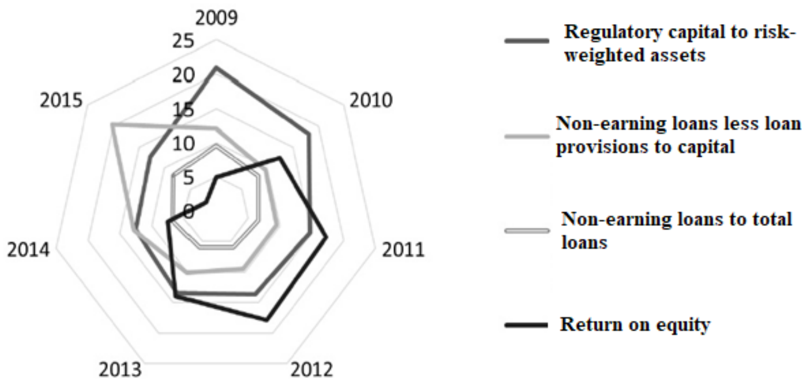

Figure 5. Financial stability indicators of the Russian banking sector (2009-2015) [18]

The value of the key stability indicator of credit organizations, which is capital adequacy, almost halved in 2015 compared with the post-crisis year 2009: from 20.9 % to 12.9%. At the same time, the share of non-earning loans in the total loan portfolio of the banking sector amounted to 7.4%. It should be borne in mind that this sample does not include data on a high share of restructured debts, which would significantly worsen the estimate. Regarding the ratio of non-earning loans (less the loan impairment reserve) to bank equity, this value even exceeds 20%: a fifth of the banking sector capital is virtually lost. In the aggregate (SWOT analysis), the strengths and weaknesses of the banking sector that showed up during the current economic crisis, as well as opportunities and potential threats, are presented in the annual report to the 26th Convention of the Association of Russian Banks "Anti-crisis techniques and strategies: the interaction of banks and banking supervisors" (the official website of the Association of Russian Banks available at < https://arb.ru/arb/management/congresses/9905385/ > (Data extracted on November 17, 2018)

(Figure 6).

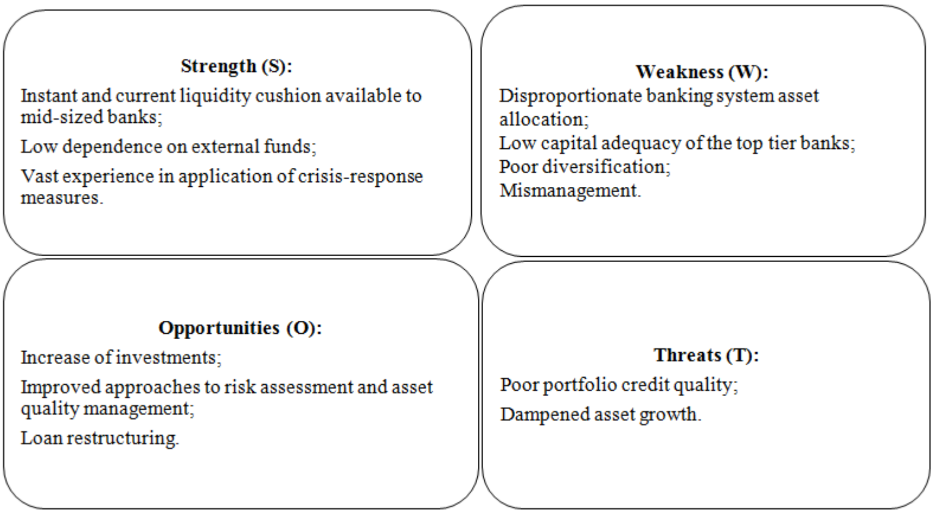

Figure 6. Strengths and weaknesses analysis of the Russian banking system in current conditions

It can be said that the major external causes of the aggravated situation in the banking sector were heightened risks, several license withdrawal peaks, and sharp fluctuations in the key rate of the Bank of Russia. In addition to structural economic fluctuations, “a decline in economic activity may have also occurred because of the significant outflow of capital, which has been observed since the end of 2013. An important threat influencing both the financial system and the economy as a whole is a rapid decline in raw material prices and, above all, oil prices” [19]. Next, let us consider how banking policies shifts during the crisis. Under uncertainty, banks tend to adhere to a rather conservative credit policy. As a result, interest rates on short-term loans that are vital for trading companies to replenish working capital become prohibitively high for many borrowers (Figure 4). In addition, the number of loan product offers is decreasing. Banks are tightening credits for borrowers, which manifests itself rather in increased scrutiny of the financial standing of a legal entity and the collateral value and quality than the intangible prospects and business plan of the potential borrower. Reassessment of credit risks with reference to the working loans usually leads to a reduction of credit limits and terms. However, in the event of deterioration in the bank’s financial position, senior executives and owners of commercial banks that are at extra risk because of low capital stock and liquid asset balance, in some cases with a large share of loans to construction companies and to trading importing companies, are, on the contrary, motivated to take heightened risks. Before the crisis, such a decision could be accounted for the highly competitive banking business, but during the crisis it is fraught with the banking company winding-up. On the other hand, there is no other way such banks can compete with the country’s biggest banks that are usually owned in part by the government and supported with loans and capital infusions. Support for state-owned banks affects the level of risk in the banking system as a whole. Studies conducted in different countries show that government support for certain banks is reasonable and has a positive effect only in short term. In the Russian Federation, the government stake in bank assets has been growing over a long period of time, and this is what has largely helped the biggest banks adapt to the current domestic economic crisis. The conclusion contained in most studies is simple: government support causes banks to take more risks. At this time, the financial soundness of commercial banks that have to make the same risky play as state-owned banks is decreasing. Therefore, it is logical that banks that are not systemically important credit organizations that make the top fifty are faced with a critical need for additional capital amid the economic slump and uncertainty. At the same time, the ability to augment capital through internal sources is significantly limited: the return on equity in the banking sector decreased from 17-18% in 2011-2012 to 2% at year-end 2015 (Figure 7).

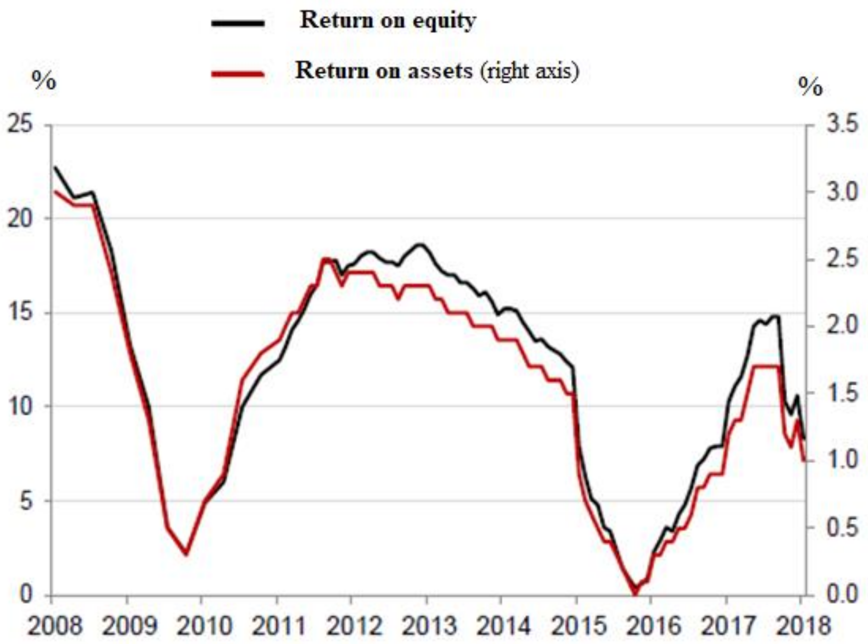

Figure 7. Profitability pattern in the banking sector, 2008-2018 [20]

Now, the threat of systemic risk realization seems quite real, whereby the risk of asset concentration may be one of the risk sources [18]. However, the banking supervisor believes that the systemic risks for the banking sector are low. At the same time, at the beginning of 2017, the Bank of Russia introduced a new type of financial data reporting “Concentration Risk Data” that details concentration risk, including by type of economic activity. Banks provide data on their requirements of the credit institution to counterparties by type, on the credit and market risk, as well as on the types and amounts of limits individually set by the bank, their signal values and the number of limit violations for the accounting period. Consequently, the Central Bank of Russia still deems it necessary to maintain strict control over the compliance of banks’ internal limits with the actual level of concentration risk. Another result of government support is the leveled scale of asset mismanagement that is much more extensive in state-owned banks than in private banks [16]. However, as was emphasized, the banking sector risks are socially responsible processes (we would even characterize them as “socially significant”), therefore, the issue of providing government support to banks and its amount requires the most thorough study possible in order to avoid social upheaval [22-24]. Due to the realization of the potential threat of borrowers’ weakening financial standing that reflects the economic troubles the country is suffering, provision costs are one of the major cost components.

5. Conclusion

Summarizing our own analysis and findings of most researchers, we can conclude that the probability of credit risk significantly rises during a downturn, which fully applies to trade bank crediting. Also, the growing provision costs are associated with the Bank of Russia pursuing a policy of improving the banking sector since the fourth quarter of 2013. This significantly reduces the profitability of the national banking system and its investment attractiveness. In the face of intensified competition with high-tech companies, whose activities are far from always falling within the regulatory scope of the Bank of Russia, Russian banks have a hard time doing business and achieving sustainability and efficiency.

To summarize:

1) The results of analysis of Russian banks crediting trade companies in 2009-2017 confirm that the risks faced by banks during the crisis are rising and are especially noticeable in the “Risk-Cause–Risk-Consequence” system. This conclusion applies both to global economic disasters and to the local crises of federal importance;

2) The more dependent the domestic economy is on the external world, the more the interest rate risk is likely to realize. However, isolation in today’s context does not protect against interest rate risks either; instead, it delays them, raising the attendant risks, for example, the concentration risk;

3) The key factor in the realization of credit risk is borrowers’ weakening financial standing, which leads to a rapid and long-term increase in the

troubled loan portfolio volume, which is the reason for creation of large (additional) provisions that adversely affect the financial performance and the capital adequacy ratio of these organizations;
4) The capital adequacy of many banks is at risk. Systemically important Russian (usually state-owned) banks can rely on the government for support in the form of capital infusions, whereas other lending institutions have a hard time, since the values of the net interest margin and profitability slump in the volatile environment [25]. Accordingly, the capital expansion possibility using internal funds is limited;
5) In this regard, despite the prevailing opinion that during a crisis it is necessary to adhere to a rather conservative policy, some commercial banks take heightened risks with a view to earn bigger profit. Such a decision is fraught with a fatal outcome for such lending institutions, especially in the context of the banking system rehabilitation carried out by the Bank of Russia since 2013;
6) The need for government support of individual banks under recessional conditions is a debatable issue in the professional and academic circles. We believe that it is necessary to recapitalize systemically important banks, since the development of a negative scenario for such credit organizations will result in devastating social and economic ramifications in Russia, which both the authorities of the Russian Federation and the banking supervisor can ill afford [26-28]. However, if a bank has the opportunity to apply for financial support from the state, the problem of asset mismanagement becomes especially pressing. Therefore, such emergency assistance should be short-term and strictly controlled.

References

[1] Morsman, Edgar M. The Art of Commercial Lending. – RMA. Paperback, 124 pages, 1997.
[2] Rose, Peter S. *Commercial Bank Management. Irwin* , McGraw-Hill, Hardcover, 2001.
[3] Sinkey J. *Financial management in a commercial bank and in the financial services industry*, J. Sinkey. – M.: Alpina Business Books, 2007.
[4] Koch, T.W., MacDonald, S.S. *Bank Management* – South-Western, Cengage Learning, 2009.
[5] DeAngelo, H., Stulz, R. *Liquid-Claim Production, Risk Management, and Bank Capital Structure: Why High Leverage Is Optimal for Banks*, Journal of Financial Economics. 116. – pp. 219-236, 2015.
[6] Beloglazova G.N., Krolivetskaya L.P. *Banking. Organization of commercial banking activities*. – M.: Yurait Publishing House, 2014.
[7] Pomorina M.A. *Financial Management in a Commercial Bank*: Learning Guide.
[8] Karminsky A.M., Khon O.D. *Collateral factors in bank risk management: a regional aspect*, Bulletin of MGIMO University. 1(58). pp.169-185, 2018.
[9] Berezinskaya O.B. *Lending to the non–financial sector of the Russian economy: opportunities and limitations*, Economic Issues. 3. – pp. 63-74, 2016.
[10] Karminsky A.M., Khromova E. *Increase of banks' credit risks forecasting power by the usage of the set of alternative models*. Russian Journal of Economics. 4(2). – pp. 155-174, 2018.
[11] Krolivetskaya V.E. *On the collateral development to ensure bank credit recovery in Russia* // Vestnik Chuvashskogo Universiteta (Bulletin of the Chuvash University). Available at: <https://cyberleninka.ru/article/n/o-razvitii-zalogovoy-formy-obespecheniya-vozvratnosti-bankovskih-kreditov-v-rossii> (accessed on December 14, 2018), 2009.
[12] Bramer, P., Gischer, H., Lucke, Ch. *Simulation Approach to Evaluate Systemic Risk*, European Journal of Political Economy. 34. pp.553-564, 2014.
[13] Voronova N.S., Miroshnichenko O.S., Tarasova A.N. *Determinants of the Russian banking sector development as economic growth factors*, Economic and Social Changes: Facts, Trends, Forecast. 4. – pp. 165-183, 2016.
[14] Shershneva E.G., Kondyukova E.S. *Paradoxes of credit risk management of the corporate loan portfolio of a commercial bank*, Finance and Credit. 1. – p. 28, 2016.
[15] Kuzmicheva I.A., Podkolzina E.A. *Bank Risk Management System*, Fundamental Research. 2-25. p. 5635-5638, 2015.
[16] Teotushkin V.A. *Marketing risk analysis of the banking system of the Russian Federation during the economic crisis*, Financial Analytics: Problems and Solutions. 30. – p. 35, 2016.
[17] Domaschenko, D.V. *The effectiveness of the banking and real sectors of the Russian economy in the face of increasing financial instability risk*, Risk: Resources, Information, Supply, Competition. 1. p. 141, 2015.
[18] Larionova I.V., Meshkova E.I. Asset concentration as a source of systemic risk in the banking sector // Finance and Credit. 23(10). p.550, 2017.

[19] Orlova, O.Yu. *The Russian banking system: new challenges and risks*, Prospects of Science. 12 (75). pp. 45-46, 2015.
[20] Simanovsky A., Morozov A., Sinyakov A., Porshakov A., Pomelnikova M., Ushakova Yu., Markelov V., Bezdudny M. *Key trends. Profitability*, Series of reports on economic research. The 2008–2017 results in the Russian banking sector: trends and factors. 31. – p. 35, 2018.
[21] Grote, G. *Promoting Safety by Increasing Uncertainty – Implications for Risk Management*, Safety Science. 71. – pp. 71-79, 2015.
[22] Ali Akbar, Ahmadi, Abolghasem, Bagheri Sirayi, Mohammad Hossein Moghadasan. *Information technology; a facilitator for improving dynamic capabilities through knowledge management utilization*, UCT Journal of Management and Accounting Studies, Issue 2, pp. 27-36, 2014.
[23] Kohler, M. *Which Banks Are More Risky? The Impact of Business Models on Bank Stability*, Journal of Financial Stability. 16. – pp. 195-212, 2015.
[24] Parusimova N.I. *Banking in the growing uncertainty context*, Vestnik of the Orenburg State University. 4. – pp. 318-321, 2015.
[25] Prabha, A., Wihlborg, C. *Implicit Award, Business Models and Banks' Risk-Taking through the Crisis: Global and European Perspectives*, Journal of Economics and Business. 76. – pp. 10-38, 2014.
[26] *Financial Management Association International*: Official site. – Available at: <https://www.fma.org> (accessed on 12.14.2018)
[27] *Association of Russian Banks: official website* / 26th Convention "the interaction of banks and banking supervisors". Available at: << https://arb.ru/arb/management/congresses/ 9905385/>(accessed on November 17, 2018), 2015.
[28] *The Central Bank of the Russian Federation: Official site. URL: http://www.cbr.ru*.