

# Credit Cycles & Debt Restructuring: Refining Theoretical Flaws

Dmitry Vladimirovich Burakov<sup>1</sup>

<sup>1</sup> Department of Monetary Relations and Monetary Policy, Financial University under the Government of Russian Federation, Moscow, Russian Federation

Correspondence: Dmitry Vladimirovich Burakov, Department of Monetary Relations and Monetary Policy, Financial University under the Government of Russian Federation, Moscow, Russian Federation. Tel: 8-967-008-2725. E-mail: dbur89@yandex.ru

Received: May 18, 2014 Accepted: June 18, 2014 Online Published: September 3, 2014

doi:10.5539/res.v6n4p1

URL: <http://dx.doi.org/10.5539/res.v6n4p1>

## Abstract

In this article we set ourselves the task to determine the place of the debt restructuring process upon various phases of the credit cycle. Given the fact that modern theories of credit cycle do not emit debt restructuring as an essential element of the credit cycle development, using data on the development of the Russian banking sector for the period from 2004 to 2012, we analyze the specifics of debt restructuring in the banks' activity. In the study we have identified patterns of restructuring processes' dynamics and correlated them with the phases of the credit cycle. Also as a result of the research we propose and test methods of the restructuring trend's identification on the example of the Russian banking sector. The hypothesis of the natural rate of restructuring and deviations from it at the different phases of the credit cycle is also stated. In particular, we believe that restructuring is a natural process in credit relations, but in the pre-crisis period of expansion and the phase of the credit crunch, debt restructuring deviates from the threshold values and changes its role of the instrument of maintaining stability on the credit market to become a deterrent to clear the market of bad debts.

**Keywords:** banking, credit cycle, credit market, credit risk, debt restructuring, uncertainty

## 1. Introduction

The problem of credit dynamics today is one of the key problems of optimization of economic system's development. A series of debt crises in the USA and the Euro zone has increased interest to the undeservedly forgotten subject of credit relations. Unfortunately, the contemporary understanding of the specifics of credit flows in the short and medium term (the phenomenon of the credit cycle) is heterogeneous in nature. The research results are ambivalent.

On the one hand, according to the mainstream economic thought, credit cycle is the result of external shocks' impact on the credit system (Bernanke et al., 1996; Kiyotaki & Moore, 1997). According to the efficient markets hypothesis, unpredictable external shocks, and any deviation in assets' value (including those that serve as the collateral) are determined by fundamental factors of supply and demand (Fama, 1970). The movement of asset prices is unpredictable, because of the uncertainties of the market (Knight, 1921).

On the other hand, representatives of the heterodox schools consider ups and downs in the movement of credit as an element inherent in the credit and financial markets due to factors of imperfection (Kindelberger, 1975; Minsky, 1978; Stiglitz & Weiss, 1981; Haldane, 2010).

The solution for identifying the credit cycle by means of measures and indicators, then, becomes a hostage of ideas on the nature of the credit cycle. However, at the same time, regardless of the vision of the nature of the cycle, which, in turn, affects the structure and typology of phases, the restructuring process is inherent in each credit cycle.

Given the uncertainty of economic conditions, in the framework of return movement of credit the problems of timely repayment by borrowers of funds lent to them may arise. Reflection of overdue debt in most cases is perceived by creditors as a negative outcome, and is fraught with the loss of profit. Some see the roots of such behavior in the creditors' desire to follow the market trend, because reflection of overdue debt above the level of the market will lead to lower prices of shares and bonds of the bank, on the other hand - restructuring serves as a kind of insurance against costly process of borrower's default. Still others believe that constant reporting of rising non-performing loans (NPL) may alienate quality borrowers who will be afraid of losing solvency in the

short term because of the actions of the bank.

Thus, it is believed that restructuring is a response to the condition of uncertainty in the market and reflects expectations of creditors regarding the quality of the borrower and market conditions.

At the same time, a number of researchers believe that restructuring in certain circumstances moves beyond its natural boundaries.

For example, in the works of H. Minsky (1978), it's proposed to consider the use of the restructuring as an instrument of keeping afloat low-quality borrowers (speculative type of financing and Ponzi-financing schemes). Features of Minsky's vision of debt restructuring (DR) is a direct consequence of the matured economy hypothesis of Lord Keynes (1931), according to which as the economy develops, the number of quality projects (and high quality demand for credit) is reduced, and the number of speculative and poor quality players increases. However, Minsky considers changes in debt restructuring in the long term, which does not meet the credit cycle's assumptions.

Soviet Union's researchers also drew attention to the importance of the restructuring by creditors of overdue debt. Thus, according to E.J. Bregel (1955), during the crisis the availability of credit resources is reduced, while the demand for credit used to postpone the bankruptcy is growing even faster. However, unfortunately, firstly, this view has not received quantitative confirmation. Secondly, it is believed that the demand for restructuring loans increases during the crisis. However, there is no evidence that this pattern is large-scale exactly in this period.

Then, let's suppose that, first, none of the studies takes into account the possibility of the existence of the natural rate of restructuring over the credit cycle; second, dynamics of debt restructuring is not combined with the notion of the credit cycle's phases; third, requirements for the recognition of restructuring deviations from trend are not formed; fourth, at the moment there are no acceptable methods for capturing the dynamics of restructuring activity to improve the quality of the theoretical constructs designed to reflect the movement of credit flows; fifth, finding the means of quantitative identification of changes in debt restructuring movement can help to improve the quality of control over credit dynamics.

As mentioned above, modern ideas of credit dynamics is very scarce and often quite uninformative. The absence of clear and unified approaches to the analysis of the object exacerbates the problem. Indeed, nowadays theoretical notions on the process of debt restructuring can only be found in developing countries. The main reason of such "unpopularity" of this research subject is the active development of strategies for loans' sales: granting the loan is accompanied by its packaging and reselling to other market players. Assets securitization was thought of a panacea for credit risk mitigation, although in essence this mechanism of risk hedging merely transfers the credit risk from one player to another. At the same time, the accumulation of credit risk continues.

The second reason for the unpopularity of this subject can be linked to the active use of the collateral, the level of short-term liquidity of which may reach 100% level. Given that in developed countries, the portfolio of mortgage loans may take up to 70-75% of the total loan portfolio of the national economy, it seems logical that the quick realization of the collateral, supported by strong protection of the creditors' rights, eliminates necessity to help the borrower in case of difficulties with debt repayment so as to refinance current debt. Summarizing, we can say that debt restructuring is more of a scourge of industrial economies, rather than post-industrial.

At the same time, even studies of developed countries support the idea that debt restructuring is an essential mechanism to ensure the stability of credit market functioning and national markets in general. This mechanism acts as a kind of safeguard against the possible realization of tail risks in the market - unforeseen events that result in increasing the probability of default of the borrower for reasons, not related with his activities. A vivid example of such a function of debt restructuring is a program of debt mediation for small business entities in the period of the Great Recession in the USA.

The only theoretical position that is relatively fully reflected in the literature on the issue is the sum of conditions under which debt restructuring can take place. These conditions typically include: the interest of the parties to the restructuring relationship, existence of a legal possibility for providing such form of relations. In other words, such vagueness of definitions does not eliminate a problem of describing and explaining the patterns of the restructuring process movement, its natural rate, the relative levels of DR use in different countries and many others.

## **2. Methodologies**

Studying the process of debt restructuring we start from a number of assumptions in order to achieve the above set goals. First, the restructuring is mainly considered to be a process of debt extension, often accompanied by issuing a new loan to cover the due one. Second, to reflect the restructuring process we use a combination of

statistical data on the banking sector. In particular, for the construction of the trend of credit activity of commercial banks the values of monthly growth rates of corporate loan portfolio on macro-level are used. To highlight restructuring component of the trend monthly values of corporate loans' portfolio with different maturities' growth rates are used. Based on the correlation mapping the dynamics of the portfolios by maturity with the common market trend we determine the basic portfolio that reflects changes in supply and demand for credit at its best (maximum value of the approximation coefficient). Thirdly, to determine the natural boundaries of restructuring we form a set of indices of restructuring. They are defined as the ratio of monthly growth rates of unit share's of one portfolio by maturity to another. The base period in all calculations is the current year. Fourth, the definition of the natural rate of debt restructuring for the national credit market is based on the determination of the average value of the trend and deviations from it.

### 3. Debt Restructuring and Credit Cycles

#### 3.1 Debt Restructuring: Main Theoretical Pillars

The debt restructuring in respect to credit relations is commonly understood as a process that allows the borrower experiencing a shortage of liquidity, to change the terms of the credit agreement, in order on the one hand to restore solvency and creditworthiness, and on the other to pay current debt. In other words, under debt restructuring often it's understood a debt deferment, an increase of terms of repayment, often accompanied by an easing of requirements, for example, a temporary reduction of the debt burden. It's often used the mechanism of refinancing, when to cover current overdue debt and interest payments, the lender provides the borrower with a new loan, and thus the process of extension of the debt takes place

Description of the restructuring process in the theoretical sense implies the structure of the process (presence of the lender, the borrower and an object of restructuring). In this case we consider it reasonable to use an equilibrium approach for analysis of this kind of relations. So, on the supply party of debt restructuring we place lenders willing to allow borrowers facing financial difficulties (temporary or permanent) to refinance current debt.

Further to determine the equilibrium in the market, one must select the criteria, which will be the core for the clearing function of the market. In the case of markets for goods and services such a variable is, as a rule, the price. In our case, speaking about the supply and demand on the restructuring one should take into account both quantitative criterion (as the amount of refinanced debt) and qualitative - the willingness of creditors to restructure current debt. For lenders and borrowers willingness to restructure the debt is defined by the expected return ( $R_e$ ). For system of restructuring relations to take the place it is necessary to observe the following conditions are fulfilled:

- Benefits for the lender from the restructuring of a loan should be higher than the costs of restructuring;
- Net gains (losses) for the lender from the restructuring of a loan should be higher (lower) than net gains (losses) from starting the process of borrower's default, receiving the property of collateral and its further realization;
- Confidence in the benefits of the restructuring of a loan should be higher than confidence in the negative outcome of the restructuring.

Only under fulfillment of these requirements, the system of relations regarding debt restructuring between the creditor and the borrower can take place. Otherwise, in violation of at least one of the conditions, creditors lose the impetus for restructuring in connection with high agency costs or because of behavioral factors and expectations.

Thus, the equilibrium on the market for assets' restructuring takes the following form (Figure 1).

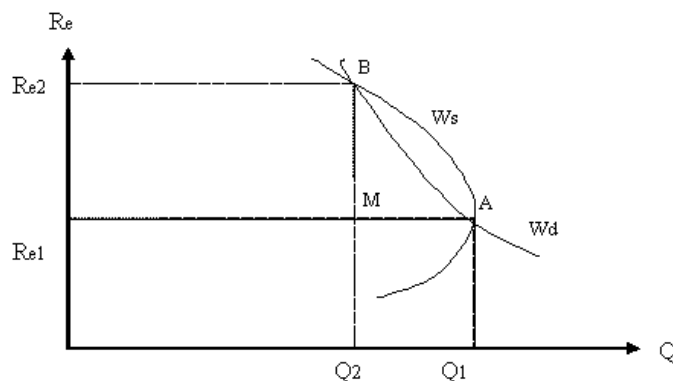


Figure 1. Multiple equilibria on restructured assets' market

Curve  $W_s$  reflects the willingness of creditors to restructure bad debts. Thus dependence on the expected return is of the reverse character. In other words, high meanings of the expected return ( $Re$ ) on restructuring loans characterize a high degree of risk of non-repayment and poor quality of the project. In this case we see an analogy with the credit market and the problem of credit rationing. The presence of information asymmetry reduces the willingness of lenders to get involved in the restructuring of loans for large projects, although this willingness exists. This can be explained through behavioral biases, for example, by sunk costs or simply by greater risk appetites.

Curve  $W_d$  reflects the willingness of borrowers to restructure bad debts depending on the expectations of return on invested projects and confidence of its payback. In this case, the willingness of borrowers to restructure debt also depends on the degree of the project's risk. In the case of high quality borrowers, readiness to restructure the debt is very high. However, quality borrowers, as a rule, are characterized by average rate or below average rate of return. Debt restructuring with high expected rate of return is always associated with a high level of risk. And often, such projects are the manifestation of the moral hazard effect - misuse of the loan, which puts the projects in the rank of low quality.

Thus, on the market of the restructured assets at least two equilibria are formed: one for low-quality projects, formed of the set of H contracts, including plane  $((Re_2; B; Q_2 - Re_1; B; Q_2)$  on the graph, another (L) - for high-quality projects  $(Re_1; A; Q_1)$ . Moreover, such that L more than H. It is also worth noting the presence of the dead zone of restructuring (non-price rationing of assets which could be restructured), located in the triangle BAM. This triangle is a set of projects in need of restructuring, but due to low capacity of lenders to determine their quality, rationed.

The second theoretical pillar of a market for restructured assets is a set of factors that influence the willingness of the lenders to enter into relationship about refinancing, and on the other hand influencing the change of this willingness.

Taking into account existing studies, among these factors one can point out the following:

- Degree of protection of the creditors' rights;
- The degree of state presence in the economy and the quality of market institutions;
- The degree of elasticity of the market for restructured assets.

Each of these factors determines the degree of readiness of creditors to lend money.

Studies show that the more protected the rights of creditors, i.e. the easier it is to take the collateral from the borrower, the lower the set of incentives on the one hand to check the quality of the borrower, on the other hand to enter into a relationship in terms of restructuring the current debt (Padilla & Requejo, 2000; Burakov, 2014d).

The second factor relates to the quality of general market institutions and of state presence in the economy. In particular, in the case when the state presence is significant on the market of credit, and the economy is characterized by the principles of extracting rents, banks can begin to fulfill political functions and to refinance debts of quasi-profitable organizations in order to preserve the support of the electorate (e.g., Vernandez-Villaverde et al., 2013; Burakov, 2014e;).

The third factor involves the combination of market forces and determines the degree of elasticity of the credit

market and its impact on the willingness of lenders to enter into the restructuring of debt. In other words, if the main bargaining power is concentrated in the hands of borrowers, lenders are forced to lower credit standards, due to the presence of a high degree of dependence of the bank's results from the activity of competitors (for example, through the effect of herd behavior).

The third theoretical pillar of this object is connected with the study of the patterns of the dynamics of restructuring activity and relations of debt restructuring with credit movement at the different phases of the credit cycle. However, before one can determine patterns of movement of restructuring, it is necessary to turn to the question of identification methods of restructuring process, its trend and deviations. It is also necessary to synthesize knowledge about the dynamics of restructuring with the idea of the credit cycle.

### *3.2 Debt Restructuring and Credit Cycles: Methods of Identification*

In our view, the credit cycle starts with a phase of the credit recovery, when while maintaining a negative loan growth rate, the trend changes. In other words, the phase of credit recovery is characterized by a gradual (or accelerated) reduction of the negative credit growth rates. The transition into the positive values and maintaining such growth rates for at least four months allows us to recognize the transition to the phase of the credit expansion. The monthly increase in the growth rate of credit (in our case, corporate lending), beyond the line of the long-term trend and its sustainability for 1.5 quarter is the basis for the phase of the credit expansion to become the sub phase of excessive expansion (acceleration sub phase). In this case, the set of indicators allows with a certain degree of confidence to assume that a deterioration of the quality in credit flows takes place. More often it is accompanied by insufficient reserves accrual, reflecting deterioration in the evaluation and/or consideration of risk. Depending on the expectations and policies of credit institutions formation of restructuring sub phase of credit expansion can take place, in which market demand for credit is reduced and is replaced by demand for credit resources aimed at alleviating problems with servicing previously received from the creditors debt. Due to occurrence of a shock phenomenon, the phase of credit expansion ends (growth rates break the zero mark). If growth rates remain in the negative plane at least 4 months, this change in the trend can be considered sufficient for the recognition of the transition to the phase of the credit crunch.

This phase is characterized as "the movement to the bottom". Indeed, if the values for the main categories of demand and supply change, a search for a new equilibrium takes place. Moreover, given the anti-crisis regulation of the state, the bottom may be suboptimal, i.e. some market forces can be weakened by anti-crisis policy. For example, debt-deflationary spiral, stagnation rationing of credit, when banks reduce the supply of credit for too long that starts a new spiral of lowering production, increased cost and reducing wages. On reaching the bottom, there is a phase of credit stagnation - there is a consolidation of negative credit growth rates and their fastening on a new level. Being dependent on circumstances (success and adequacy of anti-crisis measures, the strength and depth of the crisis), the phase of credit stagnation has no definite duration. After credit stagnation ends again comes the phase of the credit recovery - the pace of credit growth begins to decline at less and less rate, which indicates a gradual recovery of the credit trend.

Another confirmation of the stability of this phase, in absence of excessive accumulation of risk can be found in the block of indicators reflecting the dynamics of restructuring. However, with this method of research, a number of questions arise: first, given the variety of maturities of the loan portfolio, how to define the "basic" one, i.e. the portfolio that will best reflect the dynamics of movement of the total corporate loans portfolio, and, secondly, as reflected from the economic point of view, how to identify the feasibility of using certain maturity portfolios for restructuring certain loans?

The answer to the first question is connected with the determination of the specific share of the portfolios by maturity in the total credit portfolio. According to the Bank of Russia three groups of portfolios account for about 75%-80% of the corporate loan portfolio on 1 March 2014. These include the loans with maturity from 91 days to 180 days (short-term), from 181 days to 1 year (mid-term), from 1 to 3 years (long-term).

Further we set the task to determine the underlying maturity portfolio to the general credit trend. To this end, we conducted a correlation test of different portfolios with an overall trend in search for the best one to describe market demand for credit in the context of Russian banking sector. Results (presented in Figure 2-4) allow us to clearly establish that there is a relationship between the general trend of the corporate loan portfolio and a variety of different maturities portfolios depending on the phases of the cycle. Quantitative comparison has also allowed us to allocate the basic periods of maturity, using which we can determine the natural borders of restructuring on the credit market and its deviations from them on various phases of the credit cycle.

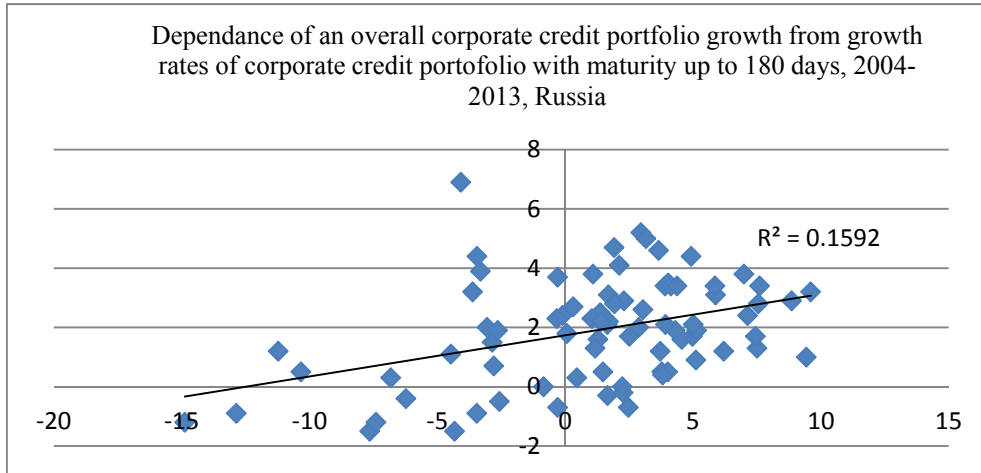


Figure 2. Correlation test results for credit portfolio with maturity up to 180 days

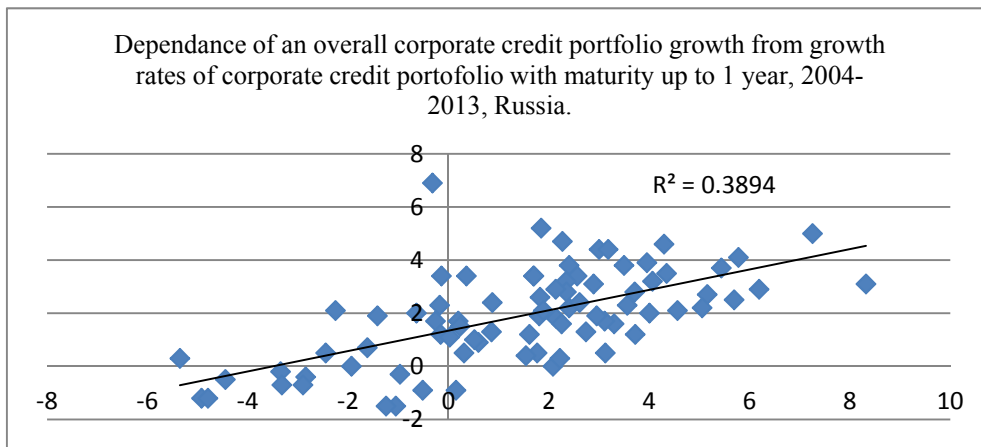


Figure 3. Correlation test results for credit portfolio with maturity up to 1 year

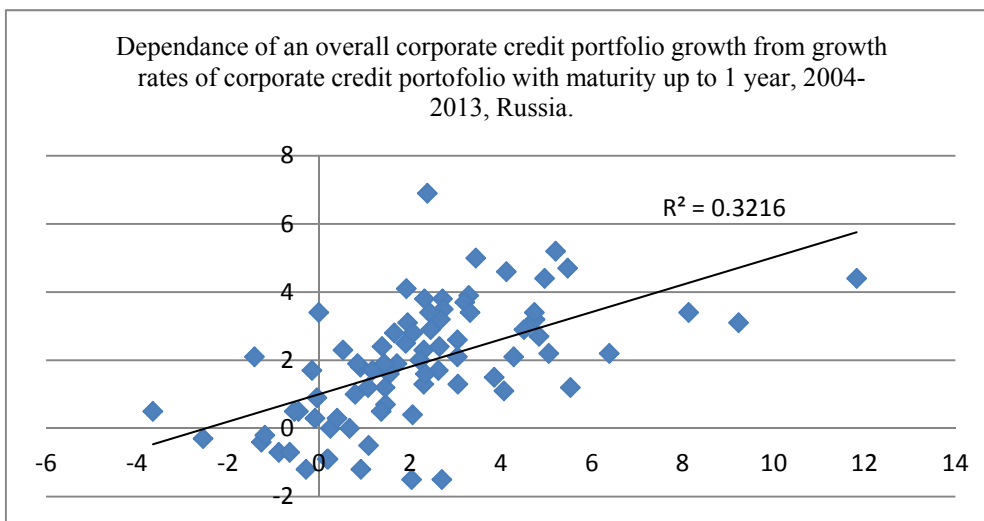


Figure 4. Correlation test results for credit portfolio with maturity up to 3 years

The above calculations make it possible to determine the degree of reflection of the total portfolio dynamics, depending on the structure of portfolios by maturity. As we can see, the closest connection is traced for portfolios

with maturity of up to one year and over one year. Thus, defining the basic portfolio we assume that the main portfolio best reflecting changes in market demand for credit will be a portfolio with maturity of up to one year.

Then, determination of index values of short, medium and long-term restructuring above its natural boundaries may be represented by defining relations on a monthly basis (month to month of the current year) of the different portfolios by maturity. In other words, in case of occurrence of problems with repayment on a particular portfolio, creditors, depending on the expectations and other factors can roll over the loan in the hope of temporary nature of the problems that the borrower faces. Thus, a change in expectations is associated with the duration of prolongation. If problems are short term in nature, the period of restructuring can be short term/medium term, if the problems seem structural to creditors - restructuring may be of an enduring nature.

It is important to note that the restructuring is normal in all phases of the cycle. The problem can be considered as a deviation from the natural rate, from long-term values that 1) should be large-scale and 2) sustainable.

Then, let's consider index values of short, medium and long-term restructuring during the analyzed periods in Russian banking sector (Figure 5, 6).

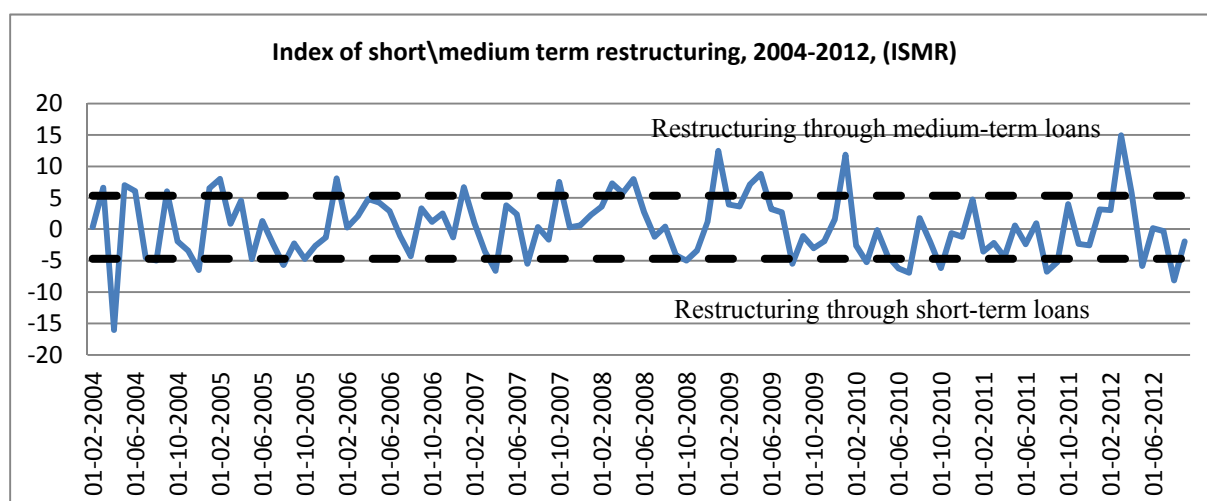


Figure 5. Index of short\medium term restructuring

Negative values of these indices allow us to reflect on one hand the sharp decline in market demand for credit (but not necessarily go into the negative plane), on the other hand restructuring of earlier granted loans through providing the new ones. Positive values of these indices could reflect 1) restructuring at the expense of “longer” credits, 2) an increase in total demand for credit. Only the episodes which lie beyond the natural borders can be considered as a significant shift in the restructuring activities on the credit market.

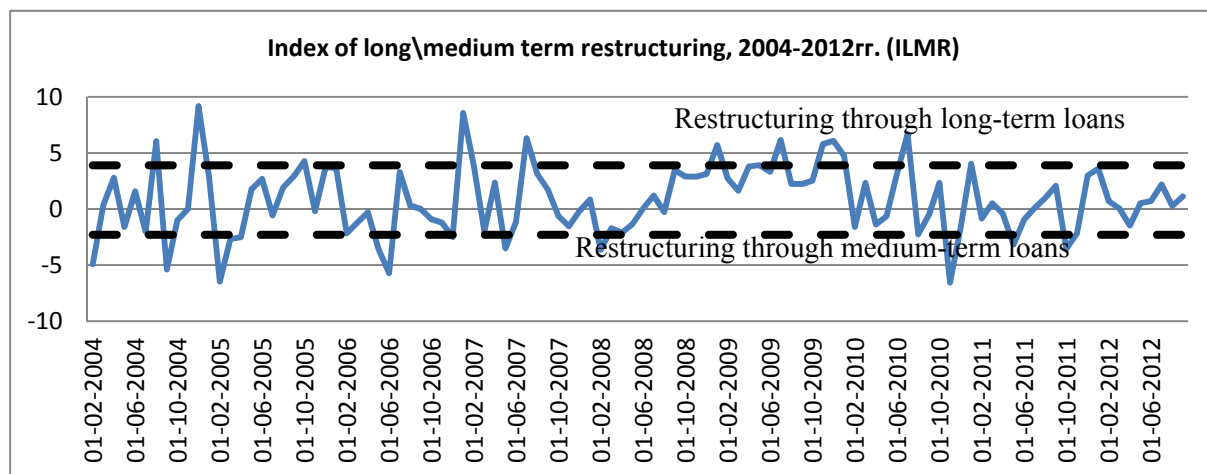


Figure 6. Index of long\medium term restructuring

Then within the studied phase of stable credit expansion is logical to assume that the restructuring should not carry a massive character and greatly exceed the levels of its natural rate. Data of the ISMR Figure allows us to point out several distinct groups of episodes for the period of 2004-the first half of 2006, and January-February 2005. The last one is explained by the reduction in growth rates of short-term loans and stays in their early 2005 in a negative plane. As a rule, the reduction in the rate of growth of credit in the end-the beginning of the year is normal for the movement of credit flows, therefore, we shall not consider this episode to be significant for the overall trend. Thus, ISMR reflects the overall dynamics of credit flows in the period being in line with the natural rate. The same will be true for IMLR. It is important to note the existence of several features of this phase of the cycle.

First, as we suggested above, the phase of restructuring is not necessarily identical for different national economies in duration, extent and quality. Indeed, the specifics of the dominant type of ownership of credit institutions, the degree of “partner” relations between creditors and borrowers, scale of borrowers, and institutional aspects can affect the movement of restructuring. For example, one of the Soviet classics of credit and banking thought Bregel (1955) wrote: "During the crisis one can clearly identify the opposite movement of credit and actual capital. The supply of goods exceeds the demand, the sales are interrupted, production is reduced; there is an excess of actual capital and a sharp drop in profits. In contrast, demand for loan capital considerably exceeds the supply, resulting in an acute lack of loan capital and there is a sharp increase in interest rates... extraordinary demand for loan capital in times of crisis is peculiar and does not reflect the demand for real capital. The main reasons for it are:

1) the pursuit of money as means of payment, not necessary for purchase of new products and expansion of production, but to pay for previously issued debt and avoid bankruptcy...”.

A similar position was held by H. Mynski (1978) in his hypothesis of financial fragility, though his understanding of the mass and large-scale restructuring is manifested not in the short/mid-term fluctuations in the movement of credit flows, but is inherent in the long run, generating immanent for developed economy instability.

However, we do not consider that the phase of the restructuring is part of the crisis, even more - it precedes it. After all, if we look at economic statistics (production, trade, quarterly GDP growth, employment), a large-scale restructuring began in Russia long before officials recognized the beginning of the crisis in the domestic economy.

Secondly, in support of the first thesis, it is worth noting the existence of different patterns of behavior between credit portfolios of state banks and private banks in Russia. According to the modern theory of credit market, the state banks exist in several planes: in the plane of social problems and in the plane of political tasks. And when the crisis occurs, private banks tend to restructure bad debt to a lesser extent rather than government-owned banks.

### *3.3 Debt Restructuring and Phases of the Credit Cycle*

The conducted research showed that restructuring is really a part of the credit dynamics. Moreover, on the certain phases of the credit cycle, it is restructuring incentive of the demand for credit which is overwhelming. However, as mentioned above, conventional models of the credit cycle ignore the restructuring aspect. In this paragraph, based on the above studied issues, we set ourselves the task to synthesize ideas about the phases of the credit cycle and dynamic patterns of restructuring activity of credit organizations. The synthesis presented in Figure 6.



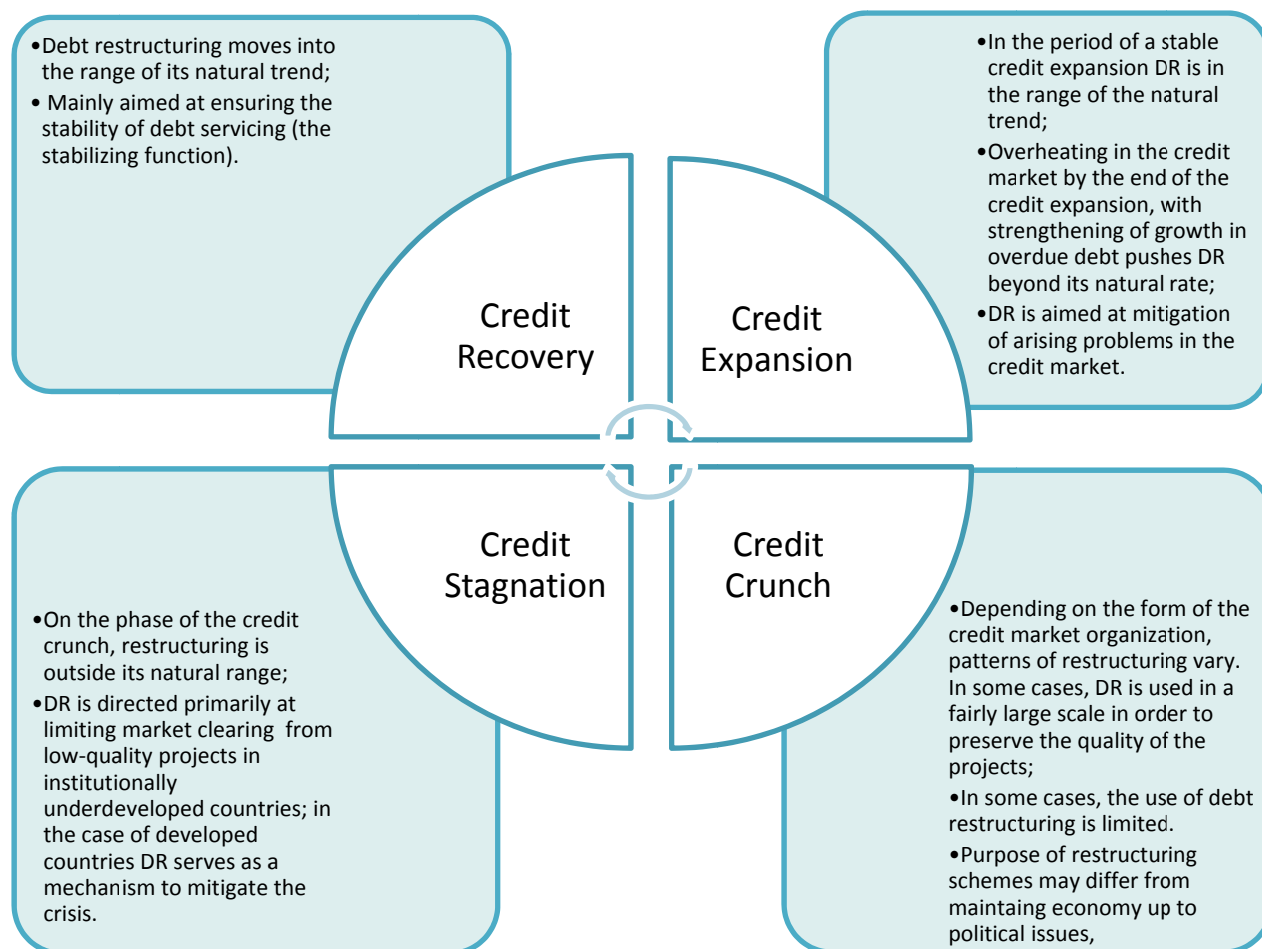


Figure 6. Patterns of debt restructuring on phases of the credit cycle

#### 4. Conclusion

In this study, we have highlighted theoretical and applied aspects of the relationship of the credit cycle and debt restructuring process. In particular, given the scarcity of theoretical positions on debt restructuring, we have developed a simple model of multiple equilibria on the market of restructuring assets. Also we've identified factors that have a significant impact on the overall level of implementation of debt restructuring in the national economy. The hypothesis about the existence of the natural rate of restructuring in the national economy that is dependent on a number of factors is put forward. Also a number of indicators for the identification of debt restructuring is developed and was tested on the example of Russian banking market of corporate lending. On the basis of the received results, we formulated the hypothesis about the relationship between restructuring processes in the economy and the credit cycle. We also pointed out patterns of the restructuring assets market's dynamics at the different phases of the credit cycle.

#### References

- Acharya, V. V. (2009). A theory of systemic risk and design of prudential bank regulation. *Journal of Financial Stability*, 5(3), 224-255. <http://dx.doi.org/10.1016/j.jfs.2009.02.001>
- Arrow, K. J. (1962). Economic welfare and the allocation of resources to invention. *The Rate and Direction of Incentive Activity: Economic and Social Factors*. National Bureau of Economic Research, Conference Series No. 13. Princeton, United States: Princeton University Press.
- Barth, J. R., Caprio, G., & Levine, R. (2008). *Rethinking bank regulation: Till angels govern*. Cambridge University Press.
- Beck T., Behr P., & Güttler A. (2010). Gender and banking; are women better loan officers? *European Banking Center*, Discussion Paper No. 2009-19. <http://dx.doi.org/10.1093/rof/rfs028>

- Berger, A., & Udell, G. (2004). The institutional memory hypothesis and the procyclicality of bank lending behavior. *Journal of Financial Intermediation*, 13(4), 458-495. <http://dx.doi.org/10.1016/j.jfi.2004.06.006>
- Bernanke, B., Gertler, M., & Gilchrist, S. (1996). The financial accelerator and the flight to quality. *The Review of Economics and Statistics*, 78(1), 1-15. <http://dx.doi.org/10.2307/2109844>
- Bester, H. (1985). Screening vs. Rationing in credit markets with imperfect information. *American Economic Review*, 75, 850-855.
- Bregel, E. J. (1955). *Monetary circulation and credit in capitalist countries*. Moscow, Finance and Statistics.
- Burakov, D. V. (2013). Exogenous credit cycle: an experimental study. *World Applied Sciences Journal*, 26(6), 733-736. <http://dx.doi.org/10.5829/idosi.wasj.2013.26.06.13510>
- Burakov, D. V. (2014a). Does framing affect risk attitude? Experimental evidence from credit market. *American Journal of Applied Sciences*, 11, 391-395. <http://dx.doi.org/10.3844/ajassp.2014.391.395>
- Burakov, D. V. (2014b). Limited liability, bank capital and credit cycles. A behavioral economic approach. *Middle East Journal of Scientific Research*, 21(1), 28-32. <http://dx.doi.org/10.5829/idosi.mejsr.2014.21.01.21171>
- Burakov, D. V. (2014d). Sources of credit cyclicity: A theoretical literature overview. *Review of European Studies*, 6(1), 151-159. <http://dx.doi.org/10.5539/res.v6n1p151>
- Burakov, D. V. (2014e). The curse of the credit cycle: A theoretical review of potential cures. *Asian Social Science*, 10(10), 127-133. <http://dx.doi.org/10.5539/ass.v10n10p127>
- Burakov, D. V. (2014c). Propagation mechanism of credit risk in the credit cycle. *European Journal of Social Sciences*, 41(4), 539-545.
- Burns, A. F., & Mitchell, W. C. (1946). *Measuring business cycles*. New York, National Bureau of Economic Research.
- Fama, J. (1970). Efficient capital markets: A review of theory and empirical work. *Journal of Finance*, 25(2), 383-417. <http://dx.doi.org/10.1111/j.1540-6261.1970.tb00518.x>
- Geanakoplos, J. (2010). The leverage cycle. *NBER Macroeconomics Annual 2009* (Vol. 24, pp. 1-65). University of Chicago Press. <http://dx.doi.org/10.2139/ssrn.1539483>
- Glasner, D. (1997). *Business cycles and depressions: An encyclopedia*. Garland Publishing Inc., New York & London.
- Gorton, G., & He, P. (2008). Bank credit cycles. *Review of Economic Studies*, 75(4), 1181-1214. <http://dx.doi.org/10.1111/j.1467-937X.2008.00497.x>
- Guttentag J., Herring M., & Richard J. (1986). Disaster myopia in international banking. *Princeton University Essays in International Finance*, 164.
- Haldane, A. (2010). *Curbing the credit cycle*. Speech presented at the Columbia University Center on Capitalism and Society Annual Conference. New York.
- Hall, L. W. (1927). *Banking cycles*. University Press.
- Hart, O. (1995). *Firms, contracts, and financial structure*. London, United Kingdom: Oxford University Press. <http://dx.doi.org/10.1093/0198288816.001.0001>
- Hauswald, R., & Marquez, R. (2006). Competition and strategic information acquisition in credit markets. *Review of Economic Studies*, 19, 967-1000. <http://dx.doi.org/10.1093/rfs/hhj021>
- Holmstrom, B., & Tirole, J. (1997). Financial intermediation, loanable funds, and the real sector. *Quarterly Journal of Economics*, 112, 663- 92. <http://dx.doi.org/10.1162/003355397555316>
- Kindleberger, C. (1975). *Manias, panics, and crashes: A history of financial crises*. Palgrave Macmillan. [http://dx.doi.org/10.1111/j.1468-0289.2012.00670\\_30.x](http://dx.doi.org/10.1111/j.1468-0289.2012.00670_30.x)
- Kiyotaki, N., & Moore, J., (1997). Credit cycles. *Journal of Political Economy*, 105(2), 211-248. <http://dx.doi.org/10.1086/262072>
- Knight, F. H. (1921). *Risk, uncertainty and profit*. Boston, MA: Hart, Schaffner & Marx; Houghton Mifflin Company.
- La Porta, R., Lopez-de-Silanes, F., & Shleifer, A., et al. (1997). Legal determinants of external finance. *Journal*

- of Finance*, 52(3), 1131-1150. <http://dx.doi.org/10.1111/j.1540-6261.1997.tb02727.x>.
- Manove, M., Padilla, A. J., & Pagano, M. (1999). *Creditor rights and project screening: A model of lazy banks*, Boston, United States. Mimeographed document.
- Marti, M. S. (1996). Boundedly rational credit cycles. *Economics Working Paper*, 156.
- Minsky, H., (1992). *The financial instability hypothesis*. Working Paper No. 74, The Jerome Levy Economics Institute of Bard College. <http://dx.doi.org/10.2139/ssrn.161024>
- Padilla, A. J., & Requejo, A. (2000). *The costs and benefits of strict protection of creditor rights: Theory and evidence*. Research Department Publications, Inter-American Development Bank.
- Rajan, R. (1994). Why bank credit policies fluctuate: A theory and some evidence. *Quarterly Journal of Economics*, 109(2), 399-441. <http://dx.doi.org/10.2307/2118468>
- Rothbard, M. ([1962] 2004). *Man, economy and state (with Power and market)*. Auburn, Ala.: Ludwig von Mises Institute.
- Rötheli, T. F. (2012). Boundedly rational banks' contribution to the credit cycle. *Journal of Socio-Economics*, 41(5), 730-737. <http://dx.doi.org/10.1155/2012/961316>
- Stiglitz, J., & Weiss, A. (1981). Credit rationing in markets with imperfect information. *The American Economic Review*, 71(3), 393-410.
- Vernandex-Villaverde, J., Garicano, L., & Santos, T. (2013). Political credit cycles: The case of the Euro Zone. *Journal of Economic Perspectives*, 27(3), 145-166. <http://dx.doi.org/10.1257/jep.27.3.145>
- Weill, L. (2011). Does corruption hamper bank lending? Macro and micro evidence. *Empirical Economics*, Springer, 41(1), 25-42. <http://dx.doi.org/10.1007/s00181-010-0393-4>

### Copyrights

Copyright for this article is retained by the author(s), with first publication rights granted to the journal.

This is an open-access article distributed under the terms and conditions of the Creative Commons Attribution license (<http://creativecommons.org/licenses/by/3.0/>).