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ANALYSIS OF LINKS BETWEEN THE OWNERSHIP STRUCTURE, FINANCIAL STABILITY AND CEO TURNOVER OF RUSSIAN COMPANIES AND BANKS

PhD Dissertation Summary

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Problem description. The relevance of the research is due to the increasing role of corporate governance quality in increasing the competitiveness and social responsibility of business in the long term, not only for the public companies but also for non-public companies. The relationship between the quality of corporate governance mechanisms and the financial stability of companies is an important area of strategic management research [Demsetz, Villalonga, 2001]. At the same time, the role of ownership structure characteristics in the efficiency of corporate governance mechanisms (from now on referred to as CG) designed to resolve agency conflicts has been in the focus of researchers' attention for many years, who do not always get consistent results. An understanding of these issues at the level of Russian non-public firms should help improve the corporate governance code, as well as contribute to the formation of adequate economic policies to support enterprises to implement catch-up economic growth for Russia [OECD, 2016].

It is important to note that in some countries, work is already underway to adapt common corporate governance approaches for non-public companies (e.g., the code developed in the United Kingdom in 2018). Large private companies are not a homogeneous group and created with different ownership structures and legal forms, including family businesses, private equity companies, sole proprietors, and subsidiaries. At the same time, the economic and social importance of non-public companies for a wide range of stakeholders can be as high as companies listed on the stock exchange. From this point of view, the issues of improving the CG quality of both public and non-public companies continue to be relevant for Russia, while the quality of CG itself is an important indicator of an increase in companies' financial stability and investment in all sectors of the economy.

Review of selected literature. The process of separation of ownership and management from each other [Berle, Means, 1932] has led to a situation in which there may be quite a lot of stakeholders within the company with diverging motives and goals, which in turn leads to several potential conflicts and costs [Jensen,

Meckling, 1976; Fama, Jensen, 1983; Eisenhardt, 1989]. In agency relations, appropriate internal and external corporate governance mechanisms should resolve the problem of mismatch between owners (principals) and managers (agents) [Shleifer, Vishny, 1997; Heugens et al., 2009]. Among the internal mechanisms, the monitoring of managers by the board of directors (CEO turnover), the formation of a coalition of minority shareholders, and the dividend policy are distinguished [Radygin et al., 2007a]. The main external mechanisms of corporate governance are the financial market, the market for mergers and acquisitions, as well as the institution of the bankruptcy of legal entities [Radygin et al., 2007b]. In the case of the inoperability of these mechanisms, there is an alternative mechanism that consists of the high ownership concentration, as well as the fulfillment CEO's functions by the founder of the company [Shleifer, Vishny, 1986; Randoy, Goel, 2003; Heugens et al., 2009].

In non-public companies, often, the founders and owners act as the CEO, which somewhat softens the «principal-agent» conflict. In the case of the sole ownership and management of the company, this type of conflict naturally completely ceases to matter. Thus, some studies have shown a positive relationship between the profitability of firms and the combination of the functions of ownership and management of one person in them [Adams et al., 2003; Villalonga, Amit, 2006]. The interest of founding leaders (for example, in family firms) in maintaining a reputation and long-term business development may encourage them to avoid opportunistic actions [Wang, 2006]. However, concentrated ownership in the hands of senior management can also lead to reluctance to take on additional risks and participate in the strategic changes of the company (diversification of enterprises, product innovation or entry into new international markets) [George et al., 2005].

Many empirical studies have revealed a non-linear relationship (an inverted U-shaped relationship) between ownership concentration and firm performance [Thomsen, Pedersen, 2000; Arosa et al., 2010; Balsmeier, Czarnitzki, 2017; Machek et al., 2018]. This nature of the relationship lies in the plane of the search for a

potential compromise between the «principal-agent» conflict (the idea of monitoring by a major owner) [Berle, Means, 1932; Elloumi, Gueyie, 2001] and the «principalprincipal» conflict (the idea of expropriation by the large owner) [Jensen, 1993; Shleifer, Vishny, 1997; La Porta et al., 2000; Filatotchev et al., 2013; Aluchna, Kaminski, 2017]. Also, in some works, an inverted U-shaped bond was found, which is supplemented by a peak (about 100% in one hand) on the right tail of the distribution of ownership concentration [Morck et al., 1988; Gugler et al., 2004; Balsmeier, Czarnitzki, 2017]. On the one hand, in a situation of very high concentration of ownership, infringement of the rights of small investors becomes a less serious problem, and the interests of shareholders and managers become more consistent. On the other hand, under conditions of concentrated ownership, the agent problem can move from the traditional conflict between the owner and manager («principal-agent») to the conflict between controlling shareholders and minority shareholders («principal-principal») [Fama, Jensen 1983; Shleifer, Vishny 1997; La Porta et al., 1999; La Porta et al., 2000; Bebchuk, Weisbach, 2010; Filatotchev et al., 2013], which is especially important when firms operate in a weak institutional environment. In many countries with an immature financial market and a weak legal system that does not adequately protect property rights and minority shareholders, quite often, even the most efficient firms have a highly concentrated ownership structure [Shleifer, Vishny 1997; La Porta et al., 1999]. In Russia, this situation became widespread following the results of the privatization of the 1990s (for example, [Stiglitz, 1999; Guriev et al., 2003; Entov et al., 2005; Dolgopyatova, 2010; Sprenger, 2011; Pappe, 2012; Enikolopov, Stepanov, 2013; Kuznetsov et al., 2014; Dolgopyatova, 2016]).

The results of modern work devoted to a meta-analysis of the relationship between ownership concentration and company performance in emerging markets [Sánchez-Ballesta, García-Meca, 2007; Heugens et al., 2009; Wang, Shailer, 2015; Balsmeier, Czarnitzki, 2017; Iwasaki, Mizobata, Muravyev, 2018; Iwasaki, Mizobata,

2019], show that the answer to the question about the optimal level of concentration of ownership is not clear. At the same time, one of the explanations for the mixed results may be that different types of shareholders have different motives in the framework of the company's development strategy («principal-principal» conflict can lead to high costs) [Chaganti, Damanpour, 1991; Gedajlovic et al., 2005; Perrini et al., 2008; Chen et al., 2009].

Thus, in the process of generating research hypotheses about the relationship between ownership structure and company performance, modern empirical work was studied based on data from public and non-public companies in both developed and developing countries (for example, [Ivashkovskaya et al., 2009; Arosa et al., 2010; Chen et al., 2013; Ciampi, 2015; Liang et al., 2016; Darrat et al., 2016; Ducassy et al., 2017; Fernando et al., 2018; Machek et al., 2018; Ciftci et al., 2019]). As a rule, the majority of empirical work devoted to large companies whose shares are listed. Nevertheless, since in the context of economic globalization in developing countries the number of non-public private companies that seek to gain access to capital markets is growing, there is growing interest in analyzing the conformity of their mechanisms of corporate governance to the mechanisms of public companies for observing the interests of potential shareholders.

One of the manifestations of the poor quality of corporate governance is the situation when the CEO continues to hold his position even with poor results of the company (relative to the market). This can be interpreted as the lack of necessary opportunities for the board of directors and shareholders to decide on the inexpediency of further cooperation with such CEO. Therefore, an important internal corporate governance mechanism for changing a non-productive CEO considered workable only if there is a negative relationship between the performance of the company and the likelihood of CEO turnover [Fama, Jensen, 1983; Barro, Barro 1990; Daily, Dalton, 1995; Lausten, 2002; Bushman et al., 2010; Fiordelisi et al., 2014; Srivastav et al., 2017; Jenter, Lewellen, 2019]. This assumption confirmed, for

example, for companies listed on the New York Stock Exchange [Weisbach, 1988], for Indian [Das, Ghosh, 2004] and Japanese banks [Anderson, Campbell II, 2004], as well as Russian companies [Muravyov, 2003; Kapelyushnikov, Demina, 2005; Solntsev, Pentuk, 2016]. Moreover, in companies with a predominance of external directors on the board of directors, shares price decline leads to CEO turnover three times more often than in other companies [Weisbach, 1988]. At the same time, in companies whose shares not widely distributed, the effect of this mechanism in case of financial difficulties is worse traced [Furtado, Karan 1990]. Based on the analysis of the literature, the urgent tasks of this study formed for non-public companies and banks.

The object of the research and definition of key terms. The object of the research is medium and large-sized non-public companies in the construction and manufacturing industry, as well as Russian banks. The subject of the research is the relationship between the ownership structure of these companies and their financial stability, as well as the nature of these relationships. Also, the subject of the study is the mechanism of CEO turnover in Russian banks.

Objectives of the research. The aim of the work is a qualitative and quantitative analysis of the relationship between the characteristics of the ownership structure, financial stability, and the likelihood of CEO turnover in Russian non-public construction and industrial companies, as well as banks. To this end, the study examined factors and alternative mechanisms that can have a significant impact on the resolution of intra-corporate conflicts between owners and managers («principalagent» and «principal-principal») in the studied industries.

The following tasks were solved tp achieve these goals:

• the terms of agent theory, as well as modern empirical literature of foreign and domestic authors on assessing the links between company performance, ownership structure and the likelihood of CEO turnover, were studied and systematized;

- an extensive database prepared with financial indicators and characteristics of the ownership structure for construction and industrial non-public companies in Russia (medium and large businesses), as well as a database for Russian banks:
- a comparative analysis of alternative measures of financial stability («before the event» of bankruptcy) carried out using non-public companies in the construction sector as an example;
- several basic and additional hypotheses formulated on the relationship between the characteristics of the ownership structure and financial stability for construction and industrial companies; additional hypotheses have been put forward about the relationship between the frequency of CEO turnover of the bank and financial results, as well as the concentration of ownership;
- the econometric models of the probability of financial stability of non-public construction and industrial companies were estimated to test the hypotheses put forward, and a comparative analysis of the results obtained for certain types of activities was performed;
- the model for the probability of CEO turnover of the bank was formed, statistically significant relationships with financial performance and ownership concentration were identified.

Methodology. The methodological basis for the formulation of hypotheses is the agent theory in the context of corporate relations [Jensen et al., 1976], ideas about protecting property rights in transition economies [Stiglitz, 1999], the effect of wentrenching a manager» [Morck et al., 1988] and also the wchange of ineffective CEO» model [Weisbach, 1988].

As a tool for testing hypotheses are methods of comparative analysis and econometric modeling. The main research model is logistic regression (a binary selection model) for panel data on Russian companies, which was first used to predict

company bankruptcies in [Ohlson, 1980] and continues to be actively used in some other modern international studies (for example, [Ciampi, 2015; Darrat et al., 2016; Fernando et al., 2019]).

The main methods for assessing the bankruptcy risk of industrial companies, control variables and approaches to validating the results obtained about Russia are described, for example, in the following works [Karminsky, 2009; Totmyanina, 2011b; Salnikov et al., 2012; Karminsky, 2015; Fedorova et al., 2016; Donets et al., 2017]. The empirical testing of hypotheses for construction and industrial companies based on a two-step evaluation procedure (Step I - the basic financial model, Step II - the inclusion of the characteristics of the ownership structure in turn)

Also, a comparative analysis of the effects obtained for various types of manufacturing activities carried out by comparing the estimates of two other model modifications: logistic regression with Lasso regularization and logistic regression for all subsets. The first approach allows one to check the generalizing ability of the model and solves the problem of selecting variables. Therefore, the assessment was carried out immediately for the entire set of explanatory variables [Tibshirani, 1996]. The second approach allows determining the best model for each subset: for one explanatory variable, for two explanatory variables, etc. [Kabakov, 2014]. The quality of the estimates of the final models controlled using the shape of the ROC curves.

Testing hypotheses regarding the probability of CEO turnover in Russian banks also carried out using logistic regression following foreign empirical studies (for example [Daily, Dalton, 1995; Lausten, 2002; Brunello et al., 2003; Das, Ghosh, 2004; Anderson, Campbell II, 2004; Fiordelisi, Ricci, 2014]).

Statistical evaluation of models for companies and banks was performed in the R Studio software development environment for the programming language R.

For the empirical part of the work, two databases were prepared by the author: for Russian companies and Russian banks. Database of the «Companies» for the period from 2011 to 2015 formed on the materials of SPARK-Interfax, Ruslana

Bureau van Dijk and Rosstat for 3386 and 2700 medium and large non-public companies from the construction sector and manufacturing industry, respectively (unbalanced panel). This database includes indicators of the financial statements of companies, as well as information on the ownership structure. Database «Banks» for the period of an active revocation of licenses from 2014 to 2016 was prepared based on sources such as Ruslana Bureau van Dijk and the Bank of Russia on 336 Russian banks and also included indicators of financial statements of banks and information on the ownership structure (unbalanced panel). The choice of the banking sector to study the mechanism for changing the head (CEO) is determined, firstly, by the fact that similar work for industrial companies in Russia was performed earlier by other authors, and, secondly, by the fact that banks have higher quality data regarding shift a leader compared to the non-public industrial sector. At the same time, the characteristics of the ownership structure and the fact of CEO turnover were collected by the author manually.

Main findings. Several basic and additional hypotheses for medium and large non-public companies were put forward and tested.

Basic hypotheses

The first basic hypothesis (H1) is that if in a non-public company, the owner also acts as CEO, the probability of financial instability (default) of such company is lower.

According to our estimates, the hypothesis was confirmed. Thus, the combination of management and ownership functions is the most important tool for the control and protection of property rights in non-public companies in Russia, which indicates high costs in case of agency conflict between the owner and manager, as well as weak competition on the management personnel market.

The second basic hypothesis (H2) is that the higher the number of co-owners in a non-public company, the higher the likelihood of its financial instability (default).

In contrast to the theory, the estimates showed that the hypothesis is rejected for the formed sample.

The third basic hypothesis (H3) is that in the Russian market, the concentration of ownership nonlinearly related to the probability of financial instability (default) of a non-public company.

This hypothesis is not rejected. It is shown that in the manufacturing industry, medium and high levels of ownership concentration have a negative and positive relationship with the financial instability (default) of the company, respectively. Consequently, the industry is characterized by high «principal-principal» costs of the conflict, in which majority co-owners can infringe on the rights and interests of minority shareholders (expropriation). In construction, the hypothesis is also not rejected, although the nature of the connection differs from the manufacturing industry. A nonlinear connection (an inverted U-shaped connection) between the probability of default and the concentration of ownership was established, that is, the existence of high costs in the «principal-principal» conflict was not found.

This difference may be due to the greater informational closeness of the construction industry and higher costs in the situation of «principal-agent» conflict than in the case of «principal-principal» conflict, which requires the owner to increase protection of their property rights (combining ownership and management functions with a high share of ownership). So, more than half of construction companies are managed solely by the founder (about 57% of the construction companies in the sample are managed by the founder, in the manufacturing industry this indicator is 50%).

The fourth basic hypothesis (H4) is that (1) a private non-public company is characterized by a lower probability of financial instability (default); (2) subsidiary non-public companies are subject to greater financial instability (default); (3) foreign ownership implies a lesser likelihood of financial instability (default) of a non-public company.

This hypothesis is not rejected in points 1 and 2. It is established that private property (by the all-Russian classifier of ownership forms) is negatively related to the likelihood of a «hole» in the company's capital. However, subsidiary status is indeed associated with a greater likelihood of default. However, our estimates showed an increased likelihood of financial instability (default) of the company in the case of foreign ownership, which may be associated with possible geopolitical risks of recent years (outflow of foreign capital) and offshore foreign ownership structure.

The fifth basic hypothesis (H5) is that the higher the level of industry expectations¹ among managers, the lower the likelihood of financial instability (default) of non-public companies.

This hypothesis is confirmed. With an example of certain types of the manufacturing industry, it was found that there is a negative relationship between industry expectations of company executives and the likelihood of financial instability (default) of non-public companies.

Some basic hypotheses are confirmed not only for the manufacturing industry as a whole but also for individual types of activity.

Additional hypotheses on ownership concentration

In terms of studying the consequences of concentration of ownership for non-public construction and industrial companies, three *additional hypotheses* that were not previously studied in the literature for non-public companies were also put forward and tested.

The first additional hypothesis (H1-OC) is that the higher the concentration of ownership in the company relative to the industry average, the higher the likelihood of financial instability (default).

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¹ Industry expectations were measured as the average half-year value of the Rosstat index of entrepreneurial confidence (seasonality eliminated), which allows managers to characterize the economic activity of organizations based on the answers of managers on the forecast of production output, balances and demand for it. Index calculation methodology: https://www.gks.ru/free_doc/new_site/metod/prom/met_pred-uver.htm

This hypothesis extends the previously tested basic hypotheses about the level of ownership concentration. This hypothesis is not rejected for non-public manufacturing companies, but it is rejected for construction companies from our sample.

The second additional hypothesis (H2-OC) is that the higher the share of the majority holder relative to the share of the second largest owner, the higher the likelihood of financial instability (default) of this non-public company.

In this way, the presence of a «principal-principal» conflict is checked. According to the results of our estimates, the hypothesis cannot be rejected. It is shown that for large businesses in manufacturing and construction, the gap between the strength of the largest owner and the next most powerful owner is associated with a greater likelihood of financial instability (default).

The third additional hypothesis (H3-OC) is that (1) the higher the share of the managing owner (CEO) relative to the industry average share of ownership of the largest owner, the lower the likelihood of financial instability (default) of this non-public company; (2) the higher the share of the managing owner (CEO) relative to the industry average share of the manager, the higher the likelihood of financial instability (default) of this non-public company; (3) the higher the share of the managing owner (CEO) relative to the share of the largest owner in the company, the higher the likelihood of financial instability (default) of this non-public company.

According to the results of the assessment, the hypothesis cannot be rejected for construction and industrial companies. The result was the same for the three relative measures of the CEO's strength in the company.

Additional hypotheses on CEO turnover

Also, three hypotheses were tested in the research (H1-CEO, H2-CEO, H3-CEO) in the context of studying the internal mechanism of corporate governance on CEO turnover.

The first hypothesis (H1-CEO) is that the better the bank's financial performance relative to other market participants, the lower the likelihood of CEO turnover.

This hypothesis is not rejected. It was confirmed that in the Russian banking sector, regardless of regional registration and form of ownership, there is a negative links between the probability of CEO turnover and financial indicators (the validity of including in the model the share of highly liquid assets in the bank balance sheet and the share of corporate loans in the bank's portfolio is shown).

The second hypothesis (H2-CEO) is that the higher the CEO's share in the bank's share capital, the lower the probability of his turnover.

According to our estimates, the hypothesis is not rejected. In this regard, there can be both the effect of "entrenching" the head (CEO), and the logic of financial incentives, within which the owner-manager will try to develop the bank, of which he is the beneficiary.

The third hypothesis (H3-CEO) is that there is a statistically significant link between the level of ownership concentration and the likelihood of CEO turnover in the bank.

This hypothesis is also not rejected. A negative relationship has been established between the cross-effect (low concentration of ownership and return on equity) and the likelihood of CEO turnover. Thus, the level of ownership concentration changes the sensitivity of the fact of CEO turnover to poor bank performance. At the same time, dispersed ownership (the largest share of ownership is less than 25%) provides better control over the activities of ineffective managers of Russian banks, rather than simply being associated with their more frequent turnover.

Contribution of the work consists in studying the features of corporate governance in non-public companies and methods of analyzing the links between ownership structure and financial stability. This work is one of the first ones to simultaneously consider the effect of two types of conflicts (between owner and

manager, and between majority and minority owners) when conducting an empirical analysis of financial stability for a large sample of Russian non-public companies. The most important new results obtained in this paper are:

- 1. The positive effect of a lower level of property concentration on the financial stability of industrial non-public companies and the monitoring of the CEO of the bank is shown. This conclusion is significant for the formation of a developed corporate governance system in Russia.
- 2. A coefficient of deviation from the industry average concentration of ownership is proposed, which supplements the existing methods for analyzing concentrated ownership in a company. It is empirically shown that the higher the deviation coefficient in manufacturing companies, the higher the likelihood of their financial instability (default).
- 3. The significance of the gap between the majority shareholder and the second-largest co-owner as one of the indicators of the financial stability of the company was confirmed. This is due to the high costs of localizing conflicts of interests of owners.
- 4. The statistical significance of the CEO's strength, measured as the share of his ownership of the company relative to the average industry values of the concentration of ownership, for the financial stability of this company is shown.
- 5. The practical significance of the Rosstat entrepreneurial confidence index for assessing the financial stability of non-public companies is substantiated.
- 6. The effectiveness of the internal corporate governance mechanism for the CEO turnover in the Russian banking sector due to weak financial results was confirmed. It is empirically shown that for banks with a low level of ownership concentration, low return on equity entails an increased likelihood of the CEO turnover. Moreover, the financial results of the bank are evaluated in comparison with the indicators of other banks, which allows taking into account the real successes in its management, and not just market fluctuations in this market.

Theoretical implications of the research consist of the development and justification of approaches to determining the relationships between the characteristics of the ownership structure, CEO turnover, and financial stability of non-public companies and banks about testing the theory of agent relations for Russia. Empirical results confirm:

- the validity of applying the principles of agent theory when considering the characteristics of the ownership structure in the context of analyzing the financial stability of non-public companies in a developing economy. This indicates that non-public companies are characterized by a high concentration of ownership and a combination of ownership and management functions in a weak institutional environment;
- the consistency of theoretical provisions on the entrenchment and beneficial incentives of the manager about banks. It is shown that ownership with a more even distribution between the owners of the bank provides a positive effect in terms of the likelihood of a change in the ineffective manager. The findings complement the few domestic studies on the triggers of the CEO turnover of the bank.

Practical implications. The results of the research thesis can be used to develop corporate governance in non-public companies and assess their financial stability:

- while improving corporate governance practices, including by identifying factors that may limit the operability of corporate governance mechanisms (beneficiary: state);
- in the development and implementation of corporate governance principles for medium and large non-public companies in Russia (beneficiary: companies and business associations);
- in determining the need for the CEO turnover in the banking sector (beneficiary: banks);

• when performing an express analysis of the financial condition using a reasonable use of the negative net worth of the company ("hole" in the capital) (beneficiary: companies and their counterparties).

Approbation of research results. The results of the thesis research presented at the following conferences:

- XVIII April International Academic Conference on Economic and Social Development. Alexey Rybalka. «Modeling probability of default in the construction sector: factors of corporate governance» (11.04.2017-14.04.2017. Russia, Moscow, HSE).
- Second World Congress of Comparative Economics «1917 –2017: Revolution and Evolution in Economic Development». Alexey Rybalka. «How corporate governance impacts on the negative net worth: evidence from Russia» (15.06.2017-17.06.2017. Russia, St. Petersburg, HSE).
- 26th Annual Conference/Meeting of the Society for Risk Analysis Europe (SRA-E) «New challenges, new threats: Resilience and adaptation in a risky world.» Alexey Rybalka. «How corporate governance and expectations impact on the probability of default: a comparative analysis of industries in Russia» (18.06.2017-21.06.2017. Portugal, Lisbon).
- 29th Eurasia Business and Economics Society (EBES) Conference. Alexey Rybalka. «Analysis of links between ownership structure and financial stability of Russian companies.» (10.10.2019-12.10.2019. Portugal, Lisbon).

The results of the thesis research were also discussed during a research internship at the University of Luxembourg in the period from April 16, 2018 - July 16, 2018.

Separate results of the dissertation research in terms of assessing the financial stability of manufacturing companies were introduced into the financial risk assessment models of the real sector of the economy, developed and used at the

Center for Macroeconomic Analysis and Short-Term Forecasting (CMASF). The results obtained on this basis were transferred to the Ministry of Industry and Trade of the Russian Federation, as well as to the Presidential Experts' Directorate. The proposed models have also found application in the teaching activities of the author at HSE as part of the practical part of the course on risk management in financial institutions.

List of author's original articles. The main results of the dissertation research published in four works with a total volume of 5.88 author's sheets; the personal contribution of the author is 4.47 author's sheets:

- 1. Rybalka A. (2017). Modeling the probability of default in the construction sector: factors of corporate governance. Journal of Corporate Finance Research, 11 (3), 79-99 [In Russian].
- 2. Karminsky A, Rybalka A. (2018). Negative net worth of manufacturing companies: corporate governance and industry expectations. The Journal of the New Economic Association, 38 (2), 76-103 [In Russian].
- 3. Rybalka A. (2018). Risk factors of manufacturing industries. Economics of Contemporary Russia, 82 (3), 93-113 [In Russian].
- 4. Karminsky A., Rybalka A., Shevchenko E. (2018). CEO turnover in Russian banks. Russian Management Journal, 16 (1), 95-108 [In Russian].

Structure of the research. The dissertation consists of an introduction, four chapters, a conclusion, a list of used literature and applications. The total amount of work is 149 pages of the main text, as well as 24 pages of applications and references from 168 items, more than a third of which have been published over the past ten years. The list of English-language articles mainly consists of papers published in highly rated journals (66% of the journals of the first quartile).