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OPTIONS SIMULATION TOOLKIT FOR STRATEGIC EVALUATION OF CORPORATIONS' FINANCIAL POTENTIAL

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Abstract. The study substantiates the need to develop the authors' model for strategic evaluation of financial potential in corporations based on stochastic simulation, which provides for determination of an absolute indicator for sustainability of financial potential resources (i.e. strategic permanent resources for financial potential and relative strategic ratio), as well as actual and strategic indicators values deviations, the study also provides prerequisites for relevant expert conclusions. Such model implies influence of emergent (macro-, meso-) environment on financial potential of corporations. Its application is of a universal character, it contains integrated interests of different stakeholder groups (owners, financial managers, lenders, potential owners, creditors, investors, suppliers, auditors, lawyers, associations, trade unions) allowing in a short period identify internal actual and potential financial opportunities, risks and hidden potentials, takes into account emergent environment influence on financial potential condition in corporations, thus contributing to development of strategic policies for its generation.

Keywords: financial potential; strategic assessment / evaluation; corporation; permanent resources; deviations; simulation

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1. Introduction

Financial potential carrying tactical and strategic characteristics of corporations' capabilities should conceptually reflect phenomenon of their current and strategic financial performance. The process of corporations' financial potential generation and evaluation should be focused at efficient application of financial mechanisms to achieve intermediate and strategic goals. However, in most cases, generated financial potential of corporations is evaluated exclusively in the system of operational financial management where only internal factors affecting

efficiency of financial potential are identified assessed and modified. Methodological approach to the issue reveals that most methods of corporations' financial potential evaluation characterize retrospective and current financial potential status and exclude prospective status assessments (Rashid and Jabeen 2018; Wang, Reimsbach and Braam 2018; Dungey, Tchatoka and Yanotti, 2018; Malaquias and Zambra 2018).

At the same time, despite the fact that issues of corporations' financial potential generation and evaluation have been discussed worldwide for extensive period, in finance related literature there is no unambiguous definition of corporations' financial potential concept, which makes it difficult to develop tools for its evaluation (Būmane, 2018; Masiulevičius and Lakis 2018; Kuzmin et al. 2015; Dubrovsky et al. 2016; Kuzmin 2017; Narkunienė and Ulbinaitė 2018; Subačienė et al. 2018).

N.A. Sorokina (Sorokina 2009) directly correlates assessment of corporations' financial potential with achievement of their strategic development goals, and highlights the following strategic indicators: revenue, sales profit, net assets, and capital intensity of products, capital turnover, and added value.

The aim of the research includes development of scientifically proof toolkit for assessing financial potential of corporations in the system of their strategic financial management, which should take into account influence of factors of both internal and external environment; it also implies identification of the areas for its practical implementation. Achievement of the goal determined implementation of the following tasks: study economic content of financial potential; carry out evaluation on how internal factors influence financial potential of corporations; develop and test the model of corporations' financial potential strategic assessment in the system of their strategic financial management based on simulation. Theoretical and methodological basis of the research is grounded in the works of foreign and Russian scientists and experts, cites the materials from periodicals on evaluation of corporations' financial potential in the system of their financial management, and refers to their internal regulatory framework. Methodological basis of the research includes logical, situational and scientific approaches to study the process of financial potential evaluation in the system of financial management of corporations. With the help of general scientific and special methods such as inductive, deductive, analysis, synthesis, coefficient analysis, grouping, monographic, graphic, comparative, economic-statistical, economic-mathematical, authoring software of general MS EXCEL and special EXCEL-VBA designation, etc. the toolkit for assessing strategic financial potential of corporations based on stochastic simulation was generated and tested; the results of the tests indicated basic areas for implementation.

Working hypothesis of the research is grounded in the need to develop a modern scientifically proof toolkit for corporations' financial potential evaluation based on the research of economic content of the latter; and also in the need to suggest a model for strategic evaluation of financial potential based on simulation, which would ensure efficient performance of financial management system of corporations in today's business environment. Theoretical significance of the research leads to expanding and deepening scientific understanding of toolkit development for corporation's financial potential evaluation in the system of their strategic financial management. Practical significance of the research represents development and application of specific methods, techniques, tools, models and practical recommendations that generate theoretical methodological and practical basis for development of toolkit for corporations' financial potential evaluation, establishing alternatives to implement new methods, techniques, tools and models that might ensure efficient performance of strategic financial management system.

2. Method

2.1. Theoretical approaches to the term "financial potential" of corporation

The term "potential" derived from Latin "potentia" and means force that expresses the tactical / strategic characteristics of the organization's capabilities.

From the perspective of evaluation of corporations' financial potential factorial approach to definition becomes interesting when decisive importance is given to factors that affect financial potential of the corporation.

N.V. Kolchina (Kolchina et al. 2015), L.T. Gilyarovskaya (Gilyarovskaya and Endovitskaya 2012) are supporters of this approach.

N.V. Kolchina (Kolchina et al. 2015) evaluate financial potential of organizations through the prism of their financial grounds, i.e. provision of financial resources, revenue potentials and financial stability level, stock generation and innovations which represent the key factor and influential investment.

L.T. Gilyarovskaya (Gilyarovskaya and Endovitskaya 2012) identify the following factors that affect financial capacity of organizations: their ability to fulfil financial obligations precisely and in due time, attract additional financial resources and use investment opportunities; experience financial stability; efficient utilization of own or borrowed capital; asset management and availability of risk management policy.

Traditional financial process management seeks to manage operational factors affecting efficiency of financial potential of corporations, whereas strategic management is focused on strategic issues.

It should be noted that, unfortunately, many economists, such as: A.G. Kaygorodov (Kaygorodov and Khomyakova 2007), T.N. Tolstykh (Tolstykh and Ulanova 2004), V.I. Makarieva (Makarieva 2014), T.G. Sheshukova (Sheshukova and Kolesen 2013), O.A. Minayeva (Minayeva 2012) qualify financial potential of corporations as a category of operational financial management. P.A. Fomin (Fomin and Starovoitov 2003) consider financial potential of corporations as a category of both operational and strategic financial management of corporations. V.G. Artemenko (Artemenko and Belandir 1997), V.A. Barinov (Barinov 2005), V.V. Kovalev, (Kovalev 2016) regard financial potential of organizations as a systemic phenomenon characterized by a set of indicators describing availability and investment of funds, actual and potential financial opportunities. N.A. Sorokina (Sorokina 2009) and N.D. Stakhno (Stakhno 2010) combine definition of financial potential of organizations with their strategic development. N.A. Sorokina (Sorokina 2009) characterizes financial potential as a combination of financial resources involved in the turnover for accumulation of additional financial resources and taking into account the strategic investment attractiveness of a company. At the same time, she seeks to study financial potential as an element of strategic management in conjunction with assessment of economic security of business. N.D. Stakhno (Stakhno 2010) characterizes financial potential by means of various financial resources involved in operational activities which might be accumulated to finance business in future and establish strategic development guidelines. In our opinion (Manuylenko and Loktionova 2017) financial potential of a corporation is a combination of mobilized real current and strategic financial resources pooled in funds with particular valuation, it completely excludes various potential assets, immobilized sources which depend on macro, meso and micro levels, both in complex establishing current and strategic trends of corporation's financial activities. Corporations should seek to assess their financial potential in the system of operational and strategic financial management, which ensures creation of and streamlining for categorical gear based on characteristics of corporations' financial potential that would be a ground for development of methodological approaches to financial potential generation and its evaluation in modern environment.

2.2. Evaluation of financial potential of corporations based on identification of internal factors that affect its efficiency; issues and prospects

Integral element of organizations' financial potential evaluation is an assessment of the factors affecting the process of its generation, which altogether depends on financial management, and – accordingly – on financial potential improvement opportunities. Factor based evaluation of hierarchical structure allows identifying significant factors influencing the final value of indicators and judge the factors and the values for gain or fall where dynamics of financial potential is estimated for the appointed period.

There were corporations selected for research field, they were business entities that impacted financial potential of other corporations in the territory accordingly.

PJSC "Interregional Distribution Net Company of the North Caucasus" – provision of electricity and technical connection to power grids (Official site of IDNC of the North Caucasus);

Non-Public JSC "Stavropolstroyoptorg" – ferrous metals wholesale trade (Official site of NAO "Stavropolstroyoptorg");

"Rusky Canning Plant " LCC – processing industries (processing and canning of vegetables) (Official site of " Rusky Canning Plant "LCC).

Efficiency of organizations' financial potential generation strategy embedded in relevant policies is evaluated via internal factorial assessment of its utilization by means of chain substitution method (1):

$$EOFP = NP/L \times L/OSFP \times OSFP/SFP \tag{1}$$

where – NP/L net profit / loss sales;

L/OSFP – return of own financial potential resources;

OSFP/SFP – financial independence.

Contains reference data to calculate indicators – table 1; table 2 contains results of internal factor assessment.

Table 1. Reference data for internal factor evaluation of corporations' financial potential utilization efficiency

Indicators	Public JSC "IDNC of the North Caucasus"		Non Public JSC "Stavropolstroyoptorg"		"Rusky Cannery Plant" LCC	
	2010	2016	2010	2016	2010	2016
1. Revenue, in thousand rubles.	10460795	15701228	5267105	8535901	115232	159389
2. Net profit / loss, in thousand roubles.	562957	- 1234179	294386	449031	2501	88
3. Financial potential overall resources, in thousand rubles.	22713590	35640088	1674938	4067597	305832	459303
4. Financial potential own resources, in thousand rubles	15685790	15680735	1365818	3375611	44022	275533
5. Profitability/ sales loss, in units	0,0538	- 0,0786	0,0559	0,0526	0,0217	0,0006
6. Financial potential own resources turnover, in cycles	0,6669	1,0013	3,8564	2,5287	2,6176	0,5785
7. Financial independence, in units	0,6906	0,44	0,8154	0,8299	0,1439	0,5999
Public JSC "IDNC of the North Caucasus"	$\Delta EOFP_{\Delta NP/L} = (-0,0786 - 0,0538) \times 0,6669 \times 0,6906 = - 0,0610$ $\Delta EOFP_{\Delta L/OSFP} = - 0,0786 \times (1,0013 - 0,6669) \times 0,6906 = - 0,0182$ $\Delta EOFP_{\Delta OSFP/SFP} = - 0,0786 \times 1,0013 \times (0,44 - 0,6906) = + 0,0197$					

	$\Delta \text{ЭИФП} = -0,0595$
Non Public JSC "Stavropolstroyoptorg"	$\Delta \text{EOFP}_{\Delta \text{NP} / \text{L}} = (0,0526 - 0,0559) \times 3,8564 \times 0,8154 = -0,011$ $\Delta \text{EOFP}_{\Delta \text{L} / \text{OSFP}} = 0,0526 \times (2,5287 - 3,8564) \times 0,8154 = -0,0569$ $\Delta \text{EOFP}_{\Delta \text{OSFP} / \text{SFP}} = 0,0526 \times 2,5287 \times (0,8299 - 0,8154) = +0,0019$ $\Delta \text{ЭИФП} = -0,066$
"Russky Cannery Plant" LCC	$\Delta \text{EOFP}_{\Delta \text{NP} / \text{L}} = (0,0006 - 0,0217) \times 2,6176 \times 0,1439 = -0,00784$ $\Delta \text{EOFP}_{\Delta \text{L} / \text{OSFP}} = 0,0006 \times (0,5785 - 2,6176) \times 0,1439 = -0,00018$ $\Delta \text{EOFP}_{\Delta \text{OSFP} / \text{SFP}} = 0,0006 \times 0,5785 \times (0,5999 - 0,1439) = +0,00016$ $\Delta \text{ЭИФП} = -0,0078$

Source: calculation provided by the authors V.V. Manuylenko, M.A. Loktionova with reference to financial reports of corporations (official Internet sites of Public JSC "IDNC of the North Caucasus", Non Public JSC "Stavropolstroyoptorg", "Russky Cannery Plant" LCC)

Table 2. Results of internal factor assessment for efficiency of financial potential utilization in PJSC "Interregional Distribution Net Company of the North Caucasus"

Internal Factors	Impact value					
	IDNC of the North Caucasus		NAO "Stavropolstroyoptorg"		OOO " Russky Canning Plant "	
	ед.	%	ед.	%	ед.	%
1. Variations in profit / sales loss	-0,0610	-102,5	-0,011	-16,7	-0,00781	-100,1
2. Variations in return of own sources for financial potential	-0,0182	-30,6	-0,0569	-86,2	-0,00018	-2,3
3. Financial independence alterations	+0,0197	+33,1	+0,0019	+2,9	+0,00016	+2,4
4. General influence of internal factors	-0,0595	-100,0	-0,066	-100	-0,0078	-100

Source: calculation provided by the authors V.V. Manuylenko, M.A. Loktionova

In Public JSC "IDNC of the North Caucasus" poor efficiency of financial potential utilization is caused by sales loss and financial independence decline. Turnover growth of own financial potential sources, which is a strategic indicator for corporation's development, unfortunately did not exclude negative impact of above two internal factors.

In Non-Public JSC "Stavropolstroyoptorg" efficiency of financial potential utilization decrease is explained with sales profitability reduction that accounts to 16.7%, deceleration rate of own financial potential resources is 86.2%, and financial independence growth did not compensate negative impact of previous internal factors.

A similar situation is noted in "Russky Canning Plant" LCC. Although influence of internal factors values to financial potential utilization efficiency decrease is different, decrease in profitability of sales is 100.1%, own financial potential resources' deceleration is 2.3%.

Among advantages of this method we can list identification of internal factors as quantitative value that affects efficiency of organizations' financial potential utilization, and among shortcomings there is exclusiveness of external factors direct influence, forecast of organizations' financial potential performance, and consideration of macro-, meso- and micro-environment factors influence. It should be noted that ignoring influence of emergent (macro-, meso-) environment on efficient utilization of financial potential complicates accurate transformation of one type of financial strategy into another, while corporations develop as the subject to complex influence of internal and external factors. All the foregoing justifies the need to develop a model for strategic assessment of corporations' financial potential that should take into account influence of emergent (macro-, meso-) environment on the latter in the conditions of uncertainty thus forming the next stage of the study.

2.3. Development of a model for strategic assessment of corporations' financial potential based on simulation

In modern developing environment important strategic decisions must be implemented based on the forecast. It is important to consider that decisions to generate financial potential of corporations are always accepted in uncertain environment with different levels of risk in order to determine profitability and risk ratio. Insufficient level of corporations' financial potential determines risk assessment because of long uncertainty period. Forecast identifies anticipated financial resources conditions and financial processes, and feasible financial activities options considering them as prerequisite for business planning. Distinctive financial potential forecast means to characterize corporation by its interdependent links and some level of inertia described by dependence of each indicator value in the relevant period in the past and taking into account influence of particular factors. It can be optional and it is its main characteristic.

Requirements for the model of corporations' financial potential forecast:

- maximum simplicity and no secondary links;
- compliance with specific task of the study, for the purpose of the study determines the links, phenomenon angles both primary and secondary;
- real indication of financial potential essence that includes all key aspects and the links of simulation subject matter and its evaluation;
- identification of all necessary, probable parameters of the simulated process (objective function) considering ability to respond to parameters change.

In emergent (unstable, volatile, high-risk) environment stochastic static models (Monte Carlo method) as mathematical description are worth noticing since they incorporate random processes. Forecasted value contains accomplishment of clearly determined factor model that reflects interconnection of results and affecting factors. Achievement of the forecast accuracy for corporations' financial potential requires sufficient and complete amount of information characterized with high level of reliability and its availability for reference as per time periods versus quantitative and qualitative indicators. In order to make management decisions for financial potential generation and its assessment constant business awareness is required for result oriented selection, evaluation and concentration of information along with a thorough investigation of initial data that implies awareness about the tasks for financial potential evaluation and generation.

Monte Carlo method implementation for selection of a random variable during 2012 – 2016 implied a study of various indicators describing strategic resources of financial potential in corporations. It is obvious that in the system of strategic financial management a standard instrument for corporations' financial potential regulation is accumulation of own and long-term resources. Accordingly, strategic assessment of corporations' financial potential should be based on a combination of tools for its current own and long-term permanent investments. Forecast of corporations' permanent resources in conditions of uncertainty will determine adjustment of the policies for corporations' financial potential generation including a strategic component.

High volatility of the indicator for stability of corporations' financial potential sources from one period to another makes it possible to be a random variable. Accordingly, there is a non-zero probability of it to exceed acceptable level. Defining strategic indicators of corporations' financial potential is carried out applying Excel-VBA approved software "Software for determining strategic indicators for assessing the financial potential of corporations" (Manuylenko and Loktionova 2018).

Empirical distribution function for a random variable is derived by the following actions:

1. Random number generator generates a random value on the interval $[0,75 - 0,8]$, since indicator for stability of resources for corporations' financial potential should be $<75\%$ and $= /> 80\%$.
2. According to the distribution function $F(s)$ probability that a random variable will reach the value $</ = s$ with a confidence level of 95% determines strategic permanent resources for financial potential.
3. The inverse distribution function Fs^{-1} (quantile of distribution is 95%) (according to the established argument c , the value s is determined, the random variable is $</ = s$ with probability c), strategic permanent resources for financial potential are calculated.

Basic parameter of the recommended method is indicator of stability for corporations' financial potential resources, its variability which serves as the basis for calculating strategic permanent resources for corporations' financial potential. Relative strategic indicator for sustainability of corporations' financial potential resources contains parts of the absolute indicator – strategic permanent sources and, conversely.

4. The procedure is repeated 20,000 times.
5. Variation series for strategic permanent resources and strategic indicator for stability of financial resources for 6 years are prepared; the 6-th year is forecasted by extrapolation, i.e. stirring average with effective observation period 2012 – 2017.
6. Empirical function for distribution of strategic permanent resources for corporations' financial potential and strategic indicator of their stability is concluded according to analytical results of 20,000 Monte Carlo experiments (figure 1 – 5).

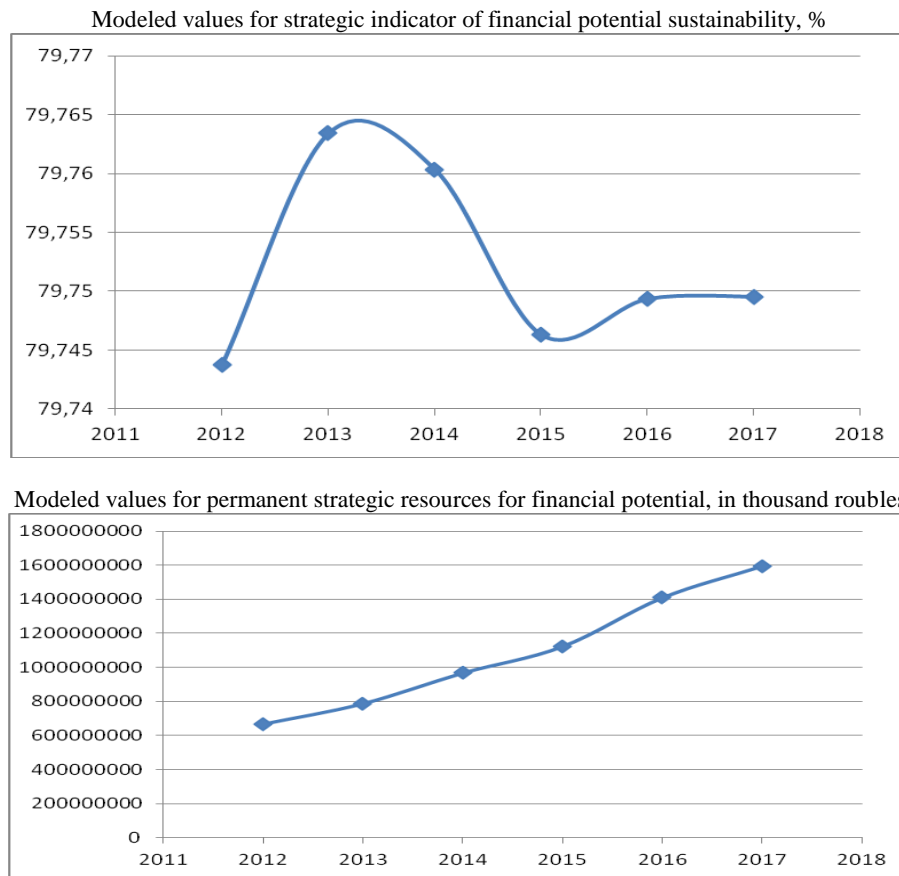
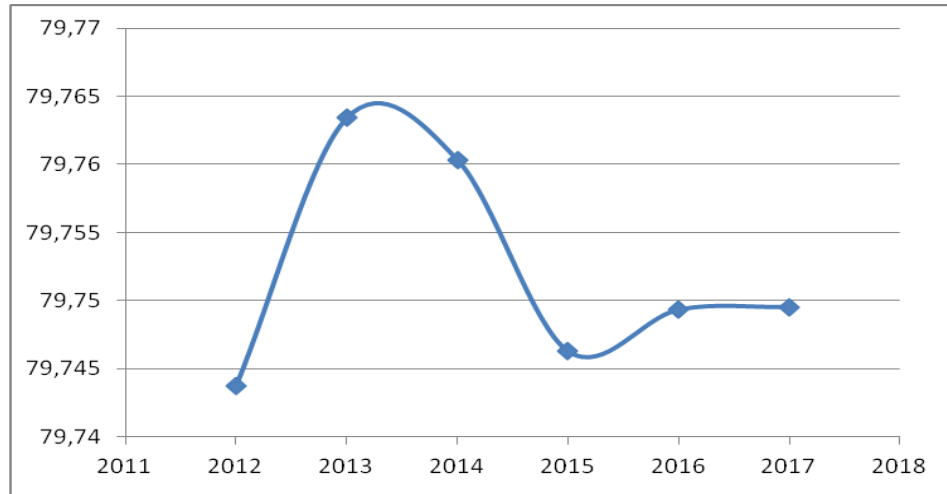


Figure 1. Modeled values of strategic indicators for assessing financial potential in corporations (developed by authors V.V. Manuylenko, M.A. Loktionova Modeled values for strategic indicator of financial potential sustainability, %



Modeled values for permanent strategic resources for financial potential, in thousand roubles

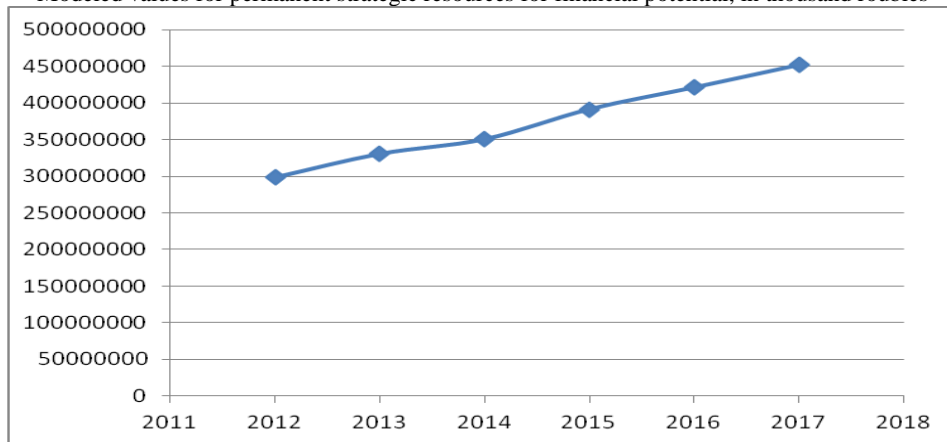


Figure 2. Modeled values of strategic indicators for assessing financial potential in corporations - JSC
(developed by authors V.V. Manuylenko, M.A. Loktionova)

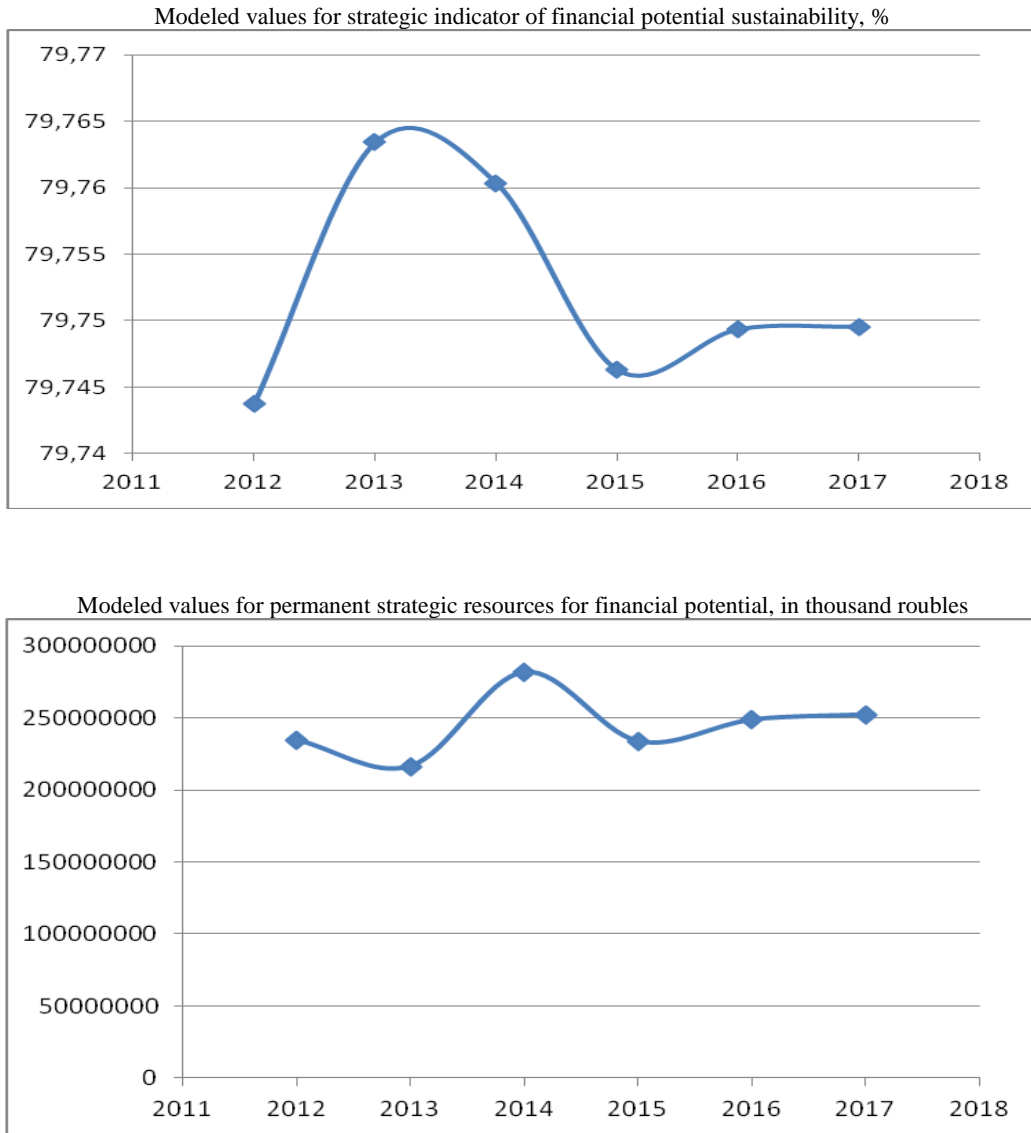


Figure 3. Modeled values of strategic indicators for assessing financial potential in corporations – Public JSC
(developed by authors V.V. Manuylenko, M.A. Loktionova)

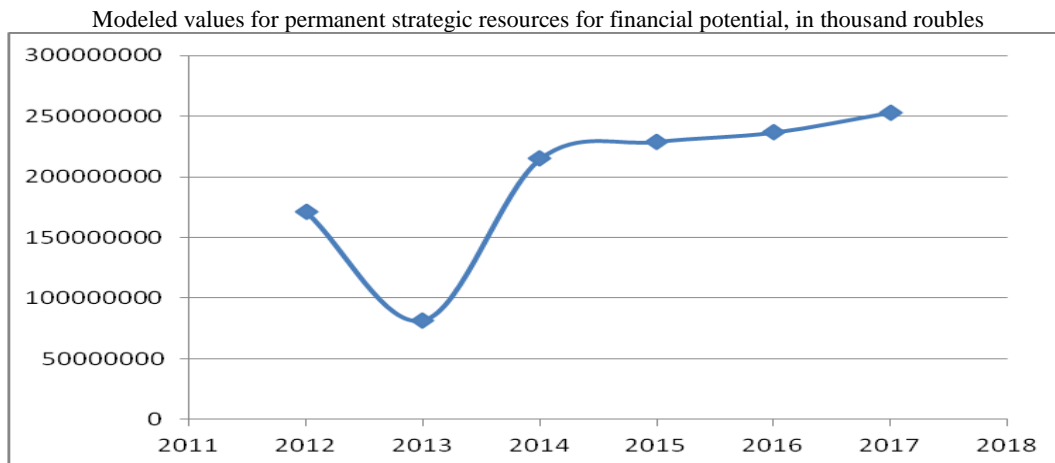
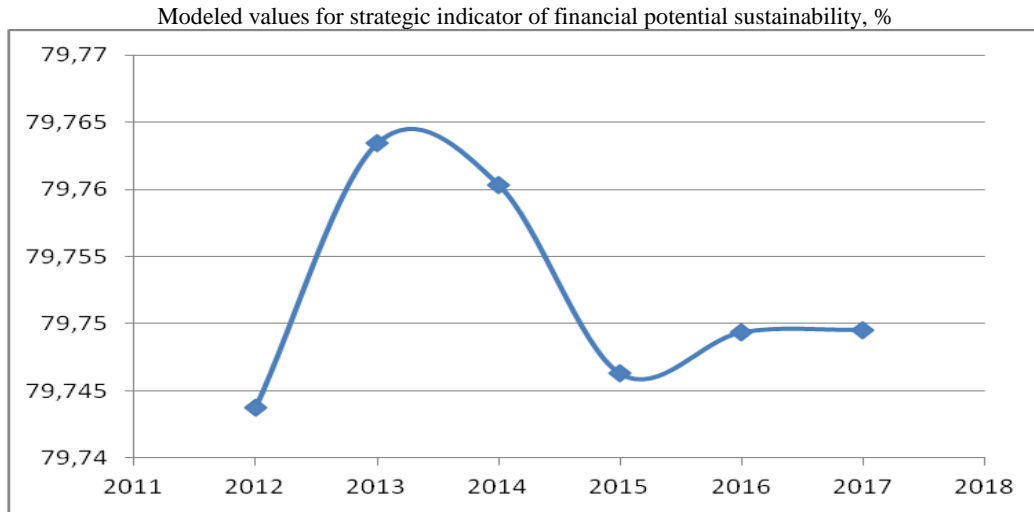


Figure 4. Modeled values of strategic indicators for assessing financial potential in corporations processing and distributing electricity, gas and water
(developed by authors V.V. Manuylenko, M.A. Loktionova)

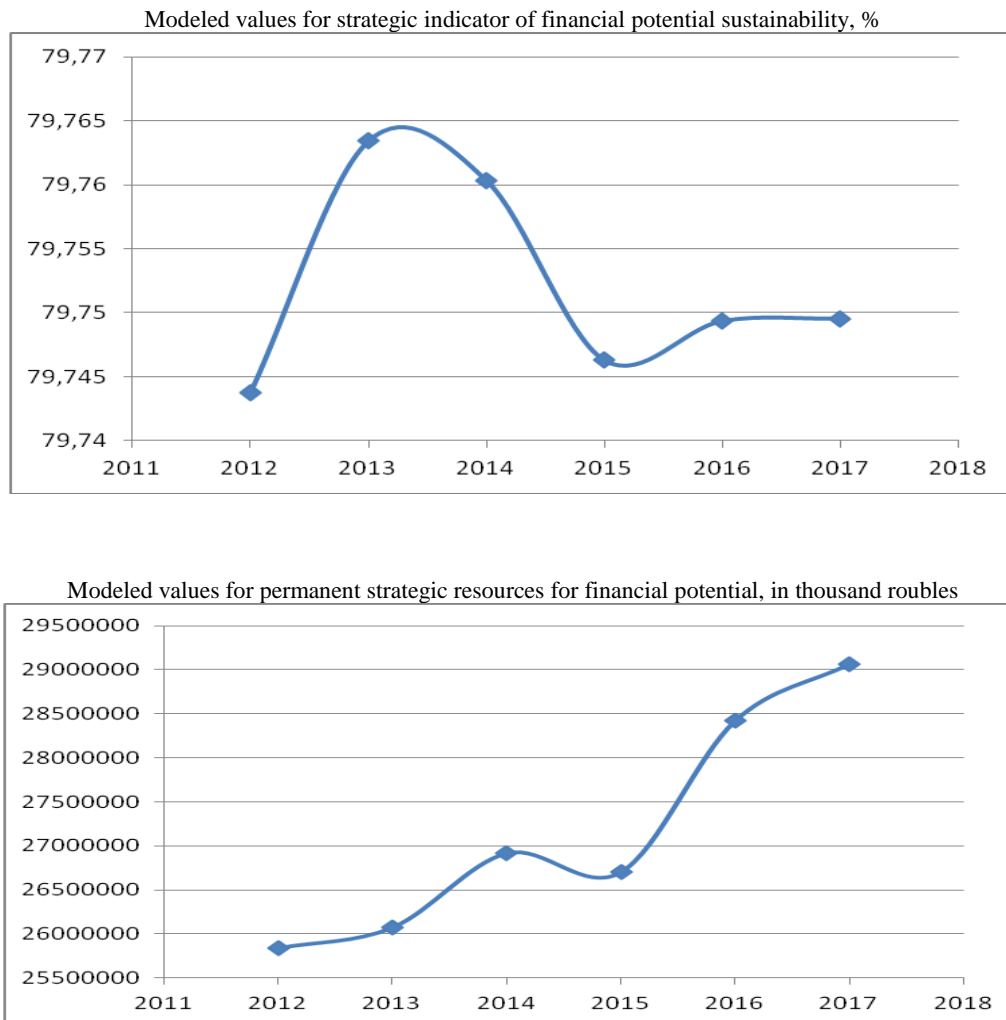


Figure 5. Modeled values of strategic indicators for assessing financial potential in PJSC “IDNC of the North Caucasus” (developed by authors V.V. Manulyenko, M.A. Loktionova)

7. Comparison of strategic assessment indicators’ values for absolute (actual and strategic permanent resources) and relative (actual current and strategic coefficients) for sustainability of corporations’ financial potential resources.

It is believed that projected corporations’ financial potential increase should correlate with progression of funds sources where their ratio may vary.

8. Identification of indicators’ value deviations, desk work with deviations. Table 3.

Table 3. Identification of deviations between actual and strategic values for indicators, in corporations (Stavropol territory cases)

YY	Absolute Index			Relative Index		
	Permanent actual resources in thousand rubles	Permanent strategic resources in thousand rubles	Deviations, %	Actual sustainability of financial potential resources in thousand rubles	Strategic sustainability of financial potential resources in thousand rubles	Deviations, %
1	2	3	4	5	6	7
Corporations						
2012	473511395	668374181	- 29,2	56,5	79,7	- 23,2
2013	566437126	788390894	- 28,2	57,3	79,8	- 22,5
2014	677525985	967963995	- 30,0	55,8	79,8	- 24,0
2015	746631037	1123403573	- 33,5	53,0	79,7	- 26,7
2016	677766090	1409792250	- 51,9	38,3	79,7	- 41,4
2017 _{strategic.}		1595138816			79,7	
Corporations - JSC						
2012	239883015	298326555	- 19,6	64,1	79,7	- 15,6
2013	317718423	330322509	- 3,8	76,7	79,8	- 3,1
2014	321877877	350451544	- 8,2	73,3	79,8	- 6,5
2015	332470901	391323258	- 15,0	67,8	79,7	- 11,9
2016	341678863	420966836	- 18,8	64,7	79,7	- 15,0
2017 _{strategic.}		451622734			79,7	
Corporations – Public JSC						
2012	202458220	234680918	- 13,7	68,8	79,7	- 10,9
2013	257701128	216374889	+ 19,1	95,0	79,8	+ 15,2
2014	267269001	281900839	- 5,2	75,6	79,8	- 4,2
2015	216890465	233770528	- 7,2	74,0	79,7	- 5,7
2016	215467875	248736849	- 13,4	69,1	79,7	- 10,6
2017 _{strategic.}		252247304			79,7	
Corporations – Non Public JSC						
2012	37424795	63645638	- 41,2	46,9	79,7	- 32,8
2013	60017295	113947620	- 47,3	42,0	79,8	- 37,8
2014	54608876	68550705	- 20,3	63,5	79,8	- 16,3
2015	115580436	157552730	- 26,6	58,5	79,7	- 21,2
2016	126210988	172229987	- 26,7	58,4	79,7	- 21,3
2017 _{strategic.}		199375430			79,7	
Corporations - LTD						
2012	211334571	348348889	- 39,3	48,4	79,7	- 31,3
2013	222623487	434588815	- 48,8	40,9	79,8	- 38,9
2014	330217649	593337674	- 44,3	44,4	79,8	- 35,4
2015	384459036	703885415	- 45,4	43,6	79,7	- 36,1
2016	300639992	956646787	- 68,6	25,1	79,7	- 54,6
2017 _{strategic.}		1108717781			79,7	
Corporations for production and distribution of electricity, gas and water						
2012	93774828	170844478	- 45,1	43,8	79,7	- 35,9
2013	95758553	81478725	+ 17,5	93,7	79,8	+ 13,9
2014	122590033	214979717	- 43,0	45,5	79,8	- 34,3
2015	101896451	229042076	- 55,5	35,5	79,7	- 44,2
2016	64197915	236762927	- 72,9	21,6	79,7	- 58,1
2017 _{strategic.}					79,7	
Public JSC “IDNC of the North Caucasus ”						

2012	22790992	25844815	- 11,8	70,3	79,7	- 9,4
2013	24593657	26079581	- 5,7	75,2	79,8	- 4,6
2014	23803550	26921156	- 11,6	70,5	79,8	- 9,3
2015	19396913	26707046	- 27,4	57,9	79,7	- 21,8
2016	21486678	28422731	- 24,4	60,3	79,7	- 19,4
2017 _{strategic.}		29066824			79,7	
Corporations for wholesale and retail trade and others						
2012	49293727	99270133	- 50,3	39,6	79,7	- 40,1
2013	73106564	62059066	+ 17,8	94,0	79,8	+ 14,2
2014	66496668	163318202	- 59,3	32,5	79,8	- 47,3
2015	69192857	179117726	- 61,4	30,8	79,7	- 48,9
2016	104797097	225252857	- 53,5	37,1	79,7	- 42,6
2017 _{strategic.}		256747404			79,7	
Non Public JSC "Stavropolstroyoptorg"						
2012	1948743	1808324	+ 7,8	85,9	79,7	+ 6,2
2013	2194527	1990022	+10,3	88,0	79,8	+ 8,2
2014	2519177	2349669	+ 7,2	85,5	79,8	+ 5,7
2015	2956580	2893401	+ 2,2	81,5	79,7	+ 1,8
2016	3375611	3243881	+ 4,1	83,0	79,7	+ 3,3
2017 _{strategic.}		3602747			79,7	
Manufacturing Corporations						
2012	83574712	109476692	- 23,7	60,9	79,7	- 18,8
2013	36443841	30269251	+ 20,4	96,0	79,8	+ 16,2
2014	104308782	158894605	- 34,4	52,4	79,8	- 27,4
2015	99048522	187944214	- 47,3	42,0	79,7	- 37,7
2016	118728613	188900987	- 37,1	50,1	79,7	- 29,6
2017 _{strategic.}		208755633			79,7	
"Rusky Canning Plant " LLC						
2012	276265	324990	- 15,0	67,8	79,7	- 11,9
2013	335423	298984	+12,2	89,5	79,8	+ 9,7
2014	309499	320992	- 3,6	76,9	79,8	- 2,9
2015	278153	314381	- 11,5	70,6	79,7	- 9,1
2016	288308	366291	- 21,3	62,8	79,7	- 16,9
2017 _{strategic.}		376612			79,7	

Source: compiled by the authors V.V. Manuylenko, M.A. Loktionova

9. Preparation of expert conclusions.

Thus, Monte-Carlo stochastic simulation method in its essence concludes a forecast for corporations' financial potential and takes into account external environment influence considering uncertain environment.

3. Results

3.1. In practical block of the research

- factor evaluation of corporations' financial potential allows depicting only pre-emptive part of its generation policy and excludes strategic component;
- significant internal factors that affect financial potential efficiency were distinguished in factor hierarchical structure; they require special regulation and monitoring in corporations' financial management systems (viability / sales loss, turnover of own financial potential resources);
- it is recognized that in operational financial management system of corporations' internal factors that influence efficiency of financial potential utilization are identified, evaluated and monitored; that demands development of an author's model for strategic evaluation of the potential that should be founded on Monte Carlo simulations which consider influence of emergent environment factors (i.e. macro - and meso-).

3.2. In the theoretical and methodological field of research

– definition of corporations' financial potential is suggested based on an eclectic approach, which integrates elements of multitude approaches (resource, structural, resource, factor, efficiency, etc.) and suits most to characterize corporations' financial potential in the system of operational and strategic financial management;
– author's model for strategic assessment of financial potential based on stochastic simulation was developed and tested; it identifies absolute indicator for sustainability of financial potential resources (strategic permanent sources of financial potential and relative strategic indicator) as well as determines deviations of actual indicators' values from strategic ones (table 3) and implies appropriate expert conclusions.

Significant deviations of indicators' actual values from strategic ones are noted in all corporations which include the types: JSC, Non-Public JSC, LLC, corporations for production and distribution of electricity, gas and water, wholesale and retail trade, processing industries, PJSC "IDNC of the North Caucasus", LLC "Russky Cannery Plant". It is notable that only in the Non-Public JSC "Stavropolstroyoptorg" actual values of absolute and relative indicators exceed the strategic ones during the entire retrospective period, which is a better result comparing to those in wholesale and retail trade corporations, as well as in others.

Few cases where actual values of indicators exceed their strategic landmarks are noted in 2013 in corporations of PJSC type, corporations that produce and distribute electricity, gas and water, wholesale and retail trade, processing industries, and LLC "Russky Cannery Plant".

Considering the fact that the normal value of the indicator for stability of corporations' financial potential resources is 80%, critical value is 75%, then at its value <75% - high risk, 75% - 80% - medium, > 80% - low risk, volatility of indicator is applied as a measure for the level of risk. Strategic values of the indicator for stability of corporations' financial potential resources generally correspond to the average level of risk, and the actual ones to some extent relate to high level of risk; that excludes Non-Public JSC "Stavropolstroyoptorg" which shows low actual level of risk.

Analysis of deviations between forecasted indicators' values and actual ones is an instrument of financial potential adjustment in the system of strategic financial management, the content of analysis is presented in the form of logical classification (figure 6).

It should be noted that involvement of all level managers into analysis of deviations allows determining the level of consequent contribution into overall financial outcome. PJSC "IDNC of the North Caucasus" case showed involvement of special Audit Board that controlled generation and utilization of reserved and other special funds, monitored efficiency of resource utilization, revealed causes for non-production losses and expenses, controlled reserved funds for improvement of financial situation.

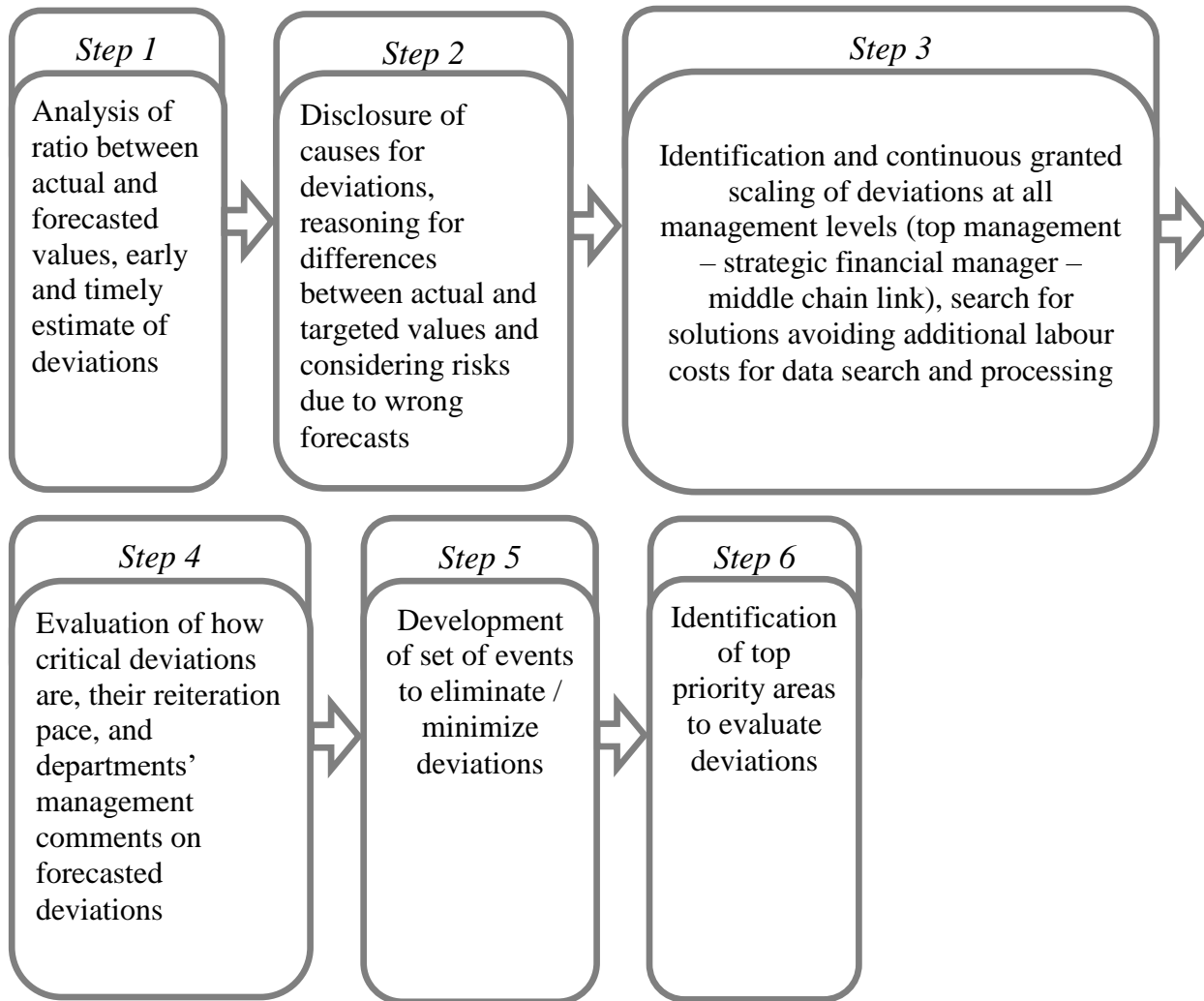


Figure 6. Consequence of steps to assess deviations (developed by authors V.V. Manuylenko, M.A. Loktionova)

Exceeded strategic values of indicators over the actual ones should be considered for determining risk-oriented strategies for organizations' financial potential generation.

The forecast data is applied by organizations for development of guidelines in accordance with strategic goals.

The suggested toolkit for strategic evaluation of corporations' financial potential incorporates the benefits for different groups of stakeholders (Table 4)

Table 4. Practical application of corporations' financial potential strategic evaluation results for stakeholders

Stakeholders	Areas for strategic evaluation results application
Owners	Evaluation of appropriate growth / decrease of own financial potential resources, return on investment, profitability, financial risk level and development prospects
Financial Managers	Efficiency of taken decisions, utilized financial potential resources and financial results
Creditors	Feasibility of loan prolongation, loan terms, return guarantee
Lenders	Essential prolongation of long-term credit /bonds, credit terms/ bond terms, return guarantees

Potential owners, creditors and investors	Investments profitability
Suppliers	Solvency assessment
Auditors, lawyers, associations, trade unions	Analytical goals

Source: compiled by authors V.V. Manuylenko, M.A. Loktionova

Stakeholder interests' inclusion aims to generally improve financial management system quality, where the criteria for efficient performance of the latter include observance and protection of the stakeholders' rights.

The suggested toolkit for strategic evaluation of corporations' financial potential carries a significant practical value, namely:

- it promptly identifies internal potentials of organizations, their weaknesses, undiscovered abilities opt to improve performance, thus it enhances their financial potential;
- it is a key element in development of their activities, which later may become a supporting element of business planning for other key financial indicators;
- it accumulates a significant number of resources for a long-term operation, allowing to accumulate a full range of possible scenarios to advance permanent resources for financial potential;
- it allows building a model to enhance strategy for financial potential generation, and contributes to development of a more efficient supporting strategic policy.

Developed toolkit for strategic evaluation of corporations' financial potential based on imitation simulation was tested in financial management system of PJSC "IDNC of the North Caucasus", Non-Public JSC "Stavropolstroyoptorg" and LLC "Russky Cannery Plant".

4. Conclusions

Thus, a model for strategic evaluation of corporations' financial potential based on imitation simulation reinforced with a special author's software product was developed and implemented, development implied also identification of deviations between actual and target indicators' values, their analysis and formulating expert conclusions for all levels of financial management. Its practical application incorporates interests of different groups of stakeholders.

Completion of the research, namely the results of the evaluation, subsequently become the ground for management decisions arising in the process of corporations' financial potential generation and evaluation, they will also serve to lay theoretical and methodological foundation for further research in corporations' financial potential evaluation, namely:

- Completed research, and namely evaluation results subsequently become the ground for management decisions in the area of generation and evaluation of corporations' financial potential, they allow building a theoretical and methodological foundation for further research in the area of corporations' financial potential evaluation, namely:
- conduct strategic assessment of corporations' financial potential in the medium and long term (3 to 5 years) in conditions of uncertainty;
 - creation of a modern toolkit for assessing financial resources of corporations in conditions of uncertainty;
 - development of financial policy, corporations' financial potential generation policy that incorporates strategic and risk components for conditions of uncertainty;
 - development of multiple scenarios of corporations' financial potential performance in conditions of uncertainty;
 - development of financial strategies and strategies for risk-oriented corporations' financial potential generation;
 - development of new methods and instruments for financial risks insurances associated with corporations' financial potential generation in the insurance market: E.A. Rusetskaja (Rusetskaja et al. 2016);

- provision of connection between financial and intellectual potential; a separate study on intellectual capital of companies was conducted by S.S. Galazova (Galazova and Manuylenko 2017).

5. Discussions

The authors believe that suggested author's model for corporations' financial potential generation evaluation can be modified with a different forecasting period as part of corporations' financial potential generation policy implementation. Given specifics of different corporations' performance in uncertain environment, each corporation can develop its own model. At the same time, necessary consideration of emergent (macro-, meso-) environment factors influences efficient utilization of corporations' financial potential and leads to development of perspective trends for corporations' financial potential generation and evaluation.

Thus, a universal toolset for corporations' financial potential long-term evaluation was suggested and tested; the toolset incorporates absolute and relative indicators in the system of strategic financial management functioning under conditions of uncertain environment.

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