Financial Design of Techologies of Economy Sectors' Cooperation with Consideration of Business Climate Cycles

[1]Venera I. Vagizova, [1]Ksenia M. Selivanova and [2]Ajdar M. Tufetulov
[1]Department of Banking Institute of Management,
[2]Department of Taxation Institute of Management, Economics and Finance Kazan (Volga region)
Federal University, Kazan, Russia

Abstract: In this study, we have studied an approach to financial design of cooperation of bank and real economy sectors in accordance with cycles of business climate. For effective building of abovementioned cooperation of bank and real economy sectors on the Russian Federation, we have defined peculiarities of stages of their life cycles with consideration of the need in long-term investments. Basing on analysis of possibility of synchronization and comparability of development of country's financial and industrial sections, we have defined factors of breakthrough cooperation and misalignment of bank and real sectors of economy of the Russian Federation. We have studied dependence of life circles' phases of bank and real sectors of economy in conditions of re-industrialization from factors of their development. In addition, we have revised factors that combine stages of life circles of economy's sectors and levels of their influence. We have defined modern system contradictions in cooperation of bank and real economy sectors, which are majorly manifested during periods of economic recession in business climate which condition reduction of long-term financing of economy's real sector. For complex understanding of above-mentioned contradictions, we have ranged them with the aim of detection of the most significant ones and the ones that are difficult to be eliminated.

Key words: Sectoral cooperation, life cycle, real sector of economy, financial sector of economy, financial design

INTRODUCTION

Now a days, it has become evident that progressive advance of society, dynamic building of its economic capacity is impossible without development of industrial economy's sector, branches of real sectors, which require forming effective mechanisms of their financial support. Modern business experience shows that a prerequisite for support of economy's real sector by long-term sources is an effective cooperation of real and financial economy sectors (Pederzoli *et al.*, 2010). However, in domestic economic system sectoral cooperation as a resource in development of re-industrialization processes is used insufficiently and sometimes inefficiently (Kazarenkova *et al.*, 2014). At the same time, some difficulties occur that are connected with forming of long-term financial relations of business entities which makes measures, aimed at stimulation of this process, more and more important. Special attention should be paid to the processes that limit possibilities of financing and crediting to provision of new processes in industrial development and its priority directions, like: lack of investment credits; presence of investment pause in life cycle of business entities; debt load of business entities; increasing tension on capital, loss of its quality; inefficient correlation of proper and borrowed capital; incoordination of interests of economy's financial and real sectors.

MATERIALS AND METHODS

Correlation analysis as the main research method was conducted. The method allows determining the relationship and its degree between the studied variables. The formula for calculating the Pearson correlation coefficient as follows (Barrow, 2013):

$$r_{xy} = \frac{\sum (x_i - \bar{x}) \times (y_i - \bar{y})}{\sqrt{\sum (x_i - \bar{x}) \times \sum (y_i - \bar{y}) \times (n-1)}}$$

Where:
x_i = Value of variable x
y_i = Value of variable y
$\bar{x}$ = Arithmetic mean of variable x
$\bar{y}$ = Arithmetic mean of variable y

Correlational analysis model included such indices of business entities like gain growth rate, investments into main funds, profitability, competitive position in the

Corresponding Author: Venera I. Vagizova, Department of Banking Institute of Management,
Economics and Finance Kazan (Volga region) Federal University, Kazan, Russia

branch, innovational level, differentiation level, international expansion, import phase-out, coverage of home market.

According to results of modeling, correlation coefficients (K) have been defined, the values of which vary from (-1) to 1. The level of dependency of life circle phases of the branches from selected indices is defined by means if comparing correlation coefficients: K>0.7 dependency level is high; K<0.7 dependency level is low. If the level of coefficients coincide among branches, the index refers to coordinated cooperation category; if the level of coefficients does notcoincide, the index refers to uncoordinated cooperation category.

RESULTS AND DISCUSSION

The main factor for development of any branch is coordination and achievement of balance between internal and external environments, ability to adapt go current market tendencies. In case, then methods and techniques for increasing of its activity's efficiency which do not coincide with real stage of life cycle, are applied, the branch starts reacting negatively and stagnate (Chernov, 2011). For more efficient cooperation of bank and real economy's sectors of Russia, it is necessary to identify peculiarities of stages of their life cycles.

Fundamental model of branch's life cycle was presented by Porter (1980); all further model are one way or another built by analogy with it with addition of some intermediate stages and change of their characteristics.

While considering life cycle of business entities of bank and real sectors of economy, we note rather significant divergence in stages, which in many ways define approaches to managing their interaction (Chakraborty, 2008).

We note coincidence of stages during growth and stability periods in economic development. During periods of economic recessions and sharp climatic changes, real sector goes through recession period and unlike bank sector, its recovery takes more time.

The main difference of studied economy's sectors lies in the pace with which they pass through stages of life cycle: real sectors' pace is several times lower than that of the bank one. At the same time, there is no interdependence between above-mentioned paces; bank sector develops regardless of real one's conditions and increasing paces of the first are reflected only in insignificant increasing paces of the second one.

Bank system is characterized by high pace of branch's development, survival capability in a down economy and changes of business climate, relative stability at the account of support, provided to it by Central Bank, high institutional growth rate, control over large amounts of monetary resources (Table 1).

In conditions of reindustrialization for development of industrial structures, it is necessary to have long-term financial support, the source of which may be represented by institutional investors, proprietary funds of the enterprises, household funds, budget funds and foreign investments (Gazizullin, 2014).

Small volumes of financial resources are centralized in credit organizations which are not interested in backing low-profit economy's sectors.

Let us investigate dependency of life circle phases of bank and real sectors of economy from factors of their development and also let us define the levels of their influence. For this purpose in the study of Chernov (2011) expert review method for Russia's business branches is used, which is based on 18 components, each of which define the level of their development. Some of the components are calculated for a decade (profit's growth

Table 1: Life cycle of economy's financial and real sectors in conditions of re-industrialization: 1 bank sector; 2 real sector, respectively

Growth	Maturity	Decay	Growth
The level of economy's development			
Rapid increase in demand, widening of consuming limits (√)	Occurrence of mass consumer market, total popularity of product or service and a wide range of consumers	Diminution in demand, decrease in number of consumers	Limited demand, low number of interested consumers
Standardization on the base of dominating innovational technologies and rapid occurrence of innovational processes (√)	Seek for technological perfection, know-how technologies' distribution (√)	Decrease of innovational activity	Onrush of technologies, occurrence of innovational goods and services (√)
Improvement of quality characteristics of goods and services, detection of dominating characteristics and technologies (√)	Tendency of turning into mass consumption good/service Differentiation with the help of quality of services rendered	Difficult and unprofitable differentiation of goods and services	Low quality of goods/services, high differentiation between characteristics and technologies
Shortfall in fabricating capacity, competence for distribution positions (√)	Occurrence of overcapacity, less qualified labor , long industrial cycles, distributors serve less lines of the goods	Chronic overcapacity, renewal of special distribution channels	Short production cycle, highly qualified labor, specialized distribution channels (√)
Economy's development (√)	Stabilization of economy (after growth stage)	Economic decay (crisis)	Stabilization of economy (after decay)

Cycles of economic climate; (√) Sector's need in long-term resource provision
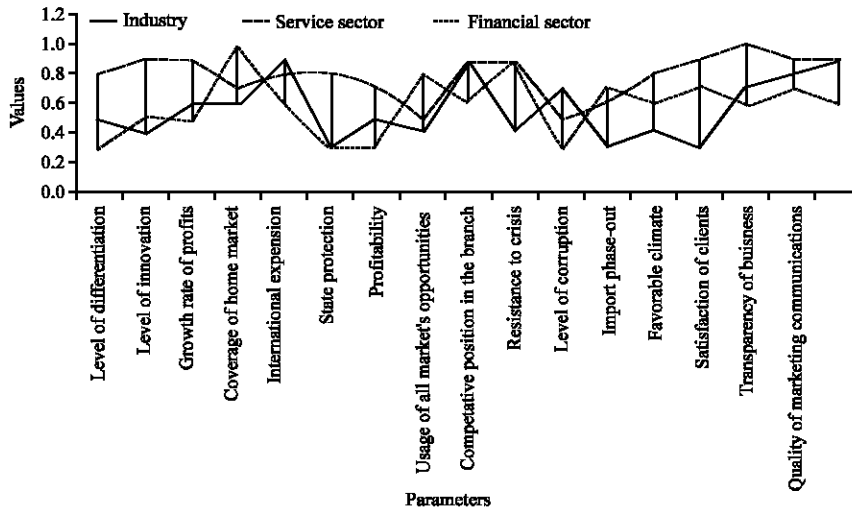
Fig. 1: Dependence of life circle phase frpm parameters of sector's development

rate, profitability of the sector), others are based on business climate that corresponded to the period from 2008-2012. Per results of each branch total point was displayed according to all studied parameters with the help of which they ranged in descending order. Depending in the range, stage of sector's life cycle was defined.

Maximal dependence level of life cycles of Russia's economy is seen with reference to the following factors in the descending order of significance (Fig. 1): internal management; transparency of business; satisfaction of clients; level of innovations; import phase-out; state protection; investments into main funds, i.e., at advancement of the abovementioned factors the pace of switching of sectors to the next stage of their life cycle increases.

The factors that mostly display their misalignmentare profit growth rate; competitive tension in the sector; profit, favorable climate, taking advantage of all market's opportunities; capacity to resist crisis.

Comparability analysis of life circle in the area of bank and real sectors of economy (in particular, industrial and service sectors) showed that bank sector had hardly any touch with industry and service sector which had increased level of dependence of almost all studied factors.

In our opinion, it is also necessary to define current stages of life cycles of studied sectors. D.V. Chernov, unlike M. Porter with his fundamental concept of life circle, defines new intermediate phase between inception and growth, namely, formation. We think that introduction of intermediate phase is justified, since the majority of

Russia's sectors find reflection in formation cycle which implies decelerated establishment of the sector which is already for from inception phase but which is still not characterized by proliferation.

According to study, yet in 2012, there was a gap in life circle of bank and real sectors (Chernov, 2011). Bank sector is in its growth phase. Real sector, represented by such industrial branches as consumer industry, coal industry, chemical and oil-chemical industry, building, transport, are distinguished at their formation stage while agro industrial complex, machine engineering and constructions materials industry are distinguished in formation phase, which is close to inception phase. Under formation stage, the rsearchers means formation of effective business model which at effective interaction may provide sector's growth. Consequently, in bank sector some business models that define their effective activity have already been formed while real sector is at formation stage (Dietmar and Heribert, 2011). Under that logic, the tendency of tearing of life circles increase in course of time, creating impediments for effective management and interaction for the aims of re-industrialization. At the same time, paces of growth also differ which additionally increases sectoral gap that arose (Table 2).

There is an emphasis on contradictions, one of which lies in misalignment of activity of bank and real sector (Samsi *et al.*, 2012). Creditor organizations' activity doesn'treally depend on development of real economy while Foreign experience show large dependence in this area.

For the purposes of this study, we have detached the following modern contradictions of interaction between bank and real economy's sectors in conditions of re-industrialization:

Table 2: Planning of sectoral interaction in conditions of re-industrialization on the base of life circle phases of business entities

Phases of development of life circle of economy's sector

industrial				Service				Financial
Inception	Formation	Growth	Accelerated growth	Inception	Growth	Accelerated growth	Stabilization	Phase of growth
Argo industrial complex	Chemical industry	Sand mining (other types)	Food industry	Education	Sales	Retail sales	Telecommunication (mobile connection)	Banks and investment companies
Machine engineering	Consumer industry	Materials processing	Household foods	Health care	Insurance			
	Coal industry	Industry (other types)	Industry	Real estate business	Public catering service			
	Chemical and Oil-Chemical industry	Pharmaceutical industry		Housing and public services	Packaging			
	Building	Electrical power Engineering			Telecommunication (other types)			
	Transport				Distribution of electric energy, water and gas			

Phases of development of economy's life cycle

- Contradiction at the level of profitability of economy's sectors (cost effectiveness of economy's financial sector is several times higher than effectiveness of economy's real sector)
- Contradiction at the level of riskiness of economy's sectors (focus of financial sector's activity is at moderate risk level; activity of economy's real sector is mainly aligned with high risk of project's inconsistency)
- Contradiction in time of formation of investment income (focus of financial sector's activity is at short-term financing for needs of real sector in long-term money for long-term projects)
- Contradiction in level of resistance to crisis phenomena (during the period of financial instability real sector of economy is badly in need of long-term resources; financialsector is interested in sustainment of its own activity and is not inclined for investment)

For complex understanding of influence of abovementioned contradictions, we have ranged them according to following grounds: significance of influence on economy in 2015; possibility of resolving the contradiction in further years (Fig. 2a, b).

As it can be seen from the above, the following were substantial contradictions in cooperation between bank and real sectors of economy in 2015: contradictionin the level of profitableness of economy's sectors (the level of significance is 30 from 100%), contradiction in the time of formation of investment income (the level of significance is 25 from 100%) and contradiction on the level of riskiness of economy's sectors (the level of significance is 25 from 100%). Contradiction at the level of resistance to crisis conditions covers 20% of significance. Further, it will be rational to initiate activities, aimed at solution of the following contradictions: contradiction at the level of resistance to crisis conditions (probability of solution is about 25 from 100%). The most difficult are those
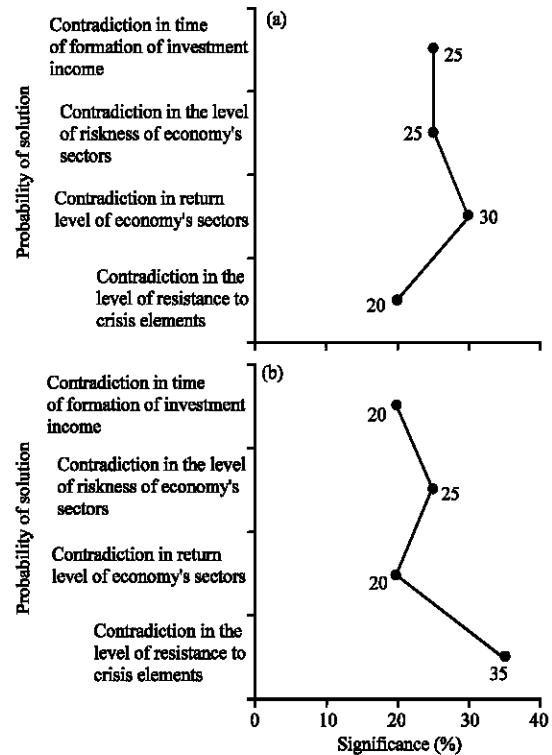

Fig. 2: Results of ranging significance of contradictions in cooperation between financial and real sectors of economy according to probability of their solution: a) in 2015; b) for further solution

contradictions which are connected with the time of formation of investment income and the level of profitability of economy's sectors.

Summary: The analysis we performed showed that there is a misalignment of development of life cycles in financial and real sectors of economy (Kundukchyan *et al.*, 2014). It has been established that the most difficult are those

contradictions, which are connected with the time of formation of investment income and the level of profitability of economy's sectors.

CONCLUSION

The main factors that combine these sectors are: internal management, transparency of business; satisfaction of clients; level of innovations; import phase-out; state protection; investments into main funds, i.e., at advancement of the abovementioned factors the pace of switching of sectors to the next stage of their life cycle increases. The factors that to the most extent reflect theirmisalignmentare: profit growth rate; competitive tension in the sector; profit, favorable climate, taking advantage of all market's opportunities; capacity to resist crisis.

As a result of this research, we have defined and assessed modern contradictions of sectoral cooperation in conditions of reindustrialization, like: contradiction at the level of profitability and riskiness of economy's sectors, contradiction in time of formation of investment profit and the level of resistance to crisis events.

ACKNOWLEDGEMENT

REFERENCES

Barrow, M., 2013. Statistics for Economics, Accounting and business studies. M. Barrow (Eds.), pp: 504.

Chakraborty, I., 2008. Does Financial Development Cause Economic Growth? The Case of India. South Asia Econ. J., 9 (1): 109-139.

Chernov, D.V., 2011. Industry Peculiarities of Managing Large Russian Enterprises at Various Stages of Organization Life Cycle. M.: GUU, pp: 216.

Dietmar, P. and G. Heribert, 2011. The financial sector and the real economy. Real-World Econ. Rev., 57: 40-47.

Gazizullin, V.K., 2014. Regarding the question on financing sources for new industrialization of Russian economy. New industrialization of Russia. Theoretical and managerial aspects: Multi-authored monograph under scientific editorship of Doctor of Economics N.F. Gazizullin. Saint-Petersburgh: "ROST" research and production company, pp: 237.

Kazarenkova, N.P., O.N. Ovcharova, O.V. Ostimuk and I.N. Tretyakova, 2014. Modern trends of interaction of real and banking sectors in conditions of modernization Russian Economy. Asian Soc. Sci., 10: 110-117.

Kundukchyan, R.M., R.R. Gaizatullin, Z.N. Zappartova and N.V. Antonova, 2014. Development of integration relations involving Russian real and financial sector entities. Mediterranean J. Soc. Sci., 5 (12): 69-73.

Porter, M.E., 1980. Competitive Strategy: Techniques for Analyzing Industries and Competitors. New York: Free Press, pp: 396.

Pederzoli, C., C. Torricelli and S. Castellani, 2010. The Interaction of Financial Fragility and the Business Cycle in Determining Banks' Loan Losses: An Investigation of the Italian Case. Economic Notes, 39 (3): 129-146.

Samsi, A.M., Z. Yusof and K.C. Cheong, 2012. Linkages between the real sector and the financial sector: The case of malaysi. Asian Academy of Management J. Accounting and Finance, 8 (Suppl.): 93-113.