

Assessment of the Impact of Market Drivers on the Sustainable Growth of the Banking System

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Abstract

The article examines the current situation in the Russian banking system, the assessment of which has shown mixed results. The analysis of the forecast indicators of the further development of the Russian banking system has revealed multidirectional trends. For the progressive and sustainable development of the Russian banking system, the authors investigated the interaction of the market environment and the banking system by assessing the impact of the drivers that act as conductors of such impact. Competition, marketing, management, market technologies, market regulation, business planning, and forecasting, bank profit have been suggested as drivers. The authors hypothesized that depending on the type of impact, which is divided into progressive, reactionary, and conservative, as well as the forces of the market environment on the banking system: superficial, segmental, and developing, there will be different situations of adaptation of the banking system to such impacts and, as a result, a different level of stability of the banking system. To implement the hypothesis, the authors proposed formalized parameters for calculating market drivers, identified the possible results of such an implementation, and provided advice on their interpretation.

Key-words: Financial Stability, Banking System, Impact, Market Environment, Driver, Competition, Marketing, Management, Market Regulation, Market Technologies, Business Planning, and Forecasting, Bank Profit

1. Introduction

The forecast of the long-term socio-economic development of the Russian Federation for the period up to 2030 provides for the expected results in the field of innovation, investment, human capital development, science, technology, industrial infrastructure, territorial development, foreign economic activity, and the environment [1]. It is necessary to ensure the sustainable development of the Russian banking system for adequate financial support for such long-term development. The main

directions of the development of the financial market of the Russian Federation provide for the implementation of several measures aimed at further strengthening the financial stability, including the banking system. Several measures concern the creation of conditions for the regulator to identify problems in the activities of credit institutions at an early stage. It provides for the introduction of regimes for restoring financial stability and resolving the insolvency of central counterparties [2]. However, the analysis of the dynamics of the banking system development shows that the planned indicators are not always fulfilled due, first of all, to the impact of external factors, as a rule, of a negative nature. This is the impact of financial crises, the imposition of economic sanctions, and pandemics. The situation with the financial condition of the banking system is ambiguous against the background of the regulator's long-term policy of improving the banking system. According to the Analytical Credit Rating Agency (ACRA), the Russian banking system passed through an acute phase of deterioration in its performance in 2020 without significant financial losses due to its stable state on the eve of the crisis and significant support from the Bank of Russia [3]. This situation manifests itself in a noticeable increase in the assets of the banking system by 14% while maintaining the profitability of banking operations mainly due to lending to individuals. The values of the capital and liquidity of the banking system remain stable due to the Bank of Russia's easing of the use of risk weights and allowances to them, which has a positive effect on leveling the outflow of funds from term deposits of individuals. According to ACRA, the main driver of the development of the Russian banking system is mortgage lending. Analyzing the dynamics of the main forecast indicators of the Russian banking system until 2022, we can note the ambiguity of the forecast, since several indicators are planned to decrease (Table 1):

Table 1 – Dynamics of indicators of the Russian banking system development, %

Indicator name	2020	2021	Change 2021 / 2020	2022	Change 2022 / 2021
1. Assets	14.6 ¹	10.2	-30.1	10.5	+2.9
2. Loans, total	13.4	10.5	-21.6	10.0	-4.7
2.1 Corporate	14.0	9.3	-33.6	8.8	-5.4
2.2 Retail	12.5	16.8	+34.4	15.4	-8.3
2.2.1 Mortgage	18.7	17.8	-4.8	16.8	-5.6
3. Customer funds, total	15.6	11.6	-25.6	11.0	-5.2
3.1 Legal entities	23.3	15.3	-34.4	13.7	-10.5
3.2 Individuals	8.0	7.2	-10.0	7.5	+4.2
4. Capital	10.6	5.0	-52.8	10.4	+108.0
5. ROA	1.4	0.6	-57.2	1.2	+100.0
6. ROE	13.4	6.5	-51.5	13.2	+103.1
7. Net profit	1,410	735	-47.8	1,613	+119.5

Compiled according to [3].

Table 1 shows that in 2021, such indicators of the banking system as capital (by 52.8%), return on assets, and equity by (57.2% and 51.5%, respectively), will suffer a significant decrease. The net profit of the banking system will decrease by 47.8%, and the funds of legal entities by 34.4%. The assets of the banking system in terms of lending to corporate clients will also significantly decrease by 33.6% and to individuals, as retail loans will decrease by 34.4%. According to some of these indicators, the downward trend will continue in 2022. Such indicators of the banking system as capital, return on assets and equity, net profit of banks will fall by almost 100% or more. According to ACRA, this situation may be influenced by the trend of additional accrual of reserves and lower interest rates, which limit the growth of net interest income.

The Bank of Russia, commenting on the current financial state of the banking system in its information and analytical material "On the Development of the Banking Sector of the Russian Federation in March 2021", notes that the key trends in March are the slowdown in corporate lending as opposed to the active growth of the retail segment due to unsecured mortgage loans, the issuing activity of the Ministry of Finance in terms of investments in federal loan bonds, the inflow of state funds associated with the temporary placement of funds from tax revenues, a reduction in funds of legal entities invested in banks by reducing balances in foreign currency, reducing term deposits due to the reduction of interest rates on deposits, reduction of banks "profits due to cancellation of concessions in terms of formation of reserves for large corporate clients [4]. In terms of the decrease in the number of credit institutions, as of March 31, 2021, there were 398 of them operating in Russia, of which 357 are banks [5].

What will help Russian credit institutions adapt and continue to develop steadily in the current conditions? What market drivers can have a positive impact on the progressive development of the Russian banking system? The driver can be understood as an "explorer". This word was used in information systems and meant a computer program that acts as a conductor that allows the device and the operating system to interact with each other. This term can be applied in economics to ensure the possibility of interaction between the market environment and the banking system, i.e. the driver is a conductor that allows the market environment and the banking system to interact. Depending on the type of impact of the market environment, the strength of such an impact can change the stability of the banking system, and the consequences of such an impact on the banking system. Various factors are attributed to the market drivers of interaction between the environment and the banking system. These can be market technologies, regulation, marketing, and other factors, but most often – competition.

2. Literature Review

The scientific community has long been puzzled by the impact of competition on the development of the banking system. V.I. Vlezkova introduced the concept of "pro-competition" in her dissertation work, which means creating conditions for the competitive formation and development of the Russian banking system, assessed the degree of monopolization of the banking industry using the Herfindahl-Hirschman index, and also focused on the fact that the main criterion of the market efficiency of the organization is not profit, but added value [6]. Researcher M.M. Zinina notes that the environment is uncertain, changeable, and therefore it is necessary to predict a high degree of adaptation of business models of commercial banks to the conditions of the macroeconomic environment. The author suggests proactive and rehabilitative adaptations, as well as stress testing as the most effective method of such adaptations [7]. M.M. Galper highlights the features of the banks' transformation at the level of the global environment in his dissertation, when they are integrated into the system of the digital economy, using flexible management methods to adapt to rapidly changing conditions, automate and optimize costs using digital technologies, as well as find alternative sources of income. At the local level of the environment, banks switch to digital channels for bringing their products and services to customers, cross over to open banking, create an ecosystem and attract new sources of income, using the technological vector of development. The author notes that it is necessary to use a customer-oriented approach for a more effective transformation of banks in a global unstable environment [8]. Some authors in their research highlight trends and methods of developing a competitive environment in the banking services market [9] offer conditions for the development of independent customer service to improve the competitiveness of banks [10], highlight the formation of an integrated model of financial supervision of the Bank of Russia as a tool for improving the efficiency of functioning in a changing environment [11] or the formation of the most competitive environment in the banking services sector [12]. Some authors study competition in the Russian banking system and its impact on the stability of banks [13]. In the scientific article "Analysis of the competitive environment", O.S. Rudakova and O.M. Markova proposed to use a competitive map to identify the features of the competitive environment of commercial banks, which allows, based on the market share and the rate of its change, identifying banks belonging to the leaders or outsiders of the market, as well as determining the degree of improvement of the competitive position of the bank through the use of formalized author's tools that take into account the value of the integrated indicator, reflecting the correspondence between the assessed and the basic samples of banking services, the value of the total effect obtained from the distribution of banking

services, as well as the value of useful costs for the provision of specific banking service and the basic sample. Separately, the authors of the scientific article stipulate a mixed version, when the bank is interested in the overall assessment of the competitive position and the components of competition for individual bank services [14].

3. Methods

We proposed to specify market drivers and differentiate the market environment depending on the nature of their impact in order to more accurately and fully assess the impact of market drivers on the sustainable growth of the Russian banking system. As for the drivers of interaction between the market environment and the banking system, in our opinion, it is advisable to include such characteristics that allow the "market" properties of the environment to manifest themselves: these are competition (C), marketing, and management (MM), market regulation (MR), business planning and forecasting (BPF), market technologies (including digital) (MT) and profitability (PF), taking into account commercialization in market relations. The environment itself reacts differently to the impact of drivers, so we propose to divide it into an active market environment (AME), a passive market environment (PME), and a neutral market environment (NME). It is worth noting that that the impact of the environment through the drivers can be direct on the system, or indirect – mediated. The strength of the impact of market drivers on the banking system can also be different. In this regard, we propose to differentiate the impact itself into the surface (SF), segment (S), and developmental (D) (Table 2)

Table 2 – Differentiation of the impact of drivers on the banking system

Impact name	Impact characteristics
Surface (SF)	A minor surface impact of the environment does not lead to any changes in the banking system, which, although it reacted to the impact, practically nothing has changed in the system.
Segment (S)	The segmental impact of the environment on the system implies some quantitative changes in individual segments (elements) of the banking system, which responded to such an impact, but generally returned to its original state.
Developmental (D)	The developmental impact of the environment on the system implies qualitative changes in the banking system, an increment in the development of the system as a whole, and its transition to a new higher level of development

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An example of the surface impact (SF) of market drivers of the environment on the banking system can be an increase in the volume of issuance of mortgage-backed securities. An example of

the segmental impact (C) of the environment drivers on the banking system can be a reduction in the key rate of the regulator. In general, the banking system reacted to this decline in savings and lending (investment) and realized the possibility of switching to alternative market instruments of savings and investment, as evidenced by the rapid growth in the number of broker clients and the growth in the number of individual investment accounts opened. However, the banking system itself has not moved to a new level of development but has remained at the same level. An example of the developmental impact (D) of environmental drivers on the banking system can be the creation of conditions for the development of competition in the banking system, an increase in the number of participants in the competitive banking market, their universalization and expansion of the range of banking products and services, the transition from the price area to the area of high-quality personalized customer service, including digital, increasing speed, convenience, and security, reducing the price of banking services and products. The impact of market drivers of the environment can be caused by various reasons, for example, in connection with the development of progressive methods and technologies (primarily digital), such an impact will be progressive (PR); if the impact of the environment forces the banking system to preserve everything rational in the past, then such an impact will be called conservative (CS) and, finally, the impact of environmental drivers can be reactionary (RC), if such an impact leads to a regression of the banking system.

Since the impact of the market drivers of the environment on the banking system may be different, the drivers themselves will also change. The banking system adapts to survive any impact, which may be permanent or periodic. The ability of any system to adapt to an impact is an adaptare, which means to adapt. In our case, there are three possible options (Table 3).

Table 3 – Variability of adaptation of the banking system to the market environment through drivers

Adaptation name	Characteristics of the banking system adaptation
Full adaptation (A1)	the banking system has fully adapted, does not come into conflict with the market environment, which in this case does not interfere with the development of the banking system
Partial adaptation (A2)	the banking system has only partially adapted, i.e. the environment has become neutral for some elements of the system, while it has remained influential for the rest
Not an adaptation (A3)	the banking system has not adapted at all, it has come into conflict with the impact of environmental drivers due to their incompatibility

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Depending on the options for adapting the system to the impact of drivers, there may be different consequences for the banking system in terms of its stability. In this case, three types of consequences of adaptation of the banking system are possible according to the criterion of resistance to the effects of environmental drivers (Table 5).

Table 4 – Variability of the stability of the banking system depending on the type of adaptation

Name of the stability type	Characteristics of the banking system stability type
Sustainable development (SD)	the impact of drivers forces the system to change qualitatively and move to a new higher level of development
The equilibrium or partially stable state of the banking system (EQ)	the impact of the drivers led to a return to the original state by compensating for the impact or to individual changes in the system (individual elements of the system changed)
Non-stable state (NSS)	the impact of drivers led to a regression in the system, which contradicts its development

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Commenting on Table 4, it is advisable to explain why we attributed the equilibrium to a partially stable state. Because equilibrium in the banking system is possible only theoretically, and its partially unstable state arises with the slightest fluctuations in the system. The relationship between the type and strength of the impact of market drivers on the banking system, depending on the type of environment, is presented in Table 5.

Table 5 – Adaptation of the banking system to various environmental impact through market drivers

Type of environment	Impact type	Drivers	Impact strength	System adaptation
1. Active Market Environment (AME)	1.1 Progressive (PR)	C, MM, MR, BPF, MT, PF	Developmental (D)	In full (A1) Partially (A2)
	1.2 Reactionary (RC)	MR, BPF, MT	Segment (S)	Did not adapt (A4)
2. Passive Market Environment (PME)	2.1 Conservative (CS)	MR, BPF	Surface (S)	In full (A1) Partially (A2)
			Segment (S)	Did not adapt (A3)
3. Neutral Environment (NME)	The impact does not affect the development of the system	BPF	Surface (SF)	In full (A1)

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Let us comment on Table 5. Drivers of an active market environment practically do not affect the banking system conservatively, in this case, the impact will be powerful progressive or powerful reactionary.

Drivers such as competition, marketing and management, market regulation, business planning and forecasting, market technology, and profitability carry out the powerful progressive impact.

A powerful progressive impact can not be segmented and superficial by definition, it will be developing since almost all the drivers of the environment we have named are involved.

The powerful but reactionary impact of drivers on the banking system can be segmented, such an impact is carried out by drivers: market regulation, market technologies, and business planning and forecasting, but the banking system is usually not ready to adapt to the reactionary impact, which leads it to an unstable state with a significant shortage of funds. Incorrect regulation, incorrectly applied technologies, inefficient business planning, and forecasting can lead the banking system out of its previous evolutionary stage and throw it back in its development, causing damage and leading to significant losses.

The impact of the drivers of the passive environment is conservative, it can not be progressive or reactionary. Such an impact will be superficial or segmental, which is carried out by the drivers: market regulation and business planning and forecasting. Weak market regulation and business planning do not contribute to the development of the banking system, therefore these drivers do not carry out the properties of the market environment. The banking system may adapt fully or partially to the surface impact of the drivers of the passive market environment, moving to a partially stable state or equilibrium, and it may not adapt to the segment impact, moving to an unstable state with a shortage of funds.

The drivers of a neutral environment can affect the banking system, but the banking system either does not react to such an impact at all or reacts superficially by fully adapting and moving into a state of equilibrium or partial stability with equal income and expenses. The driver here maybe business planning and forecasting, but in fact, the system may not follow the planned and forecast indicators.

Studying the types of impact of drivers of different environments on the banking system, the most unfavorable option is the reactionary impact of drivers of an active market environment, when the system has not adapted, has completely lost its stable state with a significant shortage of funds. The segmental impact of the drivers of the passive market environment can also lead to an unstable state of the banking system, but in this case, the losses will be significantly less than with the reactionary impact of the drivers of the active market environment. Therefore, to a large extent, in

this case, the situation will depend on how the drivers will conduct market characteristics under the reactionary action of the active medium.

From the point of view of profitability, the consequences of the impact of drivers on the banking system, we can say that sustainable development is characterized by an excess of income over expenses, a partially stable state, and equilibrium is characterized by equality of income and expenses, and an unstable state of the system is characterized by an excess of expenses over income.

First of all, we attributed competition to the market drivers. In order to determine how competition, as a market driver, carries out a particular type of impact of different market environments, it is advisable to determine the type of competition, its properties, and indicators. Currently, there are generally several types of competition, depending on the type of market for goods and services: perfect, monopolistic, oligopoly, and absolute competition, each of which is characterized by a certain set of conditions regarding the number of sellers, buyers, barriers to entry, differentiation of goods or services and the impact on their market price.

The perfect type of competition is not suitable for the banking industry, since there are barriers to entry to the market for new credit institutions, for example, in the form of a standard amount of capital, full compliance with a certain package of requirements, and the presence of hidden risks. Oligopoly is also not typical for the banking industry due to the small number of sellers, which is not true, and even more so, an absolute monopoly, since it is characterized by only one seller. Monopolistic competition, strictly speaking, also does not accurately describe the situation in the banking industry from the point of view of competition, since theoretically, it has the property of entering the market without special obstacles and with a large number of sellers. There are barriers to entering the market, and in fact, the number of sellers of banking services in the banking industry in terms of 1 million people in Russia is 4.2; while in the United Arab Emirates – 5.5; in Armenia – 7.7; in the United States – 16.2; and in Switzerland – 30.0. According to the "degree of freedom", the existing competition can be classified as strictly regulated, since only a few banks have achieved certain freedom and own a significant share of the market, can influence prices for banking products and services, and enjoy government support, all other participants in the Russian banking system do not have such an opportunity at all, and their actions are strictly regulated.

In the analytical report of the Bank of Russia "Competition in the Financial Market" for 2018, the regulator proposed a methodology for calculating competition level indicators using the Lind market power index and the GAP market competition development index [15.] Moreover, the first Lind index allows estimating the number of leading financial institutions in the market, i.e. is a

quantitative parameter; the second GAP index determines the level of development of competition depending on the interval values, based solely on the results of calculating the Lind index. It turns out that the second indicator is also quantitative. To determine the level of competition in the constituent entities of the Russian Federation, the regulator proposes to determine the CBR – Composite based on Lind and GAP normative indices, which leads to the conclusion of the third quantitative indicator.

It is difficult to assess the specifics of the banking system calculating only quantitative parameters, therefore, we propose to introduce qualitative indicators into the competition assessment system: the transformation ratio of savings into investments (Kтп), the ratio of working assets (Kпа), price elasticity of demand for banking products and services (Есц) (table 6).

Table 6 – Competition parameters as a market driver

Parameter name	Calculation formula	Parameter characteristic
<i>Quantitative</i>		
1. Number of market leaders	$LIND = \frac{1}{n(n-1)} \sum_{i=1}^n \left(\frac{n-i}{i} \frac{CR}{CR_n - CR_i} \right),$ <p>where n is the number of market participants; i – number of major market participants; CRn – total market share of market participants; CRi – the total share of major market participants.</p>	(according to the Central Bank's methodology) the index allows estimating the number of leading banks in the market; n = 1 – monopoly; n = 2 – 4 – classic or "hard" oligopoly; n = 5 – 8 – "soft" oligopoly; n > 9 – monopolistic competition.
2. Assessment of the state of competition	$GAP = \frac{CR_l}{l} \cdot \frac{f}{CR_f},$ <p>where l is the number of market leaders (the leaders are determined based on the results of the Lind index calculation); CR – total share of market leaders f – the number of other market participants (followers); CRf – the total share of followers in the market.</p>	(according to the Central Bank's methodology) according to international approaches, with eight or more market participants, there is a potential for competition. With a small number of market participants (n<8), the accuracy of the GAP index decreases, and therefore this index is not calculated.
3. Inter-market comparison of the competition development level	$CBR - Composite = -30 \cdot Lind + 4 \cdot GAP$	(according to the Central Bank's methodology), the results of the index are compared with the threshold values for the final assessment of the competition in the segments: high: CBR-Composite ≤ 80; Moderate: 80 < CBR-Composite < 80; low: CBR-Composite ≥ 80
<i>Qualitative</i>		

4. Working asset ratio	$W_{ar} = \frac{B_{sp}}{\Sigma A},$ <p>where B_{sp} – balance sheet profit</p>	the coefficient shows the amount of income generated by operating assets (loans to the non-financial sector, interbank and other loans, securities)
5. Transformation coefficient	$T_c = \frac{As}{Inv},$ <p>where As – the amount of savings Inv – the amount of investment</p>	the coefficient determines the amount of the bank's savings that are invested in investments (loans)
6. Price elasticity of demand for banking products and services	$P_{ed} = \frac{DV_1 - DV_0}{DV_0} \cdot \frac{P_0}{P_1 - P_0},$ <p>where DV_1 is the demand value (new) DV_0 is the amount of demand (previous) P_1 – new price P_0 – previous price</p>	The millet price elasticity parameter is the ratio of the demand increment to the price increment: $P_{ed} \geq 1$, demand is elastic; $P_{ed} \leq 1$, demand is not elastic; $P_{ed} = 1$, unit elasticity

Compiled by the author according to the Central Bank's methodology [15]

Another market driver of the market environment is marketing and management. Marketing, in general, is designed to adapt production to the needs of the market and includes product development, market analysis, pricing strategy and policy, advertising.

We propose to describe marketing in the banking system by the following indicators: the volume of sales of banking products and services, the share of the banking market in the financial market as a whole, and the customer loyalty index. Management in the banking system is represented by several parameters that characterize the effectiveness of management in the system and the social sphere. We propose to refer to the most pronounced indicators of management in the banking system: the BSC parameter, which is a balanced scorecard; KPI – key indicators of the banking system; a dynamic indicator of management efficiency.

There is no doubt that these indicators alone do not describe bank marketing and management, but we suggest focusing on the most priority parameters (Table 7)

Table 7 – Parameters of marketing and management as market drivers

Parameter name	Calculation formula	Parameter characteristic
<i>Marketing</i>		
1. Sales volume of banking products and services	V_{sa} .	The value expression of the volume of banking products sold and services rendered by banks
2. Market share	$MS = \frac{V_{sa}}{V_{fr}}$ where V_{fr} is the value expression of the volume of banking products sold and services rendered by all financial market participants	The share of the banking market shows the position of the banking system relative to its competitors in the financial market as a whole
3. Customer Loyalty Index	$NPS = \frac{K_s}{K_r} - \frac{K_c}{K_r}$ where K_s is the number of supporters K_r – number of respondents K_c – number of critics	The willingness of customers to recommend banking products and banking services to their friends and acquaintances.
<i>Management</i>		
4. Balanced scorecard	BSC	A balanced scorecard allows monitoring the implementation of the strategy
5. Key performance indicators	KPI	These indicators are related to the goals of the banks and are set for its employees.
6. Dynamic indicator of management efficiency	$E_{MD} = \frac{P_p}{M_{exp}} - \frac{P_b}{M_c}$, where P_p is the profit of the banking system in the current period P_b – profit of the banking system in the base period M_{exp} – management expenses in the system in the current period M_c – management costs in the base period	Shows the amount of changed profit for the study period when administrative expenses change by 1 ruble. This indicator reflects the dynamics and growth rates of bank management efficiency

Compiled by the authors

Market drivers, in our opinion, also include market regulation, market technologies, primarily digital, business planning and forecasting, as well as profit. As for these drivers, their parameters can be as follows (Table 8).

Table 8 – Market regulation, market technologies, and business planning and forecasting as drivers of the market environment

Parameter name	Calculation formula	Parameter characteristic
Market regulation		
1. Number of incentive regulation measures	<i>NRM</i>	Number of measures to support lending to SMEs, housing construction, project finance, enterprise operations, and the development of a deposit insurance system
2. Number of measures to implement international regulatory standards	<i>NIRS</i>	The number of measures to regulate liquidity, interest rate risk, credit, and market risks when calculating the capital adequacy ratio, assessing the quality of internal procedures, and disclosing information of banks
3. Number of measures to strengthen supervisory discipline	<i>NSD</i>	Several measures to strengthen supervisory discipline: changing penalties for violating AML/CFT requirements, ensuring the application of IFRS, disclosure of information about BR supervision.
Market technologies (primarily digital)		
4. Number of implemented Internet and mobile banking programs	<i>Nim</i>	The coefficient shows the automation of remote banking services through Internet banking and mobile banking, as well as the automation of customer loyalty programs
5. Number of fully digital banks	<i>Ndb</i>	Shows the number of fully digital credit institutions in the banking system
6. Efficiency of digital technology implementation	$E = \frac{D}{N_{im}}$, where <i>D</i> is the revenue generated from the introduction of digital technologies	The coefficient shows the effectiveness of the introduction of digital technologies, primarily remote banking technologies: Internet banking and mobile banking: the amount of income received from the implementation of digital technologies
Business planning and forecasting		
7. Number of formed business plans and forecasts	<i>Nbpf</i>	The coefficient shows the number of strategic, current, and operational business plans and forecasts made
8. Number of implemented business plans and forecasts	<i>Nrbpf</i>	The coefficient determines the number of implemented strategic, current, and operational business plans and forecasts
9. Effective implementation of business plans and forecasts	$E_{pbf} = \frac{D}{N_{rbpf}}$	The coefficient shows the amount of revenue received from the implementation of all business plans and forecasts

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4. Results

1. The impact of market drivers leads to different stability of the banking system. In an active market environment and the progressive impact of drivers with a developing force of impact, the banking system can either fully adapt and move to sustainable growth with a surplus of funds: $D \geq R$, or partially adapt and move to an equilibrium state: $D = R$. In a passive market environment and the conservative impact of drivers with a superficial force of impact, the banking system can fully or partially adapt and be in an equilibrium state: $D = R$. In this environment, with the conservative impact of drivers, but the segmental force of impact, the banking system does not adapt at all with a shortage of funds: $D \leq R$. In a neutral market environment, the impact has almost no effect on the banking system and the impact force is superficial, the banking system fully adapts to it, being in an equilibrium state: $D = R$.

2. To assess the impact of the competition driver on the stability of the banking system, we propose to introduce, in addition to the quantitative parameters of the regulator, qualitative indicators, to which we attributed the ratio of working assets, the transformation ratio, elasticity of demand for the price of banking products and services.

3. The parameters of the volume of sales of banking products and services, the market share of the banking system in the Russian financial market, and the customer loyalty index are proposed to assess the impact of the marketing driver. Management can be evaluated by a balanced scorecard, key performance indicators, and a dynamic management indicator. Market regulation is characterized exclusively by quantitative parameters of measures in the field of incentive regulation, the implementation of international regulatory standards, and the management of supervisory discipline. The assessment of the impact of market technologies can be carried out using both quantitative indicators: implemented Internet and mobile banking programs or fully digital banks, and qualitative parameters, for example, the effectiveness of the implementation of digital technologies. Business planning and forecasting can be evaluated using the number of business plans and forecasts formed and implemented, as well as the effectiveness of their implementation.

5. Discussion

The results obtained by the authors do not contradict the main provisions of the theory of stability of the banking system used by domestic and foreign scholars and practitioners. However, there are conditions to which special attention should be paid.

- in the process of determining the type of impact, we talked about direct or indirect impact. However, it is worth noting here that the very impact of the environment on the system can be direct, but as for management methods, in this case, preference is given to indirect methods based on economic incentives, since market relations do not accept dictatorship, monopolism and excessive regulation;

- the market environment in its development goes through several stages: formation, growth, maturity, stagnation, and decay. Concerning the theory of the impact of the market environment through drivers on the banking system at the stages of formation, stagnation, and decay, the environment has little or no impact on the banking system. In this case, we consider only such stages of development of the market environment as growth and maturity.

6. Conclusion

It should be taken into account that the actual values of competition as a market driver at different stages of the environment development will be different, for example, at the stage of growth and maturity, the value of the elasticity of demand for the price of banking products and services will be different: at the stage of growth, demand may be elastic or not elastic, at the stage of maturity, demand for the price is likely to be elastic.

The interaction of the banking system with the market environment requires clarification in terms of the limits of changes in the values of drivers. The banking system is sufficiently open, but when interacting with the market environment, the boundaries can either be violated or maintained at the same level, since everything depends on the type and strength of the impact of the environment on the system.

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Note

When calculating the indicator "number of market leaders" (Table 6) in the driver of competition, it is advisable to determine the average value of market leaders and take into account the

Intermarket comparison of the level of competition development in the federal districts of the country.

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