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## ANALYSIS AND FORECAST OF THE MAIN FINANCIAL INDICATORS OF THE BANK'S ACTIVITY

**Abstract.** Virtually every bank has established a cost accounting system and has carefully studied the relevant principles. In Kazakhstan, however, some banks have paid very little attention to this issue, although in almost all other areas of cost accounting in the commercial sector they are taken into account and in fact become necessary in modern business conditions.

The need for a cost system in a bank is indeed greater than in any other business, due to the narrow margin of profit from the gross amount processed in the banking sector, as well as the number and variety of services provided by banks to its customers and the public without remuneration. In the cost accounting system, it is very important to assess the financial indicators of the bank, as well as their forecasting, since the analysis of the financial activities of the bank is the basis for making important decisions in the bank.

The article analyzes and predicts key performance indicators using the example of Kaspi bank.

**Keywords:** analysis of financial indicators, return on assets, return on equity, forecasting financial indicators.

**Introduction.** Financial indicators are information that allows you to make relevant important business decisions in the bank. Analysis of financial indicators in banks is crucial for the efficiency of bank operations [1]. The data required for adequate financial analysis are contained in the main financial statements. In recent years, the need to calculate performance indicators using information from balance sheets, income statements and cash flow statements has increased [2]. Analysis and forecasting are important for bank management accounting [3].

The analysis of financial indicators of banks was carried out by many from various aspects. Thus, P. Srinivasan and Y. P. Saminathan determined that operational efficiency, asset management and size of banks have a positive impact on their financial performance [4]. A. Makkar and S. Singh evaluated the relationship between ROA and bank size, as well as the operational efficiency of the bank [5]. It was once again proved that asset management, bank size and operational efficiency have a positive relationship with the activities of the bank [6].

The analysis of financial indicators of the bank is important for taking into account the costs of the bank as a whole [7]. In this case, the primary role is given to the financial results of the bank, as well as the structure of liabilities and sources of funding [8].

Important in the bank account has a forecast. The application of economic analysis methods allows not only to assess the current state of the bank, but also to plan certain financial aspects of the bank's activities [9].

In this regard, the article will focus on the analysis of financial performance indicators and their forecasting on the example of Kaspi bank JSC.

**Method of research.** Methods of economic modeling, comparative analysis, horizontal analysis, the method of relative indicators, the method of tabular and graphical display of data for visualization of the analytical process and financial analysis are used for the analysis.

To estimate the forecasts used an exponential equation of the type:

$$y_t = a_0 e^{a_1 t}$$

$a_0$  – the initial level of the time series in the period  $t=0$ ;  $e^{at}$  – average growth rate of series levels for the period  $t$  [10].

The exponential trend reflects the general direction of the forecast for the relevant financial indicators of the bank.

**Results.** Key financial indicators of Kaspi bank JSC for the last 3 years are presented below.

Table 1 – Key financial indicators of Kaspi bank JSC

Indicators	On 01.01.2016		On 01.01.2017		On 01.01.2018	
	Billion tenge	Billion tenge %	Billion tenge	Billion tenge %	Billion tenge	Billion tenge %
Money resources	284	115,4	157	-44,7	305	93,7
Gross loans	848	-3,1	799	-5,8	981	22,9
Net loans	783	0,4	715	-8,7	891	24,7
Assets	1286	24,4	1219	-5,2	1472	20,8
Liabilities	1152	27,9	1083	-6	1303	20,3
Deposits	818	14,6	815	-0,4	1001	22,9
Equity	134	0,8	137	1,6	169	24
Interest income	129	3,4	129	-0,1	157,9	22,4
Interest expense	-67,8	10	-86,2	27,1	-98,2	14
Net interest income	61,3	-3	42,8	-30,1	59,7	39,5
Net commission income	91,7	18,4	94,3	3,2	114,2	21,1
Operating expenses	-46,6	19,8	-48	3,8	-57,6	20,1
Net profit	15,4	-62,3	5,4	-64,9	69,2	176,5

Note: compiled by the author on the basis of the financial statements of Kaspi bank JSC [11]

Assets of Kaspi bank JSC similarly as liabilities have a stable growth trend. The highest growth of assets was observed at the beginning of 2014 49.6%. Despite the negative growth in 2017 (-5.2%), assets increased by 20.8% during the year and amounted to 1472 billion tenge at the beginning of 2018.

Accordingly, we insert the exponential trend equations for assets, Equity and liabilities of the Bank (figure 1).

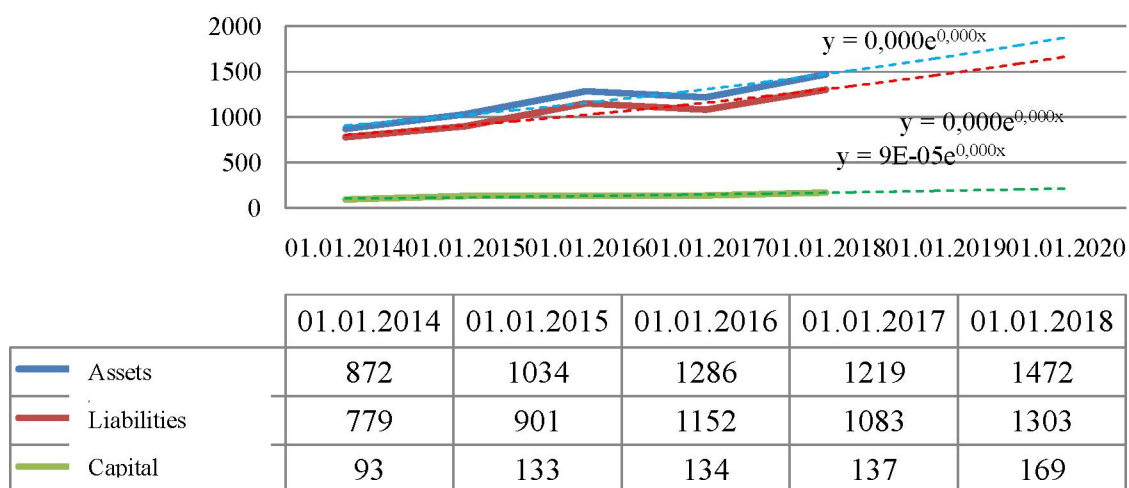


Figure 1 - Dynamics and forecast of assets, liabilities and Equity of Kaspi bank JSC

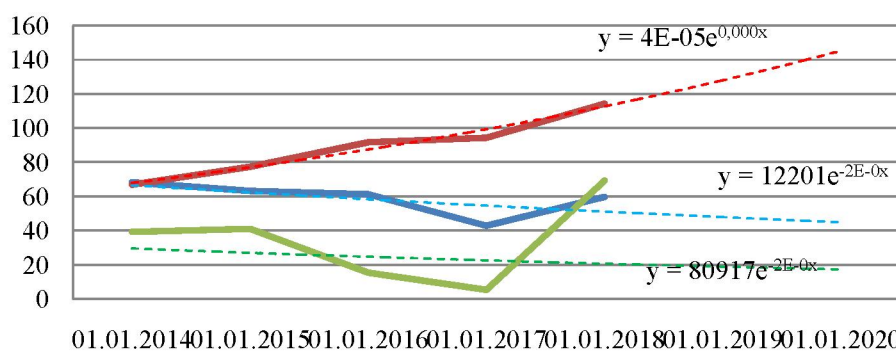
Note: compiled by the author on the basis of the financial statements of Kaspi bank JSC

The growth of assets was mainly due to the growth of the loan portfolio, which increased by 25% and whose share in the total assets of the bank amounted to 61%. The share of securities in the structure of assets is relatively small: on 01.01.2017, the volume of securities increased by 77%, however, on the beginning of 2018, it decreased by 27.2% due to a reduction in investments intended for sale.

Kaspi bank JSC liabilities for the last three years of 2016-2018 increased by 42.2%. This increase was due to the growth of REPO liabilities and deposits of banks, as well as the growth of the deposit base of customers, mainly legal entities.

The exponential trend lines show the projected growth of the bank's assets, liabilities and Equity.

The growth of the Bank's Equity was provoked by an increase in retained earnings by 5% on 01.01.2017 and by 27% on the beginning of 2018. It can also be noted that a significant increase in net profit arose due to a reduction in provisions by 64%. At the same time, the Bank's operating profit increased by 30%, which was affected by the growth of net interest income by 39% in early 2018.



	01.01.2014	01.01.2015	01.01.2016	01.01.2017	01.01.2018
Net interest income	68,3	63,2	61,3	42,8	59,7
Net commission income	66,9	77,4	91,7	94,3	114,2
Profit	39,3	41	15,4	5,4	69,2

Figure 2 - Dynamics and forecast of net income and profit of Kaspi bank JSC

Note: compiled by the author on the basis of the financial statements of Kaspi bank JSC

Despite the fact that the net interest income before 2016 had a steady downward trend (especially at the beginning of 2017), when it fell by 30.1% as a result of the growth of interest on deposits by 27.1%, resulting in the bank's net profit fell by 64.5%, Kaspi bank JSC was able to recover quickly. In the first four months of 2018, the profit of Kaspi bank JSC amounted to 32.3 billion tenge, which is 2.8 times higher than the previous year. As a result, the bank ranked third in terms of net profit in Kazakhstan's banking sector as of early May 2018.

According to the exponential trend, net interest income and net profit are expected to decline in the coming periods. At the same time, net fee and commission income are projected to increase.

We will analyze the main financial ratios for Kaspi bank JSC (table 2).

The indicators of return on assets and Equity shows a positive trend, except for the beginning of 2017, when, as already mentioned above, as a result of the increase in interest on deposits, the bank's net profit fell sharply.

As a result, ROA fell from 1.33% to 0.43% and ROE from 11.54% to 4%. However, Kaspi bank JSC quickly restored its capabilities by the beginning of 2018: ROA rose 11.95 times to 5.14%, and ROE – 11.32% to 45.27%. At the same time, a sharp increase in the indicator indicates an increase in risks in the placement of assets. ROA in the banking system of Kazakhstan at the beginning of 2016 amounted to 1.15%, ROE – 9.36%. At the beginning of 2017, ROA and ROE were 1.64% and 15.18% respectively. At the beginning of 2018, ROA and ROE were 0.37% and 3.01% respectively. Based on these data, it can be noted that the ROA as of 01.01.2017 was below the average level in the banking sector of Kazakhstan, however, at the beginning of 2018 significantly exceeded it. The situation is similar with the return on Equity. This is conditioned to the fact that in 2017 the bank pursued a fairly conservative investment



policy, but in 2018 it directed investments in high-yield assets. The net interest margin and spread indicators also show effective interest rate management (figure 3).

Table 2 - Key financial ratios of Kaspi bank JSC

Indicators	On 01.01.2016	On 01.01.2017	On 01.01.2018
ROA, %	1,22	0,47	5,14
ROE, %	10,53	4,36	45,27
Net interest margin	14,35	13,18	14,9
Net interest spread	7,53	5,29	6,47
Loans/assets, %	60,87	58,65	60,55
Reserves/ loans,%	7,66	10,46	9,19
Reserves/Equity%	48,35	61,17	53,27
Share of overdue loans,%	21,19	15,16	14,6
Share of non-performing loans,%	8,94	9,30	8,30
Deposits/liabilities,%	71,02	75,25	76,85
Deposits/ loans,%	104	114	112
Current ratio 0.3	6,57	4,01	4,72
Absolute liquidity 1	9,35	10,68	7,46
Quick ratio 0.9	7,27	8,48	5,63
Equity/assets,%	10,45	11,20	11,50
K1 0,06	0,10	0,11	0,11
K2 0.085	0,19	0,14	0,17

Note: compiled by the author on the basis of the financial statements of Kaspi bank JSC

The last two years, 2017-2018 the profitability indicators of Kaspi bank JSC have an upward trend. However, exponential trends predict a decline in the next two years. In general, the bank has a fairly high interest margin for the entire analyzed period, which shows a high level of net interest income. In addition, at the beginning of 2018, the bank's net interest margin increased by 1.78%, spread – by 1.16%, real cash flows – by 30%, which reflects the bank's ability to generate real cash income.

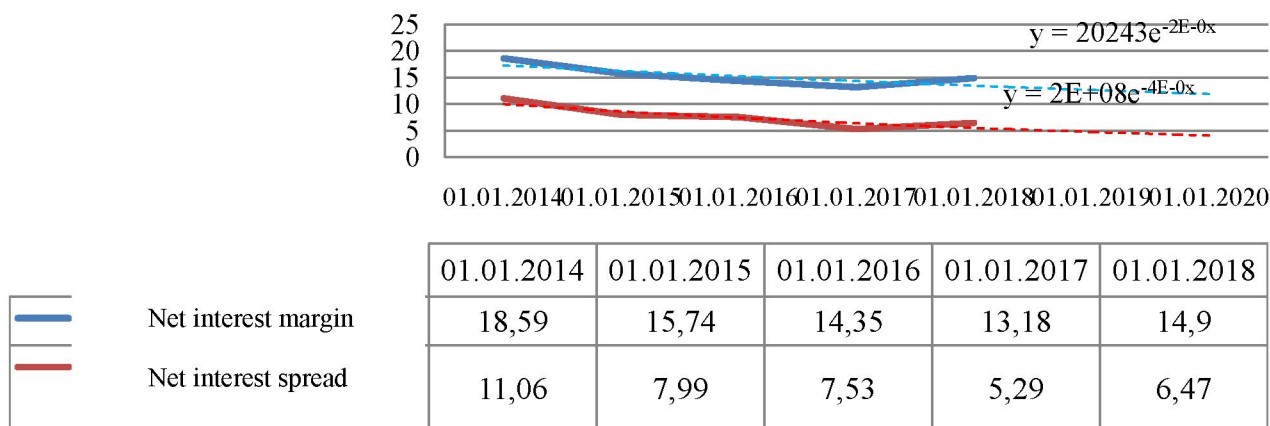


Figure 3 - the Dynamics of indicators of profitability of Kaspi bank JSC

Note: compiled by the author on the basis of the financial statements of Kaspi bank JSC

The main asset of Kaspi bank JSC is loans, which account for more than half of all the funds placed, although their share is reduced, while the bank activates activities in the stock market, using the borrowed funds for the purchase of securities. The deposits/ loans indicator clearly demonstrates that for 1 tenge of loans issued, 0.91 tenge of deposit resources were used in 2014, and at the beginning of 2017 – 1.14 tenge, on 01.01.2018 – 1.12 tenge of deposits attracted by the bank, which indicates an increase in the importance of customer deposits in the bank's activities. On the other hand, 0.14 in 2017 and 0.12 in 2018 reflect the degree of increase in the cost of deposit resources, and short-term, as the term deposits/ loans



ratio shows very low involvement of term deposits in lending to customers. At the same time, the importance and involvement of the bank's bonds as a source of funding is increasing (figure 4)

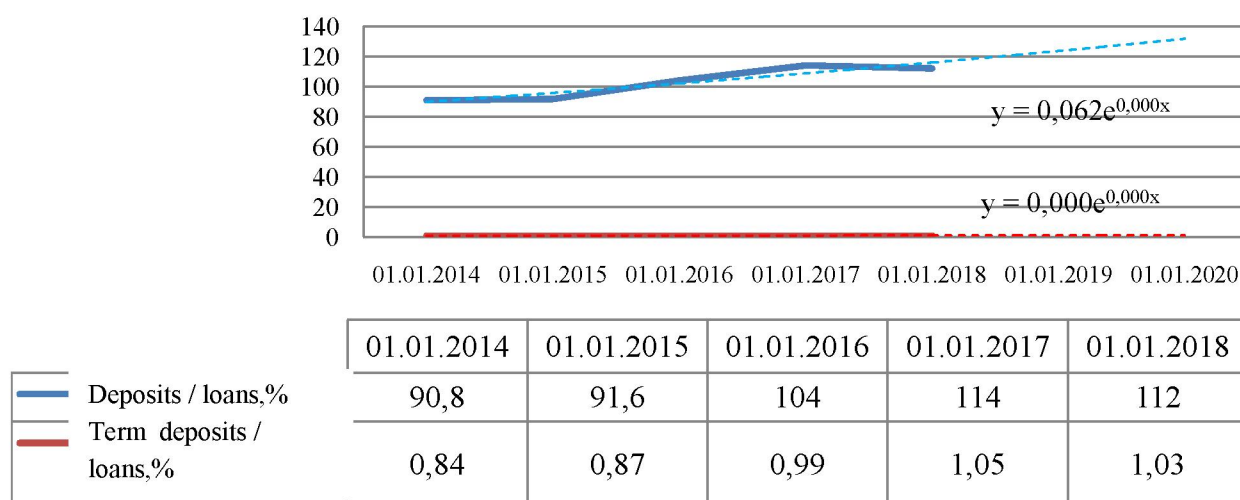


Figure 4 - the Dynamics of involvement of borrowed funds in lending to the clients of Kaspi bank JSC

Note: compiled by the author on the basis of the financial statements of Kaspi bank JSC

The involvement of attracted funds allows us to talk about the sustainability of funding. Deposits, especially term deposits, are the most sustainable source of attracted resources.

The closer the involvement is to 1, the more stable the bank's funding is when loans are financed by deposits rather than interbank lending. The second real source of funding is the bonds issued by the Bank, as they are also a term, medium and long-term, source of funding.

In this regard, it can be noted that the bank has to rely mainly on demand deposits, which can not act as funding for medium-and long-term loans.

Term deposits holds a very low share in the funding structure (by the beginning of 2017 and 2018, slightly more than 1%), much less bonds. Therefore, figure 4 shows rather high stability of funding in Kaspi bank JSC in nominal terms.

Liquidity indicators generally show steady growth. Taking into account the fact that Kaspi bank JSC is consistently ranked 3rd in terms of liquidity after Halyk bank of Kazakhstan and Forte bank, we can talk about the great opportunities of the bank to meet its Liabilities to the bank's customers in a timely manner and without losses.

The importance of accounting has a system of funding on the one hand as a method of cost management, and on the other hand as a tool for quantitative economic impact assessment of the activities of the treasury department of the bank to increase profitability of the operations by managing the imbalance of the structure of funding of assets.

Funding is a set of attracted resources of the bank directed to the implementation of activities (active operations).

When assessing the funding system of the banks we analyze, we will take into account its structure, urgency and cost. Diversification of resources is important in the structure.

Since the bank's dependence on one source is an increased risk factor: the subordination of deposits, especially of individuals, can carry the risks of liquidity loss, funding mainly in the interbank market leads to the bank's vulnerability during periods of economic instability.

The difference between the involved resources and the placed resources indicates either the unused capacity (positive) or the need for funding (negative).

So, in order to assess the funding system in Kaspi bank JSC, we will analyze the structure of funding sources and form consolidated forms of reporting on funding for the last three years of 2016-2018.

In the structure of funding, deposits are the main source, despite the fact that at the beginning of 2016 and 2017 there was a decrease in the share of customer deposits in the total funding sources of Kaspi bank JSC (figure 5).

Figure 5 shows how the role of deposits as sources of funding for activities is increasing. In particular, if at the beginning of 2016 the share of deposits accounted for 65.6%, at the beginning of 2017 already 67.6%, on 01.01.2018 – 68.9%. The funding structure shows a strong dependence of the bank on deposits of customers, and individuals.

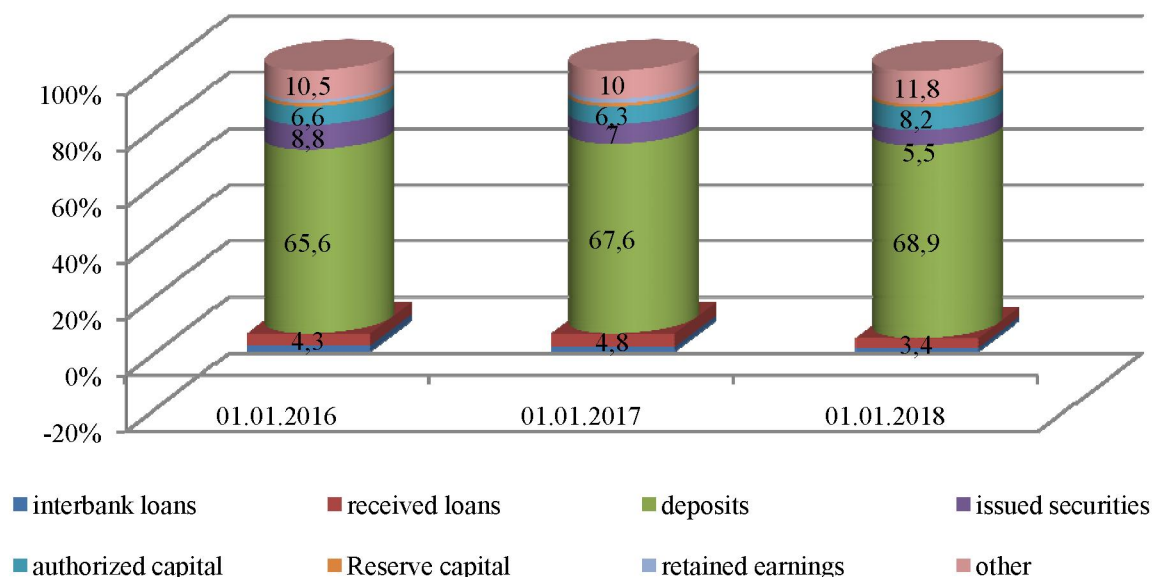


Figure 5 - Sources of funding of Kaspi bank JSC, %

Note: compiled by the author on the basis of the financial statements of Kaspi bank JSC

To do this, we analyze the interest and funding ratio of Kaspi bank JSC (table 3).

This situation increases the risk of liquidity loss, especially if demand deposits or short-term deposits prevail.

At the beginning of 2016, the funding structure is dominated by short-term attracted sources up to a year and, as already mentioned, customer deposits. Short-term liabilities account for 58.43% of the total amount of attracted resources. At the same time, financial assets of similar urgency are much more, which leads to an excess of short-term assets.

The big drawback is that the average and long-term liabilities significantly exceed the average and long-term assets. That is, the Bank does not fully place all the attracted funds, which leads to the emergence of unused opportunities. Moreover, the rates of attraction and placement of funds on securities are negative. Thus, the Bank raises resources under of 9.62% and 9.96%, and places under of 5.79% and 5.95%, generating negative returns.

However, this difference is covered by consumer loans issued at 16.54%. In general, on 01.01.2016, financial assets exceed financial liabilities by 117.73 billion tenge, which allows the Bank to retain liquidity as a protection against possible short-term shocks that may affect the outflow of deposits.

At the beginning of 2017, the funding system showed qualitative changes, in particular, with regard to the rates of attraction and placement of funds. So, attracting funds from banks and customers at 8.55% and 7.04%, Kaspi bank JSC issues loans at 16.29%, issuing bonds at 9.65%, the bank has securities at 10.42%. As a result, the difference between assets and liabilities for which interest is accrued was positive and amounted to 17.4 billion tenge. The structure of the term of attracted funds is also significantly equalized, although the bank continues to place the main volume in short-term assets in order to maintain liquidity. Let's compare the situation with the beginning of 2018 (table 4).

Table 3 – Structure and interest of funding  
of Kaspi bank JSC at the beginning of 2016 and 2017, billion tenge

Financial asset	On 01.01.2016 r.					On 01.01.2017 r.				
	Effecti ve rate%	Circulation term			Total	Effecti ve rate%	Circulation term			Total
		Before 1 year	1-5 years	Over 5 years			Before 1 year	1-5 years	Over 5 лет	
Money resources and money equivalents	0,05	67,66	-	-	67,66	0,77	88,47	-	-	-
Loans to customers	16,54	563,4	193,19	26,39	782,99	16,29	512	160,48	42,58	715,05
Investments, available-for-sale	5,79	34,41	0,15	-	34,55	0,15	0,0002	0,733	-	0,733
Investments held to maturity	5,95	3,45	18,03	16,81	38,28	10,42	216,45	-	-	216,45
Total financial assets for which interest is accrued	-	668,91	211,37	43,2	923,47	-	816,91	161,21	42,58	1020,7
Financial assets for which interest is not accrued	-	318,53	2,35	1,75	322,64	-	154,73	2,77	0,98	158,48
Total	-	987,44	213,72	44,95	1246,11	-	971,64	163,98	43,56	1179,18
Financial liability										
Bank accounts	10,15	6,78	40,8	-	47,58	8,55	0,28	39,99	-	40,27
Customer accounts	6,31	549,93	203,05	28,14	781,4	7,04	434,84	294,73	28,18	757,75
Issue bonds	9,62	63,19	11,56	95,44	170,2	9,65	4,32	11,57	95,45	111,33
Subordinated bonds	9,96	0,42	14,84	72,21	89,46	11,3	4,8	24,45	64,72	93,98
Total financial liabilities for which interest is accrued	-	620,31	270,52	198,07	1088,64	-	444,2	370,75	188,35	1003,33
Financial liabilities on which no interest is charged	-	38,95	0,53	-	39,74	-	62,34	0,76	-	63,11
Difference between financial assets and liabilities	-	328,18	-57,33	-153,12	117,73	-	465,1	-207,53	-144,79	112,78
Note: compiled by the author on the basis of the financial statements of Kaspi bank JSC										

Note: compiled by the author on the basis of the financial statements of Kaspi bank JSC

Table 4 – Structure and interest of funding  
of Kaspi bank JSC at the beginning of 2018, billion tenge

Financial assets	Effective rate%	Circulation term			Total
		Before 1 year	1-5 years	Over 5 years	
Money resources and money equivalents	1,21	107,33	-	-	107,33
Loans to customers	17,66	673,88	183,97	33,47	891,32
Bank accounts	1,26	1,42	-	-	1,42
Investments, available for sale	13,81	136,34	58,67	17,46	212,48
Total financial assets for which interest is accrued	-	918,96	242,64	50,94	1212,54
Financial assets for which interest is not accrued	-	222,33	0,67	1,14	224,14
Total	-	1141,29	243,31	52,08	1436,68
Financial liability					
Bank accounts	8,33	63,2	-	-	63,2
Customer accounts	8,15	834,04	71,81	24,01	929,86
Issue bonds	9,65	11,88	-	99,45	111,33
Subordinated bonds	10,22	3,92	11,93	77,8	93,65
Total financial liabilities for which interest is accrued	-	913,06	83,73	201,26	1198,05
Financial liabilities on which no interest is charged	-	91,48	-	-	91,48
Total	-	1004,54	83,73	201,26	1289,53
Difference between financial assets and liabilities	-	136,75	159,58	-149,18	147,15

Note: compiled by the author on the basis of the financial statements of Kaspi bank JSC

Table 4 shows that every year Kaspi bank JSC improves the funding system. In particular, when rates of resources attraction is under 8.33% and 8.15%, the lending rates (loans to customers) amount to



17,66%. When issuing bonds at 9.65% and 10.22%, securities in the portfolio bring 13.81%. The strengthening of positions in funding equalized the situation for medium-term assets and liabilities. As a result, the difference between financial assets and liabilities amounted to 147.15 billion tenge.

**Discussion.** Thus, the results of the accounting show that the indicators of profitability, liquidity and Equity adequacy of the bank, as well as the forecast trends of assets, liabilities, equity, and profits have an upward trend, which characterizes Kaspi bank JSC as a dynamically developing. The only problem of the bank may be the deterioration of the macroeconomic situation in Kazakhstan, which may lead to a reduction in income of population, which is the main customer base of the bank.

Exponential trends clearly show the general trend of the bank's financial indicators. The downward exponential forecast should attract the bank's attention and strengthen the work in the relevant areas. At the same time, upward exponential trends do not mean that the bank has not focus on these indicators. There should take into account the angle of the trend and monitor for confidence. As a result of the analysis of financial indicators, the bank can make more correct and timely decisions.

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### **БАНК ҚЫЗМЕТІНІҢ НЕГІЗГІ ҚАРЖЫЛЫҚ КӨРСЕТКІШТЕРІН ТАЛДАУ ЖӘНЕ БОЛЖАУ**

**Аннотация.** Әрбір банкте шығындар есебінің жүйесі бар және тиісті қағидалары ескеріледі. Аалайда, Қазақстанда, кейбір банктер бұл мәселеге өте аз көңіл бөлінеді, бірақ коммерциялық салалардың барлық басқа бағыттарында олар есепке алынады және іс жүзінде бизнесті жүргізудің заманауи жағдайында қажетті болып табылады.

Банк секторында өңделетін жалпы сома мен пайданың арасындағы айырмашылықтың аздығынан, сондай-ақ банктердің өз клиенттеріне және халыққа тегін көрсететін қызметтерінің саны мен әртүрлілігінің салдарынан кез келген өзге бизнеске қарағанда, банктегі шығындар жүйесінің қажеттілігі шын мәнінде артық. Банктің қаржылық қызметін талдау банктегі маңызды шешімдерді қабылдаудың негізі болып табылатындықтан, шығындар есебінің жүйесінде банктің қаржылық көрсеткіштерін бағалау, сондай-ақ оларды болжау зор маңызға ие.

Мақалада «Kaspi bank» АҚ қызметінің негізгі көрсеткіштеріне талдау жүргізіліп, болжам жасалған.

**Түйін сөздер:** қаржылық көрсеткіштерді талдау, активтердің рентабелділігі (табыстылығы), меншікті капиталдың рентабелділігі (табыстылығы), қаржылық көрсеткіштерді болжау.

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### **АНАЛИЗ И ПРОГНОЗИРОВАНИЕ ОСНОВНЫХ ФИНАНСОВЫХ ПОКАЗАТЕЛЕЙ ДЕЯТЕЛЬНОСТИ БАНКА**

**Аннотация.** Практически в каждом банке установлена система учета затрат и тщательно изучены соответствующие принципы. В Казахстане, однако, некоторыми банками уделяется очень мало внимания этому вопросу, хотя практически во всех других направлениях учета затрат в коммерческой отрасли учитывается и фактически становится необходимой в современных условиях ведения бизнеса.

Необходимость системы затрат в банке действительно больше, чем в любом другом бизнесе, из-за узкой границы прибыли от валовой суммы, обрабатываемой в банковской сфере, а также количества и разнообразия услуг, оказываемых банками своим клиентам и населению без вознаграждения. В системе

учета затрат большое значение имеет оценка финансовых показателей банка, а также их прогнозирование, поскольку анализ финансовой деятельности банка является основой принятия важных решений в банке.

В статье проведен анализ и прогнозирование основных показателей деятельности на примере АО «Kaspi bank».

**Ключевые слова:** анализ финансовых показателей, рентабельность активов, рентабельность капитала, прогнозирование финансовых показателей.

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