

Assessment of Credit Risk in the Second-Tier Banks of the Republic of Kazakhstan

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Abstract: Credit risk is the possibility of potential losses due to the inability of borrowers to timely fulfill their obligations to the bank to pay the principal amount of the debt and accrued interest. Credit risk assessment is an integral step in the risk management of a banking institution, since the main source of income for banks is the provision of loans. That is why the determination of the maximum possible losses in case of default by the borrower, as well as the timely assessment of collateral for loans, allow banks to minimize possible credit losses.

Keywords: commercial bank, credit risk, loan portfolio, credit management

1. Introduction

Banks manage credit risk on an ongoing basis in order to reduce the likelihood of financial losses due to default by borrowers on their obligations to the lender. Measures taken by second-tier banks to minimize loan risk have similar features, as they are standardized in accordance with IFRS. The article discusses the main aspects of managing the risk of the loan portfolio in the 5 largest second-tier banks of the Republic of Kazakhstan, which currently have the highest ratings from international rating agencies. Also, the main similarities in their lending risk management policies were identified, features were identified and recommendations were made in order to improve measures for assessing and managing loan risk.

The credit rating of second-tier banks of the Republic of Kazakhstan is assigned by three independent international rating agencies. To date, the top 5 STBs of the Republic of Kazakhstan in terms of credit risk are presented in the following Table 1:

Table 1: Assessment of STBs of the Republic of Kazakhstan by international rating agencies

Bank	Moody's		S&P		Fitch	
	Rating	Forecast	Rating	Forecast	Rating	Forecast
JSC Halyk Bank of Kazakhstan	Baa2 (Baa3)	Stable	BB+ (BB)	Stable	BBB- (BB+)	Stable
SB JSC "Sberbank"	Ba1 (Ba3)	Positive			BBB- (BBB-)	Stable
JSC "Kaspi Bank"	Ba1 (Ba2)	Stable	BB- (BB-)	Positive		
Forte Bank JSC	Ba2 (Ba3)	Stable	B+ (B+)	Positive	B+ (B)	Positive
Bank Center Credit JSC	B1 (B2)	Stable	B (B)	Stable		

2. Bank Center Credit Risk Management Overview

2.1. Bank center credit risk management model

Bank Centre Credit performs effective credit risk management through the Financial and Risk Management Committee under the Board of Directors, as well as through the Credit Committee. The credit risk assessment for transactions that carry credit risk is carried out taking into account the type and business segment of the potential borrower. That is, based on the classification by credit rating and expert assessment, as well as credit history and general characteristics of the business, a risk assessment is made for lending to the business segment. Risk assessment for retail lending is carried out through the active use of a scoring model built by analyzing information from external sources.

2.2. Credit risk connotation of bank center

The Bank identifies credit risk as a relevant risk, which in turn includes default risk, counterparty risk, issuer risk, collateral value risk, concentration risk. In turn, the bank manages credit risk on the basis of approved procedures that reflect the requirements for setting and complying with credit risk concentration limits, its assessment and monitoring.

Credit risk ratios are established in order to determine by the bank the maximum allowable value of the ratio of the borrower's total liabilities to equity capital. Thus, the NBRK for 2020 and 2021 set the value of the k-3 ratio at 25%.

With regard to the risk appetite of Bank Center Credit, it is worth noting that the value of financial assets presented in the Bank's statement of financial position reflects the maximum exposure to credit risk. ^[2]The monetary value of this indicator makes it possible to determine the value of assets that are most sensitive to the potential risk of lending. The maximum exposure to credit risk is presented in the following Table 2:

Table 2: Maximum exposure to credit risk of Bank Center Credit JSC

Assets	Maximum exposure to credit risk		
	31.12.2018	31.12.2019	31.12.2020
Cash and cash equivalents	123 496	93 420	222 354
Financial instruments valued at MA	41 594	16 635	22 356
Investment FA valued at MA through OCI - debt FI	170 719	160 176	295 797
Investment FA valued at AS	6 911	4 355	16 456
Funds in banks	31 292	9 102	63 426
Loans to customers and banks	968 684	982 390	1 009 473
Other financial assets	10 771	10 157	13 840
Total	1 353 467	1 276 235	1 644 002

The maximum level of exposure to credit risk demonstrates those financial assets of the bank that are most sensitive to credit risk. It can be noted that the largest share in the structure of risky assets of Bank Center Credit JSC is occupied by loans to customers and account for 61.4% as of December 31, 2020. The smallest share is made up of other financial assets – 0.84%. The overall increase in the most risky assets in the period from 2018 to 2020 was 21.5%.

The reduction of credit risk, as well as liquidity risk, is carried out through transactions with derivative financial instruments, which by their nature can be equated to the offset of financial assets and liabilities. Such transactions are subject to the standard terms and conditions of the International Swaps and Derivatives Association's ISDA Borrowing Security Supplement. Securities received as a result of transactions with derivative financial instruments, as well as "REPO" and "reverse REPO" may be pledged or sold during the term of the transaction, but must be returned before the end of the term of the transaction. The mechanism of transactions with derivatives contributes to minimization of credit risk through the settlement of receivables and payables.

3. Credit risk management model at Halyk Bank of Kazakhstan

Implementation of effective credit risk management at Halyk Bank of Kazakhstan is due to the introduction of a risk management system and other business processes that have contributed to the separation of the main production functions of the bank and risk management. The Bank has also formed an organizational structure for credit risk management, the main function of which is to separate powers between the Bank's divisions directly involved in the assessment and management of credit risk, as well as liquidity risk.

The level of credit risk of Halyk Bank of Kazakhstan is established on the basis of calculating the maximum amount of risk in relation to one borrower or their group, as well as industry segments. Risk appetite levels by sectors of the economy are set by the Assets and Liabilities Management Committee in accordance with the types and terms of lending. Changes in the actual risk value in comparison with the approved limits are monitored on an ongoing basis. Credit risk for an individual borrower is limited by balance and off-balance sheet exposure limits.

Risk appetite in Halyk Bank of Kazakhstan is defined as the carrying amount of financial assets and

contingent liabilities. The maximum exposure to guarantees and commitments is the maximum amount that the Bank has to pay in the event of a demand for loans on open credit lines, as well as in the event of payment of guarantees.^[1] The maximum exposure to credit risk is presented in the following Table 3:

Table 3: Maximum exposure to credit risk of Halyk Bank of Kazakhstan JSC

ASSETS	Maximum exposure to credit risk		
	31.12.2018	31.12.2019	31.12.2020
Cash equivalents	1 558 872	1 483 784	1 542 784
Required reserves	115 741	141 006	170 128
Financial assets measured at fair value through P&L	168 298	155 531	224 532
Funds in credit institutions	55 035	53 161	709 310
Financial assets measured at fair value through OCI	1 763 478	1 628 406	1 250 182
Debt securities valued at AC net of ECL reserves	1 055 907	1 212 981	1 229 539
Loans to clients	3 481 079	3 752 445	4 446 275
Other financial assets	75 718	102 424	95 648
Contingent financial liabilities	528 509	525 566	497 338
Total	8 802 637	9 055 304	10 165 736

The maximum level of exposure to credit risk demonstrates those financial assets of the bank that are most sensitive to credit risk. It can be noted that the largest share in the structure of risky assets of Halyk Bank of Kazakhstan JSC is occupied by loans to customers and amount to 43.74% as of December 31, 2020. The smallest share is made up of other financial assets – 0.94%. The overall increase in the most risky assets in the period from 2018 to 2020 was 15.5%.

4. Credit risk management model at JSC "Forte Bank"

JSC "Forte Bank" manages credit risk based on the determination of risk appetite, taking into account constant monitoring of established limits. The Bank constantly applies measures to maintain the optimal level of credit risk, and also calculates expected credit losses based on a collective assessment.

The Bank has introduced a procedure for monitoring credit quality in order to identify changes in the solvency of borrowers as early as possible. This procedure allows reviewing loan collateral and adjusting limits for each counter party, which are determined based on an internal credit risk classification that assigns a credit rating to each borrower. The purpose of the credit quality check is to establish the maximum possible potential losses on risks and to minimize them in a timely manner.

The Bank on an ongoing basis at the end of the reporting period evaluates the increase in lending risk since initial recognition in respect of assets that are most exposed to the risk. The policy is implemented by determining the risk of default until the expiration of the asset. Thus, the mechanism for assessing credit risk primarily includes the stage of recognizing an allowance in the amount of 12-month expected losses. If the amount of the allowance exceeds the amount originally assumed, the bank recognizes a reserve in the amount of expected credit losses for the entire term of the loan. An allowance for secured loans is also recognized at the amount of ECL over the entire term of the loan.

With regard to the risk appetite of Forte Bank JSC, it is defined as the carrying amount of items in a separate statement of financial position, not including the possibility of the impact of risk reduction. The maximum exposure to credit risk may arise from changes in the carrying amount of assets exposed to credit risk.^[3] As for the current exposure to credit risk, it is defined as the carrying amount of financial instruments previously measured at fair value. The maximum exposure to credit risk is presented in the following Table 4:

Table 4: Maximum exposure to credit risk of Forte Bank JSC

ASSETS	Maximum exposure to credit risk		
	31.12.2018	31.12.2019	31.12.2020
Cash equivalents	225 147	347 242	311 632
Funds in credit institutions	19 711	28 205	73 707
Financial instruments measured at fair value	9 511	6 452	7 377
Investment financial assets measured at FVOCI	389 535	458 424	505 922
Loans to clients	689 645	785 068	749 742
Other financial assets	27 105	26 781	24 204
Total	1 360 654	1 652 172	1 672 584

The maximum level of exposure to credit risk demonstrates those financial assets of the bank that are most sensitive to credit risk. It can be noted that the largest share in the structure of risky assets of Forte Bank JSC is occupied by loans to customers and amount to 44.8% as of December 31, 2020. The smallest share is made up of financial instruments measured at fair value – 0.44%. The overall increase in the most risky assets in the period from 2018 to 2020 was 23%.

5. Credit risk management model at JSC "Kaspi Bank"

Kaspi Bank JSC effectively manages lending risk by centralizing decision-making procedures for granting loans, their accounting and verification. It is in Caspi Bank that exposure to credit risk is associated primarily with consumer lending. The process of approval of consumer loans is the most automated and centralized among all available processes among STBs of the Republic of Kazakhstan, which contributes to the rapid adoption of a decision on issuing a loan. The Bank also maintains collateral and other means to mitigate potential credit risk in the form of securities, real estate and vehicles.

The Bank has developed its own algorithms for calculating credit risk, and also uses predictive quantification models that help to most effectively assess the risk of a potential borrower. Statistical modeling of credit risk is carried out on the basis of external data obtained from credit bureaus and the pension center, as well as internal data representing the history of all banking transactions.

Based on international financial reporting standards, the bank determines the maximum amount of credit risk (risk appetite), which is equal to the balance sheet value of financial assets minus the offsets of assets, liabilities and collateral. As of December 31, 2019 and 2020, the risk appetite, taking into account the offset of assets, liabilities and collateral, amounted to 1,015.84 million tenge and 1,067.05 million tenge, respectively. The maximum exposure to credit risk is presented in the following Table 5:

Table 5: Maximum exposure to credit risk of Kaspi Bank JSC

ASSETS	Maximum exposure to credit risk		
	31.12.2018	31.12.2019	31.12.2020
Cash equivalents	168 471	239 140	330 409
Funds in credit institutions	22 872	43 484	44 259
Required reserves	17 215	25 243	27 659
Financial instruments measured at fair value	9 942	1 326	3 725
Investment financial assets measured at FVOCI	356 689	473 255	865 847
Loans to clients	1 067 002	1 292 104	1 404 554
Total	1 642 191	2 074 552	2 676 453

The maximum level of exposure to credit risk demonstrates those financial assets of the bank that are most sensitive to credit risk. It can be noted that the largest share in the structure of risky assets of Kaspi Bank JSC is occupied by loans to customers and account for 52% as of December 31, 2020. The smallest share is made up of financial instruments measured at fair value – 0.14%. The overall increase in the most risky assets in the period from 2018 to 2020 was 63%.

6. Credit risk management model at SB JSC "Sberbank"

SB JSC Sberbank of Russia manages credit risk, including by periodically calculating expected credit losses based on probability-calculated scenarios that allow assessing the potential shortage of funds to cover credit lines. Future cash flows are discounted using the effective rate.

To assess credit risk, a credit scoring model is often used, the main essence of which is to take into account various types of information, including historical financial information, which includes data on solvency and liquidity ratios, on payment and credit history, as well as on the activities of the borrower. Also, an important criterion is the consideration of macroeconomic and publicly available information on the client, which must be substantiated and its relevance confirmed without fail.

The main advantage of credit risk management in SB JSC "Sberbank of Russia" is an independent assessment and analysis of risks associated with the bank's borrowing operations. ^[4]The Bank has introduced a system of limits, which helps to ensure an adequate level of concentration of credit risk in the portfolio. This system allows you to assess the level of risk in the context of economic sectors.

Risk appetite is the maximum allowable level of credit risk that a bank is able to accept when carrying out lending operations. Thus, SB JSC Sberbank of Russia determines the risk appetite for the level of

credit risk based on international financial reporting standards. The maximum exposure to credit risk is expressed as the sum of the carrying amounts of the balance sheet items that are most exposed to that risk. The maximum exposure to credit risk is presented in the following Table 6:

Table 6: Maximum exposure to credit risk of SB Sberbank of Russia JSC

ASSETS	Maximum exposure to credit risk		
	31.12.2018	31.12.2019	31.12.2020
Cash equivalents	505 008	538 987	856 394
Investment FA valued at FVOCI	148 115	169 225	458 845
Funds in credit institutions	17 634	55 732	111 905
Financial instruments valued at MA	-	42 423	82 293
Loans to clients	1 120 232	1 286 748	1 549 720
Other financial assets	3 525	1 222	566
Total	1 790 989	2 093 115	3 059 157

The maximum level of exposure to credit risk demonstrates those financial assets of the bank that are most sensitive to credit risk. It can be noted that the largest share in the structure of risky assets of SB Sberbank Russia JSC is occupied by loans to customers and amount to 50.7% as of December 31, 2020. The smallest share is made up of other financial assets – 0.02%. The overall increase in the most risky assets in the period from 2018 to 2020 was 70.8%.

7. Conclusion

The Bank continuously monitors the entire list of financial assets that are most exposed to credit risk from the moment of their initial recognition. If the level of credit risk exceeds the maximum allowable value, the bank must calculate the amount of the allowance in accordance with the amount of potential losses expected throughout the entire loan term.

The increase in credit risk on bank loans is reflected in an increase in the probability of default over the life of the loan, through the establishment of thresholds for various types of objective evidence of financial difficulties since initial recognition. [5] Financial instruments issued to financial institutions have a low level of credit risk and do not significantly increase the overall level of credit risk. A bank's low level of credit risk is achieved if the external credit rating is equal to the investment grade, determined by rating agencies.

It should be noted that based on the analysis of credit risk management in the top 5 second-tier banks of the Republic of Kazakhstan, it was revealed that the main methods of risk minimization are:

- 1) Determination of lending limits, including risk appetite, taking into account automated calculations;
- 2) Automation and centralization of decision-making on granting loans, development of unique methods;
- 3) Evaluation of issued loans and timely changes in lending conditions;
- 4) Constantly checking the creditworthiness of borrowers, their credit history and collateral;
- 5) Analysis of the dynamics of the quality of the loan portfolio and taking measures to reduce the level of credit risk;
- 6) Formation of provisions for expected credit losses.

Recommendations for further improvement of the risk management system in relation to credit risk in STBs:

- 1) Implementation of an innovative process for assessing and analyzing credit risks in relation to the segment of small and medium-sized businesses;
- 2) Development of internal IT-examination of decision-making on lending to individuals and legal entities and its comprehensive development;
- 3) Optimization of credit risk assessment for legal entities by complying with the requirements of the AQR system (assessment of asset quality);
- 4) Automation of the process of collecting information on potential borrowers;
- 5) Simplification of the process of consideration of loan applications in order to speed up the adoption

of the final decision on the issuance of a loan;

6) Centralization of risk management departments in the head office, due to which increased control over the decision-making process on lending is achieved.

References

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