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Methodology for assignment of Bank's Rating

This document presents the analytical framework of BCRA for evaluation and assignment of Rating to banks. Ratings are being updated on an annual basis, and BCRA performs current surveillance of the state of the respective bank, on a quarterly basis. In case key factors exist, which may influence the Bank's rating, BCRA may update the evaluation before the scheduled period for annual update.

The analytical framework includes evaluation of the operating environment and of the main internal factors, under the methodology CRAMELS.

When rating a bank, BCRA assesses and issues a **Financial strength rating** and / or **Deposit rating**. These ratings could be issued both simultaneously and individually. In the bank rating papers, the type of rating is explicitly stated, and the approach set out in this methodology applies to both new ratings and for subsequent update of existing ratings.

In addition to a bank financial strength's rating, BCRA could also issue a **national-scale's rating** to a bank (see http://www.bcra-bg.com/). This type of rating is relative, in comparison to other rated entities in the country, taking into consideration only the specific risk factors of the entities and not the effect of the local environment on them. That is, the national-scale rating does not represent an *absolute evaluation of creditworthiness*, but only a *relative evaluation* within the bounds of given country. For this reason, it is impossible to draw any comparison between national-scale ratings of entities from different countries. BCRA issues national-scale ratings when a sufficiently large sample size of rated entities is available for the given country, which would allow one to draw comparisons between those entities.

Operating Environment

BCRA prepares a review of the state of the banking system in this country. Its purpose is knowledge of the environment, where the rated bank(s) operate. The main laws and regulatory requirements related to banking are being stressed on, as well as the main changes (if any) in the regulatory framework, pending, or having occurred after the last evaluation. The overall trends are also studied, in the following areas: the average price of credits; the average price of deposits; the Balance Sum of the banking system, the quality of the assets of the banks, the main processes underway in the sector – consolidations, bankruptcies, entry of international banks, etc.; depending on what is the stress and/or specialization in the operations of the specific bank, other economic indicators may also be reviewed – the base interest rate and the trend of its change, movement of the interest levels at the international bank markets, and the like. BCRA studies also other laws and regulatory acts, which have been estimated to have impact on the financial strength of the banks within the banking system of this country.

Methodology

The rating of the financial strength of a bank awarded by BCRA is based on the methodology CRAMELS. The following items are evaluated, one by one:

C – Capital Adequacy
R – Resources
A – Assets Quality
M – Management
E – Quality of Income
L – Liquidity
S – Size and systems

I. Capital Adequacy

The assessment of Capital Adequacy aims to establish if the Bank is capable of maintaining such size of its capital basis, which is adequate to the risk from its operations. The Capital Adequacy of the Bank is being estimated from the view-point of the regulatory requirements (respectively the Basel Standards and the 2013/36 / EC - CRD IV Directive) and the economic effectiveness of the Bank. The assessment of the structure of the bank's capital base for regulatory purposes is carried out according to the ratio of total capital adequacy ratio, Core Equity Tier 1 ratio (primary capital - paid-in and registered), Tier 1 capital ratio (additional capital - reserves) as well as the capital requirements for credit, market and operational risk.

BCRA studies the levels of Capital Adequacy of the Bank for a period of 5 years, as well as the main factors influencing such levels, making a comparison with the average levels of the banking sector in this country, and the average levels of the Group of Banks.

BCRA assesses the impact of the regulatory requirements on the Capital Adequacy of the Bank. Pursuant to the regulations, banks have to allocate capital in form of capital buffers for the different risks. From the view-point of the economic effectiveness of the Bank, the opportunities for growth of the own funds of the Bank are being assessed, and the levels of leverage, plus the net size of Non-performing Loans/Exposures (NPL) - against the Own Funds.

II. Resources

When the resource basis of the Bank is being analyzed, three main factors are accentuated: diversification and stability of funds attracted, price of the resources raised, opportunities and price for renewal (revolving) or substitution of the maturing liabilities. The main risk for the Bank is its possible inability to attract new resources in the place of the Bank's maturing liabilities, or the Bank's inability to do this at a reasonable price. The policy of the Bank for fund-raising, and the structure of the resource basis of the Bank (as main sources of funding) are studied. The main elements of the resource basis of the Bank include deposits, loans and subordinate term debt, plus hybrid instruments. Deposits can be: (a) deposits of natural persons – which are comparatively small in their size, however securing a stable resource basis for the bank – since there is a small possibility that a large part of them are requested at the same time; (b) savings' deposits, which present the most stable part of the deposits of natural persons; (c) corporate deposits are large by their size, however presenting a volatile source of funding. The last type of deposits is an important factor for the growth of the resource basis of the Bank; however, if they occupy a large portion in the structure of resources, the Bank may suffer from difficulties in its liquidity management. According to their maturity term, deposits may be: at-sight (mostly of corporate clients), savings' deposits (granted to natural persons), and term deposits. Loans may be loans from financial institutions (inter-bank market), loans from non-financial institutions, and debenture loans.

III. Assets Quality

Generally, the assets of a bank include credits, investments, and monetary items. Credits usually account for the most significant part of the assets of the Bank; they are also the source of the biggest risk for the Bank's operations. When reviewing the quality of assets, we assess the quality of the credit portfolio, and the risk in the investment portfolio. The quality of the credit portfolio is being reviewed separately for (a) the credit portfolio of natural persons and (b) the portfolio of corporate credits. The portfolio of credits of natural persons may be divided into segments based on the type of the loan (consumer, mortgage, etc.) or based on the main distinctive features of the borrowers (age, residence, employment, etc.). The main factors to be assessed are the dynamics in the size of the credit portfolio of the Bank during the period analyzed, the diversification of such credit portfolio, the process for evaluation of applicant-borrowers as established by the Bank; and the quality of the credit portfolio.

Important indicators in the analysis are the Gross Ratio of Generation of NPL and the Net Ratio of Generation of NPL. The investment portfolio evaluation assesses the quality, dynamics and structure of the Bank's investment portfolio, return on the investment portfolio and duration of the investment portfolio.

IV. Previous History and Management

The assessment of Management is an important element of the Risk assessment. It represents a quality indicator for the ability of the Bank - in the person of its Executive Managers - to cope with the competitive pressure, and with the other challenges of the market environment.

The following factors are being reviewed and assessed, in turn: management team, development strategy, policies and practices applied, and organizational structure.

The management team is being analyzed from the view-point of its competency, experience, succession, attitude to risk, and adopted financial policy. The financial policy determines the forms and size of funding of the operations of the Bank. From the rating view-point, any conservative attitude to Risk is rated higher – because it generally brings to lower, however more stable financial results.

When reviewing the development strategy, it is important to assess the extent of its adequacy and reflection of the market situation at all times, as well as its prospective development.

The assessment of policies and practices provides information for the effectiveness at the operating level. The lack of fair policies and practices assumes worse results from the operating activities, and this is reflected in the financial results.

Factors are being reviewed, such as the information support of operations, marketing and market practices, the Human Resources policy, existence/absence of written operating procedures, and of systems for control of the operating activities. Another factor also influencing the bank effectiveness is the Bank’s organizational structure.

V. Quality of Income

Financially strong commercial banks are usually featured by their Income from the normal banking operations (*income from the Main Activities*) remaining stable at all times. The main (*however not single*) sources of Income from the Main Activities include: Interest Income, Income from Fees and Commissions, and Income from the Main Commercial Operations. The Income, which does not pertain to the Main Activities, includes: Other Income from Commercial Operations, Investment Income, and Non-current Income from the Sale of Assets. Stable profitability is a source of growth of the capital basis, it helps the maintenance of adequate liquid position; it also protects the Bank from considerable loss ensuing from non-served assets. From the rating view-point it is favorable (normal) for the Bank to succeed in achieving stable, or improving profitability indicators. The assessment of the Quality of Income aims to establish (a) the extent, to which the Main Activities of the Bank have been historically profitable; (b) what is the structure of the Income and Expense of the Bank; (c) what is the operating effectiveness of the Bank; (d) whether the profitability of the Bank is in

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a state to protect the Bank from losses in its Credit Portfolio; and (e) what is the dependence of the Income of the Bank from Revaluation and Sale of Securities and Other Assets.

VI. Liquidity

The Liquidity of the Bank is an essential factor from the rating view-point, showing the ability of the Bank to effectively meet any decrease in its deposit basis and in the rest of its liabilities, as well as to fund any increase in its assets. Assessed are: both the internal (*maturing loans, deposits in other banks, liquid investments, etc.*), and the external sources of liquidity (*access to the capital markets, open credit facilities, discounts from the Central Bank, etc.*) of the Bank. The following main factors are being evaluated: structure of the liabilities of the Bank, structure of its deposit basis, size and structure of the liquid assets, main liquidity indicators, maturity misbalances between the assets and liabilities of the Bank, coverage of the short-term maturity discrepancies by means of liquid assets, ability to attract deposits, existence of external sources of liquidity – such as open credit facilities with other banks, and other possibilities for funding of the operations.

The maintenance of liquid assets adequate in their size is of essential importance for the Liquidity Management of the Bank. The following are reviewed as liquid assets of the Bank: the monetary items (*cash-at-hand and cash kept in the vaults*), short-term deposits with other banks (*with maturity up to 3 months*), and Government Securities (*depending on the liquidity of the market: in cases of low liquidity of the market, GS may be excluded as a component of the liquid assets*);

The existence of open credit facilities with other banks is assessed as a positive factor. The movement in limits and funds used under the credit facilities is also studied.

VII. Size and systems

The size of the Bank is measured mainly by its Balance Sum (*Total Amount of Assets*). The size of the Bank is of essential importance for its competitive position and future development as a banking institution.

In the "Systems" Section are assessed the existence and timely implementation of systems for evaluation of the credit, market, operational, liquidity risks and the degree of automation of measurement, assessment and management processes. The suitability is being reviewed of the information or accounting systems used – in terms of performance of effective monitoring and control on the Bank's operations. At this point, the ability or inability of the Bank to present the data for the purposes of the Rating preparation, as required by BCRA, has to be shown, too.

VIII. Model for evaluation, calculation of indicators and determination of bank financial strength rating

In the process of assigning a bank rating, BCRA uses a Model for evaluation, calculation of indicators and determination of bank financial strength rating (Model). The result of this Model serves only as a useful additional information for how a specific bank's quantitative and qualitative indicators and the complex indicator for creditworthiness based on them have evolved over time in comparison with the other banking clients of BCRA. The Rating Committee inevitably takes note of the result of the Model but is not confined thereby in its decision and instead has the opportunity to take advantage of the expertise of the analysts and agree on a rating different from the Model-implied rating whenever the specifics of the bank or its environment calls for it.

In the interest of clarity and orderliness, the bank-specific indicators in the Model are arranged in the seven sections described above in this Methodology:

C – Capital Adequacy

R – Resources

A – Assets Quality

M – Management

E – Quality of Income

L – Liquidity

S – Size and systems

This arrangement is not absolute and represents one possible convention used by BCRA for classification, although certainly there is interconnectedness and interaction between the various indicators and sections.

On the basis of the different indicators included in the Model, we aggregate their values into a single index of financial strength, isolated from the direct effect of the external factors of the immediate environment. This index we term the individual rating of bank financial strength. We further adjust this individual rating a number of notches down due to the risk profile of the banking sector in the country as wells as the more general sovereign risk.

In relation to the risk profile of the banking sector in the country, the factors analyzed and which could lead to an adjustment in the individual rating are:

- The extent to which the laws and regulations are well formulated and transparent and are being enforced indiscriminately rather than selectively;
- The extent to which the banking sector is competitive and stable in terms of the competitive environment;

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- The extent to which the regulatory framework is stable and not expect to change drastically in the near future;
- How optimistic the expectations for credit growth and bank-system profitability are;
- The extent to which, under the active legislation, banks could expect government financial support before the unprotected creditors suffer losses, and
- Any other factor characteristic of the banking sector, which were not already accounted for in the above factors.

The result of the adjustments made to the *individual rating* of bank financial strength is the so-called *base rating*. The final stage of the calculation of the bank financial strength rating is the potential adjustment of the *base rating* due to the general sovereign-risk factors, as evaluated by BCRA using the Sovereign Rating Methodology (see http://www.bcra-bg.com/). The analyzed rating factors in this Methodology are: 1) Political Risk, 2) Macroeconomic Stability, 3) Fiscal Flexibility, and 4) Effectiveness of the Monetary Policy. Banks which operate in a risk-prone environment, perhaps more so than other rated entities in the country, are inevitably impaired by those external factors outside their control, which present a limit to the ratings of all entities in the country. The *rating ceiling* is the term used for this limitation on the bank financial strength rating caused by sovereign-risk factors. Slightly less limited are the ratings of those bank subsidiaries or branches whose direct or indirect majority shareholder is a foreign credit institution able in one way or another to make up for the deleterious effects of the local environment. The *ceiling* of such bank subsidiaries would surpass the sovereign rating by one or more notches, which in turn cause their final Model-implied bank financial strength rating to surpass the sovereign rating.

$$Bank\ financial\ strength\ rating = \begin{cases} ceiling, & ceiling < base\ rating \\ base\ rating, & ceiling \geq base\ rating \end{cases}$$

IX. Deposit rating

The Deposit rating represents an assessment of the ability of the rated bank to repay deposit liabilities in national and foreign currency.

The assignment of the Deposit rating includes evaluation and analysis of all key factors in the methodology for Financial strength of a bank - operating environment, capital adequacy, resources, assets quality, shareholder structure and management, quality of income, liquidity, size and systems. In addition to the analysis of the sections listed above, emphasis is placed on:

- Liquidity - with a prevailing weight on the structure of attracted funds, the size and structure of liquid assets, key liquidity ratios, maturity imbalance between bank's assets and liabilities, coverage of short-term maturity mismatches with liquid assets.

- Assets quality - with a prevailing weight on credit portfolio quality and investment portfolio risk, diversification and maturity structure of the credit portfolio, structure and liquidity of the investment portfolio. With lower weight are assessed factors such as the size and dynamics of the bank's assets and the profitability indicators of loan and investment portfolio.

- Capital adequacy - further assessed as a direct expression of bank's stability and ability to hedge against risk assets through equity and indirectly affecting the ability to repay deposits.

- Resources - with a prevailing weight on the structure of funds attracted, by type and maturity and lower weight on factors such as the size and dynamics of the Bank's liabilities and the cost of funds indicators.

The above key issues in the banks rating methodology for assignment of deposit rating are reflected in the Model for evaluation, calculation of indicators and determination of deposit rating as a variation of the used and described Model for evaluation, calculation of indicators and determination of financial strength rating. It should be noted that the rules, described in section VIII, used for the determination of the final rating also apply to the deposit rating model.

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RATING SCALE

LONG-TERM RATING

Investment	**AAA**	Extremely high capability for servicing debt-related financial obligations in a timely manner. Substantial financial stability. Excellent prospects for development. Exclusively low credit risk.
	AA	Very high capability for servicing debt-related financial obligations in a timely manner. Substantial financial stability. Very low credit risk.
	A	High capability for servicing the debt-related financial obligations in a timely manner. Low vulnerability to unfavourable changes in the political or economic environment. Financial stability. Low credit risk.
	BBB	Fair capability for servicing the debt-related financial obligations in a timely manner. Fair financial condition. Moderate vulnerability to unfavourable changes in the political or economic environment. Moderate credit risk.
Speculative	**BB**	The ability to service debt-related financial obligations is to a large extent influenced by the unfavourable changes in the political or economic environment. The financial condition is relatively fair. Substantial credit risk.
	B	High level of insecurity with regards to the financial stability and capability for paying off the debt-related financial obligations. High vulnerability to unfavourable changes in the political or economic environment. Relatively high credit risk.
	CCC	Unfavourable changes in the political or economic environment may bring to a considerable deterioration of creditworthiness and a failure to fulfill the debt-related financial obligations. Weaknesses in the financial condition. High credit risk.
	CC	A high risk of going into default exists. Low capability for paying off the debt-related financial obligations. Substantial problems in the financial condition.
	C	Very high risk for going into default exists. Substantial danger of failure to fulfill the debt-related financial obligations and significant dependence on favourable changes in the political environment. Very weak financial condition.
	D	Incapability to pay a debt-related financial obligation in a timely manner according to BCRA’s definition for default.

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Note: The symbols „+" and „-" modifying rating categories AA through CCC are used to represent the relative creditworthiness within a single rating category

SHORT-TERM RATING

A-1+	Considerable financial stability and excellent capability for timely and full payment of debt-related financial obligations to a great extent regardless of the changes in the political or economic environment.
A-1	Financial stability. Weak or inconsiderable vulnerability to the changes in the political or economic environment.
A-2	Good financial condition. Certain vulnerability exists to unfavourable changes in the political or economic environment.
A-3	Good financial condition. Moderate vulnerability to unfavourable changes in the political or economic environment.
B	Relatively fair financial condition and presence of certain risk of untimely and incomplete payment of the debt-related financial obligation. High vulnerability to unfavourable changes in the political or economic environment.
C	Substantial problems in the financial condition. Presence of dependence on favourable changes in the political or economic environment in order to avoid untimely or incomplete payment of debt-related financial obligations.
D	Incapability to pay off a debt-related financial obligation in a timely manner according to BCRA's definition for default.

DEFINITIONS

Debt-related financial obligations: obligations towards financial institutions, obligations related to bonds and other fixed-income securities and any other financial instruments that do not qualify as securities

- In the case of bank ratings, the obligations include deposits and obligations related to bank guarantees;
- In the case of rating of the ability of insurance companies to pay claims, the obligations are insurance claims, and the definition for default consists of the competent authority taking the decision to revoke the license;
- In the case of credit rating of a corporation, group of companies and/or individual companies in the group, and leasing company, the definition for default is that the company is in insolvency or liquidation; it does not meet its financial liabilities.
- In the case of issue credit rating the definition of default is that there is an impossibility for meeting the payments under the issuance.

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The **short-term rating** reflects the possibility of servicing the short-term/current liabilities (within one year)

Outlook:

Positive – reflecting expectations for passing into an upper category rating within 1 year;

Negative – reflecting expectations for passing into a lower category rating within 1 year;

Stable – reflecting expectations for keeping the rating category within 1 year;

In development – reflecting expectations of the occurrence of an event, which may have negative/positive influence on the rating category.

Watch Status:

A credit rating may be placed "under review" and, accordingly, be marked with the symbol (under review), if there are expectations that further analysis of a recent or an imminent event is likely to lead to a change in the rating category in the near future. When a credit rating is placed under review, its previously assigned outlook becomes invalid.