

# Assessing the Portfolio of Bank Guarantees by Specific Indicators for Determining Risks

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## Abstract

*This paper, entitled “Assessing the portfolio of bank guarantees by using specific indicators for determining risks”, deals with the determination, measurement and management of risks and aims at assessing the quality of the portfolio of guarantees, by specific indicators for determining risks. It also analyzes the risk levels of all the activities conducted by the NFIs, quantified in terms of the following risk categories: guarantee risk, market risk, operational risk, liquidity risk, reputational and strategic risk.*

**Key words:** bank guarantees, specific indicators, assessment, risk, portfolio

**J.E.L. classification:** G20

## 1. Introduction

The assessment of the portfolio of bank guarantees was performed under the Working procedure no. 9 for determining, measuring and managing risks. Moreover, this assessment concerning the Romanian banking system, which also allowed us to analyze the risk levels of all the activities carried out by the NFIs, was conducted by means of specific indicators for determining risks. It is noteworthy that, in assessing the quality of the portfolio of guarantees, two types of indicators are used, i.e.: structural indicators and rating indicators (Dardac, N. and Moinescu, B., 2006, p. 15).

## 2. Structural and rating indicators. Analysis and interpretation

The structural indicators of granted guarantees, as shares in the balance portfolio, are presented in Table no. 1:

*Table no. 1. The structural indicators of guarantees*

INDICATOR	Det. value	Det. value	Det. value	Det. value
	31.03.2015	30.06.2015	30.09.2015	31.12.2015
I. Balance structure by the term of granting the guarantee	100%	100%	100%	100%
Share of short-term guarantees (<= 1 year)	54%	54%	55%	54%
Share of medium-term guarantees (1-5 years)	26%	26%	26%	26%
Share of long-term guarantees (> 5 years)	20%	20%	19%	20%
II. Structure of the balance of guarantees by credit type	100%	100%	100%	100%
Share of the guarantees supporting the credits for financing current activities	74%	74%	75%	75%
Share of the guarantees supporting the credits for investment	26%	26%	25%	25%
III. Structure of the balance of guarantees by the supported activity sector	100%	100%	100%	100%
Share of the guarantees granted to the commerce sector	41%	41%	43%	43%
Share of the guarantees to industry	22%	22%	22%	22%

Share of the guarantees to the service sector	18%	18%	17%	17%
Share of the guarantees to constructions	12%	11%	11%	11%
Share of the guarantees to agriculture	7%	8%	7%	7%

Source: Processing performed by the author, data from the Financial Stability Report 2015

Structural indicators are calculated specifically in order to monitor the concentration risk on various components and characteristics of the portfolio of guarantees from the balance sheet, but also in order to pursue the strategic objectives of non-banking financial institutions (Uyemura, D.G. and Deventa, D.R., 1993, p. 32). As can be seen in Table 1 above, the quarterly variation of the shares calculated on different criteria is almost unchanged. Regarding the concentration of the portfolio of guarantees, its structure could be considered as concentrated towards short-term guarantees (54%) in relation to the banking system average. There is also a concentration of the portfolio of guarantees for the credits destined to finance current activities (about 75%). The analysis of the data presented in the Financial Stability Report 2015, published by NBR, reveals that the share of the credits granted to SMEs by resident banks, per sectors of agriculture, industry and services, is relatively similar to the share of the guarantees provided in the total portfolio, while for commerce and constructions there are different concentration degrees.

Table no. 2. Rating indicators, calculated at 31 December, in order to identify and measure credit risks for the guaranteeing activity

No.	Indicator	Significance threshold	Rating	31.03.2015	30.06.2015	30.09.2015	31.12.2015	Frequency in the last four quarters
1	Share of guarantee risk	Under 2,5%	Rating 1					
		Between 2,5 and 4,5%	Rating 2	3,45%	3,43%	3,43%	3,54%	4
		Over 4,5%	Rating 3					
2	Share of depreciated guarantees	Under 4%	Rating 1					
		Between 4 and 6%	Rating 2					
		Over 6%	Rating 3	19,18%	20,81%	21,24%	21,89%	4
3	Annualized share of payments	Under 2%	Rating 1	1,27%	1,38%	1,47%	1,97%	4
		Between 2 and 4%	Rating 2					
		Over 4%	Rating 3					
4	Annualized share of payment applications	Under 2%	Rating 1					
		Between 2 and 3%	Rating 2					
		Over 3%	Rating 3	3,89%	4,22%	4,10%	3,95%	4
5	Share of payment applications settled by non-payment *	Under 20%	Rating 1					
		Between 20 and 30%	Rating 2					
		Over 30%	Rating 3	62,78%	72,20%	70,61%	72,07%	4
6	Share of group of debtors	Under 25%	Rating 1	17,84%	21,19%	19,73%	19,16%	4
		Between 25 and 35%	Rating 2					
		Over 35%	Rating 3					
7	Consumption of coverage level	Under 70%	Rating 1	44,43%	40,14%	37,19%	33,91%	4
		Between 70 and 85%	Rating 2					
		Over 85%	Rating 3					
8	Coverage by specific provisions of payments of guarantees	Over 90%	Rating 1	94,35%	94,38%	94,29%	97,10%	4
		Between 80 and 90%	Rating 2					
		Under 80%	Rating 3					
9	Annual variation in the amount of payments made for the	Under 110%	Rating 1	32,78%	44,84%	52,56%	80,01%	4
		Between 110 and 140%	Rating 2					
		Over 140%	Rating 3					

	guaranteeing activity							
10	Annual variation in payment applications	Under 120%	Rating 1	63,23%	48,38%	44,18%	46,37%	4
		Between 120 and 140%	Rating 2					
		Over 140%	Rating 3					
11	Annual variation in the balance of guarantees	Over 105%	Rating 1					
		Between 100 and 105%	Rating 2					
		Under 100%	Rating 3	86,44%	79,21%	76,09%	72,24%	4
12	Annual variation in the provision of new guarantees	Over 110%	Rating 1					
		Between 100 and 110%	Rating 2					
		Under 100%	Rating 3	40,52%	33,47%	37,21%	39,27%	4

Source: Processing performed by the author, data from the Financial Stability Report 2015

The payment applications settled by non-payment include those payment applications that were rejected, canceled, suspended and waived. The share of the payment applications settled by rejection of payment was 68.5% at 31.12.2015. The indicators in the table above have the following formulae (Chorafas, D.N., 2007, p. 22): 1) Share of guarantee risk = [value of all guarantees paid] / [value of all guarantees issued] \* 100; 2) Share of depreciated guarantees = [guarantees with depreciation index, with payment application, notice of payment or guarantees related to insolvency debtors] / [total balance of guarantees] \* 100; 3) Annualized share of payments = [annualized value of the guarantees paid in the reporting year] / [balance of the guarantees since the beginning of the year] \* 100; 4) Annualized share of payment applications = [annualized value of payment applications submitted in the reporting year] / [balance of the guarantees since the beginning of the year] \* 100; 5) Share of payment applications settled by non-payment = [value of payment applications settled by non-payment \* since the beginning of the year] / [value of all payment applications settled since the beginning of the year] \* 100; 6) Share of group of debtors = [balance of guarantees granted by groups of debtors to SMEs] / [total balance of guarantees granted based on own sources and on sources in administration] \* 100; 7) Consumption of coverage level = [balance of guarantees granted based on own sources] / [total coverage level based on own sources] \* 100; 8) Coverage by specific provisions of payments of guarantees = [balance of guarantee provisions] / [total payments - recoveries made by F.N.G.C.I.M.M. and those from FRC] \* 100; 9) Annual variation in the amount of payments made for the guaranteeing activity = [amount of payments made since the beginning of the year] / [amount of payments made in the same period of the previous year] \* 100; 10) Annual variation in payment applications = [amount of payment applications submitted since the beginning of the year] / [amount of payment applications submitted in the same period of the previous year] \* 100; 11) Annual variation in the balance of guarantees = [value of the balance of guarantees of the respective quarter] / [value of the balance of guarantees for the similar quarter of the previous year] \* 100; 12) Annual variation in the provision of new guarantees = [value of the new guarantees granted in respective quarter] / [value of the new guarantees granted in the similar quarter of the previous year] \* 100.

The analysis of the rating indicators related to credit risks reveals several important results. Regarding the share of guarantee risk, this indicator is maintained in this quarter on Rating 2, and records a value slightly higher than in the last quarter. If we compare the value of the payment applications settled (by payment, rejection, etc.) with the value of guarantees issued until 31.12.2015, we obtain a share of 5.82%. In terms of the share of depreciated guarantees, it remains at a high level (Rating 3) in this quarter, recording an insignificant increase compared to the previous quarter. The last year's developments in the balance of the portfolio of guarantees (equiv. RON), according to the depreciation indicators, is presented in Table no. 3 below:

Table no. 3. Developments in the balance of the portfolio of guarantees

Date	Payment applications	Insolvency	Payment notification	Non-depreciated	Total depreciated guarantees	Total portfolio	Share of depreciated guarantees
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01	02	03	04	05	06 = 02+03+04	07	08
31.03.2015	308,651,056	129,815,380	128,027,203	2,386,498,656	566,493,639	2,952,992,295	19,18%
30.06.2015	302,342,911	140,533,877	113,414,947	2,117,367,885	556,291,735	2,673,659,620	20,81%
30.09.2015	304,782,724	130,761,946	103,793,210	1,999,212,197	539,337,880	2,538,550,077	21,24%
31.12.2015	238,501704	144,918,144	115,463,224	1,779,392,832	498,883,072	2,278,275,904	21,89%

Source: Processing performed by the author, data from the Financial Stability Report 2015

By analyzing the data presented in the table above, we can conclude that this indicator decreased in the last four quarters largely due to the decrease in the balance of guarantees (decrease by 27.7% at 31.12.2015, compared to 31.12.2014). Concerning the annualized share of payments, it falls, for the fourth consecutive quarter, in Rating 1. This favorable development was influenced by the decrease in the amount of payments made during this period. However, we have also noticed an increase in this indicator in the last quarter due to the increase in the amount of the payments made during the analyzed period (in the fourth quarter there were performed about 44% of the total payments from the respective year). It is noteworthy that this indicator should be analyzed in (inverse) correlation with the indicator that calculates the share of the payment applications settled by non-payment of guarantees, i.e. indicator no.5. Regarding the annualized share of payment applications, in the fourth quarter of 2015, it is also situated at an alert level (rating 3). However, we should remark that it registered a positive trend in the past year. We believe that this positive development will continue in the next quarters. Therefore, this indicator is expected to leave the alert area, i.e. rating 3. These expectations are based on the fact that a significant number of banks have completed the process of clearing the accounting balances of bad loans, in conjunction with the drastic decrease in the number of the companies entering into insolvency in last year (decrease by over 50%). Concerning the share of payment applications settled by non-payment, this indicator remains at a high level in the fourth quarter of 2015, representing an important risk factor. This indicator signals that the number and value of the disputes with funding partners, triggered by the refusal to pay guarantees, may rise in the near future. On the one hand, this risk could have a negative impact by increasing the amount of payments if the disputes created will be lost, but it will also lead to a deterioration of the image on the banking market. At 31 December 2015, the value of the recorded disputes with funders, caused by the refuse to pay guarantees, was 35.1 million RON.

Table no. 4. Share of payment applications settled by non-payment

No.	Indicator	Signification threshold	Rating	31.03.2015	30.06.2015	30.09.2015	31.12.2015	Frequency in the last four quarters
5	Share of payment applications settled by non-payment	Under 20%	Rating 1					
		Between 20 and 30%	Rating 2					
		Over 30%	Rating 3	59,91%	69,63%	68,18%	71,06%	4

Source: Processing performed by the author, data from the Financial Stability Report 2015

The data on the amount of settled payment applications, by the type of the guarantee convention underlying the settled guarantee contract, and the settlement type are presented in the table below:

Table no. 5. Settled payment applications

Settlement period/ Convention type	Type of settlement (value of submitted payment applications)				No. of applications settled by rejection	No. of applications settled by payment	Total no. of applications settled by rejection and payment	% applications settled by rejection	% applications settled by payment
	Rejection	Payment	Other settlements	Total					
1	2	3	4	5=2+3+4	6	7	8=6+7	9=6/8	10=7/8
2014	54,43%	38,87%	6,71%	100%	317	259	576	55,03%	44,97%
Express	53,72%	38,27%	8,00%	100%	59	40	99	59,60%	40,40%

Coverage limit	54,87%	39,24%	5,88%	100%	258	219	477	54,09%	45,91%
<b>2015</b>	62,99%	29,39%	7,61%	100%	217	130	347	62,54%	37,46%
Express	63,01%	28,31%	8,55%	100%	30	19	49	61,22%	38,78%
Coverage limit	70,53%	37,79%	1,68%	100%	367	169	536	68,47%	31,53%

*Source: Processing performed by the author, data from the Financial Stability Report 2015*

The data in the above table indicate that, in terms of value, in the course of 2014, the share of the guarantees settled by payment was approximately equal both in express conventions and in coverage limit conventions. The data for 2015 for express guarantees are distorted by 2 payment applications of the beneficiary Ulerom SA, in the amount of 3.8 million RON. These applications were canceled at the request of funder BCR. In numerical terms, we notice a slight decrease in the number of the applications settled by payment as far as the express convention is concerned, in 2015, compared to 2014 (from 40.4% to 38.78%). Also, in numerical terms, it is noteworthy that the number of the applications settled by payment since the beginning of the year, from the total of settled applications, represents 35.14%. The main reasons for rejecting the payment of the guarantees issued under express conventions, signed during 2008-2013, were: lack of promissory notes or overdue promissory notes and lack of certain documents or their non-compliance with the requirements of the convention concluded, each reason having 21 and 20 occurrences. In this respect, we mention the following reasons: the documentation of the execution file was completed by the funder after more than 60 days (3 cases); unpaid guarantee commissions or late payment (3 cases); lack of proof of registration of the requests for execution (3 cases), etc.

Regarding the share of group of debtors, this indicator remains on Rating 1, its dynamics for the last quarters indicating an insignificant variation in the share of the groups of borrowers, within the balance. Concerning the consumption of coverage level, this indicator remains at a comfortable level due to the decrease in the amount of the guarantees from the balance sheet. It is noteworthy that the highest level of this indicator in the first two quarters of 2015, to a level of over 40%, is due solely to the change in the calculation of the coverage level. Thus, according to the Risk Policy approved within AGM, on 01.13.2015, the coverage level is determined as 7 times the equity, compared to multiplier 9, as represented in the past. In terms of the coverage by specific provisions of payments of guarantees, this indicator remains on Rating 1, the values of this indicator being directly related to the calculation of the risk provisions for the guaranteeing activity governed by internal rules (NM 19). Regarding the annual variation in the amount of payments made for the guaranteeing activity, the favorable dynamics of the indicator that measures the annual variation of payments should be analyzed in conjunction with the dynamics of the payment applications settled by non-payment. Thus, the significant decrease in the volume of payments was not triggered by the decrease to the same extent in credit risks; it was mainly triggered by the increase in the share of the payment applications settled by rejection of payment (Isărescu, M., 2015, p. 10).

Concerning the annual variation of payment applications, the strong downward trend of this indicator remained unchanged in the last quarter of 2015. This favorable dynamics materialized by recording four consecutive quarters on rating 1, after being at the alert level (rating 3) for several quarters in a row. This leads to the conclusion that the process of cleaning the banks' balance sheets of bad loans exceeded the maximum moment and is being finalized. In terms of the annual variation in the balance of guarantees, this indicator remains on Rating 3, highlighting the downward trend of the guaranteeing activity carried out by the National Credit Guarantee Fund for SMEs, which also manifested by a decrease in the balance of guarantees. This decrease in the balance of guarantees was influenced by many factors, such as the modification of guarantee conditions (imposed by both the measures ordered by the Court of Accounts after the control performed in 2012-2013). In addition, the application of Policy risk provisions contributed to an imbalance between the inflows and outflows of the guarantees from the portfolio. Another factor is represented by the refusal to pay the guarantees from the coverage limit conventions concluded in the period 2011-2013. Last, but not least, the decrease in the balance of guarantees was influenced by the competition on some market segments (such as the FEI products developed by banks like BCR, Raiffeisen, Unicredit etc., or Cosme products developed by Libra Bank) and the economic crisis of 2008 - 2012 (which still can be felt by a low level of loans for SMEs, amid maintaining a

perception of high credit risk at the largest banks in Romania). Concerning the annual variation in the provision of new guarantees, this indicator stands at Rating 3, recording an unfavorable dynamics in recent quarters. In this case, we believe the main causes that have contributed to the decrease in the amount of new guarantees are: the modification of guarantee conditions (in the sense of strengthening the risk analysis) for the reasons described in the preceding paragraph, the economic crisis, the declining demand for loans in the absence of viable investment projects and the funders' perception on credit risk. Despite the fact that the provision of new guarantees has dropped significantly in the period under review, we believe that this development could have a positive effect, namely the increase in the quality of the portfolio of guarantees.

### 3. Conclusions

The indicators used for assessing credit risk did not register significant changes from the previous quarter. With regard to market risk management, the structure of investments indicates a balanced distribution between bank deposits and government securities (about 60% - 40%). Moreover, there is an important diversification of financial instruments in the short term and of the financial instruments in medium term (Chorafas, D.N., 2007, p. 23). In addition, the currency risk associated with the portfolio of securities is below the materiality threshold. With regard to liquidity risk management, liquidity is rising (to 3.34 from 3.19 - the value recorded at the end of September 2015) and it is situated above the minimum liquidity indicator established by internal regulations. With regard to operational risks, only one indicator (internal audit recommendations) remained in the risk zone, in the third quarter of 2015. In terms of the reputational risk management, in the third quarter of 2015, no risk events affecting the Fund's image were reported.

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