

EMPIRICAL STUDY ON THE RISK – PERFORMANCE CORRELATIONS AT BRD - GROUPE SOCIETE GENERALE

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1. General considerations

Banking risk management objective is to optimize risk / return and this is an important determinant of banking strategy.

The profits obtained by the bank are a direct consequence of its own type of strategy adopted by the bank management for the purposes of accepting or not the risks in banking activities that it carries.

Since any attempt by a bank to profit involves risks, the bank objectives involve obtaining large profits from a given level of risk, or taking lower risks for a given level of profits.

So, the bank management ask itself two questions:

- What degree of risk should also take the bank to increase its profits?
- How much of each type of risk must take the bank?

Risk management provides a vision of the bank to improve its future and the skills to be competitive on the market.

Ignoring the risks present and future can lead to serious future losses and even bankruptcy. Without a rigorous analysis of risk management, the bank can not give an estimate of future risks, otherwise there is no control of risk affecting the bank's major income.

2. Trends in the evolution of indicators of risk and performance at BRD - GSG

BRD is the private bank with the largest territorial coverage both in large and medium cities and in high potential rural area. Following a 5 years period of development and modernization of

branches network, through new innovative concepts on the Romanian market (BRD Express, BRD 24H, BRD Blitz, BRD Cafe) [Annual Report, 2009, 3], 2009 marked a pause in the network development.

By the end of 2009 BRD still had a solid clientele base numbering around 2,379,000 clients. Even from the beginning of the year BRD offered to its clients financial products meant to help them face the recession through loans restructuring and rescheduling. Moreover, several measures to reduce the associated risks have been taken.

As at the end of 2009, the Romanian banking system included 32 banks, Romanian legal entities and 10 subsidiaries of foreign banks which held assets of RON 330,639 million and shareholders equity of RON 28,582 million [Annual Report, 2009, 6]. Considering the current economic context, the total net profit in the banking system has decreased to RON 772 million.

Within this dynamic, strongly competitive environment, BRD has maintained its market shares. The bank's income does not depend on any customer or group of customers; hence there is no risk that the loss of a customer might significantly affect the income level.

The bank approaches risk prudently, in line with its long-term strategy. The risk management policies and activities are designed in line with the practices of Société Générale and focus on identifying and assessing risks as early as possible. The bank implements this approach by means of

the risk management function that is independent from the business. The implementation combines centralizing the risk management policies and decentralizing risk control and follow-up.

Credit risk is mainly the risk that a counter party may fail to fulfill its payment obligations towards the bank and also that a counterparty's or an issuer's credit quality may deteriorate. The bank's management [Annual Report, 2009, 79] of credit risk is well integrated with Société Générale (SG)'s risk management processes. Some of the main principles employed in managing credit risk are as follows:

- review and approval by senior management of new products and activities involving risks;

- use of well-defined credit-granting criteria by type of customer, including thorough knowledge of the borrower as well as the purpose and structure of the credit, and of the source of repayment; the request of collateral or personal guarantees to mitigate credit risk;

- well formalized processes for credit approval, including a clear system of delegated approval limits;

- ongoing follow-up of exposures, at single or group level, if such may be the case;

- regularly monitoring and reporting to senior management the quality of the credit portfolios;

- regular internal independent review of lending activity by the Internal Audit position;

- identification and management of non-performing loans and various other workout situations, using objective indicators.

The interest rate and foreign exchange risks incurred both by the commercial activities and proprietary activities (transactions regarding the shareholders' equity, investments and issues of bonds) are hedged, to the extent possible, on an individual basis or by means of macrohedging techniques,

the remaining part is maintained within pre-established limits at prudent levels. The main tool used in managing the interest rate risk is the gap analysis, along with a measure of the balance sheet sensitivity to the movements in the market interest rates. A set of limits is applied to such sensitivity and the compliance within those limits is monitored by the Assets and Liabilities Management Committee (ALMC) on a monthly basis. For the foreign exchange position (banking and trading book), the bank has a set of limits set at prudent levels, monitored daily by the Central Risk Control Unit (CRCU).

The liquidity risk is associated with the incapacity to meet one's payment obligations on the due date, with reasonable costs. The bank's liquidity management has two major components:

- monitoring the liquidity position and estimating the financing needs of the bank on the short, medium and long term, based on forecasts, and identifying the adequate financing solutions;

- contingency planning including ongoing assessment of potential trends, events and uncertainties that could impact on the bank's liquidity position.

To highlight the correlations between risk management and performance levels, we must first analyze the evolution of the ROE rate and the quantification of indicators of credit risk, the risk of interest rate, solvency and liquidity risks. Equity rate of return (ROE) measures the return on investment made by shareholders in both operating and extraordinary activities. This indicator of the analyzed bank has in 2009 lower values than in the others years due to the international economic crisis. Since 2006, the indicator has an upward trend, due to increased net profit from one year to another, in 2008 reaching 39,7% (see table no. 1. and figure no. 1). Overall, unlike other banks in the system, BRD – GSG has succeeded in obtaining a good profitability during this period.

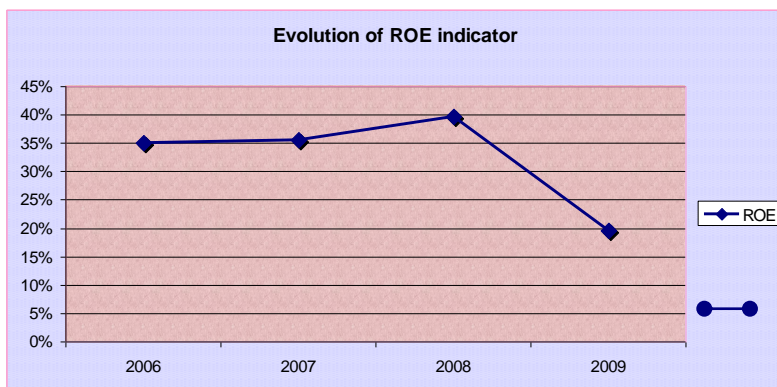
Table no. 1.
Risk and performance indicators at BRD – GSG during 2006 – 2009

Thousands RON

Indicators	2006	2007	2008	2009
ROE	35%	35,6%	39,7%	19,5%
Liquidity risk: liquidity according to NBR regulations	3,19	2,83	3,82	1,91
Solvency risk: capital adequacy indicator	13,3%	12%	9,38%	12,73%
Credit risk: Nonperforming loans/total credit * 100	0,4%	1,03%	1,31%	4,7%
Interest rate risk: Sensitive assets / sensitive liabilities *100	108,4%	109,2%	109,4%	111,2%

Source: Annual Reports of BRD – GSG during 2006 – 2009

Figure no. 1.



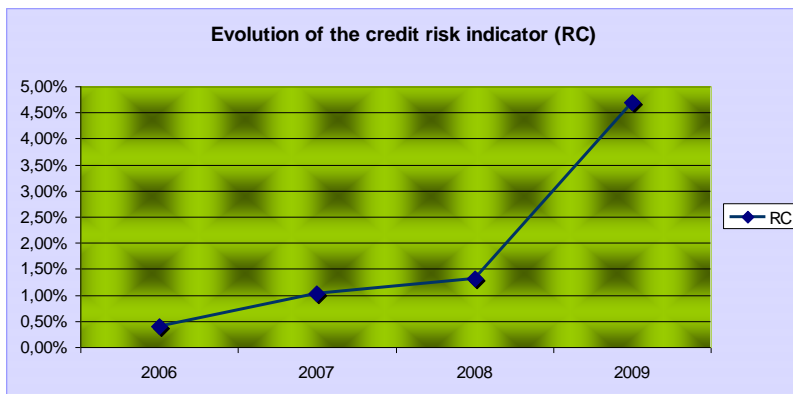
Source: processed data from the Annual Reports of BRD – GSG during 2006 - 2009

Next, we make assessments based on credit risk calculated at BRD - GSG. From table 1. and figure no. 2 we observe that the indicators have an oscillating trend, high values recorded in 2009 based on the international financial crisis and the population's incapacity to reimburse their credit rates.

The share of loans outstanding and the rate of bad loans should be as small

to express the effective management of credit risk. The size of the risk is used by the analyst to determine the necessary reserves to cover losses of the loan portfolio. Therefore, the bank maintains a good level of the credit risk indicator during the period 2006 – 2009, except for the recession year 2009.

Figure no. 2.

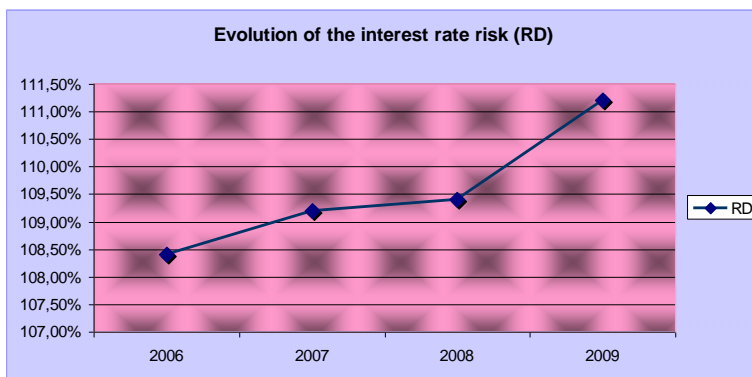


Source: processed data from the Annual Reports of BRD – GSG during 2006 - 2009

Regarding interest rate risk, the indicator values calculated in table no.1 and figure no.3 show that the degree of sensitivity is always over the unit, which

means a long position of interest. Therefore, interest rate risk is relatively low at present.

Figure no. 3.

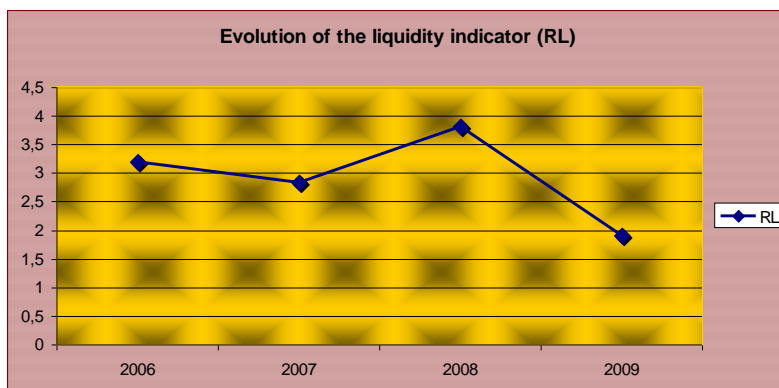


Source: processed data from the Annual Reports of BRD – GSG during 2006 - 2009

Instead, the overall liquidity calculated as the ratio between effective liquidity and necessary liquidity has an oscillating trend, reaching in 2009 the

level of 1,91. Therefore the bank has a good liquidity, as indicated in table no. 1. and figure no. 4.

Figure no. 4.



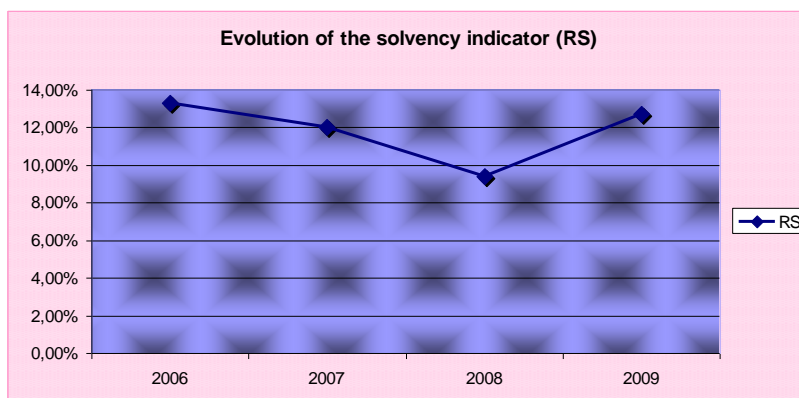
Source: processed data from the Annual Reports of BRD – GSG during 2006 - 2009

Analyzing the recorded levels of solvency rate, we can see that for the periods ending December 31, 2009 and December 31, 2008, the adequacy of the bank’s capital has been monitored using the local regulations that are based on the European Directive 2006/48/49/EC (Basel II). These requirements apply to the figures obtained based on the local accounting and financial reporting regulations (derived from European Directives on the accounting standards of credit institutions). During 2009 and 2008

the bank has complied in full with these requirements. As of December 31, 2009 the stand alone regulatory capital and the capital adequacy ratio determined in accordance with the above-mentioned regulations is 2,817,324 respectively 12.73% (2008: 3,478,867, respectively 9.38%), (see table no.1 and figure no. 5).

The downward trend of the indicators of solvency in recent years is due to non-government credit expansion, particularly on the population.

Figure no. 5.



Source: processed data from the Annual Reports of BRD – GSG during 2006 – 2009

3. Correlations between ROE and the risk indicators

In order to study the correlations between ROE and the risk indicators analyzed in the previous paragraph, we use linear regression function in Excel program.

Thus, in case of BRD - GSG, the influence of the risk of liquidity on the variation of ROE can be summarized in the following results:

<i>Regression</i>	
Multiple R	0.941117
R Square	0.885702
Adjusted R Square	0.828553
Standard Error	3.677852
Observations	4

Source: own calculations

The rate of liquidity risk affects ROE variation in the proportion of 88%. A possible statistical correlation between the two elements would have the following form:

$$ROE = 1.67 + 10.47 * Liquidity\ risk$$

Between the two sizes there is a direct correlation of high intensity. Therefore, an increase by a percentage rate of liquidity risk, ROE increased by 10.47%.

Influence of credit risk over ROE can be synthesized in the following results:

<i>Regression</i>	
Multiple R	0.915315
R Square	0.837802
Adjusted R Square	0.756703
Standard Error	4.381244
Observations	4

Source: own calculations

Credit rate risk affects ROE variation in the proportion of 83%. A

possible statistical correlation between the two elements would have the following form:

$$ROE = 40.28 - 4.20 * Credit\ risk$$

The two dimensions are correlated indirectly to high intensity. Therefore, a decrease by a percentage rate of credit risk, ROE increased by 4.20%.

Influence on the risk of solvency ROE variation can be synthesized in the following results:

<i>Regression</i>	
Multiple R	0.544547
R Square	0.296531
Adjusted R Square	-0.0552
Standard Error	9.124255
Observations	4

Source: own calculations

Solvency rate changes affect the financial profitability at the rate of 29%. A possible statistical correlation between the two elements would have the following form:

$$ROE = 65.54 - 2.79 * Solvency\ risk$$

Between the two dimensions there is an indirect correlation of low intensity. Therefore, a decrease by a percentage rate of liquidity risk, ROE increased by 2.79%.

Influence of the risk of interest rate over ROE can be synthesized in the following results:

<i>Regression</i>	
Multiple R	0.841172
R Square	0.707571
Adjusted R Square	0.561356
Standard Error	5.882815
Observations	4

Source: own calculations

Rate risk of interest rate changes affects ROE in the proportion of 70%. A possible statistical correlation between the two elements would have the following form:

$$\text{ROE} = 725.04 - 6.32 * \text{Interest rate risk}$$

Between the two dimensions there is an indirect correlation of high intensity. Therefore, at a decrease of one percent interest rate risk, ROE increased by 6.32%.

4. Conclusions

From the analysis of correlations between ROE and credit risks, interest rate, liquidity and solvency risks we draw the conclusion that, in BRD - GSG case, ROE is influenced by the variation of banking risks as follows:

- credit risk, liquidity risk and interest rate risk exercise a great influence, 83%, 88% and 70%;

- the influence of solvency risk is low, only 29%.

In conclusion, we can say that the bank manages liquidity risk effectively, has a market risk and solvency risk according to the regulations and a credit risk increased only in 2009 due to international economic crisis, but much low than other banks in the system. However, these risks are reduced by the procedures of risk management, implemented in accordance with Société Générale.

REFERENCES

www.brd.ro	<i>Annual Report of CNVM 2009;</i> <i>Administrators Report on the Individual Financial Situations of the year 2009;</i> <i>Administration Council Report of BRD – GSG on the Consolidated Financial Situation 2009</i> <i>Annual Reports 2006 - 2009</i>
Capgemini	<i>World Retail Banking Report, 2008</i>
International Monetary Fund	<i>Regional Economic Outlook, Europe, Reassessing Risks, April 2009</i>

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