NEW FRONTIERS IN CREDIT RISK ANALYSIS

Dragoş ILIE
Spiru Haret University, **Romania**
Faculty of Financial Management Accounting Craiova
dragosilie2002@yahoo.com

Abstract:

The emergence of credit risks in recent years has burned the world economy leading to the onset of one of the toughest global economic crisis. Superficiality and incompetence demonstrated by the banking system in credit risk analysis has seen the highest peaks. Banks had as main objective winning new markets at any cost and risk management and banking marketing have known the most serious contradiction. On the one hand, sales of banking products at any price, on the other hand mitigation of banking risks. The paper aims to demonstrate that a new approach is needed in credit risk analysis.

Key words: credit risk, risk management, banking marketing, financial risk, performance indicators

JEL Classification: G32

1. Introduction

In recent years all banking was conducted under the separation of banking into two distinct sections: front-office and back-office (Mihai 2009). Risk management faced increasingly larger and more diversified risks, banking marketing as their main supplier (Mehta and Fung 2008). Contradictions between risk management and banking marketing have visibly affected traditional banks in their attempt of universalization of banking (Geyfman, and Yeager 2009). Under these conditions only a miracle could prevent the crisis on emerging markets (Boz 2009).

Contradictions between risk management and banking marketing were firstly generated by the different objectives they pursue and secondly by the quality of the human factor. Both cases ultimately lead to the degradation of quality in employee-customer relations (Bowen 2006). In connection with the human factor, some authors have extended the analysis on the differences in age (older performers - younger officers) and concluded that they contribute to the degradation of human relationships in an organization (Collins *et al.* 2009).

Much of the problems of ‘enforceability’ between risk management and bank marketing can be overcome by promoting a clever marketing (Ahnonen *et al.* 2005), making training to improve the quality of sales personnel (Gan *et al.* 2009) and by the application of an appropriate system of indicators with which to operate the internal quality audit.

2. Financial risk analysis in trade

The analysis was performed for a retail company using trial balances on 31.12.2007, 31.12.2008 and 31.12.2009.

Analysis of economic-financial balance sheet of assets and liabilities based on data drawn from trial balances on 31.12.2007, 31.12.2008 and 31.12.2009 reveals the situation in Table 1.

Table 1. Economic and financial analysis of assets and liabilities

Level	Assets	2007	2008	2009	Liabilities	2007	2008	2009
I	Fixed assets	32.900	78.800	48.373	Long-term liabilities	47.800	93.200	108.941
II	Realizable assets	104.100	191.000	226.140	Current liabilities with maturity <1 year	65.000	107.400	104.188
III	Positive Treasury	500	3.300	4.980	Negative Treasury	24.700	72.500	66.364
	TOTAL	**137.500**	**273.100**	**279.493**	**TOTAL**	**137.500**	**273.100**	**279.493**

Level I assets are covered by long-term liabilities throughout the period under review resulting in a positive net working capital of 14,900 lei at 31.12.2007, 14,400 lei at 31.12.2008 60,568 lei at 31.12.2009, amounts that contribute to Level II restructured balance sheet financing.

At level II, the realizable assets are superior to current debt with maturity less than one year, generating a positive working capital amounted to 39.100 lei at 31.12.2007, 83.600 lei at 31.12.2008 and 121.952 lei at 31.12.2009, which shows a lack of resources attracted on the short term, partially covered with a surplus of Level I and through bank loans.

At level III, the net treasury is negative throughout the period analysed and had the following values: -24.200 lei at 31.12.2007, -69.200 lei at 31.12.2008 and -61.384 lei at 31.12.2009.

The evolution of working capital, the need of working capital and net cash is shown in Figure 1.

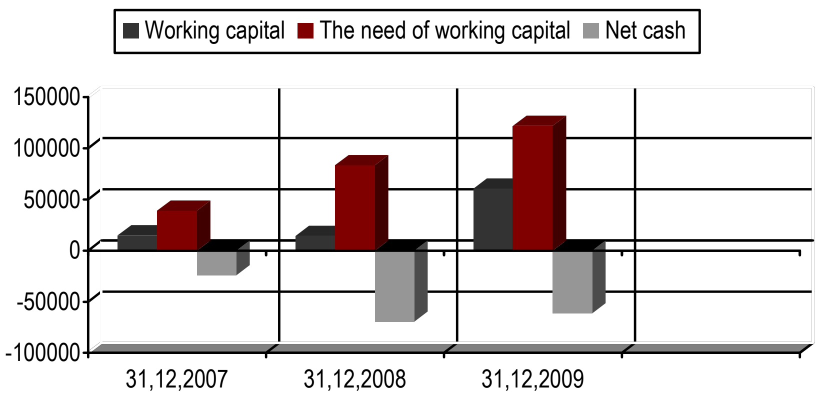

Figure 1. Evolution of working capital, the need of working capital and net cash

Regarding the patrimonial situation, the following considerations are made:

▪ Fixed assets during the period under review (2007-2009) developed fluctuating both in absolute and as share in total assets and have recorded the following values: 23.93% in December 2007, 28.85% in December 2008 and 17.31% in December 2009. On 31.12.2009 their absolute value was 48,373 lei. The increase of fixed assets with 44,700 lei at 31.12.2008 as opposed to 31.12.2007 was due to buying a car.

▪ Realizable assets recorded the following increases as a percentage of total assets during the period under review: 75.71% in December 2007, 69.94% in December 2008 and 80.91% in December 2009. On 31.12.2009 their absolute value was 226,140 lei. On active groups of assets, on 31.12.2009, we have the following structure:

Stocks of goods for sale – 205 243 lei;

Accruals and similar (prepaid expenses) – 20.897 lei.

▪ Positive treasury share in total assets during the period under review had the following increases: 0.36% in December 2007, 1.21% on 31.12.2008 and 1.78% on 31.12.2009.

Total circular assets on 31.12.2009 are worth 210,223 lei and represent 75.22% of assets.

On the liability side, in the period under review the following changes have occurred:

▪ Long-term liabilities the period under review were had an upward trend in absolute and total liabilities as a share had the following increases: 34.76% in December 2007, 34.13% in December 2008 and 38.98% in December 2009. On 31.12.2009 their absolute value was 108,941 lei, which is composed of:

▪ 200 lei in share capital;

▪ Reserves – 5628 lei;

▪ Retained earnings – 70,255 lei;

▪ Financial liabilities with a maturity greater than one year – 32,858 lei.

▪ Current debt with maturity less than one year had fluctuated in absolute size and decreasing share in total liabilities as follows: 47.27% in December 2007, 39.33% in December 2008, and 37.28% in December 2009. On 31.12.2009 their absolute value was 104,188 lei of which:

▪ Suppliers 55.809 lei.

▪ Other liabilities (fees, salaries, staff) 48 379 lei (the largest share is represented by VAT not due to the stock represented by existing freight on 31.12.2005 – 40.569 lei).

The company recorded outstanding debts to state budget (as the trial balance at 31.12.2009) in the amount of 3394 lei, of which:

▪ 12 lei payroll tax;
▪ 287 lei Insurance;
▪ 557 lei tax on profit;
▪ 2.503 lei payable VAT;
▪ 35 lei unemployment, special funds.

According to the tax attesting certificate 9874/06.04.2009 the recorded debts against the state budget in the amount of 3574 lei, and upon its release, increases in fines have been updated as well, penalties for failure to pay on term the obligations amounting to 997 lei and 321 lei. Given this situation the customer will pay the arrears to the budget in May 2009. Please note that the age profile to the state budget is up to 180 days.

Until now there haven't been enforcement orders in the client's account from the company's financial administration or creditors.

▪ The negative treasury on 31.12.2009 is 66,364 lei, consisting of the balance line of credit and more than a year from the leasing contracted by the company to purchase car.

Total liabilities on 31.12.2000 are in the sum of 203.410 lei and are 72.78% of the liabilities and are covered as a percentage of 103% of the company's circular assets.

The evolution of total debt relative to assets is shown in Figure 2.

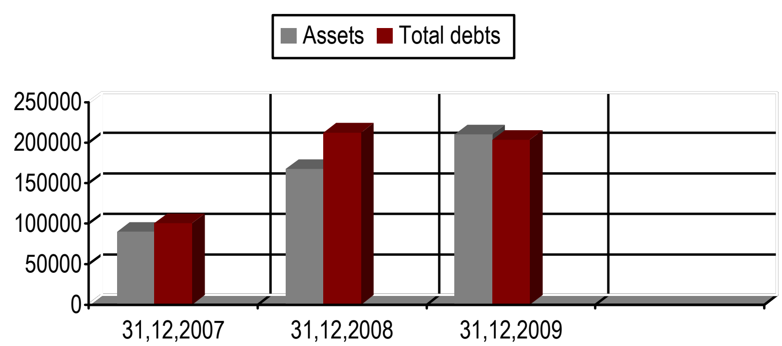

Figure 2. Evolution of total debt relative to assets

The indicators of the profit and loss (lei) in evolution are presented in Table 2.

Table 2. Indicators of the profit and loss

	31.12.2007	31.12.2008	31.12.2009
Turnover	181.900	312.500	371.560
production of the financial year + sales of goods	181.900	312.500	371.560
Added value	31.700	49.000	66.181
Operating income	181.900	314.100	372.400
Operating expenses	155.400	278.900	335.691
Operating results	26.500	35.200	36.709

	31.12.2007	31.12.2008	31.12.2009
Financial income	0	0	719
Financial expenses	3.800	6.800	11.267
financial results	-3.800	-6.800	-10.548
Total revenue	181.900	314.100	373.119
Total expenses	159.200	285.700	346.958
Gross profit	22.700	28.400	26.161
Income tax	2.700	4.700	11.194
Net income	20.000	32.100	14.967

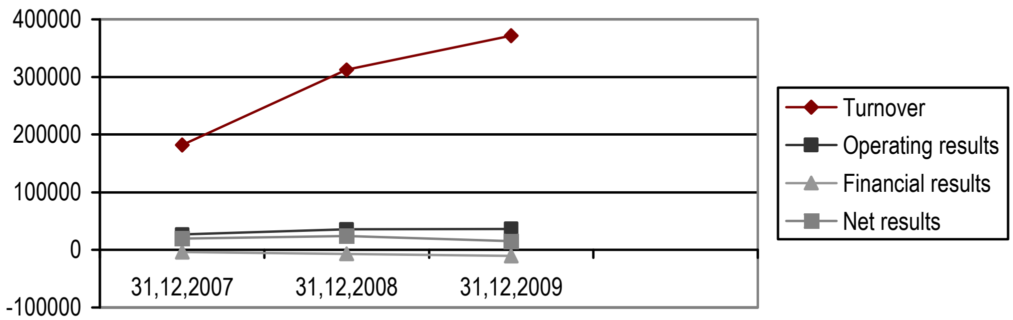

Figure 3. Evolution of turnover and results

From Table 2 it is clear that the company operates in terms of profitability, posting positive results from operations to cover losses from financial activity, achieving a profit. Composition and distribution of added value in the amount of 66,181 lei, made by the company on 31.12.2009, is reproduced below:

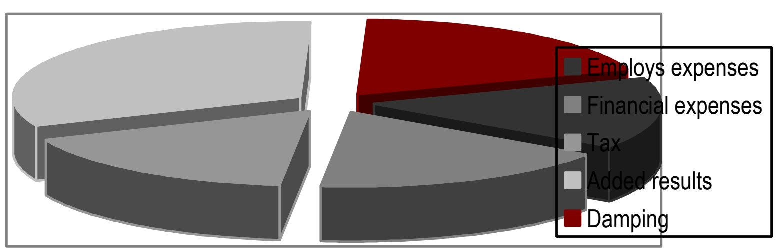

Figure 4. Composition and distribution of added value

Credit worthiness indicators record the values from Table 3.

Table 3. Creditworthiness indicators

1	**Liquidity**	**(%)**	**31.12.2007**	**31.12.2008**	**31.12.2009**
	a) immediate	(%)	0.56	3.50	2.92
	b) current	(%)	100.45	93.00	123.26
2	solvency	(%)	136.68	128.76	137.40
3	level of overall debt, financial		272.63	347.70	267.35
	indebtedness	(%)	96.48	171.64	130.41
4	current assets turnover	(no of rot.)	2.02	1.87	1.77
5	profitability	(%)			
	a) operating	(%)	14.57	11.26	9.88
	b) economic	(%)	14.55	8.68	5.36
	c) financial	(%)	54.20	38.85	19.67
6	interest coverage	(%)	7.14	5.37	3.34
7	added value rate	(%)	17.43	15.68	17.81
8	dividend policy	(%)	-	-	-

'A firm which obtains profit not always has a positive treasury because of the gap between the expenses and revenues recorded in accounting; the statistical records show that most bankruptcies are due to the weaknesses from treasury's management' (Georgescu 2010).

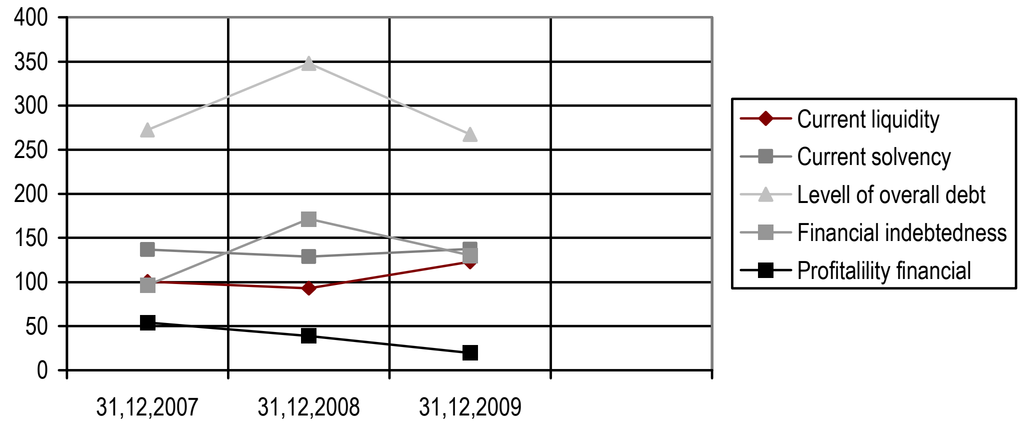

Figure 5. Creditworthiness indicators evolving

Analyzing the evolution of these indicators can be seen that:

▪ Current liquidity is good, assets being higher than the current debt with maturity <1 year;

▪ Solvency is high; the total asset value is greater than the total amount of debt registered by the trader;

▪ Degree of leverage is very good, borrowed financial resources (total debt) are worth 203,410 lei (31.12.2009), while at the same time; net equity in the strict sense has a considerable amount of 76,083 lei.

According to the response to the CRB in April 2009 the client does not record commitments to other banks and such incidents are not included in the CIP payment on checks, bills of exchange or promissory note.

3. Conclusions

Using indicators accompanied by a detailed analysis of the relationship between risk management and bank marketing, on the internal quality control line, can reveal the bank marketing incompetence, interest for earning extra commission, informing the customer clearly erroneous, and at the risk management incompetence, corruption, abuse of office etc.

With no claim to have presented all the indicators of financial risk analysis, we draw attention to the future implications they may have by ignoring them and not dealing with their evolving.

An assessment of results at a given moment is not only a cliché, a radiograph of the moment. A movie consisted of several clichés shows a history, a trend.

To compare the results of each year we must bring them to a common denominator to take into account the changes occurring to the national economy in terms of inflation, exchange rates, monetary policy measures etc.

References

[1] Ahnonen T., Kasper T., Melkko S. 2005. *3 G Marketing*, Wiley Publishing.

[2] Boz E. 2009. Can Miracles Lead to Crises? The Role of Optimism in Emerging Markets Crises. The Ohio State University. *Journal of Money, Credit and Banking*, Volume 41, Issue 6: 1189 – 1215.

[3] Bowen D. 2006. Managing customers as human resources in service organization. Wiley Periodicals, Inc. *Human Resource Management*, Volume 25, Issue 3: 371 – 383.

[4] Collins M., Hair J., Rocco T. 2009. The older-worker-younger-supervisor dyad: A test of the Reverse Pygmalion effect. Wiley Periodicals, Inc. *Human Resource Development Quarterly*, Volume 20, Issue 1: 21 – 41.

[5] Gan C. G., Lee J.A., Soutar G. 2009. Preferences for training options: A conjoint analysis. Wiley Periodicals, Inc. *Human Resource Development Quarterly*, Volume 20, Issue 3: 307 – 330.

[6] Georgescu F. 2010. The Forecasting and Diagnosis Analysis of Cash Flows; The Calculation and Covering of the Treasury Balances. *Journal of Applied Economic Science*, Volume V, Issue 4 Winter: 324 – 341.

[7] Geyfman V., Yeager T. 2009. On the Riskiness of Universal Banking: Evidence from Banks in the Investment Banking Business Pre- and Post-GLBA. The Ohio State University. *Journal of Money, Credit and Banking*, Volume 41, Issue 8: 1649 – 1669

[8] Mehta D., Fung H. 2008. *International Bank Management,* Blackwell Publishing, Oxford

[9] Mihai, I. 2009. *Managementul activităților bancare.* Editura Fundației *România de Mâine*. Bucureşti, *in Romanian.*